



Commonwealth of Virginia
Virginia Information Technologies Agency

**ENTERPRISE CONTENT MANAGEMENT (EMC) SYSTEMS INTEGRATION AND
SUPPORT SERVICES & SOFTWARE**

Date: October 20, 2010

Contract #: VA-071114-CGI

Authorized User: State Agencies, Institutions, and other Public Bodies
as defined in the VPPA

Contractor: CGI, Inc.
600 East Main Street
Suite 200
Glen Allen, VA 23219

FIN: 54-0856778

Contact Person: Judy Napier
Voice: 804-648-3865
Cell: 804-955-9313
Email: judy.napier@cgi.com

Term: November 14, 2010 – November 14, 2011

Payment: Net 30 days

For Additional Information, Please Contact:

Supply Chain Management
Virginia Information Technologies Agency

Mike Novak
Phone: 804-416-6168
E-Mail: mike.novak@vita.virginia.gov
Fax: 804-416-6361

NOTES: Individual Commonwealth of Virginia employees are not authorized to purchase equipment or services for their personal use from this Contract.

For updates, please visit our Website at <http://www.vita.virginia.gov/procurement/contracts.cfm>



COMMONWEALTH *of* VIRGINIA

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711

October 20, 2010

VIA EMAIL

TO: CGI, Inc.
Judy Napier [judy.napier@cgi.com]

RE: VA-071114-CGI

In accordance with Section 3.A of the above referenced contract, entitled "Contract Term," please consider this correspondence your notification of the Commonwealth's extension of the above referenced contract.

The expiration of the agreement is now extended to November 14, 2011.

Regards,

Mike Novak
VITA

c: contract file



Information Technology Services and Software Contract

between

The Virginia Information Technologies Agency

on behalf of

The Commonwealth of Virginia

and

CGI, Inc.

INFORMATION TECHNOLOGY SERVICES AND SOFTWARE CONTRACT TABLE OF CONTENTS

1.	PURPOSE AND SCOPE	7
2.	DEFINITIONS	7
	A. Acceptance	7
	B. Agent	8
	C. Authorized Users	8
	D. Confidential Information	8
	E. Computer Virus	8
	F. Deliverable	9
	G. ECM Software	9
	H. ECM Software Publisher	9
	I. Party	9
	J. Requirements	9
	K. Service	10
	L. Software	10
	M. Software Publisher	10
	N. Statement of Work (SOW)	10
	O. Supplier	10
	P. VITA	11
	Q. Warranty Period	11
	R. Work Product	11
3.	TERM AND TERMINATION	11
	A. Contract Term	11
	B. Termination for Convenience	12
	C. Termination for Breach or Default	13
4.	SERVICES	15
	A. Nature of Services and Engagement	15
	B. Statement of Work (SOW)	16
	C. Compliance with ECM Software Publisher's License and Support Terms and Conditions	19
	D. Other Contractors	22
	E. Subcontractors	23
	F. Deliverable Support and Maintenance Services	24
	G. Documentation of Supplier Services	28
	H. Training	29
	I. Transition Assistance	30
5.	SERVICE SCHEDULE, ACCEPTANCE, AND CURE PERIOD	32
	A. Service Schedule	32
	B. Acceptance	34
	C. Cure Period	35
6.	LICENSE GRANT	36
7.	RIGHTS TO WORK PRODUCT	38
	A. Work Product	38
	B. Ownership	39
	C. Reservation of Rights	41
	D. Return of Materials	41
8.	SUPPLIER PERSONNEL	41
	A. Selection and Management of Supplier Personnel	41
	B. Supplier Personnel Supervision	43
9.	GENERAL WARRANTY	43
	A. Ownership	43

B. Performance	43
C. Limited Warranty Period and Remedy	45
D. Malicious Code	45
E. Open Source	46
F. Supplier's Viability	46
G. Supplier's Past Experience	46
10. ORDERS AND COMPENSATION	47
A. Request for Quote	47
B. Order	49
C. Purchase Price and Price Protection	50
D. Invoice Procedures	51
E. Invoice and Payment Terms	52
F. Reimbursement of Expenses	54
G. Supplier's Report of Sales and Industrial Funding Adjustment	55
H. Small, Woman, and Minority-Owned Business (SWaM) Participation	56
11. RESERVED	57
12. CONFIDENTIALITY	57
A. Treatment and Protection	57
B. Exclusions	57
C. Return or Destruction	58
D. Confidentiality Statement	59
13. INDEMNIFICATION AND LIABILITY	59
A. Indemnification	59
B. Liability	62
14. INSURANCE	63
15. PERFORMANCE AND PAYMENT BONDS	63
16. SECURITY COMPLIANCE	64
17. IMPORT/EXPORT	65
18. BANKRUPTCY	66
19. STEERING COMMITTEE AND GOVERNANCE	67
A. Steering Committee	67
B. Governance	68
20. GENERAL PROVISIONS	69
A. Relationship Between VITA and Authorized User and Supplier	69
B. Incorporated Contractual Provisions	70
C. Compliance with the Federal Lobbying Act	70
D. Governing Law	71
E. Dispute Resolution	71
F. Advertising and Use of Proprietary Marks	73
G. Notices	73
H. No Waiver	73
I. Assignment	73
J. Captions	74
K. Severability	74
L. Survival	74
M. Force Majeure	75
N. Remedies	75
O. Right to Audit	75
P. Offers of Employment	76
Q. Contract Administration	76
R. Entire Contract	76

INFORMATION TECHNOLOGY SERVICES AND SOFTWARE CONTRACT

THIS INFORMATION TECHNOLOGY SERVICES AND SOFTWARE CONTRACT ("Contract") is entered into by and between the Virginia Information Technologies Agency (VITA) pursuant to §2.2-2012 of the Code of Virginia and on behalf of the Commonwealth of Virginia (hereinafter referred to as "VITA"), and CGI, Inc. ("Supplier") to be effective as of November 14, 2007 ("Effective Date").

1. PURPOSE AND SCOPE

This Contract sets forth the terms and conditions under which Supplier shall provide enterprise content management (ECM) systems integration and support services ("Services") and software to the Authorized Users. This Contract is non-exclusive, and Services and software identical or similar to the Services and software provided by Supplier pursuant to this Contract may be provided to Authorized Users by other suppliers also under contract with VITA on behalf of the Commonwealth of Virginia or directly with the Authorized User. Authorized Users, depending on the complexity of services required and/or each supplier's available resources, have the option to select one or more suppliers to provide services and software.

2. DEFINITIONS

A. Acceptance

Acceptance shall take the form of successful performance of the Services at the designated location, or completed and successful Acceptance testing in conformance with the Requirements and Acceptance procedures specified in the applicable mutually agreed upon order/Statement of Work.

B. Agent

Any third party independent agent of any Authorized User.

C. Authorized Users

All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia.

D. Confidential Information

Any confidential or proprietary information of a Party that is disclosed in any manner, including oral or written, graphic, machine readable or other tangible form, to any other Party in connection with or as a result of discussions related to this Contract or any order issued hereunder, and which at the time of disclosure either (i) is marked as being "Confidential" or "Proprietary", (ii) is otherwise reasonably identifiable as the confidential or proprietary information of the disclosing Party, or (iii) under the circumstances of disclosure should reasonably be considered as confidential or proprietary information of the disclosing Party.

E. Computer Virus

Any malicious code, program, or other internal component (e.g., computer virus, computer worm, computer time bomb, or similar component), which could damage, destroy, alter or disrupt any computer program, firmware, or hardware or which could, in any manner, reveal, damage, destroy, alter or disrupt any data or other information accessed through or processed by such software in any manner.

F. Deliverable

The tangible embodiment of the Services, including the provision of Software and the development or creation of Work Product, performed or provided by Supplier as identified in the applicable Statement of Work.

G. ECM Software

The programs and code, and any subsequent releases, provided to the Authorized User by ECM Software Publisher pursuant to contract number VA-070601-IBM.

H. ECM Software Publisher

IBM, the licensor of the ECM Software provided to the Authorized Users pursuant to contract number VA-070601-IBM.

I. Party

Supplier, VITA, or any Authorized User.

J. Requirements

The functional, performance, operational, compatibility, Acceptance testing criteria and other parameters and characteristics of the Service(s) and Deliverables described in the applicable documentation, Exhibit A and such other parameters, characteristics, or performance standards that may be agreed upon in writing by the VITA and Supplier or the Parties to an order or Statement of Work issued hereunder.

K. Service

Any work performed or service provided, including provision to the Authorized User of any Deliverable described in the applicable SOW, by Supplier under this Contract for an Authorized User. Service includes the discovery, creation, amendment or development of Work Product, if any.

L. Software

The pre-existing programs, including any Supplier or third party proprietary tool, and code, and any subsequent releases developed or licensed at Supplier's expense, provided by Supplier under this Contract.

M. Software Publisher

The licensor of the Software provided by Supplier under this Contract.

N. Statement of Work (SOW)

Any document in substantially the form of Exhibit B to this Contract which, upon signing by both Parties to the agreement in accordance with the requirements set forth herein, shall be deemed a part of this Contract, and which describes the Services, Deliverables, due dates, assignment duration, payment obligations and the applicable Requirements for a specific project, engagement, or assignment for which Supplier shall be providing Services to an Authorized User. Any Statement of Work shall constitute an order.

O. Supplier

Includes any individual who is an employee, agent, sub-contractor, or independent contractor of Supplier who is assigned by Supplier to perform Services under this Contract.

P. VITA

Virginia Information Technologies Agency, an agency of the Commonwealth of Virginia pursuant to Chapter 20.1 (§§2.2-2005 et seq.) of the Code of Virginia.

Q. Warranty Period

Thirty (30) days from Acceptance of the Deliverables and Services by the Authorized User as outlined in the SOW. Parties may agree to a longer Warranty Period, pursuant to a mutually agreed upon Statement of Work.

R. Work Product

Inventions, combinations, machines, methods, formulae, techniques, processes, improvements, software designs, software customizations, software interfaces, computer programs, strategies, specific computer-related know-how, data and original works of authorship (collectively, the "Work Product") discovered, created, or developed by Supplier, or jointly by Supplier and an Authorized User(s) in the performance of this Contract or any order issued hereunder. Work Product shall not include configuration of software. Work Product will not include Software as defined in this Contract.

3. TERM AND TERMINATION

A. Contract Term

This Contract is effective and legally binding as of the Effective Date and, unless terminated as provided for in this section, shall continue to be effective and legally binding for a period of three (3) years. VITA, in its sole discretion, may extend this Contract for up to two (2) additional one (1) year periods after the expiration of the initial three (3) year period. VITA will issue a written

notification to the Supplier stating the extension period, not less than thirty (30) days prior to the expiration of any current term. Expiration of the term of the Contract shall not affect any perpetual license granted hereunder. Nor shall expiration of this Contract affect any ownership of Work Product by the Commonwealth or any Authorized User pursuant to this Contract. In addition, performance of a Statement of Work or an order may survive the expiration of the term of this Contract, and all terms and conditions required for the operation of such Statement of Work or order shall remain in full force and effect until Services pursuant to such order have met the final acceptance criteria of the applicable Statement of Work or order.

B. Termination for Convenience

VITA may terminate this Contract, in whole or in part, or any order issued hereunder, in whole or in part, or an Authorized User may terminate an order, in whole or in part, upon not less than thirty (30) days prior written notice at any time for any reason ("Termination for Convenience"). In addition, VITA may immediately terminate this Contract, in whole or in part, or any order issued hereunder, if Supplier becomes a party excluded from Federal Procurement and Nonprocurement Programs. VITA shall provide written notice to Supplier of such termination, and Supplier shall provide written notice to VITA if federal debarment proceedings are instituted against Supplier. Supplier shall submit any contractual dispute or order dispute to VITA or any dispute regarding an order terminated by an Authorized User for resolution according to the terms of the Dispute Resolution Section of this Contract. Upon termination, neither the Commonwealth, nor VITA, nor any Authorized User shall have any future liability except for Deliverables accepted by the Authorized User or Services rendered by Supplier and accepted by the Authorized User prior to the termination date. Termination of this Contract or any order shall not affect any perpetual license granted pursuant to this Contract, provided all fees for such license have been paid. Nor shall termination of this Contract or any order for Convenience affect any ownership of Work Product by the Commonwealth or any Authorized User pursuant to this Contract.

C. Termination for Breach or Default

VITA shall have the right to terminate this Contract, in whole or in part, or any order issued hereunder, in whole or in part, or an Authorized User may terminate an order, in whole or in part, for breach and/or default of Supplier ("Termination for Breach" or "Termination for Default"). Supplier shall be deemed in breach and/or default in the event that Supplier fails to meet any material obligation set forth in this Contract or in any Statement of Work or any order issued hereunder.

If VITA or an Authorized User deems the Supplier to be in breach and/or default, VITA or the Authorized User shall issue a written "Show Cause Notice" to Supplier identifying the failure/nonperformance and providing Supplier thirty (30) days to cure the failure/nonperformance, or in the case of a breach not capable of cure within thirty (30) days, to develop a plan of cure, subject to written acceptance by Authorized User, and demonstrate progress toward accomplishment of that cure plan. If Supplier fails to answer the Show Cause Notice, or does not correct the deficiencies as set forth in this paragraph, VITA may immediately, upon notice, terminate this Contract or any order issued hereunder, in whole or in part, or the Authorized User may immediately, upon notice, terminate its order, in whole or in part. Such termination shall be deemed a Termination for Breach or a Termination for Default. In addition, if Supplier is found by a court of competent jurisdiction to be in violation of or to have violated 31 USC 1352, VITA may immediately terminate this Contract, in whole or in part, for breach. VITA shall provide written notice to Supplier of such termination and Supplier shall provide written notice to VITA if Supplier is charged with violation of 31 USC 1352.

Upon Termination for Breach or Termination for Default, neither the Commonwealth, nor VITA, nor any Authorized User shall have any future liability except for Services rendered by Supplier and accepted by the Authorized User or Deliverables provided by Supplier and accepted by the Authorized User prior to the termination date. Supplier shall accept return of any Deliverable that was not accepted, pursuant to the Acceptance criteria and procedures specified in the applicable Statement of Work or order, by the Authorized User(s), and Supplier shall refund any monies paid by any Authorized User for such Deliverable. All costs of de-installation and return of such unaccepted Deliverables, including any software, shall be borne by Supplier.

The failure of VITA or an Authorized User to exercise its right to terminate for breach and/or default under this provision shall not be construed as a waiver of its right to terminate for breach and/or default, rescind or revoke this Contract or any order issued hereunder in the event of any subsequent breach and/or default of any provisions of such agreements.

Supplier shall submit any contractual or order dispute to VITA or the terminating Authorized User for resolution according to the terms of the Dispute Resolution Section.

The terms of the Termination for Convenience and Termination for Breach or Default Sections shall not apply to termination for non-appropriation of funds.

4. SERVICES

A. Nature of Services and Engagement

Supplier is an independent contractor engaged to perform certain Services and to provide certain software, including but not limited to systems integration and support activities on behalf of an Authorized User as set forth in any Statement of Work. Notwithstanding all Authorized Users' rights to license or purchase Supplier's products or Services under this Contract, an Authorized User is under no obligation to purchase or license from Supplier any of Supplier's products or Services. This Contract is optional use and non-exclusive and all Authorized Users may, at their sole discretion, purchase, license or otherwise receive benefits from third party suppliers of products and services similar to, or in competition with, the products and services provided by Supplier.

This Contract is not intended to be or to be used as a staff augmentation contract.

B. Statement of Work (SOW)

All Services shall be performed at the times and locations set forth in the applicable SOW and at the rates set forth in Exhibit D herein. Unless VITA issues a written authorization for a time and materials type SOW, an SOW shall be of a fixed price type but may, with the written approval of VITA, contain a cost-reimbursable line item(s) for pre-approved travel expenses. For any time and materials type SOW, Supplier personnel shall maintain daily time records of hours and tasks performed, which shall be submitted or made available for inspection by the Authorized User upon forty-eight (48) hours advance written notice.

All changes to the Services to be provided must be described in a written change request, which includes any appropriate adjustments to the SOW. Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract. An SOW or any other order from an Authorized User may contain additional terms and conditions; however, to the extent that the terms and conditions of the Authorized User's order are inconsistent with the terms and conditions of this Contract, the terms of this Contract shall supersede. In no event shall any SOW or any modification thereto require the Supplier to perform any work beyond the scope of this Contract as such scope is defined in Exhibit A hereto.

An SOW may designate certain of Supplier's personnel as Key Personnel or Project Managers. Supplier's obligations with respect to Key Personnel and Project Managers shall be described in the applicable SOW. Material failure of Supplier to perform in accordance with such obligations may be deemed a default of this Contract or of the applicable SOW.

An SOW may be written as follows:

1. Fixed Price Type

A Fixed Price type SOW should be used when the Authorized User's requirements can be set forth in sufficient detail as to allow for a fixed price to be developed. A Fixed Price type SOW may include a cost-reimbursable line item(s) for such expenses as travel, incidentals, and materials; however, any such travel, incidental, and material expenditures must be approved in advance by the Authorized User and reimbursement of such pre-approved travel expenses shall be in accordance with the then-current per diem amounts as published by the Virginia Department of Accounts

(http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/20335_1206.pdf), or a

successor URL(s)). A Fixed Price type SOW should also include Deliverables and a milestone payment schedule associated with such Deliverables.

2. Time and Materials Type

A Time and Materials type SOW should be used when the Authorized User's requirements are not sufficiently defined as to allow for a fixed price to be developed. A Time and Material type SOW shall list the Services to be performed by labor category of personnel, and, for each labor category: a) the number of hours allocated thereto, b) the hourly rate, and c) an extended price. A Time and Materials SOW may also include line item funding for travel, incidentals, and materials, as applicable; however, any such travel, incidental, and material expenditures must be approved in advance by the Authorized User and reimbursement of such pre-approved travel expenses shall be in accordance with the then-current per diem amounts as published by the Virginia Department of Accounts (http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/20335_1206.pdf, or a successor URL(s)).

A Time and Materials SOW shall contain a Not to Exceed funding limitation, which shall be considered a reasonably accurate estimate. Supplier shall notify the Authorized User in writing when billable amounts reach eighty percent (80%) of the funding limitation, and, for a time and materials type order, Supplier's notice shall include an estimate to complete the requirements of the order. Supplier shall not be obligated to incur costs in excess of such limitation, and the Authorized User shall not be obligated to reimburse Supplier for costs in excess of such limitation.

Any SOW valued at or above US\$100,000 shall be signed and approved by VITA and Supplier prior to Supplier's commencement of work pursuant to such SOW. If an SOW initially valued below US\$100,000 is modified such that the total value of such SOW after modification is at or above US\$100,000, the modification of such SOW must be approved by VITA and signed by the Supplier prior to Supplier's commencement of work pursuant to such modification.

In addition, any SOW with a period of performance of one (1) year or longer shall be signed and approved by VITA and Supplier prior to Supplier's commencement of work pursuant to such SOW. If an SOW with an initial period of performance of less than one (1) year is extended such that the period of performance is one (1) year or longer, the extension of the period of performance of such SOW must be signed by VITA and Supplier prior to Supplier's performance of work beyond one (1) year after the start of such period of performance.

C. Compliance with ECM Software Publisher's License and Support Terms and Conditions

VITA, on behalf of the Commonwealth of Virginia, has entered into a contract with ECM Software Publisher pursuant to which all Authorized Users may order ECM Software and maintenance and support services. The contract sets forth the terms and conditions under which ECM Software is licensed by the Commonwealth or the Authorized User, as applicable. The license grant allows for "access to and use of the [ECM] Software by third party vendors who are under contract with VITA or the Authorized User to provide services to or on behalf of VITA or such Authorized User, provided (a) such access and use is solely for the benefit of VITA or the Authorized User and for no other purpose and for no other third party, and (b) such access is subject to the terms and conditions of the license."

Supplier shall at all times comply with the terms and conditions of the license grant as such terms and conditions are set forth in contract VA-070601-IBM.

In addition, VITA's contract with ECM Software Publisher contains provisions of ECM Software support. Should an Authorized User or a third party service-provider, including Supplier, not comply with such provisions of ECM Software support, ECM Software Publisher will be under no obligation to provide ECM Software support or maintenance other than rights to new versions of the ECM Software. ECM Software Publisher's conditions of ECM Software support include, but are not limited to:

- i). ECM Software must be unmodified (except as authorized by ECM Software Publisher) and operated in accordance with ECM Software Publisher's documentation.

- ii). Any ECM Software labeled "FileNet Certified Professional Installation Required", must be installed and upgraded by FileNet Certified Professional ("FCP") technicians according to published specifications, unless otherwise agreed to by ECM Software Publisher.
- iii). Authorized User must perform ECM Software back-ups in accordance with the ECM Software Publisher's documentation.
- iv). ECM Software Publisher must be notified of any ECM Software failure and must be allowed reasonable access to the ECM Software for performing support activities.
- v). Any alterations, additions, adjustments or repairs that are made to the ECM Software must be made by authorized representatives of ECM Software Publisher, or at the direction of or in coordination with ECM Software Publisher.

Supplier acknowledges that ECM Software support and maintenance are of considerable importance to the Authorized User. Therefore, if Authorized User elects to receive support and maintenance from ECM Software Publisher, Supplier will employ reasonable efforts to provide that its Services for such Authorized User comply with the ECM Software Publisher's conditions of ECM Software support. Should Supplier fail to do so, Supplier shall, at the request of the Authorized User, (a) return the ECM Software to supportable condition in accordance with the ECM Software Publisher's requirements, or (b) provide or acquire for the Authorized User support and maintenance on the ECM Software, and secure rights to new versions of the ECM Software, at a charge to the Authorized User no greater than the charge the Authorized User would have paid to ECM Software Publisher for such support and maintenance. Supplier's failure to accomplish the foregoing may be deemed a material breach of this Contract.

D. Other Contractors

VITA or an Authorized User may, at its sole discretion and in accordance with applicable laws, regulations, and policies, contract with one or more third party vendors ("Content Management Vendor(s)"), including Supplier, for technical support and advice, systems integration, and content management services, which may include, but not be limited to, integration of legacy systems with the ECM Software, conversion of content currently stored on or maintained by legacy systems, and transition of such content to the ECM Software. Supplier shall coordinate with any other Content Management Vendor(s) as may be requested by VITA or such Authorized User in order to support a timely and orderly conversion of content and capture of content by the ECM Software, to provide suitable, non-conflicting technical interfaces, and to avoid duplication of effort.

In addition, and if requested by the Authorized User, Supplier shall coordinate with ECM Software Publisher to provide that any configuration activities performed by Supplier do not constitute alterations, additions, adjustments or repairs to the ECM Software that may void ECM Software Publisher's warranties, liabilities, or indemnities.

VITA or any Authorized User may hold other contracts for additional or related work, including but not limited to independent verification and validation (IV&V) work for this Contract. Supplier must fully cooperate with all other contractors and Authorized User employees and coordinate its work with such other contractors and Authorized User employees as may be required for the smooth and efficient operation of all related or additional work. Supplier may not act in any way that may unreasonably interfere with the work of any other contractors or the Authorized User's employees. Further, Supplier must fully cooperate with any IV&V contractor assigned to this Contract. Such cooperation includes expeditiously providing the IV&V contractor with full and complete access to all Deliverables, Work Product, records, materials, personnel, meetings, and correspondence as the IV&V contractor may reasonably request.

Supplier must include the obligations of this provision in all its contracts with its subcontractors that work on this Contract.

E. Subcontractors

Supplier shall not use subcontractors to perform the Services unless specifically authorized in writing to do so by the Authorized User. Supplier represents and warrants that any authorized subcontractors performing the Services shall perform the Services in accordance with the

warranties set forth in this Contract. If an order issued pursuant to this Contract is supported in whole or in part with federal funds, Supplier shall not subcontract any Services pursuant to such order to any subcontractor that is a party excluded from Federal Procurement and Nonprocurement Programs. In no event shall Supplier subcontract any Services to any subcontractor which is debarred by the Commonwealth of Virginia or which owes back taxes to the Commonwealth and has not made arrangements with the Commonwealth for payment of such back taxes.

F. Deliverable Support and Maintenance Services

If ordered by an Authorized User, Supplier shall provide the following Services, at the prices identified in an agreed upon Statement of Work, to such Authorized User to maintain the Deliverables in accordance with the Requirements:

1. Known Defects

Promptly notify all Authorized Users of material defects or malfunctions in any Software Deliverables or Documentation of which it learns from any source, and (i) correct such defects or malfunctions for all Authorized Users or provide a correction of any such defects or malfunctions to all Authorized Users, or (ii) provide to all Authorized Users a work around until corrected, within five (5) business days of Supplier's knowledge of such defect or malfunction, or such other period mutually agreed to in writing by the Parties.

2. Software Updates

Provide to all Authorized Users no later than the first day of general release, copies of any Software and Documentation revised to reflect any updates or upgrades made by Supplier.

3. Coverage

From 8 a.m. to 6 p.m. local time, Monday through Friday, excluding Commonwealth holidays, provide to any Authorized Users all reasonably necessary telephone or written consultation requested by such Authorized Users in connection with use, problems and operation of the Deliverables, or as otherwise agreed to in a Statement of Work.

4. Service Levels

Respond to problems with the Deliverables identified by an Authorized User in no more than one (1) business hour after notification. Resolve all problems according to the following:

- a. Priority 1 (Deliverable not functioning) within eight (8) business hours
- b. Priority 2 (certain processing interrupted or malfunctioning but Deliverable able to process) within twenty four (24) business hours
- c. Priority 3 (minor intermittent malfunctioning, Deliverable able to process data) within three (3) business days.

The resolution period will commence when Supplier receives notice of the problem, and will conclude when Supplier notifies Authorized User that the problem has been resolved. The level of severity (e.g., 1, 2, 3) shall be subject to mutual agreement by the Parties.

5. Software Evolution

Should Supplier or Software Publisher merge or splinter the Software previously provided to any Authorized User, such action on the part of Supplier or Software Publisher shall not in any way result in any Authorized User being charged additional support, licensing or maintenance fees in order to receive Software Updates.

If Supplier or Software Publisher reduces or replaces functionality contained in a licensed Software product and provides the same or substantially similar functionality as or within a separate or renamed Software product, then the Commonwealth or the Authorized User shall be entitled to license such Software product at no additional license or maintenance fee, and subject to the terms and conditions herein.

If Supplier or Software Publisher releases an option, future Software product or other release that has substantially the same functionality as the Software products provided under this Contract, and Software Publisher and/or Supplier ceases to provide maintenance for the older Software product, then Supplier shall offer the Commonwealth or the Authorized User the option to exchange licenses for such replacement Software product or function at no additional charge.

6. Escalation Procedures

In the event the parties are not able to reach agreement concerning a maintenance and support problem resolution issue, the dispute will be escalated first to Supplier project manager, then to the Supplier business development representative, and then to applicable Supplier regional vice president.

7. Remedies

If Supplier is unable to meet the resolution times set for in the "Service Levels" paragraph in this Section, Authorized User, may, at its option, collect a \$500 per business day remedy for up to 30 days.

If Supplier is unable to restore the Deliverable to a condition in which such Deliverable meets, in all material respects, the Requirements, as applicable, within thirty (30) days following notification by an Authorized User, Supplier shall, at such Authorized User's request, accept return of the Deliverable and during any subsequent Maintenance Period, return all monies paid by such Authorized User for the returned Deliverable and Documentation, pro-rated using the straight-line method for an estimated Deliverable life cycle of seven (7) years. Authorized User shall discontinue use of any Deliverable so returned..

Credits and rebates are remedies available to all Authorized Users in addition to, and not in lieu of, any other remedies available pursuant to this Contract or at law or in equity.

8. Maintenance Period and Renewal

The Maintenance Period shall be a term agreed upon in a Statement of Work and renewable at the Authorized User's request. Supplier shall notify the Authorized User not less than thirty (30) days prior to the expiration of the Maintenance Period, and the Authorized User, at its sole discretion, may renew Maintenance Services for an additional one (1) year period. Supplier warrants that it shall make Maintenance Services available for each Deliverable for a period of at least five (5) years from Acceptance by the Authorized User. Cancellation of Maintenance Services by an Authorized User shall not affect this Contract or the grant of any license by Supplier.

G. Documentation of Supplier Services

Any documentation of the Deliverables shall be deemed included in the scope of the SOW unless expressly excluded.

If the Services include configuration of software by Supplier, Supplier shall provide to the appropriate Authorized User documentation containing a description of the configuration. Such documentation shall be sufficiently detailed such that any appropriately trained and certified employee or contractor of any Authorized User may administer and configure the software.

Additionally, Supplier shall provide to each Authorized User full and complete documentation of all Services, including any business process reengineering (BPR) or change management (CM) activities. If so specified in a Statement of Work, such documentation shall be sufficiently detailed such that an employee or contractor of the Authorized User may repeat the steps of the Service within its organization.

Documentation shall be provided to the Authorized User at the time of delivery of the Deliverable or the configured software, or, for all other Services, in accordance with the schedule set forth in the applicable SOW.

Authorized User shall have the right, as part of the license granted herein, at its own discretion, to take all or portions of the documentation, modify or completely customize it in support of the authorized use of the Deliverables and may duplicate such documentation and include it in an Authorized User document or platform. Authorized User shall continue to include Supplier's copyright notice.

H. Training

Training shall be deemed included in the scope of the SOW unless expressly excluded.

Supplier shall provide training to Authorized User personnel or contractors on the use and functionality of the Deliverables and Services. The training will be complete and sufficient so that the trainees can operate the features of the Deliverables independently and are capable of training additional users. Supplier and Authorized User will train end users.

In addition, Supplier shall, throughout the term of the Contract, provide to VITA and all Authorized Users receiving Supplier's Services, at no additional cost, information Supplier deems relevant to implementing DoD 5015.2-STD and NARA policies, achieving and maintaining compliance with the Sarbanes-Oxley Act of 2002 (SOX) and the Health Insurance Portability and Accountability Act (HIPAA), and providing for confidentiality and protecting proprietary data; provided, however, that in no event will Supplier be responsible for providing legal consulting or counsel to VITA or Authorized user concerning the policies, statutes, rules, and regulations cited in this Section.

I. Transition Assistance

Upon execution of an order or Statement of Work pursuant to this Contract, Supplier and Authorized User will develop a transition plan ("Transition Plan") detailing each Party's respective tasks in connection with the orderly transition and migration of the Services to Authorized User or a third party service provider, such transition and migration to occur upon termination or expiration of the Contract or the applicable order.

At a minimum, the Transition Plan shall provide that upon expiration or termination of this Contract or the applicable order for any reason, Supplier will, at Authorized User's option, continue to provide Services for up to six (6) months after the date of expiration or termination in order to facilitate Authorized User's transition to a new service provider, and Supplier shall provide such reasonable assistance as may be requested by Authorized User to effectuate such transition.

The Transition Plan shall include, at the request of the Authorized User, a detailed plan to develop Authorized User self-sufficiency or to transition operation and management of the Services to Authorized User, VITA, or a third-party vendor under contract with VITA or the Authorized User. At Authorized User's request and pursuant to an order for Supplier's Services issued hereunder, Supplier shall provide all assistance reasonably required by Authorized User to develop self-sufficiency in performing the Services. During and/or after the transition period, Authorized User may, at its sole discretion, elect to order or continue support Services from Supplier. Supplier's assistance Services in transitioning to self-sufficiency may include training of developers, testers, administrators, operational support personnel and end-users of the Authorized User's ECM system prior to, during and post implementation of the system. Supplier may be asked to determine training needs and develop a training strategy.

During the transition period, Supplier shall provide all information regarding the Services or as otherwise needed for a transition, including data conversion, interface specifications, and any related services. Supplier shall provide for the prompt and orderly conclusion of all work, as Authorized User may direct, including completion or partial completion of projects, documentation of work in process, and other measures to assure an orderly transition to Authorized User or its designee.

In addition, VITA may, in accordance with the Virginia Public Procurement Act, award a successor contract prior to the final expiration date of this Contract, and VITA, or any Authorized User, may issue orders to the successor contractor prior to the expiration date of this Contract. Supplier acknowledges that the services provided under this Contract are vital to the Commonwealth and all Authorized Users and must be continued without interruption and that upon expiration or termination of this Contract, a successor, either an Authorized User or another

contractor, may continue services identical or similar to the services provided by Supplier. Supplier shall exercise its reasonable efforts and cooperation to effect an orderly and efficient transition of services to any successor entity.

Supplier shall maintain adequate administrative and management support for any orders that extend beyond expiration of this Contract until the end of the performance period specified in each such order. Appropriate task management personnel shall meet with any successor contractor to coordinate task transition. Supplier may be required to transition order-specific items such as Government- or Supplier-furnished supplies, materials, equipment, and services.

The obligations set forth in this section and in any Transition Plan developed pursuant to an order issued pursuant to this Contract may extend beyond expiration or termination of the Contract for a period not to exceed six (6) months. Supplier shall perform such obligations at a reasonable hourly rate or a charge agreed upon by Supplier and VITA or an Authorized User.

5. SERVICE SCHEDULE, ACCEPTANCE, AND CURE PERIOD

A. Service Schedule

1. Scheduling

Supplier acknowledges that VITA's contract with ECM Software Publisher includes certain timelines for installation, testing, and acceptance of the ECM Software, that meeting such timelines is critical to the Authorized User's ability to conduct quality assurance with respect to the ECM Software, and that Supplier's activities, and performance may affect the Authorized User's ability to meet such timelines. Supplier, therefore, agrees that its sole failure to perform any installation Services of the ECM Software materially in accordance with the schedule set forth in the applicable SOW such that the ECM Software timelines are adversely impacted shall constitute a material breach of this Contract, if and to the extent it results in damages to the Authorized User. In the event of such failure, Authorized User shall be entitled to collect, at its option, a penalty of \$500 per business day as long as the delay persists, for up to a maximum of 30 business days.

2. Installation

Should Supplier install more than the number of licenses to the ECM Software purchased by the Authorized User, Supplier shall promptly notify Authorized User and report the net number of additional copies of the ECM Software deployed. Should the additional license installations result in additional license fees for the Authorized User, Supplier shall, at the request of the Authorized User, pay such additional license fees and any required maintenance fees therefor.

3. Responsibility for Coordination of Delivery with Third Party Contractors

Supplier is responsible for the timely coordination of delivery, installation and completion of the Deliverables set forth in any SOW. Where the SOW requires delivery and/or installation of third party products or services to be furnished by or through Supplier, Supplier is responsible for coordinating delivery and installation with third party contractors, and shall be liable for any cost(s) of reinstating standard manufacturer's warranty or acceptance periods which have lapsed due to untimely coordination by Supplier. Where the Authorized User is responsible for delivery and/or installation of third party products or services, Supplier is responsible for furnishing the delivery schedule to such Authorized User and such Authorized User is responsible for timely delivery pursuant to that schedule. Supplier shall not be responsible under this Section for any untimely delivery or installation or any other action, inaction, or delay to act by Authorized User.

B. Acceptance

Service(s) and Deliverables shall be deemed accepted when the Authorized User determines that such Service(s) and Deliverables materially meet the Requirements or written criteria set forth in the applicable SOW. Acceptance criteria for Services and Deliverables shall ensure that all of the functionality described in the Requirements set forth in Exhibit A and required by the Authorized User in the applicable SOW has been delivered to the Authorized User. If applicable, Supplier

shall be responsible for ensuring that any individual Deliverable functions properly with any other Deliverable provided pursuant to the SOW. Should a previously Accepted Deliverable require further modification in order to work properly with any other Deliverable, Supplier shall be responsible for all costs associated with such modification.

Authorized User shall commence Acceptance testing within seven (7) days after receipt of the Service or Deliverable. Acceptance testing will be no longer than thirty (30) days, or such longer period as may be agreed in writing between Authorized User and Supplier, for each Deliverable or for the first instance of each Service type set forth in Exhibit D. Authorized User shall provide to Supplier written notice of Acceptance upon completion of installation and successful Acceptance testing. Acceptance of a Service or Deliverable will be deemed to occur on the earlier of (i) delivery by the Authorized User to Supplier of a written notice of Acceptance; (ii) failure of Authorized user to deliver to Supplier either a written notice of Acceptance or a list of outstanding defects within five (5) days of conclusion of the thirty (30) day Acceptance testing period.

C. Cure Period

Supplier shall correct any material reproducible non-conformities identified in writing by the Authorized User and shall thereafter re-submit such previously non-conforming Service or Deliverable for re-testing within seven (7) days of the appropriate Authorized User's written notice of non-conformance, or as otherwise agreed between such Authorized User and Supplier. In the event that Supplier fails to deliver a Service or Deliverable which materially meets the Requirements, the Authorized User may, in its sole discretion: (i) reject the Service or Deliverable in its entirety, and any Service or Deliverable rendered unusable due to the non-conforming Service or Deliverable, and recover amounts previously paid hereunder for all such Services and Deliverables; (ii) issue a "partial Acceptance" of the Service or Deliverable with an equitable adjustment in the price to account for such deficiency; or (iii) conditionally accept the applicable Service or Deliverable while reserving its right to revoke Acceptance if timely correction is not forthcoming. Failure of a Service or a Deliverable to meet, in all material respects, the Requirements after the second set of acceptance tests may constitute a default by Supplier. In the event of such default, the Authorized User may, at its sole discretion, terminate its order, in whole or in part, for the Services to be provided thereunder by Supplier. Supplier shall accept return of the non-conforming Deliverable, and any product or Deliverable rendered unusable due to the non-conforming Service or Deliverable, and Supplier shall refund any monies paid by such Authorized User pursuant to the order, or portion thereof terminated. All costs of de-installation and return of products or Deliverables shall be borne by Supplier. Notwithstanding the foregoing, VITA or the Authorized User shall be entitled to pursue any other remedies that are available to it under this Contract and at law or in equity.

6. LICENSE GRANT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, the license shall be held by the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, the license shall be held by that public body.

If and to the extent that any pre-existing rights are embodied or reflected in the Service Deliverables, and for any Software Deliverable identified in Exhibit D of this Contract and provided hereunder to an Authorized User, Supplier hereby grants to the Commonwealth or the Authorized User, and subject to payment in full for the applicable Service or Deliverable, including any license fee associated with the license of Software hereunder, an irrevocable, perpetual, non-exclusive, worldwide, royalty-free right and license to (i) use, modify, transmit, execute, reproduce, display, perform, distribute copies of and prepare derivative works based upon such pre-existing rights and any derivative works thereof, and (ii) authorize others to do any or all of the foregoing; provided, however, nothing in this paragraph shall be construed to entitle licensee to use the license material for other than its own internal business purposes as defined in the first paragraph of this Section. It is expressly understood that "perpetual" license rights shall commence upon delivery of the Deliverables and shall exist in perpetuity unless otherwise terminated in accordance with the applicable provisions of the Contract.

Notwithstanding any other provision or other unilateral license terms which may be issued by Supplier after the Effective Date of this Contract, and irrespective of whether any such provisions have been proposed prior to or after the issuance of an order which may include Software licensed under this Contract, or the fact that such other agreement may be affixed to or accompany Supplier-provided software upon delivery ("shrink wrap"), the terms and conditions set forth herein shall supersede and govern licensing and delivery of all products and services hereunder.

7. RIGHTS TO WORK PRODUCT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, all rights in, title to, and ownership of Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, all rights in, title to, and ownership of Work Product shall vest with that public body.

A. Work Product

VITA and Supplier each acknowledge that performance of this Contract or any SOW hereunder may result in Work Product. The Parties shall document all Work Product specifications and such specifications shall be made an incorporated exhibit to this Contract. Supplier agrees that it shall promptly and fully disclose to the Commonwealth or the Authorized User any and all Work Product generated, conceived, reduced to practice or learned by Supplier or any of its employees, either solely or jointly with others, during the term or performance of this Contract, which in any way relates to the business of the Commonwealth, VITA, or any Authorized User. Supplier further agrees that neither Supplier nor any of Supplier's employees, nor any party claiming through Supplier or Supplier's employees, shall, other than in the performance of this Contract, make use of or disclose to others any proprietary information relating to the Work Product. All Services performed hereunder shall include delivery of all Work Product source code, object code, executables, and documentation. Supplier agrees that a copy of the most recent Work Product source code shall be provided to the Commonwealth or to the Authorized User pursuant to whose order the Work Product was discovered, created, or developed.

B. Ownership

Supplier agrees that, whether or not the Services are considered "works made for hire" or an employment to invent, all Work Product discovered, created or developed under this Contract shall be and shall remain the sole and exclusive property of the Commonwealth of Virginia and its assigns or the Authorized User and its assigns. Except as specifically set forth in writing and signed by both VITA and Supplier, or Authorized User and Supplier, Supplier agrees that the Commonwealth or the Authorized User shall have all rights with respect to any Work Product discovered, created or developed under this Contract without regard to the origin of the Work Product.

If and to the extent that Supplier may, under applicable law, be entitled to claim any ownership interest in the Work Product, Supplier hereby transfers, grants, conveys, assigns and relinquishes exclusively to the Commonwealth or the Authorized User any and all right, title and interest it now has or may hereafter acquire in and to the Work Product under patent, copyright, trade secret and trademark law in perpetuity or for the longest period otherwise permitted by law. If any moral rights are created, Supplier waives such rights in the Work Product. Supplier further agrees as to the Work Product to assist the Commonwealth or the Authorized User in every reasonable way to obtain and, from time to time, enforce patents, copyrights, and other rights and protection, and in protecting trade secrets, with respect to such Work Product, and to that end, Supplier and its employees shall execute all documents for use in applying for and obtaining such patents, copyrights, and other rights and protection with respect to such Work Product, as the Commonwealth or the Authorized User may reasonably request, together with any assignments thereof to the Commonwealth or the Authorized User or entities designated by the Commonwealth or the Authorized User. Supplier's and its employees' obligations to assist the Commonwealth or the Authorized User in obtaining and enforcing such rights shall continue beyond the termination of this Contract.

The Supplier hereby agrees that, notwithstanding anything else in this Contract, in the event of any breach of this Contract by VITA or any Authorized User, the Supplier's remedy shall not include any right to rescind, otherwise revoke, or invalidate the provisions of this Section. Similarly, no termination of the Contract by VITA shall have the effect of rescinding the provisions of this Section. VITA and Authorized user hereby agree that their rights under this Section 7 are conditioned on and subject to payment in full of all Supplier fees associated with creation of the applicable Work product

C. Reservation of Rights

Nothing in this Section 7 or any other provision of this Contract or any Statement of Work or order issued under this Contract shall prevent either party from using ideas, concepts, expressions, know-how, skills and experience possessed by it prior to, or developed or learned by it in the course of, performance under the Contract or the applicable Statement of Work or order.

D. Return of Materials

Upon termination of this Contract, Supplier shall immediately return to VITA or the appropriate Authorized User all copies, in whatever form, of any and all Confidential Information, Work Product and other properties provided by VITA or such Authorized User, which are in Supplier's possession, custody or control.

8. SUPPLIER PERSONNEL

A. Selection and Management of Supplier Personnel

Supplier shall take such steps as may be necessary to provide that all Supplier personnel performing Services under this Contract are competent and knowledgeable of these contractual arrangements and the applicable SOW between Authorized User and Supplier. Supplier shall be solely responsible for the conduct of its employees, agents, and subcontractors, including all acts and omissions of such employees, agents, and subcontractors, and shall provide that such employees and subcontractors comply with the appropriate Authorized User's site security, information security and personnel conduct rules, as well as applicable federal, state and local laws, including export regulations. Authorized User reserves the right to require the immediate removal from such Authorized User's premises of any employee, subcontractor or agent of Supplier whom such Authorized User believes has failed to comply or whose conduct or behavior is unacceptable or unprofessional or results in a security or safety breach.

All Supplier personnel, including agents and contractors of Supplier, shall be required to sign a non-disclosure agreement (NDA) prior to commencing work on any order issued pursuant to this Contract. In addition, any Authorized User may require such Supplier personnel to execute an additional NDA containing provisions specific to such Authorized User. Supplier shall be responsible for compliance and fully liable for the failure of any Supplier personnel to act in accordance with any NDA, and Supplier shall indemnify, defend, and hold VITA, the Authorized User, their officers, directors, employees and agents harmless from and against any and all fines, penalties (whether criminal or civil), judgments, damages and assessments, including reasonable expenses suffered by, accrued against, or charged to or recoverable from VITA, the Authorized User, their officers, directors, agents or employees, on account of the negligent or intentional failure of Supplier to perform its obligations pursuant to this Section. The notice, defense and settlement requirements specified in the Section entitled "Indemnification and Liability" of this Contract shall apply to the foregoing indemnification.

B. Supplier Personnel Supervision

Supplier acknowledges that Supplier, or any of its agents, contractors, or subcontractors, is and shall be the employer of Supplier personnel, and shall have sole responsibility to supervise, counsel, discipline, review, evaluate, set the pay rates of and terminate the employment of Supplier personnel.

9. GENERAL WARRANTY

With respect to the Services provided by Supplier, Supplier represents and warrants the following:

A. Ownership

Supplier has the right to provide the Services, including Deliverables, without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party.

B. Performance

- i). All Services shall be performed with care, skill and diligence, consistent with or above applicable professional standards currently recognized in its profession, and Supplier shall be responsible for the professional quality, technical accuracy, completeness and coordination of all plans, information, specifications, computer programs, software, Deliverables and Services furnished under this Contract; provided, however that Supplier does not provide any warranty, express or implied, with respect to any Services, Work Product, or Deliverables of any third party that is not Supplier's subcontractor, or with respect to any Software of any such third party or any third party Software product, whether or not such third party is a subcontractor under this Contract;
- ii). The Services are pursuant to a particular order or SOW and therefore such Services and any associated Deliverables shall be fit for the particular purposes defined and agreed to by the Parties in the applicable Statement of Work or order, and Supplier is possessed of expert knowledge with respect to the Services and Deliverables;
- iii). ;
- iv). The Services and Deliverables shall materially meet the applicable Requirements;
- v). The Services shall be performed in a professional manner;
- vi). The Services shall not cause or result in the loss of any data housed by the Authorized User. Supplier will in no event be held responsible under this Section for any loss of data to the extent that the performance of Authorized User, Agents, third parties other than Supplier's subcontractors, or the operation of the ECM or other Software not provided by Supplier contribute to the loss of data;
- vii). The documentation which Supplier is required to provide under this Contract shall be sufficient in detail and content to allow an appropriately trained VITA or Authorized User personnel to understand and fully utilize the Deliverables without reference to any other materials or information.

C. Limited Warranty Period and Remedy

During the Warranty Period, Supplier warrants that the Deliverables shall not contain any material errors and shall function properly and in conformity with the Requirements. Supplier shall correct, at no additional cost to any Authorized User, all material errors identified during the Warranty Period that result in a failure of the Services or Deliverables to function as specified in Exhibit A or in the applicable order. If Supplier is unable to make the Deliverable conform, in all material respects, to the Requirements within ten (10) days or such longer time period as the Parties may agree in writing, following written notification by an Authorized User, Supplier shall, at such Authorized User's request, accept return of such Deliverable and any other related Deliverable(s) rendered unusable, and return all monies paid by such Authorized User for the non-conforming Deliverable and such other related Deliverable(s) rendered unusable.

D. Malicious Code

Supplier has used its reasonable commercial efforts through quality assurance procedures to ensure that there are no Computer Viruses or undocumented features in any software or materials delivered electronically or in an electronic format at the time of delivery to an Authorized User and neither the software nor the media contains any embedded device or code (e.g., time bomb) that is intended to obstruct or prevent any Authorized User's use of the software or the information contained on such media, nor shall Supplier disable any Authorized User's use of such software or media through remote access or otherwise.

E. Open Source

Supplier will notify all Authorized Users if the Software contains any Open Source code and identify the specific Open Source License that applies to any embedded code dependent on Open Source code, provided by Supplier under this Contract.

F. Supplier's Viability

Supplier warrants that it has the financial capacity to perform and continue to perform its obligations under this Contract; that Supplier has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Supplier that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction.

G. Supplier's Past Experience

Supplier warrants that the Services have been successfully performed for a non-related third-party without significant problems due to the Services or Supplier.

THE OBLIGATIONS OF SUPPLIER UNDER THIS GENERAL WARRANTY SECTION ARE MATERIAL. SUPPLIER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY CONCERNING MERCHANTABILITY OR FITNESS FOR ANY OTHER PARTICULAR PURPOSE, INTEGRATION, PERFORMANCE AND ACCURACY, ANY IMPLIED WARRANTIES ARISING FROM STATUTE, COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE.

10. ORDERS AND COMPENSATION**A. Request for Quote**

Authorized Users of this Contract, depending on the complexity of services required and/or each supplier's available resources, have the option to select one or more suppliers to provide systems integration and support services. In addition, an Authorized User may determine that a competitive process is required to ensure it receives the best value. In either or both of such circumstances, the Authorized User may, at its sole discretion, use a Request for Quote (RFQ) process to obtain services identical or similar to those provided by Supplier pursuant to this Contract. The process for obtaining a quote from Supplier, or for obtaining quotes from more than one supplier of systems integration and support services will be as follows:

- i). Authorized User will notify Supplier or suppliers of its requirement for services and will document such requirement in a written SOW in a form substantially similar to that in Exhibit B. Authorized User may request a time and materials and/or fixed price quote in response to such SOW. Authorized User shall include in its RFQ a due date for the submission of quotes in response to such RFQ. Should an Authorized User fail to include such due date, quotes shall be due fifteen (15) days after Authorized User's issuance of the RFQ.
- ii). Supplier may respond to the RFQ by providing a quote, including an estimated total price, and, if requested by the Authorized User, a proposal and documentation of the qualifications of the individual(s) proposed for providing services to the Authorized User. In no event shall Supplier's quote exceed Supplier's Contract pricing (as set forth in Exhibit D). Should Supplier be unable to respond to the RFQ due, for example, to resource constraints, Supplier shall notify Authorized User in writing of its inability to perform the work requested by such Authorized User, and provide the reasons for such inability to perform, prior to the due date for the submission of quotes in response to the RFQ. Supplier's repeated failure to provide a quote in response to an RFQ may be grounds for termination of this Contract.
- iii). Authorized User will evaluate all quotes received and may, at its sole discretion: a) reject all quotes; b) negotiate with one or more suppliers to reach a satisfactory agreement on such items as price discounts, specific deliverables, acceptance and testing criteria, total price, controls, and guidelines; and/or c) place an order with one or more suppliers for all or any portion of the services described in the RFQ.
- iv). Prior to issuing an order for services, Authorized User reserves the right to interview each individual proposed by a supplier to perform work on Authorized User's SOW and has the

right of refusal, if it is determined, in such Authorized User's sole judgment, that an individual lacks sufficient knowledge or experience to perform the required tasks.

- v). Following issuance of an order for Supplier's Services, Supplier shall make available Key Personnel and Project Managers, if any, at the start of the period of performance identified in the associated SOW.
- vi). Supplier shall not commence work until Authorized User has issued a written order to Supplier. Any cost reimbursable work performed or expenses incurred by Supplier prior to the effective date of the order shall not be billed to or reimbursed by the Authorized User.

B. Order

Supplier is required to accept any order placed by an Authorized User through the eVA electronic procurement website portal (<http://www.eva.state.va.us>), assuming that a mutually agreed upon Statement of Work has been signed by both Parties. eVA is the Commonwealth of Virginia's e-procurement system. State agencies, as defined in §2.2-2006 of the Code of Virginia, shall order through eVA. All other Authorized Users are encouraged to order through eVA, but may order through the following means:

- i). Purchase Order (PO): An official PO form issued by an Authorized User.
- ii). Any other order/payment charge or credit card process, such as AMEX, MASTERCARD, or VISA under contract for use by an Authorized User.

This ordering authority is limited to issuing orders for the Services available under this Contract. Under no circumstances shall any Authorized User have the authority to modify this Contract. An order from an Authorized User may contain additional terms and conditions; however, to the extent that the terms and conditions of the Authorized User's order are inconsistent with the terms and conditions of this Contract, the terms of this Contract shall supersede.

Notwithstanding the foregoing, Supplier shall not accept any order from an Authorized User if such order is to be funded, in whole or in part, by federal funds and if, at the time the order is placed, Supplier is not eligible to be the recipient of federal funds as may be noted on any of the Lists of Parties Excluded from Federal Procurement and Nonprocurement Programs.

ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH AN ORDER PLACED BY ANY AUTHORIZED USER ARE THE SOLE OBLIGATION OF SUCH AUTHORIZED USER AND NOT THE RESPONSIBILITY OF VITA UNLESS SUCH AUTHORIZED USER IS VITA.

C. Purchase Price and Price Protection

Exhibit D sets forth the fees and the appropriate Commonwealth discounts. Fees shall not increase and discounts shall not decrease for a period of not less than two (2) years from the Effective Date. No such increase shall exceed the lesser of three percent (3%) or the annual increase in the Consumer Price Index for All Urban Consumers (CPI-U), U.S. City Average, All Items, not seasonally adjusted, as published by the Bureau of Labor Statistics of the Department of Labor (<http://www.bls.gov/cpi/home.htm>), for the effective date of the increase compared with the same index one (1) year prior. Any such change in price shall be submitted to VITA in writing in accordance with the above and shall not become effective for sixty (60) days thereafter.

D. Invoice Procedures

For an order with a period of performance not expected to exceed one (1) month, Supplier shall remit each invoice to the "bill-to" address provided with the order promptly after all Deliverables or Services have been accepted and in accordance with the milestone payment schedule, if any, in the applicable order. For a time and materials type Statement of Work with a period of performance expected to exceed one (1) month, Supplier shall submit invoices to the ordering Authorized User monthly in arrears, unless otherwise specified in such Statement of Work. For a fixed price type Statement of Work, Supplier shall invoice in accordance with the milestone payment schedule, if any, in the applicable order; if such order does not include a milestone payment schedule, Supplier shall invoice after all Deliverables or Services have been accepted by the ordering Authorized User. Payment for software and Deliverable support and maintenance

Services shall be annually in advance unless otherwise stated herein, or in any order referencing this Contract. No invoice shall include any costs other than those identified in the executed order or Statement of Work, which costs shall be in accordance with Exhibit D. Without limiting the foregoing, all shipping costs are the Supplier's responsibility except to the extent such charges are identified in Exhibit D, or as noted in any executed order or Statement of Work referencing this Contract. Invoices issued by the Supplier shall identify at a minimum:

- i). Deliverable or Service type, or project milestone, and description
- ii). Quantity, charge and extended pricing for each Deliverable and/or Service item or milestone; or, for a time and materials type order, the name(s) of the assigned employee(s), the hourly rate(s), and the number of hours worked;
- iii). Applicable order date or Statement of Work date
- iv). This Contract number and the applicable order number
- v). Supplier's Federal Employer Identification Number (FEIN).

Any terms included on Supplier's invoice shall have no force or effect and will in no way bind VITA or any Authorized User.

E. Invoice and Payment Terms

All payment obligations under this Contract are subject to the availability of legislative appropriations at the federal, state, or local level, for this purpose. In the event of non-appropriation of funds, irrespective of the source of funds, for the items under this Contract, VITA may terminate this Contract, in whole or in part, or any order or Statement of Work, in whole or in part, or an Authorized User may terminate an order, in whole or in part, for those goods or services for which funds have not been appropriated. Written notice will be provided to the Supplier as soon as possible after legislative action is completed. Termination for lack of appropriations shall not affect any perpetual license granted pursuant to this Contract, provided all fees for such license have been paid.

Supplier is responsible for the accuracy of its billing information. Supplier agrees not to issue invoices hereunder until Services have been performed or milestones have met Acceptance criteria. Charges for Services accepted more than ninety (90) days prior to receipt of a valid invoice may not be paid, except in accordance with a milestone payment schedule. Should Supplier repeatedly over bill Authorized User, Authorized User may assess a one percent (1%) charge for the amount over billed for each month that such over billing continues.

In the event any Deliverable is shipped without the applicable documentation, payment shall not be due until the required documentation is provided.

If there are any disputed items, the appropriate Authorized User shall pay all undisputed charges and promptly notify Supplier in writing of any disputed amount. Supplier shall thereupon review its records, and, if it does not concur with such Authorized User, provide such Authorized User with documentation to support the charge. If such charges remain in dispute, such dispute shall be resolved in accordance with the Dispute Resolution section of this Contract. In the absence of the Supplier's written evidence identifying the merit of the disputed amounts, Authorized User may not pay the disputed amounts and may consider the matter concerning the specific identified amounts closed. All payment terms are net 30 days after Acceptance.

F. Reimbursement of Expenses

If allowable pursuant to an Authorized User's SOW, such Authorized User shall pay, or reimburse Supplier, for all reasonable and actual travel-related expenses for greater than thirty (30) miles from portal to portal incurred by Supplier during the relevant period; provided, however, that such Authorized User shall only be liable to pay for Supplier's travel-related expenses, including transportation, meals, lodging and incidental expenses, that have been authorized by such Authorized User in advance and which will be reimbursable by such Authorized User at the then-current per diem amounts as published by the Virginia Department of Accounts (http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/20335_1206.pdf), or a successor URL(s)).

All reimbursed expenses will be billed to the Authorized User on a pass-through basis without any markup by Supplier. At Authorized User's request, Supplier shall provide copies of receipts for all travel expenses over US\$30.00.

G. Supplier's Report of Sales and Industrial Funding Adjustment

By the 10th day of every month, the Supplier shall submit the "Supplier Monthly Report of Sales". A template showing the format in which the report is to be submitted and contact information for submission is available at <http://www.vita.virginia.gov/procurement/supplierResources.cfm> under "Supplier Reporting". The report shall be submitted via electronic mail to the VITA IFA Coordinator and shall report total sales (defined for purposes of this report as all invoiced payments received by Supplier from all Authorized Users) for this Contract during the preceding month. Supplier shall be responsible for submitting the monthly report of sales even if Supplier has had no sales (i.e., a \$0.00 total sales value) for the reporting period.

The Supplier shall submit the Industrial Funding Adjustment (IFA) payment for the period covered by such "Supplier Monthly Report of Sales" within thirty (30) days after submitting the "Supplier Monthly Report of Sales". The IFA payment is equal to two percent (2%) of total sales reported during the relevant month.

The IFA payment shall be submitted to VITA, Attention VITA Controller in the form of a check or electronic payment, made payable to the Treasurer of Virginia. The IFA payment shall reference this Contract number, "report amounts", and "report period" and shall be accompanied by a copy of the relevant "Supplier Monthly Report of Sales". Contact information for submission of IFA payments is available at <http://www.vita.virginia.gov/procurement/supplierResources.cfm> under "Supplier Reporting".

Failure to comply with reporting, payment and distribution requirements of this section may result in default of the Contract.

H. Small, Woman, and Minority-Owned Business (SWaM) Participation

Supplier and VITA agree to meet promptly after the Effective Date of this Contract to discuss the participation of Virginia Department of Minority Business Enterprise (DMBE)-certified Small, Woman, and Minority Owned Businesses (SWaMs) as subcontractors and second-tier suppliers under this Contract. Supplier and VITA will review Supplier's SWaM subcontracting plan, which was submitted with Supplier's proposal, and SWaM subcontract reporting, and will discuss ways of encouraging SWaM participation and increasing subcontracting spend with SWaM suppliers.

Supplier and VITA agree to meet annually thereafter to review SWaM subcontracting reports and discuss further action with respect to SWaM subcontracting and spend.

Discussions regarding SWaM subcontracting may be held in conjunction with meetings of the Steering Committee, as described in the Steering Committee section of this Contract.

In addition, by the 10th day of every month, Supplier shall submit to VITA the Small, Woman, and Minority Owned Business (SWaM) Subcontracting Monthly Report (template available at <http://www.vita.virginia.gov/procurement/supplierResources.cfm>). Supplier's report should include spend on all Supplier's contracts with second-tier suppliers which provide products or services under this Contract. The report should specify the amount of such spend provided to SWaM vendors, by SWaM category, regardless of such SWaM vendors' certification status. Supplier shall submit the report to SWaM@vita.virginia.gov.

11. RESERVED

12. CONFIDENTIALITY

A. Treatment and Protection

Each Party shall (i) hold in strict confidence all Confidential Information of any other Party, (ii) use the Confidential Information solely to perform or to exercise its rights under this Contract, and (iii) not transfer, display, convey or otherwise disclose or make available all or any part of such Confidential Information to any third-party. However, an Authorized User may disclose the Confidential Information as delivered by Supplier to subcontractors, contractors or agents of such Authorized User that are bound by non-disclosure contracts with such Authorized User. Each

Party shall take the same measures to protect against the disclosure or use of the Confidential Information as it takes to protect its own proprietary or confidential information (but in no event shall such measures be less than reasonable care).

B. Exclusions

The term “Confidential Information” shall not include information that is:

- i). in the public domain through no fault of the receiving Party or of any other person or entity that is similarly contractually or otherwise obligated;
- ii). obtained independently from a third-party without an obligation of confidentiality to the disclosing Party and without breach of this Contract;
- iii). developed independently by the receiving Party without reference to the Confidential Information of the other Party; or
- iv). required to be disclosed under The Virginia Freedom of Information Act (§§2.2-3700 et seq. of the Code of Virginia) or similar laws or pursuant to a court order.

C. Return or Destruction

Upon the termination or expiration of this Contract or upon the earlier request of the disclosing Authorized User, Supplier shall (i) at its own expense, (a) promptly return to the disclosing Authorized User all tangible Confidential Information (and all copies thereof except the record required by law) of the disclosing Authorized User, or (b) upon written request from the disclosing Authorized User, destroy such Confidential Information and provide the disclosing Authorized User with written certification of such destruction, and (ii) cease all further use of the Authorized User’s Confidential Information, whether in tangible or intangible form.

VITA or the Authorized User shall retain and dispose of Supplier’s Confidential Information in accordance with the Commonwealth of Virginia’s records retention policies or, if Authorized User is not subject to such policies, in accordance with such Authorized User’s own records retention policies.

D. Confidentiality Statement

All Supplier personnel, contractors, agents, and subcontractors performing Services pursuant to this Contract shall be required to sign a confidentiality statement or non-disclosure agreement. Any material violation of such statement or agreement shall be deemed a breach of this Contract and may result in termination of the Contract or any order issued hereunder.

13. INDEMNIFICATION AND LIABILITY

A. Indemnification

Supplier agrees to indemnify, defend and hold harmless the Commonwealth, VITA, or any Authorized User, their officers, directors, agents and employees (collectively, “Commonwealth’s Indemnified Parties”) from and against third party claims, demands, proceedings, suits and actions, including any related liabilities, obligations, losses, damages, assessments, fines, penalties (whether criminal or civil), judgments, settlements, expenses (including reasonable attorneys’ and accountants’ fees and disbursements) and costs (each, a “Claim” and collectively, “Claims”), for (i) personal injury and damage to tangible personal property incurred by, borne by or asserted against any of Commonwealth’s Indemnified Parties to the extent such Claims in any way relate to, arise out of or result from any intentional or willful misconduct or negligence of any employee, agent, or subcontractor of Supplier, and (ii) any actual or alleged infringement or misappropriation of any third party’s intellectual property rights by any of the Services or Deliverables. Selection and approval of counsel and approval of any settlement shall be accomplished in accordance with all applicable laws, rules and regulations. For state agencies the applicable laws include §§ 2.2-510 and 2.2-514 of the Code of Virginia. In all cases the selection and approval of counsel and approval of any settlement shall be satisfactory to VITA or the Authorized User against whom the claim has been asserted.

VITA or Authorized User, as applicable, agree to promptly notify Supplier in writing of the Claim, providing Supplier a copy of all notices received by the VITA or Authorized User with respect to

the Claim, cooperating with Supplier in defending or settling the Claim, and allowing Supplier to control the defense and settlement of the Claim. VITA or Authorized User may observe the proceedings concerning the Claim and confer with Supplier at its own expense.

In the event that a Claim is commenced against any of Commonwealth's Indemnified Parties alleging that use of any Deliverable or that the provision of Services under this Contract infringes any third party's intellectual property rights and Supplier is of the opinion that the allegations in such Claim in whole or in part are not covered by this indemnification provision, Supplier shall immediately notify VITA and the affected Authorized User(s) in writing, via certified mail, specifying to what extent Supplier believes it is obligated to defend and indemnify under the terms and conditions of this Contract. Supplier shall in such event use reasonable efforts to protect the interests of the Commonwealth's Indemnified Parties and secure a continuance to permit VITA and the affected Authorized User(s) to appear and defend their interests in cooperation with Supplier as is appropriate, including any jurisdictional defenses VITA or the affected Authorized User(s) may have.

In the event of a Claim pursuant to any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Services or Deliverables, and in addition to all other obligations of Supplier in this Section, Supplier shall at its expense, either (a) procure for all Authorized Users the right to continue use of such infringing Services or Deliverables, or any component thereof; or (b) replace or modify such infringing Services or Deliverables, or any component thereof, with non-infringing products or services satisfactory to VITA. And in addition, Supplier shall provide any Authorized User with comparable temporary replacement deliverables and services, or reimburse VITA or any Authorized User for the reasonable costs incurred by VITA or such Authorized User in obtaining alternative products and services in the event such Authorized User cannot use the affected Deliverable or benefit from the affected Services. If Supplier cannot accomplish any of the foregoing within a reasonable time and at commercially reasonable rates, then Supplier shall accept the return of the infringing component of the Services or Deliverable, along with any other components of any products rendered unusable by any Authorized User as a result of the infringing component, and refund the price paid to Supplier for such components equitably reduced to account for depreciation of the allegedly infringing item..

B. Liability

Supplier shall have unlimited liability with respect to (i) any intentional or willful misconduct or gross negligence of any employee, agent, or subcontractor of Supplier, (ii) claims for bodily injury, including death, and real and tangible property damage, (iii) Supplier's indemnification obligations in the Section entitled "Indemnification and Liability", (iv) Supplier's confidentiality obligations, and (v) Supplier's security compliance obligations. Supplier agrees that it is fully responsible for all acts and omissions of its employees, agents, and subcontractors, including their gross negligence or willful misconduct.

FOR ALL OTHER CONTRACTUAL CLAIMS, THE PARTIES WILL ONLY BE LIABLE FOR ACTUAL AND DIRECT DAMAGES. IN NO EVENT WILL ANY PARTY BE LIABLE TO ANY OTHER PARTY FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING (WITHOUT LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF, EXCEPT WHEN SUCH DAMAGES ARE CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE PARTY, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS. IN NO EVENT WILL SUPPLIER BE LIABLE FOR ACTUAL AND DIRECT DAMAGES IN EXCESS OF THE GREATER OF \$100,000 OR THE VALUE OF THE APPLICABLE ORDER.

14. INSURANCE

In addition to the insurance coverage required by law as specified in the URL identified in the Incorporated Contractual Provisions section of this Contract, Supplier shall carry errors and omissions insurance coverage in the amount of US\$1,000,000 per claim.

Supplier shall also maintain and furnish evidence of a fidelity bond or a blanket crime bond in an amount of at least one million dollars (US\$1,000,000) per occurrence which contains an endorsement

with the following terminology or its substantive equivalent: "The Company [Insurance Company] shall be liable under the fidelity insuring agreement on account of loss sustained by the Commonwealth or any Authorized User of the Contract through fraudulent or dishonest acts committed by any of Supplier's employees or contractors while performing their duties for any Authorized User whether or not Supplier is legally liable for such loss."

Provisions of this section as to maintenance of insurance shall not be construed as limiting in any way the extent to which Supplier may be held responsible for payment for damages to persons or property resulting from its activities or the activities of any of its employees or contractors or other person(s) for which Supplier is otherwise responsible.

15. PERFORMANCE AND PAYMENT BONDS

An Authorized User may require, as a condition of its SOW, that Supplier deliver to such Authorized User a fully office executed Commonwealth of Virginia Standard Performance and Payment Bond, or other standard form document required by such Authorized User, in the sum of the SOW amount, with the Commonwealth of Virginia or the Authorized User, as applicable, as obligee. The surety shall be a surety company or companies approved by the State Corporation Commission to transact business in the Commonwealth of Virginia. No payment shall be due and payable to Supplier, even if the SOW has been performed in whole or in part, until the bond(s) has been delivered to and approved by the Authorized User.

16. SECURITY COMPLIANCE

Supplier agrees to comply with all provisions of the then-current Commonwealth of Virginia security procedures, published by the Virginia Information Technologies Agency (VITA) and which may be found at (<http://www.vita.virginia.gov/docs/psg.cfm>) or a successor URL(s), as are pertinent to Supplier's operation. Supplier further agrees to comply with all provisions of the relevant Authorized User's then-current security procedures as are pertinent to Supplier's operation and which have been supplied to Supplier by such Authorized User. Supplier shall also comply with all applicable federal, state and local laws and regulations, including but not limited to the Sarbanes-Oxley Act of 2002 (SOX), and the Health Insurance Portability and Accountability Act (HIPAA). For any individual Authorized User location, security procedures may include but not be limited to: background checks, records verification, photographing, and fingerprinting of Supplier's employees or agents. Supplier may, at any time, be required to execute and complete, for each individual Supplier employee or agent, additional forms which may include non-disclosure agreements to be signed by Supplier's employees or agents acknowledging that all Authorized User information with which such employees and agents come into contact while at the Authorized User site is confidential and proprietary. Any unauthorized release of proprietary information by the Supplier or an employee or agent of Supplier shall constitute a breach of this Contract.

Supplier shall indemnify, defend, and hold the Commonwealth, VITA, the Authorized User, their officers, directors, employees and agents harmless from and against any and all fines, penalties (whether criminal or civil), judgments, damages and assessments, including reasonable expenses suffered by, accrued against, or charged to or recoverable from the Commonwealth, VITA, the Authorized User, their officers, directors, agents or employees, on account of the failure of Supplier to perform its obligations pursuant this Section.

17. IMPORT/EXPORT

Any product generated from any data collected, developed, analyzed, or otherwise used or obtained by Supplier pursuant to Supplier's performance of this Contract shall be considered Data Product.

Supplier shall not export or re-export any data collected, developed, analyzed, or otherwise used or obtained by Supplier pursuant to Supplier's performance of this Contract, or any Data Product, to any country, person, entity or end user subject to U.S. export restrictions. Supplier specifically agrees not to export, re-export, or download such data or Data Product: (a) to any country to which the U.S. has embargoed or restricted the export of goods or services, which currently include, but are not necessarily limited to Cuba, Iran, Iraq, Libya, North Korea, Sudan, Syria, Federal Republic of

Yugoslavia, or to any national of any such country; (b) to any end-user who Supplier knows or has reason to know will utilize the data or Data Product or portion thereof in the design, development or production of nuclear, chemical, or biological weapons, or for any purpose which may, directly or indirectly, pose a security threat to the United States or its territories; or (c) to any end-user who has been prohibited from participating in U.S. export transactions by any federal agency of the U.S. government. Supplier is responsible for complying with applicable local laws in Supplier's jurisdiction, as well as all applicable federal and state laws and regulations regarding import and export, which might impact its right to import, export, or use the data or Data Product.

In addition, VITA requires that any data deemed "restricted" or "sensitive" by either federal or state authorities, must only be collected, developed, analyzed, or otherwise used or obtained by persons or entities working within the boundaries of the United States.

18. BANKRUPTCY

If Supplier becomes insolvent, takes any step leading to its cessation as a going concern, fails to pay its debts as they become due, or ceases business operations continuously for longer than fifteen (15) business days, then VITA may immediately terminate this Contract, or an Authorized User may terminate an order, on notice to Supplier unless Supplier immediately gives VITA or such Authorized User adequate assurance of the future performance of this Contract or the applicable order. If bankruptcy proceedings are commenced with respect to Supplier, and if this Contract has not otherwise terminated, then VITA may suspend all further performance of this Contract until Supplier assumes this Contract and provides adequate assurance of performance thereof or rejects this Contract pursuant to Section 365 of the Bankruptcy Code or any similar or successor provision, it being agreed by the VITA and Supplier that this is an executory contract. Any such suspension of further performance by VITA pending Supplier's assumption or rejection shall not be a breach of this Contract, and shall not affect the rights of VITA or any Authorized User to pursue or enforce any of its rights under this Contract or otherwise.

19. STEERING COMMITTEE AND GOVERNANCE

A. Steering Committee

In order to facilitate mutually beneficial contractual relationships with suppliers, VITA has procedures for establishing a steering committee ("Steering Committee"), which will consist of senior management personnel, including personnel involved in the contractual relationship, from VITA and Supplier.

Roles of the Steering Committee will include but not be limited to a) identifying potential issues which may arise during the performance of a contract, b) discussing and assigning roles and responsibilities, c) establishing methods for quickly resolving potential disputes, d) setting rules for communication and decision making, e) monitoring and measuring the business relationship between the parties, and f) acting as a final decision board for escalated problems.

A meeting of the Steering Committee is intended to be a forum for brainstorming and sharing ideas, emphasizing respect, cooperation, and access, with the end goal of developing relationships to avoid conflict. A facilitator may, but is not required to, conduct a meeting of the Steering Committee.

The Steering Committee will meet within thirty (30) days of the Effective Date of this Contract and will meet annually thereafter during the term of the Contract, including any extension thereto. One or more additional meetings may be held at any time during the Contract term, should VITA, at its sole discretion, determine that a meeting(s) would be beneficial to the contractual relationship, and Supplier agrees to participate in such meeting(s). In addition, Supplier may at any time submit a written request to VITA for a meeting of the Steering Committee, which VITA will not unreasonably deny.

Supplier shall ensure the availability of the appropriate personnel to meet with the Steering Committee. Additional Steering Committee meetings involving representatives from VITA, the Supplier, and an Authorized User may be required prior to or during performance on any specific Statement of Work issued pursuant to this Contract.

B. Governance

Each SOW issued pursuant to this Contract shall include procedures for governance of such SOW. At a minimum, such procedures shall include monthly status reporting by Supplier, appointment by Supplier and Authorized User of SOW Managers, and a coordinated response to any findings of any IV&V contractor(s) assigned to the SOW. Supplier agrees to comply with its obligations pursuant to the governance procedures set forth in any SOW issued pursuant to this Contract.

20. GENERAL PROVISIONS**A. Relationship Between VITA and Authorized User and Supplier**

Supplier has no authority to contract for VITA or any Authorized User or in any way to bind, to commit VITA or any Authorized User to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of VITA or any Authorized User. Under no circumstances shall Supplier, or any of its employees, hold itself out as or be considered an agent or an employee of VITA or any Authorized User, and neither VITA nor any Authorized User shall have any duty to provide or maintain any insurance or other employee benefits on behalf of Supplier or its employees. Supplier represents and warrants that it is an independent contractor for purposes of federal, state and local employment taxes and agrees that neither VITA nor any Authorized User is responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to, income tax withholding and social security contributions, for Supplier. Any and all taxes, interest or penalties, including, but not limited to, any federal, state or local withholding or employment taxes, imposed, assessed or levied as a result of this Contract shall be paid or withheld by Supplier or, if assessed against and paid by VITA or any Authorized User, shall be reimbursed by Supplier upon demand by VITA or such Authorized User.

B. Incorporated Contractual Provisions

The contractual provisions at the following URL are mandatory contractual provisions, required by law or by VITA, that are hereby incorporated by reference:

<http://www.vita.virginia.gov/procurement/documents/MandatoryContractTsandCs.pdf>

The contractual claims provision §2.2-4363 of the Code of Virginia and the required eVA provisions at <http://www.vita.virginia.gov/procurement/documents/eVATsandCs.pdf> are also incorporated by reference.

The terms and conditions in documents posted to the aforereferenced URLs are subject to change pursuant to action by the legislature of the Commonwealth of Virginia, change in VITA policy, or the adoption of revised eVA business requirements. If a change is made to the terms and conditions, a new effective date will be noted in the document title. Supplier is advised to check the URLs periodically.

C. Compliance with the Federal Lobbying Act

Supplier shall not, in connection with this Contract, engage in any activity prohibited by 31 USC 1352 (entitled "Limitation on use of appropriated funds to influence certain Federal Contracting and financial transactions") or by the regulations issued from time to time thereunder (together, the "Lobbying Act"), and shall promptly perform all obligations mandated by the Lobbying Act in connection with this Contract, including, without limitation, obtaining and delivering to the Commonwealth all necessary certifications and disclosures.

Supplier is hereby advised that a significant percentage of the funds used to pay Supplier's invoices under this Contract may be federal funds. Under no circumstances shall any provision of this Contract be construed as requiring or requesting the Supplier to influence or attempt to influence any person identified in 31 USC 1352(a)(1) in any matter.

Supplier's signed certification of compliance with the foregoing is incorporated as Exhibit E hereto.

D. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia without regard to that body of law controlling choice of law. Any and all litigation shall be brought in the circuit courts of the Commonwealth of Virginia. The English

language version of this Contract prevails when interpreting this Contract. The United Nations Convention on Contracts for the International Sale of Goods and all other laws and international treaties or conventions relating to the sale of goods are expressly disclaimed. UCITA shall apply to this Contract only to the extent required by §59.1-501.15 of the Code of Virginia.

E. Dispute Resolution

In accordance with §2.2-4363 of the Code of Virginia, Contractual claims, whether for money or other relief, shall be submitted in writing to the public body from whom the relief is sought no later than sixty (60) days after final payment; however, written notice of the Supplier's intention to file such claim must be given to such public body at the time of the occurrence or beginning of the work upon which the claim is based. Pendency of claims shall not delay payment of amounts agreed due in the final payment. The relevant public body shall render a final decision in writing within thirty (30) days after its receipt of the Supplier's written claim.

The Supplier may not invoke any available administrative procedure under §2.2-4365 of the Code of Virginia nor institute legal action prior to receipt of the decision of the relevant public body on the claim, unless that public body fails to render its decision within thirty (30) days. The decision of the relevant public body shall be final and conclusive unless the Supplier, within six (6) months of the date of the final decision on the claim, invokes appropriate action under §2.2-4364, Code of Virginia or the administrative procedure authorized by §2.2-4365, Code of Virginia.

Upon request from the public body from whom the relief is sought, Supplier agrees to submit any and all contractual disputes arising from this Contract to such public body's alternative dispute resolution (ADR) procedures, if any. Supplier may invoke such public body's ADR procedures at any time and concurrently with any other statutory remedies prescribed by the Code of Virginia.

In the event of any breach by a public body, Supplier's remedies shall be limited to claims for damages and Prompt Payment Act interest and, if available and warranted, equitable relief, all such claims to be processed pursuant to this Section. In no event shall Supplier's remedies include the right to terminate any license or support services hereunder.

F. Advertising and Use of Proprietary Marks

Supplier shall not use the name of VITA or any Authorized User or refer to VITA or any Authorized User, directly or indirectly, in any press release or formal advertisement without receiving prior written consent of VITA or such Authorized User. In no event may Supplier use a proprietary mark of VITA or an Authorized User without receiving the prior written consent of VITA or the Authorized User.

G. Notices

Any notice required or permitted to be given under this Contract shall be in writing and shall be deemed to have been sufficiently given if delivered in person, or if deposited in the US mails, postage prepaid, for mailing by registered, certified mail, or overnight courier service addressed to the addresses shown on the signature page. VITA or Supplier may change its address for notice purposes by giving the other Party notice of such change in accordance with this Section.

H. No Waiver

Any failure to enforce any terms of this Contract shall not constitute a waiver.

I. Assignment

This Contract shall be binding upon and shall inure to the benefit of the permitted successors and assigns of VITA and Supplier. Supplier may not assign, subcontract, delegate or otherwise convey this Contract, or any of its rights and obligations hereunder, to any entity without the prior written consent of VITA, and any such attempted assignment or subcontracting without consent shall be void. VITA may assign this Contract to any entity, so long as the assignee agrees in writing to be bound by the all the terms and conditions of this Contract.

If any law limits the right of VITA or Supplier to prohibit assignment or nonconsensual assignments, the effective date of the assignment shall be thirty (30) days after the Supplier gives VITA prompt written notice of the assignment, signed by authorized representatives of both the Supplier and the assignee. Any payments made prior to receipt of such notification shall not be covered by this assignment.

J. Captions

The captions are for convenience and in no way define, limit or enlarge the scope of this Contract or any of its Sections.

K. Severability

Invalidity of any term of this Contract, in whole or in part, shall not affect the validity of any other term. VITA and Supplier further agree that in the event such provision is an essential part of this Contract, they shall immediately begin negotiations for a suitable replacement provision.

L. Survival

The provisions of this Contract regarding License, Rights To Work Products, Warranty, Confidentiality, Liability and Indemnification, and the General Provisions shall survive the expiration or termination of this Contract.

M. Force Majeure

No Party shall be responsible for failure to meet its obligations under this Contract if the failure arises from causes beyond the control and without the fault or negligence of the non-performing Party. If any performance date under this Contract is postponed or extended pursuant to this section for longer than thirty (30) calendar days, VITA, by written notice given during the postponement or extension, may terminate Supplier's right to render further performance after the effective date of termination without liability for that termination, and in addition an Authorized User may terminate any order affected by such postponement or delay.

N. Remedies

The remedies set forth in this Contract are intended to be cumulative. In addition to any specific remedy, VITA and all Authorized Users reserve any and all other remedies that may be available at law or in equity.

O. Right to Audit

VITA reserves the right to audit those Supplier records that relate to the Services rendered or the amounts due Supplier for such Services under this Contract. VITA's right to audit shall be limited as follows:

- i). Three (3) years from Service performance date;
- ii). Performed at Supplier's premises, during normal business hours at mutually agreed upon times; and
- iii). Excludes access to Supplier cost information.

The Supplier shall not have the right to audit, or require to have audited, VITA or any Authorized User.

P. Offers of Employment

During the first twelve (12) months of the Contract, neither Party shall hire an employee of the other Party who has substantially worked on any project covered by this Contract without prior written consent.

Q. Contract Administration

Supplier agrees that at all times during the term of this Contract an account executive, at Supplier's senior management level, shall be assigned and available to VITA. Supplier reserves the right to change such account executive upon reasonable advance written notice to VITA.

R. Entire Contract

The following Exhibits, including all subparts thereof, are attached to this Contract and are made a part of this Contract for all purposes:

- i). Exhibit A Service Requirements
- ii). Exhibit B Statement of Work (SOW) Template
- iii). Exhibit C Reserved
- iv). Exhibit D Service Fees

v). Exhibit E Certification Regarding Lobbying

This Contract, its Exhibits, and any prior non-disclosure agreement constitute the entire agreement between VITA and Supplier and supersede any and all previous representations, understandings, discussions or agreements between VITA and Supplier as to the subject matter hereof. Any and all terms and conditions contained in, incorporated into, or referenced by the Supplier's Proposal shall be deemed invalid. The provisions of the Virginia Department of General Services, Division of Purchases and Supply Vendor's Manual shall not apply to this Contract or any order issued hereunder. This Contract may only be amended by an instrument in writing signed by VITA and Supplier. In the event of a conflict, the following order of precedence shall apply: this Contract document, Exhibit A, Exhibit D, and then any SOW issued hereunder.

An Authorized User and Supplier may enter into an ordering agreement pursuant to this Contract. To the extent that such ordering agreement include any terms and conditions inconsistent with the terms and conditions of this Contract, such terms and conditions shall be of no force and effect.

VITA and Supplier each acknowledge that it has had the opportunity to review this Contract and to obtain appropriate legal review if it so chose.

Executed as of the last date set forth below by the undersigned authorized representatives of VITA and Supplier.

Supplier
By: Dean C Merrill

(Signature)

Name: Dean C Merrill

(Print)

Title: Vice President Consulting

Date: Nov 9, 2007

Address for Notice:

CGI
600 EAST MAIN ST, Floor UL
Richmond, VA 22219

Attention: Dean Merrill

VITA
By: James T. Roberts

(Signature)

Name: James T. Roberts

(Print)

Title: Director Finance & Administration

Date: 11/20/07

Address for Notice:

CESC
11751 Meadowville Lane
Chester, VA 23836

Attention: Contract Administrator

EXHIBIT A
CONTRACT NUMBER VA-071114-CGI
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
CGI, INC.

Exhibit A is hereby incorporated into and made an integral part of Contract Number VA-071114-CGI ("Contract") between the Virginia Information Technologies Agency ("VITA" or "Commonwealth" or "State") and CGI, Inc. ("Supplier").

In the event of any discrepancy between this Exhibit A and Contract No. VA-071114-CGI, the provisions of Contract No. VA-071114-CGI shall control.

A. Base 1

Estimated Storage Capacity: DEQ anticipates storing approximately 34 million pages within the next five (5) years. This includes the backfile conversion for all media in the deployment list as well as ongoing work for five (5) years from the date of implementation. The volume of back-file and on-going documents to be scanned for programs between years six (6) and ten (10) after implementation is anticipated to be 25 million additional pages. This includes on-going work for those areas on the deployment list and back-file conversion and on-going work for those areas not on the deployment list such as Administration, Policy, Water Resources and Environmental Enhancement. In summary, DEQ anticipates that it will require storage for 59 million pages within the next ten (10) years and 100% increase beyond that for 118 million pages.

The system should be configured to accommodate the maximum daily input volumes. The system will most likely require a maximum input of up to 3,500 pages per day per scanner from up to 20 scanners not including input from the fax service or those created or received electronically in native format.

Suppliers should make storage subsystem recommendations with consideration given to DEQ's existing infrastructure. Currently DEQ has approximately 4.5 million TIFF images equating to 421,521 documents. The current system utilizes 238 GB of non-compressed storage, which includes image storage, indices and log files. This results in an average of 50K bytes per page including index and log space.

It is anticipated that due to storing a large number of documents in native mode, the average storage space per document will significantly decrease as on-going work functions are accomplished through ECM. The estimated storage for the next five (5) years is anticipated to be 1.36 TB. The subsequent five (5) years are expected to require a total of 1TB of additional storage. DEQ will utilize the existing SAN for this storage. Based on the volumes provided, the supplier should validate the storage requirements.

Can you provide the necessary services for the required storage capacity estimation?

Yes, CGI has a wealth of experience in helping clients determine their overall storage capacity. As part of our ECM methodology, CGI estimates storage capacity on every ECM project.

As a preliminary estimate, at 6.8 million pages per year in the first five years utilizing the statistical average of 50k of data per page in TIFF format with a resolution of 200dpi, the following statistics are provided:

- 130,770 pages per week for the first five years, 96,150 pages per week for years six through ten;
- 6.24 GB per week of document storage for the first five years, 4.59 GB for years six through ten;
- 324.5 GB per year of document storage for the first five years, 238.7 GB for years six through ten

Higher-resolution images will increase production storage requirements dramatically. Figures are included for production storage utilizing 300 DPI TIFF images.

The following table predicts the annual storage requirements for the next ten (10) years.

Exhibit Error! No text of specified style in document.-1 Projected Annual Storage Requirements

Year	Annual Volume	Production Images	Total Production Storage	Total Production Storage @ 300 DPI	Database Storage
2007	6,800,000	6,800,000	324.5 GB	730.13 GB	30 GB
2008	6,800,000	13,600,000	649.0 GB	1.46 TB	60 GB
2009	6,800,000	20,400,000	973.5 GB	2.19 TB	90 GB
2010	6,800,000	27,200,000	1.30 TB	2.92 TB	120 GB
2011	6,800,000	34,000,000	1.63 TB	3.65 TB	150 GB
2012	5,000,000	39,000,000	1.86 TB	4.19 TB	180 GB
2013	5,000,000	44,000,000	2.10 TB	4.72 TB	210 GB
2014	5,000,000	49,000,000	2.34 TB	5.26 TB	240 GB
2015	5,000,000	54,000,000	2.58 TB	5.80 TB	270 GB
2016	5,000,000	59,000,000	2.82 TB	6.33 TB	300 GB

In regards to current storage, the existing 238GB of data can be migrated into the ECM environment for unified access to existing and new data, reducing systems in use and redundant storage of information. However, storage of the images within the system will not necessarily reduce the space currently utilized. Please refer to the estimates shown above for disk space consumed by DEQ utilization of the ECM solution.

Other document “types” can be utilized as well. Among those formats is the popular Adobe Acrobat Portable Document Format (PDF). Depending on features utilized within the PDF, PDF documents can be larger than compressed TIFF images, or hover around the same size as the TIFF.

Another choice would be to utilize Kofax VRS software services to further improve TIFF scanning quality. The implementation of VRS may require additional hardware and software, but there are substantial benefits to utilizing Kofax VRS, which typically includes improved accuracy in optical character recognition programs (OCR), automatic image clarity improvement, utilization of barcode recognition, and smaller file sizes. In our experience, utilizing VRS instead of normal document scanning solutions leads to improved document compression and clarity of the document, as well as improved OCR and sped-up image indexing times.

B. Base 2

Storage Options: Long-term document storage will be maintained in a storage subsystem(s) that could be made up of a combination of storage media including magnetic disk and other media types. DEQ may wish to move files that are used less frequently to an on off-line media. If there are DEQ document classes/types that need to be retained beyond their active life, it may be possible to use other storage media. Suppliers should recommend a cost effective solution and justify their recommendation for storage design given DEQ's environment to include discussion of viewing options and limitations. Any proposed solution should have the near-line storage completely automated while the off-line solution should have the least amount of manual intervention that is practical.

All documents stored in the system will need to be accessible throughout the retention schedules regardless of the media. Retention schedules do exist and they are being updated by DEQ. DEQ will modify/enhance/enforce retention schedules using a records management module. Supplier should address how DEQ handles retention since documents generally have an 'active life' during which they are used more frequently. After its active life, files are required less frequently but need to be assessable, even by the public. In many cases, the date that begins retention is triggered by a date in CEDS. The supplier should implement this integration.

Suppliers should describe, in detail, their recommended approach for storage of the information. This should incorporate storage media and a recommendation of whether it is necessary or desirable to provide cached images at a regional level. A further alternative may be to cache only those documents involved in a "workflow" process locally rather than all regional documents. Other options may exist. Suppliers are expected to analyze, as part of their detail design, the bandwidth requirements, document size, and transaction estimates based upon the data provided in this document as well as Appendix E - DEQ Technology Infrastructure Diagram to recommend a storage, search and retrieval strategy for DEQ. The investment in the current infrastructure should not be ignored; however, emphasis should be placed upon the best business solution for DEQ.

Can you provide the necessary services for the required storage options analysis?

Yes, CGI can provide services for storage analysis. Based on our experience with various storage technologies over the past twenty years, we strongly recommend storage area networks comprised of magnetic hard drives for purposes of hard drive redundancy, increased storage capacity, and overall disk performance. An analysis based on the given information is that while hierarchical storage solutions -- such as near-line libraries and optical media - - are certainly available, the storage volume indicated utilizing 200 DPI images -- approximately three (3) terabytes after ten (10) years -- could remain completely available on magnetic drive storage, enabling rapid access while minimizing overall storage management costs due to the benefits of managing a single storage infrastructure.

Higher scanning resolutions, such as 300 DPI, should still not exceed the predicted drive space requirements of approximately four (4) terabytes after five (5) years and does not dramatically stretch the requirements of SAN and RAID arrays available today, much less those anticipated storage solutions available in the next five years. However, the storage area network available may need to be upgraded sooner than anticipated due to the increased size of scanned documents. Please refer to Exhibit **Error! No text of specified style in document.-1** for allocated space differences between 200 and 300 DPI image scans.

In either case, automatic retention deadlines can be established and handled through the use of FileNet Records Manager, enabling automatic compliance with required retention schedules, though all data will remain available on the magnetic disk environment. For purposes of disaster recovery, the utilization of a remotely mirrored SAN, or minimally a tape library for data backup and retention will also be strongly recommended.

As for bandwidth requirements, remote communications utilizing a thin-client architecture will download images as necessary from the central infrastructure. Telecommuting users typically find acceptable performance at the cable-modem or DSL level, depending on other applications being executed (such as corporate e-mail and file system access). Telecommuting users typically find acceptable performance at the cable-modem or DSL level, depending on other applications being executed (such as corporate e-mail and file system access). Remote office environments, again depending on other applications in usage, number of users of the system per site, and network traffic between branches, tend to perform acceptably at T-1 levels or better. Based on average time for document retrieval shown in the BASE-3 question, it is anticipated that the existing bandwidth in place will be sufficient for the current regional offices.

C. Base 3

Network: Suppliers should evaluate information provided in this document and Appendix E, which shows DEQ's current central storage at VITA, network capacity, network hardware and network design. Information regarding transaction estimates are provided in Appendix F It may be viable for DEQ to leverage the use of their SAN at VITA provided the retrieval rates are fast enough. Supplier recommendations on the use of the current SAN or alternatives should be made including the bandwidth that would be required based upon document sizes (samples of which are available for viewing) and volumes provided below. If other hardware and/or software are required to accommodate the proposed solution, this analysis should be provided; however, it is not to be priced.

Since network design, storage media, and storage location fundamentally affect overall image response time, options related to these variables need to be considered and analyzed together with consideration given to DEQ document size as part of the detailed design. To facilitate this analysis for the proposal and detailed design, we have provided staffing charts by program and by location in Appendix G as well as the following chart. Since certain storage alternatives may involve separate storage of workflow documents, Appendix F provides an estimated number of pages per folder, retrieval volumes, and the length of time each program area needs the work in progress files (workflow).

Based upon assessment and recommendations for storage and network design, suppliers should state the anticipated response time associated with their proposed configuration. Preferably, this should be equal to or better than current retrieval times. The sample response times shown in Table 5-1 are the number of seconds to retrieve the full document. Suppliers can request the documents used for this testing from VITA. The time from all regional offices is averaged to provide the totals shown below.

In addition, upload and download estimates for the test documents should be provided for mobile units. These estimates are to be based upon the following scenarios:

Dial-up access utilizing a 56K modem connected at 28,800bps

DSL access utilizing a 128kbps

As stated above, suppliers should provide response time calculations for their recommended configuration under different load scenarios for each of the categories in Table 5-1 above. This should be provided based upon the test sets shown above and an estimated 400 users. Suppliers should state their assumptions. If other hardware or software is required to accommodate the proposed solution, this should be stated with full specifications but not priced as an option.

1-page document (8.5 x 11" 54 K)	10-page document (all 10 pages 8.5 x 11, avg. 44K/ page)	50-page document all 50 pages mixture 8.5 x 11 avg. 53K/page)	50 1-page Documents (avg. 54KB/page)	10-page color document (JPG avg. 214KB/ page)	10-page drawing or plan (2.23 mb per page)
2 Seconds	10 Seconds	46 Seconds	70 Seconds	11 Seconds	130 Seconds

RFP Table 5-1 – Current Response Time Averages

Can you provide the necessary services for the required network infrastructure analysis?

Yes, CGI can provide network infrastructure analysis.

For DEQ, wide area network utilization and performance will require analysis to verify that adequate bandwidth exists between the various image-enabled facilities. To properly perform this analysis, it is necessary to make some assumptions about the peak and average bandwidth required to support the various types of devices used by the imaging system. The examples referenced in this document include an analysis of the current high-speed scanners from Fujitsu in use at DEQ and a typical viewing workstation. The following information is presented to provide a basis for DEQ to review the existing network topology and capabilities. CGI has assumed that DEQ will provide a facility-wide network with sufficient available bandwidth to support electronic document imaging.

DEQ's higher-speed scanners will most likely present the largest network load. While scanning, the existing Fujitsu devices are rated to image approximately 60 pages per minute (dual sided). Although the average image size is approximately 50 Kbytes at 200 DPI, the scanner generates approximately 100 Kbytes of traffic for each image. This means that the maximum image traffic that the scanner will be generating is approximately 12 Mbytes per minute (1600 Kbits/sec).

The scanner's average network load will be lower than the maximum for two reasons: first, not all images are dual sided; and second, the scanner utilization rate typically runs between 30 percent and 50 percent during scanning. If we assume that only 10% of the scanned pages are dual sided, then the peak network load drops by 45 percent from the maximum network load to become 880 Kbits/sec. If we factor in a scanner utilization ratio of 50 percent, the average network load will drop to 366 Kbits/sec. Factoring in the utilization ratio would not be prudent however, because the distribution of the scanner's average network load looks like a square wave. Half of the time the load would peak at 880 Kbits/sec, and the other half of the time the network load would be zero. To effectively service the scanner, the network would have to be sized to accommodate the peaks in that square wave.

The electronic document imaging end-user station should be capable of viewing a new image or document every two-to-four seconds. For the sake of this analysis, the practical peak will be 15 images per minute. Although the average image size is 50K at 200 DPI resolution, the network traffic associated with each image is 110K. Therefore, this would present a network load of 1.65 Mbytes/min (220 Kbits/sec) for each workstation. It should be noted that this does not present a viable scenario for dial-up usage of the document imaging solution on a day-to-day basis, but cable and DSL-access of greater than 1Mbit/sec would be expected to perform at this reasonable level provided sufficient remote access bandwidth exists for the users of the VPN environment.

The average load presented by the viewing stations will be a function of the volume of documents retrieved, but the network should be sized closer to the peak loading to prevent unacceptably large network latency times. For example, if there were only 110 Kbits/sec available to a viewing workstation, each image would take eight seconds to transmit from the server to the workstation. For remote locations with a large number of workstations, the network sizing can be more closely matched to the expected average load. For example, if there were 100 workstations at a remote location the expected peak loading would demand a bandwidth of 22 Mbits/sec. In reality, a much less bandwidth would probably be effective for that location.

Because of the nature of thin-client computing and the equivalent size of your existing documents to the proposed electronic document solution, CGI anticipates that provided the current "average" bandwidth was available during peak load times, CGI's retrieval times should closely match the existing time measurements provided.

D. Base 4

Licenses: DEQ anticipates purchasing an estimated 400 named and/or concurrent licenses for IBM's FileNet P8 software; however, not all may be procured immediately.

Workstations: In view of their strategy to utilize IBM's WebSphere Portal Software, DEQ will utilize thin clients. For informational purposes, Appendix H describes the specifications for DEQ desktop and laptop workstations.

Suppliers should review the hardware specifications that are provided in Appendix H. Recommendations regarding these workstations and monitors and their functionality in relation to IBM FileNet's P8 solution will be requested by DEQ for the various user categories such as scanning operators, workflow users, and casual users.

Can you provide the necessary services for the required analysis of workstations and monitors?

Yes, CGI can provide services for analysis of your workstations and monitors.

In general, end user workstations should meet minimum requirements outlined by FileNet:

- Intel Pentium III 750 MHz or higher – Other chipsets can be used, but errors must have the ability to be reproduced on an Intel machine equal to or above the minimum specification.
- 128 MB of memory or higher is the preferred configuration for “dedicated” users.
- 100 MB of free hard drive space – This is more of an indication of overall workstation load and performance than an actual requirement, but having less than 100 megabytes of free space can cause performance and stability issues.
- 1024 x 768 minimum video resolutions – It is recommended that monitors are 19-21 inches and support 1600x1200 resolution to maximize user satisfaction and efficiency.
- Network – Each workstation will require network connectivity. It is assumed that the network bandwidth and architecture is running within its “normal” capacity and can support the additional load of images.

Addressing DEQ's specific current and future workstations, preliminary analysis indicates that equipment is well above the proposed level of hardware necessary to achieve minimum requirements. The one potential shortcoming that should be further reviewed is the monitors and video cards currently being utilized or proposed for utilization. Lower-resolution display combinations may be insufficient for DEQ's desired utilization in some cases. Please note the product recommendation for 19-inch monitors (or larger) that can handle 1600x1200 resolution. CGI strongly recommends following this recommendation, the foremost reason being that 19-inch monitors displaying 8.5 x 11 inch paper images at 1600x1200 resolution are then showing the document at “full size”, as it would appear to the user on paper. This is highly valuable for reviewing scanned documents. Other advantages include greater screen space for side-by-side comparison as well as space on the screen for running other applications, such as administration systems, terminal emulation programs, or e-mail packages.

E. Base 5

Scanning: Suppliers should assess the current scanning equipment as described in Appendix D including the HP DesignJet 4200 with attached computer for large maps and drawings. The supplier should identify any limitations, issues or problems with the existing hardware and software in relation to the proposed ECM solution.

Can you provide the necessary services for the required analysis of scanners?

Yes, CGI can provide services for the required analysis of scanners.

CGI is a Fujitsu Premier partner and routinely utilizes the Fujitsu 5750C as a standard scanner offering for higher-volume imaging. In regards to the other listed models from Appendix D, FileNet's Capture software requires the use of scanners with available TWAIN, ISIS, or KOFAX driver interfaces. Of the scanner devices listed -- the Fujitsu 5750C, Fujitsu M4097D, Fujitsu M3097DE, and the HP DesignJet 4200 – only the DesignJet 4200 does not possess the appropriate documented interface in its specifications and may require additional review and/or procedures to appropriately interact with the proposed FileNet solution. Aside from the DesignJet, CGI anticipates a successful implementation of its proposal with the listed scanners.

This does not preclude DEQ from choosing other scanner solutions in the future that utilize TWAIN, ISIS, or KOFAX interfaces. Based on the forms displayed in Appendix I as well as the notes regarding the primary utilization of 8.5x11 forms, DEQ can select scanners from a variety of vendors. For individual scanners, CGI recommends the use of scanners with a minimum rated speed of 25 pages per minute (ppm) utilizing 200 DPI resolution, and recommends that these scanners include auto-document feeder (ADF) features. For workgroup scanning, aim for a baseline of 50ppm at 200 DPI with an ADF capacity of at least 100 pages. At the workgroup level, the scanner should typically also accept legal-sized documents. Higher-speed scanners are also available and CGI can assist with further recommendations as necessary.

F. Base 6

Remote Access: Remote access, within DEQ's security parameters, is required to provide information to inspectors and field staff as well as mobile staff. They will need to capture documents and upload them to the ECM system. This is especially true for electronic documents. SSL and VPN are used for remote access. The integrator should ensure that the ECM software is accessible through the VPN. Web access to documents is also required by the general public for FOIA purposes. Web access to the documents will be provided using IBM's WebSphere portal software.

Can you provide the necessary services for the required remote access?

Yes, CGI can provide the necessary services for establishing remote access. FileNet P8 may be accessed via virtual private networks (VPNs). Remote DEQ users may access the FileNet P8 system in the same way as users on the DEQ LAN and WAN, but with existing VPN software. CGI has assisted clients in the past that have successfully used in-house VPNs to access their FileNet P8 applications. FileNet P8 web based applications may be accessed remotely via a VPN, such as:

- P8 Workplace Portal
- eForms Submission
- Document Submission
- Document Search
- Document Retrieval
- Workflow Processing

1. Remote Document Entry

Once remote users access FileNet P8 via the DEQ VPN, Workplace functions will be available to the user, such as document entry, inbox access, and other P8 functions. Documents may be submitted to P8 via one or more Document Entry Templates. CGI will work with DEQ staff to determine which entry templates may be accessed by remote users. Users will be granted access to document entry templates based on their ActiveDirectory group membership. For example, remote users may be in the group "Remote Users." Group membership will cause P8 to display links in Workplace that will display the appropriate document entry template, as shown in Exhibit **Error! No text of specified style in document.-2**.

Exhibit Error! No text of specified style in document.-2 Document Entry Template

The screenshot shows the 'Add Document' interface in FileNet P8. The 'Steps' pane on the left indicates the current step is '2. Set Properties'. The main area shows a 'Class: Document' configuration table:

Property	Value
Document Title:	<input type="text"/>
Options	Value
Add as major version:	Yes <input type="button" value="v"/>

At the bottom right, there are 'Previous' and 'Next' navigation buttons.

2. Public Access – FOIA

There are various methods in which to grant public access to documents. Two methods are described below.

a) Guest Access via P8 Workplace

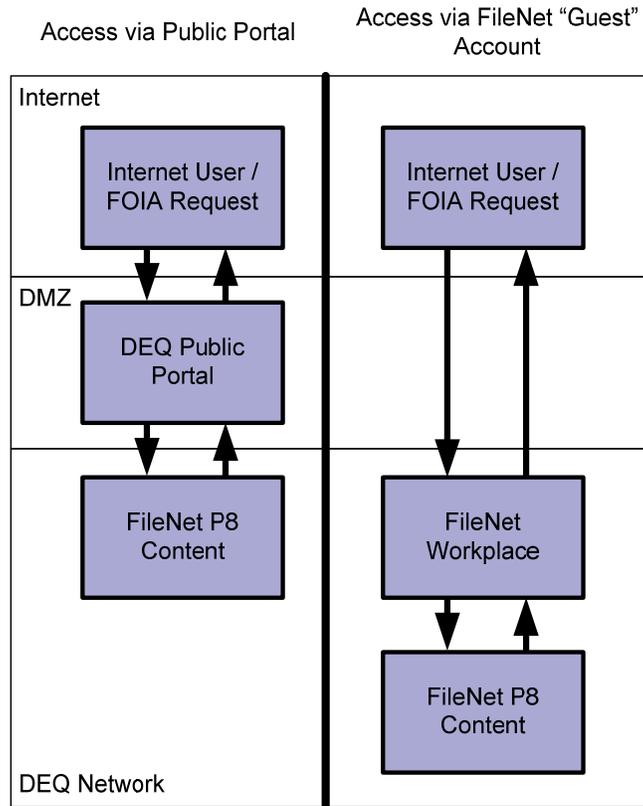
FileNet P8 may be configured to allow “guest” access to Workplace, where users do not need to be authenticated via DEQ’s LDAP. Even though FileNet P8 supports “guest” access, CGI does not recommend granting unauthenticated user access to Workplace. Guest access simplifies system configuration, but opens the internal Workplace servers to the internet. Public portals are often separated from the enterprise LAN to ensure attacks to internal systems are minimized or eliminated.

b) Guest Access via Existing Portal

CGI recommends using the existing web portal available to internet users. CGI will work with DEQ staff to determine which objects stored in FileNet P8 should be made accessible by the public web portal. For instance, security will be applied to each document that is to be made public, enabling a system account to read them. This feature will enable the public portal to access P8 objects via an internal system account. Access to the documents may be tracked to help gauge data and access requirements for future growth of DEQ’s network.

The diagram below demonstrates the Portal and Workplace methods that allow public access to DEQ documents. CGI recommends using a demarcation zone (DMZ) that will protect the internal network from outside attacks, while providing public access via the Internet.

Exhibit Error! No text of specified style in document. -3 Public Access Methods



G. Base 7

Document Capture: The ECM system will capture images in several ways: scanner, fax, eMail, electronic native file (which includes voice and video), and eForms. The successful supplier will be responsible for implementing all capture set-up and integration including the necessary release scripts. All images will be saved to a document format that meets the following criteria: preserves the exact appearance of the original document, precludes alteration of the document after storage (unless stored as a new version), and is compatible with the document viewer. Native format documents like MS Word and Excel files may be stored in their native format. Captured documents should be able to be reproduced to scale. Document capture methodologies are discussed in further detail below.

Can you provide the necessary services for the required implementation of the capture capability?

Yes, CGI will provide the necessary services required to capture scanned, faxed, and email documents. Kofax Ascent Capture will be configured with batch classes that support scanned, faxed, and emailed documents. The table below outlines the methods that will be developed by CGI to support DEQ's document capture requirement.

Exhibit Error! No text of specified style in document. -4 Document Entry Mechanisms

Batch Class	Input	Kofax Email Import	Document Separation	Manual Indexing Required?	CEDS Integration
Scan	Scanned images	No	Barcode	Yes	Document Index Batch Release
Import	Electronic Documents (Office documents, video, audio, drawings, etc.)	No	By File	Yes	Document Index Batch Release
FAX	Email from doc2fax	Yes	By email (fax job)	Possibly	Document Index Batch Release
Email	Email	Yes	By email	Possibly	Document Index Batch Release
eForm	Web Page	No	By eForm	Yes	None

1. Capturing Scanned Documents

Most document capture is performed at DEQ's Central Office and several remote offices using the industry standard Kofax Ascent v7. CGI will configure Kofax Ascent to efficiently capture scanned documents using one or more barcoded document coversheets so that index operators can efficiently identify documents. Based on the outcome of the detailed design phase, CGI will attempt to use the barcode separators already in use at DEQ.

2. Capturing Faxed Documents

CGI will configure Kofax Ascent to accept faxed documents arriving from fax2mail, a popular fax-to-email solution already in use at DEQ. Upon receiving a fax, the fax2mail service creates email that is sent to DEQ via the internet. Once the mail server receives the fax, it will be processed by Kofax Ascent.

CGI will configure Kofax Ascent to open incoming email from the fax2mail service and create batches in Ascent. CGI will configure a batch class that is optimized to allow the batches to be indexed and released to FileNet's Content Manager. Incoming faxes, via email, may be indexed using the caller's fax number, incoming date and time, as well as other index values. CGI will work with DEQ to determine the appropriate document indexing configuration that meets all legal and technical requirements.

3. Capturing Email

In the same way that faxed documents are imported into the capture system via email integration, CGI will configure Kofax Ascent batch classes to route, index, and release incoming email by using the email import capabilities built into Kofax Ascent. The email capture workflow will be configured by CGI to use the existing CEDS interface that allows index operators to quickly index incoming documents. Many document attributes will be available from Ascent: document received time, email "From" field, etc., but CGI expects that index operators will need to add further metadata to the incoming batches. CGI will work with DEQ to configure index workstations to communicate with CEDS via the existing CEDS-enabled document index tool and CEDS Release Script.

4. Capturing Native File Formats

CGI understands that storing native format files in FileNet P8 greatly enhances worker productivity, document access, and the ability to get to information quickly within the DEQ environment. In addition to capturing documents created on other systems, then sent to DEQ via fax, email, or paper, native format documents can be imported in a variety of ways.

Neither Kofax Ascent nor FileNet P8 modifies documents as they are processed. Native file formats include but are not limited to:

- Office: MS Word, MS Excel
- Engineering Drawings: TIF, JPG, GIF
- Video Files: MPG, MOV, AVI formats
- Sound Files: MP3, WAV, MP4 formats

CGI will design efficient document entry templates in the FileNet P8 environment. Entry templates allow P8 users to index and upload documents residing on their PCs or network.

Entry templates control which users can upload documents, and which document classes and fields are accessible or required. CGI will work with DEQ staff to determine the document class structure, required metadata, and folder storage options.

A sample FileNet P8 Document Entry template is shown below.

Exhibit Error! No text of specified style in document.-5 Document Entry Template

The screenshot shows a web interface for adding a document. On the left, a 'Steps' sidebar lists three steps: '1. Select Folder', '2. Set Properties' (which is selected and highlighted in red), and '3. Select File'. The main content area is titled 'Add Document' and shows 'Class: Document'. Below this, there are two tables. The first table, 'Property', has one row with 'Document Title:' and an empty text input field. The second table, 'Options', has one row with 'Add as major version:' and a dropdown menu currently set to 'Yes'. At the bottom right of the form, there are 'Previous' and 'Next' navigation buttons.

5. FileNet eForms

The FileNet Forms Manager delivers the ability to process electronic forms as standalone documents or as part of a business process workflow. FileNet Forms Manager makes use of a HTML eForms client allowing for zero footprint access from a user’s browser. eForm data capture is comprised of the following process:

- User opens eForm via link in P8 Workplace
- eForm is filled out by user
- eForm is submitted to FileNet via an eForm Document Entry Template; this step stores the eForm as an XML document in the FileNet Repository

c) Kofax Document Import

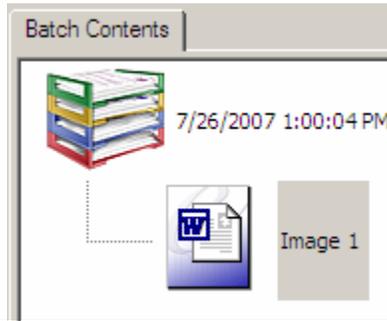
(1) Ascent Batch Import

Kofax Ascent Capture can import documents in their native format, such as Microsoft Excel or Word. CGI will work with DEQ staff to determine the proper batch classes and associated document index fields required to capture documents with Kofax Ascent and release the data to FileNet P8 Content Manager.

To support importing documents with Kofax Ascent, CGI will create one or more Kofax Ascent Batch Classes that accept electronic documents. Batch classes will be configured to send the electronic documents through index validation, allowing users to apply specific document class index values to the documents. CGI will configure the FileNet Release script to add the electronic documents to the P8 Repository. As with all other documents released from Kofax Ascent, electronic documents will be sent through the document entry workflow and CEDS updates.

The example below shows how a MS Word document can be imported with the Kofax Ascent Scan module.

Exhibit Error! No text of specified style in document.-6 Kofax Ascent Import: Electronic Documents



(2) **Kofax Auto Import**

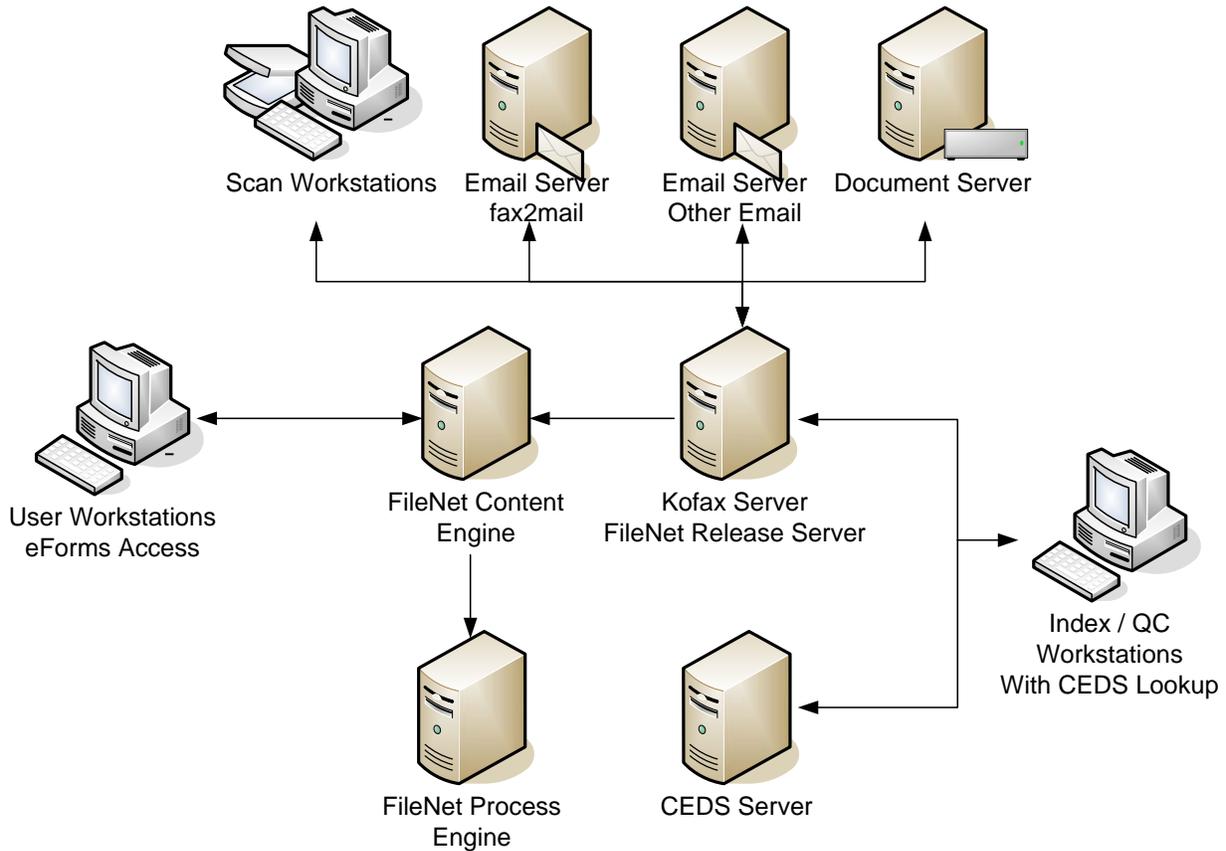
Documents and scanned images may be imported into Kofax Ascent via the Auto Import feature. Auto Import allows virtually an unlimited number of documents to be processed in Kofax Ascent. CGI will work with DEQ staff to determine whether or not documents are to be imported into the document capture system in bulk by performing the following tasks:

- Documents are collected by a manual or automated process from existing DEQ document file servers.
- Document metadata is extracted and placed into a Kofax Ascent compliant XML file
- Configure Ascent Auto Import feature to create batches based upon the metadata and native documents defined by the XML file
- Batches of imported documents may go through the same process as other capture methods, allowing for document QC, indexing, and CEDS update via the Kofax Release Script.

6. Proposed Data Flow

CGI will configure the necessary Kofax Ascent release scripts to release all scanned, faxed, and emailed images to FileNet's Content Manager. The figure below demonstrates a potential data flow that will be installed at DEQ. Note that the Kofax Ascent server accepts images from four data sources: fax2mail email, email from other sources, scanned documents, and native files retrieved from existing DEQ servers. The figure below outlines data flow throughout the document capture process.

Exhibit Error! No text of specified style in document.-7 Document Capture Data Proposed Architecture



7. Document Retrieval

Industry standards in the DEQ Electronic Document Imaging System are used throughout the solution. Data storage utilizes the existing EMC Clariion CX500 for file storage and SQL Server for metadata storage. Retrieval and processing is via industry standard thin client java viewer launched through interaction with the FileNet web application.

The CGI solution is open to both future customizations and enhancements. Additional ECM components can be added through the feature-rich FileNet P8 platform like Electronic Forms, Business Process Management, Email Management, Web Content Management and Team Collaboration Management. In addition, the solution can be extended through the .NET, Java or XML web services APIs to extend the industry standard integration layers to existing or emerging systems within the ODPS architecture.

The CGI Solution does not modify any of the COTS provided source code from any of the COTS vendors. CGI best practices dictate the full usage of COTS products, including any extensibility they provide. However, direct modification of source code adds too much risk to justify the end results and is avoided.

d) Scanned Document Retrieval

Scanned documents are stored in the FileNet P8 Content Manager such that the document appearance is preserved. Documents may be marked up using the FileNet Java based view in a way that precludes alteration of the document after storage unless stored as a new version.

e) Native Document Retrieval

Native documents are stored unaltered in the FileNet P8 Repository. Because the document is not altered as it is stored in the Content Manager, it may be opened by its native document viewer, available on the user's workstation or by FileNet's document viewer.

f) eForm Retrieval

eForms are retrieved simply using a web browser, and does not require any additional software to be installed on the user's workstation. eForms may be locked for subsequent editing, or may be available for user edits. CGI will work with DEQ staff to determine which, if any, eForms may be edited after they have been submitted.

H. Base 8

Scanning: Most documents will arrive via mail into the regional offices, satellite offices, or the Central Office where they will be scanned and stored into the Content Repository. Scan volumes will require transfer and storage of up to 3,500 pages per day per scanner, and there are expected to be approximately 20 scanners for production and back-file conversion after implementation. Most documents are scanned at 300 DPI. Speed may vary significantly based upon whether documents include single or multi-pages and whether or not barcode sheets are being used. Regardless, these pages should be captured very quickly in order to permit processing by others in the downstream processes. Figure 5-1 below shows a high-level view of how the ECM system might be implemented.

At DEQ, scanning will be decentralized and will occur at all seven (7) regional offices, the Central Office in Richmond and perhaps two satellite offices. There are wide varieties of document types. The 8.5" X 11 documents will be scanned in batches with a high-speed scanner. DEQ also has some large and unusual size documents. Many are size D (2' x 3'); however, a few are larger. Aquifer logs for ground water withdrawal permits can be eight (8) or more times the length of an 8.5" x 11" page. Although the percentage varies by program, a significant number are MS Word and Excel documents as well as eMail. There are relatively few numbered forms. The extent to which duplexing is used varies by office and program. DEQ does not currently have a comprehensive list of all document types and forms. However, Suppliers may make appointments with VITA to view copies of sample files from the programs identified in the deployment list for early implementation. These appointments should be made with the VITA procurement office at 804-371-5563.

Can you provide the necessary services to implement the required scanning capability?

Yes, CGI can provide the necessary services to implement the required scanning capabilities. CGI is one of Kofax's leading partners, and has significant experience implementing a wide variation of Kofax solutions from high volume Federal government clients to small departmental State government clients.

Capture is the front-end component of any document management and/or imaging system. The proposed solution leverages Kofax Ascent Capture 7.x to provide the front-end infrastructure for the DEQ document imaging system. Kofax Ascent supports the following:

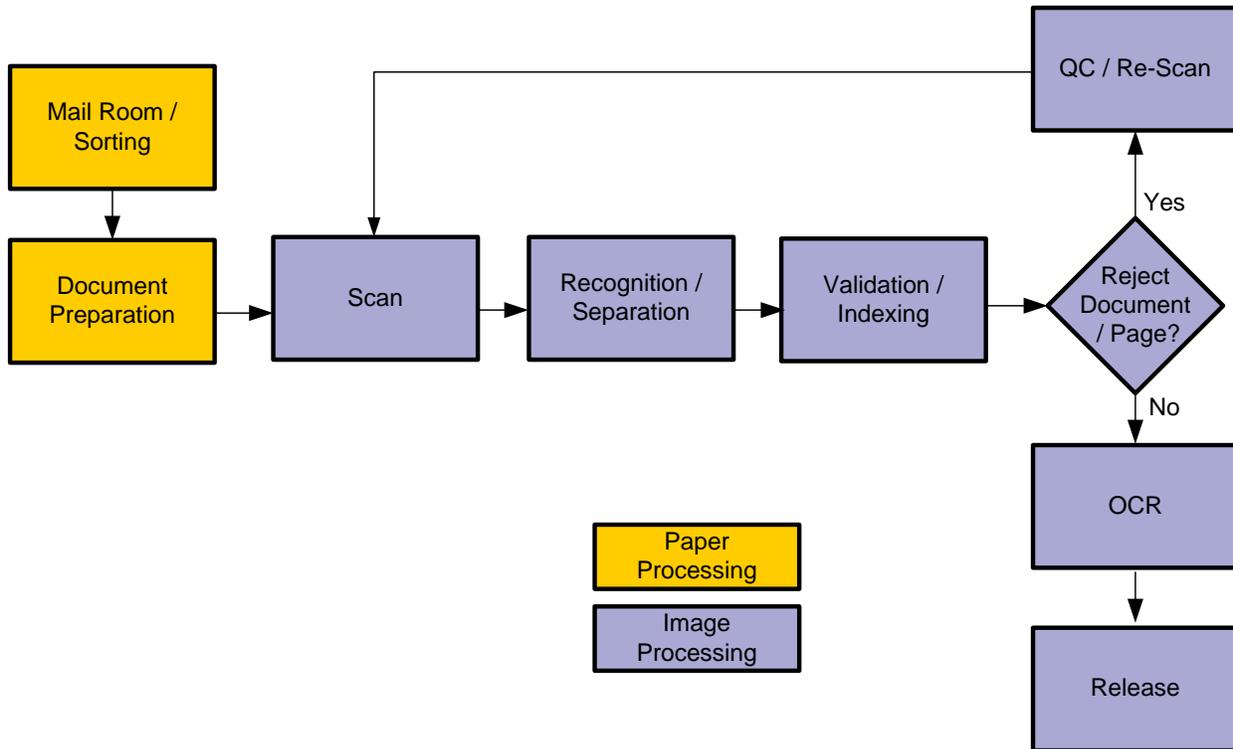
- The capture and storage of digital images and documents;
- Storage and access of digital images with security features that prevent alterations or modifications of the stored images;
- Secure access to digital images;
- Storage and retrieval of digitized images of any size and shape, including maps, etc.;
- Keyed access to all images, using a single unique identifier;
- The mechanism, methodology or procedures for transferring or transmitting the images to the repository for storage and retrieval, including the entry, transferal or transmittal of data and
- Acceptance of large volume or "batch" transfers or transmissions of digital images by the repository.

The Document Capture Process will start when regional offices, satellite offices, or the Central Office personnel receive documents to scan. It will end when the fully classified and indexed document images are processed in Kofax Ascent Capture, recorded on a storage medium managed by FileNet P8 Content Manager (CM). The major steps will be as follows:

- Document Receipt by DEQ office personnel
- Document Preparation
- Scan into Kofax Ascent
- Validation/Indexing using the current CEDS enabled index tool
- Quality Control (QC)/Rescan
- Release to FileNet

Exhibit **Error! No text of specified style in document.**-8 depicts how the physical paper will be processed to become document images within the DEQ Electronic Document Imaging System and illustrates the ability to correct scanning deficiencies within the capture process. If a page or document is rejected, the QC step allows the user to make necessary adjustments to correct the image prior to the release into FileNet.

Exhibit Error! No text of specified style in document.-8 Document Capture

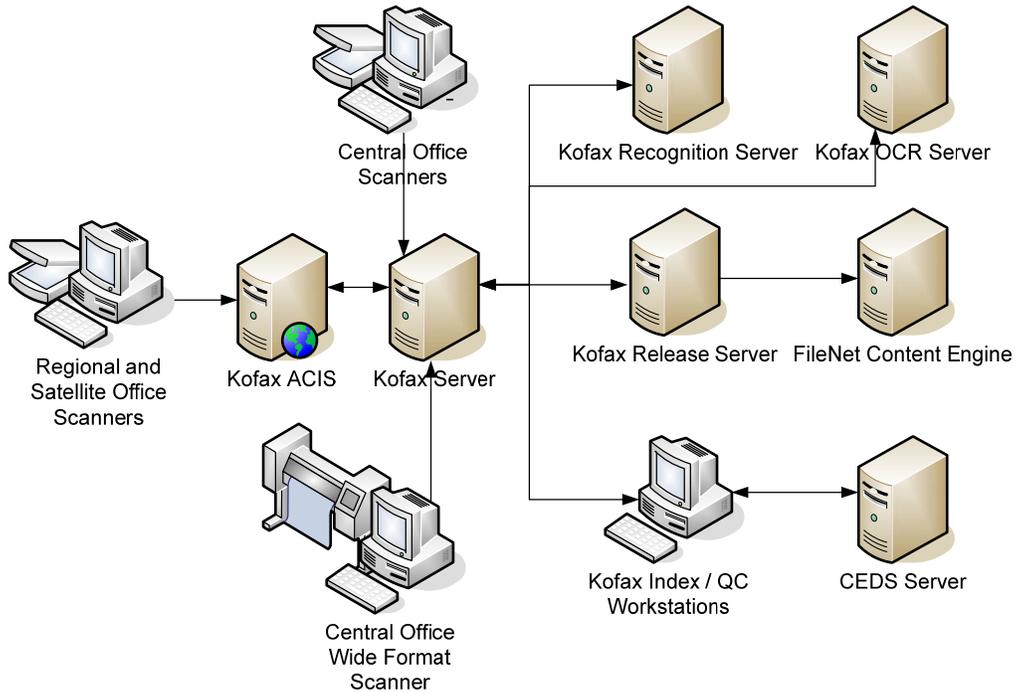


1. System Architecture

Because DEQ clerks must wait significant amounts of time for batches to be processed by the Forms Recognition and OCR, CGI recommends the addition of several imaging servers:

- Recognition Server – identifies form type and recognizes barcodes
- OCR Server – performs optical character recognition on all pages;
- Release Server – releases batches to FileNet Content Manager
- ACIS Server – accepts scanned batches from regional or satellite offices; allows users to scan at full rated speed and to upload scanned documents to the home office at any time (e.g., after business hours)

Exhibit Error! No text of specified style in document. -9 Document Capture Proposed Architecture



2. Document Preparation

The Ascent Capture software has sophisticated barcode and patch code recognition capabilities. CGI will work with DEQ during the requirements and design phase to identify the business needs for document separation. Kofax supports the functionality such as utilizing barcodes on document separator sheets to automatically identify the breaks between documents and automatically index critical information. CGI will use the barcode sheets already developed by DEQ and create additional separators as necessary.

In addition to document separation, CGI will work with DEQ staff to determine the best way to represent basic document index information, such as "Document Type" and "Facility."

3. Scan Module

The scan software module turns paper documents into electronic images. Because DEQ is already using duplex scanners, Kofax Ascent's Blank Page Detection feature will be used to eliminate the storage of blank pages. Scanning also includes the ability to perform image clean up functions like despeckle and deskew.

4. Paper Types

In addition to standard 8½ by 11 inch paper, the DEQ solution will scan the paper types listed below. CGI will work with DEQ to determine which, if any, additional scanners will be required to support the capture of continuous forms.

Exhibit Error! No text of specified style in document. -10 Supported Paper Types

Size	Type	Scan Sides	Scanner
8.5"x11	Letter	Duplex	Existing M4097D, 5057C Scanners
D Size	Drawing	Simplex	Existing HP DesignJet Scanner
8.5" W	Continuous Forms	Simplex	New Scanner Required (Kodax i820?)

5. Forms Recognition and OCR

The Kofax Recognition server is used to perform forms and barcode recognition to identify documents. Once document types are known, they can be indexed appropriately. One Kofax Recognition Server will be used to identify the numbered forms in use at DEQ. As stated in RFP 2007-22 Appendix D, forms recognition and OCR processes can take up to one hour to complete. CGI will configure the Recognition Server to perform this work so that the user's PC can be available for additional tasks.

6. Index / Validation

The current Kofax Ascent Custom Index module that allows users to look up document index values in CEDS will be used in the CGI solution. This custom index module sends CEDS the information that is already known about a document, such as Plant ID, and will populate the missing values, such as Plant Name and Plant Address. This module will require access to a CEDS interface, such as a database connection, web service, or an API. The list below outlines various index fields and population methods that may be used in the configuration of the indexing module.

Field Type	Recognition	Lookup / Validation	Example Fields	Example Data Source
Barcode Field	Recognition Server	None	Document Separator (no document data) Document Type Plant ID	Existing DEQ Document separator sheet
Manual Entry	User process	None	Document Received Date	Date Stamp on document
OCR	Recognition Server / OCR	Identified Forms	Air Registration Code	Registration code that is in a fixed location on a standard form
Automated Entry	None	CEDS	Plant Name	CEDS enabled Kofax Ascent index panel populates Plant Name, Facility Name, etc., based on CEDS ID entry

7. Batch Release

Once batches have been processed through capture, index, and quality assurance steps, they are released to FileNet’s Repository from the Kofax Release server. Each batch class will be configured to store the document images and metadata in the proper location in the P8 Repository where the documents are secured according to LDAP access rights. Once documents are released from Kofax, the images and data are deleted, as FileNet P8 is the primary storage mechanism.

As expressed in RFP 2007-22 Appendix D, the release process can take some time to complete. CGI will configure a Release Server (either at VITA or the Central Office) to perform the release tasks, which can take significant time to complete. This allows users to continue scan, index, and QC operations without waiting on the PC to perform the release function.

8. Post-Release Paper Handling

Once a batch of documents has been released and permanently committed to FileNet’s Content Manager from Kofax, the online image will become the primary record. The paper documents that were the original source of the image will then be redundant copies. However, they must be stored for a period of time to satisfy potential rescanning needs and/or legal retention requirements. CGI recommends that the document capture office staff pass batches from the document processing office into short-term storage, then to long-term storage as a best practice document imaging operation. After the long-term storage period elapses, the paper documents can be destroyed.

9. Short-Term Storage

Once release is completed, the document capture office will retain paper batches on-site for a brief period in case a document image needs to be rescanned. A request for Rescan may be called for by an authorized user, who is working with the document in the DEQ Electronic Document Imaging System. Keeping the paper batch close at hand for a brief period after release will expedite the Rescan process.

10. Long-Term Storage and Destruction

For document images, the document capture office staff will store the paper batches for the mandated short-term storage period. Once that duration is exceeded, the paper files will be sent to long-term storage. DEQ will need to determine when the paper documents can be destroyed and which shredding method to employ.

I. Base 9

Email: There are three (3) primary types of eMail. The first type is those eMails that contain business information in their body; therefore, they should be retained as part of the permanent file. The second relates to eMails that are used to transfer other documents such as MS Word, Excel, etc. The third type of eMail is documents that are not needed in support of a business application.

For the First two categories:

These eMails have information significant to the documentation of a DEQ process. That information may be either in the text of the eMail or in an attachment.

DEQ would like to centralize the storage of these eMails, thus eliminating the need for staff to save old eMails and their attachments. This would also greatly improve documentation, document access, collaboration, and their ability to respond to legal requirements. DEQ staff (or the eMail management software) need to identify and save eMails to the ECM system which are "pertinent to their business activities", i.e. discoverable and, potentially needed to support or augment a business process.

The proposed solution needs to meet the Library of Virginia's mandate on the management and retention of public records.

The third category contains eMails that do not have an on-going business use. These will be retained on the Exchange servers (eMails not selected for ECM retention will be deleted in conjunction with DEQ's retention policies and procedures).

Can you provide the necessary services for the required integration and support associated with eMail retention?

Yes, CGI can provide the necessary services and support associated with email retention.

1. Email Management Business Drivers

IBM FileNet Email Manager is an ECM-based email and electronic messaging active archiving solution for Lotus Domino, Microsoft Exchange, and Novell GroupWise. FileNet Email Manager:

- Helps to extract knowledge buried in email and other electronic messaging
- Enables the management of email and electronic messaging as part of a business process.
- Helps reduce operational problems introduced by the growing size of email and electronic messaging data stores. For these stores: helps to manage mailboxes, increase server performance, enable faster backup and restore, provide for easier upgrades, leverage storage management best practices for email, and apply simple retention rules
- Helps to manage email and electronic messaging as a record, and improves compliance. For email and electronic messaging, FileNet Email Manager enables records management, legal discovery, and supervision and monitoring for non-compliance
- Decreases exposure to risk of litigation – email is managed using Records Manager
- Provide a single repository for email storage – email is easily tracked and located in the central IBM FileNet Repository
- Helps to automate workflow steps and associate email and electronic messaging content to processes, cases and line-of-business systems
- Will be used to comply with Library of Virginia rules and regulations

2. IBM FileNet Email Manager

IBM FileNet Email Manager is a server based email management tool built to manage enterprise email systems using FileNet's ECM solutions. Email Manager can capture all email or email with enterprise value and upload them to a central repository where security is applied and messages are indexed.

Email manager features include:

- Automated rules based capture,
- Automated upload and indexing of email and attachments,

- Linking of email attachments within the repository,
- Manual client based capture,
- Manual capture by forwarding them to an inbox, and
- Records Management support.

3. Index Templates

FileNet Email Manager processing is based on Rules and Index Templates. CGI will work with DEQ staff to determine the proper template configuration to support internal and Library of Virginia rules. Index templates:

- send email and attachments to the proper Repository and folder structure
- define record classes; this supports the task of storing different types of email using different record classes
- define which security level to apply to captured email
- define how to link attachments in the P8 Repository

4. Email Rules

Email manager rules are used to determine which messages should be captured by Email Manager. Rules allow business logic to inspect email and its metadata as it is processed. Rules can look for the following:

- Specific value
- List of specific values
- Pattern of text based on Regular Expressions (see below)

CGI will work with DEQ staff to determine how to capture email with enterprise value by creating appropriate email rules.

5. Regular Expressions

Regular expressions are used by many of today's software tools, including FileNet Email Manager, to search and manipulate text based on patterns. For example, regular expressions can be written to match email with a subject line that includes "DEQ" or email message text that includes a URL.

6. Library of Virginia Compliance

To address the email retention requirement, CGI intends to implement appropriate rules in both the Email Manager and IBM FileNet Records Manager. CGI will work with DEQ to configure Email Manager to capture all business related email, including attachments. CGI will work with DEQ and Library of Virginia staff to verify email and related attachments are declared as records according to Library rules for record retention.

7. Email Categories

CGI will work with DEQ staff to determine how to identify the kinds of email listed in the RFP. Email containing business information will be placed in the Repository. Email of business value with attachments will be placed in the Repository and will contain links between the email messages and the attachments. Email that has no business value will not be sent to the P8 Repository.

g) Email Containing Business Information

CGI will configure Email Manager to extract email that contains business information and place that email into the Repository. CGI will configure rules based on regular expressions to identify important communications.

h) Email Containing Documents

Email containing document attachments will be processed according to the Email Manager rules engine so that the message and the attachments are placed in the FileNet P8 Repository. CGI will configure EM to link email with its associated attachment(s) so that the messages and content may be retrieved later.

i) Email Not Of Business Value

CGI will assist DEQ to determine which email may be deleted from Email Manager using the EM rules engine.

8. Email Manager Integration with Records Manager

Integrating Email Manger and Records Manager enables email to be declared as records automatically during the capture process. Users do not need to perform any extra steps to verify that a record has been declared. This

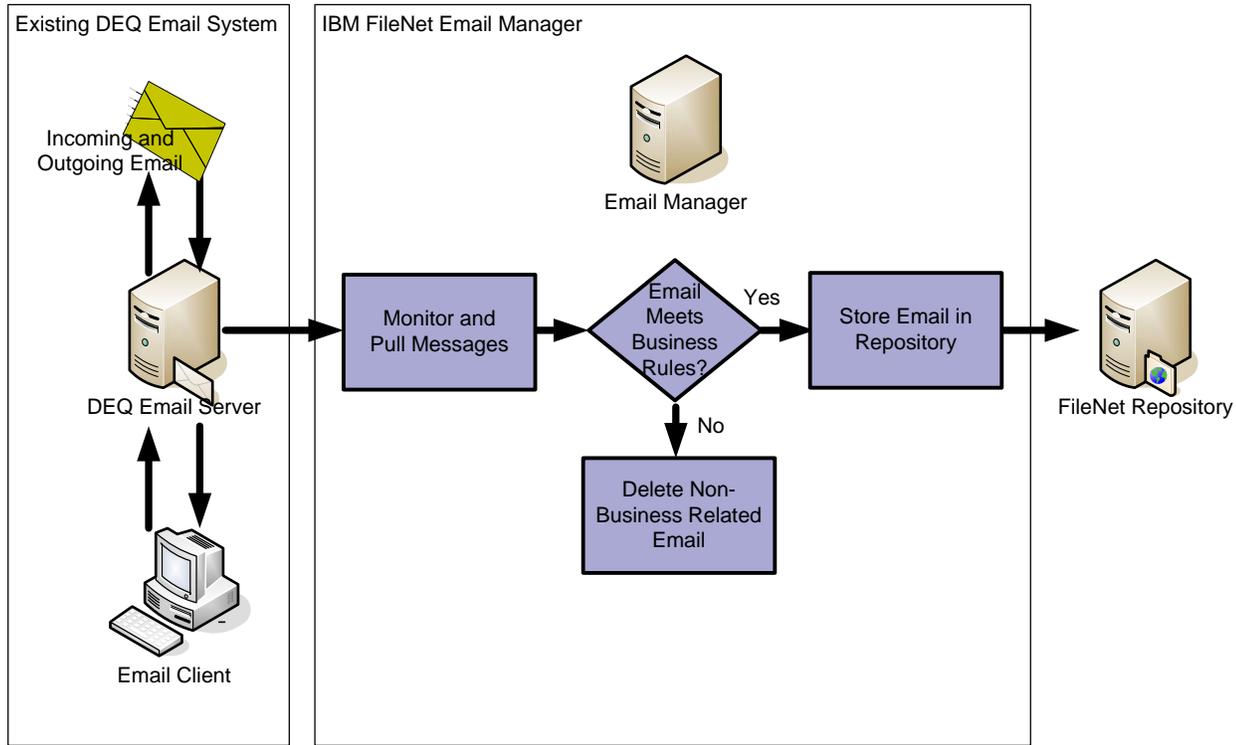
integration will allow DEQ to declare email content as business records seamlessly and to manage these records effectively throughout the lifecycle in accordance with the respective retention policies. Email Manager invisibly enforces compliance and email policies enterprise-wide and this transparency reduces the burden on both end-users and system administrators. CGI will configure both Email Manager and Records Manager to provide DEQ with a robust email management system.

9. Proposed Email Manager Architecture

CGI will configure FileNet Email Manager to communicate with existing enterprise email servers and clients.

Exhibit Error! No text of specified style in document. -12
Architecture

Email Manager High Level



CGI proposes implementing one Email Manager server with each regional email server or with each server that processes a large amount of email. Email Manager runs on MS Windows 2000, XP, and 2003 servers. It communicates with email systems such as MS Exchange and Lotus Domino. CGI will work with DEQ staff to determine how many servers should be deployed, and where they should be located.

J. Base 10

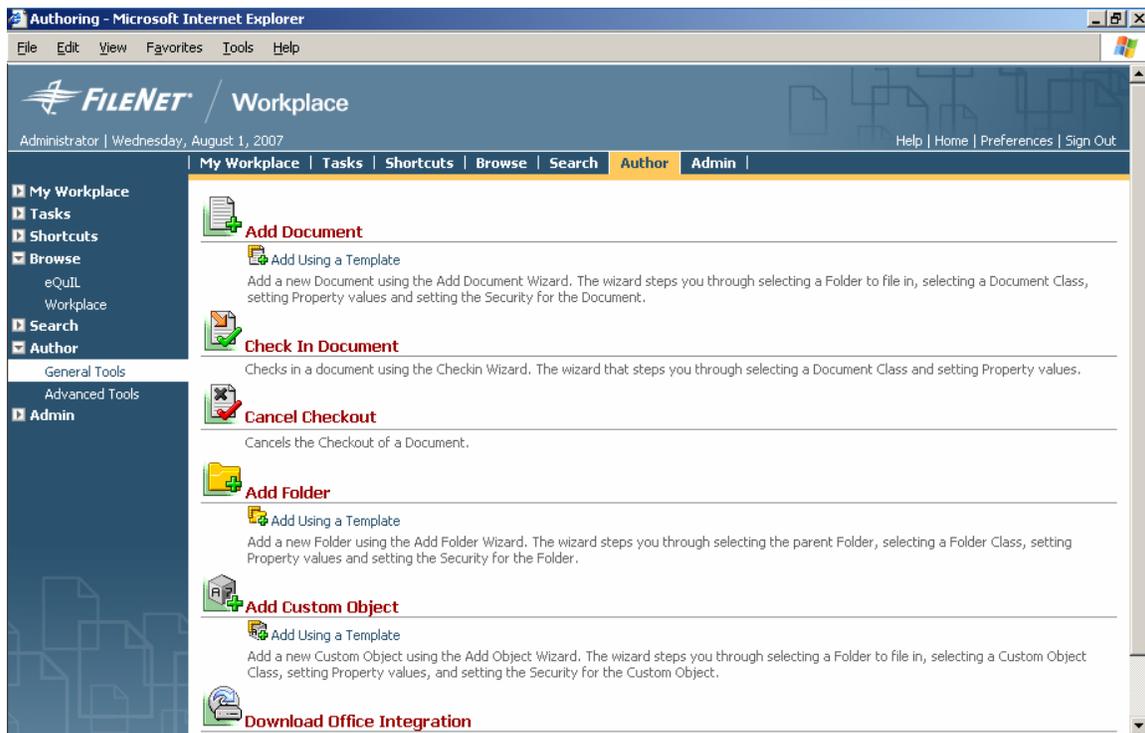
Electronic Native: It is anticipated that many electronic documents will be received as eMail attachments that will be saved to the ECM system. In addition, workers will create ad hoc electronic documents such as MS Word documents, spreadsheets, Adobe documents, and Visio drawings. Microsoft Office documents are to be saved to the document repository when the user saves the file. Options associated with how documents may be indexed or excluded from the document repository are to be reviewed with DEQ and implemented or integrated with the option chosen by DEQ. Supplier's implementation should provide the file's creation date, time and originator be automatically added as part of the metadata for this document.

Some electronic documents may involve large drawings that need to be imported into the imaging system. Supplier should set-up, implement, and provide integration services as required to accomplish the capture of electronic documents for DEQ.

Can you provide the necessary services for the required set-up, implementation and integration of electronic native documents?

Yes, CGI can provide the necessary services for the set-up, implementation, and integration of native electronic documents. Documents may be added to the FileNet Content Manager in a variety of ways.

The simplest method of adding documents is to use the "Add Document" feature included with FileNet P8 Workplace. Only authorized users may add documents to the Object Store using this web based mechanism. CGI will configure FileNet P8 to grant one or more groups of users access to the Author page, as shown below. Electronic documents may be uploaded, checked out, and checked in using this page.



1. FileNet Document Entry Templates

FileNet P8 document entry templates enable users to add documents to the FileNet Content Manger repository. Document entry templates control the way in which documents are loaded to the Content Manager. For example, Consultants or Central Office personnel may have the need to add Air Inspection supporting documentation to the P8 Repository. The document entry template shown below demonstrates how the Document Title, Date, and Originator are required fields – the document cannot be added unless all required fields are populated. Many document entry templates can be created, each with their own rules, and each associated with groups of users. CGI will work with DEQ staff to determine the strategies and mechanisms to provide this functionality.

Steps

- ▶ **1. Set Properties**
- 2. Select File

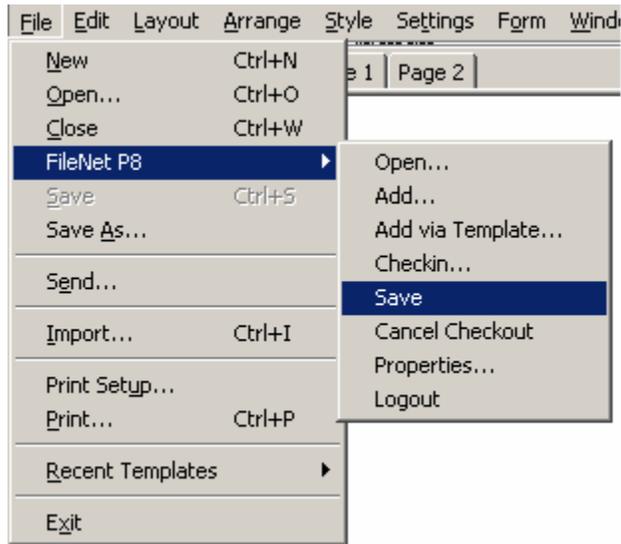
Class: DEQ Air Inspection Supporting Documentation

Property	Value
* Document Title:	<input type="text"/>
* Document Date:	<input type="text"/> Clear (MM/d/yy)
* Document Originator:	<input type="text"/>

Options	Value
Add as major version:	Yes <input type="text"/>

2. FileNet Office Integration

Microsoft Office users can install FileNet’s Office Integration tool that will allow them to save documents to FileNet as easily as using standard “File / Save” mechanisms found in most applications. Rather than saving files to a file server, users may elect to store the file in FileNet P8, as shown below.



3. WebDAV

WebDAV (Web-based Distributed Authoring and Versioning) is a set of extensions to HTTP which allows users to edit and manage files on remote web servers. Users with a WebDAV client can point to virtual directories via a URL and perform file system like operations, such as save and delete. User may access the Repository environment with little or no training.

FileNet supports WebDAV on the following client software:

- MS Office 2000 or later
- Macromedia DreamWeaver
- Adobe GoLive

CGI will work with DEQ to determine how to user WebDAV to provide document upload capabilities.

4. Supported Files and Input Methods

The table below lists the types of documents that may be uploaded to FileNet P8.

File Type	Document Upload Methods
MS Office Documents	MS Office Integration WebDAV Document Entry Template Kofax Ascent
Email / Email Attachments	Document Entry Template (requires user attention) FileNet Email Manager Integration (transparent to users)
Large Drawings	Document Entry Template
Electronic Documents: PDF, Visio, video, audio files, etc.	Document Entry Template Kofax Ascent
Scanned Documents	Kofax Ascent

K. Base 11

Support Services for Database Transfer: Originally, DEQ images were stored at a regional level. These images have now been transferred to Richmond for centralized administration; however, they are still segregated into regionalized electronic "file cabinets". Regional offices need the ability to perform a federated search so that one office can search content from other offices. Currently the regional office name or number is NOT part of the metadata associated with documents. The Central Office and occasionally regional office staff need to be able to retrieve documents from the entire document database, regardless of location. The supplier should implement a solution that would allow this functionality without requiring that regional office staff sort through documents from all regions. This can be as a centralized or de-centralized system implementation. The solution should include merits and demerits of the proposed solution and the criteria for the selection.

Upon finalizing the schema and retrieval requirements and gaining DEQ's concurrence with the recommendation, the supplier should delete any unnecessary database fields, add fields, change fields, or globally change document names as required, and then migrate the required index information and metadata to the new system.

Can you provide the necessary services for the required database transfer?

Yes, can perform various services required to meet the needs of the database transfers.

CGI has performed various data migrations from existing document management systems to FileNet's Repository. Past experience has shown that maintaining a single content repository is preferred over maintaining multiple content repositories over the long-term.

1. FileNet Approaches

Any FileNet implementation mandates that overall storage taxonomy is considered.

According to AIIM, the Enterprise Content Management Industry Association, "A taxonomy provides a formal structure for information, based on the individual needs of a business. Categorization tools automate the placement of content (document images, email, text documents, i.e., all electronic content) for future retrieval based on the taxonomy. Users can also manually categorize documents. Critical step to ensure that content is properly stored."

In DEQ's case, a discussion on taxonomy is relevant because a taxonomy serves the basis for how content will be stored within FileNet. The taxonomy that is ultimately designed for DEQ impacts such areas as:

1. What data values can be used to search for documents or content?
2. Who has access to certain types of content?
3. Where the content is stored?
4. What process (workflow) does a content or document type follow?

The taxonomy design directly impacts the roll out of FileNet, which in turn directly impacts how data will be transferred. The content manager repository is a secure storage area that provides organized access to the content, regardless of the source of the content or its format. The repository tracks an extensive set of attributes or properties about each content item. These attributes serve as metadata describing the content. The repository uses the metadata to organize the content, and users can use it to search for content that is relevant to them. The set of attributes stored for each item is configurable and fully extensible.

Given the importance of this concept, FileNet provides a range of options that must be considered, including:

j) Multiple Object Stores

One such approach to the problem outlined above is to create multiple Object stores in FileNet, and then migrate content from the Regional offices into their own Object Store. An object store is a repository, or "store", of objects, as well as a suite of accompanying storage and retrieval services. Because a Content Engine's object stores can consist of many elements, some required and some optional, and can be spread over so many servers, it is useful to look at several views of what an object store is:

1. Object Store Views

A system administrator can create an object store by running the Content Engine's object store wizard. All the additional components, especially the ones that are located on different servers —the multiple file

stores, the content indexes, the database — revolve around that single initial installation. The system administrator's interface to the object store is the Enterprise Manager.

The Content Engine's database is the single repository of all the various classes, objects, and properties that comprise the object store.

2. Object Store Components: An object store includes the following components:

- A single tablespace which the Object Store Service uses to manage objects.
- One or more Content Stores which hold document content.
- An entry in the Global Configuration Database.

FileNet P8 Platform applications such as Workplace use object stores to store objects and content. Users access the object store through their application to accomplish such tasks as creating, searching, retrieving, and storing documents.

Each object store has a tablespace that contains metadata such as property values for documents, folders and other objects. The content for the documents in the object store is located in one or more files stores associated with the object store.

3. Relation to FileNet P8 domain

Each time you create a new object store, the Content Engine registers it in the Global Configuration Database (GCD). A single FileNet P8 domain can contain one or many object stores.

Once the content is migrated to its own object store, users can still access content across object stores by creating cross object store searches.

Maintaining multiple object stores may result in additional admin functions to be performed or additional searches being required.

k) Single Object Store – Foldering

Another approach to separating content by Regional Office would be to maintain different foldering structures and place content into each structure during the migration process. Controlling content at the folder level may require additional security to be applied to content.

l) Single Object Store – Meta-Data

Another approach to separating content by Regional Office would be to create a master taxonomy that incorporates region as part of the overall meta-data structure. Maintaining region as part of the master metastructures may require additional indexing to be performed, additional searches, or additional search criteria to be entered by users.

2. Database Transfer Success Considerations

CGI will work with DEQ to analyze the following items to help determine the best overall approach.

m) Database Schema

CGI will study the document management system currently in use. Working with DEQ, CGI staff will determine which aspects of the current database schema should be used in the FileNet P8 system. A worksheet similar to the example below will be used to track database schema changes.

Exhibit Error! No text of specified style in document. -17
Migration Plan

Sample Database Schema

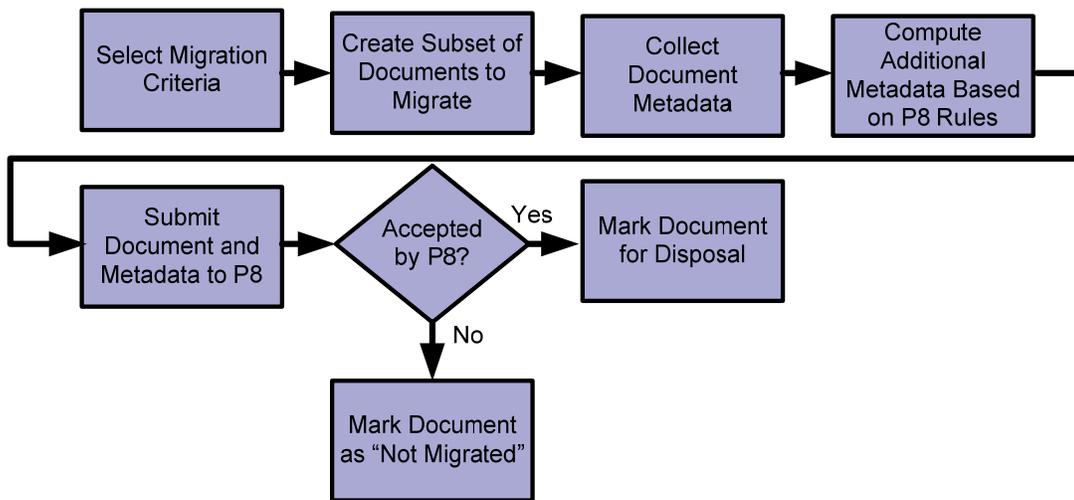
Document Class	Field	Required	Data Type	Migrated To Field
Field Report	Document Title	▪	Text	Document Name
Field Report	Plant ID	▪	Numeric	Plant ID
Field Report	Folder ID		GUID	[Not migrated]
Email	Sender	▪	Text	Sender
Email	Received Date	▪	Date	Received Date

n) Application Development

Based on detailed migration requirements, CGI will work with DEQ to design a migration tool and strategy that will move documents from regional offices to the central office in an efficient manner. Development of the tool will follow DEQ development standards and will use methods currently in use to access documents in the existing document management system. A basic application design is shown below.

Exhibit Error! No text of specified style in document. -18
Application

Sample Document Migration



o) Data Migration

CGI will work with DEQ to determine the best methods of migrating documents to FileNet P8, such as:

- Selecting documents based on Date, Type, etc.
- Choosing the best time to migrate documents: after business hours? Weekends?
- Determine logging requirements: what should be logged?
- Compute values for FileNet: the “regional office” number may not be directly related to a document, but the fact that it came from a regional office allows the migration application to add this data to the document before it is uploaded to FileNet.

p) Storage Strategies

The table below outlines the advantages and disadvantages of each document storage strategy.

Exhibit Error! No text of specified style in document. -19

Storage Strategies

Document Storage Strategy	Pros	Cons	Migration Strategy
Centralized Storage	<ul style="list-style-type: none"> ▪ One Repository ▪ Single point to manage data ▪ Easier to manage data requirements ▪ Low hardware and software license costs ▪ Small administrative staff ▪ Folders used to separate documents originating from regional offices 	<ul style="list-style-type: none"> ▪ Single point of failure ▪ High speed WAN access required ▪ Potential heavy workload on central server 	<ul style="list-style-type: none"> ▪ Migrate documents from regional offices to home office using application developed for project ▪ Additional fields must be added, e.g., "Office Number" and/or "Office Name"
Decentralized Storage	<ul style="list-style-type: none"> • No single point of failure • WAN not needed 	<ul style="list-style-type: none"> • Difficult to remotely manage regional office data • Additional hardware and licensing costs • Central Application Engine must communicate with multiple Content Engine servers • Larger administration staff needed 	<ul style="list-style-type: none"> • Additional fields must be added, e.g., "Office Number" and/or "Office Name" • Documents and metadata must still migrate to new Repository
Hybrid Solution	<ul style="list-style-type: none"> • Documents captured and forwarded to Home Office outside of regular business hours • Capture operators are not slowed down waiting for documents to be uploaded to the home office 	<ul style="list-style-type: none"> • Web Servers at central office require access to regional office object stores 	<ul style="list-style-type: none"> • Same as Centralized Storage

3. Option 1

DEQ has developed indexing schemas; they are in use for the Air Program, Voluntary Remediation, and Tanks (see Appendix J). It has been recommended that DEQ modify indexing schema for Air, Voluntary Remediation, and Tanks. DEQ staff are reviewing and evaluating indexing options. As an option to DEQ, suppliers will analyze with agency staff the existing indexing schema as part of the detail design, the proposed indexing schemas and the retrieval patterns to ensure that data required for retrieval patterns are captured.

Can you provide the necessary services for database transfer?

Yes, CGI will study the document classification schema currently in use at DEQ and provide the necessary services. CGI personnel will work with DEQ to determine which aspects of the database schema should be ported to the FileNet P8 repository. As with many legacy systems that have been built over the years, CGI has found that many systems contain redundant or unused fields; document classification structures can be significantly improved after detailed analysis.

4. Research Methods

CGI will study the following aspects of the system in use at DEQ today by analyzing the following:

- Can document or object classes be eliminated? Some object classes are redundant and can be eliminated.
- Can relationships between documents classes be formed? This will allow DEQ to take advantage of FileNet's class inheritance.
- Are all of the properties associated with object classes used by DEQ? If not, properties may be eliminated.
- Which fields are used when searching? CGI will configure class properties to be indexed in the database, allowing for efficient searching. Fields that are not commonly used in searches may not need to be indexed.
- Which fields will be used in workflow? During workflow design, CGI will determine which fields will be used in FileNet's Process Engine.
- Are standard class names used? CGI has found that many organizations benefit from a standard naming structure, allowing future developers and analysts to understand the data structure quickly and easily.
- Does DEQ use consistent field definitions? Standard field definitions are used in FileNet to build document classes; DEQ will benefit from using consistent field names throughout all document classes.
- Are field defaults used? CGI will configure the FileNet Content Engine to populate fields with default data when objects are created.
- Do field types make sense? Some systems, through time, do not store or use data appropriately. For instance, fields that are used in mathematical functions should be numeric.
- Should users have access to documents with certain document classes? For example, "Air Quality Reports" may be created by engineers, edited by managers, and viewed by users in the regional office. CGI will help DEQ determine document access based on document class.
- Do document class fields imply document security? CGI will determine whether or not field values imply a certain document security level; this feature is used in conjunction with document class and folder security. FileNet P8 restricts access to objects with certain field values via "Marking Sets". CGI will work with DEQ during the design phase of the project to determine if this level of security is needed.

5. Database Implementation

After document class and database analysis, CGI will submit plans to DEQ for approval. Once both CGI and DEQ agree on the new document classification, CGI will deploy the document class structure in FileNet P8, as all documents will be stored in FileNet P8.

q) Object Store Configuration

CGI will configure the FileNet Object Store using checklists similar to the example below after document classes and associated class properties are designed.

Exhibit Error! No text of specified style in document. -20
Parameters

Sample "DEQ Object Store"

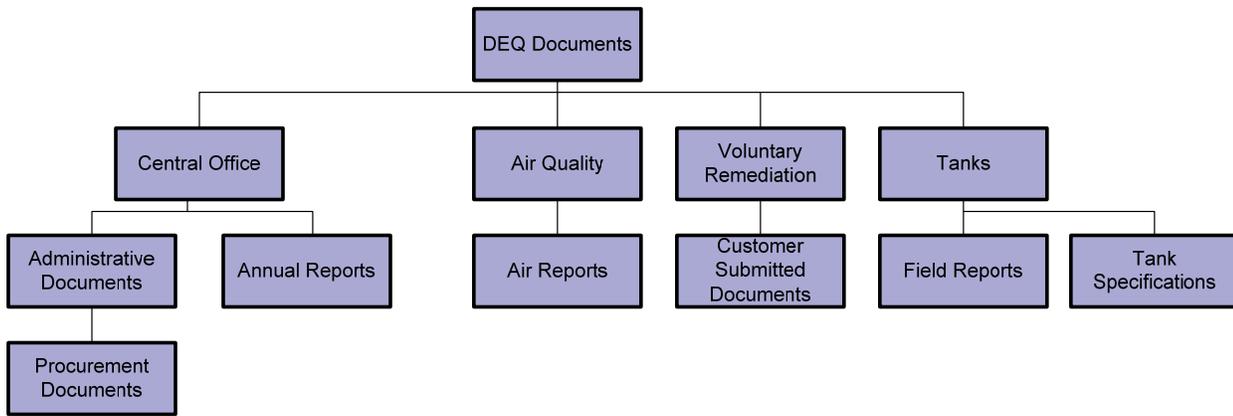
Object Store Parameter	Object Store Parameter Value
Display Name	DEQ Object Store
Symbolic Name	DEQ_OBJ_STORE
Description	The DEQ Object Store manages all DEQ documentation
Oracle Database Alias	DEQP
File Store	DEQ_FS
Shared Folder	\\DEQFS\DEQ
Administrators	FileNet-CEAdministrators FileNet-P8Admin DEQ-Admin

r) Object Class Hierarchy

Once the DEQ document classifications have been approved, CGI will develop a graphical representation of all DEQ classes, similar to the following example.

Exhibit Error! No text of specified style in document. -21
Hierarchy

Sample DEQ Document Class



Once a basic document class structure is approved, CGI will detail each document class and document subclass with a document similar to the following example.

Exhibit Error! No text of specified style in document. -22
Class” Properties

Sample “Base DEQ Document

Attribute Name	Attribute Value	Notes
Parent Class	FileNet Document	All document classes are inherited from the base FileNet document class
Name	DEQ Document	CGI suggests subclassing all enterprise wide document classes
Symbolic Name	DEQDocument	Symbolic name is used by internal processes and is not visible to users
Description	DEQ Base Document	Parent Document Class
Support Versioning (Y/N)	Yes	DEQ documents will be versioned
Allow Instances (Y/N)	No	All documents are created as subclasses of the “DEQ Document”
Allow Subclasses (Y/N)	Yes	Document subclasses may be created from this class
Allow Property Addition (Y/N)	Yes	Properties may be added by Administrators
Hidden (Y/N)	Yes	Users do not know the base class exists, as it enables DEQ standard document properties; other classes will be visible to users.

s) **Class Properties**

Properties used at DEQ will be documented by CGI as shown below. FileNet properties are shared between document classes. For example, the “Plant ID” property will be defined, for example, as a 12 character string. All classes that use “Plant ID” will use the same definition, allowing for easy data manipulation between classes.

Exhibit Error! No text of specified style in document.-23 Sample "Air Quality" Class Properties

Display Name	Symbolic Name	Data Type	Length	Indexed	Required
Plant ID	PlantID	String	12	Yes	Yes
Document Date	DocDate	Date	N/A	Yes	No
Document Received Date	DocRecDate	Date	N/A	No	No
Region	Region	String (Choice List)	64	Yes	Yes
Plant Type	PlantType	String (Choice List)	12	No	No

Air Quality documents contain information regarding all Air Quality Documents. Every document in this class or its subclasses will contain the properties listed. CGI will determine which properties will be indexed for quick retrieval. Not all document properties need to be indexed, as they may not be searched upon. CGI will work with DEQ to determine which properties in each class will be indexed.

All documents belonging to the "Air Quality Reports" class contain the following properties. Note that only documents belonging to the "Air Quality Reports" class also contain the properties associated with the "Air Quality" class.

Exhibit Error! No text of specified style in document.-24 Sample "Air Quality Reports" Class Properties

Display Name	Symbolic Name	Data Type	Length	Indexed	Required
Report Type	ReportType	String	20	No	Yes
Reporting User	ReportingUser	String	64	No	Yes
*Plant ID	PlantID	String	12	Yes	Yes
*Document Date	DocDate	Date	N/A	Yes	No
*Document Received Date	DocRecDate	Date	N/A	No	No
*Region	Region	String (Choice List)	64	Yes	Yes
*Plant Type	PlantType	String (Choice List)	12	No	No

Class property definitions marked with "*" are inherited from the parent class.

t) Security

CGI will assist DEQ with optimizing the document class structure as well assigning security to document classes. For example, DEQ and CGI may determine the Air Quality Reports should be created by engineers, edited by managers, and viewed by authenticated users.

Security may also be applied to folders in the repository. CGI will analyze how documents are stored in existing document repositories to determine how the document location affects access. CGI will work with DEQ to optimize the document folder structure as well as classification.

L. Base 12

Search: DEQ requires a document search capability that can be used to retrieve information. This search window should be easily accessible and available to enable immediate access to the document repository based on any combination of search criteria including but not limited to index searches, keywords, full text search etc. in all stored document formats or folders. Any reference information and metadata should be searchable. (DEQ is currently using several cross reference numbers for documents including a CEDS ID number.)

The user will be able to search by entering one or more values into the keyword fields. All documents should be searched by their index values so that documents from different sources will appear in the search list. Full text search and retrieval is also required. The implementation and integration required to accomplish this task should be provided.

Suppliers will be required to propose, as an option to DEQ, the validation of the current/proposed search criteria for Deployment Phases 1, 2, 3, and 5 (see "DEQ Case Study Deployment") to insure that all the necessary information is being captured for retrievals. As part of this option, suppliers should also identify whether there is unnecessary metadata currently being captured and retained.

Can you provide the necessary services for the required analysis, integration and implementation associated with the search requirements?

Yes, necessary services for the required analysis, integration and implementation associated with the search requirements.

The FileNet P8 solution allows the creation of search templates for frequently used searches. System Administrators can create pre-defined searches for the user community with the FileNet Search Template tool, or individual users can create and manage their own searches through the Simple Search tool provided by OOTB FileNet portal functionality. CGI will work with DEQ during the design phase to define the Search Templates to be provided to the user community for Go-Live and will later assist with the addition of new Search Templates as additional needs are identified during Pilot and deployment.

CGI will configure Document Search Templates in IBM FileNet P8 during the design phase of the project. Searches will include document index, keyword, and full text search capabilities.

1. Search Templates with Keywords

CGI will work with DEQ staff to determine common ways in which users may search for documents. Exhibit **Error! No text of specified style in document.**-25 below shows a search that will locate documents that:

- are in the "DEQ Scanned Documents" folder; even the user may select other folders through this search, this functionality may be disabled
- are in the class "DEQ Inspection Supporting Documentation"; This example shows how this criterion cannot be changed
- with a particular date; this may also be changed to "greater than" or "less than",
- with a particular title; this is an exact match, or
- contain keywords; wildcards may be used here as well.

Practically any combination of document classes, fields, Boolean logic, keyword, and full text searching is possible with FileNet P8 search templates. CGI will work with DEQ staff to determine how documents will be used, and, therefore, searched.

Exhibit Error! No text of specified style in document.-25 **DEQ Document Search with Keywords**

Search View

Selected Search Template: **Workplace** > **DEQ Keyword Search**

Get Info Hide Search Criteria

Printable View

Search in: /DEQ Scanned Documents [Select Folder](#)

Find released documents, where:

Document Date *is equal to* [Clear \(MM/d/yy\)](#) OR

Document Title *is equal to*

Keyword *contains*

Filter results against selected Classes:

DEQ Air Inspection Supporting Documentation

Max Results:

Search

Restore Defaults

2. Full Text Search

During system deployment, CGI will configure the Verity search engine to enable content based retrieval (CBR) on the appropriate repositories. CGI will work with the DEQ staff to create the "Exception Word List," which will increase the efficiency and decrease the size of content index storage. For example, the word "Virginia" may appear in practically every document that DEQ stores, so searching on this word would not yield useful results.

The document indexing process is integrated with FileNet's Object Store service. When a user saves a document, FileNet queues a request for full text indexing, thus freeing the user to perform other tasks. The FileNet Object Store then sends the index requests to the Verity engine, where the document's text is extracted and indexed for future searches.

The Verity search engine supports the following document types:

- MS Office Documents
- Adobe PDF
- XML
- HTML
- ASCII

3. Simple Searches

The FileNet P8 solution allows the creation of search templates for frequently used searches. System Administrators can create pre-defined searches for the user community with the FileNet Search Template tool, or individual users can create and manage their own searches through the Simple Search tool provided by OOTB FileNet portal functionality. CGI will work with DEQ during design to define the Search Templates to be provided to the user community for Go-Live and will later assist with the addition of new Search Templates as additional needs are identified during Pilot and deployment.

4. Search Results

The DEQ Electronic Document Imaging System solution will provide search results encompassing all relevant content. Search results will display the document name and any index data determined necessary by DEQ. Once a "hit list" is displayed, users may view the content to which they have access using the FileNet Image Viewer for TIFF files or native viewers for JPG and PDF documents.

Exhibit Error! No text of specified style in document. -26

DEQ Document Search Results

Search View

Selected Search Template: **Workplace** > **DEQ Document Number Search**

Get Info Hide Search Criteria

Printable View

Find released documents, where:

* ODP5 Title Number *is equal to*

Max Results:

▼ Actions Menu

Items Found: 2

View: Show Items:

<input type="checkbox"/>		Title	ODPS Title Number	ODPS Issue Date Of Certified Vehicle Certificate of Title	ODPS Owners SSN FEIN	ODPS Owners Last Name	ODPS Owners First Name	ODPS Dealer Vendor Number	ODPS Property Type
<input type="checkbox"/>		Title 999448888	102222210	11/2/06 12:00 AM	999448888	Taylor	Timothy	80000008	T
<input type="checkbox"/>		Support 999448888	102222210	11/2/06 12:00 AM	999448888	Taylor	Timothy	80000008	D

5. Metadata Analysis

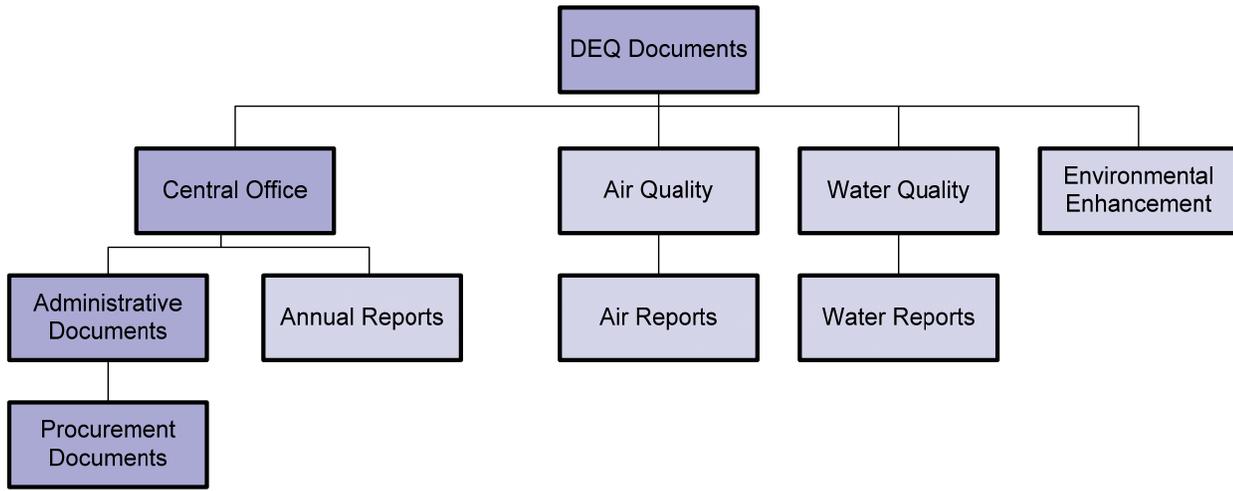
The CGI will work with the DEQ technical team and users to determine which document classes and associated fields, if any, are redundant or not useful. CGI staff will analyze the current document classification configuration to determine the most efficient structure, and will create the DEQ document classification schema according to agreed upon document classification rules and DEQ data standards.

CGI will help DEQ determine the best document classification hierarchy. A FileNet document class inherits properties from its parent – this can significantly increase the usability and efficiency of document storage in the FileNet Repository. As shown in Exhibit **Error! No text of specified style in document.-27** below, “Administrative Documents” will inherit all of the properties of the “Central Office” document class. CGI will help DEQ determine if the “Central Office” document class may even store documents, or if documents may only be stored using under the classification of “Administrative Documents”, “Annual Reports”, or “Procurement Documents.”

Documents of class “Procurement Documents” inherit the properties of all three parent document classes: “Administrative Documents,” “Central Office” and “DEQ Documents”. For example, if the “Central Office” document class contains the field “Office Name”, all documents in classes “Administrative Documents” and “Procurement Documents” will also contain the field “Office Name.” CGI will work with DEQ to determine the most efficient and logical way to classify enterprise documents.

Exhibit Error! No text of specified style in document.-27
Example

DEQ Document Class Hierarchy



M. Base 13

Image Retrievals and Viewing: The implementation should include the ability for users to select the document they want to see by selecting it and double clicking with the mouse. The document management system will automatically launch the correct application or image viewer; the appropriate application will present the documents for XLS, PDF, or word processing documents. This also applies to the viewing of eForm documents. Additionally, applications should be implemented so that the user determines the default size and location of the viewer so that it is optimized for their desktop environment. Options for paging through very large electronic documents, which can be from a few hundred to a few thousand pages, should be evaluated and implemented to best meet DEQ's needs. This may include document caching, pagination and other techniques to minimize the retrieval time.

Can you provide the necessary services for the required image retrieval and viewing capability?

Yes, CGI can provide the necessary services for the required image retrieval and viewing capability.

The IBM FileNet image viewer is capable of viewing large documents. Content Manager is used to pre-fetch, cache and other techniques to achieve efficient image throughput. CGI will work with DEQ staff to determine optimal settings to support retrieval of large documents numbering in the thousands of pages.

FileNet's image viewer enables users to view and navigate the document images they have retrieved via searches, folder navigation, or as workflow attachments. The Image viewer allows users to:

- Display and page forward and backward through a document;
- Alter the size and orientation of a displayed page;
- Use the Magnifier to enlarge sections of the image and the Navigator to traverse large images rapidly (e.g., D Size);
- View, create, edit, move and delete annotations, margin notes and highlights;
- Copy an image or part of an image to the Windows clipboard;
- Make a print or fax request for a single page, a document or a set of documents, and
- Invoke the native PC application associated with those document types on the user's workstation.

1. User Notes on Images

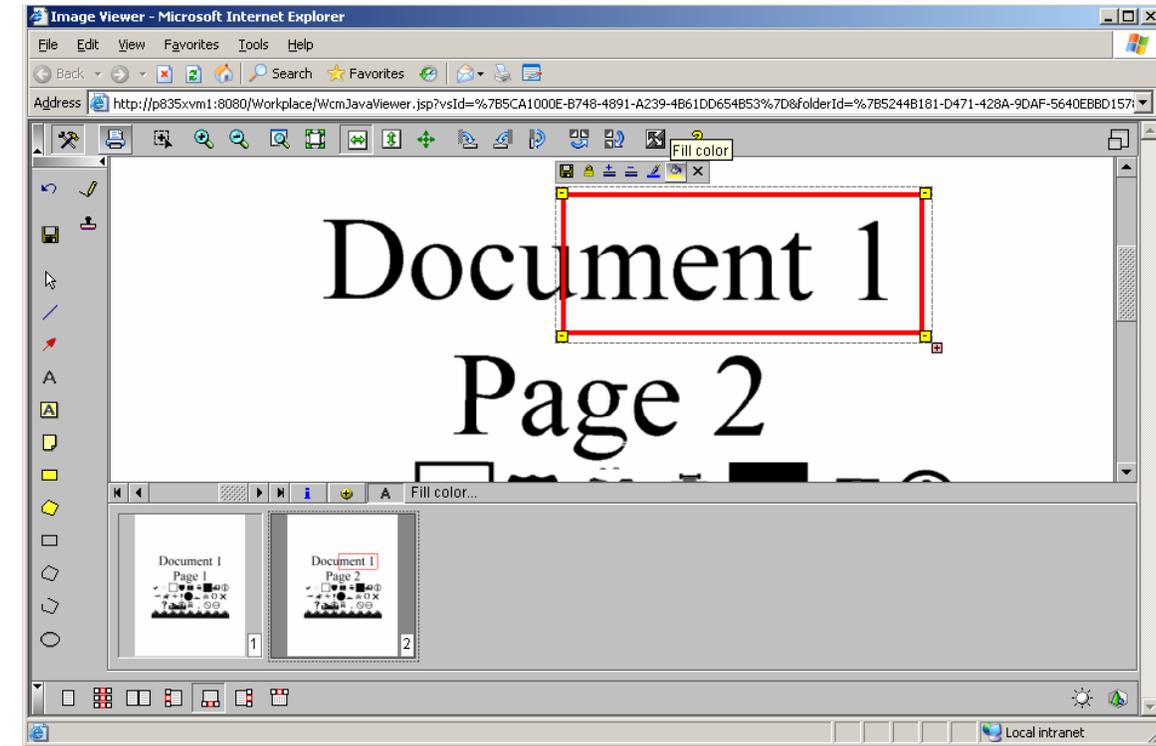
The most important documents to the user are the documents on which notes are placed. These documents are generally documents that users need to access more than once or documents that have influenced their decisions. For these reasons, document notes are important. Notes are used just like tabs, paper clips and Post-it™ notes to draw attention to information, to mark progress through a document, to mark specific areas and to leave reminders.

Every note has an associated owner and full security access control; thus, the originating user can restrict the viewing of annotations made on a document to their group or just themselves, or the user can make viewing of annotations available to everyone. "Notes" is the collective name for textual and graphical annotations added to document images. Up to 256 notes can be placed on every page of a document. Adding Notes to a document does not change the original document. Notes are stored separately from the original image by the P8 software. Therefore, the original image is unaltered by the addition of document annotations and redactions.

The following types of Notes are available with P8 Content Manager:

- Highlight – A highlight is a transparent block of color or gray shading that can be used in the same manner as a highlight pen.
- Annotations – An annotation is an opaque window that can contain up to 750 characters. These appear as separate windows on top of the image and can be represented as icons.
- Margin Notes – A margin note is a transparent block of color or gray shading with text. Like an annotation, it may contain up to 750 characters. It differs from an annotation in that it has no border and the text expands or shrinks when the image is scaled to a different size. Notes added by one user may be viewed or modified by any other users on the network; however, they are subject to the security access control restrictions applied by the originating user. The addition of several annotations can tend to clutter an image, so Image Display offers the ability to show or hide notes so that the original document image can be

viewed with or without annotations. Annotations can also be represented as icons, thus reducing the amount of image they obscure.



2. Image Manipulation for Ease of Viewing

The FileNet image viewer provides comprehensive image manipulation facilities, including the following:

- Seven magnification (zoom) levels;
- Zoom selection, which can be fitted to the full size of the display window;
- Alteration of the size of the image to user preferred scale;
- Custom horizontal and vertical scaling factors;
- Scroll within a document;
- Rotation by 90, 180 and 270 degrees in either direction;
- Selection of a portion of image for copy and paste to the Windows clipboard; and
- Multiple Thumbnail configurations for larger, multi-page documents.

3. Browsing Facilities Allow Users to Move Freely Through Pages

The FileNet viewer offers the following browsing facilities:

- Page forward or backward through a document or go directly to a specific page;
- Thumbnail viewing for multi-page browsing; and
- Multiple thumbnail options to fit user preferences.

4. Document Security

FileNet P8 provides several different security levels associated with each document image. The following table lists the various levels of security on a document. The exact distribution of user rights will be finalized during design sessions and applied to appropriate users and user groups.

Exhibit Error! No text of specified style in document. -29
Rights

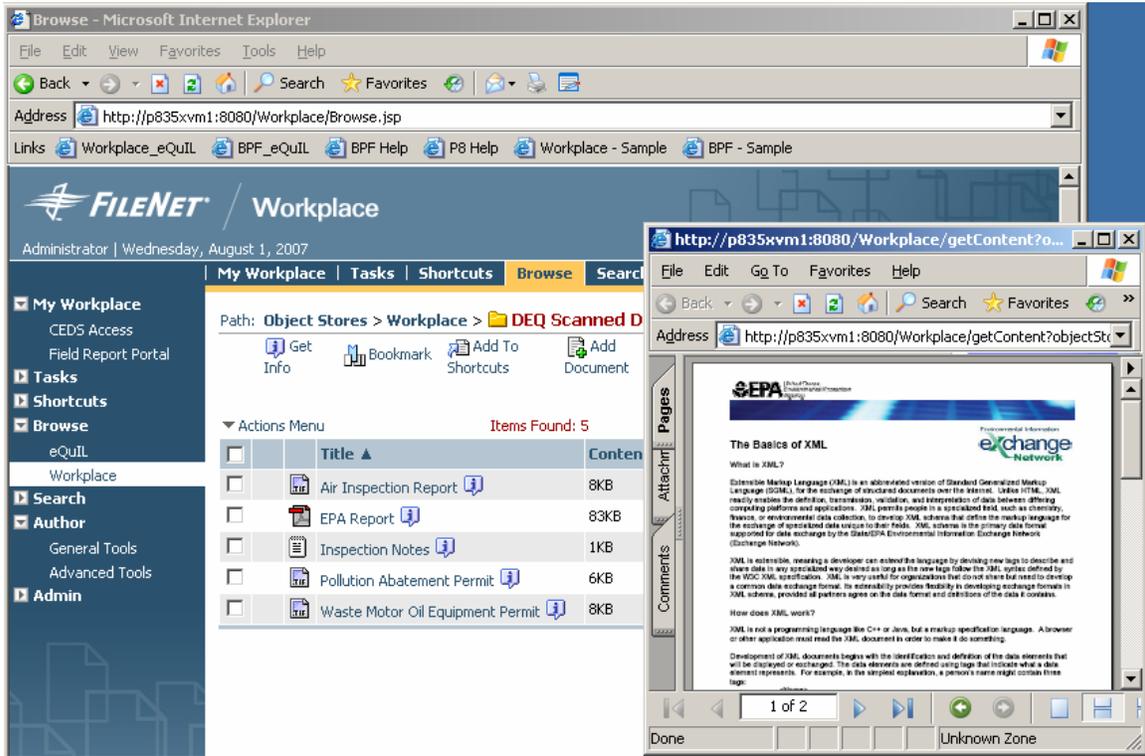
Document Security Access

Access Levels	Access Rights
Full Control	All access rights listed in this table, as well as the following: <ul style="list-style-type: none"> • Modify security; • Change owner and • Delete the document.
Minor Versioning	<ul style="list-style-type: none"> • Check out a document; • Check in a minor version and • Cancel a checkout.
Major Versioning	<ul style="list-style-type: none"> • Change state (promote and demote); • Check out a document; • Check in a major version and • Cancel a checkout.
Modify Properties	<ul style="list-style-type: none"> • Modify property values.
View Properties	<ul style="list-style-type: none"> • View properties and security.
Publish	<ul style="list-style-type: none"> • Publish the document.
View Content	<ul style="list-style-type: none"> • View content.

5. Electronic Document Viewers

Like other document types, FileNet stores unaltered copies of documents submitted via document entry templates, Kofax Ascent, and other document capture techniques. FileNet views scanned documents using its built in Java based document viewer. Electronic documents, however, are opened in their native application. The sample below demonstrates a PDF document opened via a browser plug in.

Exhibit Error! No text of specified style in document. -30 **Native Document View**



6. eForm Viewer

FileNet eForms are viewed on client workstations with Internet Explorer, as shown below. No browser add-ons or additional software is necessary, as FileNet eForms are encoded as HTML. The exhibit below demonstrates how eForms are viewed in the user's browser.

Page 1 | Page 2

Submit Close



Air Inspection Report

Commonwealth of Virginia

Run Date <input type="text" value="01/01/2007"/>	APS Plant ID <input type="text" value="123-124"/>
Plant Name <input type="text" value="Cumberland River Coal Company"/>	Classification <input type="text" value="Synthetic Minor"/>
Address <input type="text" value="123 Main"/>	Region <input type="text" value="SWRO"/>
	Report Number <input type="text" value="993-0-233218"/>

Inspection Date <input type="text" value="5/1/2007"/>	Contact Name <input type="text" value="Tom Planter"/>
Type <input type="text" value="FCE With Site Visit"/>	Contact Phone <input type="text" value="(804) 555-1212"/>
Inspector <input type="text" value="Joe Inspector"/>	
Inspection Result <input type="text" value="In Compliance"/>	

Air Program	Subpart
SIP	N

N. Base 14

Web Access: The document retrieval interface should be web accessible. It is crucial that the public at large as well as employees working remotely be able to access the ECM system via the web. Likewise, the workflow interface should be web accessible.

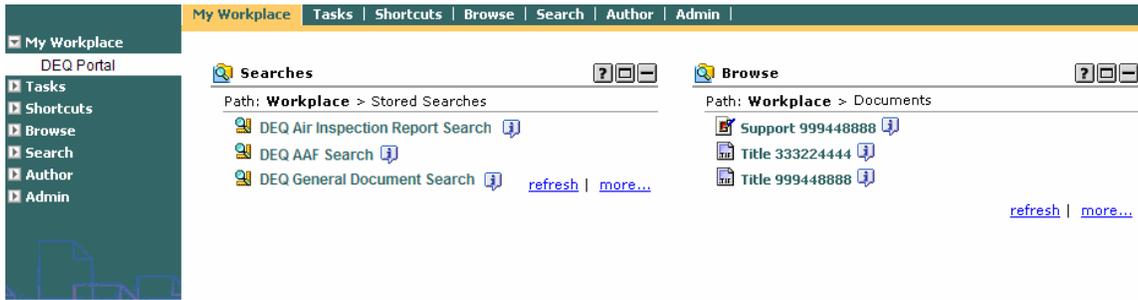
The document management system should be implemented so that users can retrieve their work queues and perform searches against the repository via an internet interface. This may be accomplished by ad hoc queries; for example, an employee performing a query on facility number and date range. DEQ needs remote access for inspectors and others who frequently work away from the office. Suppliers should state the worst case response time that can be anticipated for a 50K scanned document. Since the ECM system includes CEDS integration, remote access to the ECM system may result in updates to CEDS as described later in this document. It should be noted, however, that CEDS is currently not accessible by remote access. A proof of concept project is underway to achieve remote access for CEDS users. Implementation for remote access as described above should be included in the proposal.

Image Retrievals and Viewing: The implementation should include the ability for users to select the document they want to see by selecting it and double clicking with the mouse. The document management system will automatically launch the correct application or image viewer; the appropriate application will present the documents for XLS, PDF, or word processing documents. This also applies to the viewing of eForm documents. Additionally, applications should be implemented so that the user determines the default size and location of the viewer so that it is optimized for their desktop environment. Options for paging through very large electronic documents, which can be from a few hundred to a few thousand pages, should be evaluated and implemented to best meet DEQ's needs. This may include document caching, pagination and other techniques to minimize the retrieval time.

Can you provide the necessary services for the required web access capability?

Yes, CGI can provide the necessary services for the required web access capability.

The user-tier portion of FileNet is managed by the application engine, providing the web access to the core functions of the ECM system. The web interface for the FileNet P8 platform is called FileNet Workplace and will be configured as a Portal for users of the DEQ system.



Workplace is used to access document searches, as shown in the example above. CGI will work with DEQ staff to create searches based upon common document retrieval patterns. For example, searches may be configured to locate documents based on facility numbers, date ranges, document numbers, or practically any combination of document properties. FileNet P8 supports full-text searching to assist users locate documents based on their content.

1. FileNet Search Capability

The DEQ Electronic Document Imaging System solution will enable users to search on multiple index fields. Searchable fields will be finalized with DEQ during the design phase. CGI will work with DEQ to optimize the speed and efficiency of searching based on user needs, search configurations and database indexing.

Access to document searches is limited via FileNet’s object security feature. For example, field consultants should not have the ability to locate financial or HR related documents at the Home Office. CGI will work with DEQ staff to determine which searches users may execute.

The DEQ Electronic Document Imaging System solution will allow authorized users to search for documents based on the index values provided by DEQ. Searches may be performed on one or more index values, as shown below.

Search View

Selected Search Template: **Workplace** > **DEQ Document Search**

Get Info
 Hide Search Criteria
 Printable View

Find released documents, where:

Facility Number <i>is equal to</i>	<input style="width: 95%;" type="text"/>	AND
Document Date <i>is greater than</i>	<input style="width: 95%;" type="text"/>	
Document Date <i>is less than</i>	<input style="width: 95%;" type="text"/>	

Max Results:

2. Remote User Performance

For this implementation, the networking issue that will require the most analysis is the wide area network utilization and performance. This analysis is necessary to verify that adequate bandwidth exists between the various image-enabled facilities. To perform this analysis, it is necessary to make some assumptions about the peak and average bandwidth required to support the various types of devices used by the imaging system.

The following information is presented to provide a basis for DEQ to review the existing network topology and capabilities. CGI has assumed that DEQ will provide a facility-wide network with sufficient available bandwidth to support the DEQ Electronic Document Imaging System.

The DEQ Electronic Document Imaging System end-user station should be capable of viewing a new image or document every two to four seconds. For the sake of this analysis, the practical peak will be 15 images per minute. Although the average image size is 50K, the network traffic associated with each image is 110K. Therefore, this would present a network load of 1.65 MB/min (220 KB/sec) for each workstation.

The average load presented by the viewing stations will be a function of the volume of documents retrieved, but the network should be sized closer to the peak loading to prevent unacceptably large network latency times. For example, if there were only 110 Kbits/sec available to a viewing workstation, each image would take eight seconds to transmit from the server to the workstation. For remote locations with a large number of workstations, the network sizing can be more closely matched to the expected average load. For example, if there were 100 workstations at a remote location, the expected peak loading would demand a bandwidth of 22 MB/sec. In reality, a much lower bandwidth would probably be effective for that location.

In addition, larger documents are stored as multi-page tiff images. Although a 50K image should be viewable in a few seconds at typical LAN bandwidth levels, larger documents will download over time. A 50-page document could be several megabytes and take up to a few minutes before the end user can see or print the document.

3. Remote CEDS Access

FileNet P8 may be configured to provide a links to external systems, such as CEDS. CGI proposes to add a URL that points to the web based CEDS application. Users may be restricted from seeing the CEDS link on FileNet Workplace. Users will most likely need to authenticate into CEDS once the system is accessed via the web browser. The CEDS interface may be as simple as a document object that is merely a URL that refers to CEDS. In the example below, the “CEDS” document is reference to an URL, such as “http://ceds”. CGI will work with DEQ staff to determine the access method to the CEDS portlet window shown below.

My Workplace | Tasks | Shortcuts | Browse | Search | Author | Admin

My Workplace
CEDS Access
Field Report Portal

Tasks
Shortcuts
Browse
Search
Author
General Tools
Advanced Tools
Admin

CEDS ? □ ▢

Path: **Workplace** > CEDS Folder

 CEDS 

[refresh](#) | [more...](#)

O. Base 15

Printing: DEQ needs easy, flexible printing options that will allow printing of either a single page or a multiple page document at one time. Due to FOIA requests, some of which will always be completed at the DEQ offices, it is also necessary to print an entire folder with a single print command.

DEQ wishes to utilize a fast printing option that is accomplished by moving the decompression to the printer. The anticipated decrease in average file size will also improve the performance of this network task. Supplier should ensure that print features and fast printing options are implemented. The supplier will only perform these services at a single DEQ location. Although printer types vary, the HP M5035mfp multi-function printer represents one of the types used.

Can you provide the necessary services for the required printing capability?

CGI will install ASE Content Output Server to fulfill DEQ's print needs. The ASE print server accepts and process print requests, offloading rasterization tasks from the user's workstation. The Content Output Server then routes print jobs to existing DEQ printers. The ASE Content Output Server can process the multiple requests and can print thousands of documents per day. Print volumes indicated by DEQ will not exceed Print Server capacity.

1. Content Output Server Business Case

ASE Content Output server will benefit DEQ users by:

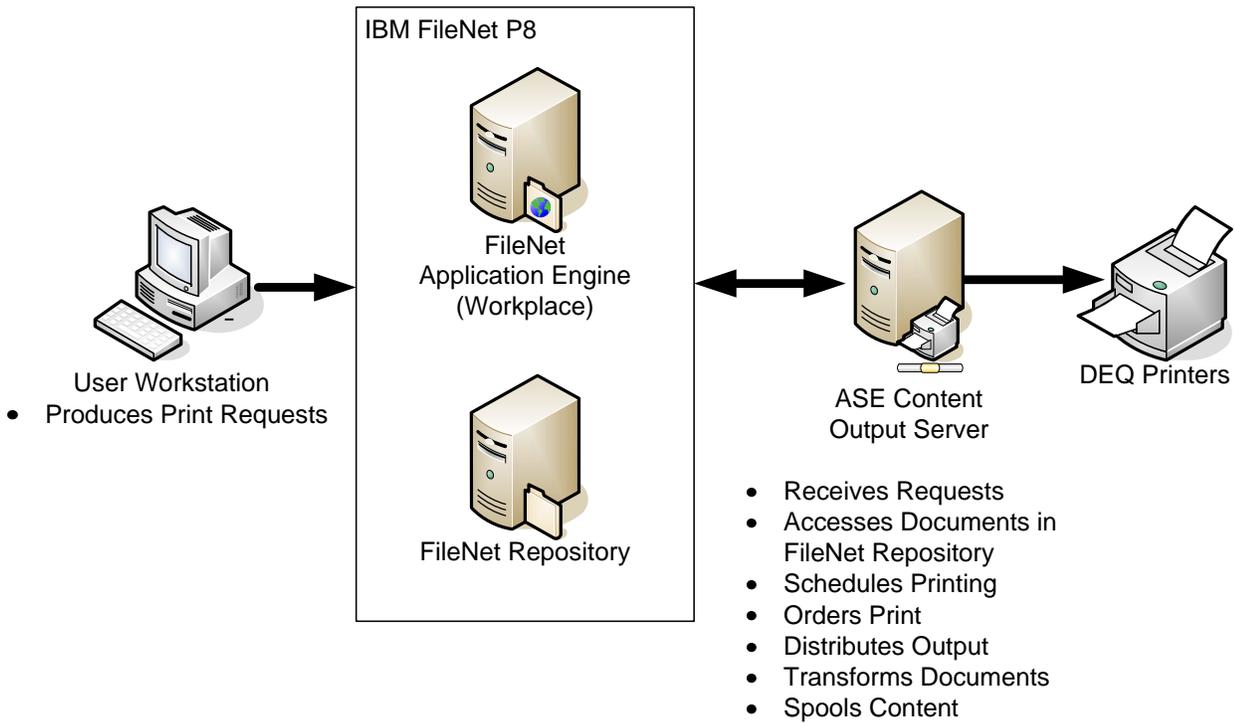
- Eliminating "bottlenecks" associated with desktop printing
- Saving time by spooling multiple print jobs
- Eliminating the need to open documents in their native application
- Reducing the cost associated with manually creating print jobs

2. FileNet Print Solution

FileNet relies on its partners, such as ASE, to provide document output solutions for its customers. Even though FileNet users can print documents using native applications running on user workstations, CGI recommends the use of a full featured print server, rather using FileNet's built in document printing capabilities when printing large or complex print jobs.

3. Print Architecture

CGI will configure ASE Content Output Server to accept print requests from FileNet P8 users by using one or more Content Output Servers to accept, schedule, rasterize, and output print jobs. The architecture diagram below shows the basic document print architecture that will be configured at DEQ.



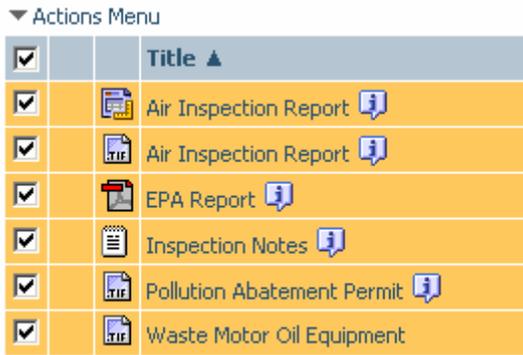
4. Printing Folders

CGI will configure ASE Content Output Server to print one or more documents contained in a folder. Users will print the contents of FileNet folders by accessing the folder through Workplace. When the appropriate documents are located, the user will select ASE’s “Print” menu in FileNet’s multi-select action menu. This action will immediately send the selected documents to the print server, freeing up the user’s workstation for other tasks. CGI does not expect to perform additional customizations using the ASE Content Output Server solution.

To print the contents of a folder, user will:

- Open the appropriate folder
- Select all or some documents to print
- Select the “ASE Output” menu
- Choose the appropriate output options: document order, output device, etc.

The exhibit below illustrates the multiple document selection in P8 Workplace.



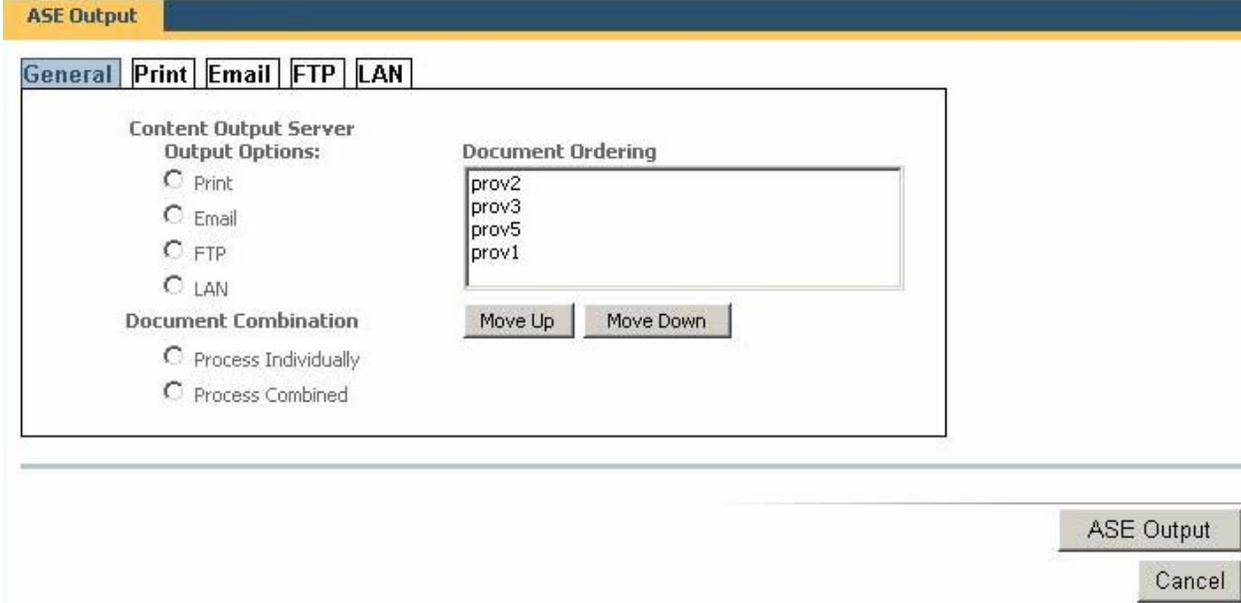
The exhibit below demonstrates the “ASE Output” menu selection added to the standard FileNet P8 Workplace menu. This menu is invoked from the “Actions Menu” shown above.

Exhibit Error! No text of specified style in document. -37 **ASE Output Menu Selection**



The menu below provides an example of the ASE Output options window. Users will select print options from this window.

Exhibit Error! No text of specified style in document. -38 **ASE Output Options Selection**



5. Other Print Options

In the past, CGI has worked with other output management software vendors, such as ICI. CGI proposes to use ASE software because of its tight integration with FileNet P8, robust web service interface, and job scheduling capabilities. Additionally, ICI software is not on the Commonwealth’s MSA software list.

P. Base 16

Security: The current authentication software is LDAP compliant. Security should be established for all aspects of the deployment. Active directory is used for authentication. A role based and folder level authentication and authorization scheme will be required.

Can you provide the necessary services for the required analysis, assistance, and support for system security?

Yes, CGI can provide the necessary services for the required analysis, assistance, and support for system security. The FileNet P8 Security model is built on LDAP and supports Active Directory. CGI has proven and extensive experience advising clients with Active Directory, Novell eDirectory, Sun Java System Directory Server and many other LDAP-compliant security platforms. In addition to our technical expertise with secure implementations, CGI personnel have extensive experience in security policy and threat and risk assessment.

1. LDAP

FileNet products support LDAP to facilitate enterprise security. CGI will conduct an analysis of DEQ's infrastructure, including software versions, Windows Security Requirements, LDAP configuration and enterprise security standards. Once the appropriate security architecture is determined, the CGI team, in conjunction with DEQ, will configure the FileNet LDAP configuration incorporating ActiveDirectory.

2. Authentication

Access to FileNet, Kofax, and other products require LDAP authentication. Once a user is authenticated, FileNet Workplace is presented to the user, but only the objects in which that user may access are displayed. For example, Home Office users may not need to create Air Inspection Reports; only Consultants will create reports. When a Home Office user logs in to Workplace, he or she will not see the icon or link that creates an Air Inspection Report. When a Consultant logs in, he or she will see a link that will create a new Air Inspection Report.

During the design phase, CGI will work with DEQ staff to determine system functionality, access, and user roles. These roles will then be mapped to appropriate existing or new AD user groups and FileNet objects. Additionally, CGI will determine folder structures that simplify document access. For example, the following security policies may be associated with Air Inspection Reports:

Exhibit Error! No text of specified style in document. -39 ActiveDirectory Groups Sample

AD Group	Access
Consultants	<ul style="list-style-type: none"> • Create Reports in Regional Office "Reports" folder • View Reports created by self
Engineers	<ul style="list-style-type: none"> • View Reports (from any office) • Modify reports created by Consultants in the regional office (filed in Regional Office Folder)
Managers	<ul style="list-style-type: none"> • View Reports from any office • Modify Reports from any office

CGI will work with DEQ staff to determine appropriate LDAP based security settings on all folders in the repository. CGI will configure FileNet to communicate with an LDAP provider which will authenticate users and provide FileNet P8 with user group membership. Group membership is used to determine access rights to folders stored in the FileNet Repository.

The example below shows that the system Administrator, Managers, and Consultants may create documents in the "Air Quality Reports" folder. However, Managers and Consultants may not create subfolders. Users not in any of the groups will not be able to view the folder or its contents. CGI will create the folder hierarchy and associated group privileges based on ActiveDirectory groups.

Exhibit Error! No text of specified style in document. -40 Folder Security Sample

My Workplace | Tasks | Shortcuts | **Browse** | Search | Author | Admin |

Information

Properties Folder: **Air Quality Reports**

Security

Links

History

Actions

- Delete
- Move
- Add To Shortcuts
- Add Document
- Add Folder
- Add Custom Object
- Launch
- Create Link
- Show Hyperlink

Title	Owner Control	Modify Props	Create Subfolder	File In Folder	View Props	Remove
#AUTHENTICATED-USERS						<input type="checkbox"/>
Administrator	✓	✓	✓	✓	✓	<input type="checkbox"/>
Managers	✓	✓		✓	✓	<input type="checkbox"/>
Consultants	✓	✓		✓	✓	<input type="checkbox"/>

Add New

Apply

Exit

Q. Base 17

Records Management: The requirements of the ECM software in relation to records management are as follows: Some documents scheduled for destruction according to the retention schedules can be purged from the ECM system based only on origination date and retention requirements. Prior to purging, a Library of Virginia compliant notification should be generated that contains lists each of the documents that will be purged. The Library of Virginia forms are located at <http://www.lva.virginia.gov/whatwedo/records/forms/index.htm>. Once authorization has been received, the documents can be purged by the system. In many cases, however, the period of retention is triggered by a date in CEDS. This date should be accessible to the ECM system and if the date is deleted from this field in CEDS (meaning that the facility or site is again active or the date was entered by error), the system should verify this date and cancel the scheduled destruction. The system should be able to administer correctly a single document that is associated with multiple retention schedules.

DEQ is currently in the process of updating and validating their retention schedules. Suppliers should offer services to input retention schedules into the ECM system for the departments identified in Deployment Phases 1, 2, 3, and 5 as well as the associated document types. Record series that contain ECM documents should be operational as part of this deliverable. Completion of these tasks will be required for deployment phases 1-3. In deployment phase 5, this task will be completed at DEQ's option.

Supplier should provide support services to implement a fully functional records management system at DEQ that provides the necessary implementation, integration, reports, redaction, and processes that meet the requirements of the Library of Virginia.

Can you provide the necessary services for the required records management capability?

Yes, CGI can provide the necessary services for the required records management capability.

IBM FileNet Records Manager is designed to uniquely combine content, process and connectivity to automate and streamline all records-based activities, eliminate unnecessary end user participation, enforce compliance, including DOD 5015.2 standards, and create business advantage through a compelling return on investment.

IBM FileNet's Records Manager supports the entire lifecycle of records. In addition to the proposed use of Records Manager to facilitate the retention periods of various document types for DEQ, Records Manager can be expanded to coordinate the content and documents, including email messages, to be automatically declared as records across multiple repositories. Records Manager is also centrally managed to provide transparent enforcement of records management policies.

Enforcement and compliance become both achievable and cost effective—to get into compliance and stay in compliance. By leveraging IBM FileNet's Business Process Manager (BPM) capabilities, IBM FileNet Records Manager enables DEQ to manage the compliance and records management processes, as well as prove adherence to policy. IBM FileNet's Records Manager, powered by IBM FileNet ZeroClick, helps address regulatory compliance challenges and delivers tangible ROI by:

- Reducing risk by verifying consistent policy enforcement through automation of the entire records management lifecycle process;
- Lowering operational costs by reducing storage, discovery, training and infrastructure expenses and
- Improving productivity by automating routine business user and records management tasks and enabling staff to focus on higher value activities.

Records Manager is based on the IBM FileNet P8 standards-based architecture, which offers enterprise-level scalability and flexibility to handle the most demanding content challenges, the most complex business processes and integration to existing systems. The IBM FileNet P8 architecture provides a scalable framework for functional expansion to manage the enterprise content challenges of ODPS and provide greater process control and consistency across the enterprise.

1. Records Manager Components

CGI will configure or customize the IBM FileNet Records Manager components listed below.

- RM Web Application - Web-based user interface for managing records
- RM Java API - Interfaces and classes to support custom applications, such as CEDS
- RM Disposition Sweep - Java application that controls and computes disposition

- RM Data Model - Specific properties and classes that define system behavior
- RM Crystal Reports - Configurable templates for presenting reports
- RM Workflow - Processes that are used to manage records; notifies Library of Virginia Records Manager

2. Records Manager Roles

CGI will work with DEQ staff to identify the following RM users.

- Records Administrator – a System Administrator with some knowledge about specific records management capabilities
- Records Manager – a knowledge worker in DEQ who defines and manages file plans and disposition schedules
- Records Reviewer – Library of Virginia users that approve record destruction
- Records User – system users that create records, knowingly or not

3. Library of Virginia Notification

CGI will configure workflows used by IBM FileNet Records Manager to manage the retention of DEQ records. The "Record Destruction" workflow will be configured by CGI to require one or more Records Managers at the Library of Virginia to approve the destruction of the records. If the Record Manager does not approve a record destruction request, the destruction will not occur. CGI will work with DEQ and Library staff to configure IBM FileNet Records Manager workflow definitions to optimize record destruction requests.

Library notification will be configured to create a listing of records ready for destruction, similar to the notification in use today, as shown below.

Exhibit Error! No text of specified style in document.-41 Sample Library Notification

Commonwealth of Virginia
 **THE LIBRARY OF VIRGINIA**
 Archival and Records Management Services Division
 800 East Broad Street, Richmond, VA 23219-8000
 (804) 692-3600

CERTIFICATE OF RECORDS DESTRUCTION
(Form RM-3 May 2007)

This form documents the destruction of public records in accordance with the Virginia Public Records Act, § 42.1-78 through 42.1-81 of the Code of Virginia.

1. Agency / Locality		2. Division / Department / Section			
3. Person Completing Form		4. Address		5. Telephone Number & Extension	
6. Records to Be Destroyed					
a) Schedule and Records Series Number	b) Records Series Title	c) Date Range (mo/yr)	d) Location	e) Volume	f) Destruction Method

4. CEDS Integration

CGI will configure the IBM FileNet Records Manager Java API to communicate with CEDS to perform the following tasks:

- Query CEDS for record destruction date in addition to maintaining record destruction date information in RM
- Update CEDS with record destruction status

5. Multiple Retention Schedules

Out of the box, IBM FileNet Records Manager is configured to honor the longest retention period for a given record. Based on prior projects, CGI does not expect multiple retention schedules placed upon record to be a issue with system operations.

6. Records Management System

CGI will implement a fully functional records management system at DEQ using IBM FileNet Records Manager, a reliable and secure storage and control of department information and assets.

- Integration - Records Manager integration with CEDS will be accomplished via the RM Java API
- Reports – RM reports will be configured in RM Crystal Reports
- Redaction – Records destruction requests will be configured to communicate with Library of Virginia Records Reviewers and Managers, allowing for staff to deny or approve requests with comments that will be sent back to Records Administrators
- Processes – CGI will design and identify RM users, workflows, CEDS integration points, and Library of Virginia records destruction requests.

R. Base 18

It has been recommended that a type of Computer Output to Laser Disk (COLD) which involves importing data into an ECM environment through a print stream. This approach is less costly and accommodates the transfer of CEDS documents into ECM. These captured documents are treated as a native file (as described in Appendix D). As an option to DEQ, supplier should provide services to implement, with auto indexing, reports provided as a print stream from the Oracle database and not having any overlays. These reports include:

- *one (1) associated with e-DMR processing*
- *two (2) associated with Air Permitting*
- *one (1) associated with Air Compliance*
- *one (1) associated with Air Enforcement*

Can you provide the necessary services for the required Enterprise Report Management?

Yes, CGI can readily provide the necessary services to implement Enterprise Report Management (ERM). CGI's ECM Team understands the conceptual basis for proper use of ERM, and understands the product offerings from FileNet, IBM, and others that address ERM.

CGI has also read and absorbed Page 67 of Appendix D of the RFP, which this Base-18 RFP question references. Appendix D Page 67 states:

"The DEQ Central Office is responsible for developing and maintaining the applications used throughout the agency. The primary source of data, reporting and tracking is CEDS. There are currently 750 CEDS users at DEQ. CEDS, which is an Oracle database, contains much of the data used by DEQ; however, to augment CEDS, some areas have created Access and similar PC based databases. Data transfers also occur between DEQ and a number of state and federal databases.

CEDS has been used extensively for tracking purposes within DEQ. It also provides document templates for some programs. Although the original intent was to create permits in CEDS, this concept did not prove viable and permits are now created from MS Word templates. As a result, staff in some media areas create MS Word documents and "cut and paste" the information into CEDS to reduce redundant data entry.

The Discoverer tool is used to generate ad hoc reports from CEDS for the field as well as for the EPA and other entities with which DEQ must share data. Standard CEDS reports are generated using Oracle 10G Reports. Data entry screens for CEDS are built using Oracle 10G Forms. Business Analysts have been allocated to assist the media areas in data retrieval and to help facilitate system design and enhancements. A Data Mining initiative is being explored to expand the availability and ease of access to data."

CGI understands well the original conceptual basis for what was formerly called "COLD" and was renamed years ago to "ERM". Originally, COLD (Computer Output to Laser Disk) was used primarily as a way to "print" legacy system reports to electronic versus paper media, in order to reduce paper usage, reduce storage costs, and simplify logistics. The methodology was to simply trigger a print report on the legacy system, but then intercept the report and redirect it to electronic media versus to a printer. The name "COLD" was a result of the fact that the least expensive electronic storage media at the time was "laser disk", and thus the generic name for the concept of intercepting print reports and storing on e-media became COLD.

Users began to see the advantages of ad hoc inquiry and searches of electronic versus paper reports, and it was also realized that since virtually any printed report had headings and columns of data, similar to that of a relational database with its field names and field data elements, an electronic COLD report could be viewed as a sort of "pseudo relational database". This led to the notion that such a "database" could be queried (or "mined") similar to a "real" database, and could also be used in the execution of business processes. Ultimately, this understanding, coupled with a move towards media more flexible than laser disks, resulted in the industry adopting the name "Enterprise Report Management" to replace "COLD".

ERM can be used as a relatively quick and inexpensive way to construct a pseudo relational-database that can address both the specific needs that are listed by VITA on page 67 of Appendix D (generating Word documents

populated from CEDS data fields, and enabling ad hoc queries of CEDS data), just as VITA has apparently speculated.

However, it is important to realize that the “batch” nature of ERM updates, because they are based on intercepted print reports that are a “snapshot” at one point in time, makes the approach somewhat vulnerable when anything in CEDS has changed since the “report” was last generated

In addition, ERM is viewed as a “low technology” solution in the current state of the art, as, rather than targeting and enabling full-featured seamless integration and flexible access between different system architectures, it adds a “third party” with limited translation and interaction capabilities.

Another way of looking at ERM software is to regard it as the print counterpart to what is called “screen scraping” software. In both cases, a 3rd party software package is used to translate and interpret what a legacy solution generates either as a print stream (ERM) or as a screen display data stream (screen scraping). Either can be a quick and relatively inexpensive solution if its limited capabilities are recognized and expectations are managed.

A slightly more recent approach is to provide software that facilitates the capture and conversion of print streams into “documents”, for electronic storage, distribution, or querying in architectures incompatible with the legacy source architectures. This enables ERM to contribute content towards enterprise content management in a format or formats compatible with user systems.

The IBM contract software listing that VITA has included in its RFP documentation lists two ASE Technologies products that VITA has access to under the contract:

- ASE Output Archiver for AFP (Advanced Function Printing) and Metacode
- ASE Content Output Server

CGI has naturally assumed that because of their inclusion, VITA is considering the use of these ASE products to address the Base-18 requirements as well as the two business problems on page 67 of Appendix D.

Per ASE’s website, “Content Output Server enables organizations to select and submit stored content in their ECM solution to any output device, assemble print jobs from disparate applications, and take full advantage of your organization’s print facilities. Content Output Server server oriented architecture allows administrators to configure optimal print times and select output destinations. Users can combine multiple documents of mixed MIME formats and submit them to a target device as a single job. Content Output Server includes a webservice API to enable organizations to print from existing applications.”

From the above, this product is clearly targeted solely at printing, and is therefore not a supplier-intended “solution” for the Base-18 stated need nor the two missions described in Appendix D page 67.

Again, per ASE’s website, “OutputArchiver organizations have the ability to integrate their legacy print data with their enterprise wide document management strategy. ASE DataPrep OutputArchiver is a combination of products for enabling legacy print data to be integrated with Enterprise Content Management solutions. [OutputArchiver Native](#) is a solution that enables organizations to store legacy print data in its native format meeting the demand for high-volume legacy operations. [OutputArchiver PDF](#) is designed to allow organizations to setup automated processes for transforming legacy print into Adobe PDF format for accessing and distributing across the Internet.”

Output Archiver therefore has potential for fruitful use with CEDS, but really does not truly fully address the Base-18 needs, nor either of the two business needs stated in Appendix D page 67. Those three needs require at least the following capabilities:

1. Implement, with auto indexing, reports provided as a print stream from the Oracle database and not having any overlays, so that CEDS reports can be “exported” seamlessly to non-CEDS environments, and used within agency business processes.
2. Enable the creation of permits using data from CEDS within MS Word templates, without the current time consuming and error-prone copy and paste
3. Enable data mining that uses standard CEDS data entry screens and reports generated using Oracle 10G Reports, without requiring, or at least reducing the need for, Business Analysts to more than once set up the required repetitive and ad hoc reporting and queries for users. In effect, the intent here is to use the relational database query and reporting capabilities on the CEDS system in non-CEDS environments, by utilizing ERM software as the link between CEDS and whatever reporting tools exist, or can be easily installed, on the non-CEDS systems.

Need 1 could be satisfied by using a true ERM software solution that would convert CEDS prints streams into pseudo relational databases that could be imported into a FileNet ECM environment, auto-indexed, and then be used to:

- Print entire or selectively filtered reports
- Create electronic documents that could be stored within the ECM systems
- Enable ad hoc queries using any standard report generator that interacts with a relational database
- Enable ad hoc queries that query against multiple pseudo relational databases

Need 2 could be satisfied by generating pseudo relational databases from CEDS via ERM, and then using those pseudo databases to populate MS Word templates.

Need 3 is conceptually very similar to Need 1, except that there is a “prior” step in which Oracle 10G Reports is used to “create” the print reports (actually print streams) which are then handled as in Need 1.

Both FileNet and its parent IBM talk of tools to meet these purposes, but neither is recommended at this point in time.

The FileNet ERM offering, Report Manager, is a limited capability, older product that is not recommended for this situation and for use in fully modern architectures.

CGI and FileNet would recommend using IBM Content Manager On Demand instead, but did not do so yet so as the On Demand product does not yet integrate with FileNet P8 CM (that integration is scheduled). Once that integration is enabled, On Demand will be a compelling solution for VITA to look at.

Content Manager OnDemand for Multiplatforms is the leading ERM / COLD management product which provides Enterprise Report Management and electronic statement presentation. It provides high volume capture of computer output, advanced client solutions for desktop and standard Web browsers, and automated storage management with advanced search and report-mining capabilities. The Content Manager OnDemand application will let an enterprise automatically organize and store any printed output, such as reports, statements, or invoices, as well as e-mails and image documents.

OnDemand manages the print output of application programs. It extracts index fields from the data, stores the index information in a relational database, and stores one or more copies of the data in the system. With OnDemand, both newly created and frequently accessed reports can be archived on high speed, disk storage volumes and automatically migrated to other types of storage volumes as they age.

Another important point is that OnDemand fully integrates the capabilities of Advanced Function Presentation™ (AFP™), including management of resources, indexes, and annotations.

OnDemand offers several advantages allowing the user to:

- Easily locate data without specifying the exact report;
- Retrieve the pages of the report required without processing the entire report; and
- View selected data from within a report.

In another client setting in the Healthcare space, CGI has utilized a custom application known as Content Connector that leverages FileNet COLD functionality. Content Connector ingests external data feeds, utilizing configurable rules to parse logical records into documents, index these documents with data captured within the data stream, and convert these documents to images for final committal to the FileNet repository. Content Connector allows document begin/end determination based on such logic as text string matches or control characters. In addition, Content Connector can locate data to index each document based on fixed or variable positioning as well as if/and/or logic. Content Connector is also used to import bulk loads of PDF, PCL, PS, JPG and TIFF document types. Finally, Content Connector's COLD capabilities allow newly created document images to trigger downstream processes, such as automated workflow and other back-end operations.

S. Base 19

The ECM storage system should be configured, integrated, and implemented to include total document storage and management. This includes applying retention schedules and enabling deletion with the appropriate approvals for paper, eMail, and other electronic document formats that include native, electronic photographs, audio, and video. Electronic documents should be captured and stored in their native format.

The IBM FileNet P8 software will allow DEQ to copy electronic documents from one folder to another and change index and metadata information with the appropriate security, e.g., renaming a superseded permit file. The supplier should ensure that this functionality is available for DEQ use for all applications including customization of folders to distinguish folder types.

DEQ has a need to check files out for processing. During checkout, file material should be accessible for viewing and can be checked out by anyone with adequate security. Other users should not be able to change the document, its template fields, or its tags, although the document should still be viewable as a read only document by authorized users. The ECM system will allow the user that has the document checked out to log out of the repository and still have the document checked out. This document should be stored locally on the user's workstation so they may continue to work on the document even though they are logged out. When the document is checked back in, changes should be saved to the server as a new version, and the document becomes modifiable to other users again. The supplier should validate that the functionality described above is operational by demonstrating this as part of their test plan.

Redaction and its associated security are important to DEQ. Unauthorized users should not be able to view the part of the documents that have been redacted out. The supplier should ensure that this feature is fully functional by demonstrating this to DEQ as part of their test plan.

To comply with DEQ standards, the ECM system and associated systems should be configured to include a development, test, and production library. Supplier should set up these libraries.

Supplier should work with DEQ to define system administrator functions and capabilities as well as security administration, to include the knowledge, skills, and abilities required in each function.

Can you provide the necessary services for the required analysis, services, integration, and implementation of the capabilities described by the General System Features?

Yes, CGI can provide the necessary services to comply with the requirements of Base 19. This includes establishing and implementing full records management policy, providing limited case management functionality through Workplace application integration/augmentation, BPM integration and application development, and optionally Business Process Framework implementation.

To meet the needs of the requested check-in/check out functionality, FileNet Workplace handles this as part of the out of the box capability. This includes the ability to check out a local copy of a file to a user's machine, log out of the repository, make changes, and then log back in to check the updated file in. Based on the needs of DEQ, there are multiple options as to what should happen when the file is checked back in – if anything at all. For example:

- The file can be checked in as a major or minor version (2.0 vs. 1.1).
- Using FileNet's Active Content features, FileNet can be configured to automatically trigger an event for either the major or minor version. For example, the system can be configured to automatically create a new record in Records Manager – or supersede an existing record – upon checking in each major (or minor) version.
- A workflow can be launched based on an event such as the creation of a new major version. This event could be an approval workflow, a notification email to a group of users indicating a new file is available for viewing or update, or it can be set to trigger nothing at all. The choice is DEQ's.

The configuration options are fairly limitless based due to the Active Content model, and will be designed to meet the specific needs of DEQ.

For advanced redaction capabilities, CGI proposes the implementation of the Spicer Freedom product, which is listed as a 3rd party option on state Contract VA-070601-IBM.

1. Option 2

Fax Capture: A smaller, but significant number of documents arrive via facsimile. These documents will not be printed and scanned. A fax server should queue them up for data extraction and indexing as electronic documents in TIFF format. DEQ uses a fax service for incoming and outgoing fax support. Information regarding the product, supplier, and software may be found at:

<http://www.fax2mail.com/index.jsp?pa=n§ion=HowItWorks>

These documents should be transferred from a fax server, indexed and uploaded to the local repository. The index keys should be synchronized with the central database, and routed via workflow. The implementation and integration required to accomplish this task should be provided as an option for DEQ to consider.

Can you provide the necessary services for fax capture and integration?

CGI will configure Kofax Ascent to accept faxed documents arriving from fax2mail, a fax-to-email solution already in use at DEQ. Upon receiving a fax, the fax2mail solution creates an email message that is sent to DEQ via the internet. Once the mail server receives the fax, it will be processed by Kofax Ascent Capture Email Import (ACEI) tool.

CGI will configure Kofax Ascent to open incoming email from the fax2mail service and create batches in Ascent. CGI will configure a batch class that is optimized to allow the batches to be indexed in Kofax Ascent and released to FileNet's Content Manager. Incoming faxes, via email, may be indexed using the caller's fax number, incoming date and time, as well as other index values. CGI will work with DEQ to determine the appropriate document indexing configuration that meets all legal and technical requirements.

CGI will configure Kofax Capture to retrieve necessary email fields, place the values in the Kofax Index module, and finally send the fields to FileNet P8. The Kofax Ascent Capture Email Import tool supports the following predefined email fields:

- <From>
- <To>
- <CC>
- <Subject>
- <Date>
- <Message ID>
- <Priority>

CGI will work with DEQ to determine which properties should be indexed by Kofax, and subsequently, FileNet Content Manager.

2. Kofax Document Capture Workflow

Incoming faxes, formatted as email with TIFF attachments, will be configured to follow a document capture workflow, as defined in a Kofax Batch Class. The batch class will send the incoming batch through barcode recognition (if necessary), index validation (with the CEDS interface), and finally, release. The release script will then export the batch to FileNet's Content Manager where it may be processed by additional workflow definitions.

3. FileNet Workflow

FileNet will be configured to accept the documents released from Kofax Ascent so that the images will be made available to users for subsequent processing. Working with DEQ staff, CGI will determine the optimum method of creating new documents in Content Manager. For example, documents arriving via FAX for a specific document type may automatically launch a workflow designed to assist DEQ workers perform their duties.

The method of calling workflows based on the introduction of a document in Content Manager is called a "workflow subscription." During the design process, CGI will determine whether or not a workflow subscription should be called.

4. Index Key Synchronization

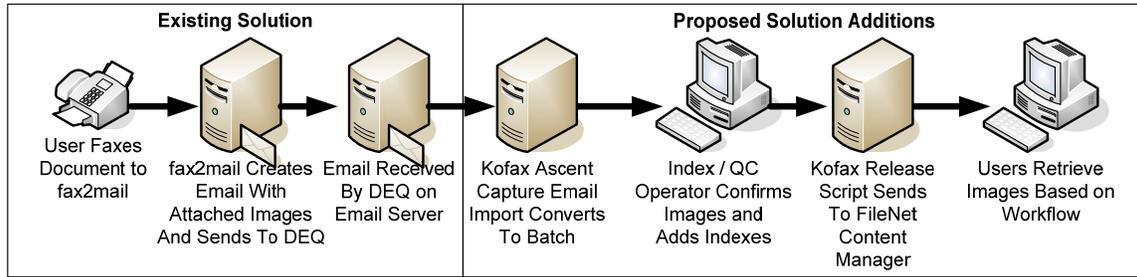
CGI will design and deploy the document index schema according to DEQ requirements on both the FileNet Content Manager Document Classes and Kofax Ascent Capture Document Class levels. The process of

maintaining additional document index keys will be created by CGI and will be followed by DEQ staff once the system is in the production phase. The main goal of this synchronization is to verify that index operators see the same fields and field values (or keys) as what appears in FileNet Content Manager.

5. Basic Data Flow

Users may fax documents to DEQ via the fax2mail solution already in place. Document images are extracted from the email, and sent to Kofax Ascent via the Ascent Capture Email Import feature. Once the fax images are part of a batch, they may be indexed, sent through quality control, and released to FileNet Content Manager just as any other scanned batch. The figure below outlines this process.

Exhibit Error! No text of specified style in document. -42 Proposed FAX Architecture



6. Option 3

Electronic Forms Capture: It is anticipated that eForms software will be used by DEQ; it will include electronic signatures, security, and CROMERR compliance. IBM FileNet eForms software is an option made available for Agencies of the Commonwealth as part of the ECM statewide procurement. As part of this RFP, the supplier should propose two eForms implementation: one eForms application is associated with Air Compliance and the other is associated with Tanks and requires electronic signatures.

Can you provide the necessary services for eForms capture and implementation?

Yes, CGI can provide the necessary eForms capture implementation services – at DEQ’s discretion. CGI is proposing two eForms that will support two FileNet P8 workflow processes. Both forms are based on the samples provided in “Appendix I – Sample eForms.”

7. Air Compliance Workflow

The “Air Compliance eForm”, based on the sample supplied in Section I-1, will be used to launch the Air Compliance workflow. CGI expects this form to be implemented as a multi-page form that will be stored in the FileNet Content Manager, and will available to authorized users of the DEQ system. The table below describes the eForm and its role in workflow.

Exhibit Error! No text of specified style in document. **-43**
Workflow

Proposed Air Compliance

Step	User Action	Details	Addresses CROMERR Requirement
1.	User with the role of "Inspector" opens P8 Workplace	User must have login rights and access to FileNet P8	User authentication Credential validation
2.	User selects "Submit Air Compliance Report"	Link on FileNet P8 Workplace launches an eForm and subsequent workflow. Access to portals and eForm submission tools is restricted based on user group membership; only authorized users may submit eForms.	User authorization
3.	User fills required form fields	All fields are required in this eForm Some fields, such as "Inspection Result" accept one value from a list via a dropdown menu. This aids both the form user and subsequent workflow and reporting mechanisms by using standard field data.	
4.	eForm is validated as the user enters form data.	Run Date is computed as today's date APS Plant ID checked against the CEDS via a newly developed CEDS web service "GetPlantInfo" which accepts Plant ID as its input parameter Plant Name, Address, Classification, and Region are auto populated based on GetPlantInfo() return data Inspection Date cannot be more than 30 days in the past or in the future; this provides some basic error checking in the form, as well as fulfilling a (potential) requirement that inspection reports must be filled out in a timely manner.	

<p>5.</p>	<p>eForm Signature (optional)</p>	<p>Once the eForm is completed by the Inspector, he or she may electronically sign the document, indicating that it is complete and accurate.</p> <p>Signing the eForm will lock all but the signature fields, providing an audit trail and data integrity safeguard.</p> <p>Locked data on eForms does not imply that new versions of the same form cannot be created in the future. CGI will work with DEQ staff to determine the methods that best meet project requirements.</p>	<p>Identity Proofing</p> <p>Determination of credential ownership</p>
<p>6.</p>	<p>Workflow Launch – Inspector</p>	<p>As the eForm is saved in the Repository, a workflow is created that will lead the appropriate users through the Air Inspection process. The workflow is given the data elements added to the eForm, such as Plant Name, Inspection Result, Inspector’s Name, Comments, etc.</p>	<p>Procedures to flag accidental submissions</p>
<p>7.</p>	<p>Workflow Process – Manager</p>	<p>Once the workflow is created, the work item is placed into the Manager’s Inbox. The Manager will then open the Air Inspection Report eForm, and, depending on his or her judgment, approve or deny the inspector’s report.</p>	<p>Opportunity to review document content</p> <p>Verification of attestation by disinterested individuals</p>
<p>8.</p>	<p>CEDS Update</p>	<p>Once the inspector’s manager approves the report, a custom component updates CEDS via a web service (or other method) call. Data on the eForm, computed by the workflow engine, or computed by a custom component may be sent to CEDS.</p>	<p>Notification that a copy of record is available</p>
<p>9.</p>	<p>Workflow Process – Schedule Next Inspection</p>	<p>After a successful CEDS update, the P8 Workflow engine can create a reminder for the group of inspectors to inspect the facility again, based on dates provided by CEDS, or by calculating a date, say, 1 year in the future.</p>	

10.	Reporting	<p>After the Air Inspection Report is stored in the Repository, the data may be queried and reported upon using standard and customized tools. For example, a query can be created in P8 that locates all Air Inspection Reports for:</p> <ul style="list-style-type: none"> • a plant, • a range of dates, or • for specific inspection results. 	Creation of copy of record in human readable format
11.	Audit Trail	Whether or not electronic signatures are used with the Air Inspection Reports, FileNet P8 tracks the actions and access to eForms and other objects managed by the Content Manager.	

8. CROMERR Compliance

CGI will work with DEQ staff to verify the eForms and workflow solution will comply with as many CROMERR guidelines as possible.

9. Option 4

Records Management: At DEQ's option, the vendor will create records management system reports that allow DEQ records managers to screen various records and to see which records meet certain criteria.

Can you provide the necessary services for records management reports?

Yes, CGI can optionally build the records manager reports. The IBM FileNet P8 product suite provides many out of the box reports that can meet an organization's information needs. If DEQ requires data outside of what is inherently provided in P8, CGI can provide customized reports surrounding any aspect of the solution, including Records Management. CGI can work with DEQ to determine how the out of the box reports match to DEQ's Records Management reporting needs and if custom built reports are required.

The following exhibit below provides detail on a number of pre-programmed reports that IBM FileNet packages with the Records Manager component. These reports are accessible through use of Crystal Reports. The following pre-programmed reports can be configured for use with the DEQ ECM solution.

Exhibit Error! No text of specified style in document. -44 FileNet Records Manager Pre-programmed Reports

Pre-Programmed Report	Report Description
Actions Performed by a User	Lists the actions performed by a user on a specific record category or record folder.
Categories and Folders by Disposition Actions	Lists the electronic categories and folders according to the associated disposition actions.
Disposition Schedule Defined in a File Plan	Lists the disposition schedules created in a file plan.
Disposition Schedules Allocated to Record Types	Lists the disposition schedules allocated to specific record types.
Electronic Categories and Folders Associated with a Disposition Schedule	Lists all the record categories and folders associated with a disposition schedule.
Electronic Folders and Records by Supplemental Markings	Lists all the electronic folders and records associated with a specific type of supplemental marking.
Electronic Folders Created Within a Specific Period	Lists the electronic folders that are created within a given period.
Electronic Records Created by a	Lists the electronic records that are created by a user /group within a given time

Pre-Programmed Report	Report Description
User/Group Within a Specific Period	period.
Electronic Records Viewed by a User/Group Within a Specific Period	Lists the electronic records viewed by a user/group within a specific period.
Electronic Volumes Opened and Closed Within a Specific Period	Lists the volumes that were opened/closed within a specific period.
Folders and Records by Disposition Actions	Lists electronic folders and records according to the associated disposition action.
Folders and Records on Hold	Lists the electronic folders and records that are placed on hold.
Location of Electronic Records by Application Type	Lists the location of electronic records according to the application type.
Records Folders without an Associated Disposition Schedule	Lists the electronic record folders that are not associated with any disposition schedule.
Review Decisions Taken Within a Specific Period	Lists the electronic entities and the review decisions taken within a specific period.
Structured File Plan View	Lists the records, folders, and record categories that exist in a given file plan.
Vital Records Due for Disposal	Lists the electronic vital records due for disposition within a specific period.

T. Base 20

ECM integration requirements are described below. If DEQ resources are required to complete an integration effort to or from a legacy database, estimates of DEQ resource requirements should be made.

CEDS Integration: CEDS is a custom application for DEQ and both the application and the data change with some frequency. Based upon the type of integration proposed, suppliers should describe in detail the type of impact to either CEDS or the ECM system when changes are made to the other system.

CEDS/ECM integration is required at numerous points. These are described below.

During scanning, a portion of the index information will be manually keyed, and based upon the information indexed, additional metadata information will be pulled from CEDS to the ECM system. Suppliers should describe the type of integration proposed to pull the necessary information from CEDS into their proposed ECM solution as shown in Figure 5-2. As scanning may be done in various locations, it is highly likely that indexing may be implemented as a portal application. Suppliers should define the CEDS indexing integration that will also support this thin client indexing. It should be noted that integration should occur between CEDS and the ECM system, not CEDS and Kofax. Suppliers will be asked to provide this level of integration for Deployment Phases 1, 2, 3, and 5.

The ECM should be able to download changes from CEDS that are also critical to indexing/metadata information into the ECM on a nightly basis and update all appropriate ECM fields. For instance, if a facility name has changed across all media in CEDS, these changes will be downloaded to the ECM system nightly and all applicable media records updated. Other changes may relate only to a single media. Suppliers should describe the methodology used to accomplish this and will be asked to provide integration to ten (10) data elements from CEDS to ECM on the nightly downloads.

The Records Management module needs to be driven by CEDS events in many instances. Integration between these two systems is therefore essential to utilize automated records management. DEQ will provide at least five (5) trigger dates from CEDS that will trigger a specified state of the records, for the supplier to integrate into the ECM system. DEQ OIS staff will assist as required in relation to CEDS. Suppliers should describe the methodology used to accomplish this integration.

Can you provide the necessary services to DEQ for the required analysis and implementation for CEDS integration?

Yes, CGI can provide the necessary services to implement CEDS integration.

1. CEDS Integration

CGI will customize a Kofax Ascent Index Panel to validate and populate document indexes and create a FileNet P8 Custom Component to accept and send CEDS updates. CGI will assist DEQ staff with the CEDS web service interface. A web service will enable both thick and thin clients take advantage of CEDS functionality in both the Kofax and FileNet environments.

2. Kofax Index Panel

Kofax Ascent supports many points of integration, including customized document index panels, release scripts, and batch class configuration. CGI will customize a Kofax Ascent index panel to support the document indexing requirements currently in use in CEDS. The index panel in Exhibit **Error! No text of specified style in document.-45** demonstrates what an Index Panel may look like. As stated in the RFP, some document index fields may be retrieved directly from CEDS rather than relying on a user to enter the information.

CGI proposes to create a CEDS Interface software layer that will act as a conduit between Kofax and CEDS. This interface will be built receive document index field data from CEDS upon entering key fields. In the example below, the "APS Plant ID" is entered by the user manually. When the user exits the ID field, the CEDS interface is called to request the remaining metadata for the plant. This frees the user from entering plant information, while providing powerful searches in the FileNet P8 environment.

Exhibit Error! No text of specified style in document.-45 Sample CEDS Enabled Kofax Index Panel

Kofax Index Panel

Document Class Air Facility

Document Type

Document Date / /

Air Facility Index Fields

APS Plant ID

Plant Name

Classification

Region

	SIC	NAICS
Primary Code		
Secondary Code		
Tertiary Code		

Instructions
Document Index Fields Change Based on Document Class
Bold Fields are required
Italics Fields are auto populated

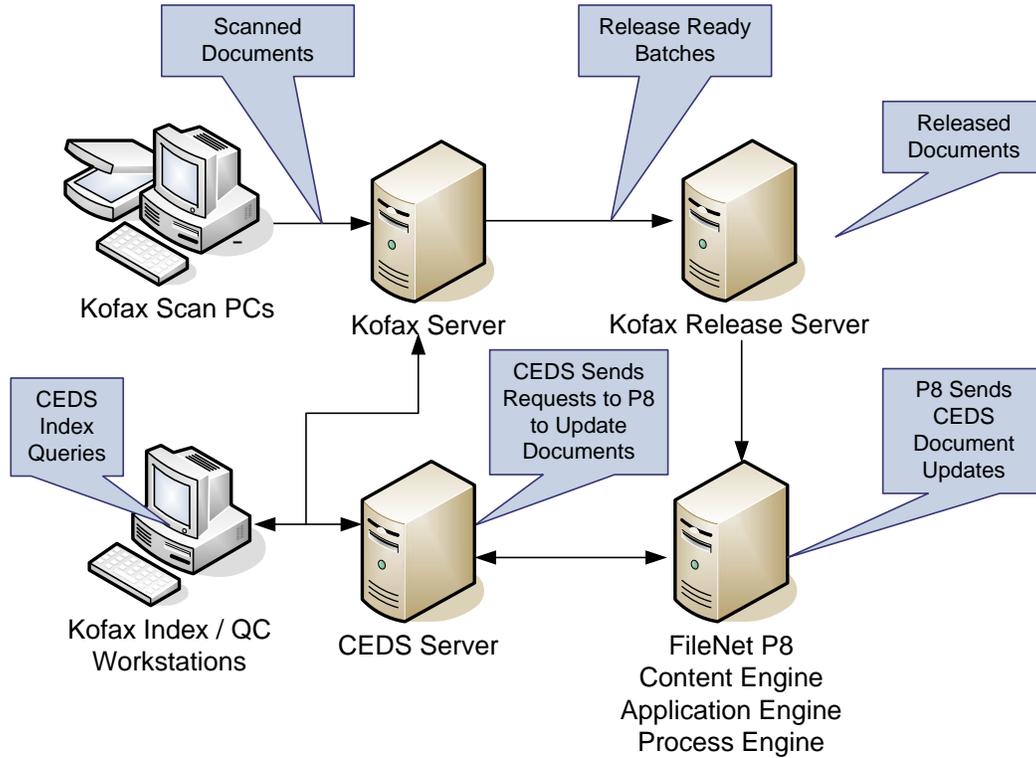
3. Kofax Integration

CGI will configure Kofax Ascent, FileNet P8, and CEDS to accept documents in the following manner:

1. User scans documents with Kofax Ascent
2. Document index operator uses Ascent Index Validation with CEDS enabled document index panel. Upon entry of key fields, the CEDS interface is called, requesting additional data fields from CEDS
3. Batches are released to FileNet P8 Repository from release server. No CEDS interface is used here. The standard FileNet release script is used.
4. Upon document acceptance by the FileNet Repository, a message is queued, later to be sent to CEDS via the CEDS web service interface requesting CEDS updates.
5. Upon changes to CEDS documents, the CEDS web service is invoked to send document modification requests to FileNet P8. FileNet then performs the appropriate updates to the document metadata.

Exhibit Error! No text of specified style in document. **-46**
Points

Kofax, P8, and CEDS Integration

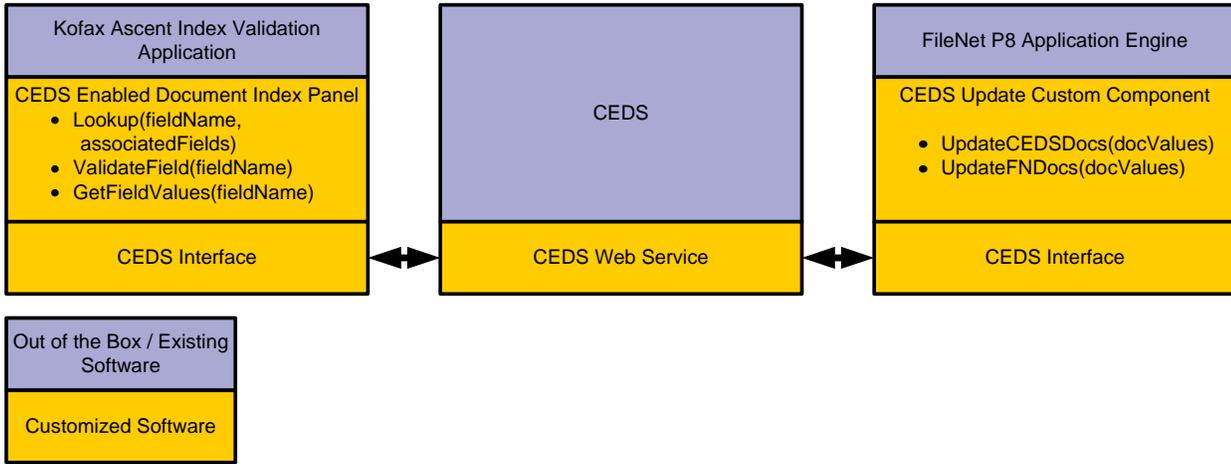


4. CEDS Integration with FileNet P8

Kofax Ascent will not update CEDS while releasing batches to FileNet. Rather than updating CEDS upon releasing batches from Kofax to the FileNet Content Manager, CGI proposes to rely upon the FileNet P8 Custom Component that will update CEDS data upon receiving new documents. CGI will configure a workflow subscription that will act upon all incoming documents from Kofax Ascent. When documents are received, the metadata will be extracted and sent to the CEDS Update Custom Component. This component will then send CEDS an update request at that time or at scheduled times, for instance, on a nightly basis.

Exhibit Error! No text of specified style in document. -47 Architecture

CEDS Integration Proposed



5. DEQ Resource Requirement

It is estimated that a DEQ resource will be needed to provide information and knowledge related to CEDS for up to 50% of the time prior to development, and then 25% thereafter until all CEDS integration is accomplished.

6. Option 5

When a DEQ employee is working within a CEDS screen and would like to view associated documents, some type of integration should allow them to view the folder “hit list” of available documents for that facility and/or function. Suppliers should describe the technology used to perform this type of integration and define what is required within CEDS to accomplish this. As part of the Detail Design, the suppliers should specify each screen that will be integrated and the “hit list” associated with the screen. DEQ has approximately 300 screens where this level of integration will be necessary. Supplier may wish to provide options to accomplish this level of integration.

DEQ also would like to have ECM MS Word documents update tracking fields in CEDS. Suppliers should describe the process and functionality used to accomplish this and should provide this integration for ten (10) MS Word letters with approximately ten (10) fields per letter (with the assistance of DEQ OIS staff). Completion of these tasks will be at DEQ’s option.

Can you provide the necessary services to DEQ for analysis and implementation for CEDS integration?

Yes, CGI can optionally provide the necessary services to DEQ for analysis and implementation of CEDS integration. CGI has extensive experience with integrating custom and off the shelf applications for its clients.

u) CEDS Architecture

CGI will first study the CEDS architecture with the assistance of DEQ staff. This application may be built on various architectures:

- Thick client with database connection
- N-tier thick client with business logic layer at server (business logic layer communicates with database)
- N-tier Web client

If CEDS is built on an N-tier architecture using a thick or thin client interface, P8 integration will be simple because the FileNet Application Programming Interface can run on a server. The CEDS/P8 API will enable the CEDS front end to simply call the business logic on an existing server without major application modifications.

Thick client applications that access the database without a business logic layer will need direct access to the FileNet Content Manager (CM) API. Adding the CM API to all workstations will add significant client application requirements, as the FileNet CM API will be required to be installed on all CEDS clients.

v) Application Integration

CGI will design an Application Programming Interface (API) layer that will assist CEDS developers integrate the FileNet Content Manager API. This approach will speed the development and integration of the FileNet search functionality by reducing the number of steps required to invoke FileNet APIs.

Once CEDS developers identify the areas that require P8 integration, a button, menu, or any other user interface tool will be added to the window. This menu or button will then call a CEDS API or module that will collect the necessary data from the window. CGI does not expect to access detailed information on how the 300+ windows are built because CEDS will invoke the CEDS/FN API.

After the FileNet API locates documents in the repository that match the search criteria, a hit list will be developed that displays a document "hit list." The document list will be displayed as a web page that will be formatted to follow the same styles present in the CEDS application. The hit list will provide the user an opportunity to inspect document properties and to open the document in either the FileNet image viewer or in the document's native application.

w) CEDS/FileNet API

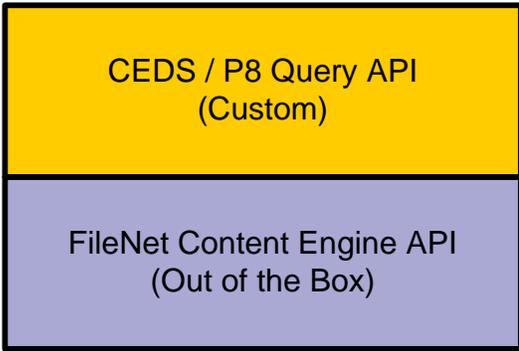
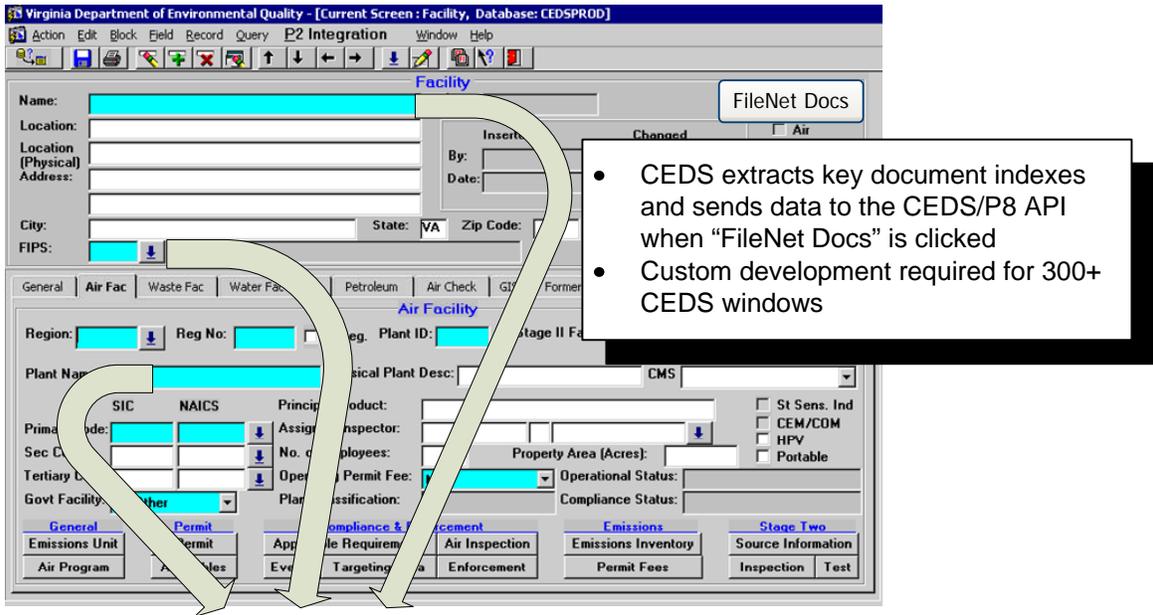
The CEDS/FileNet API will be developed by CGI staff to enable developers to quickly add FileNet P8 integration to CEDS. This API may consist of one method: "LocateFileNetDocuments". The parameter to the method call may be simply name / value pairs of relevant document information based on the type of data or case being viewed in CEDS. DEQ will dictate the key document information to be used in FileNet searches. CGI intends to simplify the application integration process as much as possible due to the complexity of the CEDS application.

x) Integration Methods

CEDS integration methods with FileNet P8 will comply with existing DEQ development and architecture standards. For example, if CEDS is built in Visual Basic, CGI will develop a COM object that will accept search requests and display results that are returned from the FileNet CM API. In the past, CGI has added browser controls to applications that display FileNet document hit lists.

The following tasks will be performed by CGI to integrate CEDS and FileNet.

- Gain knowledge of CEDS architecture and development tools
- Work with DEQ staff to identify windows that require FileNet integration
- Write procedures for CEDS development staff to follow when adding FileNet integration
- Develop one or more FileNet searches that locate documents in the repository; this may include wildcard, folder, document class, and other types of searches.
- Develop API that accepts key document data to be used in FileNet search
- Develop display mechanism for document "hit lists" returned from FileNet



- CEDS extracts key document indexes and sends data to the CEDS/P8 API when “FileNet Docs” is clicked
- Custom development required for 300+ CEDS windows

- API Accepts query requests from CEDS application
- Builds FileNet queries based on information passed by CEDS
- Submits queries to FileNet CE API
- API communicates with FileNet repository
- Accepts search requests and returns document references

y) Integration Architecture

CGI realizes that there are many ways of integrating CEDS and FileNet P8. CGI will work with DEQ staff to determine optimal integration methods before building the architecture necessary to support CEDS integration. The architecture diagram below demonstrates one method of integration where CEDS is built on an n-tier architecture. Note that the CEDS application will need to be altered to locate key data used in FileNet searches. The middle layer assembles the index data and builds a FileNet query. The out of the box FileNet Content Manager API then locates documents in the FileNet Repository and sends the result set back to the client via the business logic layer.



CEDS Workstations

- Acquires key indexes
- Calls CEDS/P8 API
- Displays Results

CEDS Server

- Accepts CEDS Workstation Requests
- Builds P8 Queries
- Formats and sends results back to client

FileNet Content Engine

- API locates documents
- Sends results back to CEDS Server

U. Base 21

Portal Integration: Portal technology should provide a front-end user interface for employees as well as the public at large with appropriate security.

The proposed integration of ECM with IBM's WebSphere needs to support a public/guest view and an authenticated, employee view.

Can you provide the necessary services for the required portal integration?

Yes, CGI can provide the necessary services to integrate with WebSphere portal. CGI has significant experience using various Portal technologies, including WebSphere Portal Server, and realizes the logical connection between portals and content management best practices. CGI will configure WebSphere to support both internal and external roles.

1. Internal Portal Configuration

CGI will configure WebSphere to support multiple internal roles. Typically, there are multiple internal roles with different content and/or workflow needs, and it is possible that each role has its own portlets associated with the role (1:m roles:portlets). For example, DEQ might desire that every employee has access to the same 6 items:

1. DEQ News and Events
2. DEQ Content Search
3. Employee Benefits
4. Current Weather
5. Richmond Traffic
6. Times Dispatch Updates

However, DEQ might then want a few specific items available depending on the department. For example, DEQ might want Human Resources to have easy access to:

7. Resume Searches
8. Letter Template Wizard
9. An Employee Request Workflow (such as vacation, name change, change of benefits).

Additionally, DEQ desires that Engineering has easy access to:

10. Land Management Records
11. CAD Workflow Submission

Using the above scenario as an example, CGI would create Portlets for each internal portlet such as #2 Content Search or #7 Resume Search. Using WebSphere security to control access, portlets would then be turned on in the DEQ Portal such that HR Users had the ability to view Portlets 1-9; while Engineering users would be configured to only have access to 1, 2, 3, 4, 5, 6, 10, and 11. Portlets can also be controlled using FileNet's Workplace application.

2. Internal Portal Example

CGI has worked with numerous clients to create a personalized Portal experience for different users leveraging FileNet as a baseline content repository. In the representative example below, CGI created a customized Enterprise Portal to deliver different content to different users by building custom portlets by functional area – each managed by the user's security profile.

On the left side of the screen, please note there are 3 portlets:

1. Search
2. I Want To

3. Word Templates

In the middle, please note there are 2 portlets:

4. Communications

5. My Tasks

And finally on the right, please note there are 2 portlets:

6. Risk Rating Dashboard

7. Factiva

The Exhibit below demonstrates the view an HR employee receives when they logon to the Portal.

The screenshot displays the HR Portal interface. At the top, there is a navigation bar with links for Home, Today is Tuesday, August 7, 2007, My Account, Log Off, Help, Site Map, Advanced Search, Site Feedback, and Exit Portal. Below this is a search bar labeled "Search - Content Only" with a "Go..." button. A horizontal menu contains tabs for Organizational Charts, Active Cases, Approvals Process, Training Courses, System Support, Library, and Human Resources.

The main content area is divided into several portlets:

- Search - Content Only:** A search bar with a "Go..." button.
- I Want To...:** A list of tasks including "Send an Out-of-Office request for approval", "Create a security profile for a new employee", "Create an interview report for a potential employee", and "Monitor employee performance".
- Word Templates:** A list of document templates such as "Request Letter", "Procedures", "Meeting Notes", "Report Notes", "Memorandum", "Miscellaneous Letter", "Analysis Memorandum", "Conclusion Letter", "Risk Assessment Letter", "Board Letter", and "Report of Examination".
- Shortcuts:** A section with the text "Please set your preferences."
- Communications - Updated 06/16/06:** A central portlet containing a "Team Meeting Minutes" section with a "Refresh Your Portal" tip and a "Tip of the Week" section.
- My Tasks:** A list of tasks with details such as "Document Approval - Release 3.0 Transcendence Data Setup July 2007- 003317" and "Document Approval - RENAME - board letter_template- 003138".
- Risk Rating Dashboard:** A dashboard showing "Aggregate Risk" as "High" with a "Needs Improvement" direction and a "Quantity" of "High".
- Factiva:** A section with the date "6-20-06" and a list of news items including "HUD Report on Nomination for Director of Whitehouse Department for Enterprise Oversight Sent to Senate" and "U.S. Treasury worried about risk from GSEs-Clouse".

Alternatively, when a standard (generic) user logs in, they get a different view than the HR user's view. Notice that the on the left side of the screen, there are the same 3 portlets:

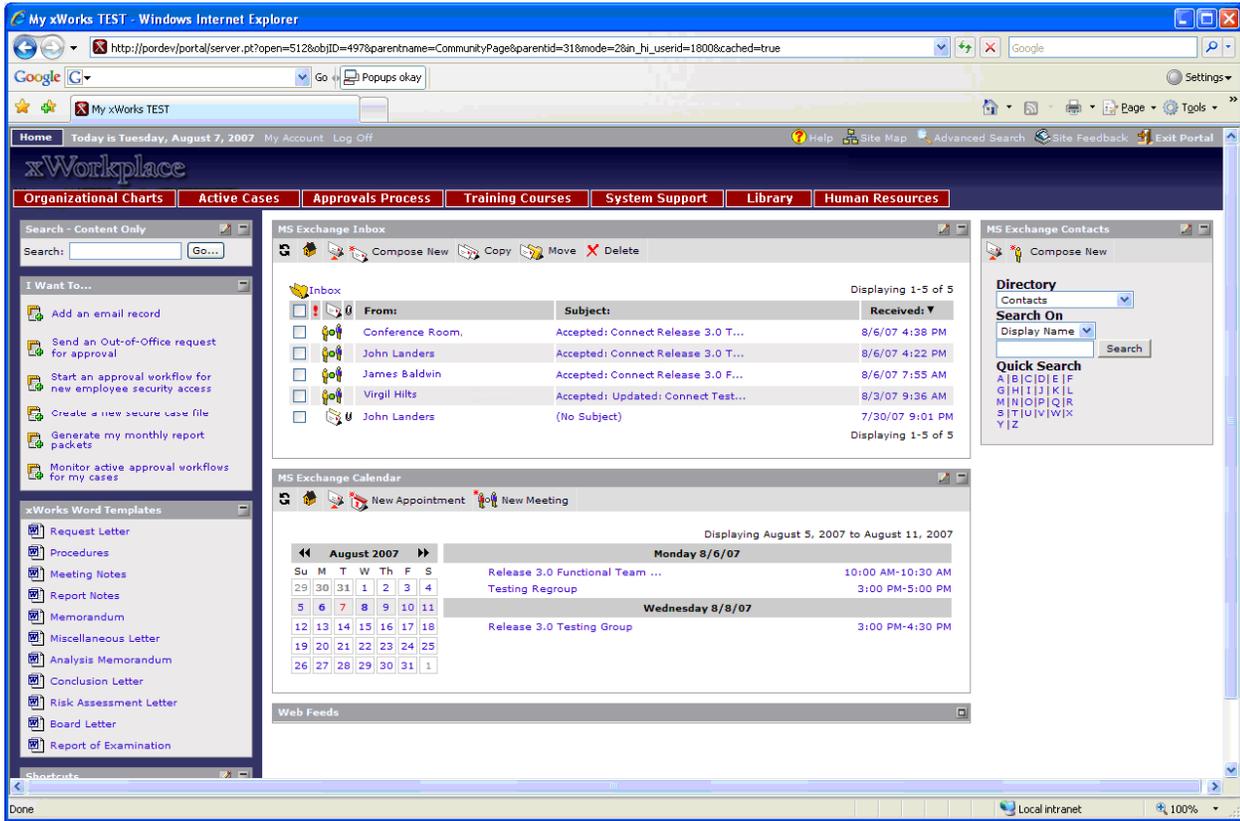
1. Search
2. I Want To
3. Word Templates

However, there are now 3 different portlets in the middle of the Portal:

1. Exchange Inbox
2. Exchange Calendar
3. Web Feeds

And finally on the right, there is now only 1 portlet:

1. Exchange Contacts



The above

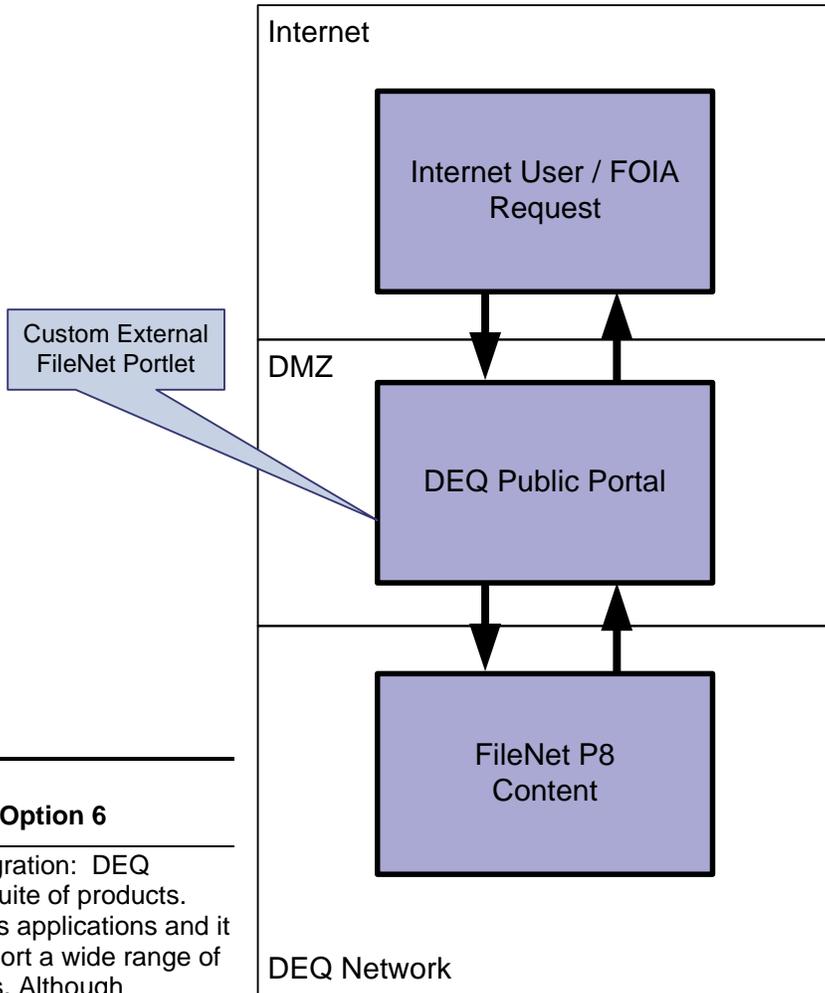
example comparing the view for a standard user and the view for an HR Employee demonstrate the flexibility and possibilities afforded by Portal technology. As demonstrated in the example, ECM Portals are useful for:

- Content Presentation and Control Capabilities: HR Users have access to different portlets than a standard user.
- Application Integration: Microsoft Exchange, FileNet Content Manager, and a Custom BPM workflow are all accessible via the Portal
- Different Personalization Capabilities: The HR user has selected different colors than the standard user colors

3. External Portal Configuration

CGI will configure WebSphere to support a public guest user. As noted in our response to Base 6, there are certain conditions that need to be addressed at the security and network level. Utilizing our response in 6 as the baseline, CGI will create a portlet that sits over the top of FileNet and resides within the DEQ Portal and grants access to content based on a public/guest view.

Access via Public Portal
Via Guest Account



4. Option 6

GIS Integration: DEQ ArcGIS suite of products. numerous applications and it that support a wide range of programs. Although is required, the GIS system is early in its implementation and immediate integration to the ECM system may not be undertaken at this time. It is required, however, that suppliers provide information on how their proposed solution will integrate to this software when DEQ is ready.

makes use of ESRI's The system is used for features a variety of 'layers' DEQ needs across multiple integration of ECM and GIS

Can you provide the necessary services for GIS integration?

Yes, CGI can provide a range of service options for GIS integration. One approach CGI has detailed experience with is integrating FileNet P8 with ESRI's ArcGIS using SpatiaX's GIS Solutions Suite and SpatiaX's Universal Viewer and Collaboration solution. In this scenario, CGI would install and configure the following SpatiaX components:

- sxGIS-P8 for ESRI ArcView
- sxGIS-Web-P8 for ESRI ArcIMS / ArcGIS Server
- sxMARKUP-Web-P8 for Cimmetry AutoVue

5. Integration Using SpatiaX

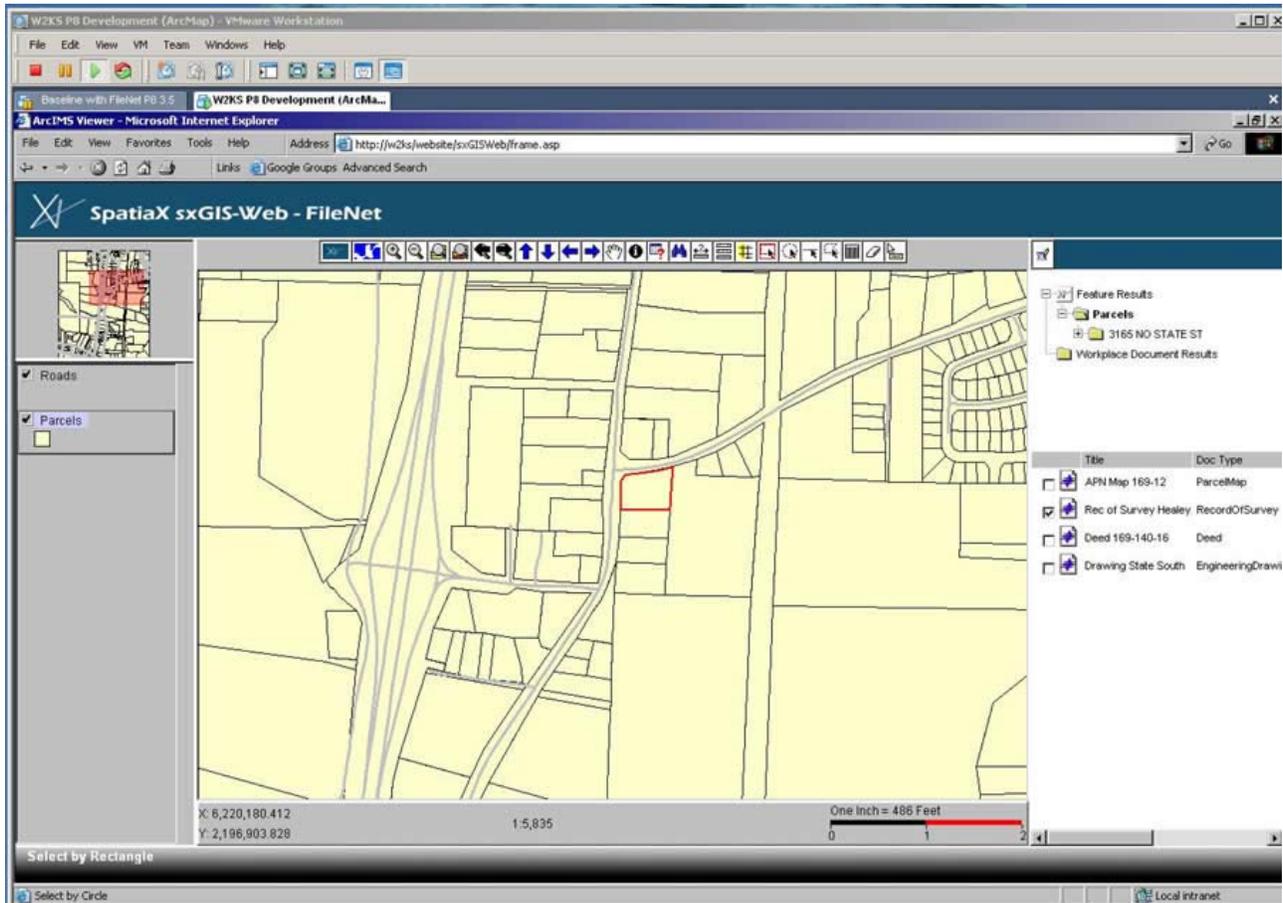
SpatiaX products provide content management and GIS solutions for both the desktop using sxGIS and the web using sxGIS-Web and sxMARKUP-Web. SpatiaX markup products allow GIS users to add document markups without modifying the underlying document.

SpatiaX GIS solutions will provide DEQ users with the ability to define relationships between map entities, such as roads, parcels, rivers, and bodies of water. Virtually any data source or system can be integrated, such as:

- FileNet P8 Repository,
- relational databases,
- 3rd-party applications, and
- legacy systems, such as CEDS.

6. SpatiaX Web Viewer

When DEQ completes its GIS configuration, CGI can configure SpatiaX to access GIS data via FileNet P8. SpatiaX allows users to view GIS data without the need for thick client software, allowing users to view GIS data using their web browser.



7. Geospatial Referencing

Once an area of a map is identified by the user, geospatial referencing techniques used by SpatiaX locate related documents stored in the FileNet repository. This feature enables users to locate documents with minimal or no data entry – users simply select the map feature that is of interest and SpatiaX locates the related documents.

8. Option 7

eDMR Integration: DEQ has recently implemented an Electronic DMR application. (See the DMR process in the Water Media portion of regional offices activities in Appendix D to view the prior manual process.) The electronic DMR application accepts data from electronic devices that is in XML format, stores this data in an Oracle database with electronic signature authentication, and updates CEDS.

The integration of the ECM with eDMR will cause the ECM system to generate a DMR form that contains the XML data. Since this document is not a legal representation of the document, it should clearly contain a notice similar to, "This form has been generated and is not a legal representation of the document". Due to legal constraints, the original XML data needs to be retained since it contains the electronic signature authentication.

Suppliers are also expected to provide a detailed explanation of their proposed solution including diagrams, schematics, etc. and to address legality issues associated with the ECM version of the document and retention. Although suppliers should propose a process to integrate the eDMR process into their proposed ECM solution, it will be at DEQ's option to accept the proposed solution as part of this RFP.

Can you provide the necessary services to DEQ for eDMR integration?

Yes, at DEQ's discretion, CGI can provide the necessary service to integrate with the eDMR application.

9. CGI Development

CGI proposes a straightforward integration between DEQ's Electronic Discharge Monitoring Reports (eDMR) and FileNet P8 by employing both off-the-shelf and custom developed code. CGI has extensive experience creating application connectors and workflow based on customer requirements.

10. eDMR Integration Requirements

eDMR integration requires the following:

- An Oracle trigger that will inform FileNet P8 that a new eDMR document has been stored in the database.
- A custom Java solution that will retrieve and format eDMR XML documents.
- A workflow definition that will inform users that a new eDMR document is ready for retrieval from the Repository.
- Optional additional workflows that will process eDMR document changes.

z) Document Intake: Oracle Trigger

The proposed FileNet P8 based solution requires a single point of integration with the existing eDMR system. CGI proposes the creation of an Oracle trigger that executes when a new eDMR XML document is stored by the eDMR application already in production. This trigger will simply launch an event that will be executed by FileNet's Process Engine.

If the database trigger cannot send eDMR document data to FileNet, an additional step will be required. CGI will develop a document query mechanism within the Java component that will query the Oracle database for the contents of the document. The custom component will require read only access to the database or to an eDMR application programming interface (API) to retrieve XML documents.

aa) Document Processing: Java Component with XSLT

The FileNet Process Engine will be configured to call a Java based software component that will retrieve the eDMR XML document stored in DEQ's Oracle database after the database trigger informs FileNet that a DMR document is ready for processing. FileNet must be able to communicate with the Oracle database to retrieve the DMR XML documents. After the Java component retrieves the XML document, it will store the document in the Repository using the Content Manager API.

During the storage phase, the Java component will use standard XML library components such as XSLT or the Java XML DOM to add attributes such as:

- Document received date
- DMR document number
- Disclaimer text, such as "This form has been generated and is not a legal representation of the document"

Once the XML data is transformed to a new document it will be stored in the repository.

bb) User Notification: Custom Workflow

CGI will configure a workflow and an associated subscription to process the XML document when it is stored in the P8 Repository. CGI will create a workflow that will notify a user or a group of users that the eDMR document is ready for retrieval.

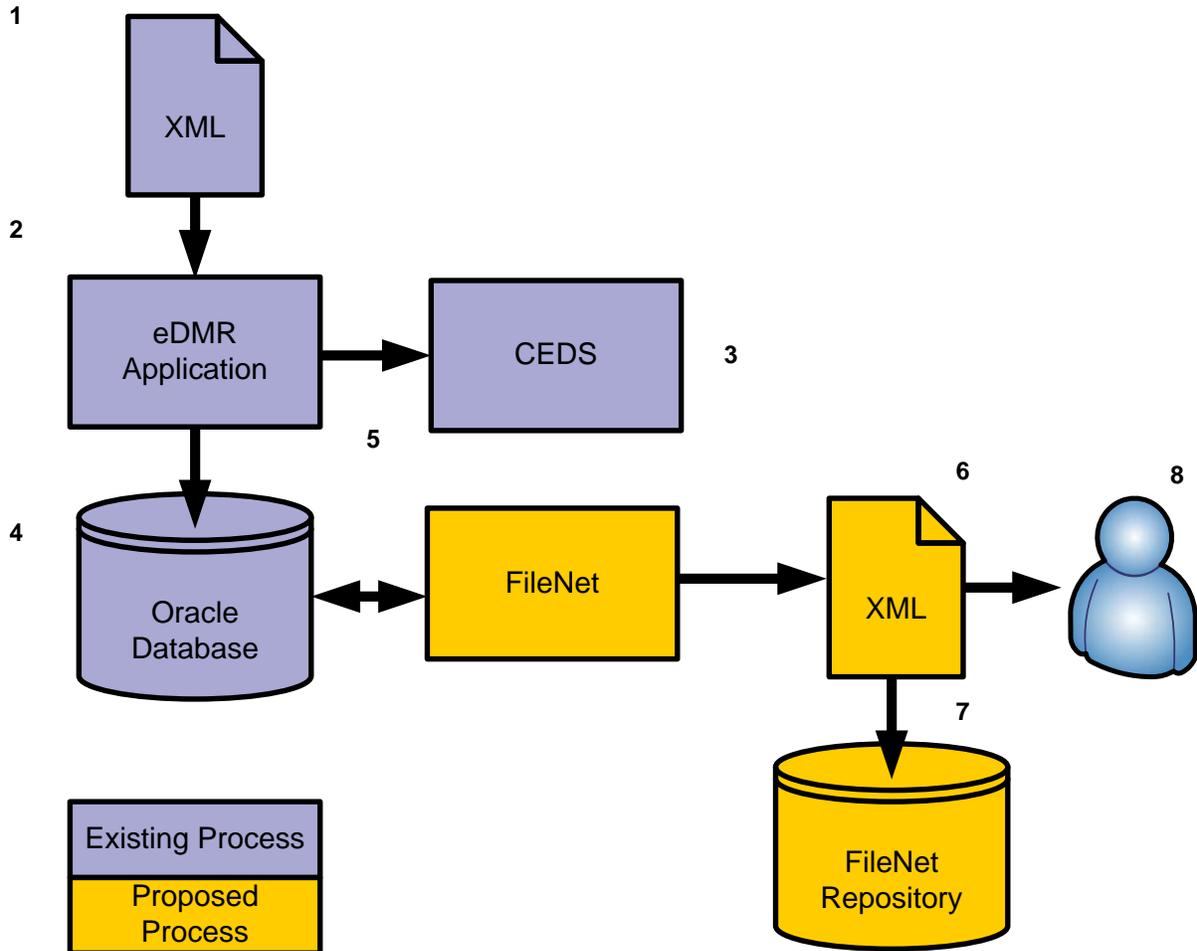
Additional workflow steps may be added based on DEQ requirements. For example, the eDMR application already in use at DEQ may be modified to accept messages indicating that the eDMR document has been processed by the FileNet system. Additionally, a FileNet workflow process may be developed that accepts updates from the Division of Consolidated Laboratory Services (DCLS) when actions are taken at the monitoring stations. CGI will work with DEQ to determine additional workflow steps if needed.

Exhibit Error! No text of specified style in document. -54 eDMR Integration Summary

Step	Description	Comments / Requirements
1	XML document created by electronic monitoring devices	Existing system
2	DEQ eDMR application accepts XML document	Existing system
3	DEQ eDMR application updates CEDS	Existing system
4	DEQ eDMR application updates Oracle database	Existing system
5	Oracle database trigger informs FileNet that a new DMR record was stored	Trigger from database or notification method by eDMR is required FileNet access to XML document is required via database query or other API
6	FileNet creates DMR document with disclaimer	Java Custom Component or other transformation is required
7	XML file is stored in FileNet repository	Workflow subscription is called when document is created in repository
8	User or Group notified of new DMR document	Workflow notifies users that a new DMR has been created; all users in a group or a single user may received notification

Exhibit Error! No text of specified style in document. -55

eDMR Capture Process



11. Option 8

eForms Integration: IBM FileNet proposed FileNet’s eForms software. If DEQ opts to purchase this eForms package, integration services may be requested. The Integration supplier should work with DEQ staff to integrate eForms from several perspectives. Two forms are required, one without an electronic signature and one with an electronic signature.

eForm without electronic signature: The anticipated eForms application is referenced in Workflow, “A Sample Workflow for Air Compliance” Steps 5-10 and is described from a functional perspective below (see Appendix I for a sample of the form):

Information is pulled from CEDA to pre-populate the eForm. This transfer will involve no more than fifty (50) fields of data from the CEDA system

The information from the completed eForm should be stripped and routed for uploading to CEDA. This transfer will involve no more than fifty (50) fields of data to the CEDA system. Suppliers should describe the type of transfer and verification proposed. DEQ staff will work with suppliers to accomplish the CEDA integration, however, an estimate of the DEQ hours required to implement and support this implementation should be provided.

An electronic image of the form should be saved to the ECM system. Suppliers should describe the process by which the document is routed to the ECM and how data extraction occurs for automatic indexing.

Can you provide the necessary services for eForm without an electronic signature?

Yes, CGI can optionally provide the services to enable eForm processing within a FileNet BPM workflow.

The FileNet Forms Manager delivers the ability to process electronic forms as standalone documents or as part of a business process workflow. FileNet Forms Manager makes use of a HTML eForms client allowing for zero footprint access from a user's browser. FileNet Forms Manager makes use of the following components:

12. eForms Tools

FileNet eForms Designer – A Windows application that combines the design control of a desktop publishing program with the power of a spreadsheet, allowing the creation of high fidelity, highly intelligent form templates.

Tight integration of eForms Designer with the FileNet P8 Workplace allows form templates to be easily and quickly added to the object store. Using the convenient FileNet P8 Workplace menu located in eForm Designer's file menu, form templates can be added to, checked out from or updated within the FileNet P8 Workplace object store.

Form Template – An XML document created by the FileNet eForm Designer application that defines the data schema, presentation and logic for an e-form. When viewed by an end user in the browser, a form template is rendered into HTML and JavaScript with all its visual fidelity and intelligence intact.

Form Data – An XML document that contains the data from an instance of a completed e-form. Form data is linked to the form template it was created through for presentation.

Workplace – FileNet P8 User Interface.

Entry Template – An XML document that specifies the instructions on how an object such as a document, folder or custom object should be added to an object store. It can specify location, document class and security.

Workflow Definition – An XML document that specifies steps of a workflow and the user interface that should be presented at each step.

FileNet eForms HTML Step Processor – The eForms HTML Step Processor integrates with the Process Engine to provide integration of intelligent e-forms into the workflow process. The Process Engine provides the means for designing workflows; it also provides security privileges and a repository for templates, data documents, and workflows. The eForms HTML Step Processor acts as a content development tool that facilitates the design and launching of workflows and workflow components.

FileNet HTML eForms – An electronic form that can be completed by users online. These e-forms can maintain the presentation of their paper counterparts, while adding the convenience of data formatting, automatic calculations and validation. The data from these e-forms can also be integrated with other systems such as document management and workflow.

Document Policy – An XML document that specifies how the data from a particular form template should be saved when the e-form is completed by an end user. It contains a link to a form template, a link to an entry template to control how and where form data should be saved and a specification for mapping form template data fields to document class properties for the resulting form data document. The policy is created by a policy wizard and is stored as an object in an object store.

Workflow Policy – An XML document that specifies the form template to be displayed at various steps of a workflow and how the data from the form template should be saved when the e-form is completed by an end user. It contains a link to a workflow definition, links to a form template for each step of the workflow, a specification for mapping form template data fields to workflow data fields and optionally a link to an entry template to control how and where form data should be saved. The policy is created by a policy wizard and is stored as an object in an object store.

13. eForm Data Transfer

FileNet P8 Form Entry Templates are used to transfer data from eForms to the Repository. During the design process, CGI will work with DEQ staff to determine not only the layout of the forms, but also which fields should be transferred to the Content and Workflow engines. Data from the forms are stored in an XML file within Content Manager, and, like other objects, can be versioned, controlled, and accessed based on user security rights.

During the design phase of the project, CGI will work with DEQ staff to determine which, if any, field values are to be sent to workflows. This task is accomplished via a Document Policy. For example, assume the Workflow Compliance workflow is designed to be launched from the introduction of a Workflow Inspection Report eForm, as shown below.

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Sample

Air Inspection Report eForm



Air Inspection Report

Commonwealth of Virginia

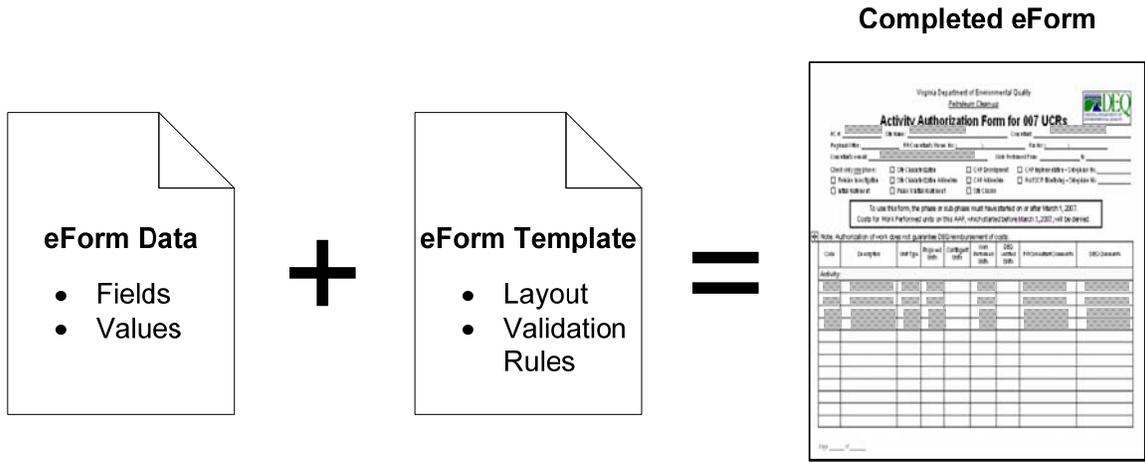
Run Date	1/1/2007	APS Plant ID	
Plant Name	Cumberland River Coal Company	Classification	
Address	123 Main	Region	SWRO
		Report Number	993-0-233218

CGI will work with DEQ to determine which fields are needed within the workflow by configuring a Workflow Policy. For example, the Run Date may be used in the workflow to determine the priority of its associated work items. Some data may not be needed in the workflow itself, but should be stored in the Content Manager. For example, the APS Plant ID may not be needed by the workflow engine, so it would not be sent to the workflow by the Workflow Policy.

FileNet eForm data are stored as XML documents in the Repository without the form template. The eForm "image" is created by the FileNet's eForm Step Processor as the user requests eForm data. Once an instance of an eForm is created by DEQ users, it may be printed or saved as a PDF. Users may not need to save the eForm data as PDF "images", as FileNet manages both the data and the form template (layout).

Like most objects stored by the FileNet Content Manager, eForm data, templates, workflow policies, and document policies may be versioned and restricted to one or more user groups.

The figure below demonstrates how eForm data, when combined with an eForm Template, will yield a completed eForm.



14. eForm Automatic Field Indexing

FileNet eForm data fields will be customized by CGI to allow DEQ users to enter in as little information as possible on the form. For example, a “Document Date” field may be configured to default to the date in which the form was created. Fields may also be computed, such as column totals or number of checkboxes selected.

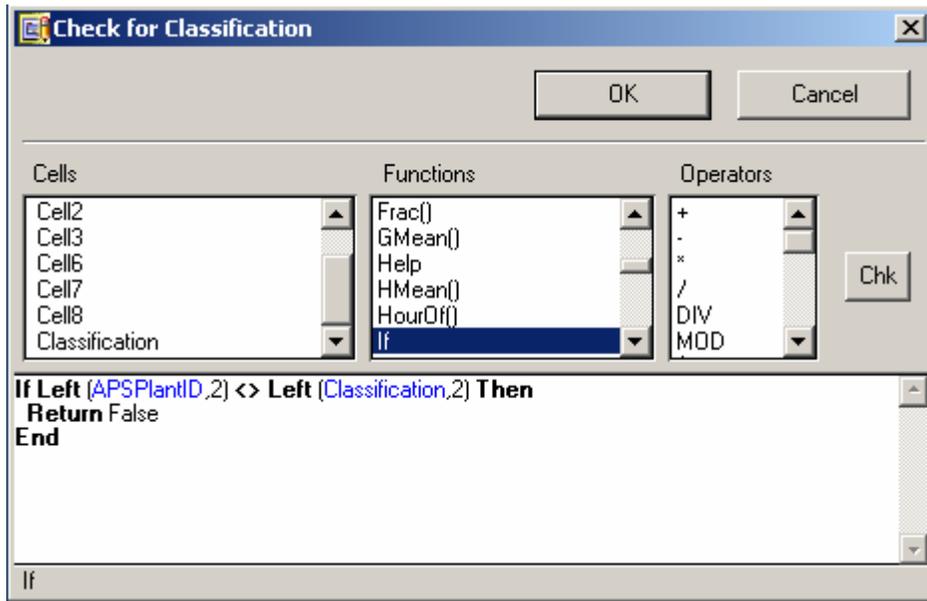
Fields may also be updated based on more complex rules, such as data lookups in CEDS. For example, a “Site Name” dropdown list may invoke a JDBC or HTTP query through a CEDS interface that would populate the site’s address, site code, and other site related information. Once accessed, this data will be stored in the eForm document and brought back at any time. The data stored in the eForm will not be configured to change, say, if the site code changes. The table below outlines the ways in which eForm field data may be automatically indexed.

Population Method	Example
Default Value	Form Type is set to "Form A" when form is opened
Computed Value	Form Date is set to today's date when the form is opened
Fixed List	Fixed list of items are displayed as a pull down
Database Lookup	Field values are retrieved from a JDBC database lookup
HTTP Lookup	Field values are retrieved from an HTTP method

15. eForm Field Verification

CGI will work with DEQ staff to determine data validation rules to verify data integrity in FileNet, CEDS, and other related systems. eForm data validation will be accomplished by adding field validation formulas using the FileNet eForm Designer. Data validation formulas may access other field values and database records via JDBC or HTTP.

For example, DEQ eForms may require that an APS Plant ID start with the same 2 digits as the Plant Classification. A sample field validation formula is shown below.



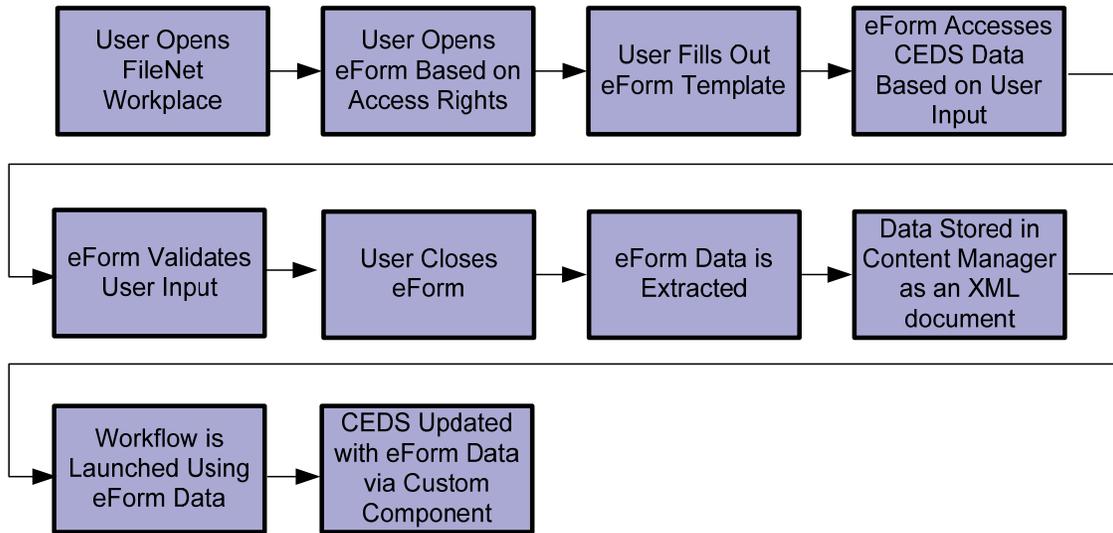
16. Sending eForm Data to CEDS

eForm data may be sent to CEDS once the data is stored in the Content Manager by using a customized workflow component. CGI will work with DEQ to determine which data elements are to be sent to CEDS and at what time. For example, once an eForm is submitted by a user, it may be sent through a workflow that uses a custom component developed by CGI and DEQ. The custom component will be written in Java and run on the Application Engine. The component will extract the workflow data at the proper point in the process; for example, after all validation is performed by the workflow engine and the eForm itself. Any number of fields may be processed, converted or encoded before being sent to CEDS.

17. Basic eForm Flow

The diagram below outlines the basic flow of eForm information and its integration with FileNet workflow.

Exhibit Error! No text of specified style in document. -60 eForm Process



18. Option 9

The second eForm application is the Tank program’s Reimbursement Authorization Form. This form will be used in conjunction with a workflow, which is to be developed. A functional description follows (see Appendix I for a sample of the form):

The eForm is reviewed by the DEQ staff; once approved, it is electronically signed.

The information from the completed eForm needs to be stripped and routed for uploading to CEDS. This transfer will involve no more than fifty (50) fields of data to the CEDS system. Suppliers should describe the type of transfer and verification proposed. DEQ staff will work with suppliers to accomplish the CEDS integration, however, an estimate of the DEQ hours required to implement and support this implementation should be provided.

An electronic image of the form needs to be saved to the ECM system. Suppliers should describe the process by which the document is routed to the ECM and how data extraction occurs for automatic indexing.

Can you provide the necessary services for eForm with an electronic signature?

Yes, similarly to Option 8, CGI can optionally provide the services to enable eForm processing within a FileNet BPM workflow, but in this case with an electronic signature. The proposal for Option-8 contains in depth information on how eForms will operate in the DEQ system delivered by CGI.

FileNet eForms may be digitally signed using third party signing services, such as FileNet “I-Sign”, Microsoft CSP, and Entrust (partially supported). Electronic signatures may be used to authenticate and lock the entire form or selected form fields, preventing tampering with signed data. If form data must change, users may remove the electronic signature to remove the field locks. The user may then sign the document again to lock the modified data.

19. Signature Authorization Methods

Based on analysis performed during the detailed design phase of the project, CGI and DEQ will select the appropriate signature authorization architecture. Two electronic signature providers are listed below.

cc) I-Sign

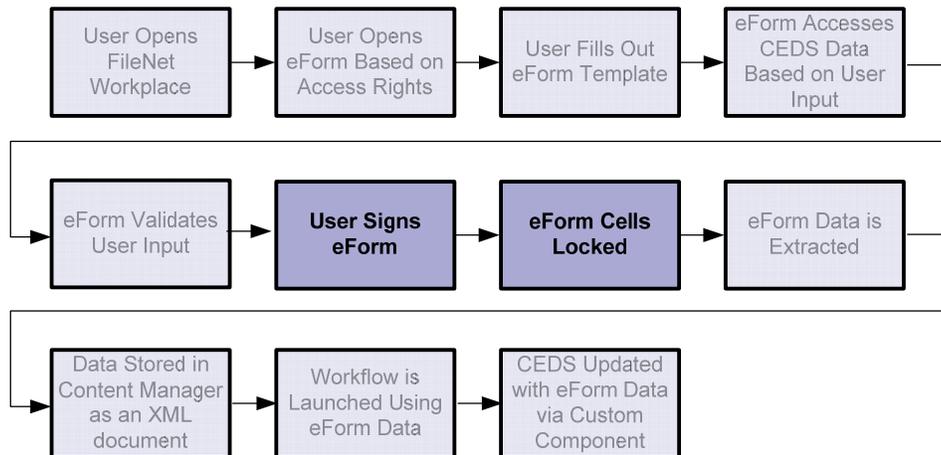
Electronic signatures are implemented by using either built-in FileNet or third party tools. FileNet’s “I-Sign” electronic signature support requires no additional software, but I-Sign signatures are not considered legally binding, as they do not encrypt form data. I-Sign uses FileNet’s user authentication security service (i.e., LDAP, eDirectory) implemented with the P8 system.

dd) **CAPICOM**

Microsoft's "CAPICOM" interface may be used to authenticate and encrypt digital signatures on eForms. A public / private key combination is used to encrypt the eForm data, thereby making the data unalterable. As with FileNet's I-Sign option, once a form is digitally signed, appropriate fields are locked and cannot be modified unless the signature is removed from the eForm.

20. eForm Workflow

eForms with digital signatures go through the same process as forms that do not implement digital signatures. The figure below shows the basic flow of work for eForms. Steps related to electronic signatures are highlighted.



21. Design

CGI will work with DEQ staff to perform the following:

- Determine the best method of locking form cells on the Tank Program Reimbursement Authorization and other forms
- Identify and implement the appropriate electronic signature signing service
- Identify fields that must remain locked after an electronic signature is applied to the eForm
- Determine eForm field validation
- Design FileNet P8 workflow to accept eForm and perform appropriate CEDS update via custom component

22. Sample eForm

A sample electronic signature is shown on the eForm prototype in the following example.

Exhibit Error! No text of specified style in document. -62

eForm Signature

Inspector's Electronic Signature

 Signature



Reimbursement Authorization Form

V. Base 22

Some of the DEQ workflows will be ad hoc in nature, but many will require programmed routines. The supplier will program five (5) standard workflows for the processes identified in Deployment Phases 1, 2 and 3. These tasks will be at DEQ's option.

The workflow functionality required includes access, notify, review and approve steps for either sequential or concurrent processing. Alarms should notify staff and management of significant delays or processes in danger of missing a milestone. Reminders will prompt staff with notices of work to be done or follow-ups. Work should be assigned to users and displayed in public or personal queues. The implementation should provide the ability for a manager with adequate security to view and change workflow steps and to adjust priorities. Supplier should also ensure that supervisors and managers are able to access and produce statistics on work performed by an individual or by groups. The supplier will be responsible to establish this functionality on the required workflows including the development of reports to provide status of the workflows.

Sample workflows have been provided below for several initial applications. These samples demonstrate the level of complexity required; they should not be considered a Detail Design. Suppliers are expected to propose, as an option to DEQ, services to validate, program and fully implement workflow capabilities for Deployment Phases 1, 2, 3, and 5. These workflows or work processes should encompass case management, pre-fetching, automatic import of CEDS data via a print stream (Enterprise Report Management), routing to multiple staff including management for approval, pending for receipt of documents, and automatic closing of a current or pending cases. It is important that the DEQ ECM solution be able to grow and support a variety of workflow requirements.

A sample workflow process for Air Permitting

- Air Permit Application is received and scanned at the front desk.
- Documents are scanned to shared queues by media type but not fully indexed.
- Media support staff provide generic indexing, then determine whether the document should go into an existing case or create a new case.
- If application opens a new case, historical imaged documents are pulled into the new file based upon pre-established criteria.
- If information is needed from CEDS, GIS, or any integrated system, this could be pre-fetched and made part of the permit file automatically via Enterprise Report Management functionality.
- If processes should not occur simultaneously, it would be desirable to identify these or perhaps automatically send an "informational" copy of the document to the other processor to let them know that this document has been received.
- After this, the electronic copies of the Air Permit Application and all accompanying documents should be routed to the first person in the workflow automatically.
- Users should be able to "Pend" the cases electronically for either the receipt of a requested document or for a specific date.
- When the document required to relieve the pend is scanned, the new image is placed in the folder and the folder is routed to the user's active queue.
- If no response is received within the designated time, the file is removed from a pending status and placed in the users active work queue (assuming that a second request is necessary).
- DEQ would like to test updating CEDS tracking fields based upon MS Word document types as part of this work process. As MS Word documents are created and indexed, documents with links to CEDS should automatically update the appropriate CEDs field.
- The permit folder is processed and workflow will take it to a supervisor, co-worker or whomever is identified as the next recipient in workflow.
- Non-electronic documents that may be created during processing need to be scanned prior to closing. To keep users from continually having to check to see if the necessary documents were scanned in order to close the permit folder, this process should be automated to the best extent possible. An example of a possible solution

could be for the employee to pend the case for the receipt of the document that has to be scanned. The hardcopy document will be sent to scanning and when it is scanned, it will relieve the "pend". Workflow could show the next step as a "close" queue. An automated function would be required to close automatically all of the cases in this queue nightly.

A sample workflow process for Air Compliance

- A compliance document is received and scanned at the front desk.
- Documents are scanned to shared queues by media type but not fully indexed.
- Media support staff provide generic indexing, than determine whether it should go into an existing case or create a new case.
- If a new Compliance case is opened, the necessary historical documents are pre-fetched automatically into the new case.
- Information required by the Inspector is downloaded into the ECM system via Enterprise Report Management based upon the creation of this new case.
- An electronic compliance folder is now available with the required background information.
- The inspector takes a laptop with remote access or with the cached images available.
- An Inspection report is available for the inspector to fill in. It will be saved to the electronic case.
- Portions of the information will be imported and updated into CEDS to replace the current "cut and paste process" that some offices use.
- The inspection report will be routed, if necessary, for review and approval.
- If any extraneous information that is not in electronic form is obtained during the inspection, the case is pended for the scanning of the required documents. Upon scanning of the necessary documents, the pend is relieved and the case is sent to a "close" queue via workflow.
- The "close" queue is programmed to close all cases in that queue on a nightly basis.

A sample workflow process for Air Enforcement

- An enforcement folder is generally initiated when a facility has gone through the compliance process, an informal correction process and has received a warning letter with no success. Depending upon the region, these documents may be maintained in the Compliance Folder until it is clear that a formal Enforcement Action will be taken.
- The next step of the enforcement process is a Notice of Violation (NOV). When this becomes necessary, an Enforcement Case is created.
- Historical documentation will be prefetched to support this process such as the informal correction, warning letter, NOV and inspection reports.
- The NOV letter updates CEDS.
- Depending upon the source, the NOV may be sent to EPA.
- A letter of Agreement may be used which is also a MS Word template which will be saved to the electronic folder.
- If the letter of Agreement does not result in a solution, a Consent Order is issued. The Consent Order is also a MS Word Template, which can be saved to the electronic folder.
- This should update CEDS.
- Copies of Consent Orders are retained in the electronic folder created by the regional offices and are routed via workflow to the Central Office.

- *If any extraneous information that is not in electronic format is obtained during the inspection, the case is pending for the scanning of the required documents. Upon scanning of the necessary documents, the pend is relieved and the case is sent to a “close” queue via workflow.*
- *The “close” queue is programmed to close all cases in that queue on a nightly basis.*

Can you provide the necessary services for the required network workflow?

Yes, CGI can provide the necessary services for the required workflows.

The section presents the workflow functionality capabilities that CGI intends to leverage for the DEQ ECM project. Core FileNet capabilities are outlined as related to the DEQ implementation, followed by specific customizations to be built into the workflow portion of the project. This chapter is made up of the following sections.

- Core FileNet Workflow Functionality
- Specific DEQ Requested Functionality
- Case Study Sample Workflow Illustrations

1. Core FileNet Workflow Functionality

FileNet Business Process Manager (BPM) will be used to control the workflow throughout the DEQ implementation by streamlining, automating and optimizing business processes. It has the flexibility and scalability to handle the most complex business processes and is scaleable to manage millions of transactions, thousands of users, and multiple business applications.

BPM helps shorten process lifecycles and automatically manages process exceptions so you can react immediately to internal events or customer demands. While powerful, it is also easy to use, administer and deploy. Business analysts can modify processes and apply new business rules immediately. Best practices and business logic can be captured and reused thereby shortening implementation time and increasing your speed-to-market so you can seize new business opportunities.

Additionally, BPM monitors and tracks business processes so analysts and managers can see how their operations are performing. This, in turn, helps you simulate and optimize key processes and the value of internal resources. By integrating content with business processes, all levels of your organization can make timely decisions based on the most accurate information available.

CGI will leverage the capabilities provided by FileNet BPM to provide both an ad-hoc and fully automated workflow functionality.

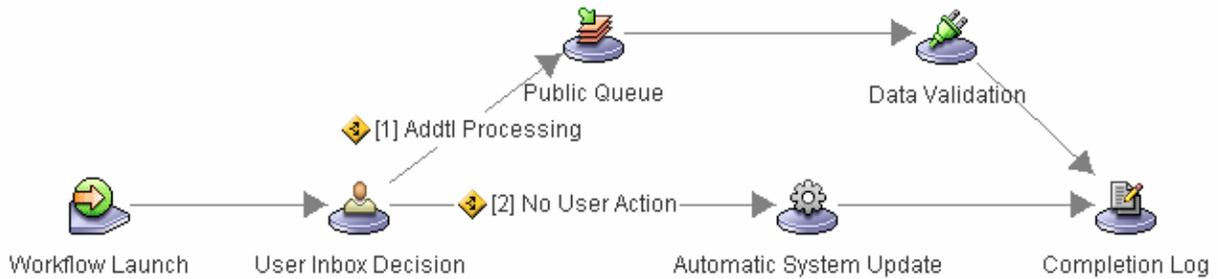
ee) Discrete Workflow Step Processing

At the core of FileNet workflow is discrete step processing to delegate work throughout the full process lifecycle. Individual items of work are routed through the automated paths and controlled by security rules to provide managed access to work. These processes are managed through the development and configuration of graphical workflow maps.

Each step of the process represents a single element of the defined business process. Steps will be configured to notify individual users or groups when appropriate and provide the ability to access, review, and approve work at the appropriate point. Additionally, DEQ process milestones will be configured to automatically record, track, and provide a history of individual events throughout the process. These milestones are configurable at the step level and the milestone history is accessible to any user with appropriate security permissions. An example of discrete step functionality is illustrated below.

Exhibit Error! No text of specified style in document. -63
Processing Example

Discrete Workflow Step



ff) Multiple routing options

Within the BPM workflow maps, FileNet provides the capabilities to route and deliver work both sequentially concurrently. Both models of workflow routing can be isolated into separate processes or combined into a single workflow. The sequential processing of the Business Process Manager tool requires work to be completed at a single step before progressing to the next step in the process. Concurrent processing provides the ability to perform multiple operations, automated or manual, on the same item of work. Additionally, FileNet provides workflows to be designed to communicate with each other, creating the situation, for example, where one workflow waits for another workflow to complete before proceeding to the next defined step.

gg) Notification and Automated Events

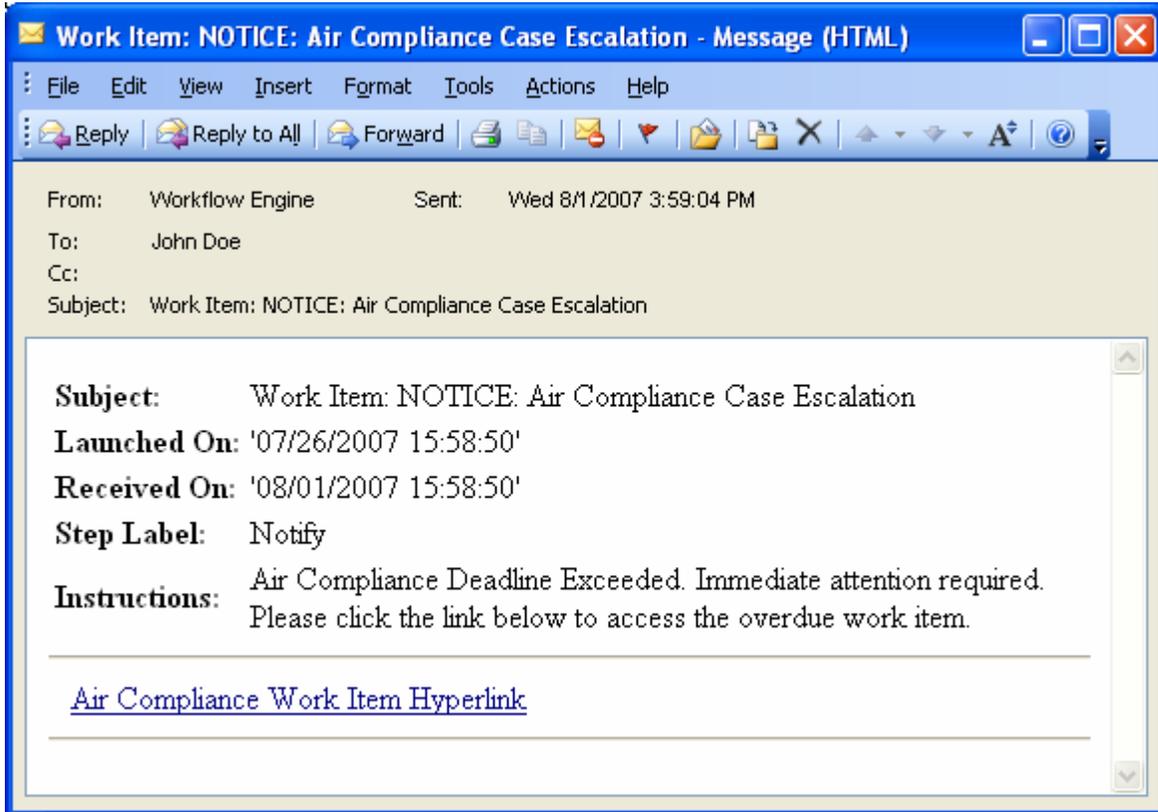
FileNet BPM provides multiple options for providing automatic notification to users through the user of automated events. DEQ workflow maps will be configured to instantiate automated alarms, notifications, and other event triggers.

Alarms can be automatically triggered in multiple ways. A typical scenario makes use of the escalation capabilities provided by BPM. For example, a deadline can be set, tied to an individual workflow step or to an entire workflow process. If the deadline expires, the workflow will automatically be re-routed to the defined escalation process where appropriate staff can be notified. When re-routed, notifications will be provided by email integration, escalation queues, and elevated queue priority values where appropriate. Queue processing for both escalation and priority will be defined and automated. Work items will be prioritized and moved to the top of the work queue, moved to a separate escalation queue, or routed to a user inbox for immediate processing.

Where email notification is desired, FileNet BPM will be configured to generate an automated email notice to be distributed to the appropriate staff member. Email notifications can be configured to contain descriptive data related to the reason for notification, pertinent workflow data, as well as a hyperlink to directly launch the related workflow work item. An example of the email notification is below.

Exhibit Error! No text of specified style in document. -64
Email Notification

Sample Workflow-Generated



hh) Step Functionality

FileNet BPM provides an exceptionally wide array of processing tools that can be leveraged through configured workflow components. Commonly used functions include the following:

- **Delays.** Delay functions cause the workflow processing to “pause” until a preset interval or a calculated future date is reached
- **Timers.** Timers indicate a period of time during which a specified series of steps must process. If the timer expires before this processing is complete, the system software calls another workflow map that provides alternate processing of the work item.
- **Logging.** FileNet provides a configurable logging function where customized messages can be written to logs for further review.
- **CheckPoints.** A checkpoint is used to roll back work item data field values to the values held at a previous point in processing and, if necessary, resume work item processing at that previous point.
- **Database Execution.** The database system function is used to execute a stored procedure in a specified database.
- **Web Service Invocation.** Web Services system functions provide the capability for a workflow to automatically invoke a service provided by others or receive and reply to external Web Services requests.
- **Wait Conditions.** Wait conditions are configured for when a work item must wait for another work item to meets a specified condition. For example, a pended case could be set to wait for receipt of a new image that, upon receipt, will cause the pended case to automatically be routed to the user’s active queue.
- **Java Integration.** FileNet BPM provides the ability to execute custom developed Java code from within a workflow. This capability provides interaction with FileNet API interfacing as well as extensive options to interact with external systems or data sources.

Each of these defined functionalities is represented in the FileNet BPM Process Designer tool as a graphical icon to simplify visual reading and interpretation of workflow maps.

ii) Security Based Work Assignment

DEQ workflow steps will be configured to provide access to work based on security assignments. Security can use Active Directory groups or workflow-defined groups to delineate assignment permissions. Access to work queues will be based on role based authorization (public queues). An individual inbox for each authorized FileNet user is also provided as default functionality.

Workflow steps graphically differentiate between the two access models.

Exhibit Error! No text of specified style in document. -65 Queue vs. Inbox Workflow Map Depiction



In this manner, routing to multiple staff is facilitated. If a step is to be processed by a role-based user group, security-regulated Public Queues will be built into the DEQ workflow. If a step is to be processed by an individual user, a User Inbox step will be built into the DEQ workflow.

(1) Move to Inbox and Reassign Functionality

In some instances, DEQ may require a user to remove an item from a Public Queue and place it in his/her personal inbox or assign it to a specific individual to complete that step. In other instances, a user who receives an item in their inbox may require the ability to reassign it to another user.

Any instance of moving an item from a queue to an inbox or reassigning an item to another user retains the work item in the current step. This provides the ability for users to move work between one another without impacting the processing of the workflow.

(2) Out of Office Functionality

Users who are out of the office or otherwise unavailable have the ability to set an “out of office” status that designates an individual or group to manage the workload in his/her absence. When this status is set, work is automatically routed to the designee instead of the out of office user.

jj) Security Based Viewing and Data Adjustment

Within the workflow configuration, users can be granted the ability to view specific workflow properties. Each step in the workflow can be configured to display any, all, or none of the available workflow parameters. Additionally, users can be granted various permissions on the selected properties. Available access permissions for selected properties are:

- **Read.** The field name and current value will display in the step processor, allowing the participant to view, but not change, the value.
- **Write.** The field name will display in the step processor, but the value will be blank. The participant can enter a value.
- **Read/Write.** The field name and current value will display in the step processor, and the participant can change the value.

The exhibit below illustrates the configuration of workflow parameters.

Properties

Name: User Inbox Decision

General | Deadline | **Parameters** | Assignments | Routing

Operation: <None>

Select Parameters

Available Parameters:

- Case_Escalation_Date
- GIS_Field_1
- GIS_Field_2

Selected Parameters:

- Case_Initiation_Date[Read]
- Case_Title[RW]
- CEDS_Field_1[Read]
- CEDS_Field_2[Read]
- CEDS_Field_3[Read]
- Workflow_Priority[RW]
- Workflow_Status[Write]

Access Rights: Read/Write

Prompt:

kk) Workflow Reporting

FileNet BPM has the ability to accumulate and store a wealth of information throughout the lifecycle of a workflow. Audit information, logging information, informational messages, as well as other data can be collected for display in various formats. CGI will work with DEQ to identify the required reports and display formats for implementation in each phase. The DEQ requested reports can be accommodated through use of FileNet Business Activity Monitor (BAM) and custom reports built using data extracted with the FileNet Process Engine API. Data gathered from FileNet API's can be ported to an external data source (data mart, data warehouse, isolated database tables, etc.) if desired. Custom reports can be built to display workflow statistics by users and groups as well as access to individual workflow data fields such as Workflow Status. Additionally, the BAM reporting tool provides configurable options for real-time graphical display of workflow work items.

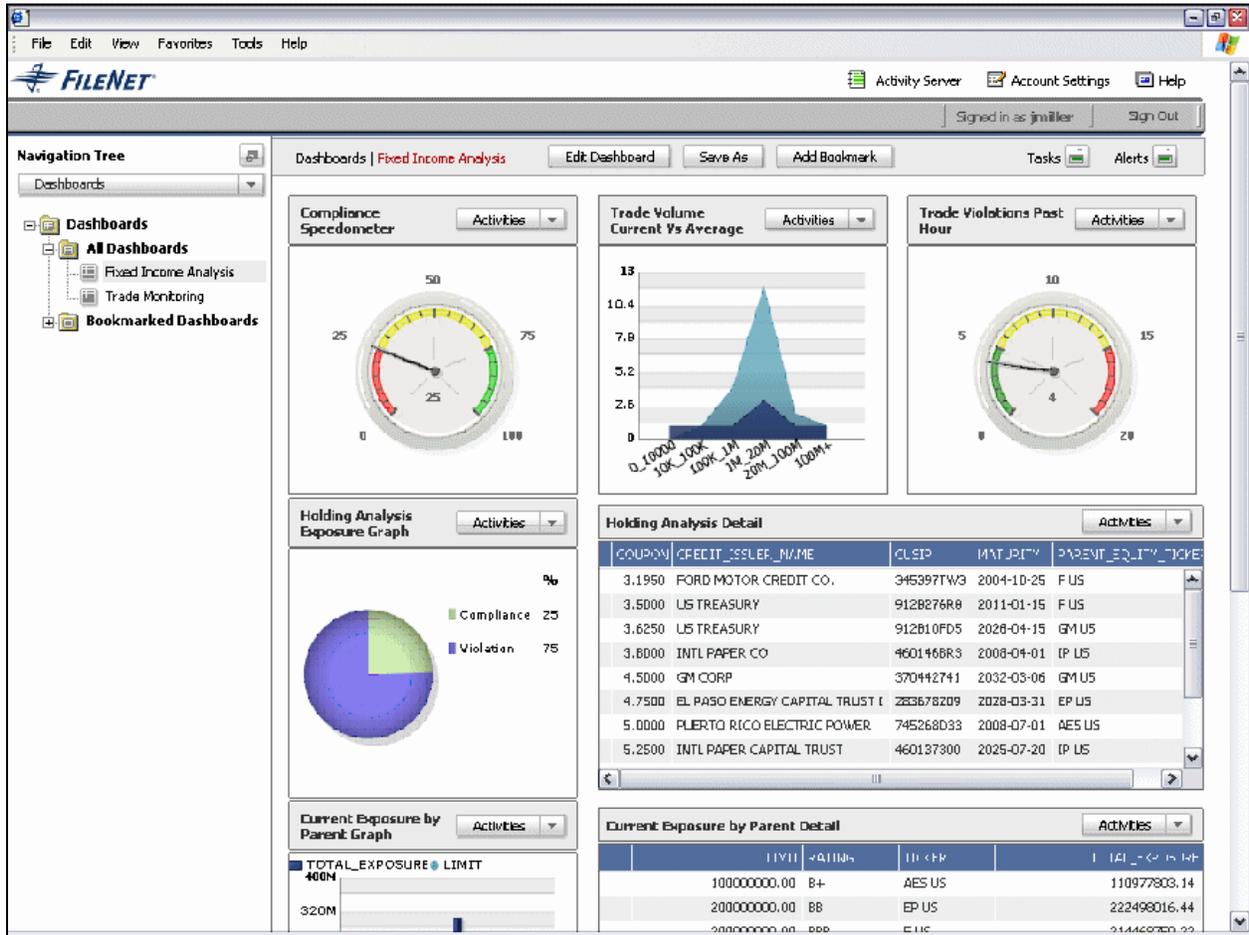
(1) FileNet Business Activity Monitor

The FileNet Business Activity Monitor (BAM) is based on designated workflow Key Performance Indicators (KPIs). BAM monitors these KPIs in real-time and provides a dashboard view of workflow statistics. Threshold values can also be monitored and configured to notify individuals (via pagers, email, etc.) when those thresholds are exceeded. Furthermore, BAM has the ability to integrate back into BPM. This ability can be leveraged, for example,

to automatically launch a workflow for additional processing when thresholds are exceeded to reduce the manual intervention.

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Monitor Dashboard View

Sample Business Activity



2. Additional DEQ Functionality

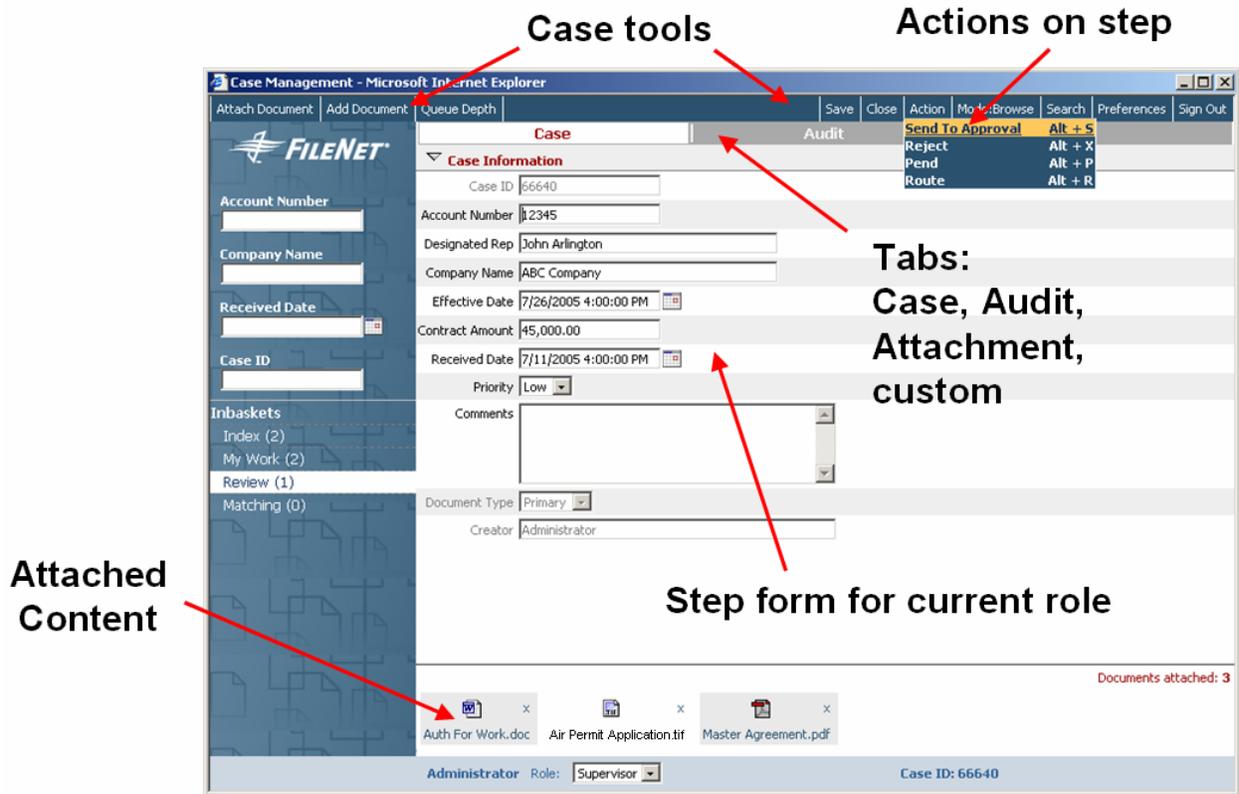
Some of the specific workflow functionality requested by DEQ requires the extension of configurable FileNet capabilities with additional development. CGI will incorporate this effort into the overall implementation to provide a final solution to meet the needs of DEQ.

II) Case Management – FileNet Business Process Framework

The DEQ Case Study workflow examples refer to automatic routing of electronic cases as a means by which work is assigned to staff. FileNet’s Business Process Framework (BPF) is an ideal web-based tool, providing functionality that extends the BPM workflow capabilities into a configurable case management solution. Using BPF, DEQ will be able to automatically route cases, complete with attached documents or folders, a fully configurable audit trail, security controlled case data fields, as well as other time-saving functions.

Exhibit Error! No text of specified style in document. -68
Framework Case

Sample Business Process



(1) Security and User-Based Functionality

Security is role-based, where users may have one or more roles. For users with multiple roles, BPF provides a single drop-down menu that enables a user to instantaneously swap between available roles. Data field updates are controlled at the user role level, so controlling functionality such as making priority updates to cases may be limited to specifically designated user roles.

(2) Priority based processing

BPF augments standard public queue processing by providing security controlled Inbaskets granted to users. Each Inbasket is a filtered view of an existing BPM queue that may be sorted or prioritized on any value. The underlying structure used to filter the Inbasket queue views is a SQL query, executed against the queue database. This allows the configuration of BPF to include complex sorting and prioritization beyond a simple “ascending/descending” scheme.

Additionally, BPF provides both a “Push” and a “Browse” feature where, depending on user role, the next work item on the queue is automatically “Pushed” to the user upon login or the user may “Browse” the queue to select the next item to work. This will allow DEQ significant control over work distribution.

Users with “Browse” capabilities can see any item in the selected Inbasket. When an item is selected, the Case view is displayed, providing access to all case data and attached documents. Users logging in with “Push” functionality are automatically limited to the Case view to enforce the prioritization established for working cases.

mm) Pre-fetching CEDS Data and Historical Documents

The DEQ Case Study examples illustrate the need to pre-fetch data from the CEDS, GIS, or any other integrated system and to make that data part of the case. FileNet provides this ability through the use of Component Integrator steps in the workflow to access custom Java code to perform the required tasks. The Java code will use the FileNet APIs to build in rule-based retrieval of the print stream data where it will automatically be parsed into the appropriate data fields to become a viewable set of data associated to the case.

Additionally, the workflow will be configured to, upon instantiation of a case, execute a rule-based Component Integrator Java API method to facilitate the retrieval of appropriate historical documents. Once retrieved, these documents will be automatically attached to the case and available immediately for the case processor.

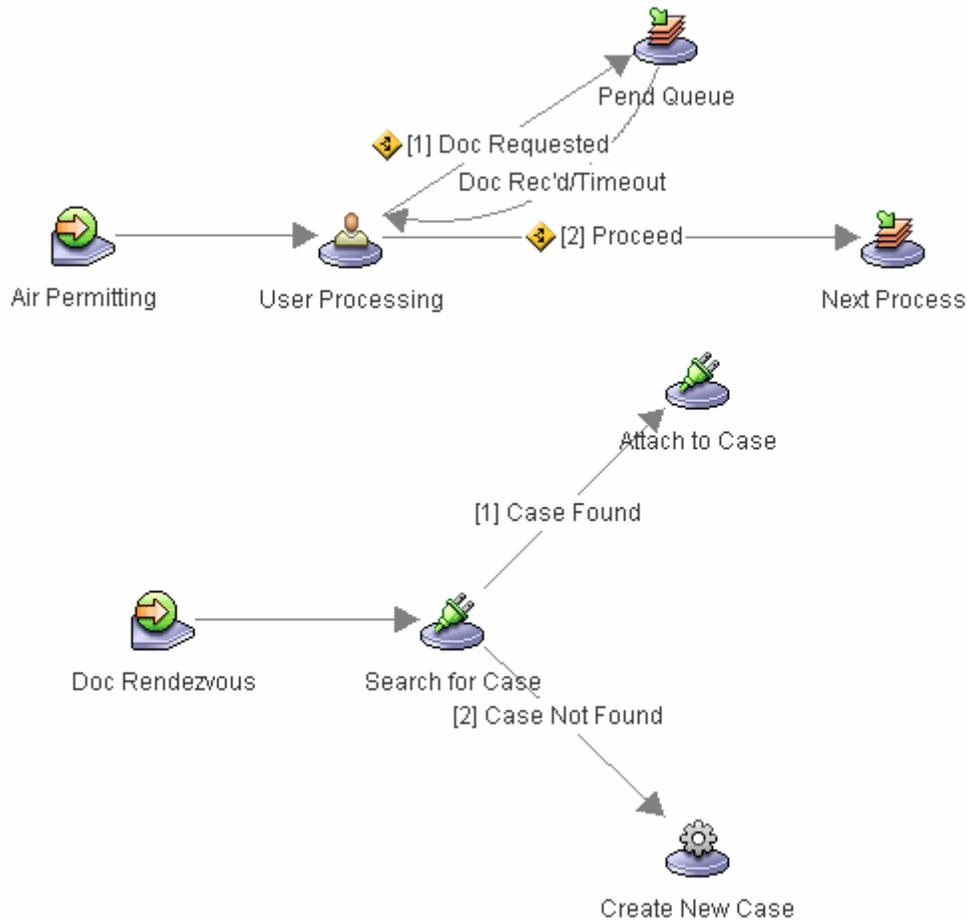
nn) Pending Documents / Document Receipt

In the case where a requested document is unavailable or a case must be put on hold until a specific date, FileNet BPM and BPF provide the ability to “pend” cases. When a selects the Pend option, the case will be removed from the queue until either the requested document is received or the specified date is encountered. Upon receipt and rendezvous of the requested document to the case or date expiration, the entire case will be routed back to the user, to a public queue, or escalated to an exception process.

The rendezvous functionality provided will be workflow based and will utilize additional processes to retrieve all documents from all sources. Methods to distribute the documents from the various sources (email, fax, scanned documents, eForms, and native documents) into the FileNet CE repository are discussed in the implementation of the capture capability. However, once these documents are received by FileNet, the BPM workflow controls the automatic processing of these documents. A workflow must be launched upon receipt of appropriately designated documents to facilitate the automatic attachment to an existing case or the automatic creation of a new case.

Exhibit Error! No text of specified style in document. -69
Rendezvous Logic

Example of Workflow



oo) Legacy system integration (workflow or other)

In addition to database integration and Enterprise Report Management functionality integration, the FileNet architecture permits workflows to integrate with other workflow system, legacy systems, and/or any other system that provides connectivity methods.

pp) eForms

In an effort to standardize interfaces, FileNet provides the ability to integrate eForms directly into the BPF architecture. Leveraging eForms within a BPF solution provides the ability to utilize a consistent interface design between BPF workers and workers simply using the Forms technology. eForms are discussed in detail in proposal responses to Options 8 and 9.

qq) Automatic case closing

Upon completion of the case, a nightly process can be run against the final queue in the workflow: the FileNet “close” queue. This process may be either an external scheduled process that connects to the FileNet application and executes available Java API code or available Web Services. Alternatively, the final FileNet workflow step in each workflow can utilize the delay workflow functionality to put the work item “on hold” until the day expires. At that point, the delay trigger would fire and the workflow would automatically terminate, thereby eliminating the need for an external process and additional integration work.

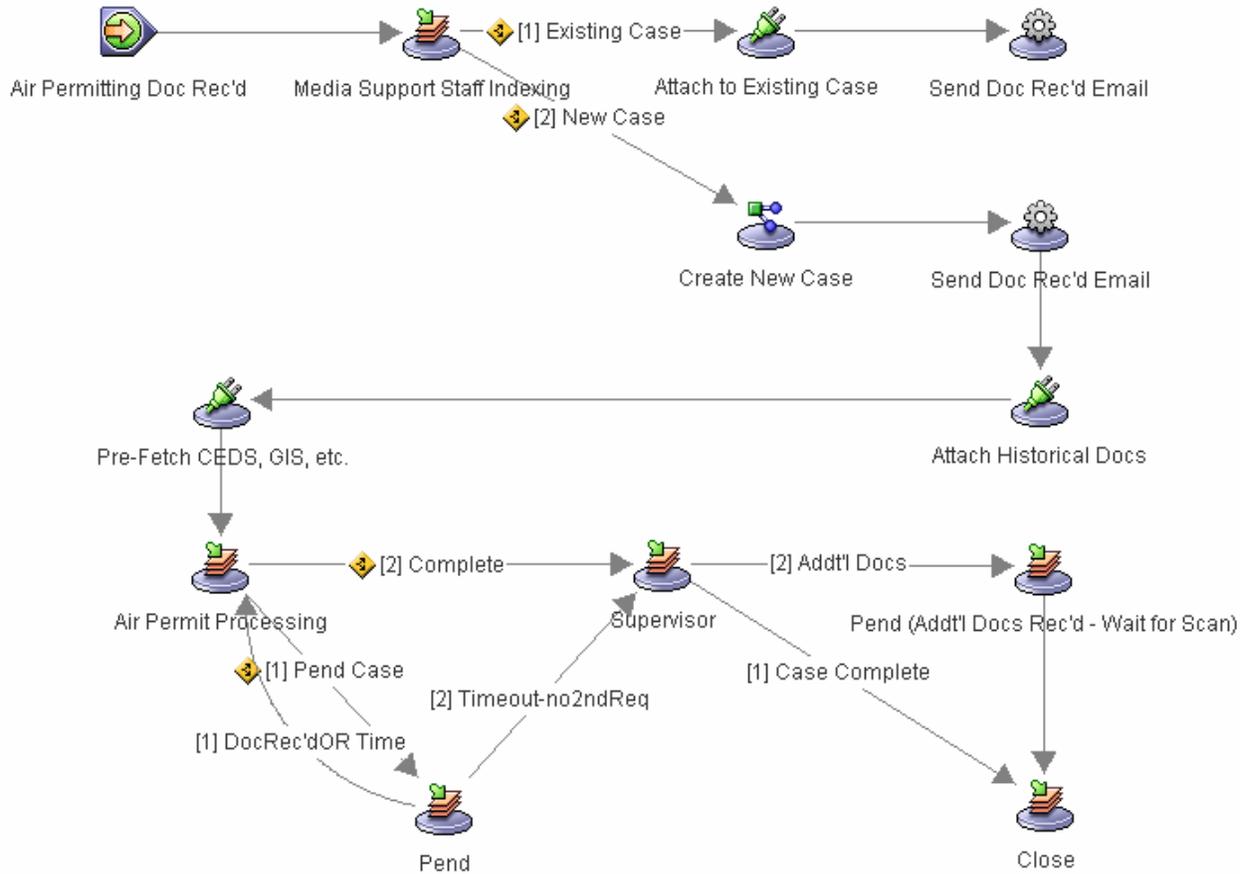
3. Case Study Sample Workflow Illustrations

To illustrate CGI's understanding of the Case Study examples as well as CGI's ability to construct ah-hoc and automated workflows around the DEQ needs, the Case Study workflows are illustrated below. Key points are articulated following each workflow sample.

rr) Air Permitting Case Study Sample Workflow

Exhibit Error! No text of specified style in document. -70 Example

Air Permitting Workflow



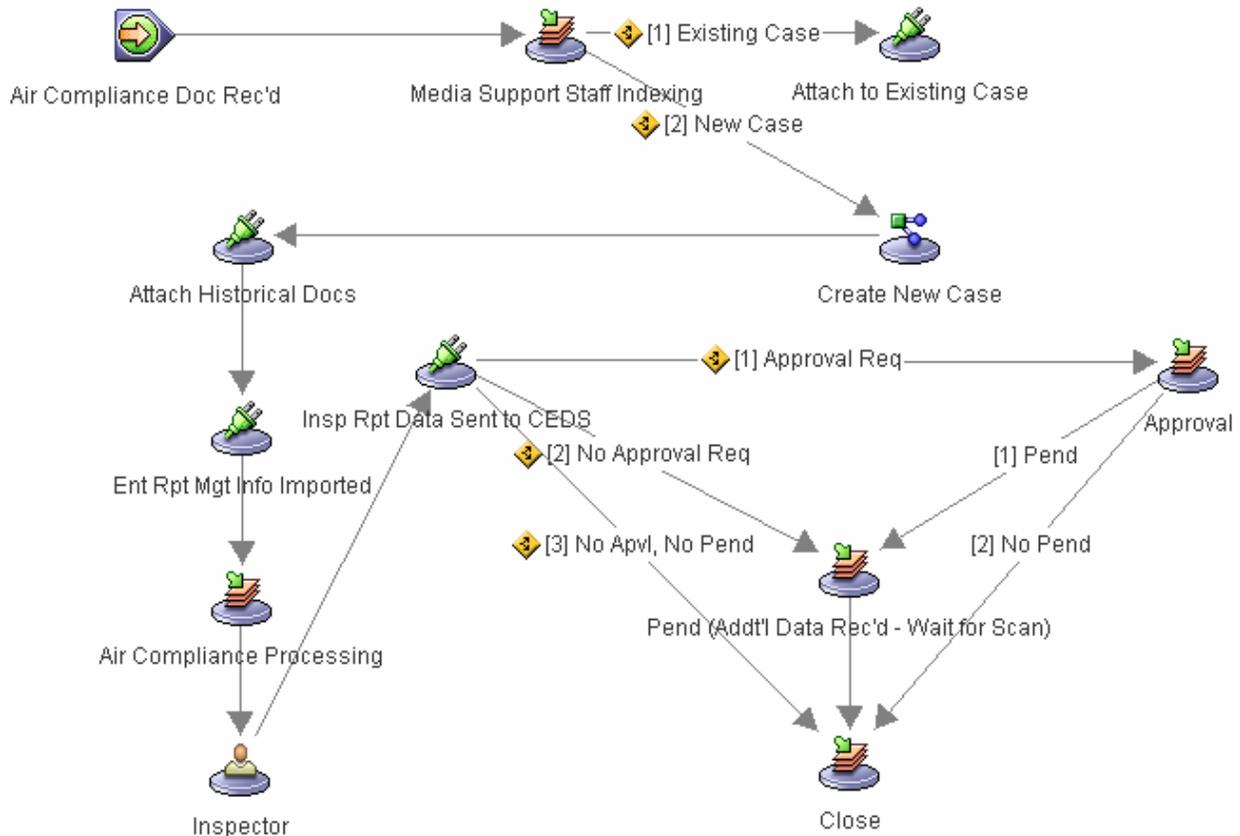
In the Air Permitting example, receipt of a document into FileNet following scanning automatically initiates a workflow via FileNet Document Subscription functionality. In all Case Study examples, the Media Support Staff make the determination as to whether a new case is created, but if enough data were available in the index values, this decision could be automated.

The Pend queues are illustrated here but will be tied to secondary Document Rendezvous workflows that will automatically send the work item to the next step upon document receipt.

ss) Air Compliance Case Study Sample Workflow

Exhibit Error! No text of specified style in document. -71 Example

Air Compliance Workflow



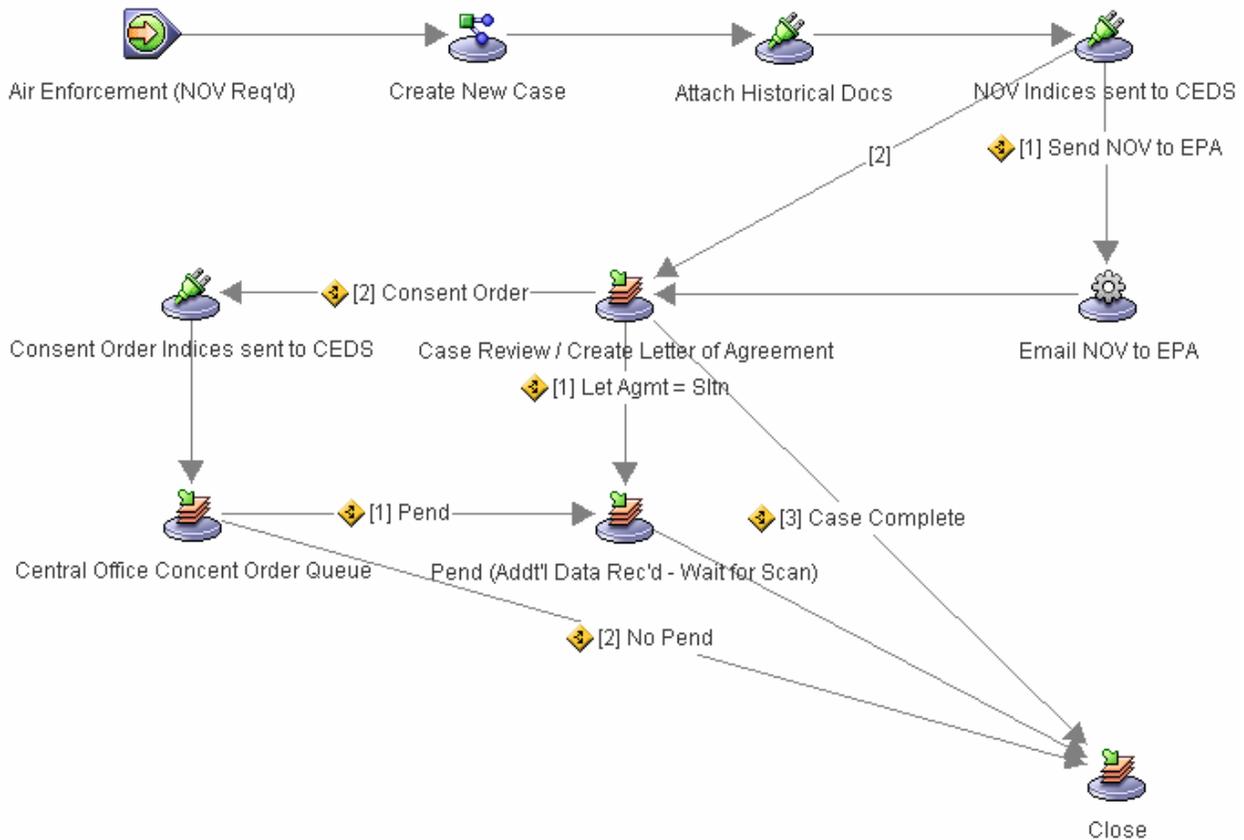
This sample workflow, similarly to the Air Permit workflow, requires the Media Support staff to determine whether or not a new case is to be created. With sufficient indexing, this decision could be automated.

The primary differentiator for this workflow is the idea that an Inspector owns the case until the Inspection Report is completed and data is uploaded to CEDS. The concept illustrated here is that the Inspector has the work item in his personal inbox and retains it there until the work is complete. DEQ will have multiple options at design time, for example, to create an escalation trigger that automatically routes the case to a supervisor if a designated period of time elapses.

tt) Air Enforcement Case Study Sample Workflow

Exhibit Error! No text of specified style in document. -72 Example

Air Enforcement Workflow



The differentiators for this workflow are the launch point and the MS Word Document entry (not graphically illustrated). This workflow could be launched by various triggers tied to the Notice of Violation or values attached to the Compliance Folder. Once the appropriate trigger scenarios are met, this workflow will launch, separate from any Compliance workflow.

The non-illustrated portion of this workflow is the inclusion of MS Word Document Templates and the automatic reaction to specific index values. At the Case Review step, for example, DEQ has the option to add MS Word documents to the case and to associate index values to the document when added. The index values of this document, once input into the Case data provide another decision mechanism by which work may be automatically routed to subsequent steps.

W. Base 23

DEQ cannot implement ECM simultaneously for all business operations. After evaluating risks, benefits, and ease of implementation, it has been recommended that DEQ use a deployment list. Although the scope of the case study includes a solution that should meet the requirements identified for the first five (5) years (all applications shown below), the services requirements may vary as various parts of the project are deployed.

Full deployment for DEQ consists of five (5) phases. A fixed price bid for integration and implementation services is required for certain aspects of Deployment Phases 1-5; however, others are at DEQ's option. For optional services, DEQ may procure all, a portion of or none of the services at its discretion.

The deployment list is below.

Phase1 - Air for a single Regional Office: The supplier will deploy the ECM system and perform the Core Deployment Tasks for permits, compliance, and enforcement for the selected Air regional Office.

The Core Deployment Tasks include:

The supplier should install the FileNet software for the production environment. This service is to be provided by a certified FileNet installer.

review the draft indexing schema as part of the Detailed Design process

as an option to DEQ, supplier should meet with DEQ staff to validate and recommend modifications to the proposed indexing schema as

install the new indexing schema

supplier should also convert the existing Keyfile indices, metadata and imaged Keyfile documents to the new system

perform the required integration between CEDS and Ascent Capture as defined under CEDS integration

as an option to DEQ, implement the Electronic Report Management requirements based upon supplier analysis and user input

install the Electronic Records Management document types and Retention Schedules, either general or agency specific

as an option to DEQ, implement the workflows based upon user input provided during the Detail Design, supplier expertise, and the samples provided of the anticipated level of workflow complexity as described in the Workflow section of this document

Implement a basic integrated application based on the above workflows and users input provided during detailed design

Can you provide the necessary services for the required Phase 1 implementation deployment?

Yes, CGI can provide the necessary services for the required Phase 1 implementation deployment. CGI will design, develop, test, and deploy all related components to the solution for permits, compliance, and enforcement in the Air area for a single regional office to be determined during the deployment planning phase. The following provides further information on the high-level scope and timeline for Phase 1.

Phase 1 – Air for a Single Regional Office.

CGI will work with DEQ and VITA on the initial infrastructure assessment and analysis related to such items as storage capabilities, network/bandwidth, and workstation requirements.

CGI installs and performs initial configuration of the core enterprise content management environment for the DEQ ECM solution based on the FileNet P8 Content Manager, Business Process Manager, Email Manager, Records Manager, Spicer FREEDOM, and ASE OutputArchiver COLD, including the ability to capture, store, and manage documents in electronic form.

CGI will configure Content Manager to store the appropriate set of document types for the Air area, including capture, storage, and retrieval of related documents and index data in a centralized repository. This includes review of the existing draft indexing schema with potential implementation of recommended changes to the schema.

CGI will configure the existing Kofax Ascent Capture solution for capture of related index data, including integration with CEDS.

CGI will provide a Reindexing process to verify index data changes are in sync between CEDS and the DEQ ECM solution.

CGI will configure Email Manager to capture and store emails of the type requested in the RFP.

CGI will configure Business Process Manager for a single workflow to automate existing processes.

CGI will configure Records Manager for appropriate document retention and disposition based on DEQ file plans and will include event trigger integration with CEDS. CGI will configure Spicer FREEDOM for redaction functionality.

CGI will configure the ASE OutputArchiver COLD solution to provide ERM from existing data feeds.

CGI will configure portlet(s) within DEQ's portal for employee access to the ECM solution.

CGI will convert all appropriate images and metadata from DEQ's existing Keyfile Imaging system.

CGI will provide initial support of the ECM solution and transition primary support to the DEQ system administrators.

Please see the response to BASE-28 as well as Appendix B – Project Plan for details on the Phase 1 project schedule.

Please note that CGI's proposed services above and corresponding execution schedule and pricing for Phase 1 is based on strict adherence to the requested deployment schedule noted in the RFP. As an alternative, CGI would be willing to discuss an approach where DEQ considers a deployment schedule that is based on a piloted implementation on the technology level instead of the existing deployment focus on the agency function area and location level. For example, a deployment schedule could involve a scan, index, storage, and retrieval pilot across all of DEQ and all office locations. This allows the core capture and content management infrastructure to be implemented, stabilized, with corresponding user adoption throughout the agency prior to rolling in significant additional functionality such as workflow, email management, records management, ERM, etc. There are several different approaches to an enterprise rollout of ECM functionality. If desired by DEQ, CGI will be happy to discuss alternative deployment options. However, for the purposes of this proposal, the CGI response is in line with the requested deployment approach as outlined in the RFP.

X. Base 24

Can you provide the necessary services for the required Phase 1 validation services?

Yes, CGI can provide the necessary services for the required Phase 1 validation services. CGI understands that the document taxonomy of any ECM solution is a critical component to the design and eventual functionality of the solution. Classification of documents and assignment of index values supports many aspects of the solution, including how documents are captured, what triggers automated workflow, how documents are retrieved, how they are retained/destroyed, among others. CGI can work with DEQ to review the existing indexing schema for the Air area during the Detailed Design process, determine jointly with DEQ what changes should be made to the schema, and implement those changes as part of the Phase 1 deployment.

Y. Base 25

Phase 2 - Air for remaining Regional Offices and Central Office, Voluntary Remediation and IBM's WebSphere integration: The supplier will perform the Core Deployment Tasks detailed in Deployment Phase 1 for permits, compliance, and enforcement for the remainder of the Air functional area (this would encompass six (6) additional regional offices and two (2) several satellite offices) and Voluntary Remediation

The supplier will perform integration of the ECM system to IBM's WebSphere for all regional offices

Can you provide the necessary services for the required Phase 2 implementation deployment?

Yes, CGI can provide the necessary services for the required Phase 2 implementation deployment. CGI will deploy all related components to the solution from Phase 1 for permits, compliance, and enforcement in the Air area for the Central Office, Satellite Offices, remaining Regional Offices, and Voluntary Remediation. The following provides further information on the high-level scope and timeline for Phase 2.

Phase 2 – Air for Remaining Offices.

CGI will work with DEQ to determine the appropriate sequence and timing for the various locations.

CGI will deploy the Phase 1 ECM solution functionality to the Central Office, Satellite Offices, remaining Regional Offices, and Voluntary Remediation.

CGI will convert all appropriate images and metadata from DEQ's existing Keyfile Imaging system.

CGI will provide remote support to the DEQ trainers in training the staff at the various offices.

CGI will assist DEQ system administrators in supporting the ECM solution for the newly implemented offices.

Please see the response to BASE-28 as well as Appendix B – Project Plan for details on the Phase 2 project schedule.

Z. Base 26

Phase 2 - Petroleum Tanks and Public Access to ECM: The supplier will perform the Core Deployment Tasks detailed in Deployment Phase 1 above for the petroleum tank functional area

Additionally, the supplier will work with DEQ staff to analyze and develop the requirements and implement public access to the ECM system through IBM's WebSphere

Can you provide the necessary services for the required Phase 3 implementation deployment?

Yes, CGI can provide the necessary services for the required Phase 3 implementation deployment. CGI will design, develop, test, and deploy all related components to the solution from Phase 1 for the Petroleum Tanks area for the Central Office and all Satellite and Regional Offices. In addition, CGI will provide public access to the solution. The following provides further information on the high-level scope and timeline for Phase 3.

Phase 3 – Petroleum Tanks for All Offices and Public Access.

CGI will configure Content Manager to store the appropriate set of document types for the Petroleum Tanks area, including capture, storage, and retrieval of related documents and index data in a centralized repository. This includes review of the existing draft indexing schema with potential implementation of recommended changes to the schema.

CGI will configure the existing Kofax Ascent Capture solution for capture of related index data, including integration with CEDS.

CGI will configure the Reindexing process to verify index data changes are in sync between CEDS and the DEQ ECM solution.

CGI will configure Email Manager to capture and store emails of the type requested in the RFP.

CGI will configure Business Process Manager for a single workflow to automate existing processes.

CGI will configure Records Manager for appropriate document retention and disposition based on DEQ file plans and will include event trigger integration with CEDS. CGI will configure Spicer FREEDOM for redaction functionality.

CGI will configure portlet(s) within DEQ's portal for public access to the ECM solution with appropriate security provisions.

CGI will convert all appropriate images and metadata from DEQ's existing Keyfile Imaging system.

CGI will provide initial support of the ECM solution and transition primary support to the DEQ system administrators.

Please see the response to BASE-28 as well as Appendix B – Project Plan for details on the Phase 3 project schedule.

1. Option 10

Can you provide the necessary services for the required Phase 3 validation services?

Yes, CGI can provide the necessary services for the required Phase 3 validation services. CGI understands that the document taxonomy of any ECM solution is a critical component to the design and eventual functionality of the solution. Classification of documents and assignment of index values supports many aspects of the solution, including how documents are captured, what triggers automated workflow, how documents are retrieved, how they are retained/destroyed, among others. CGI can work with DEQ to review the existing indexing schema for the Petroleum Tanks area during the Detailed Design process, determine jointly with DEQ what changes should be made to the schema, and implement those changes as part of the Phase 3 deployment.

2. Option 11

Phase 4 - DEQ selected options: The supplier will deploy each of the proposed options that DEQ has selected during this phase. These options include:

eForms implementation and integration services

install eForms software

GIS Integration

e-DMR Electronic Reports Management

Can you provide the necessary services for the required Phase 4 implementation services?

Yes, CGI can provide the necessary services for the required Phase 4 implementation deployment. At DEQ's option, CGI can design, develop, test, and deploy all related components to the solution for eForms, GIS integration, and e-DMR functionality. The following provides further information on the high-level scope for Phase 4, assuming all options are subsequently selected by DEQ.

Phase 4 – DEQ Selected Options

- CGI installs and performs initial configuration of the optional components selected for inclusion in the DEQ ECM solution to potentially include FileNet P8 eForms, SpatiaX sxGIS for GIS integration, and eForms for e-DMR functionality.
- CGI will configure eForms for one (1) form for the Air Compliance area with two-way data integration with CEDS and inclusion in one (1) existing workflow.
- CGI will configure eForms for one (1) form for the Tank's Reimbursement Authorization form with two-way data integration with CEDS, e-signature functionality, and inclusion in one (1) existing workflow.
- CGI will configure SpatiaX sxGIS for GIS integration allowing retrieval based on active layers and geographic boundaries.
- CGI will configure eForms for one (1) form for e-DMR integration of XML data received from external report data feeds with legal constraint considerations included.

Given the Phase 4 implementation is a deployment of optional components and was requested to be excluded from the DEQ ECM solution pricing, Phase 4 is not included in the integrated master schedule.

AA. Base 27

Phase 5 - Water, Hazardous Waste and Solid Waste: These functional areas will be phased in as part of the services procured through this RFP. The supplier will provide the services described below for each functional area for permits, compliance, and enforcement:

review the draft indexing schema

as an option to DEQ, supplier should meet with DEQ staff to validate and recommend changes to the proposed indexing schema as appropriate

install the new indexing schema

as an option to DEQ, perform the required integration between CEDS and Ascent Capture as defined under CEDS integration subsequently in this document

as an option to DEQ, implement the Enterprise Report Management requirements based upon supplier analysis and user input

as an option to DEQ, install the Electronic Records Management document types and Retention Schedules, either general or agency specific

as an option to DEQ, implement the workflows based upon user input provided during the Detail Design, supplier expertise, and the samples provided of the anticipated level of workflow complexity as described in the Workflow section of this document

as an option to DEQ, implement a basic integrated application based on the above workflows and users input provided during detailed design

Can you provide the necessary services for the required Phase 5 implementation deployment?

Yes, CGI can provide the necessary services for the required Phase 5 implementation deployment. CGI will design, develop, test, and deploy all related components to the solution from Phase 1 for permits, compliance, and enforcement for the Water, Hazardous Waste, and Solid Waste areas for the Central Office and all Satellite and Regional Offices. The following provides further information on the high-level scope and timeline for Phase 5.

Phase 5 – Water, Hazardous Waste, and Solid Waste for All Offices.

CGI will configure Content Manager to store the appropriate set of document types for the Water, Hazardous Waste, and Solid Waste areas, including capture, storage, and retrieval of related documents and index data in a centralized repository. This includes review of the existing draft indexing schema with potential implementation of recommended changes to the schema.

CGI will configure the existing Kofax Ascent Capture solution for capture of related index data, including integration with CEDS.

CGI will configure the Reindexing process to verify index data changes are in sync between CEDS and the DEQ ECM solution.

CGI will configure Email Manager to capture and store emails of the type requested in the RFP.

CGI will configure Business Process Manager for a three (3) workflows to automate existing processes.

CGI will configure Records Manager for appropriate document retention and disposition based on DEQ file plans and will include event trigger integration with CEDS. CGI will configure Spicer FREEDOM for redaction functionality.

CGI will provide initial support of the ECM solution and transition primary support to the DEQ system administrators.

Please see the response to BASE-28 as well as Appendix B – Project Plan for details on the Phase 5 project schedule.

1. **Option 12**

Can you provide the necessary services for the required Phase 5 validation services?

Yes, CGI can provide the necessary services for the required Phase 5 validation services. CGI understands that the document taxonomy of any ECM solution is a critical component to the design and eventual functionality of the solution. Classification of documents and assignment of index values supports many aspects of the solution, including how documents are captured, what triggers automated workflow, how documents are retrieved, how they are retained/destroyed, among others. CGI can work with DEQ to review the existing indexing schema for the Water, Hazardous Waste, and Solid Waste areas during the Detailed Design process, determine jointly with DEQ what changes should be made to the schema, and implement those changes as part of the Phase 5 deployment.

BB. Base 28

Suppliers should present their approach and capability to control and integrate the proposed system. Suppliers should describe the organization structure, listing all key personnel functions. Please also indicate whether they have experience with managing projects according to VITA project management methodologies. If your candidates for project management have certifications, please specify.

More consideration will be given to suppliers who can list personnel by name, placement in the project structure, title, qualifications, and experience.

Supporting rationale should be provided to show that the organization is adequate to support the overall effort and to justify the number and allocation of personnel involved.

A master integrated schedule depicting all activities and milestones from contract award to installation and cutover should be included in the proposal. The supplier should also discuss how they will control the proposed schedule and how it will identify and report achievement of tasks and milestones. Suppliers will also discuss how they will identify, track, escalate, resolve, and report issues such as schedule slippage, or engineering anomalies. Escalation procedures should be discussed. Suppliers will also discuss how they will identify, track, escalate, and report risks and issues associated with the project. Should the supplier miss a task or milestone, DEQ reserves the right to require more frequent status reports and more detailed project schedules.

Suppliers should also address specific issues associated with Change Management procedures. Suppliers should make specific recommendations as to steps that should be performed by DEQ and the supplier, respectively.

Suppliers should describe their issue and risk management process, including escalation criteria and management responsibilities. Suppliers should make specific recommendations as to steps that should be performed by DEQ and the supplier, respectively.

This section should also contain a matrix that lists tasks and identifies the corresponding "owner." DEQ's tasks should be identified as well as those of any subcontractor(s).

Suppliers should describe their approach to formal review meetings with DEQ, the organization of the typical meeting, and methods for documenting and approving all meeting notes. Suppliers will be required to provide project status updates.

Describe your relevant experience, capabilities and approach to project management.

1. Project Management Process

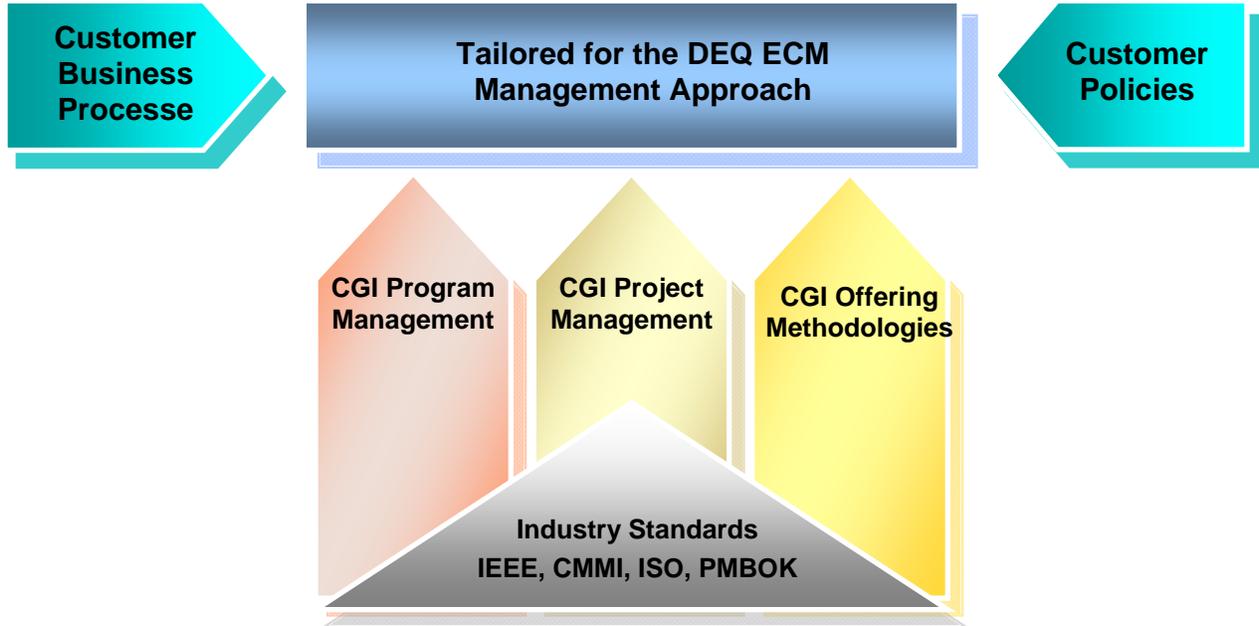
CGI is pleased to present our project management plan approach for the DEQ ECM project. CGI believes that the approach detailed for Quality and Risk Management will add value for this project given the criticality and complexity of the project. The CGI approach to project management was developed and refined through thousands of successful projects with hundreds of clients in both the private and public sectors. The proposed approach for the ECM project comprises a customized version of proven, state-of-the-art CGI project management methodologies as shown in

Exhibit **Error! No text of specified style in document.**-73. The CGI approach to managing the DEQ ECM project is based on solid foundations of project management and system development.

The complexity of the transformation that DEQ must accommodate, the number of individual components that must be brought together, and the transformation from the added functionality require a robust yet flexible management approach.

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CGI Project Management Approach



The approach will be executed by an outstanding management team that CGI believes is the right partner for DEQ’s ECM project. The CGI team offers a unique combination of strengths that are well suited to the management needs and objectives of the ECM project. Highlights of these strengths include:

Comprehensive, Practice-Based Methodology: The CGI team’s methodology is based on CGI Project Management Standards. Drawing on its experience with hundreds of large-scale projects in dozens of industries, CGI developed these Standards as the foundation for achieving high-quality project results and promoting exceptional productivity within and across teams.

Tools, Templates, and Processes Ready to Implement: Because they are based on direct project management experience, the Standards are supported by a wealth of tools, templates, and procedures that will enable the CGI team to implement its methodology quickly and at low cost. By making our methodology less abstract and more applicable to real-world situations, these same materials can also facilitate knowledge transfer to DEQ staff and integration with existing Commonwealth procedures. Finally, our tools are flexible, and CGI will work with DEQ at project initiation to select and tailor the right tools for the DEQ ECM project.

Consistency with Industry Standards: The CGI Standards are consistent with the principles of industry standards such as the Project Management Institute’s Body of Knowledge (PMBOK), the International Standards Organization (ISO), and the Software Engineering Institute’s Capability Maturity Model Integration (CMMI).

CGI offers a powerful combination of industry and systems integration knowledge and will bring that depth of experience to bear and tailor our Project Management methodology to the specific needs of the ECM project. The following section describes the CGI project management standards.

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CGI Project Management Framework Crosswalk to Industry Standards

Topic	CGI PMF	PMBOK	CMM
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Topic	CGI PMF	PMBOK	CMM
Project Initiation (Team Assembly, Staff Orientation, Project Kick-off)	✓	✓	✓
Project Planning and Control (Work Breakdown Structure, Project Plan/Schedule, Integrated Plan)	✓	✓	✓
Communications Planning	✓	✓	✓
Procurement Management		✓	
Quality Assurance (Approach, Standards/Measures, Reviews, Oversight)	✓	✓	✓
Metrics	✓		✓
Risk Management	✓	✓	✓
Scope Management	✓	✓	✓
Change Control Management	✓	✓	✓
Status and Time Reporting	✓	✓	✓
Team Management	✓	✓	✓
Issue Management	✓		✓
Stakeholder Management	✓	✓	✓
Inter-group Coordination	✓	✓	✓
Project Reviews and Audits	✓		✓
Vendor/Subcontractor Management	✓		✓
Project Close-out (Project Acceptance, Final Report, Archival)	✓	✓	✓

CGI conducts project management in every area of the project in a consistent manner with the use of experienced executive managers, project managers, together with guidelines, templates and tools, to promote efficient and effective delivery. This management practice is fundamental to our organization and reaffirms our belief that we are well prepared, through our methodologies and experience, to meet DEQ’s expectations for the management of the ECM project.

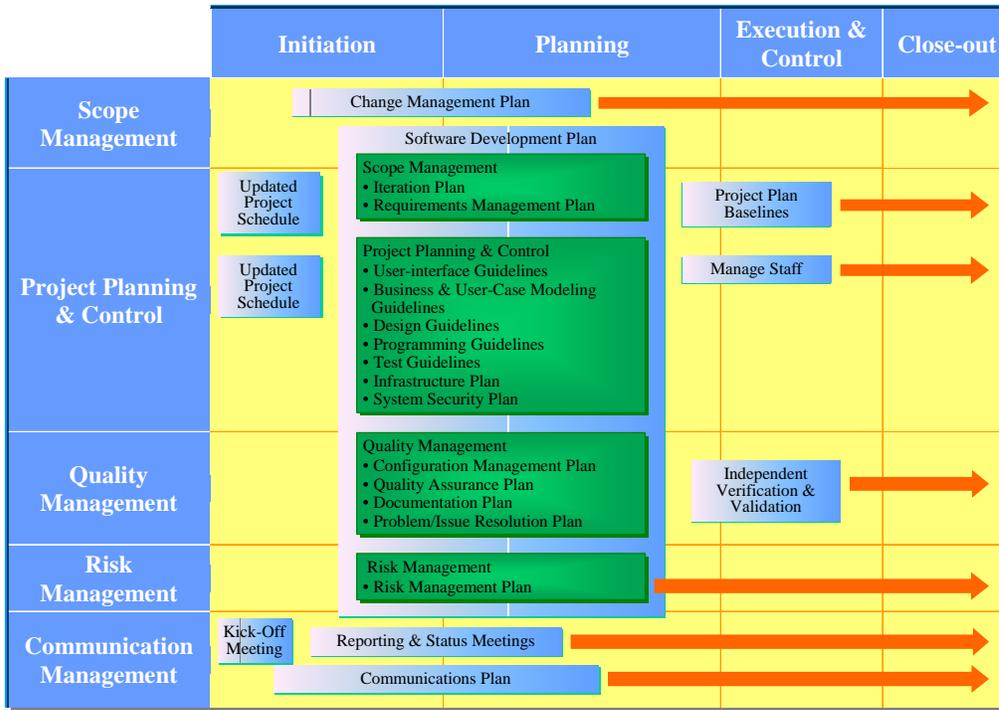
2. CGI Project Management Framework Methodology

CGI utilizes the Project Management Framework (PMF), which defines the way projects are managed. The PMF approach to Project Management is comprehensive and will provide a controlled environment for monitoring and managing the overall delivery of the solution. Our Project Management Framework Methodology, PMF, provides processes, tools and techniques to conduct complex IT projects in a disciplined, well-managed, consistent manner that promotes delivery on time and within budget. Our PMF is tailored to meet the specific needs of the ECM project, while drawing upon industry standards, as well as our lessons learned from almost three decades of experience with such projects. In 1994, CGI developed a significant competitive advantage by becoming the first North American Company in its category to secure ISO 9001 certification for its Project Management Framework.

CGI’s Project Management Framework, PMF and associated methodology is illustrated below. Across each phase of the project, the project management effort will occur concurrent with the completion of project milestones, such as the completion of a deliverable, both to oversee the completion of the current milestones and to monitor readiness for the beginning of the next milestone. At each point, CGI PMF will provide our team with more than just a roadmap to navigate through the project lifecycle; it will also equip the team with proven tools, techniques and templates to assist them in keeping the project on schedule and on target.

Exhibit Error! No text of specified style in document. -75
Framework Methodology

CGI Project Management



uu) **Scope Management**

In PMF, the area of Scope Management includes the discipline of High-Level Planning, which encompasses the activities involved in defining the project scope, success targets and high-level Work Breakdown Structure (WBS). One critical task within this discipline for the project will be finalizing the Project Plan. We will validate project scope during this initial planning activity upon project initiation. We establish scope management roles and responsibilities, policies, guidelines, processes and procedures to control changes to the project scope in the ECM Project Plan. Upon DEQ acceptance, CGI will employ scope change control procedures on the project. We will define the change control process within the project plan, which is communicated throughout the project team and with stakeholders. Our change control procedures include initiating change requests, which outline the reason for the change, scope of the change and impact to the project. We will submit the change request to DEQ for management review and approval. Upon approval, the change will be incorporated into project scope for execution and control purposes.

vv) **Project Planning and Control**

The Project Planning and Control area within our PMF includes the discipline of Detailed Project Planning, which encompasses a range of activities to turn a project’s high-level schedule and success targets, into a detailed task plan and schedule of deliverables, drawing on our tools and templates.

A critical task for this discipline upon project initiation is validating the project success targets for the various phases and the initial project schedule presented in this Section. The purpose of this validation is to confirm that the goals are still achievable and to reaffirm our shared understanding of what it will take to meet them, in light of any new developments or changed assumptions since the proposal was submitted. CGI provides templates for project documentation, including the project success targets, roadmaps and dependency diagrams that we have used to facilitate and expedite this validation on numerous projects. We look forward to working with DEQ project management to select from among these templates to develop a set of tools that will expedite this critical task.

Upon approval of the project plan, our management will oversee activities throughout the team by assigning tasks to qualified resources with inputs, scope definition, template outputs and due dates. The CGI Project Manager will oversee the completion of tasks and provide guidance regarding methods, processes, standards, coordination and

quality review associated with the specific task. The CGI Project Manager will monitor task performance, identify risk mitigation measures and resolve issues the project team member may experience in completing the task.

The CGI Project Manager will conduct formal weekly project team reviews. The team reviews are intended to:

- Coordinate project activities among team members;
- Provide status of activities and work results;
- Discuss effective processes around quality results and areas requiring improvements;
- Identify risks and mitigation measures;
- Identify and resolve issues affecting project performance;
- Identify resource requirements for project team; and
- Adjust tasks to maintain scope, schedule and cost.

The output of the team reviews will provide input into project status reports and management reviews with DEQ.

ww) **Quality Management**

The CGI Team's PMF Quality Management area includes the disciplines of Configuration Management, Quality Planning and Assurance, Project Documentation, and Problem Management, which our PMF calls Incident and Defect Management. Our methodologies provide a comprehensive, proven set of templates and planning guidance to assist our team in rapidly and efficiently creating these plans. Moreover, we will deliver a team with the experience and expertise to implement these plans effectively.

xx) **Risk Management**

(a) Our PMF places strong emphasis on the Risk Management disciplines of Issue Management (identifying and tracking project developments that could impact the schedule, cost or scope), Project Risk Management (identifying and monitoring project tasks and events that will trigger issue escalation and contingency planning activities to mitigate the risk) and Contingency Planning (developing and implementing contingency plans in the event of a risk trigger). These disciplines provide our framework for the Risk Management Plan, which is included in the initial project planning phase. Again, our PMF's tools and templates will provide our team with a significant head start in completing and applying this plan for the ECM project.

(b)

(c) The Risk Management Plan details how to manage the risks associated with a project. It details the risk management tasks that will be carried out, assigned responsibilities and any additional resources required for the risk management activity. Based on CGI's PMF methodology, we expect that the contents of the ECM Risk Management Plan will include:

Definition of the project's risk management principles (i.e. goal-based, task-based approach) and major categories of risks to be managed (i.e., performance, cost, schedule, technology, staffing);

Description of project risk management processes, including risk identification, evaluation and tracking;

Description of contingency planning and risk mitigation procedures, including definition of contingency plan triggers and authorization/approval to execute contingency plans; and

Specification of risk management tools and templates, including a Risk Stoplight Report template and specification of a risk/issue management repository to track risks and map them back to tasks and deliverables on the project work plan.

3. Communications Management

(a) The purpose of a clear and concise Communication Plan is to meet the needs of the project, including information needs of project stakeholders, as well internal communication planning. Our Communication Management consists of an inward-looking communication discipline (Project Communication Management) and an outward-looking communication discipline (External Accountability).

(b)

The internal Project Communication Plan focuses on the tools, media and procedures to be used by team members for communications within the project team, including both the integrated team at the Primary Project Site

and the CGI support staff at other locations. Maintaining consistent, manageable and well-understood communications protocols between staff will be an especially important element of this plan.

To begin developing a communications infrastructure, there is quite a bit of information that needs to be known and understood. What information people throughout the project require is often times dictated by the organizational structure of the team. Information that is disseminated should contribute to project success and/or highlight possible areas of communication failure.

The draft Communication Plan will outline how information will be:

Collected and Updated – This section of the plan discusses how the Project Manager will collect information from certain project areas and how often updated information will be expected to be reported. It should also discuss what action should be taken if important information needs to be updated between project information collection cycles.

Controlled and Distributed – This section of the plan will provide a description on how project information will flow throughout the project and who will make decisions on where information flows. This section will also discuss what stakeholders and team members will have access to what particular areas of information. The intent of the Distribution section is, not to limit team members from being able to access data that they need, but to provide a structure to prevent damage to the project by restricting access to sensitive materials. Information security policies should be referenced here.

Stored – This section of the plan will give project members an idea of where physical project files will be kept within the ECM project, as well as where electronic media might be stored for project team access.

External accountability is the process of fostering communication, trust and mutual support between the ECM project and its critical stakeholders. The project must build good working relationships with its customer stakeholders by getting them actively involved in a project and gaining their commitment to its success. Stakeholders are entities who have a vested interest in the success of the ECM project and who exert influence over the outcome. Coordinating project communications across all of those channels is a daunting challenge; however, it is one that we are eager to help the ECM project address.

During the course of the ECM project, CGI agrees to:

Establish and administer controls;

Update the detailed project management plan and schedule on a weekly basis and deliver it to the DEQ Project Manager;

Monitor project activities;

Provide weekly and monthly status reports;

Facilitate and attend project-related meetings, team status meetings and project briefings.

CGI will plan multiple reporting and status meetings during the life of this project. As a routine part of project control, CGI will conduct weekly status meetings with the DEQ Project Manager and the CGI Project Manager as a means to provide the day-to-day project manager with an opportunity to discuss current activity, plan for future activity, discuss risk and issues to identify resolution actions and plan resources and meetings. In addition, CGI will conduct monthly meetings with executives at DEQ and CGI to facilitate adequate communication and commitment, provide an opportunity to raise topics for guidance or decisions that must be made at that level within both organizations and provide an opportunity for executives to monitor the health of the project to maintain focus on achieving objectives and realizing benefits. CGI will also work with DEQ to identify any additional reporting and status meetings necessary for the project.

CGI will use the following types of communication to escalate issues which could prevent the project team from fulfilling the requirements in the RFP:

Weekly status reports detailing accomplishments, tasks behind schedule, dependencies, issues and tasks to be completed in the following week.

Weekly status/issue resolution meetings between the CGI managers and ECM project sponsors.

Monthly executive steering committee meetings between the CGI project executive and the ECM Project Sponsor. CGI expects that this meeting will have the necessary project stakeholders to facilitate the resolution of issues that may arise.

Any issues that the CGI project team encounters during the implementation of the project will be communicated to the DEQ Project Manager as soon as possible. These issues, upon coordination with DEQ, will also be logged using an issue management tool (e.g., Rational ClearQuest, Mercury Test Director) and documented in the weekly status report. Each logged issue will be discussed during the weekly status/issue resolution meeting. In this meeting, each issue will be resolved, deferred to a later date or escalated to the monthly executive steering committee meeting.

4. Project Control

This section presents the approach to controlling the project schedule, and how CGI will identify and report achievement of tasks and milestones. This section also discusses how CGI will identify, resolve, and report resolution of problems such as schedule slippage, or project engineering anomalies. Risk Management and Quality Assurance are also discussed in this section. They are integral components of the CGI project management approach, and key in supporting overall project success and the project control environment.

Topics in this section include:

- Schedule Maintenance and Control
- Schedule Cost and Tracking
- Schedule/Progress Communication
- Explanation and Reporting of Schedule Delays
- Issue and Risk Management
- Quality Assurance

yy) Schedule Maintenance and Control

Once the ECM project schedule for Phase 1, or other phases as determined by CGI and DEQ, has been baselined, schedule maintenance and control is the activity of keeping the project schedule current and accurate. Going forward, CGI would like to maintain three sets of schedule data; baseline, actual and forecast. This will help us understand where the project stands in accordance with our original plans and how DEQ and CGI will get to the project destination.

Baseline Schedule Data—Baseline schedule data is data agreed upon as the established dates for the project. This represents the benchmark against which progress and deviations are measured. The baseline is established at the start of each task/release and then revised during the course of the release. Adjustments to the baseline can occur from approved changes to requirements, revisions to estimates to complete, or changes based on new approaches to implementing the solution.

Actual Schedule Data—Actual data captures the precise dates on which tasks or milestones occurred. Actual data is updated and maintained based on input from team members and team leads. This information provides for accurate and timely reporting of actual starts, actual finishes, and estimate to complete.

Forecast Schedule Data—Forecast data is the current best assessment of when tasks or milestones are likely to occur. It is based on past history, revised estimates and management insights. The Project Manager will maintain projected data based on input from the teams. Forecasted dates will be reflected at the work package level monthly.

zz) Schedule and Cost Tracking

In order to focus attention on potential cost and schedule variances, the Project Manager will track progress of tasks on a weekly basis using actual data. Actual start and end dates for tasks will be compared with the planned dates and estimated level of effort. The start and end dates, plus the status of the cross-project dependencies, will be updated and assessed. From these comparisons, the Project Manager will adjust projections of milestones and costs and also determine if re-estimating or staffing changes are needed. Schedule metrics to be reviewed include:

- Percent of tasks started/completed on time;
- Late tasks;
- Estimates to complete; and
- Milestone status.

aaa) Schedule/Progress Communication

The CGI Team will communicate progress against project milestones and deliverables through the following channels:

The cycle of periodic schedule updates, including team member status, variance analysis reports and management reviews provides multiple opportunities for discussion;

Schedule changes managed through Microsoft Project;

Regular meetings, including weekly status meetings;

Informal discussion taking place within teams and across the different teams; and

Written documentation such as project work plans, deliverable matrix, and weekly status reports.

bbb) Explanation and Reporting of Schedule Delays

Any recommended project schedule change will be communicated to DEQ within two days of identification for review and approval. The following is a sample change request form CGI will use to communicate and address delays with DEQ management.

Request for Project Schedule Change	
Task	3.3.2.1 Develop Core DEQ Report ABC
Issue Description	Revised report requirement will need to be coded and back-patched. Code completion and testing will take 5 days
Planned Date	12/17/07
Revised Date	12/21/07
Schedule Impact / Downstream Effect	No overall Schedule slippage will occur. This task is not on the critical path and will be completed prior to the planned completion of all programming. No delay is expected with implementation.
Steps to Prevent Future Delays	Conduct final walk-through with DEQ using mock-up to confirm expected outcome.

ccc) Issue and Risk Management

The CGI approach to management focuses on early risk discovery and mitigation into day-to-day management activities. Issues and risks associated with schedule, project delivery and staffing resources are inherent in projects. To mitigate this, at the start of Phase 1 and each subsequent phase, CGI will work with DEQ to define success targets that describe what a successful outcome for the phase will look like. This will enable DEQ and CGI to quickly identify and deal with issues and risks as they are identified and mitigate them so as not to impact the project's ability to meet DEQ's objectives.

(1) Issue Management

Issues arise on every project. The key to success is providing a process that provides for resolution, quickly and efficiently. Issues can be identified by any member of the project and may occur through a number of channels such as status meetings, project schedule reviews, requirement sessions, code review sessions, and testing.

Issues occur when something unexpected, or unexplained occurs that has an impact on the project's ability to meet an objective. Examples of issues can include things such as: schedule delays, changes in project scope, depth of deliverables, or newly identified requirements. Issues can also exist with any part of the solution, such as designs, documentation, test scripts, environment configuration, data set-up, or business processes.

Once an issue has been identified the following process will be followed:

- The issue will be reported to the project manager, technical lead or functional lead;
- The issue will be logged into the issue management repository;
- A determination will be made regarding approach to issue resolution;
- Resources will be assigned to provide resolution; and
- The project manager will report on and track the status of all issues.

The CGI issue management approach enables the management team to have insight into problem areas and to highlight areas for potential improvement. The issue tracking repository will allow the project to collect quality metrics. DEQ can be assured that our team will report on, investigate and resolve all issues.

(2) Risk Management

The CGI approach to risk management is based on four key activities:

Identify and analyze risks that threaten our ability to achieve the success targets through risk identification and risk analysis. Risk identification is the process of evaluating the program objectives, scope, requirements, project deliverables and work activities for potential events that could negatively or positively impact the activity or program. Risk analysis involves a process of evaluating an identified risk for its likelihood (probability) and its potential impact

on the project. This is followed by determining the estimated impact of the risk event, should it occur, on scope, time, cost or quality of the project's objectives and deliverables.

Develop mitigation strategy for each risk. The mitigation strategy focuses on identifying specific actions that must be taken to help keep the project on track toward meeting the success targets. There need not be a one-to-one correlation, between risks and risk mitigation activities. In some cases, CGI will identify and recommend several tasks to mitigate a critical risk. At other times CGI will be able to recommend an activity that addresses several risks concurrently.

Specify tasks to implement the mitigation strategy. Once the mitigation strategy is defined and documented, it should be incorporated into the project schedule in the form of specific tasks, with deliverables, due dates and assignment to appropriate member(s) of the project team.

Monitor and report risks. Using the project schedule as the mechanism for tracking tasks associated with risk mitigation strategies provides a simple mechanism for monitoring and reporting on the status of actions necessary to mitigate the risks. Review of project risks and mitigation strategies will be a key focus area within team meetings and on project status reports.

The CGI team will identify and track the open risks in the weekly status reports. CGI will discuss the risks and solution options with DEQ at weekly meetings. Identifying risks is not a one-time activity; as the ECM project progresses, new risk factors may appear due to changes or situations internal or external to the organization. The risk management approach is an iterative process that occurs throughout the life of the project. CGI will communicate the risks via meetings and status reports. The sample risk management matrix in the following exhibit provides examples of risks that could threaten project success.

Risk Factor	Mitigation Strategy/Action Plan
Scope changes impact project schedule and/or budget	<p>Before CGI proceeds with changes, the change control process will be enacted:</p> <ul style="list-style-type: none"> Deviations discovered or suggested from the project scope will be brought to the attention of the Change Control Board for approval. CGI will meet with DEQ to review change impacts. CGI will provide an estimate to DEQ of the impact of this change on the project’s schedule and or price. Decisions will be made regarding implementation of risk mitigation.
Design issues or details surface during solution configuration that were not identified and addressed during the process analysis phase	<p>As developers are implementing designs for customizations, inevitably questions or issues not addressed during the process analysis sessions will be uncovered. To mitigate this, CGI will share our draft process analysis/prototypes with the stakeholders BEFORE they are final, with the goal of uncovering potential “gaps” in a timely manner.</p>
Key DEQ staff are unable to participate in project activities due to other commitments	<p>It is important that a strong cross-section of DEQ staff be present throughout the project to enable a successful implementation for each affected area during the phase.</p> <p>CGI will work with DEQ to identify and assign appropriate staff to each task and to resolve scheduling issues.</p> <p>The DEQ Project Manager is immediately made aware of staffing issues</p>

While CGI has a solid means of reporting and tracking risks in our current process, CGI recommends measuring risk status by incorporating stoplight coding, a successful technique employed by CGI’s Best Practices Methodology, to indicate the previous and current status of each risk. The stoplight colors will indicate the following status:

- Green** –The mitigation strategy is working, the threat is currently not causing impact and the risk to the success of the project is low.
- Yellow** –The mitigation strategy is working somewhat; however, there have been circumstances that indicate that the risk will cause impact to the success of the project if the situation is not rectified immediately.
- Red** –The risk has already come to fruition, the project has already incurred impact and will continue to be impacted and the process has changed from risk management to plan revision.

The CGI team will work with DEQ to categorize and prioritize each risk with a red or yellow status. The Risk Management Report will be reviewed at the weekly meetings. CGI will work with DEQ to identify a format for the risk report that will be delivered as part of the Weekly Status Report.

- ddd) Quality Assurance
- (1) Deliverable and Work Product Reviews

CGI has a systematic approach to achieve quality results. Every project executed has a Quality Controller (QC) as part of the project team. There may also be an independent Quality Assurance Team (QA), which verifies that all projects follow standard methodologies and processes. Group meetings are held regularly to identify the root causes of any quality issues and identify solutions and improved quality processes.

For each project a QC is identified. The objective of the QC is to conduct systematic deliverable and code reviews, managing conformance to the methodologies and adherence to pre-defined quality standards. Agreements will be

made up front regarding the format, content, and acceptance criteria of each deliverable. Our mission is to deliver high quality products to DEQ facilitating their review and acceptance process.

CGI will complete deliverables according to the agreed schedule and will deliver them to the identified and responsible DEQ project team member. DEQ will review the associated deliverable and document any deviations from the agreed acceptance criteria and return to the CGI Project Manager within the agreed schedule. CGI will correct the deviations identified and return to DEQ according to the agreed schedule for subsequent review. Should DEQ not respond to any deliverable within the agreed schedule, the deliverable will be assumed to be accepted.

(2) Configuration Management

Configuration management applies sound business practices to managing the configuration of items, such as the hardware, software, and documentation needed to maintain, manage, and operate any system. CGI will use configuration management to assist DEQ staff with the management of the ECM configuration for configuration items under its control. This includes items such as version control for software and documentation. CGI will conduct periodic audits to confirm that versions are adequately maintained and tracked. CGI will use the project repository tools to store configuration items, or upon agreement with DEQ, utilize existing DEQ or VITA configuration management tools.

(3) Incident and Defect Management

Incident and defect management applies to all deliverables, especially software. Incidents are unexpected or unexplained results. Defects are proven material deviations from the agreed specifications. CGI will monitor all reported incidents and confirmed defects, prioritize fixes and complete defect resolution in a timely manner. The process for diagnosing incidents found in the ECM solution includes:

Determine the scope and impact of the defect—This includes its impact on other components, its environment, and on collateral materials (such as documentation, training materials, reference data, and forms). Identify any conflicts or constraints. Estimate resource requirements to resolve the defect and determine how doing so would affect staffing and schedules for concurrent activities.

Design a repair—Determine how to resolve the defect, providing alternative approaches if appropriate. Estimate the duration, work effort, schedule modification, and cost as applicable associated with each alternative. Identify any available tools or techniques that could make it easier to implement the change. For complex or extensive repairs, schedule and conduct a review of the planned change. Participants should include stakeholders (for example, the individuals affected by the defect and key staff members who will implement the repair). Revise the proposed plan of action based on feedback from the review and obtain final approval to proceed.

Repairing the defect—Modify the deliverable or software component and document the change as appropriate. Validate the modification to verify that it meets agreed upon expectations by submitting for review or for software, conduct a unit test. Implement the change and submit for review or integrate the updated code for further testing.

Selecting and execute appropriate tests—Document the results. Modify the software component based on test results. Minor or localized enhancements may need only limited testing. A major, complex enhancement should be treated as a separate transition segment (or included with other changes in a transition segment). Any extensive change should be tried and proven using the working model before initial deployment.

Finalizing Documentation Deliverables- Once comments on the updated deliverable have been received from DEQ, CGI will update the deliverable in accordance with the agreed schedule. This cycle will continue until CGI receives notification that all comments have been appropriately incorporated into the document or the agreed review period has expired without notification from DEQ.

Installing the repaired software component—Notify affected staff members of the impending change. Provide each with updated materials (such as reference guides and forms) before implementing the change. Provide training materials and courses, if necessary. Verify that changes are properly implemented into operation, in accordance with configuration management or operations standards. Make sure that the changes are fully documented.

CGI will perform these services in a timely manner consistent with the urgency of the situation. Corrective action will follow the following general guidelines for software defects:

Severity 1—A critical problem has been encountered such that the solution is inoperable. CGI will respond immediately to diagnose the problem. CGI and DEQ personnel will work diligently and continuously to correct the problem as quickly as possible.

Severity 2—A problem has been encountered that does not prevent use of the Product, but the system is not operating correctly. CGI will diagnose the problem and advise DEQ of a work-around as quickly as possible.

Severity 3—A minor problem has been encountered. The solution is usable but could be improved by correction of a minor defect, or usability enhancement. CGI and DEQ will review and agree that the problem is a minor defect or an enhancement. If the problem is determined to be a defect, CGI will assess the problem and, depending on priorities will schedule a fix for the next release of the software. If the problem is determined to be an enhancement, CGI will advise DEQ that the minor defect will not be corrected, or offer this change to DEQ as a chargeable customization if DEQ determines it is desirable.

5. Project Approach

The ECM project consists of a five phase approach to implement the ECM solution for the Air, Petroleum Tanks, Water, Hazardous Waste, and Solid Waste areas of DEQ within the Central Office and Regional and Satellite Offices. If the Phase 4 DEQ selected options phase is selected, additional functionality will be provided with the system. CGI's implementation process for the DEQ ECM project integrates event-driven activities and tasks that support a system that meets or exceeds DEQ's requirements and agreed schedule. Project Management and Quality checkpoints are scheduled within the project at all management levels to facilitate regular, periodic communication of project status and to validate and obtain DEQ "sign-off" on the deliverables associated with the project.

The CGI project approach employs the use of the software development life cycle methodology to verify the proper tasks, activities, and deliverables are executed and utilized. The following provides further detail on this methodology.

eee) Software Development Life Cycle Methodology

Each phase of the DEQ ECM project includes a set of activities associated with the deliverables for that phase. These activities are accompanied by associated quality control measurements, tools and reporting to support delivery of each phase. Both weekly and monthly status reporting is performed at the project team and management levels to communicate accurate status and to help the project maintain schedule, within scope and within budget. Any issues which place the project at risk are communicated to management with recommended actions to mitigate those risks. The Project Management Plan encourages involvement from DEQ staff from start to finish of each phase of the project and requires formal review and signoff of key deliverables and documents.

(1) Requirements Definition and Detailed Design

CGI has defined a solution that satisfies the specifications as presented in the RFP. A Requirements Definition phase is required to drill down each requirement through the use of meetings and facilitated sessions with CGI team members and DEQ team and business area staff. A final consolidated list of detailed requirements will be generated and signoff required by DEQ. Once requirements are established, a Functional and Technical Detailed Design Document will be produced to document the overall design of the solution for each phase of the project. The Detailed Design will be at the level that allows a full functional and technical understanding of the solution and facilitates completion of the subsequent stages of the life cycle. Validation and signoff of the Detailed Design by the appropriate DEQ staff will be one of the initial steps in the systems development life cycle for this project.

fff) System Development

CGI will install, configure, and customize as necessary the hardware and software required for each phase. This will primarily involve the installation and configuration of the COTS software, including FileNet P8 Content Manager, Business Process Manager, Records Manager, Spicer FREEDOM, Email Manager, and ASE OutputArchiver COLD solution. Based on the functionality and scope of each phase, the CGI technical team will execute the necessary configuration, customization, integration, and conversion tasks necessary to build a functioning solution based on the requirements and design for that phase.

ggg) Testing

CGI adheres to ISO 9001 standards which require that developed applications are thoroughly and comprehensively tested. Part of our Quality Planning and Assurance processes include extensive testing at three levels:

- System or Unit Testing at the component level
- Integration Testing
- User Acceptance Testing

Each of these levels entails the development of associated testing plans and scripts that are included in an overall System Test Plan. Successful execution of each set of scripts is a requirement to proceeding to the next level. Additionally a detailed log is maintained that documents the results of this testing at each level.

(1) System or Component Testing

This level of testing focuses on individual programs or components within the solution. Testing is defined to exercise all functions of the component and the component is allowed to migrate to the next level only when all functions have been successfully executed and the results documented and verified.

(2) Integration Testing

This level of testing focuses on "end to end" testing of the application. Associated with this testing are integration test scripts and a testing plan that is executed and documented with associated results. The plan is repeated until acceptable results are achieved validating that all components work together and that the integration to legacy applications such as CEDS functions correctly. The major products from this level of the testing will be the documented test results and a fully tested application that is ready for DEQ user acceptance testing.

(3) User Acceptance Testing

User Acceptance testing will focus on final acceptance of the application by DEQ. An Acceptance Test Plan with associated scripts will be developed by CGI and DEQ staff. DEQ staff will execute the Acceptance Test Plan with assistance from CGI as required. Any Defects will be noted and corrected. The test will be repeated and assuming acceptance criteria are met will be "signed off" for production implementation.

hhh) Training and Documentation

CGI will develop and conduct Train-the-Trainer end-user training, administrator training, and security training for the ECM project. This will include not only the development of appropriate training material and reference guides but also development of a training plan and associated communication. Finally, CGI will conduct the corresponding training sessions to selected end-user trainers, system administrators, and security personnel.

iii) Implementation

CGI, in conjunction with designated DEQ staff, will develop a plan which will provide the steps, process and communication that will occur to promote the ECM solution to a production pilot ready state. This plan will communicate this transition in a timely manner to affected users and will serve to reduce impact to the user community when the promotion occurs. As part of the deployment, a plan will also be developed and executed to allow a smooth transition from the project team to the DEQ staff supporting the system. Appropriate documentation and assistance in the assumption of responsibility for this maintenance will be important components of system deployment. A signoff by appropriate DEQ staff will be required prior to complete turnover of support.

jjj) Support and Maintenance

CGI will help support and maintain the ECM solution for an agreed upon timeframe following each phase. As DEQ faces technical challenges, CGI resources can deliver DEQ's needed services. CGI's priority is to provide timely response to and resolution of technical problems. This will help DEQ save time, reduce risk, stay current with software versions and releases, improve bottom-line productivity, and increase DEQ's return on the FileNet P8 investment.

6. Project Schedule

Our work plan includes major phases, stages, activities, dependencies, sequencing of work, timelines and resource allocation. The Gantt chart timeline represented in Exhibit **Error! No text of specified style in document.-78** represents our estimated start and end dates for the four major phases (Phase 1, 2, 3, and 5) defined in the RFP. Please note that because Phase 4 is optional and not to be included in the pricing for the overall project, it was excluded from the project plan with Phase 5 starting at the completion of Phase 3. This plan assumes an overall start date of 01/07/2008. The following sections describe each major phase and the associated deliverables. It

includes a summary schedule and a description of each deliverable and its associated completion criteria. Please note that some duration values in the project plan graphics to follow are longer than actual due to the incorporation of holidays and anticipated non-working timeframes. Appendix B – Project Plan contains the detailed activities, tasks and associated deliverables for this phase as well as all other phases.

Exhibit Error! No text of specified style in document. -78 DEQ ECM Project – Summary Phase Schedule

ID	Task Name	Start	Finish	Duration	2008				2009				2010				2011	
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	Project Management	01/07/2008	04/18/2011	856d														
2	Phase 1 – Air for 1 Regional Office	01/07/2008	03/13/2009	310d														
3	Phase 2 – Air for Remaining Offices	02/16/2009	06/09/2009	82d														
4	Phase 3 – Petroleum Tanks and Public Access	02/16/2009	03/12/2010	280d														
5	Phase 5 – Water, Hazardous Waste and Solid Waste	02/15/2010	04/18/2011	306d														

The following sections describe the activities, deliverables, and tasks within each major phase.

kkk) Phase 1 – Air for a Single Regional Office

Phase 1 comprises implementation of the ECM solution to the Air area for a single regional office and will focus on establishing the base platform for the ECM solution. Primary activities for Phase 1 will occur concurrently with an Infrastructure analysis phase to design and install the core solution infrastructure within the confines of VITA as requested. The FileNet P8 Content Manager, Business Process Manager, Email Manager, Records Manager and ASE OutputArchiver COLD products will be installed and configured. CGI will develop as part of Phase 1 a mutually acceptable Detailed Design document which will describe the functional and technical design of the solution.

The ECM solution will include content management capabilities that will allow for flexible security, scanning and file import, document search capabilities, and web-based retrieval. Document management capabilities will be included with the ECM system to include custom queries, search capabilities, notes, rendition and versioning, full text search capabilities etc. Workflow functionality will allow for automated execution and management of select processes within the Air area. Email Management will provide for the capture and storage of selected email types for staff assigned to this business area. Records Management functionality will provide for retention and disposition of records based on established file plans. The existing Kofax Ascent Capture module will include integration with CEDS for a streamlined index process and a reindexing process will verify index data changes are kept in sync between CEDS and the ECM solution. ERM functionality will be provided through COLD capture of data feeds associated with the Air area. To allow for employee access, a portlet will be established through a DEQ portal to allow for web-based access to the solution.

Additionally, data and documents from the legacy Keyfile imaging solution associated with the Air area will be migrated to the DEQ ECM system. A data migration plan outlines the steps necessary to successfully complete this migration. Execution of the plan will be done in conjunction with a validation of successful migration by the user.

The activities to deliver the functionality above will involve creation of the requirements definition; functional/technical detailed design; system installation, configuration, and customization; system, integration, and user acceptance testing; training; documentation; implementation to a single regional office, and post-implementation support.

(1) Phase 1 Schedule

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Phase 1 – Air for a Single Regional Office

ID	Task Name	Start	Finish	Duration	2008				2009
					Q1	Q2	Q3	Q4	Q1
1	Project Management	01/07/2008	03/13/2009	310d					
2	Phase 1 – Air for 1 Regional Office	01/07/2008	03/13/2009	310d					
3	Stage 1 – Project Initiation	01/07/2008	01/11/2008	5d					
4	Stage 2 – Requirements Analysis	01/14/2008	03/07/2008	40d					
5	Stage 3 – Detailed Design	03/10/2008	06/02/2008	61d					
6	Stage 4 – Infrastructure Analysis	01/14/2008	02/22/2008	30d					
7	Stage 5 – Environment Set-up	02/25/2008	06/16/2008	81d					
8	Stage 6 – Development	06/03/2008	08/26/2008	61d					
9	Stage 7 – Testing	06/03/2008	12/05/2008	134d					
10	Stage 8 – Training	11/06/2008	02/03/2009	64d					
11	Stage 9 – Implementation	12/08/2008	02/13/2009	50d					
12	Stage 10 – Support	02/16/2009	03/13/2009	20d					
13	Phase 1 Complete	03/13/2009	03/13/2009	1d					

III) Phase 2 – Air for Remaining Offices

Phase 2 comprises a sequenced deployment of Phase 1 functionality for the Air area to the remaining offices. This includes the Central Office, six (6) other Regional Offices, two (2) Satellite Offices, and Voluntary Remediation.

The key activities to deliver the functionality to these locations includes the execution of the Phase 2 deployment plan that provides the timing, sequence, and steps necessary to roll out the solution to each office; support of DEQ trainers as they prepare related office staff for the coming implementation; and appropriate support of DEQ system administrators and end-user staff as the solution is deployed.

(1) Phase 2 Schedule

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Offices

Phase 2 – Air for Remaining

ID	Task Name	Start	Finish	Duration	2009	
					Q1	Q2
1	Project Management	02/16/2009	06/09/2009	82d		
2	Phase 2 – Air for Remaining Offices	02/16/2009	06/09/2009	82d		
3	Stage 1 – Deployment #1 - 5 Offices	02/17/2009	03/30/2009	30d		
4	Stage 2 – Deployment #2 - 5 Offices	03/31/2009	05/11/2009	30d		
5	Stage 3 – Support	05/12/2009	06/09/2009	21d		
6	Phase 2 Complete	06/09/2009	06/09/2009	1d		

mmm) Phase 3 – Petroleum Tanks for All Offices and Public Access

Phase 3 comprises implementation of the appropriate Phase 1 ECM solution functionality to the Petroleum Tanks area for all offices as well as providing public access to the system. CGI will develop as part of Phase 3 a mutually acceptable Detailed Design document which will describe the functional and technical design of the solution.

The Phase 3 ECM solution will include nearly the same functionality described above for Phase 1. This includes content/document management capabilities, workflow functionality for automated execution and management of select processes within the Petroleum Tanks area, email management for the capture and storage of selected email types for staff assigned to this business area, records management functionality for retention and disposition of records based on established file plans, Kofax Ascent Capture module integration with CEDS for a streamlined index process and a reindexing process to verify index data changes are kept in sync between CEDS and the ECM solution. In addition, to allow for public access, a portlet will be established through a DEQ portal to allow for external, web-based access to the solution with appropriate security in place.

Last, data and documents from the legacy Keyfile imaging solution associated with the Petroleum Tanks area will be migrated to the DEQ ECM system. A data migration plan outlines the steps necessary to successfully complete this migration. Execution of the plan will be done in conjunction with a validation of successful migration by the user.

The activities to deliver the functionality above will involve creation of the requirements definition; functional/technical detailed design; system installation, configuration, and customization; system, integration, and user acceptance testing; training; documentation; implementation to all offices, and post-implementation support.

(1) Phase 3 Schedule

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Phase 3 – Petroleum Tanks for All Offices and Public Access

ID	Task Name	Start	Finish	Duration	2009				2010
					Q1	Q2	Q3	Q4	Q1
1	Project Management	02/16/2009	03/12/2010	280d					
2	Phase 3 – Petroleum Tanks and Public Access	02/16/2009	03/12/2010	280d					
3	Stage 1 – Project Initiation	02/16/2009	02/20/2009	5d					
4	Stage 2 – Requirements Analysis	02/23/2009	04/03/2009	30d					
5	Stage 3 – Detailed Design	04/06/2009	06/15/2009	51d					
6	Stage 4 – Development	06/16/2009	08/25/2009	51d					
7	Stage 5 – Testing	06/16/2009	12/04/2009	124d					
8	Stage 6 – Training	11/05/2009	02/02/2010	64d					
9	Stage 7 – Implementation	12/07/2009	02/12/2010	50d					
10	Stage 8 – Support	02/15/2010	03/12/2010	20d					
11	Phase 3 Complete	03/12/2010	03/12/2010	1d					

nnn) Phase 5 – Water, Hazardous Waste, and Solid Waste for All Offices

Phase 5 comprises implementation of the appropriate Phase 1 ECM solution functionality to the Water, Hazardous Waste, and Solid Waste areas for all offices. CGI will develop as part of Phase 5 a mutually acceptable Detailed Design document which will describe the functional and technical design of the solution.

The Phase 5 ECM solution will include nearly the same functionality described above for Phase 1. This includes content/document management capabilities, workflow functionality for automated execution and management of select processes within the Water, Hazardous Waste, and Solid Waste areas, email management for the capture and storage of selected email types for staff assigned to these business areas, records management functionality for retention and disposition of records based on established file plans, Kofax Ascent Capture module integration with CEDS for a streamlined index process and a reindexing process to verify index data changes are kept in sync between CEDS and the ECM solution.

The activities to deliver the functionality above will involve creation of the requirements definition; functional/technical detailed design; system installation, configuration, and customization; system, integration, and user acceptance testing; training; documentation; implementation to all offices, and post-implementation support.

(1) Phase 5 Schedule

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Phase 5 – Water, Hazardous Waste, and Solid Waste for All Offices

ID	Task Name	Start	Finish	Duration	2010				2011	
					Q1	Q2	Q3	Q4	Q1	Q2
1	Project Management	02/15/2010	04/18/2011	306d						
2	Phase 5 – Water, Hazardous Waste and Solid Waste	02/15/2010	04/18/2011	306d						
3	Stage 1 – Project Initiation	02/15/2010	02/19/2010	5d						
4	Stage 2 – Requirements Analysis	02/22/2010	04/16/2010	40d						
5	Stage 3 – Detailed Design	04/19/2010	06/28/2010	51d						
6	Stage 4 – Development	06/29/2010	09/08/2010	52d						
7	Stage 5 – Testing	06/29/2010	12/17/2010	124d						
8	Stage 6 – Training	11/22/2010	01/12/2011	38d						
9	Stage 7 – Implementation	11/22/2010	01/24/2011	46d						
10	Stage 8 – Support	01/25/2011	04/18/2011	60d						
11	Phase 5 Complete	04/18/2011	04/18/2011	1d						

ooo) Major Phase Activities and Deliverables

Within each primary phase there are a series of activities and deliverables to help assure the solution delivered meets expectations. These activities and deliverables are grouped into integrated Stages that provide a controlled process for system development and involve DEQ to review and approve the deliverables associated with each Stage. The tables that follow outline the expected activities, deliverables and roles for each Stage within the project.

(1) Stage 1 – Project Initiation

During this stage, the Phase 1 project kick-off occurs to provide participants and affected parties an understanding of the goals and objectives of the project, scope, tentative schedule, roles and responsibilities, etc. In addition, the project plan is refined with DEQ input and various project management plans are created to document how the project will be controlled and administered.

Project Initiation	
Objectives	To provide kick-off meeting for the joint CGI and DEQ team prior to beginning project tasks To establish the project management framework for the project To validate and refine the project plan
Deliverables	Documentation of current procedures and processes Updated project plan Establish communication processes Establish project guidelines and standards Project Management Reports
Activities and Responsibilities	
DEQ	CGI
Provide CGI team with required system and facilities access	Plan and hold project kick-off meeting
Participate in project kick-off meeting	Refine the project plan
Work with CGI Project Manager to define the project management framework	Define the project management framework, taking into consideration any specific inputs from DEQ
Sign-off on deliverables	

(2) Stage 2 – Requirements Definition and Detailed Design

During this stage, a requirements definition and detailed system design document for all the features will be developed and submitted. With the RFP specifications as a base, CGI will meet with appropriate DEQ staff to define and document all solution requirements. Using these requirements, a detailed functional/technical design is developed.

Requirements Definition and Detailed Design

Objectives	<p>To understand and document solution requirements for appropriate business areas</p> <p>Design the ECM solution for the appropriate business areas</p> <p>To capture the specifications of the database and perform the data mapping</p> <p>To analyze and design the conversion routines necessary to migrate data from the legacy Keyfile solution, where appropriate</p> <p>Prepare all the technical logistics for setting up the ECM solution environment</p>
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Deliverables	<p>Functional/Technical Detailed Design Document</p> <p>Conversion Design Document</p> <p>System Database Design Description</p> <p>Establish Configuration Guidelines and Standards</p>
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Activities and Responsibilities

DEQ	CGI
Attend and actively participate in Requirements Definition facilitated sessions	Capture understanding of business logic in the processes involved and document all requirements
Participate and provide input into the Detailed Design process	Design all components of the ECM solution
Review Design Documents	Prepare for ECM Solution Environment Set-up
Sign-off on deliverables	

(3) Stage 3 – Installation and Configuration

Stage 3 is the installation and configuration of the ECM solution. Each programmer/analyst will thoroughly test his or her configured component at the unit level.

Installation and Configuration

Objectives	Install all hardware and software components of the ECM solution in the development, testing, and production environments Configure and customize the system as per the functional specification, design, and architecture generated from earlier stages Verify configured/customized components are tested on the component level Begin technical knowledge transfer to DEQ staff
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Deliverables	Completion of ECM solution installation Completion of ECM solution configuration and customization Unit tested software modules System maintenance document
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Activities and Responsibilities

DEQ	CGI
Participate in the solution installation process	Install all hardware and software in the development, testing, and production environments
Participate in the solution configuration and customization process	Configure/customize, test, and bug-fix at the unit level
Sign-off on deliverables	Handle all day-to-day problems

(4) Stage 4 – Testing

During this stage, a system and integration test cycle is completed by CGI followed by a user acceptance testing plan executed by DEQ.

Testing	
Objectives	Develop test scripts, plan, and data Perform thorough testing of the final code base Resolve issues found during testing Prepare technical logistics for final set up of the production environment Continue functional knowledge transfer to DEQ staff
Deliverables	Developer and programmer documentation and notes on all programming, configuration, and testing System and Integration Test Document Completed Testing Checklists Test Reports and Testing Results
Activities and Responsibilities	
DEQ	CGI
Review System/Integration Test plan	Plan for and execute System Testing of all components
Review System/Integration Test scripts	Plan for and execute Integration Testing of all integrated components
Participate in System/Integration Test execution	Capture and address all defects found during the testing process
Execute User Acceptance Test	Bug fix and enhance any component as necessary
Participate in bug fix process	Prepare for final production environment set-up
Sign-off on deliverables	

(5) Stage 5 – Training

During this stage, final knowledge transfer will occur for DEQ staff, Train-the-Trainer training will occur for end-user trainers who in turn will train affected end-users, system administration training will be conducted, and security staff training will occur.

Training	
Objectives	User knowledge transfer Prepare Users for production ECM access and work Prepare DEQ IT for production support
Deliverables	Training plan Training materials End-user manuals for the ECM solution System Administration manuals for the ECM solution Train-the-Trainer Training for End-User and Training for System Administrators and Security Staff
Activities and Responsibilities	
DEQ	CGI
Coordinate business users for training	Provide Train-the-Trainer training to DEQ End-User Trainers
Provide trainers for Train-the-Trainer end-user training and delivery	Provide training for System Administration and Security staff
Coordinate IT and security staff for training	Provide required documentation for training and utilizing the system
Sign-off on deliverables	

(6) Stage 6 – Implementation

During this stage the production system is prepared for use and any related data and images from the legacy Keyfile imaging system are converted for incorporation into the new DEQ ECM solution.

Implementation	
Objectives	Plan for DEQ ECM solution deployment Prepare the production environment for Go-Live Prepare users for production implementation Convert required data/images from Keyfile
Deliverables	DEQ ECM implementation plan Production ready software Transition Management and Promotion Plan
Activities and Responsibilities	
DEQ	CGI
Assist with production implementation planning	Plan the production implementation
Test ECM production environment	Configure ECM Production Environment
Accept ECM production solution	Convert Keyfile data/images
Sign-off on deliverables	

(7) Stage 7 – Support and Maintenance

During this stage CGI will provide support and maintenance for the DEQ ECM solution. This will include addressing any incidents that may occur after production implementation as well as installation of any agreed upon system enhancements to the installed components. Each phase of the ECM solution will be transitioned to the Production Support team using a controlled process which will provide the training and documentation necessary for support staff to assume responsibility. This will include DEQ support as well as the CGI support team. Technical documentation including system architecture, database schemas, interface components and backup/recovery procedures will be delivered in conjunction with this turnover.

Support and Maintenance	
Objectives	Maintain DEQ ECM software Coordinate and prioritize system enhancements Install service packs and patches as necessary
Deliverables	System Maintenance Document Complete set of Hardware and Software support manuals Monthly Maintenance and Support Reports
Activities and Responsibilities	
DEQ	CGI
Report Issues	Facilitate Help Desk Issues
Report Enhancement Requests	Coordinate Changes or Upgrades

7. Change Management

Change is an inevitable part of every project. Effective change management is often the major difference between a successful and unsuccessful project. CGI has developed a change management approach that is an integral component of our Project Management Framework. Our change management approach is based on industry accepted best practices including the ISO 9001 and SEI/CMM process standards. This section provides a description of our change management process as it is applicable to the DEQ ECM project.

ppp) ECM Change Management Framework

Our endeavor at CGI is to “Do it Right the First Time” and minimize the need for change management. The following steps, which are part of our methodologies, help us mitigate unnecessary change management on our projects.

- Total Stakeholder and User Involvement
- Diligent Requirements and Design phases
- Unambiguous Deliverables
- Iterative Reviews
- Effective Communication

qqq) Total Stakeholder and User Involvement

Many projects encounter unforeseen changes, which result from lack of adequate user and stakeholder involvement. The CGI process recognizes the importance of user and stakeholder involvement. At the start of the project, CGI will create a list of project users and stakeholders along with their roles and responsibilities. For tasks on the project schedule, CGI will list the DEQ personnel that will be involved and their specific role for that task. Using this approach, CGI will verify that tasks have the required participation and inputs from DEQ.

rrr) Diligent Requirements and Design phases

Most changes discovered in the later phases of a project can be directly attributed to lack of oversight, diligence and missed steps in the previous phases. The approach to software development mandates highly diligent and involved Requirements and Design phases in projects. CGI strongly believes that focused and detail-oriented requirements and design phases lead to a development and test phase that is completed as per plan and with minimal changes. CGI will work with DEQ to implement a project plan for ECM that provides for adequate time and effort to complete the business process analysis for the business areas defined in each phase such that changes are minimized during the subsequent implementation stage.

sss) Unambiguous Deliverables

Deliverables with ambiguous content that are “open to interpretation” often cause change management issues that are costly and hard to manage. The CGI methodology creates deliverables that are clear, detailed and substantiated with specific content that is relevant to the project. For the DEQ ECM project, CGI will create deliverables that are detailed and substantiated with DEQ data and information wherever applicable. For example, screen layouts will be incorporated into the design, and test cases will be populated with DEQ data pertaining to its document storage requirements.

ttt) Iterative Reviews

Reviews are common in projects. However, the timing and volume of reviews determines the quality and outcome of the review. Many times reviews are scheduled at the end of a project phase where users are presented with a high volume of technical deliverables to be reviewed in a short amount of time. Users are often unable to provide constructive feedback and opinion which leads to change management issues in the later phases of a project. For the ECM project, CGI will follow a process of iterative reviews for deliverables with the end goal of efficiently finalizing those deliverables. The advantage of this approach is that users are presented with smaller documents that present a step-by-step progress for deliverables and can be reviewed in shorter timeframes.

uuu) Effective Communication

Regardless of the size of change, communicating the nature, impact and outcome of change is critical to the change management process. CGI has a well-defined process for communicating with clients on issues relating to change. This process has helped provide the necessary visibility, inputs and information to our clients to help manage the impact of necessary change. For the ECM project, CGI will have a seamless and transparent communication process and information repository that provides up-to-date information on any change

management issues that may arise. In order to encourage effective communication, change management roles and responsibilities are recommended:

(1) CGI Communication Responsibilities

- Record the change in the Change Control Log
- Discuss the change with DEQ users and stakeholders
- Prepare the Change Impact Document that describes the impact of the change on the project
- Organize a meeting to present the change and seek DEQ feedback and approval
- Revise project documents to reflect the item of change

(2) DEQ Communication Responsibilities

- Communicate changes to CGI
- Participate in meetings to discuss change items
- Review the Change Impact Document and provide feedback
- Approve the revised project schedule, cost and deliverables if the change is approved
- Provide sign-off to close the change item

vvv) Change Management Process

For Change Management, CGI will follow a structured process for recording and managing changes on the ECM project. For the purposes of this project, CGI classifies change into the following two categories:

(1) Changes to Scope and Requirements

Changes to Scope and Requirements will be managed using the Change Management Process defined for DEQ with the following steps:

- Use the approved detailed design document for the project as the baseline document for assessing and managing change
- Any scope or requirement item that has the potential to alter the scope of the project will be treated as a change management item
- All change items will be recorded in a Change Control Log for action and tracking
- CGI will set up a Change Control Board (CCB) meeting with DEQ stakeholders to discuss the change and its impact on the overall project in terms of schedule, cost, resources and deliverables
- Based on discussions with DEQ staff, a decision will be made regarding the change item
- If the decision is to implement the change item, the project plans, project documents, milestones, resources and cost estimates will be adjusted accordingly to reflect the change item

(2) Organizational Changes

Projects that bring about a change to the client organization need to be managed very carefully. CGI has a comprehensive organizational change management program to deal with organizational change. The program can be summarized as follows:

- CGI will present the potential organizational change to DEQ management along with details on the impact of the change and its benefits
- A comprehensive set of Training programs will be rolled out to the impacted user community to train them on the upcoming change, to prepare them to deal with the change and to educate them on the benefits of the change
- Communication plans to communicate with users on the implementation and progress with the project
- Monitoring and measurements on user adoption and satisfaction with the change

8. Project Accountability

Effective communication and team member accountability is critical to project success. There are a number of tools that will be used to communicate task and role assignments across the project. The project schedule will identify resources and their particular activity responsibilities in addition to how they relate to the overall project schedule calendar. In addition, Project Roles and Responsibilities and Project Tasks and Owners matrices will be maintained.

www) Project Role and Responsibilities

A roles and responsibilities matrix will be maintained throughout the project. This matrix will define the resource, organization, and their role on the project. This tool will help team members understand the role everyone plays on the project and can also be used to manage assimilation and transition management when new resources join the team. Exhibit **Error! No text of specified style in document.-83** provides a roles and responsibilities matrix for the primary personnel involved in the project. Please note that DEQ involvement listed below are suggested roles for DEQ. CGI will work with DEQ at project initiation to identify needed DEQ roles for the ECM project.

Exhibit Error! No text of specified style in document.-83 Project Roles and Responsibilities

Resource	Prime Contractor/DEQ	Full or Part Time	Role and Responsibilities
Executive Steering Committee	DEQ	Part Time	Maintain overall view of the project, its goals, and desired outcomes. Provide insight and leadership on matters elevated due to issues with project scope, costs, or risk.
DEQ Project Manager	DEQ	Full Time	The DEQ Project Manager is responsible for providing status to the Executive Committee as well as oversight to the CGI project team and DEQ Team Leader, if applicable. The project manager will also execute strategic decisions by senior management, resolve certain contractual issues, and handle DEQ resourcing requests.
CGI Project Manager	CGI	Full Time	The CGI Project Manager is responsible for the day-to-day management of the project team and will be the primary point of contact for the DEQ Project Manager. As such, the project manager is responsible for keeping DEQ informed about project progress, progress against budget, and any issues or concerns. The project manager will also work with the team to develop the project work plan, structure the analysis for the project, and direct development and execution of the project. The project manager will be responsible for developing and maintaining the Master Integrated Schedule and the Project Management Reports.

Resource	Prime Contractor/DEQ	Full or Part Time	Role and Responsibilities
CGI Technical Lead	CGI	Full Time	The CGI Technical Lead is responsible for overseeing the technical delivery of the ECM project, working closely with the DEQ Project Manager and CGI Project Manager. The technical lead is responsible for all technical aspects of the project, including requirements and business process design, installation and configuration/customization, testing support, training, documentation, and production implementation and support. The technical lead will also act as a systems and technology expert, particularly with the FileNet P8 and Kofax Ascent Capture platforms, providing guidance and leadership across the project life cycle in key areas of technology.
Lead Business Analyst	DEQ	Part to Full Time	The DEQ Lead Business Analyst will provide overall functional leadership, with particular focus on business process design, issue resolution, testing, documentation, training, implementation, and coordination with the end-user community. The lead business analyst will work closely with the DEQ Project Manager and CGI Project Manager in various aspects of project execution.
CGI Functional Lead	CGI	Full Time	The CGI Functional Lead is responsible for overseeing the functional delivery of the ECM project, working closely with the DEQ Project Manager and CGI Project Manager. The functional lead is responsible for all functional aspects of the project, including requirements and business process design, testing, training, documentation, and production implementation and support.
Business Analyst	DEQ	Part to Full Time	The DEQ Business Analysts will focus primarily on requirements definition, business process design, issue resolution, testing, documentation, training, implementation, and coordination with the end-user community. The business analysts will work closely with the CGI Business Analysts in various aspects of functional project execution.
Business Analyst	CGI	Full Time	The CGI Business Analysts will be involved in the requirements definition, business process design, issue resolution, system testing, documentation, training material creation and class delivery, implementation, and support activities. The business analysts will be responsible for completing functional components to the project.

Resource	Prime Contractor/DEQ	Full or Part Time	Role and Responsibilities
Environmental SME	CGI	Full Time	The CGI Environmental SME will provide environmental-specific insight and knowledge as it relates to designing and implementing the solution. The environmental SME will be involved in the requirements definition and business process design while supporting other key stages of the project, as necessary.
Programmer/Analyst	DEQ	Part to Full Time	The DEQ Programmer/Analysts will be primarily involved with technical aspects to the implementation, including installation and configuration/customization of the proposed solution, issue resolution, IT staff training, and general systems administration. Once the solution is in production and the appropriate transition has been made to DEQ, the Programmer/Analysts will be the primary point of contact for any technical issue.
Programmer/Analyst	CGI	Full Time	The CGI Programmer/Analysts will be primarily involved with technical aspects to the implementation, including requirements definition and business process design, installation and configuration/customization of the proposed solution, issue resolution, test support, knowledge transfer to IT staff, documentation, IT staff training, implementation and support, and general systems administration and operational maintenance. The programmer/analysts will be experienced in the use and configuration of the FileNet P8 platform, and will maintain and administer the version and change control systems.
Quality Controller	CGI	Part Time	The CGI Quality Controller will be responsible for providing quality assurance from an overall project perspective. The Quality Controller will work with the Project Manager, DEQ, and other project team resources to put measures, processes, and procedures in place to help provide quality in delivery execution throughout the project.
Database Administrator	DEQ	Part Time	The DEQ Database Administrator will be involved with database-specific pieces to the implementation, including installation and configuration of the proposed solution as it relates to database administration, issue resolution, knowledge transfer to IT staff, documentation, IT staff training, and general database administration.

xxx) Project Tasks and Owners

The purpose of the Project Tasks and Owners Matrix is to provide an at a glance view of the responsibilities for each group on the project. As part of the communications process, a project task and owner matrix will be maintained. A Task and Owners matrix is seen in the following example. This matrix can be used to hold groups and or individuals accountable for tasks and also identifies groups with secondary support responsibility. As noted above, the DEQ involvement listed below are suggested roles and responsibilities for DEQ. CGI will work with DEQ at project initiation to identify needed DEQ roles and responsibilities for the pilot project.

Exhibit Error! No text of specified style in document. -84 Project Task and Owners

Project Task	Primary Responsibility	Secondary Responsibility
Project Management	CGI Project Manager and Technical Lead	DEQ Project Manager guides the CGI Project Manager and Technical Lead and provides oversight
Requirements Definition and Business Process Design	CGI Team	CGI Project Manager, CGI Technical Lead, and CGI Functional Lead guide teams, key DEQ staff provide requirements input and current process flows, participates in JAD sessions, and reviews finalized requirements and design documents
Ordering Hardware (if needed)	DEQ/VITA Team	CGI provides input and specifications. DEQ/VITA procures and provides initial base installation and support
Installing, Configuring, and Customizing FileNet, Kofax, and Other Software	CGI Team, FileNet Team	DEQ provides oversight and participates to extent possible for knowledge transfer purposes
System and Integration Testing	CGI Team	CGI Project Manager and CGI Functional Lead guide teams, DEQ participates in testing process and corresponding knowledge transfer
User Acceptance Testing	DEQ Team	DEQ Project Manager and Lead Business Analyst guide teams, CGI team support DEQ testers
Training	CGI Team	DEQ end-user trainers, system administrator, and security staff receive training, DEQ end-user trainers train DEQ end-user staff
Documentation	CGI Team	DEQ reviews and provides comments
Implementation Readiness and Planning for ECM	CGI Team	DEQ participates and provides oversight of the CGI team
Maintenance and Support	CGI Team	DEQ reports issues, requests and receives support during initial production period, takes ownership after transition from CGI team
Weekly Status Reports	CGI Project Manager	DEQ attends meetings, reviews status reports, and provides guidance
Configuration Management Plan	CGI Team	With support from DEQ
Communication Management Plan	CGI Team	With support from DEQ
Risk and Issue Management	CGI Team	With support from DEQ
Change Management Issues	Executive Committee	DEQ and CGI Project Managers

Project Task	Primary Responsibility	Secondary Responsibility
Quality Management	CGI Project Manager and Quality Controller	DEQ Project Manager provides guidance to the CGI Project Manager and Quality Controller
Client Relationship Management	CGI Project Manager	DEQ Executives

yyy) Program Review

This section describes the Project Review and Communications process as applicable to the DEQ ECM project. CGI will work with DEQ to develop a communication plan identifying a specific strategy to promote communication among team members, detailing specific mechanisms for communicating responsibilities and involvement. After stakeholders and their relationships among each other and to the project components/processes are analyzed, CGI will work with DEQ to determine their communication and information needs. CGI managers will then facilitate appropriate status meetings, work with the DEQ Project Manager as appropriate regarding communication to the Executive Committee, facilitate work product reviews, technical working sessions, and stakeholder dependencies. CGI will consolidate programmatic plans, progress, issues, and risks from all responsible groups to present to the appropriate DEQ management committees.

The following meetings are part of the CGI project communications plan for the DEQ ECM project.

Requirements/Business Process Design Meetings—The purpose of these meetings is to discuss project requirements, current process flows, and the desired design of the ECM solution. These meetings will be the primary source of information gathering during the requirements definition and detailed design phase of the ECM project. Based on the business areas identified for each phase of the project, CGI will break down the business process design phase into logical modules that can be divided among project teams comprising CGI and DEQ personnel. Each team will then set up a series of meetings to discuss system requirements, current process flows, and the desired future design of the solution.

Organization of the Meeting—The meetings will be planned in advance and electronic meeting notices will be sent to all attendees. DEQ attendees will be determined based on their roles, responsibilities and functions within DEQ. The CGI lead analyst responsible for the meeting will send out a meeting agenda to all attendees that lists the meeting objectives, discussion threads and issues.

After the meeting, the following item(s) will be distributed to the attendees.

- Meeting Minutes
- Updated Work Products and Deliverables
- Action Items
- Updated Change Control Log
- Updated Risk Management Plan
- Updated Project Plan

Status Meetings—Project Status meetings will be held on a weekly basis. These meetings will be attended by the CGI Project Manager, DEQ Project Manager, and DEQ business users. The purpose of the status meeting is to provide an update on project status, discuss project issues and identify action items to resolve project issues.

Organization of the Meeting—A specific day and time will be established for the Project Status meeting every week. Prior to the meeting, the CGI Project Manager will send out the Weekly Project Status Report to all attendees. After the meeting, the project manager will send out the following documentation to all attendees.

- Minutes of the meeting
- Action Items for the subsequent week assigned to specific project personnel
- Any updated work products that need to be sent out

Executive Steering Committee Meetings—At the discretion of DEQ, CGI senior managers will attend DEQ’s Executive Committee Meetings to assist the committee with the following:

- Provide guidance and direction to the project team

Resolve project and contractual issues that need management attention

Review project activities on an on-going basis to provide oversight and governance

Approve Change Management Items

Organization of the Meeting—The Executive Committee will meet as scheduled by DEQ. At the option of DEQ, the CGI Project Manager may present the project status, achievements and project issues to the committee as directed by the DEQ Project Manager. The committee will review the project and discuss issues that need resolution. After the meeting, the CGI Project Manager will send out meeting minutes to all attendees at the discretion of the DEQ Project Manager.

9. Staffing

The following chapter presents our staffing plan for the DEQ ECM project. We have described our organization structure for this project, our key staff members as well as their roles and responsibilities. This chapter is made up of the following sections.

- Staffing Approach
- DEQ ECM Project Team Chart
- Summary of Staff Roles
- Staff Transition Approach
- Team Staffing Requirements
- Key Personnel
- Key personnel Resumes
- Sample Resumes

zzz) Staffing Approach

The DEQ ECM project in the long term will significantly transform the way DEQ deals with paper documents and submission of information. The successful implementation of this critical solution, with corresponding effective project and risk management, ultimately lies with the most important resources on CGI projects: human resources. The key to our success on projects has been our people. There is no greater source of our corporate success than our ability to attract, retain, and develop our people.

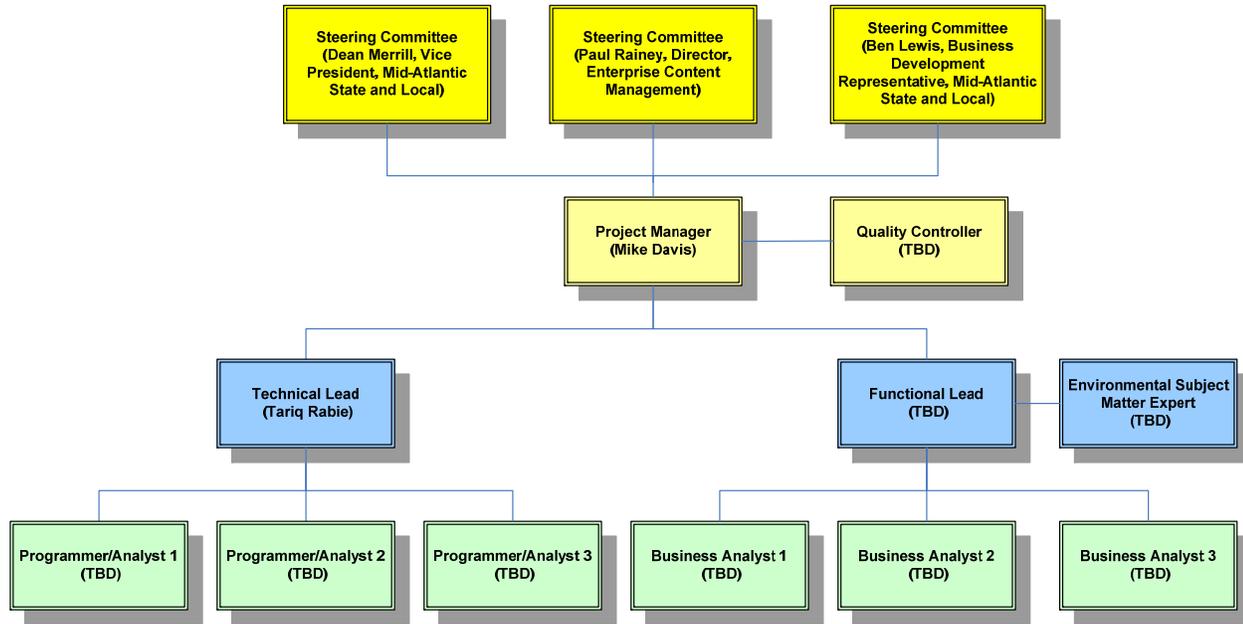
Staffing management is the process of bringing the right people together at the right time and organizing them in the most effective way for completing the project's work. CGI has built a strong team for this project consisting of select professionals from CGI. The members of this team bring an extensive history of highly successful endeavors with FileNet. They seek to collaborate with DEQ to help achieve its objectives for the DEQ ECM initiative. The project team is distinguished along several dimensions:

- **An Experienced Team providing Enterprise Content Management solutions.** The DEQ ECM project will require significant expertise in ECM such as imaging, business process management, records management, content management, business process analysis, and application of knowledge. To achieve a successful implementation of the DEQ ECM Solution, aligning the right resources to do the job is an important success factor.
- **Environmental Expertise.** CGI is an industry leader in state environmental system implementations. CGI has in-depth knowledge of the environmental regulatory business and significant experience implementing solutions for state environmental regulatory agencies.
- **Extensive FileNet Experience.** The DEQ ECM project will require extensive expertise in the Enterprise Content Management platform, FileNet. CGI has 20 years of FileNet experience.
- **Deep Subject Matter Expertise.** Our approach leverages deep Industry knowledge to help the proposed team, by involving key experts at important points in the project.
- **Ability to Meet Aggressive Project Schedules.** Our project team has met challenging and aggressive project schedules on a consistent basis. Through the use of CGI project methodologies and best practices, as well as hands-on knowledge of the FileNet system, our proposed team can increase the likelihood of a successful implementation, within the confines of a tight project timeframe.

aaaa) DEQ ECM Project Team Chart

CGI has proposed a unified team for the DEQ ECM project consisting of members from CGI and DEQ. Integrated project teams are the foundation for building trust and promoting open, timely communication. In this way, team members support each other in day-to-day activities, make decisions quickly, and readily share knowledge. While the DEQ ECM project is unique in many facets, it is also similar in many respects to a number of projects we have successfully delivered in the past. Based upon our experience in delivering FileNet based ECM solutions for two decades and the expertise of our proposed staff, we are very confident that our proposed staffing model and staff mix will be adequate to deliver the DEQ ECM solution on time and within budget.

Exhibit Error! No text of specified style in document. -85 **Core Team Staff Chart**



bbbb) Summary of Staff Roles

(1) Project Manager

The CGI Project Manager is responsible for the day-to-day management of the project team and will be the primary point of contact for the DEQ Project Manager. As such, the manager is responsible for keeping DEQ informed about technical progress, progress against budget, and any issues or concerns. The project manager will also work with the team to develop the project work plan, structure the analysis for the project, and direct development and execution of the project. The project manager will be responsible for developing and maintaining the Work Breakdown Structure (WBS) and the Project Management Reports.

(2) Technical Team Lead/Architect

The CGI Technical Team Lead (TTL) is responsible for overseeing the technical delivery of the DEQ ECM project, working closely with the DEQ Project Manager and CGI Project Manager. The technical lead is responsible for all technical aspects of the project, including requirements definition, business process design, installation and configuration/customization, testing support, training, documentation, and implementation and execution. The technical lead will also act as a systems and technology expert, particularly with the FileNet P8 platform, providing guidance and leadership across the project life cycle in key areas of technology.

(3) Functional Team Lead

The CGI Functional Team Lead is responsible for overseeing the functional delivery of the ECM project, working closely with the DEQ Project Manager and CGI Project Manager. The functional team lead is responsible for all functional aspects of the project, including requirements definition, business process design, testing, training, documentation, and production implementation and support.

(4) Environmental Subject Matter Expert (SME)

The CGI Environmental SME is responsible for contributing government environmental agency operations expertise as it relates to designing and implementing the solution. The environmental SME will be involved in the requirements definition and business process design while supporting other key stages of the project, as necessary.

(5) Programmer/Analyst

The CGI Programmer/Analysts will be primarily involved with technical aspects to the implementation, including installation, configuration, and customization of the proposed DEQ ECM solution, issue resolution, requirements definition, business process design, testing support, knowledge transfer to IT staff, documentation, IT staff training, implementation, and general systems administration and operational maintenance. The programmer/analysts will be experienced in the use and configuration of the FileNet P8 platform, and will maintain and administer the version and change control systems.

(6) Business Analyst

The CGI Business Analysts will be primarily involved with functional aspects to the implementation, including requirements definition, business process design, testing, training, documentation, implementation, and initial operations support of the system. The business analysts will be responsible for completing functional components to the project.

(7) Quality Controller

The CGI Quality Controller will be responsible for providing quality assurance from an overall project perspective. The Quality Controller will work with the Project Manager, DEQ, and other project team resources to put measures, processes, and procedures in place to help provide quality in delivery execution throughout the project.

cccc) Staff Transition Approach

It is the responsibility of the CGI Project Manager to anticipate what the resource needs of the project will be, arrange for the procurement of the proper tools and access to knowledge, deploy and adjust staffing plans as dictated by the demands of the project so that we have the right staff available at the right time. The CGI staffing approach is flexible and adaptable, allowing for team transitions, while giving the Project Manager the control to meet project milestones and cost objectives. These Best Practices include the following:

- Resource Planning;
- Programs for orienting team members to the customer, program, project, and specific teams;
- Project specific training such as: standards, tools, application context, and techniques for analysis, design, testing, and configuration management;
- Performance evaluations;
- Knowledge transfer activities;
- Transition of customer responsibility; and
- Overlap period for training replacements.

With these staff transition strategies and tactics in place, the CGI Team will be able to further reduce the risks and complexities associated with staffing the DEQ ECM project.

dddd) Team Staffing Requirements

The following section contains the proposed staffing allocations for the DEQ ECM project. The Project Manager, Technical Team Lead/Architect, and Functional Team Lead are full-time resources from start to finish of the DEQ ECM project. The three core Programmer/Analysts and three core Business Analysts are nearly full-time as several of these resources will roll on and off the project gradually. Additional, part-time Programmer/Analysts, Business Analyst, and a Technical Team Lead/FileNet Installer will also contribute to Phase 1. The Environmental SME will be used on a part-time basis to provide key agency expertise at the appropriate points in the project. The Quality Controller will be allocated on a part-time basis throughout the project. These proposed resources will primarily execute their project responsibilities on-site at DEQ's Central Office. The below allocations are based upon our understanding of the DEQ ECM project as stated in the RFP and clarified by VITA/DEQ. Allocations will change if the actual project requirements are different from those mentioned in the RFP.

Exhibit Error! No text of specified style in document.-86 Staffing Requirements

Role	Time Requirement
Project Manager	100%
Technical Team Lead/Architect	100%
Functional Team Lead	100%
Programmer/Analysts (core team)	92%
Business Analysts (core team)	95%
Environmental SME	8%
Quality Controller	50%

eeee) Key Personnel

This section lists our Key Personnel for the DEQ ECM Project. These personnel are full time employees of CGI and have been selected to work on the DEQ ECM Project because of their prior experience. Exhibit **Error! No text of specified style in document.-87** lists the names of our key personnel and their resumes are included below:

Exhibit Error! No text of specified style in document.-87 Key Personnel

Role	Name
Project Manager	Michael Davis
Technical Team Lead/Architect	Tariq Rabie

ffff) Key Personnel Resumes

(1) Michael Davis - Resume

Mike Davis is a member of the Enterprise Content Management (ECM) group, focusing on helping clients store, share, and manage content. Mr. Davis has over 10 years of experience specializing in project management, systems implementation, workflow and custom system design and testing, and business process re-design, optimization, and automation for large-scale engagements. Mr. Davis's entire project delivery career has been focused on FileNet-based ECM solution implementations, with his most recent experience managing the Total Automated Capture System (TACS) FileNet ECM solution implementation at the Virginia Department of Taxation. Mr. Davis has extensive experience working with clients across State Tax and Revenue and the Healthcare industry to assist these organizations in transforming their business operations through maximizing the use of information technology. He has managed implementations ranging from 1 application impacting 75 end users to managing the Go-Live of a complex implementation that integrates more than 30 different systems impacting over 3,500 hundred users. He has managed various team sizes that included CGI and client staff. In addition, Mr. Davis has performed a variety of cross project management activities including tracking and reporting progress to client leadership, senior level issue resolution, and project risk management.

(a)

(b) *Skills Summary*

Technical Specialization

- Large Scale Implementations
- Project Management
- Process Analysis & Definition
- Requirements Analysis & Definition

(c)

(d) *Certifications*

- Passed the Certified Public Accounting Exam in Virginia, 1996
- FileNet Certified Professional (FCP) - P8 Administrator 2A Certified in Content Manager, Business Process Manager, Forms Manager, Records Manager, and Email Manager

Chronology of Experience

CGI

January 1997 to Present

CGI Internal

Position: Proposal Delivery Manager, Enterprise Content Management **March 2006 – Present**

As part of CGI's Enterprise Content Management (ECM) group, Mr. Davis manages the proposal development and delivery team. Mr. Davis has managed teams completing numerous Request for Proposal (RFP) responses for ECM solutions totaling more than \$40 million in potential new business, Request for Information (RFI) responses, and contributed to numerous other proposals and related business development activities. In addition, Mr. Davis is frequently responsible for all project management, deal sizing/pricing, and project scope components to CGI ECM proposal responses.

Client: Virginia Department of Taxation, Partnership Project

Position: Project Manager/Team Lead

May 2000 – February 2006

Mr. Davis served in several key management roles for the Integrated Revenue Management System (IRMS) release. Launched in 1998 with CGI, the VA TAX Partnership Project was formed for the creation of IRMS, encompassing 30 different systems and over 750 internal end users and 3,000 external users. Specifically, the project called for replacement of the Department's legacy tax computer system with CGI's Advantage Revenue solution, a state-of-the-art integrated revenue management system, development of a customer relationship management system, deployment of Internet applications, including online tax filing and payment, implementation of CGI's Computer Assisted Collections System for Government (CACSG), development of the Total Automated Capture System (TACS) Imaging system and Remittance processing system, and the supporting organizational

change management and business process transformation needed to successfully implement and transition to these new systems and processes.

Mr. Davis managed the Go-Live of the new integrated system. This involved overseeing all Go-Live initiatives to ensure successful implementation, working with senior VA TAX managers on initiative execution and issue resolution, and providing status to VA TAX and CGI executives. He also had primary management and execution focus for the tax return and payment processing ramp-up initiative. Prior to Go-Live, Mr. Davis was engaged in two critical readiness efforts. First, Mr. Davis managed the planning and execution of the Mock Production test effort. Mock Production tested the business processes and procedures surrounding operational area use of IRMS. Second, Mr. Davis managed the planning for the controlled production period following the IRMS implementation. This involved working with application teams, operational areas, and project executives to create the strategic direction, focus, and approach to a controlled Go-Live of IRMS components.

Mr. Davis managed both the Point-to-Point and End-to-End phases of the IRMS integration testing effort. His teams were responsible for testing interface points between the various IRMS subsystems as well as a full end-to-end test of the integrated system. Mr. Davis also served as project manager, functional lead, and test lead across the first seven releases of the TACS FileNet-based imaging system. Mr. Davis managed teams responsible for design creation, development, system and integration testing, issue resolution, training, release implementation, and production support.

Client: Kansas Department of Revenue, Project 2000

Position: Functional Co-Project Manager

June 1999 – May 2000

Serving as functional co-project manager, Mr. Davis was jointly responsible for management of the design, development, system testing, and knowledge transfer efforts for the Corporate and Privilege Tax release of the Channel Management system, a FileNet-based data capture imaging system supporting over 100 end users as part of an overall project effort to replace the Department's major systems. Mr. Davis was primarily focused on management of the system testing effort while fully organizing and executing integration testing with a team of CGI and client staff. During the Controlled Production phase, Mr. Davis addressed relevant functional issues, bug and enhancement resolution, and worked closely with client management to improve Channel operations. For the October 1999 Sales and Compensating Use Tax release of the Channel Management system, Mr. Davis served as functional and part-time test lead and was responsible for the resolution of all functional issues and the overall system and integration testing efforts. Mr. Davis provided a contact and resolution point for functional issues with regards to the Channel system and interface issues with the CGI ASTRA systems. Mr. Davis fully organized and executed integration testing with a team of CGI and client staff.

Client: St. Vincent's Hospital, AccountLink & RecordLink Implementation

Position: Team Leader

December 1998 – May 1999

Serving as team leader, Mr. Davis was responsible for the analysis and design effort for a full AccountLink Capture and Workflow implementation. CGI's AccountLink product provides FileNet image-based workflow management for patient financial services. In addition, Mr. Davis aided in the upgrade of two full versions of the CGI RecordLink system, an imaged-based workflow management system for patient medical records.

Client: Carilion Health Systems, AccountLink Implementation

Position: Team Leader

April 1998 – November 1998

Serving as team leader, Mr. Davis was responsible for the analysis, design, development, testing, and implementation for a full AccountLink Capture and Initial Queue Population workflow system for the Carilion Physician Billing Services group.

While performing overall team leader duties, Mr. Davis focused on full analysis, design, development, testing, and implementation of two interfaces to the AccountLink system. In particular, Mr. Davis was solely responsible for the InterLink COLD interface and the HL7 Standard Parsing Interface implementation for Carilion Physician Billing Services. In addition, Mr. Davis played a key role in the analysis, design, and development of the Initial Queue Population workflow for the AccountLink system. Finally, Mr. Davis provided full on-site support and On-the-Job-Training for Carilion System Administrators during the 60-day post-live period.

Client: AHERF, AccountLink Implementation

Position: Business Analyst

January 1997 – March 1998

Mr. Davis was responsible for the analysis, design, development, testing, and implementation of AccountLink workflow and the InterLink interface to support a three hospital SMS Invision conversion for the Patient Financial

Services group. Mr. Davis designed, developed, tested, and piloted Follow-up and Unpaid Claims workflow for the Patient Financial Services group using AccountLink. Last, Mr. Davis designed and configured the InterLink COLD interface to process both patient and bulk Medicare Electronic Remittance Advices in AccountLink.

Prior Employment Experience

Employer: Auditor of Public Accounts

Position: Staff Auditor

June 1995 – December 1996

Education

B.S., Accounting, University of Richmond, 1995

(2) Tariq A. Rabie - Resume

Mr. Rabie is a member of the Enterprise Content Management (ECM) group, focusing on helping clients store, share, and manage content. He is a team lead, software engineer, and a workflow subject matter expert specializing in Windows, and Java development, web-based development, and the application of object-oriented design. Since 2000, Mr. Rabie has lead delivery teams and developed applications and user interfaces on various platforms. He spent several years working in financial services organizations on problems related to workflow, imaging, and customer satisfaction.

(a)

(b) *Skills Summary*

Software/Tools/Languages Apache Jakarta Struts; eDecisions Crystal Reports; eHelp RoboHelp; FileNet BPM, Capture, CM, Image Manager; IBM Lotus Notes, WebSphere Application Server, WebSphere Studio Application Developer (WSAD); Macromedia DreamWeaver, Fireworks; Merant PVCS Professional; Microsoft FrontPage, Internet Information Server (IIS), Office, Project, SQL Server, Visual InterDev, Visio, Visual J++, Visual Source Safe. Active Server Pages (ASP); CSS; DHTML; HTML; Java 2; JavaScript; Java Server Pages (JSP); Microsoft Visual Basic 6.0, Visual C++; XML/XSL

Operating Systems DOS; Red Hat Linux 7.2; Mac OS 9; Windows XP, 2000, 2000 Server, Me, 98, 95 & 3.1

(c)

(d) *Certifications*

- FileNet P8 Certified: BPM Solution Architect;
- FileNet P8 Certified: CM Solution Architect;
- FileNet P8 Certified: BPM Developer; and
- FileNet P8 Certified: CM Developer.

Chronology of Experience

CGI

September 2003 to Present

CGI Internal Project: Large City P8 Demo

Position: ECM Team Lead

May 2007 – Present

The purpose of this project was to demonstrate a complete ECM suite in response to a large city's RFP. This fully functional prototype consisted of multiple components, including FileNet Business Process Manager (workflow), FileNet Content Manager (document & image storage), FileNet Web Site Manager, FileNet eForms (electronic forms), FileNet Records Manager (records management), and Kofax Ascent Capture (imaging) including Release Scripts built on multiple VMWares (virtual environments). In addition, SpatiaX solutions were used which allowed seamless CAD (computer-aided design) and GIS (geographical information systems) integration with the FileNet suites. Mr. Rabie was the ECM Team Lead, responsible for the technical delivery in an extremely short timeframe. He managed, mentored, and led multiple junior resources and senior vendors in creating and documenting technical scenarios. Mr. Rabie was also responsible for creating multiple workflow scenarios, codes reviews, scenario scripting, and administration of the SharePoint project site. He assisted in the environmental and hardware setup, and administered the local network. Mr. Rabie dialoged with senior management, providing a daily status, progress update, and a functional review. Finally, Mr. Rabie was responsible for coordination and presentation of the demonstration at the client site.

Client: Bureau of Indian Affairs, TAAMS Image Repository, Dallas, Texas

Position: ECM Team Lead

December 2006 – May 2007

The purpose of this project was to add imaging functionality to the Federal Government Bureau's existing Trust Asset and Accounting Management System (TAAMS). This system consisted of multiple components, including FileNet Business Process Manager (workflow), Kofax Ascent Capture (imaging) including Capture Internet Server and Release Scripts, FileNet Content Manager (document storage), and AccuSoft ImageGear (image stamping). Mr. Rabie was the ECM Team Lead, responsible for rollout to multiple client remote sites. He managed multiple

senior resources and led junior resources ensuring they were following project processes and standards, documenting issues, and knowledge transferring to the local staff. Mr. Rabie created and documented the issue management process, and administered the SharePoint project site to support this effort. Mr Rabie also created a process improvement presentation, analyzing and documenting the current process, and integrating feedback from multiple sources.

Mr Rabie utilized his problem solving skills and various tools to debug production issues with the team, providing his expertise as a SME and ensuring production systems were running. He administered the system, including Kofax user setup and batch class publication. Mr. Rabie worked with various software vendors to diagnose and resolve environmental issues. He also created the system administration guide, developer guide, and redesigned the health check process. Mr. Rabie was responsible for source code recovery and implemented versioning on multiple custom components (including Java, Visual Basic, Visual C++, Release Scripts, and Workflows). Mr. Rabie also organized, reviewed, merged, updated, and published all project documents.

Client: Large Financial Institution, Enterprise Originations Phase I

Position: Workflow Team Lead

October 2005 – November 2006

The purpose of this project was to continue development on the Enterprise Originations (EO) product for a Large Financial Institution. This system consisted of multiple components, including FileNet Business Process Manager (workflow), WebMethods (integration services), and WebLogic & Websphere (application server). Mr. Rabie was the Phase I Workflow Team Lead. He was responsible for the delivery of design and implementation of the EO workflow. Mr. Rabie worked with the multiple client teams to ensure that the requirements were well defined and accurate. He also worked with multiple design analysts providing guidance and direction on workflow design issues and solving many potential roadblock issues.

Mr. Rabie ensured that the design and implementation of the workflow were completed on-time. He oversaw a five member team consisting of both internal and client members, and he effectively filled in for his manager leading a fourteen member team. He directed them to implement the workflow, and he assisted the team on workflow design, implementation and testing. Mr. Rabie utilized his problem solving skills and various tools (such as the Process Administrator) to debug various EO issues with the team. He also created and tracked a detailed project plan for the workflow team, and provided workflow knowledge to new members of the team. Mr. Rabie communicated with upper management and ensured they were aware of issues and progress. Mr. Rabie also provided product knowledge expertise and transferred workflow knowledge to the client and to fellow staff members, including Process Analyzer expertise.

Mr. Rabie also supported the Sales Proof of Concept (SPoC) effort. The purpose of this effort was to prove the EO API functionality. Mr. Rabie was responsible for ensuring that the workflows were implemented to meet the SPoC needs. He led the workflow resource and ensured that design and implementation of the workflow map were accurate and successful. He also provided Workflow SME expertise on multiple white papers that were written and delivered.

Mr. Rabie was also responsible for supporting the Performance Testing effort in a simulated lab environment. He supported this effort by first designing and implementing test scenarios which included analyzing and modifying workflows using the FileNet Business Process Manager. He also provided FileNet expertise while monitoring and analyzing the workflow component and product knowledge expertise to fellow staff members. Mr. Rabie utilized his problem solving skills and various tools (such as the Process Administrator) to ensure the workflow scenarios were executed.

Mr. Rabie also worked as the Workflow SME on the Requirements team. He continued to provide his expertise and worked with the client business teams to ensure successful and complete client deliverables and facilitated multiple sessions to verify requirements were in scope and teams were focused. Mr. Rabie also provided product knowledge expertise and transferred workflow knowledge to fellow staff members.

Client: Large Financial Institution, Enterprise Originations – Pilot

Position: FileNet Subject Matter Expert

January 2005 to October 2005

The purpose of this project was to continue development on the Enterprise Originations (EO) product for the Large Financial Institution. Mr. Rabie was responsible for supporting the Performance Testing effort in a lab environment under an extremely short timeline and with limited resources. He supported this effort by first designing and implementing test scenarios and story boards. This included analyzing and modifying workflows using the FileNet Business Process Manager. He also developed various automated tools to support the process using Java. He was also responsible for initialization, setup, monitoring, administration, and maintenance of the AIX environment during the testing process. Mr. Rabie utilized his problem solving skills and various tools (such as the Process

Administrator) to ensure the test scenarios were executed. He also assisted in creating and debugging automated Silk Test and Load Runner automated test scripts.

Mr. Rabie also provided product knowledge expertise to fellow staff members, and he became the FileNet Workflow SME on the EO project, providing his expertise to both the client and internal staff. He was responsible for the workflow prototype starting with its design to implementation.

Client: Large Financial Institution, Enterprise Originations - Proof of Concept

Position: FileNet Solution Architect

November 2004 – January 2005

The purpose of this project was to prove that the Enterprise Originations (EO) product could be utilized by the Large Financial Institution. Mr. Rabie was responsible for designing, creating, and implementing the Proof of Concept workflows using the FileNet Business Process Manager. Mr. Rabie worked with the functional team to isolate requirements and design the workflow, and he worked with the technical team to ensure the connection information was accurate. He then implemented the design and managed the deployment process. He also worked with the testers to correct issues and to roll in fixes from the baseline team. In addition, Mr. Rabie also presented to the client detailing the process of creating workflows, and he interfaced with the client on many EO workflow questions.

Mr. Rabie was also involved in the design and implementation of EO services, using the AMS Web framework. He worked with the technical team on creating accurate and detailed design documentation. He then implemented portions of the design which included both Java and Webmethods (EAI) development. Mr. Rabie continued to debug various EO issues and resolved them using various tools (such as the Process Administrator and Process Designer) and logs.

Client: Large Bank, Scan Production Fix

Position: FileNet Solution Architect

June 2004 – July 2004

The purpose of this project was to create and implement a production fix for a Visual Basic based scanning program utilizing FileNet. Mr. Rabie's primary responsibility was to support the development team in creating and implementing a solution for a production level issue. He was involved in the initial discussions with the Large Bank, determined the cause of the issue, and proposed the solution to the client. Mr. Rabie was then tasked with environmental setup for development of the fix. This included IIS configuration, COM+ objects installation, SourceSafe configuration, scanner configuration, and database integrity. He also enabled replication between the databases, and ensured that all patches were run, and that the code was up-to-date. Mr. Rabie also assisted in knowledge transfer to the new developer, and was responsible for code verification and approval. Mr. Rabie provided support during the installation of the fix into production.

CGI Internal Project: AMS Enterprise Organizations

Position: Developer

May 2004 – November 2004

The purpose of this project was to continue to develop the AMS Enterprise Originations (AEO) product. Mr. Rabie was responsible for the development of the First Mortgage workflow map and configuration. He also began research for implementation of the Process Analyzer to provide queue statistics and reporting functionality. He was responsible for resolving workflow issues, using the FileNet Business Process Manager. This included transferring configuration and workflows between regions, and installation and configuration of the Application Engine, and configuration of the Websphere Application Server. He also used various tools (such as the Process Administrator and Process Designer) and logs to isolate various EO issues and compose solutions. Mr. Rabie communicated with testers and the configuration management teams to ensure solutions were correct and validated.

Client: Large Bank, Common Organization System

Position: Developer

February 2004 – May 2004

The purpose of this project was to develop a customized user interface for the Common Origination System (COS) product for a Large Bank. Mr. Rabie was responsible for the development of Loan Express - a custom user interface (UI). He first designed the UI by implementing style sheets and the "look-and-feel" from the COS product. He also designed the modulation of code into manageable files. This design led to the creation of a functional prototype. This prototype was used in receiving client sign-off, and in creating the actual product (UI Driven Design). Mr. Rabie developed the application using WebSphere Studio Application Developer in the Struts framework. This included creating Java Server Pages which contained the visual and form elements. JavaScript was used to supplement these files, specifically for the use of DHTML and the creation of elements via the DOM. Additionally, tiles (templates) were used to provide a common header and footer for all pages. Mr. Rabie also

developed the business logic and model using Java. These classes were designed to pre-populate forms, store form element information into beans, determine the number of elements to be displayed on a page, and to submit applications to the COS system. This also included the use of a type dictionary which defined what elements would be displayed. It also included object arrays which dynamically defined the number of items displayed on the page. In addition, Mr. Rabie created the configuration XML files used to define the flow control and elements in the form bean, and a second XML file was created for validation of form elements. Mr. Rabie configured the WebSphere Application Server to support the application, and he installed the application.

Mr. Rabie was also involved in the creation of the first HTML Demo of the COS product. Mr. Rabie was responsible for creating a complete "point-and-click" demo of the COS product. The project schedule required Mr. Rabie to design, develop, test, and review in an extremely short period of time. He first designed the demo by using existing pages from the system, and modifying them to allow navigation and basic functionality. This included designing stub pages to support the transition from an application server to a stand alone HTML demo. He developed this demo using Dreamweaver, HTML, and JavaScript. He also provided daily status updates directly to the User Interface manager. Once the demo was completed, Mr. Rabie unit tested, and he prepared it for review by the senior managers of various teams and upper management.

Client: Large Financial Institution, TKOI Phase II

Position: Developer

September 2003 – February 2004

The purpose of this project was to create a separate application designed to retrieve images from FileNet to burn to a CD, and to add Enhancements to the current TKOI system from Phase I. Mr. Rabie was mainly responsible for the CD burning program. This program retrieves FileNet images, creates a secured PDF file, and audits the retrieval. He first designed and produced a technical design document for client sign-off. He also developed the application using Visual Basic 6.0 and active PDF. In addition, he assisted in creating a user manual and a context-sensitive help file embedded into the application, developed using the RoboHelp product. He also setup the local testing environment which included configuring IIS, the setup of the database, and ensuring network connectivity. Mr. Rabie was also involved in the Enhancements. He made modifications to various ASP files to interact with multiple databases, and new Crystal reports were created to summarize the new data. He also generated multiple SQL Server 2000 installation scripts which created tables, stored procedures, users, roles and assigned appropriate permissions to roles. He worked on documentation, including installation instructions for the updated COM+ components and ODBC configuration settings. Mr. Rabie provided technical support by solving various client environmental and configuration issues after development, and he was constantly coordinating with both client project management and technical resources to ensure project success.

Prior Employment Experience

Company: Capital One Financial, Technology Services

Position: Developer

June 2002 – August 2002

Mr. Rabie designed, tested, implemented, documented, and managed the Customer Satisfaction Survey Project. He communicated with senior managers and vendors for approval and resources for projects. He also interviewed various departments throughout Technology Services to document Work Flow Process, and created, tested, documented, and delivered Audit Excel Macro Project to external department. Finally, Mr. Rabie wrote user and technical documentation for the Domino Change Calendars.

Employer: James Madison University, Computer Science Department

Position: Developer

August 2001 – May 2003

Mr. Rabie assisted and educated students with programming problems/errors and fundamental concepts. He also graded programming projects, lab assignments, and exams.

Company: Capital One Financial, Technology Services

Position: Developer

May 2001 – August 2001

Mr. Rabie coordinated meetings between departments to gather information on design solutions for projects. He analyzed, documented, and summarized resource requests for managers. He communicated with senior managers requesting resources for projects supporting internal customers. Mr. Rabie wrote technical and user documentation for various projects. Finally, he continued work on the EUS resource tracking process by creating project files and a main resource pool.

Company: Federal Express Corporation, Information Management Technology Services

Position: Developer

June 2000 – August 2000

Mr. Rabie was assigned key tasks to complete for the Work Order System project. He attended numerous team meetings with different departments to obtain critical information. He created technical documentation such as sample test scenarios (Script Testing) documents. Mr. Rabie also created and prepared technical and user documentation for various other projects. Finally, he conducted volume testing using specialized hardware and software.

(e)

Education

BS (Magna Cum Laude), Computer Science, minor in Telecommunications, James Madison University, May 2003.

gggg) Sample Resumes

This section lists representative sample resumes for the Functional Lead, Environmental SME, Programmer/Analyst, and Business Analyst roles for the DEQ ECM Project. Exhibit **Error! No text of specified style in document.**-88 lists the names of personnel whose sample resumes are included below:

Exhibit Error! No text of specified style in document.-88 Sample Resumes

Role	Name
Functional Lead	Prakash Vilanilam & Payal Doshi
Environmental SME	Hilary Wilson
Programmer/Analyst	Sterling Huntley & Dang Nguyen
Business Analyst	Umbereen Rahman & Thomas Busillo

(1) Prakash John Vilanilam

(a) *Sample Resume for Functional Lead*

Mr. Vilanilam is an IT professional with over twelve years of diverse consulting experience with recent emphasis on Enterprise Content Management (ECM) and Imaging and Workflow systems. Mr. Vilanilam is a FileNet Certified Professional (FCP) in P8. Mr. Vilanilam has played key roles in managing and developing enterprise-wide ECM implementations as Project Manager, Lead Business Analyst, and JAD facilitator. He has served a diverse cross-section of clients ranging from Fortune 500 companies to government agencies. During the course of Mr. Vilanilam's career, he has managed over 43 projects totaling more than \$40 million in gross revenue.

(b)

(c) *Skills Summary*

Software/Tools/Languages Microsoft Office, Project, Outlook, and Visio.

Technical Skills FileNet P8 (2.0/3.0/3.5) Content Manager, Business Process Manager (BPM), Records Manager, Image Manager, Business Process Framework (BPF), E-mail Manager, Content Federation Services, Content Services, ColdFusion MX, Oracle 10g, PowerBuilder, LotusDomino, Web Services (XML, SOAP, WSDL, UDDI).

(d)

(e) *Certifications*

- FileNet P8 Certified: ECM Essentials 2A;
- FileNet P8 Certified: Email Manager;
- FileNet P8 Certified: Business Process Manager;
- FileNet P8 Certified: Content Manager; and
- FileNet P8 Certified: Forms Manager.

Chronology of Experience

CGI

December 2005 to present

Client: St. Vincent Health System, Sovera for Health Information Management

Position: Project Manager

March 2007 – April 2007

As Project Manager, Mr. Vilanilam led the implementation of an enterprise level FileNet Image Management system which provided instant access to health information from every part of the central healthcare management system. The implementation covered two hospitals and interfaced with two other mission-critical systems.

Client: Office of Federal Housing Enterprise Oversight (OFHEO)

Position: Senior Consultant

October 2006 – February 2007

Mr. Vilanilam assisted in developing the 5-Year Strategic Plan for a FileNet P8 system which would allow the Agency to manage content, business processes, and records compliance at an enterprise level. Mr. Vilanilam employed the process flow methodology to elicit and structure current and future state business processes for various offices within OFHEO. The business process flows were subsequently used as the foundation for developing the 5-year Strategic Plan. In addition, the current and future state process flows formed the basis for business process improvement projects that streamlined processes across OFHEO.

Client: New Jersey Department of Environmental Protection (NJDEP)

Position: Project Manager/ Senior Business Analyst

December 2005 – September 2006

As Project Manager, Mr. Vilanilam developed detailed work plans, tracked project financials, completed work break down structures, and guided a team of business analysts. Mr. Vilanilam's subject matter knowledge of environmental science and his use of the process and data flow methodology made requirements capturing more efficient. All detailed design projects managed by Mr. Vilanilam were completed on-time and within budget. The average CSAP rating for the NJDEP projects was over 9.2

As Senior Business Analyst, Mr. Vilanilam gathered and structured user and system requirements for multiple NJDEP projects. The projects produced software “blueprints” which were subsequently used to modify environmental permitting and enforcement software. The agency used the modified software to manage hazardous waste data and other data required to preserve the integrity of the state’s waterways and historical sites.

Prior Employment Experience

Employer: State of Texas, Commission on Environmental Quality

Position: Project Manager

January 2004 – December 2005

As IT Project Manager, Mr. Vilanilam was responsible for planning and executing several web-based systems which allowed agency personnel to more efficiently manage environmental data, work flow activities, and documents across multiple program areas. These systems were integrated with the agency’s enterprise data management and financial management systems which formed the backbone of the agency’s e-government solutions. Mr. Vilanilam employed the prototyping (RAD) methodology which resulted in high levels of user satisfaction and rapid turnaround times. Mr. Vilanilam managed large teams (15 members or more) and delivered excellent client satisfaction ratings which culminated in his team’s nomination for the agency-wide employee recognition program. Mr. Vilanilam also received a letter of commendation from the agency’s Commissioners for his work on a portal which transferred and displayed environmental permitting data across multiple agencies.

As IT Operations Manager, Mr. Vilanilam reported directly to the agency’s Information Resources Director and was responsible for the day-to-day operations of the IT division which consisted of 174 personnel. His core responsibilities included: the development of an agency-wide IT strategy to support the program areas; management of the agency’s IT budget and resources to support the infrastructure and software needs of the agency; planning and executing IT special projects which had agency-wide impact (e.g. Data Center Consolidation); designing and executing process improvement initiatives within the IT division (e.g. Help Desk and Computer Access Requests); and staff development. Under Mr. Vilanilam’s direction, the turnaround time for public information requests, desktop support requests, and general help desk requests decreased by 15% and backlog queues dropped to virtually zero.

Employer: County of Imperial California, Air Pollution Control District

Position: Air Pollution Control Engineer

January 2003 – December 2003

As an Air Pollution Control Engineer, Mr. Vilanilam evaluated air permit applications from entities across multiple industries. Mr. Vilanilam discovered that several agricultural facilities were not properly estimating their air emissions from fugitive dust. Under his recommendation, Imperial County imposed more stringent enforcement activities onto regulated entities in the agricultural and municipal waste industries, which resulted in increased revenue for the district.

Company: Tata Consultancy Services

Position: Consultant

January 2001 – December 2002

As an IT Consultant, Mr. Vilanilam developed and implemented a company-wide, comprehensive business training program designed to impart financial and project management knowledge to new recruits. The business training module proved to be very successful among employees as evidenced by the unprecedented average training feedback score of 3.96/4.0. In addition, clients in the financial management service line reported increased satisfaction ratings stemming from the increased subject matter knowledge demonstrated by new recruits.

Company: International Business Machines (IBM), Global Finance Division

Position: Team Lead

January 2000 – December 2000

As Team Lead for the SAP implementation and e-business transformation project, Mr. Vilanilam led a group of analysts during migration and systems integration testing to ensure proper integration between SAP and legacy systems. These integrated systems were used to manage IBM’s global inventory of leased hardware.

Company: Malcolmpirnie, Inc

Position: Project Manager

January 1997 – December 2000

As a Project Manager, Mr. Vilanilam led highly cohesive teams to solve complex environmental pollution control and permitting problems for clients in the cement manufacturing, wastewater treatment, combustion, pharmaceutical, and coatings industries. The projects undertaken by Mr. Vilanilam resulted in cost savings and improved operational plant safety for the firm’s clients. Mr. Vilanilam’s unique contribution of combining

environmental science with IT led to an eighty-five (85%) repeat consultancy rate. During his tenure with the firm, total gross revenue for Malcolm Pirnie's Air Program grew by 18%. Mr. Vilanilam published an article on Predictive Emissions Monitoring Systems as a viable alternative to Continuous Emissions Monitoring Systems, which was published in Air Currents.

Engineering Experience

Company: Junkins Engineering, Inc

Position: Project Engineer

January 1994 – December 1995

As a Project Engineer, Mr. Vilanilam participated in the design and development of a pilot biological and chemical system which removed hazardous waste from groundwater. The pilot system was the first of its kind in the US to use microbes to treat highly toxic material. Mr. Vilanilam ensured the proper operation of the system by overseeing the onsite laboratory. His contribution to the project demonstrated that over 90% of the toxic waste could be removed from the soil and groundwater, thereby ensuring the safety of the surrounding community.

Company: Tolas Health Care Packaging, Inc

Position: Process Engineer

January 1994 – December 1994

As a Research and Development Chemist and Process Engineer, Mr. Vilanilam employed the Kaizen Quality Control methodology to develop and manufacture heat seal coatings used for medical packages. Mr. Vilanilam developed several heat seal coatings which were subsequently used to package surgical equipment and blood bag labels.

Company: Mortan Salt, Inc

Position: Industrial Sales Engineer

January 1992 – December 1993

As an Industrial Sales Engineer, Mr. Vilanilam provided technical advice pertaining to the proper application of Morton Salt products and services to food and chemical processes. Mr. Vilanilam coordinated activities among Morton's customer service, finance, manufacturing, transportation, and marketing departments to effectively deliver products and services to Morton Salt's industrial clients. Under Mr. Vilanilam's purview, gross revenue in the Chicago and Wisconsin territories grew by seven (7%) percent.

Education

MBA, Pace University, Management Information Systems, 2001

M. Eng, Pennsylvania State University, Specialization in Environmental Engineering, 1996

B.S., Pennsylvania State University, Chemical Engineering, 1992.

(2) Payal Doshi

(a) *Sample Resume for Functional Lead*

Payal is a Consultant with the Enterprise Content Management (ECM) group headquartered in Fairfax, Virginia. Ms. Doshi is focused on requirements definition, system design, system testing, training, and implementation support in the ECM space. Ms. Doshi has experience working with legal organizations and healthcare entities to assist in the intelligent application of information technology and to provide strategic consulting services. Ms. Doshi possesses strong business, analytical, quantitative, problem solving and communication skills.

(b) *Skills Summary*

Software/Tools/Languages SQL Server, Visio, MS Outlook, FileNet P8, SnagIt, TechSmith Camtasia Studio 4, Adobe Acrobat, RoboHelp Office, MS Word, MS Excel, MS Access, and MS Powerpoint.

Analytical Skills

- Requirements Analysis and Definition
- Process Analysis and Definition
- Quality Assurance and Testing

Certifications

- ECM Essentials
- Datacap Taskmaster 6.5 Training

Chronology of Experience

CGI

October 2006 – Present

Client: Saint Vincent's Hospital System, Accounts Payable Processing Automation

Position: Lead Business Analyst

October 2006 – June 2007

The Sovera AP system was designed to enable the transformation of St.Vincent's Hospital Accounts Payable department into a paperless Invoice processing environment. The system enables the electronic imaging of paper invoices, customized invoice approval workflow, and electronic invoice updates to a financial system (Lawson) using FileNet P8 BPM and Datacap Taskmaster.

Payal was the lead business analyst on the project and was working with client subject matter experts to define and refine the business requirements and business process for workflow processing. Payal was actively involved in the testing process and handled frequent change requests to functional documentation. She led testing efforts by providing guidelines, test cases, and ensuring system test specifications covered all requirements. While working closely with the developers, Payal identified and tracked testing issues as well as coordinated testing fixes with the developers. Payal also prepared training documents, presentations, as well as an online help guide which she used to train the client users on the Sovera AP system. Payal was actively involved in the development of the following client deliverables: Requirements, Requirements Traceability Matrix, System Test Plan, Test Scripts, Process Flow Diagrams, Training Guides, Training Video, and Online Help Documentation.

Prior Employment Experience

Company: Navigant Consulting, Inc.

Position: Consultant (Washington, D.C.)

November 2003 – July 2006

Payal was a member of the Healthcare Litigation group located in Washington D.C. This group focuses on dispute resolution, litigation support and anti-trust matters in the healthcare industry. Most of her work involved analytical support to pharmaceutical manufacturers and healthcare providers facing litigation involving large volumes of healthcare transactional and financial data. This involved performing qualitative and quantitative data analysis

utilizing data mining processes involving collection, standardization, consolidation, management, extraction, and analysis through data manipulations and complex SQL queries. She was involved in the development, design, implementation and management of the databases used to run analysis. Payal utilized these databases to develop sensitivity analysis and damage models used to determine the economic impact of changing variables on damage calculations. Payal also participated in strategy consulting by providing strategic pharmaceutical monitoring and competitor analysis reports to pharmaceutical manufacturers.

Company: Medco Health Solutions Inc.

Position: Operations Analyst (Montvale, NJ)

June 2003 – November 2003

Payal was a member of the Co-pay Option Pricing Specialist group at Medco Health Solutions in their Montvale, NJ office. Medco Health is one of the leading Pharmacy Benefits Managers (PBMs). Her primary responsibilities involved analyzing and validating all existing client co-pay and pricing option requirements based on client documentation through various internal systems to ensure accurate interpretation by Account Management. She also assisted in the development of new pricing options through the development of accurate coding requirements.

Company: VHA Inc.

Position: Intern, Healthcare Business Planning Unit (Pittsburgh, PA) **January 2003 – April 2003**

Payal participated in an internship at VHA Pennsylvania in their Pittsburgh office. VHA is a health care provider alliance consisting of thousands of non-profit health care organizations. As an intern, Payal performed market share reporting, data analysis, research and business planning for healthcare services. She utilized healthcare databases such as Atlas and Solucient to perform volume forecasts, feasibility studies, and quarterly comparative reports. She also assisted in the compilation of hospital profiles used for internal strategic planning involving financial performance, market share, and clinical outcomes data.

Company: UPMC Health System, South Side Hospital

Position: Clinical Intern (Pittsburgh, PA)

January 2002 – April 2002

Payal participated in areas of Medical Coding (ICD-9 and CPT), Records Processing, Records Management, Release of Information, Transcription, and Cancer Registry.

Company: UPMC Health System, Shady Side Hospital

Position: Data Research Analyst (Pittsburgh, PA)

December 2002 – April 2003

Payal assisted the Director of Bariatric Surgery in performing research studies on gastric bypass surgery. She performed data collection, analysis, and research through the use of internal hospital software and created and managed patient information databases.

Company: Highmark Inc.

Position: Information Technician (Pittsburgh, PA)

June 2002 – December 2002

Payal determined eligibility of health insurance benefits for applicants in the state of PA. She also audited vital healthcare data required for insurance coverage via internal software systems.

Company: UPMC Health Systems, Presbyterian Hospital

Position: Health Information Management Technician (Pittsburgh, PA) **October 2001 – December 2002**

Payal assisted in the preparation of electronic health records, processing of record requests, and creation of electronic patient records through utilization of MARS, Intelus, and Chart Vision software.

Company: Merck Medco Rx Services

Position: Pharmacy Support (Mechanicsburg, PA)

March 1999 – April 2001

Payal assisted pharmacists in the analysis of medication prescriptions through the compilation of accurate product profile information.

Education

B.S., University of Pittsburgh, Health Information Management, April 2003

(3) Hilary Wilson

(a) *Sample Resume for Environmental SME Position*

With more than 9 years in the Information Technology industry, Ms. Wilson has a wide range of experience managing delivery projects, as well as recommending business process improvements, gathering customer requirements, and designing, testing, and implementing business technology solutions.

Skills Summary

- Process analysis & definition
- Requirements analysis & definition
- Implementation management
- Project management

Training

- JAD Facilitation
- Project Management
- Team Leadership
- Presentation Skills
- CGI Quality Auditor Training

Chronology of Experience

CGI

August 1997 – Present

Client: Maryland Department of the Environment (MDE), EEMS Implementation Project

Position: Lead Functional Analyst and SME

October 2004 – Present

As lead functional analyst and subject matter expert, Ms. Wilson worked with customer staff from MDE's Water, Air, Hazardous Waste, and Restoration programs to identify, document, and validate business requirements, and later to design enhancements to our CGI's TEMPO® system to support these requirements. Following requirements and design, Ms. Wilson provided implementation support, including answering MDE user questions, conducting software demonstrations, providing training and guidance on MDE implementation tasks, designing and leading end user training classes, reviewing reporting requirements and preparing report designs, and testing software enhancements. Additionally, Ms. Wilson supported the project manager by preparing Project Management Plans and contractual Change Orders.

Client: Virginia Department of Environmental Quality (DEQ), Business Intelligence Assessment

Position: Lead Business Analyst

November 2005 – December 2005

As lead business analyst, Ms. Wilson conducted interviews and workshops with DEQ staff to identify and prioritize environmental reporting requirements and identify the data from DEQ's Comprehensive Environmental Data System (CEDS) required to support these requirements. Based on this information, Ms. Wilson assisted in preparing a Business Intelligence Assessment documenting CGI's recommendations for implementing a Data Mart to address these requirements.

Client: Texas Commission for Environmental Quality (TCEQ), Architecture Assessment

Position: Lead Business Analyst

August 2005

As lead business analyst, Ms. Wilson conducted workshops with TCEQ staff to identify functional requirements for a web-based system for electronic submittal of air permits-by-rule. Based on this information, Ms. Wilson documented TCEQ's requirements and designed and documented a proposed application workflow based on TCEQ's requirements and best practices developed on CGI implementations of similar web-based systems for other state environmental agencies.

Client: Utah Department of Air Quality (DAQ), TEMPO Implementation Project
Position: Business Process Analyst **July 2005 – February 2006**

As a business process analyst, Ms. Wilson conducted facilitated sessions with DAQ staff to document target business processes, evaluate the closeness of fit between the target business processes and CGI's TEMPO® system, and design system enhancements. Ms. Wilson also assisted in proposing business process improvements and training users on TEMPO®.

Client: New Jersey Department of Environmental Protection (NJDEP), Various COMPASS Implementation Projects
Position: Subject Matter Expert **April 2005 – February 2006**

COMPASS is an enterprise environmental monitoring system developed by CGI. As a Subject Matter Expert for various COMPASS implementation projects with NJDEP, Ms. Wilson conducted requirements and design workshops with representatives from NJDEP's Private Well Testing and Site Remediation programs. Following these sessions, Ms. Wilson documented program requirements and system enhancements. Ms. Wilson also provided functional support to the implementation team and tested system enhancements.

Client: Mississippi Department of Environmental Protection, eDMR Implementation Project
Position: Lead Tester **January 2005**

As lead tester for the eDMR implementation project, Ms. Wilson developed a testing strategy, wrote unit and integration test scripts, and tested CGI's eDMR web portal functionality.

Client: Kentucky Department for Environmental Protection, TEMPO Implementation
Position: Functional Analyst and Project Manager **July 2002 – September 2004**

As a functional analyst and then as project manager, Ms. Wilson worked closely with customer staff on all aspects of implementing TEMPO® for DEP programs, including requirements analysis, software and database design, development, documentation, quality assurance and testing, implementation, and warranty support.

Client: Kentucky Department for Environmental Protection, COMPASS Implementation Project **Position:**
Project Manager **September 2001 – June 2002**

As project manager for the COMPASS implementation project, Ms. Wilson worked with customer staff on all aspects of implementing CGI's COMPASS system (an enterprise environmental monitoring system), including closeness of fit analysis, detailed design, development, quality assurance and testing, end user training, and warranty support.

Client: EPA Office of Water, Business Process Analysis
Position: Functional Analyst **April 2000 – September 2001**

As a functional analyst, Ms. Wilson facilitated sessions with customer representatives to identify programmatic drivers and document as-is and to-be business models. Ms. Wilson conducted business process analysis based on this information and recommended process improvements to Office of Water managers. Ms. Wilson also led the development of quality assurance and information management plans.

Client: EPA Great Lakes National Program Office, COMPASS Development and Implementation Project
Position: Functional Analyst and Project Manager **August 1997 – June 2002**

As a functional analyst and later as project manager, Ms. Wilson supervised the design, development, implementation, and maintenance of EPA's GLENDAs system, which was later re-branded as COMPASS.

Education

B.S., Massachusetts Institute of Technology, Biology

(4) Sterling Huntley

(a) *Sample Resume for Programmer/Analyst Position*

As an adept Programmer/Analyst, Mr. Huntley has a wide range of experience in production support, technical troubleshooting and operations analysis, design and implementation. He has undertaken regular break/fix coding, written General and Detailed Designs for operations components, and coded and supported the launch of the resultant technology solutions. Mr. Huntley has demonstrated industry and ingenuity in his investigation, pursuit and resolution of infrastructure and application issues, and provided quality customer support for the client's business community and its support organizations.

(b)

(c) *Skills Summary*

Software/Tools/Languages UNIX, SQL, Java, C++, C#, Perl, Visual Basic, Microsoft Office

Technical Specialization

- Environment management Performance analysis and optimization
- Infrastructure analysis and design
- Application and cycle troubleshooting

(d) *Certifications*

FileNet P8 Certified Developer:

- Business Process Manager
- Content Manager
- Email Manager
- Forms Manager
- Records Manager
- Team Collaboration Manager
- Web Content Manager

FileNet P8 Certified Administrator:

- Content Manager
- Forms Manager
- Records Manager

Chronology of Experience

CGI

January 2004 to Present

Client: Large Size Bank, TKOi Upgrade

Position: Programmer/Analyst

February 2007 – Present

The purpose of this project was to upgrade the existing TKOi system to run on a new operating system as well as to upgrade several of the individual system components. The TKOi system consisted of SQL Databases, Active PDF, Crystal Reports, FileNet Capture, and scan workstations. The development environment for TKOi required extensive knowledge of VMWare.

Mr. Huntley was responsible for upgrading the reporting component to Crystal Reports 11. He worked diligently to modify and test code to ensure continued reliability and accuracy. He made several improvements to the code including ASP modification that allowed for portability. Mr. Huntley was also responsible for upgrading Active PDF to the version 4.0. Active PDF integration required knowledge of Visual Basic 6.0. Visual Basic 6.0 was also

required when he made several security modifications to the scanning application FleetScan. He also worked to test the upgrade of the system databases from SQL Server 2000 to SQL Server 2005. He worked on documentation, including installation instructions for the updated COM+ components and ODBC configuration settings. Mr. Huntley took part in installation of the TKOi system into production. This client site installation required computer hardware changes, software configuration, testing, and client training. Mr. Huntley worked with the client to resolve several production issues, many of which required code changes with minimal turnaround times.

Client: Large Size Bank, Enterprise Origination

Position: Programmer/Analyst

October 2006 – February 2007

The purpose of this project was to continue development on the Enterprise Originations (EO) product. Mr. Huntley was responsible for creating and modifying workflow maps. This included analyzing and modifying workflows, creating scenarios, and automated scripts. Mr. Huntley also developed several scripts designed to identify coding deficiencies before the errors reached production. The use of the scripts saved hours in verification time and identified many errors thereby reducing production downtime.

CGI Internal: FileNet Product Training

Position: Programmer/Analyst

April 2006 – October 2006

Mr. Huntley worked hard to expand his knowledge of the FileNet product. Throughout this training he achieved several FileNet certifications as well as helped to develop several product demos.

Client: Large Size Telecommunications Company, Business Markets Delivery

Position: Programmer/Analyst

January 2004 – March 2006

As a senior member of the Operations Development team, Mr. Huntley handled routine and emergency 24x7 production support for sixteen systems and all of their third-party components, including half a dozen new applications introduced in 2005 – with all of the challenges (and heavy documentation) of new system start-ups.

He interacted regularly with the client's infrastructure management team, data center operations providers (EDS) and application end-users; oversaw batch processing (including an extensive ten-day bill cycle for the Tapestry application) and maintenance work (e.g., failover and disaster recovery testing and verifications); satisfied regular, often involved business requests for raw CDR extracts and other data; developed work request-specific operations components (handling the designs, code, and Unit Test Plans for high-visibility initiatives); and managed multiple environments for development, test, and business support.

Additionally, Mr. Huntley served as lead analyst for performance improvement and presented optimization recommendations. He also designed and implemented tools for cycle monitoring and metrics reporting. Mr. Huntley has proven adept at mastering new technologies, and developed self-taught expertise in UNIX, PL/SQL, Korn Shell and Perl. Mr. Huntley has also applied his Java skills trouble-shooting problems with the Web Interface for Long Distance (WILD).

Education

B.S., Auburn University, Computer Science

(5) Dang Nguyen

(a) *Sample Resume for Programmer/Analyst Position*

Mr. Nguyen is a Programmer/Analyst with technical focus on the various phases of the systems development lifecycle. He has a range of experience in interface development, documentation, coding, modifying, testing, and implementing business technology solutions.

(b)

(c) *Skills Summary*

Software/Tools/Languages C++, Assembly Language, SQLPlus, HTML, Cascading Style Sheets (CSS), XML, ER /EER Diagrams, Open GL, Linux Programming Environments, Java, and Matlab

Technical Expertise

- Datacap Taskmaster 6.5

(d) *Certifications*

- IS System Administrator 3.6
- IDM Desktop and Web Services Administration 3.3

Chronology of Experience

CGI

June 2006 to Present

Client: Accounts Payable Company

Position: Programmer/Analyst

October 2006 – Present

Mr. Nguyen worked on the configuring and development of a Content Management system for an Accounts Payable solution. This required testing, documentation, modifying code, and writing code in VB script, SQL and Java. Mr. Nguyen gained a solid understanding of Datacap and took ownership of that particular piece of the system. This also required Mr. Nguyen to create and keep up to date a Detailed Design Document of the Datacap system. Mr. Nguyen is currently working on the technical support for the system.

Client: Insurance Company

Position: Programmer/Analyst

June 2006 – October 2006

Mr. Nguyen updated and took control of the native test scripts for the three tracks for the project. The testing required Mr. Nguyen to use IDM Desktop and Image Services tools. While onsite Mr. Nguyen took turns with the CGI team to ensure 24 hour coverage during the transition by monitoring the progress of the cutover. Mr. Nguyen also took control and was responsible for updating and modifying communication documentation for the project.

Prior Employment Experience

Employer: George Mason University, Fairfax, VA

Position: Classroom Tech Assistant

May 2004 – May 2006

Mr. Nguyen assisted faculty with technical classroom devices. He troubleshoot and repaired audio visual equipment in classrooms and also troubleshoot faculty consoles and computers used in classrooms. Mr. Nguyen discovered and documented software deficiencies. He also tested new software on the Crestron system and trained students and faculty to use this system.

Employer: George Mason University, Fairfax, VA

Position: Lab/Classroom Staff

August 2002 – May 2006

Mr. Nguyen installed and repaired PC/Mac related hardware and software in computer lab; setup and maintained local intranet and server. He tested new software on computers and assisted in management of University

Computing Labs. Mr. Nguyen trained and assisted students and faculty in different computing platforms and software. He also provided technical aid to other branches of the University.

Education

Bachelor of Science, Computer Science. George Mason University. Fairfax, VA.

(6) Umbereen Rahman

(a) *Sample Resume for Business Analyst Position*

Umbereen is a member of the Enterprise Content Management (ECM) group, focusing on helping clients store, share, and manage content. Umbereen has worked on both large and small projects and is adept at functioning effectively as part of a team. She has applied her experience with the technologies listed below throughout the project lifecycle, including design, system testing, and performance testing.

(b)

(c) *Skills Summary*

Software/Tools/Languages FileNet P8 Content Manager, FileNet P8 Records Manager, FileNet P8 Team Content Manager, IBM Content Manager, Siebel, Ascent Capture (Kofax), Plumtree (BEA), Sharepoint, Microsoft Office, Outlook, Project, Visio, Adobe Reader, Adobe PhotoShop, C++, ASP, JavaScript, Perl, and HTML.

Operating Systems Windows 98/2K

Chronology of Experience

CGI

February 2005 to Present

Client: Bureau of Indian Affairs, TAAMS Imaging Repository, Dallas, Texas

Position: Tester/ Trainer

January 2006 to Present

The TAAMS Imaging Repository (TIR) initiative is the addition of imaging functionality to the Bureau of Indian Affairs existing Trust Asset and Accounting Management System (TAAMS). This repository will use existing Enterprise Content Management (ECM) technology for consolidation of a variety of image documents in a central repository using FileNet, allowing secure and convenient access. Accessing the repository through (TAAMS), the Bureau of Indian Affairs will utilize this system to store, organize, authenticate and retrieve various digital images used in their day-to-day operations.

Ms. Rahman is one of the testers on this project. She assisted the lead tester in creating test scripts in the customized image retrieval system, FileNet, and Kofax, and executing a first round of testing. Ms. Rahman led the second round testing effort for this project as well. She led the creation of the training manual, training labs, and a training schedule for the TAAMS Imaging Repository. Ms. Rahman is also the lead ECM trainer on this project. She will be teaching classes of variable sizes at different Bureau of Indian Affairs offices around the country.

Client: Office of Federal Housing Enterprise Oversight (OFHEO)

Position: Tester/ Trainer

August 2005 to December 2005

The xWorks System is a high-profile information system initiative, which in the near term will transform the way the Office of Federal Housing Enterprise Oversight (OFHEO) will conduct examinations of Fannie Mae and Freddie Mac. A successful implementation will centralize the examiners operations as well as automating their document workflows.

Ms. Rahman was one of the testers on this project. She worked to create testing materials and report defects and provide feedback to the project developers. Ms. Rahman documented incidents and test results for the test case deliverable. She updated, managed, and executed test scenarios and assisted the other test team members when needed. She completed testing, followed through on defect status and system functionality, and conducted thorough and accurate testing despite development issues and timeframes. Ms. Rahman worked with customizations of FileNet, Plumtree, and Cohesion off-the-shelf software components. She also assisted in creating and editing the user guide, training manual, and the onsite training material for this system Ms. Rahman assisted team members with development and completion of the xWorks User Guide and xWorks Training Exercises.

Client: Medicare Appeals System for Office of Clinical Standards and Quality, Medicare

Position: Business Analyst

August 2005 to December 2005

The Medicare Appeals System for Office of Clinical Standards and Quality (MAS for OCSQ) was created as an extension of the Medicare Appeals System (MAS). The MAS for OCSQ is a case management and electronic document management system helping streamline to process for determining national coverage policy for

Medicare. The MAS for OCSQ system takes into account the timelines and procedures for case processing unique to OCSQ cases. CGI also implemented a document capture system for OCSQ to covert hardcopy documents into electronic documents which are stored in MAS for OCSQ.

Ms. Rahman was part of a team to scan and index hardcopy documents for the MAS for OCSQ system.

CGI Internal Project

Position: Business Analyst

July 2005

Ms. Rahman installed FileNet Team Content Manager (TCM) 3.0 using BEA 8.1. She became familiar with the particularities of the software package.

Client: Medicare Appeals System for Office of Clinical Standards and Quality, Medicare

Position: Business Analyst

June 2005

The Medicare Appeals System for Office of Clinical Standards and Quality (MAS for OCSQ) was created as an extension of the Medicare Appeals System (MAS). The MAS for OCSQ is a case management and electronic document management system helping streamline to process for determining national coverage policy for Medicare. The MAS for OCSQ system takes into account the timelines and procedures for case processing unique to OCSQ cases. CGI also implemented a document capture system for OCSQ to covert hardcopy documents into electronic documents which are stored in MAS for OCSQ.

Ms. Rahman was one of the testers on this project. She worked to report defects and provide feedback to the project developers. She documented incidents and test results for the test case deliverable. Ms. Rahman updated, managed, and executed test scenarios and assisted the other test team members when needed. She worked with customizations of IBM Content Manager, Kofax Ascent Capture, and Seibel off-the-shelf software components.

CGI Internal Project

Position: Business Analyst

February 2005 to May 2005

Ms. Rahman responded to RFP's and RFQ's which held significant value for the ECM group. She ensured that accurate, detailed, and timely content was presented clearly and professionally. To facilitate completed products, Ms. Rahman researched cost structures, hardware and software procurement, and implementation pricing. She also planned project timelines with appropriate resources to allow for completion of project scope.

Prior Employment Experience

On-Site Sourcing, Documentation Intern – (June 2004 to August 2004)

General Electric, Intern – (May 2001 to August 2001)

Education

B.S., Rensselaer Polytechnic Institute, Information Technology, dual major in Science, Technology and Society, minor in Economics.

(7) Thomas Busillo

(a) *Sample Resume for Business Analyst Position*

Mr. Busillo is a member of the Enterprise Content Management (ECM) group, focusing on helping clients store, share, and manage content. He graduated from Penn State majoring in Management Information Systems in May of 2005. Mr. Busillo has programming experience in C++, Java/J2EE, SQL, VB, XML, PHP, and HTML.

(b) *Skills Summary*

Software/Tools/Languages C++, Java/J2EE, Java Script, SQL, VB, XML, PHP, HTML, MS Office, and MS Project.
Operating Systems Windows 95, 98, 2K, ME, and XP.

Chronology of Experience

CGI

May 2006 to Present

Client: Memorial Hermann Healthcare System (MHHS), Healthcare System (Sovera)

Position: Business Analyst/Tester

March 2007 to Present

The Memorial Hermann Healthcare System (MHHS) is designed to enable the transformation of an Records Management System into a paperless records processing environment. The system enables the electronic imaging of healthcare records, customized verification workflow, and electronic updates to a healthcare system (Sovera).

Thomas Busillo is working with a team of 3 other consultants on the project. Thomas' role was the main tester. He tested the workflow by ensuring that documents were going through the correct path into Sovera. Thomas tested the custom user interfaces of the program used. He ensured that all the functionality was working correctly and also worked with the clients to check if any other features would be useful. Along with the testing, Thomas was part of the end-user training, and trouble shooting.

Client: St. Vincent Health, Sovera for AP

Position: Business Analyst

October 2006 to Present

The Sovera for Accounts Payable (AP) system is designed to enable the transformation of an Accounts Payable department into a paperless Invoice processing environment. The system enables the electronic imaging of paper invoices, customized invoice approval workflow, and electronic invoice updates to a financial tracking system (Lawson). By implementing the Sovera for AP solution, an Accounts Payable department can virtually eliminate paper Invoice processing and achieve the following benefits:

- Streamline and standardize Invoice approval workflow.
- Facilitate financial data entry (Lawson) using Optical Character Recognition capture technology.
- Reduce problems caused by lost or damaged Invoices.
- Provide timely access to Invoices across all geographic locations.
- Decrease time to locate previously approved or rejected Invoices.
- Increase Invoice approval reporting and audit trail capabilities.
- Retain an electronic backup of all Invoices received.
- Reduce physical storage costs.
- Enable telecommuting for remote Invoice processing.
- Allow instantaneous routing of invoices to Approvers or AP representatives.
- Capture a complete audit trail of the entire Invoice approval process.
- Drastically reduce man-hours required for most Invoice approval processing.

Mr. Busillo was working with the Lawson Integration portion of this project. The data that was scanned from Datacap needs to be stored into the Lawson databases. His job was to work with the Datacap information, and

facilitate the SQL statements for the data.

Client: Large Life Insurance Client

Position: Business Analyst

May 2006 to October 2006

Mr. Busillo joined with the existing team from CGI assigned to a project for a large life insurance company. The project called for the CGI team to perform a program of tightly scheduled and complex infrastructure transition projects. Throughout the duration of the project, Mr. Busillo developed, modified, and updated the project task plans (WBSs) that scheduled and managed the work tasks, hosted virtually all working conference calls and work sessions in WebEx, and generated all meeting notes. Using tools such as MS Project and Excel, Mr. Busillo worked with experienced members of the transition team to create a Work Breakdown Structure (WBS), a reliable schedule during the transition (Cutover Plan) and a series of other documents which helped everybody on both client and internal team stay on task and informed (Communication Plan & Matrix). While on site, Mr. Busillo took turns with the CGI team to ensure 24 hour coverage during the transition by monitoring the progress of the cutover through status calls on both Management and Working teams as well completing vital tasks during the cutover weekend. Each track was a different transition project, and required a different set of documents and progress tracking. Upon completing each track, Thomas also helped with the Post Project Documents which included Lessons Learned, Project Assessment and Project Closure.

Education

B.S., Pennsylvania State University, Management Information Systems, May 2005.

CC. Base 29

Education and Training: Suppliers should provide a detailed description of all education and training required for this project as well as on-going training options. This section should have an introductory section that justifies the training programs described, the basic approach taken, an organization chart of the headquarters education operation, an organization chart for this project and the benefits to DEQ.

On-line training that is proposed should be part of a blended learning strategy, e.g. a combination of classroom and on-line based training. Additionally, the on-line training should be SCORM 1.2 compliant and be able to be integrated with the Commonwealth's Learning Management System (LMS) from Meridian KSI.

User Training: Suppliers should list recommended classes and the DEQ personnel who should attend. This list should contain a description of all classes, typical classroom environment, student/instructor ratio, and instructors' qualifications. An agenda of the proposed training and two (2) references that DEQ may contact where similar training has been provided should be submitted. Supplier should provide all training material.

In addition to the plan described above, suppliers should propose one and two Train-the-Trainer sessions with no more than fourteen (14) people in each session. DEQ will provide the classroom facilities and will be able to provide an instructor station and overhead projector. If the supplier has special requirements associated with computer or projector units, this should be specifically identified. This training should be provided in Richmond, Virginia. All training material should be furnished to DEQ in electronic and hardcopy format (MS Word or PowerPoint). Supplier should provide hardcopy training material as required in the Train the Trainer sessions. DEQ plans to alter and use the electronic version for subsequent training within DEQ ONLY. (Note: It will be acceptable if the supplier wishes to copyright the training material and give DEQ permission to use and alter the materials for in-house training only.) Since this is a phased implementation, training will only be provided for trainers in areas where ECM implementation is imminent.

Can you provide the necessary services for the required user training? Please submit a sample of similar training material your firm has created?

Yes, CGI can provide the required training for user.

1. Training Overview

Training is an integral part of our ECM solution. Unlike typical software development projects, ECM is an area that is new to many organizations and training becomes a necessary and important component that helps users adopt an ECM based business process. This section describes our training organization, recommended training programs for the system and the associated benefits to DEQ.

2. CGI Training Methodology

At CGI, we recognize that the success of any training program has a direct impact on the success of the overall project implementation and acceptance of the new system. CGI understands that comprehensive training is required so that staff can effectively operate the system. Aspects of this comprehensive program include: understanding the needs of each user group, developing the proper curriculum, and delivering performance-based training. The goal through the entire process and key to success will be to perform these tasks in concert with DEQ staff.

Of equal importance is a user community that is comfortable with the new technology and understands how to utilize the system to perform their tasks with ease and efficiency. In order to achieve this, the following must be in place:

- Well-designed curricula for the target audience
- Training synchronized with system rollout
- Post-implementation support to help new users

The CGI team brings a full slate of training related capabilities to DEQ. We have extensive experience working closely with our many clients to implement learning solutions for State clients. Our methodologies for designing and developing custom learning solutions depend on close coordination and communication with each client. CGI methodologies incorporate three key features:

Client Preferences— The client’s concerns, issues, constraints, and preferences are specifically sought, defined, and documented as key input to the development process. Software, colors, style, language, and user interface are all subject to client review.

Review and Modification— The development of effective learning solutions is an iterative process. Comments and modifications from each review are incorporated into the next development phase. This iterative process allows for ongoing quality checks during development of the solution.

Signoff by Client— Formal signoff occurs at specific points in the development process to designate client acceptance of the training. This confirms for all stakeholders that the project is on target, achieving success of the final outcomes.

The cornerstone of our training methodology is our rigorous, client-centered process, based on the best features of both Instructional Systems Design (ISD) and incremental systems development. With frequent input and approval from DEQ, our methodology helps identify training specifications, set forth the learning objectives, and design and develop robust delivery mechanisms to effectively support immediate, ongoing, and future client training needs. Our approach can also involve both classroom and on-line training methods. CGI can work with DEQ to integrate any on-line training into the Learning Management System (LMS).

For Train-the-Trainer delivery, CGI would utilize members of its on-site project team. Please see the project team staffing chart as part of the response to BASE-28 for more information on the project team organization. Select Programmer/Analysts and Business Analysts will provide specific training sessions, as appropriate.

3. End-User Training Curriculum

CGI will develop a curriculum for DEQ end-user staff to help them in effectively operating the functionality delivered as part of the ECM solution. Selecting the right approach and curriculum for training is a critical component for success. Delivering a system with a solid technical architecture and robust functionality is only part of the solution.

With this in mind, CGI will develop and deliver training that:

- Can include step-by-step training procedures
- Can be provided to DEQ in paper-based format as well as electronic formats
- Can meet the training requirements identified by DEQ
- Provide on-site Train-the-Trainer training at the DEQ Central Office

Our overall approach to user training is to provide more than simply the delivery of off-the-shelf training and materials. While CGI maintains a library of training materials, we can customize these materials to reflect our clients’ use of the application. This approach includes the integration of new business processes in addition to concepts related to system processing in order to provide a complete program of training for the user with input from our clients in every step of the process.

CGI will provide training material in addition to “user friendly” documentation on the system and individual components. An example of our training documentation is contained in Appendix C – Sample End User Training Handbook. Based on DEQ’s needs, and previous experience in ECM implementations, CGI recommends the following training programs for end-users, to be delivered by CGI as Train-the-Trainer sessions to DEQ trainers:

4. ECM System Overview Course

The ECM System Overview class is the lead off training course for the new solution. It should be attended by all DEQ staff affected by the implementation of the ECM system. Class sizes should range from 10 to 20 students with 1 to 2 DEQ trainers. The course will minimally provide an overview of the solution, including logging on to ECM, searching and retrieval of images, content management functionality, email management functionality, and search and retrieval of ERM reports. The training sessions delivered to DEQ end-users by DEQ trainers should run 4 to 6 hours in length. The CGI provided Train-the-Trainer course will run approximately 3 days in length.

hhhh) Scanning/Indexing Course

The Scanning/Indexing class is focused on the capture component to the solution. It should be attended by all scanning and indexing staff affected by the implementation of the ECM system. Class sizes should range from 5 to 10 students with 1 DEQ trainer. The course will minimally provide an overview of how to operate the scanners, indexing of scanned documents, and scanner maintenance activities. The training sessions delivered to DEQ end-users by DEQ trainers should run 4 to 6 hours in length. Completion of the ECM System Overview course is a prerequisite, however, completion of all other end-user training courses is recommended. The CGI provided Train-the-Trainer course will run approximately 3 days in length.

iii) Workflow Course

The Workflow class is focused on the business process management and workflow processing aspects to the solution. It should be attended by all DEQ staff who will process or manage workflow items affected by the implementation of the ECM system. Class sizes should range from 10 to 20 students with 1 to 2 DEQ trainer. The course will minimally provide an overview of how to locate ad hoc and assigned workflow items and how to process workflow items to completion. The training sessions delivered to DEQ end-users and managers by DEQ trainers should run 4 to 6 hours in length. Completion of the ECM System Overview course is a pre-requisite, however, completion of all other end-user training courses is recommended. The CGI provided Train-the-Trainer course will run approximately 3 days in length.

iiii) Workflow Management Course

The Workflow class is focused on the management and reporting associated with business process management and workflow processing aspects to the solution. It should be attended by all DEQ staff managers who will manage workflow items and processes affected by the implementation of the ECM system. Class sizes should range from 10 to 20 students with 1 to 2 DEQ trainer. The course will minimally provide an overview of how to locate ad hoc and assigned workflow items for approval processing and how to track and report on workflow items in various stages of the process. The training sessions delivered to DEQ end-user managers by DEQ trainers should run 4 to 6 hours in length. Completion of the ECM System Overview and Workflow courses are pre-requisites, however, completion of all other end-user training courses is recommended. The CGI provided Train-the-Trainer course will run approximately 3 days in length.

kkkk) Records Management Course

The Records Management class is focused on administering the records management aspect to the solution. It should be attended by all DEQ records managers who will manage the retention, disposition, and related file plans as implemented into the ECM system. Class sizes should range from 5 to 10 students with 1 DEQ trainer. The course will minimally provide an overview of how to access the configured retention and disposition of record types, how to modify the retention rules and schedule, and release of records for disposition. The training sessions delivered to DEQ records managers by DEQ trainers should run 4 to 6 hours in length. Completion of the ECM System Overview course is a pre-requisite, however, completion of all other end-user training courses is recommended. The CGI provided Train-the-Trainer course will run approximately 3 days in length.

The following are references for two clients where CGI has delivered similar end-user training:

(1) Reference #1: Office of Federal Housing Enterprise Oversight (OFHEO) – Examiner Workstation System (xWorks) - (1/2 Page Summary)

The Office of Federal Housing Enterprise Oversight (OFHEO), an independent agency within the agency for Housing and Urban Development (HUD), has the responsibility to ensure that Fannie Mae and Freddie Mac, two government-sponsored enterprises (GSEs), have the financial strength to fulfill their role in the nation's housing finance system. OFHEO conducts ongoing supervision; risk-based, targeted examinations; and special projects of the GSEs to assess their risk exposure and the appropriateness of their risk management practices. OFHEO examiners investigate, analyze, assess and document their conclusions on a broad range of factors and communicate their findings to the GSEs. These examinations determine if an institution's policies or the way it administers accounts has resulted in a contingent liability or estimated loss that could damage the institution's capital.

The examination process used by OFHEO mirrors the process used for bank examinations. The process, primarily manual, relied on a paper-based work environment. OFHEO modernized its examination process with a state-of-the-art FileNet software and systems integration services from CGI. CGI implemented a system under an extremely aggressive schedule that provides examiners a user-friendly tool to conduct, manage, and maintain examination and supervisory information. The Examiner Workstation (xWorks) System is a high-profile information system initiative which supports the OFHEO management, examiners, and administrative staff. The solution leverages the FileNet P8 platform and augments it with other COTS products. The overall solution operates in an integrated portal environment and provides the following benefits for OFHEO:

- Faster, more accurate processing of examination activity data;
- Reduced data entry effort using document capture Processes;
- Automated storage of activity documents;
- Significantly faster retrieval of inquiries (seconds as opposed to hours spent retrieving hard-copy data);
- New search capabilities providing for index-based and full-text searching;

- Minimized lost and misfiled documents;
- Increased control of the workflow and better reporting capabilities;
- Ability to standardize the examination process throughout the agency; and
- Reduced reliance on antiquated technologies.

CGI worked with OFHEO to deliver Phase I of the xWorks project in 15 weeks. This is a highly aggressive timeline for any ECM implementation. Effective project management, change management and quality management coupled with expert consulting staff from CGI were the main reasons for the success of this initiative.

(2) Reference #1: St. Vincent Hospitals & Health Services (STVI), Indianapolis, Indiana - Document Imaging and Workflow System Implementation

St. Vincent Hospital and Health Services is a nonprofit, healthcare system sponsored by Ascension Health, the nation's largest Catholic and largest nonprofit health system. St. Vincent Hospitals and Health Services encompass four major locations and over 30 satellite treatment facilities in the central Indiana area. As a patient-focused integrated healthcare delivery system build around an acute care center, St. Vincent treats its inpatients and outpatients at its two primary hospitals, St. Vincent Indianapolis Hospital and St. Vincent Carmel Hospital, with 620 and 55 beds respectively.

CGI-AMS was selected to manage the initial deployment of imaging and work flow technology in the Health Information Services (medical records), Patient Financial Services, and Patient Intake areas of both the Indianapolis and Carmel facilities. St. Vincent chose CGI-AMS primarily for its breadth of information technology and system integration resources as well as its imaging and work flow experience to assist its own Information Systems staff on this large, multi-year project.

This suite of applications helped St. Vincent to migrate from the existing environment of disparate, incompatible systems to an integrated, open architecture, enabling them to better adapt to the changes brought about by healthcare reform. Specifically, the PatientLink/RecordLink Product Suite helped St. Vincent achieve its quantitative targets of:

- Reducing operating costs due to paper handling, including floor space, supplies, micrographics, outsourcing, and closing of satellite medical records facility;
- Simultaneous remote access, off-site and hospital-wide, for authorized users of patient information;
- Improved security for medical records and other patient information;
- Faster issue resolution; and
- Improved customer service throughout the billing process for both patients and third party payers.

Implementation of the Link products helped St. Vincent prepare to take advantage of emerging technologies and achieve a competitive advantage in its market. The imaging and workflow systems are viewed as essential foundational components that will support the ongoing reengineering of the enterprise.

DD. Base 30

System Administration Training: IBM FileNet will supply Systems Administration training for the FileNet P8 software. Training required for the Systems Administrative person in relation to integration should be proposed and supplied by the Integrator. All training material should be furnished to DEQ in electronic and hardcopy format (MS Word or PowerPoint). DEQ further requires that the System Administrator work with the supplier staff on a full time basis during implementation to facilitate their understanding of the system - how it is integrated, workflow, and the general system installation. DEQ expects the supplier's staff to support fully this training approach.

Suppliers should provide one (1) sample training-handbook for evaluation. This handbook should be placed in an appendix to the proposal and marked as such.

Can you provide the necessary services for the required system administrator training? Please submit a sample of similar training material your firm has created?

Yes, CGI can provide the necessary services for the required system administrator training.

CGI will develop a curriculum for DEQ administrator staff to help them in effectively operating and maintaining the functionality delivered as part of the ECM solution. With this in mind, CGI will develop and deliver training that:

- Can include step-by-step training procedures
- Can be provided to DEQ in paper-based format as well as electronic formats
- Can meet the training requirements of system administrators that have been identified by DEQ

CGI will provide training material in addition to "user friendly" documentation on the system and individual components. An example of our training documentation is contained in Appendix D – Sample System Administration Training Handbook. Based on DEQ's needs, and previous experience in ECM implementations, CGI recommends the following training program for system administrators, to be delivered by CGI:

1. System Administration Course

The ECM System Administration class is the single training course for administering the new solution. It should be attended by all DEQ system administration staff affected by the implementation of the ECM system. Class size should range from 5 to 10 students with 1 to 2 CGI trainers. The course will minimally provide details on hardware/software components, basic administrative functions, troubleshooting, preventative maintenance, document capture and content management administration, email management administration, COLD administration, integration components, workflow and scheduling, and report generation and management functions. The training sessions delivered to DEQ system administrators should run approximately 3 days in length. Completion of the FileNet-provided system administration training and ECM System Overview course are pre-requisites, however, completion of all other end-user training courses is recommended. In addition, it is expected that DEQ system administrators will work hand-in-hand with CGI technical staff during the implementation and support phases.

EE. Base 31

Security Officer Training: The supplier should provide training to DEQ security staff. This training will cover topics such as setting-up a user account, establishing authorization and initial passwords, password reset, and other appropriate security administration tasks. This training will be provided to two DEQ employees at DEQ's central office. Upon potential contract award, the supplier should be prepared to provide electronic and two (2) hardcopy sets of all appropriate training materials.

Can you provide the necessary services for the required security officer training? Please submit a sample of similar training material your firm has created?

Yes, CGI can provide the necessary services for the required security officer training.

CGI will develop a curriculum for DEQ security staff to help them in effectively administering security functions for the ECM solution. With this in mind, CGI will develop and deliver training that:

- Can include step-by-step training procedures
- Can be provided to DEQ in paper-based format as well as electronic formats
- Can meet the training requirements of security staff that have been identified by DEQ

CGI will provide training material in addition to "user friendly" documentation on the system and individual components. An example of our training documentation is contained in Appendix E – Sample Security Training Handbook. Based on DEQ's needs, and previous experience in ECM implementations, CGI recommends the following training program for security staff, to be delivered by CGI:

1. Security Administration Course

The ECM Security Administration class is the single training course for administering security functions for the new solution. It should be attended by the two DEQ security staff members noted in the RFP and will be taught by a single CGI trainer. The course will minimally provide details on user account set-up and administration, password changes, security privilege modifications, and other basic security administration tasks. The training sessions delivered to the two DEQ security staff members should run approximately 3 days in length. Completion of any relevant FileNet-provided administration training and ECM System Overview course are pre-requisites, however, completion of all other end-user training courses is recommended.

FF. Base 32

The deliverables in the following sections (BASE-32 through BASE-42) are contingent on the award of a successful contract.

Project Schedule: The purpose of the project schedule is to establish estimated hours, dollars and staffing levels for each phase of the project and for the entire project. The project schedule also identifies completion dates for project tasks, milestones and deliverables. A project schedule should be provided prior to the start of each deployment phase and updated on a regular basis.

The project schedule contains, at a minimum:

The tasks to be performed including a decomposition of tasks into subtasks which do not exceed 160 staff hours or four (4) elapsed weeks

A narrative description of each task

Personnel hours, personnel classifications required and other resources for each subtask summarized by major subtasks and tasks

Gantt Chart or equivalent

In constructing the schedule, the supplier should take into consideration the ninety-day (90) lead-time required by VITA for any infrastructure tasks that may be required.

Can you provide the required project schedule?

Yes, CGI can provide the required project schedule. As requested in BASE-28, CGI has provided an integrated master schedule for Phases 1, 2, 3, and 5 of the ECM Integration project. This project schedule details the tasks, timeframes, resources, deliverables, and dependencies associated with implementing the requested functionality for each phase. As part of the project initiation phase, CGI and DEQ will perform a project schedule validation. The purpose of this validation is to confirm that the goals are still achievable and to reaffirm our shared understanding of what it will take to meet them, in light of any new developments or changed assumptions since the proposal was submitted. The joint team can also confirm that the required ninety day lead time is in place for any infrastructure related components to the plan.

Once the ECM Integration project schedule has been validated and base-lined, schedule maintenance and control activities will occur to keep the project schedule current and accurate. Going forward, CGI recommends maintaining three sets of schedule data: baseline, actual and forecast. This will help us understand where the project stands in accordance with our original plans and how the Commonwealth and CGI will get to the project destination.

In order to focus attention on potential cost and schedule variances, the CGI Project Manager will track progress of tasks on a weekly basis using actual data. Actual start and end dates for tasks will be compared with the planned dates and estimated level of effort. The start and end dates, plus the status of the cross-project dependencies, will be updated and assessed. From these comparisons, the Project Manager will adjust projections of milestones and costs and also determine if re-estimating or staffing changes are needed.

GG. Base 33

Infrastructure Requirements: The Infrastructure Requirements should include, at a minimum, the following:

Server specifications

SAN requirements

Network requirements

Workstation and monitor recommendations

The infrastructure requirements need to be provided as soon as possible after the commencement of services in order that VITA can deploy the infrastructure in a timely manner; VITA requires ninety-days (90) to process each request for service. VITA commences the deployment of the requested infrastructure after its review and approval of a request for service.

Can you provide the required infrastructure requirements?

Yes, CGI can provide the required infrastructure requirements.

From a server perspective, the CGI solution utilizes several devices to provide functionality. This means that each server may have differing requirements depending on the server being discussed. In general, CGI will recommend the use of dual-core Intel Xeon server processors at 2.33 GHz or greater. For those devices requiring four processors, a client can utilize dual Xeon dual-core processors or quad-core processors. CGI also recommends a minimum of 4GB of RAM in each server, and redundant disk subsystems for the boot drives. CGI also highly recommends the use of redundant power supplies.

Three classes of servers are recommended to support FileNet: High, Medium, and Basic Performance. The minimum specs for each class of machine are identified in the table below. Please note CGI did not recommend a particular brand such as IBM or Dell since we noticed both hardware manufacturers in Appendix D. CGI will work with any hardware manufacturer, and will recommend a preference if DEQ so chooses. CGI gets competitive pricing for both vendors if DEQ requires purchase assistance.

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Type	High Performance	Medium Performance	Basic Performance
Processors	4 x 3.0GHz/800Mhz/4mb Cache, Dual-Core Intel® Xeon 7120M Processor or better	2 x Dual Core Intel® Xeon® 5148LV, 4MB Cache, 2.33GHz, 1333MHz FSB or better	1 x Dual Core Intel® Xeon® 3070, 2.66GHz, 4MB Cache, 1066MHz FSB
Memory	4-32GB RAM	4GB RAM, Single Ranked DIMMs	2-4GB RAM, Single Ranked DIMMs
Operating System	Windows Server® 2003 R2, Standard Edition (Enterprise if more than 4GB RAM)	Windows Server® 2003 R2, Standard Edition	Windows Server® 2003 R2, Standard Edition
Other	CD ROM Drive, Floppy Drive, Dual Gigabit Network Adapters, 2x76-GB 15K SCSI hard disks mirrored (RAID 1)	CD ROM Drive, Floppy Drive, Dual Gigabit Network Adapters, 2x76-GB 15K SCSI hard disks mirrored (RAID 1)	CD ROM Drive, Floppy Drive, Dual Gigabit Network Adapters, 2x76-GB 15K SCSI hard disks mirrored (RAID 1)
Example	Dell 6850's or IBM equivalent are ideal for enterprise class use and serve well as high end production servers. They are the ideal class of machine to run foundation FileNet applications such as the Content Server.	Dell 2950's or IBM equivalent are multi-purpose servers and can fill a range of functions including high speed RAID file systems, RAID databases, application servers, Host VM Machines for development and/or test.	Dell 860's or IBM equivalent are basic machines designed to be basic application servers that handle simple tasks like full text indexing or executing custom DAPI calls. These servers are also ideal servers to be used in clustered server configurations.

For storage area network requirements, image storage will require a capacity of approximately 1.7TB after 5 (five) years, assuming 200 DPI TIFF storage. Database storage will require approximately 150GB after five years. Image storage should be located on RAID-5 (or better) stripe sets for redundancy and better allocation of space, while database storage would be better served on RAID-10. 2GBps of fiber-channel connectivity (or better) is preferred. Additionally, synchronous write capabilities are required for FileNet data storage images (MSAR devices). CGI can verify the capabilities of your SAN in coordination with your solution provider if necessary to determine this functionality.

Regarding network requirements, CGI will give recommendations for remote users, remote offices, local office workstation connectivity, high-speed scanning, and servers. For remote telecommuters, as noted in the BASE-2 response, CGI recommends that telecommuting users have the equivalent bandwidth of DSL or cable-modem installed (typically 1.5Mbps or greater). CGI does not recommend the utilization of slower bandwidth for regular utilization, though it is possible to run the application. For remote offices, dependent on volume of users and transactions as noted in the BASE-2 response, T-1 speeds (or better) tend to provide acceptable performance. In the local office, workstation connectivity is typically sufficient utilizing 10Mb Ethernet connectivity. This is a dated standard – the majority of offices now utilize 100Mb switched Ethernet for network capacity. In regards to the scanning environment, it is suggested that DEQ be cautious on their anticipated roll-out of additional higher-speed scanners, specifically in regards to the backfile project noted in Appendix D. Higher-speed scanners can consume a significant portion of network bandwidth, as noted in BASE-3. CGI recommends the isolation of high-speed scanners to different – and higher speed – network segments, starting at 100Mb and improving to 1Gb if available. For server connectivity, 100Mb switched connectivity should be viewed as the bare minimum and 1Gb switched connectivity is preferred.

- Workstation and monitor requirements are noted in CGI's preliminary analysis of DEQ's existing infrastructure and anticipated purchases. In general, end user workstations should meet minimum requirements outlined by FileNet:
- Intel Pentium III 750 MHz or higher—Other chipsets can be used, but errors must have the ability to be reproduced on an Intel machine equal to or above the minimum specification.

- 128 MB of memory or higher is the preferred configuration for “dedicated” users.
- 100 MB of free hard drive space—This is more of an indication of overall workstation load and performance than an actual requirement, but having less than 100 megabytes of free space can cause performance and stability issues.
- 1024 x 768 minimum video resolution—Users will require the standard recommended 19-21 inch 1600x1200 resolution monitors.
- Network—Each workstation will require network connectivity. It is assumed that the network bandwidth and architecture is running within its “normal” capacity and can support the additional load of images.

Aside from previous notations regarding monitor size and resolution, it is anticipated that DEQ’s current and anticipated workstations should perform satisfactorily.

HH. Base 34

Detailed Design: The successful supplier will submit two (2) Detailed Design Documents as an initial delivery for each deployment phase. The first should be a summary Detail Design that a non-technical user can understand. The second is a technical Detail Design that should address:

assumptions and dependencies

expected inputs

implementation language

customized script definition, e.g. UML

description of the process being performed

expected output(s)

relationships to other processes and integration requirements

workflow definitions and diagrams

documentation for all workflows, imports, and integration samples purchased as part of this procurement

security

data migration plan

DEQ department responsible for the process

DEQ grade level of the staff performing the process

The definition of each automated process includes:

a list of input files and data items to be used

data item descriptions

definitions of screens and/or online forms at a data item level, including applicable control events and the processing associated with each event

definitions of report contents at a data item level

descriptions of any other output(s)

timing and frequency of operation of the system

special considerations which may apply

The Detail Design relates directly to the functional requirements defined in the RFP and describes how the supplier's system satisfies those requirements. In the course of defining automated processes, the Detail Design distinguishes between off-the-shelf supplier software and custom software.

Each Summary Detail Design Document should be written in language that can be understood by the non-technical reader, allowing the reader to understand and evaluate the implementation impact of the supplier's design. DEQ will use these documents during the implementation process to:

ensure that the proposed design meets the business requirements

establish cost of operating the proposed system

identify staff requirements for manual processes

identify staff requirements for user interfaces with automated processes

Can you provide the required detail design document?

Yes, CGI can provide two (2) Detailed Design Documents as an initial delivery for each deployment phase. The first of which would be a summary Detail Design that a non-technical user can understand, and the second a technical Detailed Design.

The summary Design Document will consist of the following:

- **Design Scope:** details the assumptions, constraints, and risks that the CGI Team has identified.
- **Core Detailed Design Overview:** overviews the detailed design for the core application environment.

The Summary Detail Design Document will be written primarily for the non-technical reader, , allowing the reader to understand and evaluate the implementation impact of the CGI design.

The technical Design Document will consist of the following:

- **Design Scope:** details the assumptions, constraints, and risks that the CGI Team has identified.
- **Core Detailed Design Overview:** overviews the detailed design for the core application environment.
- **Security Detailed Design Overview:** overviews the detail security design for Network, Operating System and Application level security.
- **Physical Data Model:** details the Physical Data Model (PDM) for the core application environment.
- **Core Data Dictionary:** details the Data Dictionary for the core application environment.
- **Core User Role Matrix:** details the user access role matrix.
- **Core List of Values:** details the reference data for the list of values in the core application environment.
- **System Enforced Business Rules:** details business rules that will be systematically enforced in the ECM project.

As requested in the RFP, the Technical Detail Design document will address the following:

- assumptions and dependencies
- expected inputs
- implementation language
- customized script definition, e.g. UML
- description of the process being performed
- expected output(s)
- relationships to other processes and integration requirements
- workflow definitions and diagrams
- documentation for all workflows, imports, and integration samples purchased as part of this procurement
- security
- data migration plan
- DEQ department responsible for the process
- DEQ grade level of the staff performing the process

II. Base 35

User Education and Training Materials: The purpose of the User Education and Training Materials is to prepare the user organizations for implementation of the new system. Two (2) hardcopies and one (1) electronic version of this material will be required, upon award of the successful contract. This deliverable is organized by DEQ departmental and functional areas, and is directly related to the manual and automated processes identified in the Detail Design. It includes a detailed user-training plan and is the basis for all updates to user procedure manuals. Suppliers should also address on-going ECM training needs.

Can you provide the required user education and training material?

Yes, CGI can provide the required user education and training material.

As noted in our response to BASE-29, BASE-30, and BASE-31, CGI will provide the required Train-the-Trainer training for end-user staff, training for system administrators, and training for security staff. As part of this process, CGI will create a detailed training plan and the training materials, both hardcopy and electronic, requested in the RFP. These materials will provide the basis for the initial staff training and can be used by DEQ in the future to train additional or new staff.

JJ. Base 36

System Documentation: Systems documentation consists of an overall system design for each program:
input and output file descriptions
report layouts
screen layouts
program narratives and listings
all customization including functions and languages used
Suppliers should also include installation manuals, systems documentations, developer's/integrator's documentation, notes and documentation.

Can you provide the required systems documentation?

Yes, CGI can provide all the required systems documentation. The following deliverables and work products can be prepared in support of this task:

- Installation Manuals
- Systems Documentations, for example:
 - System Development Management Plan
 - Configuration Specifications
 - Data Conversion Plan
- Developer's/Integrator's Documentation, for example:
 - System Design Document
 - System Security Plan

The CGI Team believes that a large-scale system can be efficiently and cost-effectively developed so long as the development phase is preceded by a thorough design effort that is fully documented. As modules or functional units of work are completed, systems documentation can be updated as needed. These updates will highlight development and unit test progress, and demonstrate to DEQ completed functionality for the ECM solution.

KK. Base 37

Administrator's Manual: Suppliers should supply two (2) copies of an Administrative Manual that includes a complete description of all administrative functions including enhancements and integration that were developed as part of this contract. Suppliers should state what support they provide for the Imaging Systems Administrator after implementation.

Can you provide the required administrator's manuals?

Yes, CGI is able to provide the required administrator's manuals that will include a complete description of all administrative functions including enhancements and integration that were developed as part of this contract. The administrator manual assumes that all user training manuals have been read and understood by the System Administrators and the System Administrators have taken the System Administration course described in the response to BASE-30.

The ECM System Administration manual, much like the corresponding course, will minimally provide details on hardware/software components, basic administrative functions, troubleshooting, preventative maintenance, document capture and content management administration, email management administration, COLD administration, integration components, workflow and scheduling, and report generation and management functions.

LL. Base 38

Supplier Test Plan: The supplier should provide a Test Plan. The Test plan should include:

- a description of each type of testing that the supplier will perform (i.e., unit testing, system testing, performance testing, load testing, etc.)
- the goals and objectives of each type and/or phase of testing
- the Entrance Criteria for each phase of testing (Entrance Criteria are the agreed upon conditions that should be met prior to commencing the testing)
- the Exit Criteria for each phase of testing (exit criteria are the agreed upon conditions that should be met to deem the testing phase satisfactorily)
- the schedule for the testing to be performed (this may be included in the Project Plan)
- the staff required to perform each type/phase of testing
- the method of tracking, prioritizing, and escalating detected defects
- the criteria for categorizing the severity of the defects
- the environment the testing will be performed on
- the method for establishing test data
- the tools used to perform the testing (including supplier and version)

Can you provide the required test plan?

Yes, the CGI Team can provide a Test Plan for the ECM project with our primary objectives being the following:

- Providing a comprehensive and consistent view of the test effort for the ECM project
- Provide a vehicle for identifying and correcting test coverage omissions and reducing redundant work across organizations
- Serve as a means for communicating testing approach and methodology

CGI addresses the overall approach to conducting unit, system, integration, and user acceptance testing. Test processes and methodologies address activities to be performed by the CGI Development and Testing teams.

Our test plan will consist of the following:

- **Overview:** details the objective, scope, schedule, and completion tasks of the testing process.
- **System Test Methodology:** defines each testing method and details the testing preparation, documentation, and sign off.
- **Technical Environment:** details the technical environments that will be used in various stages of testing.
- **Testing Tools:** details the various tools CGI will use to facilitate testing.
- **Test Case Example:** provides an example of the Test Case Specification.
- **Test Case to Requirements Traceability Matrix:** provides an example of the Test Case to Requirements Traceability Matrix.

The following describes both the DEQ and CGI roles and responsibilities that are key to the testing process:

DEQ Test Sponsor: The DEQ Test Sponsor is the DEQ employee responsible for overseeing test activities, making sure that the interests of DEQ are addressed, and acting as the point of contact for the Functional Team Lead. The Test Sponsor is responsible for distribution, review, and collection of comments and signatures of test deliverables.

Functional Team Lead: The Functional Team Lead is a CGI employee responsible for coordinating test activities with DEQ, the Test Team, and the Development Team. Test activities include test case development, delivery of test documentation, test execution, test environment readiness, and management of the User Acceptance Testing (UAT) support.

Test Team: The CGI Test Team is a group of CGI employees responsible for execution and documentation of test cases. The CGI Test Team is responsible for conducting system and integration testing and supporting UAT. The CGI Development Team will perform unit testing; therefore, these tests are not included in the description of CGI Test Team's responsibilities. DEQ will have a Test Team responsible for planning, executing, and documenting the UAT.

Configuration Manager: The CGI Configuration Manager is responsible for tracking software changes, scheduling and monitoring software migrations, documenting changes included in each migration, and notifying the test team of incidents ready for re-testing.

Technical Team Lead: The ECM application will have unique user ID's and passwords. The Technical Team Lead is responsible for establishing user ID's and passwords in the CGI Test and Development environments for the CGI Project Team.

MM. Base 39

Supplier Testing: The supplier should create specific Test Cases and their expected results for each phase of testing. DEQ desires to be included in their review in order to gain a full understanding of the system.

Prior to commencing a testing phase, the supplier should review the Entrance Criteria to determine that everything is ready for the testing to commence.

At the conclusion of each phase of testing, the supplier will provide DEQ with the following information:

the test cases

the expected test case results

the observed test case results

the complete defect list

all release notes

the entrance and exit criteria report

On fulfillment of the Exit Criteria, the phase of testing is completed. Note, the supplier's proposal, and/or contract stipulate the expected test results for performance testing.

DEQ is desirous of establishing an automated regression test suite. The supplier should describe what automated test tools, if any, will be used and if they will provide the automated test cases for DEQ's future testing needs.

Describe your relevant experience, capabilities and approach to supplier testing. How will you comply with DEQ's requirements for supplier testing?

CGI's overall supplier testing objectives for this system are to provide alignment with business requirements, quality system components, and measurements of system quality. In order to meet testing objectives, CGI's testing strategy for this system will include the following different types of testing:

- **Unit Testing**—Focuses on specific procedural logic contained within components and the validity of data passed among components rather than on the successful execution of complete business scenarios.
- **Integration Testing**—Tests that each primary function in the system works correctly and consistently. It is technical rather than functional testing and verifies that the software and configured COTS products work together. By executing a small number of test scripts, this test will verify that the system operates in a stable manner from beginning to end.
- **Performance Testing**—Verifies that the system meets an acceptable level of performance and that changing user volumes can be handled with little change in performance quality. While other testing levels focus on the business functionality, performance testing addresses the physical transmission of a business transaction from one system component to the next. It also addresses the related considerations of the system throughput and user response time.
- **Regression Testing**—Verifies that all parts of the system continue to function as required and are not impacted by changes in functionality to specific parts of the system. Regression testing is an imperative when changes are made to an existing system. The regression test plan mirrors the system test plan with the intent to test all parts of the system and not just the code changes.
- **User Acceptance Testing**—Verifies that the system meets expected requirements by having staff execute defined scenarios.

For each increment of functionality, CGI will develop a Test Plan. The Test Plan will determine the overall testing strategy and will provide details on how the different types of testing will be performed. The plan will include a discussion of the testing approach, resources, and schedule for each testing phase.

CGI will also develop test cases to map to system requirements and use cases. The CGI team will execute the test cases according to the test procedures and as scheduled in the Test Plan. Each test case will have its own test case specification and test procedures. Each test case will include the following components:

- Objective of Test Case

- Description of Test Case
- System Requirements Satisfied by Test Case
- Prerequisites
- Inputs and Setup Required for Test Case
- Identification of Test Data
- Step by Step Procedures for Test Case Execution
- Pass/Fail Criteria
- Expected Results

The team will document the test results in a Test Log, Test Incident Report, and Test Summary Report with entrance and exit criteria as well as provide snapshots of test database contents.

These documents will contain the following information:

- **Test Log**—The Test Log will provide a chronological record of relevant details about the execution of tests. Included in the Test log will be:
 - A summary of the test
 - Dates of the testing activities
 - Identification of the test cases performed
 - Adherence to or any deviations from the Test Plan
 - Explanations why any deviations were necessary
 - Test results
 - Identification of requirements successfully tested
 - Problem reports
- **Test Incident Report**—The Test Incident Report documents any incident that occurs during the testing process that requires investigation. An incident is an occurrence of any unexpected or unexplained result. With software systems, an incident is usually identified when actual results do not match expected results. Any problem that is reported is considered an incident until further analysis determines that it is a defect.
- **Test Summary Report**—The Test Summary Report summarizes the results of the designated test activities, provides evaluations based on these results, and details the entrance and exit criteria for the test phase and how they were met.
- **Database Contents**—The contents of the database, as appropriate, for each selected test case.

CGI has experience with a variety of automated testing tools and suites that provide integrated test management, as well as powerful, functional, load testing, and end-to-end performance management. These enterprise testing and performance management tools enable organizations to successfully deploy and verify peak performance in the production environment. CGI will work with DEQ to identify an automated testing tool that is appropriate for the project. Any test cases built into the tool during the project will be available for future use by DEQ.

NN. Base 40

Acceptance Test Plan: DEQ will produce the Acceptance Test Plan. The Acceptance Test Plan will include:

- the Entrance Criteria for the testing
- the Exit Criteria for the testing
- the schedule for the testing to be performed
- the staff required to perform the testing
- the method of tracking, prioritizing, and escalating detected defects
- the criteria for categorizing the severity of the defects
- the environment the testing will be performed on
- the method for establishing test data
- the tools used to perform the testing (including supplier and version)

Both the supplier and DEQ will review and approve the Acceptance Test Plan. The supplier is required to provide comments on the Acceptance Test Plan. This document will serve as the basis for acceptance and payment to the supplier.

Describe your relevant experience, capabilities and approach to an acceptance test plan? How will you comply with DEQ's requirements for the acceptance test plan?

As requested in the RFP, CGI will review and provide comments, if any, on the Acceptance Test Plan developed by DEQ. CGI assumes this plan will define the objective, timing, and method for each type of test to be conducted by DEQ for User Acceptance Testing (UAT). In addition, the UAT Plan will clarify roles and responsibilities of the CGI Team and DEQ staff in support of the UAT efforts. The UAT plan will provide similar information to the CGI test plan to detail all relevant information related to planning, executing, reporting, and evaluating the results of the UAT test period.

OO. Base 41

Acceptance Testing: DEQ will create specific Test Cases and their expected results for the Acceptance Testing. The supplier will be included in their review.

Prior to commencing Acceptance Testing, DEQ will review the Entrance Criteria with the supplier to determine that everything is ready for formal Acceptance Testing to commence. DEQ will perform the testing with the support of the supplier. The supplier will support the Acceptance Testing as needed, i.e. setting up the Acceptance Test environment, creating test data, defect tracking and resolution, etc.

At the conclusion of testing, DEQ and the supplier will review the Acceptance Testing results; on fulfillment of the Exit Criteria, Acceptance Testing is completed.

Describe your relevant experience, capabilities and approach to acceptance testing? How will you comply with DEQ's requirements for acceptance testing?

CGI has always placed strong emphasis on providing quality support during the User Acceptance Testing (UAT) phase of the project. Our overall testing objectives are to provide:

- Alignment with business requirements
- Quality system components
- Measurements of system quality

CGI intends to comply with DEQ's requirements for acceptance testing. Prior to UAT execution, CGI will review the test cases provided by DEQ and return comments, where appropriate as well as work with DEQ to confirm that the solution is ready for UAT test execution. During the Acceptance Testing period, CGI will fully support DEQ's UAT efforts. The CGI Team will be responsible for assisting users where needed in completing their test cases, assisting with incident tracking, and resolving system defects.

At the conclusion of testing, DEQ and CGI will review the Acceptance Testing results; on fulfillment of the Exit Criteria, Acceptance Testing will be deemed completed.

PP. Base 42

Post Implementation Review: The purpose of the post implementation is to determine if the delivered product meets the expected results. The project is reviewed to determine if the system's operational expectations have been met, and if the system documentation is satisfactory. The supplier will create a post implementation report that includes:

an analysis of the observed system performance vs. the stipulated performance in the supplier's Proposal and/or Contract

unanticipated system problems

variances between implemented system design and design as shown in systems documentation

an analysis of unresolved defects including recommendations for remedies for mutually agreed upon significant defects

the project Issue log, risk log, complete defect list and traceability matrix

**Describe your relevant experience, capabilities and approach to post-implementation review?
How will you comply with DEQ's requirements for post-implementation review?**

As part of any implementation, CGI realizes the importance of providing a post-implementation review following production migration of the ECM solution. During the CGI support period, CGI will supply DEQ with a post implementation report as requested in the RFP. The post-implementation report will cover any outstanding system defects, performance issues, newly identified system incidents and defects, and outstanding project issues including design issues. It will also include the complete defect list and requirements definition supporting the implemented solution. The primary purpose of the review is to provide an initial state of affairs for the solution after Go-Live.

Through active change management, detailed requirements gathering, extensive training, and project issue tracking, our goal in the post-implementation review is to minimize any variances between customer expectations and actual system functionality and performance. Where variances exist during the CGI support period, CGI will work with DEQ to assess system variances between expected and actual system performance, and between system and detailed design. CGI will recommend remedies to mitigate these variances wherever found.

QQ. Base 43

Proposed Configuration: Based on the Case Study, provide the approach to the integrated DEQ's ECM system. At a minimum, this information should include the list of IBM FileNet P8 modules, servers, SAN capacity, and other necessary hardware and software.

Provide the proposed configuration for DEQ's ECM system.

CGI will implement a leading solution for DEQ. As one of the most innovative and long-term FileNet partner, CGI has a range of experience designing and scaling architectures for as few as twenty (20) user systems to thousands of users. It is our pleasure to present our proposed architecture to DEQ:

1. FileNet Software

The following FileNet modules will be implemented at DEQ using the Base requirements as the guideline for the configuration. Please note that CGI has recommended the P8 3.5.x platform instead of P8 4.0.x due to several factors:

1. P8 3.5.x is the base FileNet suite in State Contract VA-070601-IBM.
2. Given the functionality requested by DEQ, there are known compatibility issues in the requested functionality by DEQ and the P8 4.0.x roll-out schedule.

Additionally, please note that the number of user licenses is not provided. CGI will work with DEQ to help determine the number in accordance with the statement: "DEQ anticipates purchasing an estimated 400 named and/or concurrent licenses for IBM's FileNet P8 software; however, not all may be procured immediately."

IIII) Required Software for Base Requirements

The following baseline software modules are required for purchase in order to fulfill the Base requirements contained within the RFP:

1. **308117 and 308115: Professional FN P8 Server Pkg and Dev Server Pkg** – These are the base software licenses for Content Manager. They provide the basic content management functionality, the Workplace user interface, and enable the installation of the content engine, application engine, and FileNet database.
2. **308230 and/or 308231: BPM User Licenses:** DEQ will want to purchase BPM user licenses, however, the exact amount or best user license (concurrent or named) cannot be determined to CGI is on site.
3. **308916 and 308916: Email Archive:** DEQ will need to purchase a development and production license for email manager.
4. **503442: Email User Licenses:** DEQ will want to purchase email user licenses, however, the exact amount or best user license (concurrent or named) cannot be determined to CGI is on site.
5. **308235, 308236: Records Manager Licenses:** DEQ will want to purchase Records Manager user licenses, however, the exact amount or best user licensing model (concurrent or named) cannot be determined until CGI is on site.
6. **307385: Portal:** DEQ will want to purchase the Portal add-on to enable IBM WebSphere portal integration. Note there is no cost.
7. **308332: FileNet Portlets:** DEQ may want to purchase FileNet Portlets, but the exact need cannot be determined until CGI is on site. Note there is no cost.
8. **502909: System Designer:** Allows developers to access development tools within the FileNet P8 suite.
9. **503342, 503250: Public ELA:** Special licenses required for enabling public access to content.
10. **Spicer Impact Freedom:** DEQ will require Spicer Impact Freedom to enable advanced redaction features in FileNet.

- 11. **ASE Output Archiver for APP and Metacode:** DEQ will require ASE Output Archiver to enable COLD functionality in P8 CM.
- 12. **ASE ContentOutput Server:** DEQ will require ASE ContentOutput Server to enable bulk printing and print compression functionality in P8 CM.

mmmm) Optional FileNet Software

The following FileNet modules are necessary depending on which Optional requirements DEQ chooses to implement:

- 1. **201745: P8 Admin Training:** CGI minimally recommends DEQ purchases training for a number of DEQ IT staff to maintain FileNet.
- 2. **308131, 308149, 308150: eForms Licenses:** DEQ will want to purchase eForms user licenses, however, the exact amount or best user licensing model (concurrent or named) cannot be determined until CGI is on site.
- 3. **308139, 308140: Compliance Framework:** DEQ may want to purchase compliance framework user licenses, but the exact amount, the best user licensing model (concurrent or named), or the absolute need given the optional requirements cannot be determined until CGI is on site
- 4. **(various) Business Activity Modules:** DEQ may want to purchase BAM modules, but the proper tools cannot be determined until optional services or requirements are understood.
- 5. **(various) SysMon Modules:** DEQ may want to purchase System Monitoring modules, but the proper tools cannot be determined until optional services or requirements are understood.

2. Recommended Server Infrastructure

The following is a recommended list of servers to procure based on the Base requirements presented in the DEQ case study. Please note the optional or mandatory column – this column indicates whether the server is required to meet a Base requirement or an Optional requirement.

As a refresher, the following classes of servers are recommended:

	High Performance	Medium Performance	Basic Performance
Processors	4 x 3.0GHz/800Mhz/4mb Cache, Dual-Core Intel® Xeon 7120M Processor or better	2 x Dual Core Intel® Xeon® 5148LV, 4MB Cache, 2.33GHz, 1333MHz FSB or better	1 x Dual Core Intel® Xeon® 3070, 2.66GHz, 4MB Cache, 1066MHz FSB
Memory	4-32GB RAM	4GB RAM, Single Ranked DIMMs	2-4GB RAM, Single Ranked DIMMs
Operating System	Windows Server® 2003 R2, Standard Edition (Enterprise if more than 4GB RAM)	Windows Server® 2003 R2, Standard Edition	Windows Server® 2003 R2, Standard Edition
Other	CD ROM Drive, Floppy Drive, Dual Gigabit Network Adapters, 2x76-GB 15K SCSI hard disks mirrored (RAID 1)	CD ROM Drive, Floppy Drive, Dual Gigabit Network Adapters, 2x76-GB 15K SCSI hard disks mirrored (RAID 1)	CD ROM Drive, Floppy Drive, Dual Gigabit Network Adapters, 2x76-GB 15K SCSI hard disks mirrored (RAID 1)

High Performance

Medium Performance

Basic Performance

Example

Dell 6850's or IBM equivalent are ideal for enterprise class use and serve well as high end production servers. They are the ideal class of machine to run foundation FileNet applications such as the Content Server.

Dell 2950's or IBM equivalent are multi-purpose servers and can fill a range of functions including high speed RAID file systems, RAID databases, application servers, Host VM Machines for development and/or test.

Dell 860's or IBM equivalent are basic machines designed to be basic application servers that handle simple tasks like full text indexing or executing custom DAPI calls. These servers are also ideal servers to be used in clustered server configurations.

nnnn) Production Server Infrastructure

Exhibit Error! No text of specified style in document. **-90 Server Hardware**

Name	Server Class	FileNet Software License	Functions	Quantity	Mandatory
DEQ-P-CE-1	High	Professional FN P8 Server Pkg	Content Engine, Database Server (Oracle)	1	Y
DEQ-P-FN-AE-1/2	Med	Professional FN P8 Server Pkg, ASE ContentOutput Server	Application Engine, IBM WebSphere, IBM WebSphere Portal Server, ASE Content Output Server	2 (cluster)	Y
DEQ-P-FN-PE-1	High	BPM User Licenses, Records Manager User Licenses	Process Engine, Records Manager	1	Y
DEQ-P-FN-M-1/2	Basic	Email Archive	FileNet Email Manager	2 (cluster)	Y
DEQ-P-FN-ASE-1	Med	ASE Output Archiver	ASE COLD	1	Y
DEQ-P-FN-INT-1	Basic	None/Custom	Integration Server	1	Y

oooo) Dev/Test Server Infrastructure

The following physical servers should be purchased to support the FileNet installation at DEQ:

Exhibit Error! No text of specified style in document. -91 Dev/Test Environment

Name	Server Class	FileNet Software License	Functions	Quantity	Mandatory
DEQ-D-FN1	Med	(Reside on VMWare Image)	Windows 2003	3	Y
DEQ-T-FN1	Med	(Reside on VMWare Image)	Windows 2003	2	Y

pppp) VMWare

CGI is recommending the use of virtualization software, VMWare, to enable a more efficient, lean, and flexible development test region. CGI has implemented VMWare based dev/test environments at numerous clients, and also uses VMWare for internal FileNet deployments.

VMWare is recommended to virtualize the server architecture in development and testing. Using VMWare has the benefit of allowing development and test to mirror Production – but at a fraction of the cost.

VMWare Workstation allows one physical machine to run two or more operating systems simultaneously. VMWare Workstation software consists of a virtual machine suite for Intel x86-compatible computers. This software suite allows users to set up multiple x86 virtual computers and to use one or more of these virtual machines simultaneously with the hosting operating system. Each virtual machine instance can execute its own guest operating system, such as (but not limited to) Windows or Linux.

To maintain and create VMWare architecture, two relevant components are used:

1. VMWare Server

VMWare Server is used to create, edit, and run virtual machines. In terms of the OS, create is analogous to installation, edit is analogous to changing the configuration, and play is analogous to starting and running the OS. VMWare Server is required to create and modify VM snapshots. VMWare Server uses a client-server model, allowing remote access to virtual machines, at the cost of some graphical performance.

Users of VMWare Server's internal utilities can preserve (and revert to) a single snapshot copy of each separate virtual machine within their VMWare Server environment. EMC makes VMWare Server freely available as a potential predecessor to VMWare ESX Server.

2. VMWare Player

VMWare Player is the shell that is used to run VMware images. VMware player is available free of charge to run guest virtual machines, but it cannot itself create new virtual machines.

Medium performance or High performance class servers are recommended as the host machines to execute VMWare sessions on.

3. Recommended SAN Infrastructure

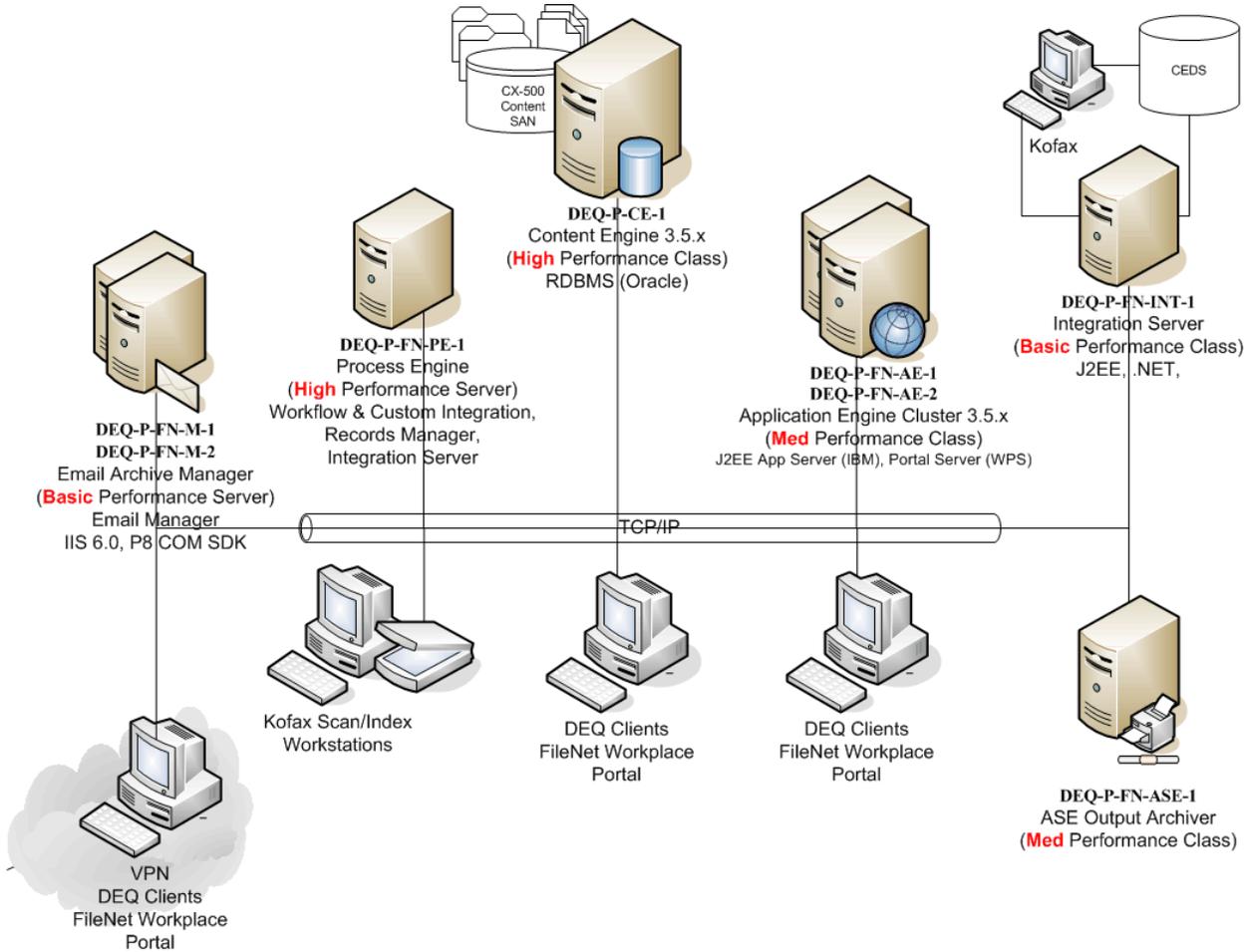
CGI recommends the continued use of the CX-500. It is recommended that 2 Terabytes (TB) of storage be allocated for the DEQ FileNet system. As estimated in Base 1, One (1) TB of storage should cover DEQ for 3 years, with another 1 TB accounting for additional growth. The drives should be configured as RAID 5 for file system storage, and RAID 10 for database storage.

CGI also recommends that DEQ explore the possibility of remotely mirroring the SAN for Disaster Recovery (DR) purposes.

4. Base Architecture

The following architecture diagram represents the minimum architecture that is recommended to support the FileNet initiative at DEQ.

Exhibit Error! No text of specified style in document. -92 Production Architecture



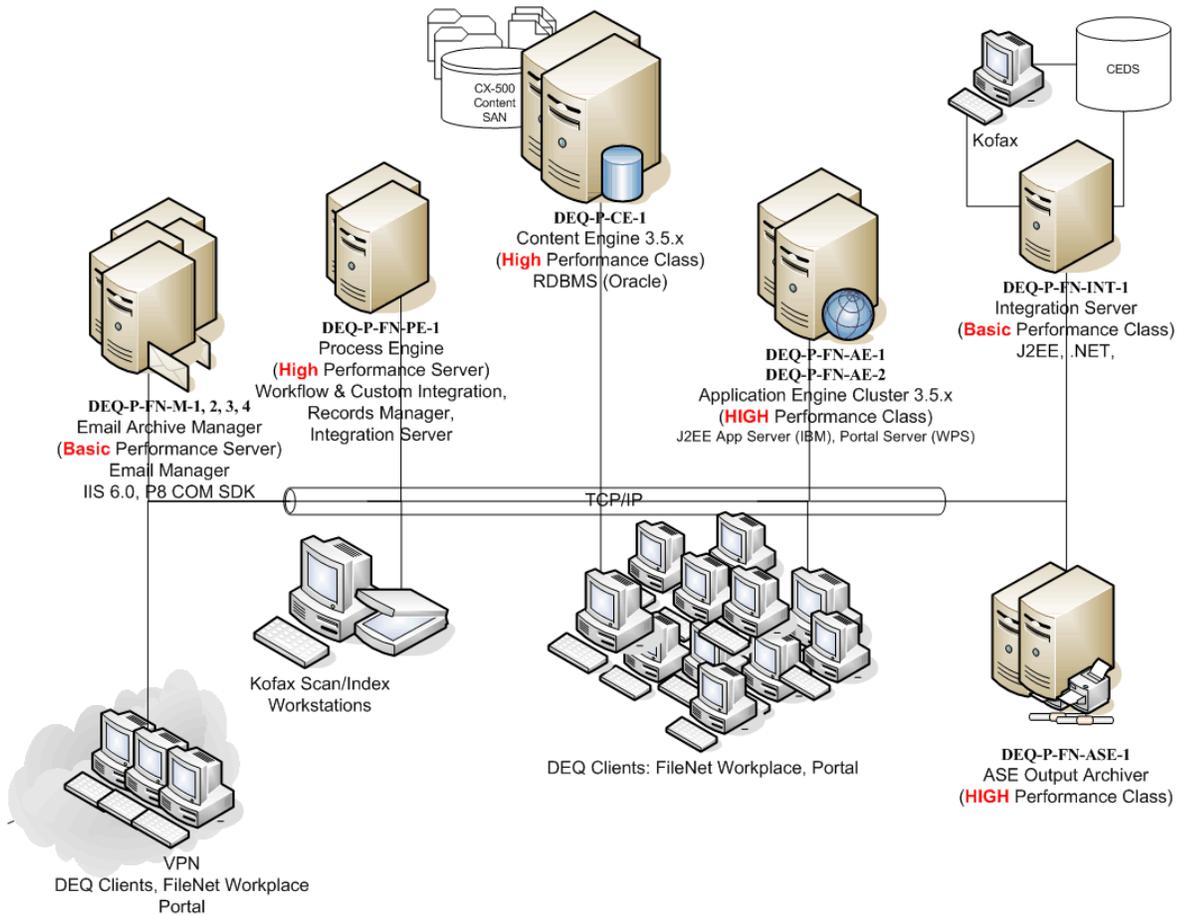
5. Future Architecture

It is recommended that as usage grows to where 75 users are on the system concurrently, an additional application engine capacity is added to meet the increase in demand. This can be accomplished via scaling up or scaling out. The example below, the AE is scaled up.

Other base components such as the Content Engine and Process Engine can be scaled as appropriate and based on the total content served and frequency and number of workflows.

The following conceptual diagram represents a scaled version of the DEQ architecture with additional components installed. Notice some servers have been scaled out (email), while others have been scaled up (AE)

Exhibit Error! No text of specified style in document. -93 Future Architecture Vision



RR. General 1

What CRM software have you integrated to IBM FileNet's P8 software?

Over the last 30 years, CGI has implemented a variety of customer relationship management solutions that included integration with IBM FileNet's P8 software. This primarily involved image enabling customer service-based legacy systems. For example, CGI integrated a statement document retrieval interface into the existing thick client back-end system user interface at numerous major credit card company clients.

SS. General 2

What ERP software have you integrated to IBM FileNet's P8 software?

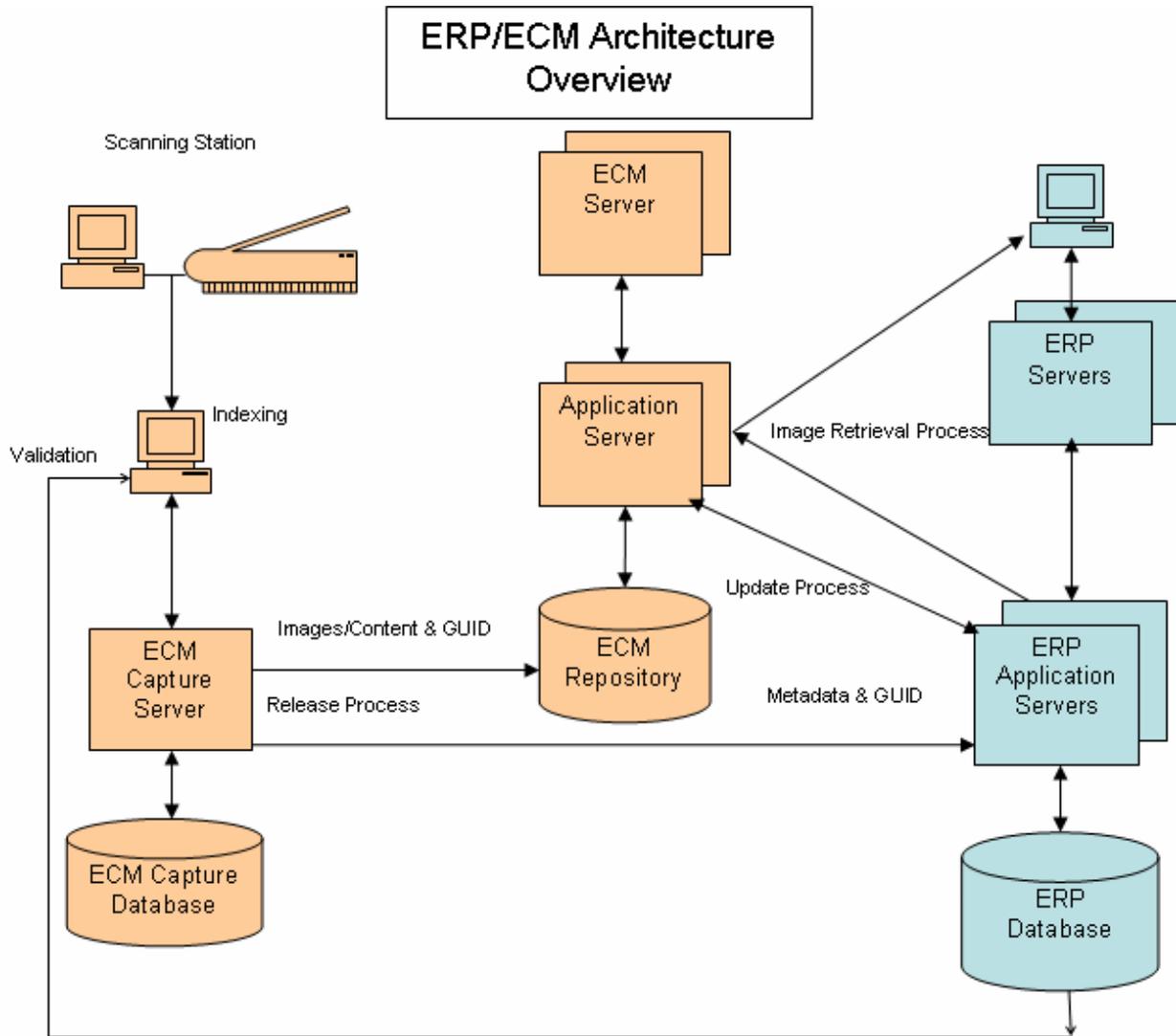
CGI understands the need to combine the functionality of ERP software with access to supporting content in a secured, flexible and seamless integration. CGI has developed ECM integrations to numerous ERP software suites such as SAP, PeopleSoft and CGI's own public sector ERP suite, AMS Advantage.

Through integrated solutions to major ERP software suites, CGI has helped organizations associate digitized information with established business process workflows, including automatic routing, review and approval of HR and Financial transactions. This allows for timely, "one click" access to information within the context of the business process.

Image enablement is a key function provided by CGI in deployment of an ECM solution. CGI, through its Sovera healthcare solution on the FileNet platform, has successfully provided image enablement to most of the major healthcare ERP vendors such as Epic Systems, McKesson, Cerner Corporation and Lawson.

CGI has incorporated seamless IBM FileNet P8 integration to its AMS Advantage® Enterprise Resource Planning (ERP) suite with a solution that provides a structured approach to consistent, centralized, searchable and secure storage helping organizations make better use of information, reduce cost and risk and increase productivity. The AMS Advantage integrated ECM solution is built on a SOA based architecture that allows our clients flexibility in the ECM components that are used to define the solution. CGI's AMS Advantage integrated ECM solution allows integration with the major ECM vendors including FileNet as well as the major Capture vendors such as Datacap, Kofax and Captiva.

The following exhibit contains a high level conceptual overview of the CGI Integrated ERP/ECM solution.



TT. General 3

Will the supplier provide prime contractor support for back-file conversion of hard-copy documents, microfilm, and other media as requested by agencies in their Statement of Work? Identify the size and type of some of the largest conversions you oversaw, and provide customer references as available.

CGI will provide prime contractor support for back-file conversion services on all loose sheet and book bound documents. CGI maintains two image capture facilities within the U.S., with full local-scan/web index capabilities allowing us to perform document conversions on-site or at one of our facilities. The following provides example experience summaries for back-file conversion services:

- **Insurance Company/CGI Customer, Lancaster, SC:** CGI, operating in a BPO relationship, maintains an ongoing inbound scan and index operation in a customer site in South Carolina. Inbound mail volumes, processed daily, average over 3.2 million documents annually which include claims, correspondence, checks, inquiries and forms. CGI preps all inbound mail, batches for scanning, and scans and indexes for delivery to the customer work flow system. Images and indexes are verified prior to release to the customer within 24-hours service level agreement.
- **Essex County, Massachusetts Registry of Deeds, Salem, Massachusetts:** Historic Essex County in Massachusetts contained properties deeded back over two hundred years. These documents, from handwritten to typewriter printed, were contained in over three hundred glue bound books of various conditions. CGI, utilizing flat bed digital camera systems, imaged and indexed over 60,000 documents dating from the present back to 1805. This process was utilized to maintain the integrity of the documents. The work was performed on-site during normal hours, with no disruption to public access to the documents. Indexed images were delivered into the Registry's existing content management system for electronic access for the public through a web portal.

Historically, CGI has utilized a business partner to support microfilm and fiche conversion requirements. We would install these capabilities in house should the need or requirement arise.

UU. General 4

How will the ECM solution capture Instant Messaging and associated native files obtained via instant messaging?

DEQ's ECM solution can be configured to capture Instant Messaging (IM) messages and attached files using third party software or manual methods. CGI has selected the following 3 options as the most effective and feasible solutions for DEQ.

1. Records Crawler

Records Crawler is an automated solution for the FileNet P8 platform that scours network resources for data that is not currently stored in a FileNet repository. Records Crawler assigns index properties to documents and adds the documents to the FileNet P8 repository.

Capturing Instant Messages using Records Crawler can be accomplished by:

- Creating a shared folder - CGI recommends creating a shared folder on a dedicated server to storing instant messages.
- Configuring log files to point to the shared folder - Most instant message clients such as AIM, Yahoo!, MSN and ICQ maintain log files in locations that can be configured to point to server shares rather than the local PC.
- Adding log files to the repository - Records Crawler uses pre-defined rules to determine which log files have been added to the repository and which ones are new. Rules can be configured to store new message log files.

After IM logs are added to the FileNet repository, users may perform text based searches using FileNet P8 stored searches. Searches can be configured to locate messages based on date, username, and other IM properties.

2. Manual Addition

Manual addition, as the name suggests, involves user intervention. At a selected time interval (hour, day, week) the end user manually adds the log files created by the Instant Message client software to the ECM Repository. FileNet P8 simplifies the upload of files by its use of Document Entry Templates. CGI can configure document entry templates so that IM logs are stored using appropriate document properties.

Manual Addition is feasible for organizations where only one or two members of a group (such as administrative assistants) must keep an account of their IM conversations and make them available to the rest of the group. From a cost/benefit ratio standpoint, a simple solution may be better than other automated solutions when only few members of the entire group require this functionality.

The Manual Addition method allows end users to perform text and date based searches to locate IM conversations by the use of FileNet Stored Searches. CGI will work with DEQ to configure IM searches in FileNet P8.

3. Akonix Solution

The third party solutions that CGI found for capturing Instant Messages are the most elegant solutions compared to FileNet Records Crawler and Manual Addition, but involve more integration and configuration. After reviewing a number of solutions within the Instant Message industry, CGI is suggesting A-Series products from Akonix.

Akonix is an IBM partner company that designs products to address the management, security, compliance and capture of instant messaging at the Enterprise Level. Features of the Akonix A-Series include:

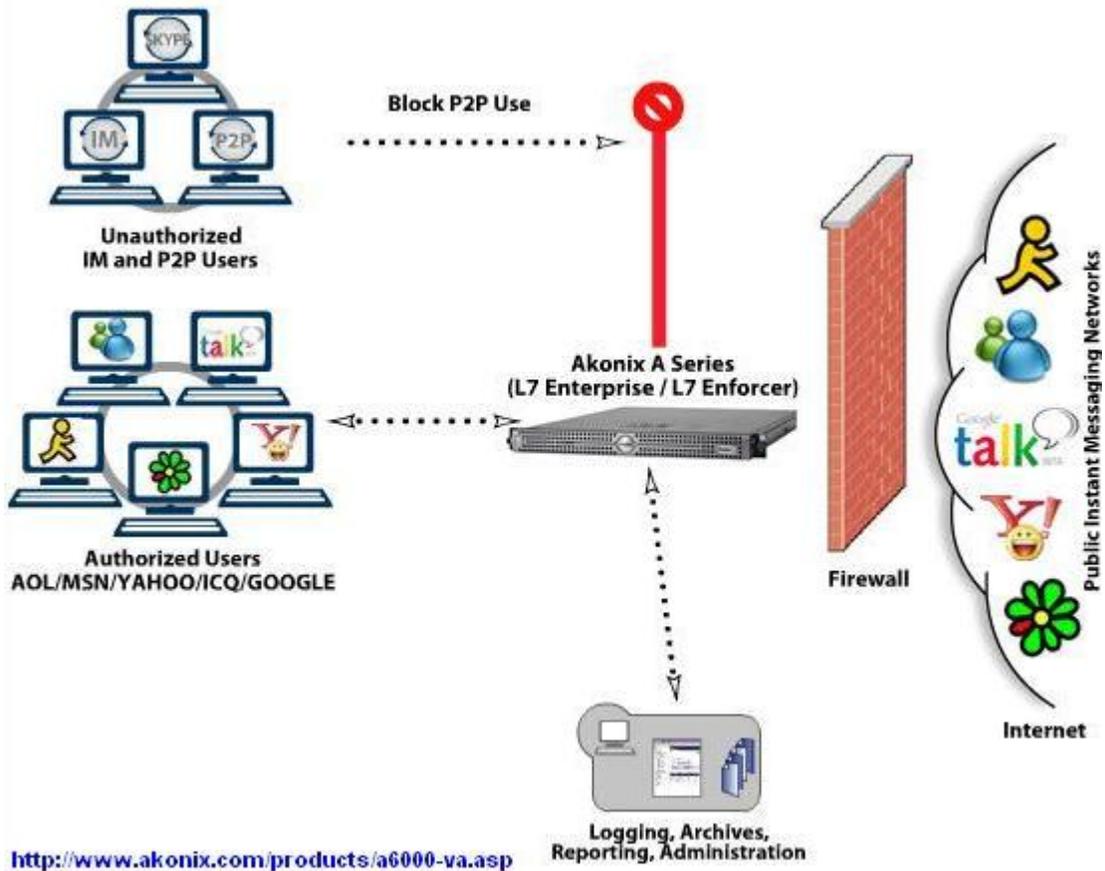
- Logs, archives and reports on all public and enterprise IM activity
- Blocks (or allows) file transfers, games, and video conferencing
- Real-time monitoring of messages
- Scans transferred files for viruses
- Protects network resources from IM based viruses
- Enforces appropriate use of IM by content filtering
- Prevents unauthenticated or unauthorized users from accessing IM
- Create ad hoc or scheduled compliance reports

- Reports policy violators
- Prevents HTTP Tunneling and Port Crawling

Akonix is compatible with a wide range of instant messaging systems, including:

- Microsoft Office Live Communications 2003, 2005
- IBM Lotus Sametime
- AIM
- MSN
- Yahoo!
- GoogleTalk

Rather than relying on log files created by IM clients, Akonix captures messages as they are sent. Unlike the Manual Addition and Records Crawler based solutions, Akonix requires no user action on IM logs, an error prone and inconsistent method of capturing messages. Akonix works by tracking all messages sent to and from IM clients through its Akonix A Series server. The exhibit below shows a simplified view of the process.



VV. General 5

What experience have you had in integrating SharePoint, particularly SharePoint 2003, with FileNet P8?

CGI has not had experience with the integration of SharePoint and FileNet; however, we do have significant experience integrating both products independently.

Additionally, CGI has experience integrating other front end portals such as Plumtree with content repositories to provide users with an integrated system view.

CGI has built an Examiner Workstation System to automate many of the manual processing steps that Examiners use to document their assessments of government sponsored enterprises. The system provides Examiners a user-friendly tool to conduct, manage, and maintain examination and supervisory information. The solution leverages two COTS products, the FileNet P8 platform, Kofax Ascent Capture, and the Plumtree Portal.

The system provides several user and system interfaces. The user interfaces present a professional virtual "desktop" to the users, allowing access to content, showing activities that require action and an authoring/publishing capability for communication messages. The system interfaces provide information interchange points between both the individual system software pieces and external systems.

The primary interface level is the system portal, which serves as the main tool for providing examiners access to workflow, knowledge and records management, and management report and dashboard views. Document capture capabilities are provided by Kofax's Ascent Capture application, which allows users to transform physical documents into digital records and, through a system interface, commit them to the system. Additional document entry capabilities are offered via familiar menu options embedded directly in Microsoft Office applications.

The BEA AquaLogic User Interaction (ALUI) Portal server is also integrated with FileNet through the Cohesion product integration suite and with Microsoft Excel and Microsoft Exchange through the AquaLogic Integration suite. BEA AquaLogic Portal Front End that provides users a streamlined view of content and tasks, access to Enterprise Content Management functions and facilitates integration with other system applications. The Cohesion FileNet Portal Integration suite is used to provide middleware connections to FileNet searching and inbox browsing capabilities. All other FileNet interaction is directly through portlets encapsulating FileNet Workplace logic. The functions exposed by these integrations along with FileNet integration and initial levels of personalization and presentation, are made available in the final release of the system.

The system portal is developed and maintained through the BEA AquaLogic Portal server. The BEA ALUI Portal server is a small part of the overall portal infrastructure. The portal server communicates with the other elements of the infrastructure using web services and the Web Service Definition Language (WSDL). The Cohesion product is used to integrate the BEA AquaLogic portal with the system Content Management (CM) and Business Process Management (BPM) functionality within FileNet.

WW. General 6

What experience have you had in integrating Falcon/DMS or other computer aided drafting and design systems with FileNet P8?

The ECM Service Line at CGI has minimal experience integrating with Falcon/DMS, but we do have experience integrating other rival CAD software and FileNet. If DEQ requests this integration, CGI would first look inside of our large consulting base of 25,000 CGI staff for expertise. If none is available, we would then look externally through partnership to bring this experience on.

Another approach for this functionality is outlined below:

1. Falcon/DMS Data Migration

Falcon/DMS is an engineering drawing management system that uses a proprietary document management platform tailored for engineering content. If DEQ is considering FileNet P8 as an Enterprise Content Management system, the Department should consider using a mechanism by which the agency can migrate legacy engineering content and associated metadata to FileNet P8.

The need to migrate data stems from the fact that Falcon/DMS is itself a document management system, and integrating with another DMS/ECM system would not be a best practice solution. Rather, migrating from the legacy system to FileNet P8 will provide a more sustainable solution.

2. Bulk Load

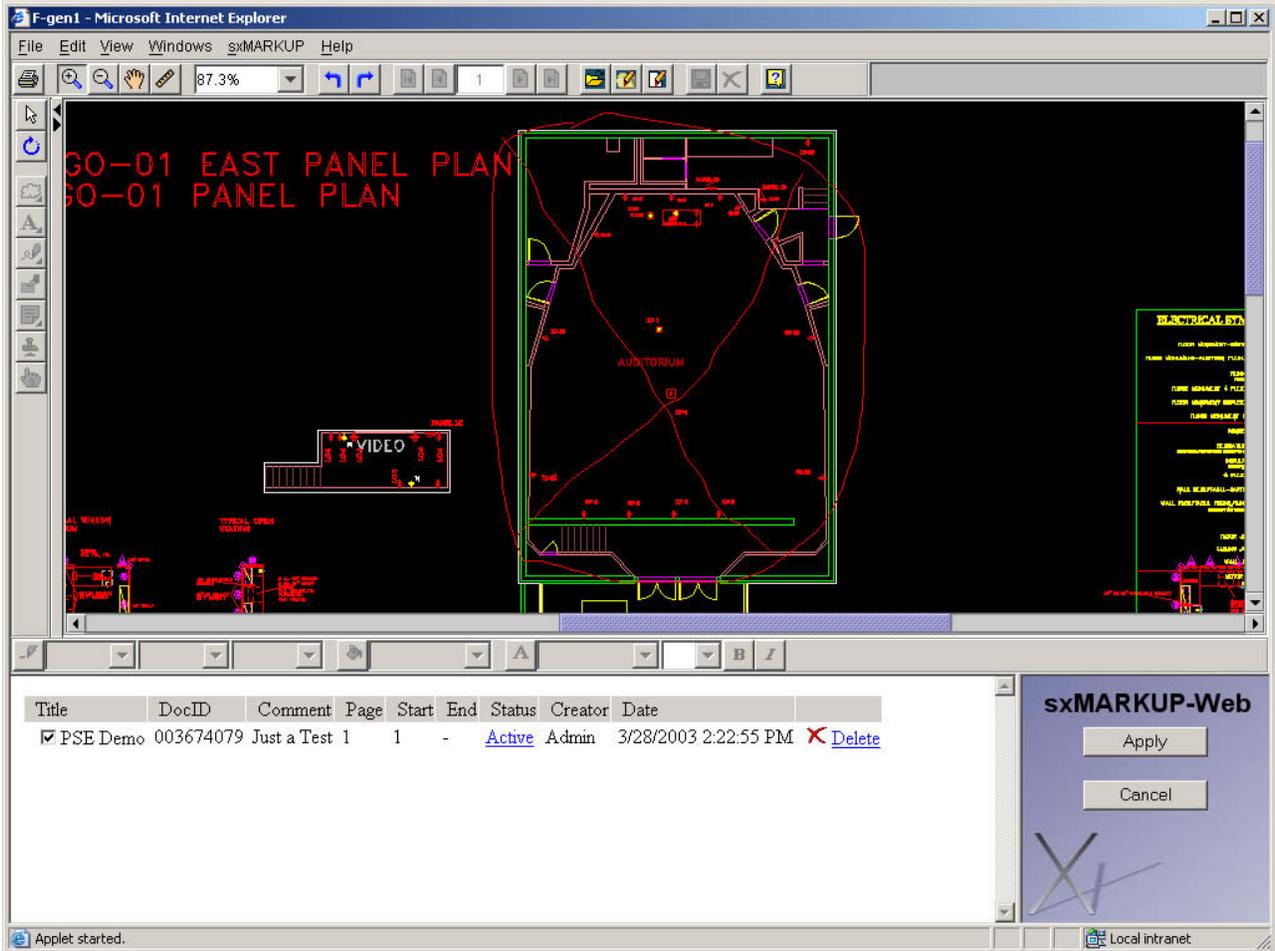
CGI has partnered with a third party vendor, SpatiaX, which offers a solution intended specifically for this purpose called sxLOADER. sxLOADER is an intelligent bulk loading utility that moves engineering content and metadata from document management systems, file systems, and relational databases to the FileNet P8 repository while maintaining the structural integrity of compound documents and their metadata. sxLOADER provides the ability to auto-index CAD attribute data via a sophisticated property mapping utility.

3. P8 Integration

CGI has experience integrating FileNet P8 with CAD software such as AutoDesk AutoCAD and Bentley MicroStation. This integration is accomplished using sxCAD, a SpatiaX product. With sxCAD, engineering departments within DEQ can store, manage, and retrieve their engineering drawings from the same P8 repository. sxCAD integration with P8 provides engineers with powerful FileNet workflow capabilities. For example, P8 workflows that manage the creation, approval, and publishing of engineering drawings can be developed to streamline DEQ's business processes.

4. Viewing CAD on the Web

When used in conjunction with SpatiaX's sxMARKUP or sxMARKUP-Web applications, sxCAD users can easily view CAD drawings and insert markups directly into their CAD drawing using the SpatiaX thin client viewer. The thin client viewer does not require software installation or maintenance on DEQ user PCs. The web based viewer is shown below.



5. CAD Application Integration

sxCAD directly integrates into the pulldown menus of both AutoCAD and MicroStation. Intuitive menu entries present document management analogs for all native CAD I/O functionality. sxCAD provides full support for external references (XREFs) and image references. The sxCAD administrative tool will enable DEQ staff to define an unlimited number of relationships between CAD attributes and EDMS properties.

6. Conclusion

CGI suggests moving Falcon/DMS data to the FileNet P8 repository so that it can be accessed, controlled, viewed, and managed in the same way that other documents and workflow items are managed throughout the DEQ enterprise. CGI has the experience and relationships with partners that will make DEQ's data migration successful.

XX. General 7

Describe your experience with integrating each of the modules in Contract VA-070601-IBM.

CGI has experience with most FileNet components in some fashion due to our long-term partnership and corporate commitment to the FileNet partnership. Benefits of our partnership include access to free online training, a constant stream of email, phone, and face to face communication with members of the FileNet organization, and constant trips to Costa Mesa, CA for training.

Additionally, CGI has attended FileNet’s UserNet conference every year the conference has been held – including this year’s joint IBM/FileNet Information On Demand conference scheduled for October in Las Vegas, NV. This conference showcases new products, allows customers and partners hands on demonstrations, provides an in depth view into the product roadmap, and delivers an overall exposure over 1 week that cannot be replicated elsewhere. CGI commits to this conference in both time – sending numerous staff, and money – yearly sponsorship at the highest level including Platinum Sponsorship in 2006.

Finally, CGI maintains an infrastructure dedicated solely to FileNet. This includes over ten (10) physical servers running FileNet in our U.S. headquarters in Fairfax, VA. CGI also has a repository of over 25 virtual (VMWare) servers each running deviations of FileNet software. These servers enable us to train our staff, learn new technologies, and stay ahead of the game.

As a direct benefit to this focused partnership, our conference commitment, and our dedication to maintaining state of the art FileNet labs, CGI has the capability to deliver across all technical and functional aspects of FileNet.

With that said, the following table is based on the modules listed in Contract VA-070601-IBM. CGI has grouped the modules in Schedule A, Schedule B, and Schedule C by the **bold** groupings in the contract. We then comment on our high level experience with the modules related to the bolded areas.

Product	CGI Experience (Y/N)	Commentary
SCHEDULE A		
Enterprise Content Management	Y	As the base product for FileNet P8, CGI has extensive experience with the Content Manager (CM) module. CGI has implemented 3.5 at numerous locations (State Government, Federal Government, Commercial) under numerous conditions (high volume, low volume, varied user bases, etc), and in numerous environments (Windows, IBM, BEA, Tomcat). CGI already has experience with the new P8 4.0 platform, and has installed and configured a working version of 4.0.
Business Process Management	Y	As one of the major tenants of FileNet P8, CGI has extensive experience with the Business Process Manager (BPM) module. CGI has implemented 3.5 at numerous locations (State Government, Federal Government, Commercial) under numerous conditions (high volume, low volume, varied user bases, etc), and in numerous environments. CGI is so committed to FileNet that one of our major commercial banking applications with an R&D budget over 10M USD is built on top of FileNet BPM.
email Archive	Y	CGI has experience with email manager through demonstrations, training,

Product	CGI Experience (Y/N)	Commentary
		UserNet demos and presentations, and our own lab configurations.
e-forms	Y	CGI has extensive experience with eForms (Form Manager) and has implemented it at numerous locations (State Government, Federal Government, Commercial) under numerous conditions (high volume, low volume, varied user bases, etc), and in numerous environments. CGI has created over 100 eForms for one customer alone.
Records Management	Y	CGI has extensive experience with Records Manager and has implemented it at numerous locations (State Government, Federal Government, Commercial) under numerous conditions (high volume, low volume, varied user bases, etc), and in numerous environments. CGI is credited with the first United States Federal Government implementation of Records Manager.
Capture		CGI has extensive experience with FileNet Capture and has implemented it at numerous locations (State Government, Federal Government, Commercial) under numerous conditions (high volume, low volume, varied user bases, etc), and in numerous environments. Several of CGI's own Capture products were built using the Panagon and FileNet Capture API to import documents into Image Services. In recent years, CGI has diversified to also support Kofax, Captiva, and Datacap for delivering advanced capture functionality. Additionally, CGI has extensive experience with the OEM components of Kofax embedded in FileNet Capture ADR.
Compliance Framework	Y	CGI has experience with all the base modules of the compliance framework; CM, BPM, RM, and eForms. Specifically, CGI has implemented Business Process Framework for numerous clients including a State Government Agency.
Team Collaboration Manager	Y	CGI has installed and configured TCM at least one client, a Federal Government customer. We also have experience with Team Collaboration Manager (TCM) through demonstrations, training, UserNet demos and presentations, and our own lab configurations.
Storage Connectors	Y	CGI has experience with Storage Connectors and has implemented it at numerous locations (State Government, Federal Government, Commercial)

Product	CGI Experience (Y/N)	Commentary
		under numerous conditions (high volume, low volume). Specifically, CGI has extensive experience with Storage Connectors through our Sovera product, which runs on Image Manager and is implemented at 217 hospitals. Over the last 10 years, CGI has helped ease the storage burden by moving a number of these customers from OSAR's to CSAR's, MSAR's, and SSAR's.
Application Connectors	Y	CGI has experience with most of the Application Connectors through demonstrations, training, UserNet demos and presentations, and our own lab configurations. Specifically, CGI has used and tested the Siebel connector for the Virginia Department of Taxation, and built a custom connector to meet their needs instead. CGI is currently doing the same thing for a large insurance company integrating with PeopleSoft. CGI is comfortable integrating FileNet across a range of technologies, platforms, and application frameworks. CGI recently went so far as to integrate FileNet with an application built using Smalltalk.
Portlets	Y	CGI has experience customizing the user experience in Workplace a number of ways including the use of FileNet Portlets 3.5, building Portlets for IBM WebSphere and BEA, and controlling the presentation layer through security and role based settings.
SCHEDULE B		
Business Activity Manager	Y	CGI has installed and configured Business Activity Manager (BAM) at least one client site, a large bank. CGI also has experience with BAM through demonstrations, training, UserNet demos and presentations, and our own lab configurations. CGI has configured this tool for numerous demonstrations to clients.
Other (Rendition, Fax, System Monitoring)	Y	CGI has a varying degree of experience with many of the tools listed in Other. Of these tools, CGI possesses the most experience with the fax suite of tools. CGI has implemented Fax at numerous sites including its FileNet ancestor product version right in the state of Virginia at the Department of Taxation. CGI has also used and implemented Rendition services and System Monitoring tools to varying degrees. Specifically, CGI has installed and configured several of the System

Product	CGI Experience (Y/N)	Commentary
		Monitoring tools at least one client site, a large bank.
SCHEDULE C		
Development	Y	CGI has extensive experience establishing development environments at numerous (we believe every) client site that we have ever been privileged to worked with. Additionally, CGI maintains an extensive virtual and physical lab of servers for varying uses related to FileNet.
3rd Party		
Spicer Freedom	Y	CGI maintains an active partnership with Spicer. We have demonstrated their product numerous times to varying customers, and have recently worked with a large city to help them select Spicer as their platform for redaction.
ASE	Y/N	CGI has not implemented ASE, but during the course of this proposal we worked with ASE to help specify system components and understand product capabilities. At CGI our goal is to hire smart people that are not afraid of new technologies. We welcome the challenge of learning ASE components, and have an open dialog with John.Bourdeau@ASE-Tech.com at ASE to help support us. CGI will contract with ASE as necessary to round out gaps in our experience.

YY. General 8

Provide all certifications you possess related to FileNet integration projects.

CGI employs over 300 IBM-FileNet consultants who have experience implementing FileNet solutions. Specifically, the CGI FileNet practice includes approximately 150 professionals spread across multiple sectors including 50 Healthcare, 25 Government, 25 Financial Services, and 50 cross-industry consultants. Collectively, the group holds 319 certifications, with 73 certified resources holding at least one or more certifications. An approximate breakdown by role for the FileNet practice:

- Developers: 70
- Project Managers: 25
- Business Analysts: 40
- Sales and Administration: 15

ZZ. General 9**Describe your experience and methodology for performing Business Process Analysis.**

CGI has operated upon the principles of sharing in our clients' challenges and delivering quality services to solve them. A leading IT and business process services provider, CGI has approximately 25,500 professionals operating in 100+ offices worldwide, giving clients the local accountability they deserve at the global value they need. CGI offers best-in-class methods in workforce strategy, knowledge management, process optimization, performance measurement and quality/regulatory management. With a reputation for integrity, commitment and hard work, we've enjoyed a thirty-year track record of tactical and strategic implementation, to truly achieve our clients' objectives. Our approach to performing Business Process Analysis uses a methodology that provides our clients with a systematic approach to improving performance in all aspects of their business.

CGI's first step to improving a process is to analyze it in order to understand the activities, their relationships, and the values of relevant metrics. CGI's Business Process Analysis generally involved the following tasks:

- Define the process boundaries that mark the entry points of the process inputs and the exit points of the process outputs.
- Construct a process flow diagram that illustrates the various process activities and their interrelationships.
- Determine the capacity of each step in the process. Calculate other measures of interest.
- Identify the bottleneck, i.e. the step having the lowest capacity.
- Use the analysis to make operating decisions and to improve the process.

Improvements in cost, quality, flexibility, and speed are commonly sought. CGI has improved our clients' processes through the following:

- Reducing work-in-process inventory, this reduces lead time.
- Adding additional resources to increase capacity of the bottleneck.
- Improving the efficiency of the bottleneck activity – increases process capacity.
- Moving work away from bottleneck resources where possible – increases process capacity.
- Increase availability of bottleneck resources – increases process capacity.
- Minimize non-value adding activities – decreases cost, and reduces lead time.
- Redesign the product – can improve several or all process performance metrics.
- Outsourcing certain activities

The Business Process Gap Analysis identifies and prioritizes the specific items that can be improved or do not exist from a process perspective. It uses the outputs from the System and Process Assessment as initial input. Discussions can be held with Commonwealth experts to determine specific improvements that can be made, the impact of each and their associated priority.

Once the Business Process Gap Analysis is completed, an overall design is developed to address the business process improvements. This design includes a view of internal and external processes, resulting in an integrated view of your business and supply chain. A Business Process Improvement Plan is developed based on information gathered during the Business Process Gap Analysis and Design. Business process improvements are identified during the initial phase of the project along with an anticipated return on investment. CGI will then be able to determine which improvements to implement based on value added to the Commonwealth. The plan will then be developed based on the Commonwealth's decision.

CGI also does things that are external to project work to demonstrate thought leadership in industry. An example of this is whitepaper entitled "What Every CIO needs to know about Business Process Automation (BPA); CGI-AMS's unique 5x5 view of BPA." This whitepaper was authored in 2005 by current CGI staff and is available free of charge.

AAA. General 10

Describe your experience and methodology for performing business process re-engineering.

CGI is a full-service IT and business process services partner with the experience and expertise in both the technology and business sides of your industry. Combining comprehensive capabilities with global delivery options, CGI's systems integration and consulting offerings help clients turn their goals into business results. One of our key practice areas is business process reengineering.

CGI's business process re-engineering experience and expertise include:

- Various projects with leading organizations, including Bayer Diagnostics, Interac, New York City HRA, Telstra and the International Species Information System
- 100+ proprietary business solutions that transform industry- and service-specific environments through repeatable and proven frameworks
- Broad capabilities augmented by CGI's business process, application management and technology management services
- ISO 9001 and SEI CMMi Level 5 certified quality processes and frameworks

CGI refers to business process re-engineering as Business Process Improvement (BPI). Our BPI approach encompasses a complete and radical review of one or many business processes to obtain performance improvements that are measurable in terms of profitability and quality of service. Furthermore, the underlying BPI approach is characterized by an organizational vision that is based on the processes, a search for major benefits as well as concerted and rigorous action.

The three key factors for the successful completion of a BPI project are: management commitment and support, a shared vision of change management, and the efficiency and effectiveness of the BPI methodology selected.

- **Management Support**: Management must support the initiative by assigning a decision-maker who is responsible for the process, sharing the principles and committing to improvement.
- **Shared "Change Management" Vision**: During a BPI project, a global vision is required to generate the anticipated benefits while taking into account the organization's capacity for change.
- **Efficient and Effective Methodology**: The efficiency and effectiveness of any BPI study depends on several elements. These include the creation of project teams with clear mandates, the availability of all resources involved, a thorough analysis of the facts, and a creative approach to defining solutions.

CGI's BPI approach agrees with generally recognized improvement principles. However, CGI has adapted them based on the expertise it has developed in this field. These principles are grouped into four categories: added value for the client; maximum process integration; respect for individuals; and use of technology as a source of innovation.

- **Value-added Process for the Client**
 - ***Added Value***: A complete process or one of its steps is only necessary if it creates added value for the client.
 - ***Accountability***: An individual or group of individuals must be accountable for the execution of a specific process. This creates a supplier–process–client relationship and empowers participants.
 - ***Organizing the Work Based on its Ultimate Purpose***: The design of tasks must be based on the ultimate purpose or goal (an added value for the client) rather than on the tasks themselves.
- **Maximum Process Integration**
 - ***Parallel Process***: Links must be established between parallel functions as applicable to coordinate these while being performed, not upon completion.
 - ***A "Close to the Action" Decision***: The implementation of control mechanisms within the process is a form of vertical work integration that brings the decision closer to the action.

- **A Hybrid Organization:** All resources involved in the process being studied must be considered, even if they are dispersed geographically. In this context, a hybrid structure (i.e. decentralized units that operate as a centralized unit through, for example, the use of telecommunication tools) could be recommended.
- **Respect for Individuals**
 - **Empowerment:** Individuals must be informed of the importance of their role in the organization. This will increase their sense of ownership and further empower them to perform their tasks.
 - **Participation:** Respect for employees is shown by involving them in the project and the problem-solving process.
 - **Motivation:** It is important to implement mechanisms that promote individual motivation. This will increase quality and productivity.
- **Technology as a Source of Innovation**
 - **Solutions Available:** Technology must facilitate the development of new business processes, not limit the project to the automation of existing ones.
 - **Reasonable Costs:** It is necessary to identify the most reasonable costs for the organization, compare the potential solutions and prioritize the required expenditures or investments according to the benefits they generate.

The BPI approach is comprised of six key steps:

- Initiation Planning
- Project Planning and Organization
- Understanding the Study Area
- Identifying Improvement Targets
- Developing Corrective Measures
- Evaluating and Presenting Solutions

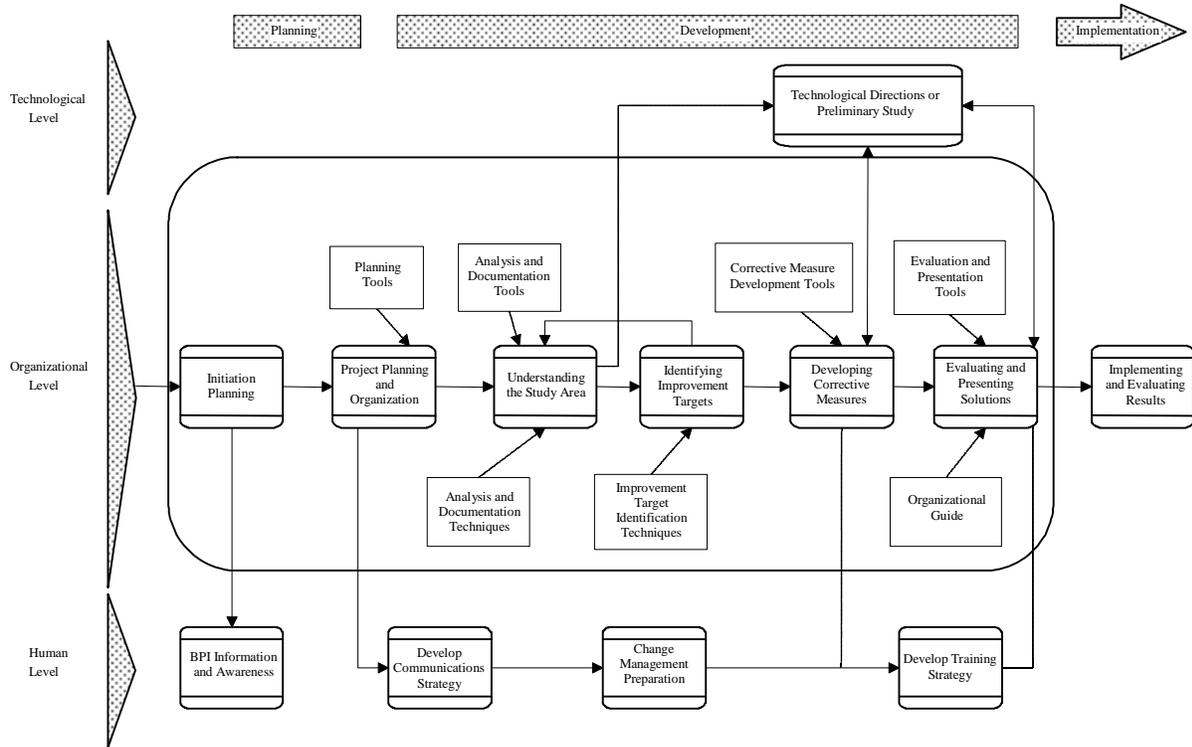
As illustrated in the diagram presented on the next page, these actions occur primarily at the organizational level. However, they also interact with the human and technological aspects.

Essentially, BPI is an integrated approach that addresses the organizational, human and technological aspects simultaneously.

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BPI Methodology

BPI METHODOLOGY



BBB. General 11

Describe any innovative methodologies or reusable component(s) that may be utilized to expedite the timelines or reduce the costs for any given project.

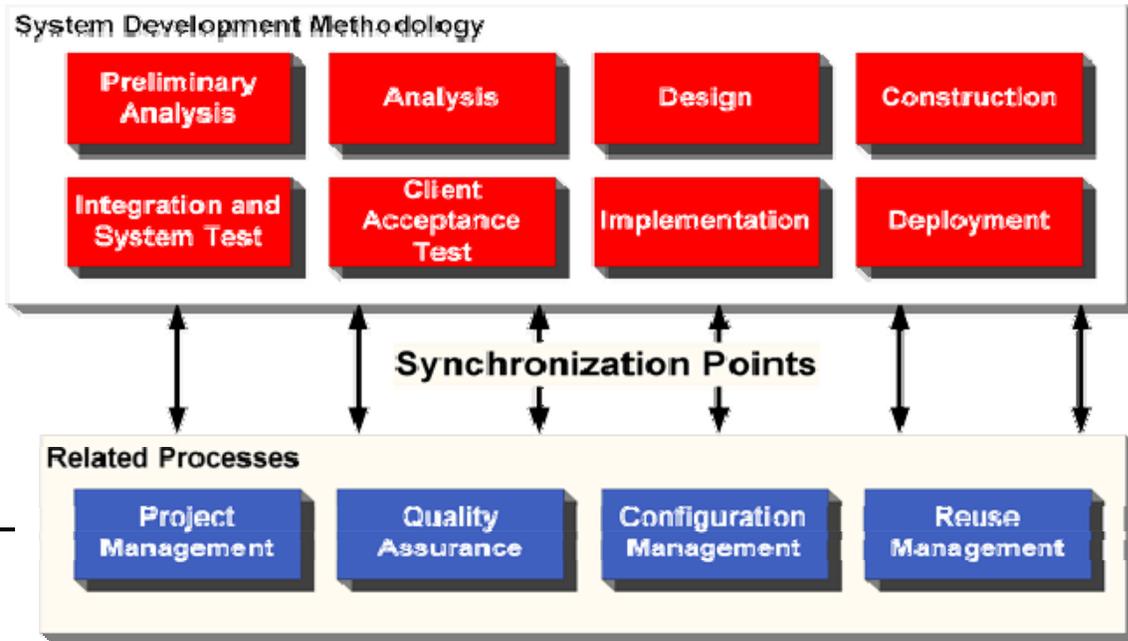
CGI's formal software development life cycle (SDLC) provides well defined activities or steps for performing the basic tasks required in developing software, including requirements gathering, design, development, testing and implementation. The Concert methodology is a result of the reflection and professional experience of CGI Subject Matter Experts from all areas of system development and integration. It is also based on industry best practice concepts (ISO-12207, IEEE) and methodologies, and is structured to best support CGI's approaches to systems development. Concert provides developers and managers with a life cycle model for IS/IT solution development and delivery, and it establishes a standard approach to execution of related activities. In addition,

- It outlines the objectives, the content and the result of each of the activities;
- It describes the framework within which the approach has to be positioned; and
- It integrates and associates in a coherent ensemble, fundamental methodology and best practice development techniques. It includes recommendations, guides, best practice approaches, templates and other job aids to promote and support managing requirements in an effective and compliant manner. It also includes procedures and references to enable effective interfaces with:
 - project stakeholders;
 - other CGI process areas;
 - solution components and services provided by various CGI support groups.

The methodology consists of a comprehensive set of processes. A project team or organization, depending on its purpose, will select the appropriate subset as a toolkit to fulfill that purpose, project or application.

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Concert System Development and Related Processes



In order for systems

to meet the needs of the Client while being developed efficiently, the active collaboration of all participants is essential. Problems must be analyzed and addressed in the correct order so that the necessary information to make decisions concerning directions, solutions, and installations is available when required. Development teams are integrated through the use of a common language and by awareness of the role and interactions of everyone involved. Everything relevant to the development of the new system must be taken into consideration and the best available techniques must be used. Thus, specific objectives of the system development life cycle are:

- To guide developers through the stages of systems development;
- To facilitate synergy and effective communication among all the participants of a system development project (management, client representatives, and development team members), by giving them a common base of reference;
- To provide development project teams with a practical, accurate, and immediately workable tool to plan and coordinate a project, whether at the global or at the detailed level;
- To foster resource productivity by clearly identifying the deliverables and the activities needed to produce them;
- To facilitate quality control by verifying that all the relevant aspects are taken into consideration, by improving quality of solutions, by documenting the system as it is being developed, and by being cognizant of related compliance requirements;
- To support effective synchronization of development, management, quality assurance and other related processes;
- To allow decision-makers (including client representatives), to locate at their own level, their role and the nature of the interventions needed, with regard to obtaining optimum results;
- To assist management's decision-making by formulating the right questions at the right time and by providing pertinent information through an accurate framework of check points;
- To enlist client participation and responsibility during development, by including them in the decision making, and when choosing solutions or development and implementation processes.

The method for development and implementation of a system is divided into eight phases.

Phases Objective

Preliminary Analysis	To recommend a viable information system solution based on the client's requirements, constraints and compliance with both applicable business and technological directions.
Analysis	To translate requirements into specifications needed for the development and implementation of an IS/IT solution. To develop strategies to optimally deliver client requirements.
Design	To produce the detailed architecture and design of the IS/IT solution, Develop plans in accordance with the strategies established during the Analysis Phase.
Construction	To produce executable software components that properly reflect the design in accordance with the Construction Plan.
Integration and System Test	<p>To construct the system by progressively adding increments and testing each resulting assembly to verify it operates properly;</p> <p>On completion of the integration of required components, complete testing of all system components to verify that they execute properly, and interface properly among themselves and with related applications.</p>
Client Acceptance Test	To demonstrate that the system meets all client acceptance criteria.
Implementation	To make the solution available to the end users and verify they can assume ownership.
Deployment	To manage planning and execution of Implementation Phase activities to enable rollout to multiple sites.

EXHIBIT B-X
CONTRACT NUMBER VA-071114-CGI
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
CGI, INC.

Exhibit B-X is hereby incorporated into and made an integral part of Contract Number VA-071114-CGI (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and CGI, Inc. (“Supplier”).

In the event of any discrepancy between this Exhibit B-X and Contract No. VA-071114-CGI, the provisions of Contract No. VA-071114-CGI shall control.

[Note: Instructions for using this template to draft a Statement of Work are in *italics*. These instructions should be deleted after the appropriate text has been added to the Statement of Work. Contractual language is **not italicized** and should remain in the document. Text that is highlighted in blue is variable based on the nature of the project.]

STATEMENT OF WORK

This Statement of Work is issued by VITA on behalf of Authorized User, hereinafter referred to as “Authorized User”. The objective of the project described in this Statement of Work is for the Supplier to provide the Authorized User with a Authorized User Project Name Solution (“Solution”).

1. Project Scope and Understanding of the Requirements

Provide information on the scope of the project and the Authorized User’s requirements for this particular engagement including:

- a) general description of the Solution*
- b) project boundaries*
- c) Authorized User-specific requirements*
- d) special considerations for implementing technology at Authorized User’s location(s)*
- e) other characteristics of this project that must be addressed to insure the success of the engagement*

2. Contract Products and Services to Support the Requirements

a. Solution Components

List the Solution components (hardware, software, etc.) provided by Supplier that will be used to support the requirement. Identify any special configuration requirements, and describe the system infrastructure to be provided by the Authorized User. Provide an overview that reflects how the system will be deployed within the Authorized User’s environment.

b. Services

Provide information on the services (e.g., requirements development, Solution design, configuration, installation) that will be provided by Supplier in the course of providing the Solution.

c. Training and Knowledge Transfer

Provide an overview of training services to be provided to the Authorized User and any special requirements for specific knowledge transfer to support the Authorized User’s successful implementation of the Solution. If the intent is for the Authorized User to become self-sufficient in

operating or maintaining the Solution, determine the type of training necessary, and develop a training plan, for such user self-sufficiency.

d. Support

Document the level of support, as available under the Contract, required by the Authorized User to operate and maintain the Solution. This may include conversion support, legacy system integration, transition assistance, Solution maintenance (including maintenance level), or other specialized consulting to facilitate delivery or use of the Solution.

3. Project Events and Tasks

Provide a high-level overview of project events and tasks to be accomplished to deliver the required Solution.

4. Period of Performance

Implementation of the Solution will occur within XX (XX) months of execution of this Statement of Work. This includes delivery and installation all of the products and services necessary to implement the Authorized User's Solution, training, and any support, other than on-going maintenance services. The period of performance for maintenance services shall be one (1) year after implementation and may be extended for additional one (1) year periods, pursuant to and unless otherwise specified in the Contract.

5. Place of Performance

Tasks associated with this engagement will be performed at the Authorized User's location(s) in _____, Virginia, at Supplier's location(s) in Wherever, or other locations as required by the effort.

6. Milestones, Deliverables, Payment Schedule, and Holdbacks

The following table identifies milestone events and deliverables, the associated schedule, any associated payments, any retainage amounts, and net payments.

Milestone Event	Deliverable	Schedule	Payment	Retainage	Net Payment
Project kick-off meeting	---	Execution + 5 days	---	---	---
Site survey	Site survey report	Execution + 10 days	---	---	---
Installation of software	---	Execution + 20 days	\$10,000	\$1,000	\$9,000
Configuration and testing	---	Execution + 20 days	---	---	---
Training	Training manual	Execution + 30 days	\$10,000	\$1,000	\$9,000
User Acceptance Testing	---	Execution + 30 days	\$20,000	\$2,000	\$18,000
Implementation complete	Solution	Execution + 45 days	\$10,000	(\$4,000)	\$14,000

The total Solution price shall not exceed \$US XXX.

Supplier's invoices shall show retainage of ten percent (10%). Following completion of Solution implementation, Supplier shall submit a final invoice to the Authorized User, for the final milestone payment amount plus the total amount retained by the Authorized User.

Required Deliverables are as follows: (Provide a description of all Deliverables for this engagement.)

- o Site survey report:
- o Training manual:

- o **Solution: See Sections 1 and 2 above.**

In addition, Supplier will provide copies of any briefing materials, presentations, or other information developed to support this engagement.

Any inventions, combinations, machines, methods, formulae, techniques, processes, improvements, software designs, computer programs, strategies, specific computer-related know-how, data and original works of authorship discovered, created, or developed by Supplier, or jointly by Supplier and an Authorized User(s) in the execution of this Statement of Work shall be deemed Work Product. Configuration of software shall not be deemed Work Product. All provisions of the Contract regarding Work Product shall apply to this Statement of Work.

If travel expenses are not included in the **fixed price** of the Solution, such expenses shall be reimbursed in accordance with Commonwealth of Virginia travel policies as published by the Virginia Department of Accounts (<http://www.doa.virginia.gov/procedures/adminservices/capp/pdfdocs/20335.pdf>).

7. Acceptance Criteria

Acceptance Criteria for this Solution will be based on a User Acceptance Test (UAT) **designed by Supplier and accepted by the Authorized User**. The UAT will ensure that all of the functionality required for the Solution has been delivered. **Supplier will provide the Authorized User with a detailed test plan and acceptance check list based on the mutually agreed upon UAT Plan. This UAT Plan check-list will be incorporated into this Exhibit D-X.**

This section should reflect the mutually agreed upon UAT and Acceptance Criteria specific to this engagement.

Each deliverable created under this Statement of Work will be delivered to the Authorized User with a Deliverable Acceptance Receipt. This receipt will describe the deliverable and provide the project manager with space to indicate if the deliverable is accepted, rejected, or conditionally accepted. Conditionally Accepted deliverables will contain a list of deficiencies that need to be corrected in order for the deliverable to be accepted by the Project Manager. The Project Manager will have **ten (10)** days from receipt of the deliverable to provide Supplier with the signed Acceptance Receipt unless an alternative schedule is mutually agreed to between Supplier and the Authorized User in advance.

8. Assumptions and Project Roles and Responsibilities

This section contains assumptions specific to this engagement.

State assumptions here.

The following roles and responsibilities have been defined for this engagement:

(Sample Responsibility Matrix)

Responsibility Matrix	Supplier	Authorized User
Infrastructure – Preparing the system infrastructure that meets the recommended configuration defined in Section 2B herein		√
Server Hardware		√
Server Operating		√
Server Network Connectivity		√
Relational Database Management Software (Installation and Implementation)		√
Server Modules – Installation and Implementation	√	
PC Workstations – Hardware, Operating System, Network Connectivity		√
PC Workstations – Client Software		√

Application Installation on PC Workstations	√	
Wireless Network Access Points	√	
Cabling, Electric and User Network Connectivity from Access Points		√
Wireless Mobile Computing Products – Scanners, printers	√	
Project Planning and Management	√	√
Requirements Analysis	√	√
Application Design and Implementation	√	
Product Installation, Implementation and Testing	√	
Conversion Support	√	
Conversion Support -- Subject Matter Expertise		√
Documentation	√	
Training	√	
Product Maintenance and Support	√	
Problem Tracking	√	√
Troubleshooting – IT Infrastructure		√
Troubleshooting – Solution	√	

9. Security Requirements

Provide (or reference as an Attachment) Authorized User's security requirements. For any individual Authorized User location, security procedures may include but not be limited to: background checks, records verification, photographing, and fingerprinting of Supplier's employees or agents. Supplier may, at any time, be required to execute and complete, for each individual Supplier employee or agent, additional forms which may include non-disclosure agreements to be signed by Supplier's employees or agents acknowledging that all Authorized User information with which such employees and agents come into contact while at the Authorized User site is confidential and proprietary. Any unauthorized release of proprietary information by the Supplier or an employee or agent of Supplier shall constitute a breach of the Contract.

At a minimum, Supplier shall adhere to all of VITA's standard security requirements.

10. Risk Management

Risk is a function of the probability of an event occurring and the impact of the negative effects if it does occur. Negative effects include schedule delay, increased costs, and poor quality of deliverables.

Depending on the level of risk of this project, as assessed by the Authorized User, this section may contain any or all of the following components, at a level of detail commensurate with the level of risk:

- a) Identification of risk factors.*
- b) Initial risk assessment.*
- c) Risk management/mitigation plan, including determination of roles and responsibilities of the Authorized User and Supplier.*
- d) Risk monitoring plan, including frequency and form of reviews, project team responsibilities, steering and oversight committee responsibilities, documentation.*

11. Reporting

The following are examples of reporting requirements which may be included in the Statement of Work by the Authorized User. [Note: In an effort to help VITA monitor Supplier performance, it is strongly recommended that the Statement of Work include "Supplier Performance Assessments". These assessments may be performed at the discretion of the Authorized User and are not mandated by VITA.]

Weekly/Bi-weekly Status Update. The weekly/bi-weekly status report, to be submitted by Supplier to the Authorized User, should include: accomplishments to date as compared to the project plan; any changes in tasks, resources or schedule with new target dates, if necessary; all open issues or questions regarding the project; action plan for addressing open issues or questions and potential impacts on the project; risk management reporting.

Supplier Performance Self-Assessment. Within thirty (30) days of execution of the Statement of Work, the Supplier and the Authorized User will agree on Supplier performance self-assessment criteria. Supplier shall prepare a monthly self-assessment to report on such criteria. Supplier shall submit its self-assessment to the Authorized User who will have five (5) days to respond to Supplier with any comments. If the Authorized User agrees with Supplier's self-assessment, such Authorized User will sign the self-assessment and submit a copy to the VITA Supplier Relationship Manager.

Supplier Performance Assessments. The Authorized User may develop assessments of the Supplier's performance and disseminate such assessments to other Authorized Users of the Contract. Prior to dissemination of such assessments, Supplier will have an opportunity to respond to the assessments, and independent verification of the assessment may be utilized in the case of disagreement.

12. Point of Contact

For the duration of this project, the following project managers shall serve as the points of contact for day-to-day communication:

Authorized User: _____

Supplier: _____

By signing below, both parties agree to the terms of this Exhibit.

Supplier
By: _____
(Signature)

VITA
By: _____
(Signature)

Name: _____
(Print)

Name: _____
(Print)

Title: _____

Title: _____

Date: _____

Date: _____

EXHIBIT D
CONTRACT NUMBER VA-071114-CGI
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
CGI, INC.

Exhibit D is hereby incorporated into and made an integral part of Contract Number VA-071114-CGI (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and CGI, Inc. (“Supplier”).

In the event of any discrepancy between this Exhibit D and Contract No. VA-071114-CGI, the provisions of Contract No. VA-071114-CGI shall control.

Category	Detailed Description of Skills, Knowledge and Abilities	Hourly Rate
CGI STANDARD ECM RATES		
ECM Program Manager	The ECM Program Manager has oversight and accountability for the CGI project team and is ultimately responsible for the engagement's completion. The ECM Project Manager will keep the ECM Program Manager informed of project status through formal and ad hoc meetings. The ECM Program Manager will communicate regularly with key senior Commonwealth of Virginia Agency stakeholders to keep expectations aligned. In addition, the ECM Program Manager will act as a facilitator for escalating and resolving issues that require CGI intervention.	\$230
Executive Consultant	The Executive Consultant is highly versed and skilled in deploying ECM product solutions which includes the FileNet P8 Platform. The Executive Consultant is a technical leader and will provide expertise to the CGI project team throughout the design and implementation of the ECM solution. The Executive Consultant keeps up-to-date on product enhancements, functionalities, and limitations and will share this knowledge with the CGI team members and the Commonwealth of Virginia Agency stakeholders to guide the decision making process.	\$225

<p>Technical Architect</p>	<p>The Technical Architect contributes during all phases of the lifecycle of a project. The Technical Architect plays a key role during Requirements and Functional Design and during Technical Design/Architecture, answers technical architecture questions during Development and acts in a support and quality assurance role during System Testing and User Acceptance Testing. The Technical Architect also develops design, architectural blueprints and technical documentation. In addition, the Technical Architect implements prototypes and Proof of concepts in order to validate proposed technical architecture.</p>	<p>\$225</p>
<p>ECM Subject Matter Expert</p>	<p>The ECM Subject Matter Expert is responsible for designing and deploying the FileNet P8 ECM architecture, verifying compatibility with the existing environment and standards, including security requirements and addressing scale, high availability, and compatibility needs of the system. The ECM Subject Matter Expert is an expert in the FileNet P8 platform and will provide guidance on the best technologies for the project.</p>	<p>\$225</p>
<p>ECM Project Manager</p>	<p>The ECM Project Manager is responsible for overseeing the day-to-day management of all ECM components of the engagement. The ECM Project Manager manages and guides the ECM functional and technical team members to ensure project deliverables meet Commonwealth of Virginia Agency's objectives. The ECM Project Manager will also keep CGI client management and senior Agency stakeholders updated on project status, technical progress, budget status, and address any issues or concerns.</p>	<p>\$175</p>

<p>Technology Management Consultant</p>	<p>The Technology Management Consultant will develop and deliver technical architectures, new technical solutions, and frameworks to meet the Commonwealth of Virginia Agency's business and application requirements. The Technology Management Consultant will also analyze technical issues related to the implementation of new technologies and/or the customization of existing technologies for the Agency. The Technology Management Consultant will formulate workable solutions tailored to the Agency's context and deliver them in a timely manner according to scope and budget. Furthermore, the Technology Management Consultant will also review computer hardware and software systems and data requirements as well as communications and response needs and devise computer hardware/software configurations to implement them.</p>	<p>\$175</p>
<p>Functional Subject Matter Expert</p>	<p>The Functional Subject Matter Expert is responsible for contributing detailed functional and business knowledge in specific Agency areas as it relates to designing and implementing the solution. The Functional Subject Matter Expert would primarily be utilized during requirements and design to merge the use of the solution to the specifics of the Agency area.</p>	<p>\$175</p>
<p>P8 Platform Administrator Team Leader</p>	<p>The P8 Platform Administrator Team Leader is highly skilled and experienced in system administration. The P8 Platform Team Leader will plan, coordinate, and monitor the tasks of multiple system administrators in the data center. The P8 Platform Administrator Team Leader will coordinate and lead team efforts on troubleshooting system issues and in performing preventative maintenance.</p>	<p>\$155</p>

<p>Technical Team Leader</p>	<p>The Technical Team Leader will prepare and monitor development task lists and schedules at the direction of the CGI project management personnel. The Technical Team Leader will plan, coordinate, and monitor the tasks of multiple programmer/analysts working on the ECM solution and provide technical leadership for the project. The Technical Team Leader will also coordinate and lead software design activities and will ensure that development processes and standards are being followed and met.</p>	<p>\$155</p>
<p>Functional Team Leader</p>	<p>The Functional Team Leader manages and guides the team of CGI functional staff members in meeting project milestones and providing high quality project deliverables. The Functional Team Leader oversees the effort in developing business requirements, designing business processes, and recommending solutions to meet the Commonwealth of Virginia Agency's business objectives. The Functional Team Leader also has responsibility for test preparation and execution, training, and functional implementation activities.</p>	<p>\$155</p>
<p>Systems Integration Team Leader</p>	<p>The Systems Integration Team Leader will oversee and manage a CGI team of technical members (e.g. Integration Engineer) from blueprint through deployment of the ECM solution. The Systems Integration Team Leader will review the system application and architecture deliverables throughout development to ensure completeness, consistency, quality and requirement traceability. The Systems Integration Team Leader will ensure that the system components work together to meet the objectives and performance goals as defined in the requirements for the ECM solution.</p>	<p>\$155</p>
<p>Senior P8 Platform Administrator</p>	<p>The Senior P8 Platform Administrator has solid experience in administering the P8 server and oversees and guides the P8 Platform Administrator. The Senior P8 Platform Administrator will also monitor and analyze FileNet system performance and make recommendations for system tuning. In addition, the Senior P8 Platform Administrator will be involved in troubleshooting system issues and perform preventative maintenance.</p>	<p>\$140</p>

<p>Senior Programmer/Analyst</p>	<p>The Senior Programmer/Analyst provides technical and business knowledge and application development for projects utilizing current computing architectures. The Senior Programmer/Analyst will define customer requirements and system interfaces, assess available technologies, and develop and present solutions. The Senior Programmer/Analyst will also guide and manage the Programmer/Analysts on project deliverables such as designing, testing, and coding software.</p>	<p>\$140</p>
<p>Senior Business Analyst</p>	<p>The Senior Business Analyst serves in a functional capacity. The Senior Business Analyst guides and manages the Business Analysts with respect to the assigned deliverables. The Senior Business Analyst is also involved in the design, testing, training, maintenance, and initial operation of the system.</p>	<p>\$140</p>
<p>Senior Training Specialist</p>	<p>The Senior Training Specialist guides and manages the Training Specialists. The Senior Training Specialist oversees the creation of training materials and class delivery for the ECM solution. The Senior Training Specialist will also be involved in training the Commonwealth of Virginia Agency personnel and management staff on the ECM solution.</p>	<p>\$140</p>
<p>Business Consultant</p>	<p>The Business Consultant is involved in partnering with the business functional groups to communicate and clarify business needs, contribute to development of the ECM solution plans, and ensure products and services are aligned with business needs. The Business Consultant will also provide strategic support to assigned stakeholders in analyzing and defining business requirements; designing business processes and researching and identifying enabling technologies based on stakeholder requirements. In addition, the Business Consultant will assess near-term needs utilizing structured interview processes to establish business priorities; consult with technical subject matter experts and develop alternative technical solutions; advise on options, risks, cost versus benefit, and impact on other business processes and technology priorities.</p>	<p>\$125</p>

<p>Application Engineer</p>	<p>The Application Engineer will document technical requirements and configurations, functional and technical architecture directions and operating models for the ECM solution. The Application Engineer will perform data gathering and data analysis, will design data models and data diagrams, and develop use cases. The Application Engineer will also provide technical support and troubleshoot issues that are raised regarding the ECM solution.</p>	<p>\$125</p>
<p>Integration Engineer</p>	<p>The Integration Engineer will be involved in identifying and implementing processes, policies, and procedures to ensure application and systems deployment, availability and reliability. The Integration Engineer will also be responsible for designing, coding, testing, debugging, documenting and maintaining moderately complex programs. In addition, the Integration Engineer will be providing escalated technical support and resolve integration and deployment issues.</p>	<p>\$125</p>
<p>P8 Platform Administrator</p>	<p>The P8 Platform Administrator is involved in administering the P8 server and performing quality assurance (QA). The P8 Administrator also performs the back up of the servers and reviews the daily checklist with respect to server operations.</p>	<p>\$125</p>
<p>Quality Controller</p>	<p>The Quality Controller will be responsible for providing quality assurance from an overall project perspective. The Quality Controller will work with the Project Manager, the client agency, and other project team resources to put measures, processes, and procedures in place to help provide quality in delivery execution throughout the project.</p>	<p>\$110</p>
<p>System Administrator</p>	<p>The System Administrator is responsible for installing new hardware/software and upgrades for all standard business configurations. The System Administrator also maintains software and server hardware by performing scheduled maintenance. In addition, the System Administrator is involved in troubleshooting application and networking issues.</p>	<p>\$110</p>

<p>Programmer/Analyst 2</p>	<p>The Programmer/Analyst 2 will be involved in the design, development, training, implementation, maintenance, and operation of the system. The Programmer/Analyst 2 will be experienced in the use of programming languages and development tools that are required for the project. In addition, the Programmer/Analyst 2 will maintain and administer the version and change control systems and assist with the development of system documentation.</p>	<p>\$110</p>
<p>Business Analyst 2</p>	<p>The Business Analyst 2 will be involved in the design, testing, training, maintenance, and initial operation of the system. This resource will be primarily responsible for business process design, testing, and providing assistance with implementation activities. The Business Analyst 2 will also have responsibility for creation of the training materials and conducting the training classes.</p>	<p>\$110</p>
<p>Training Specialist</p>	<p>The Training Specialist will be involved in creation of the training materials and training class delivery. The Training Specialist is primarily responsible for training the Commonwealth of Virginia Agency personnel and management staff and/or trainers on the ECM solution.</p>	<p>\$110</p>
<p>Programmer/Analyst 1</p>	<p>The Programmer/Analyst 1 will be involved in the design, development, training, maintenance, and operation of the systems. The Programmer/Analyst 1 will be experienced in the use of programming languages and development tools that are required for the project.</p>	<p>\$100</p>
<p>Business Analyst 1</p>	<p>The Business Analyst 1 will be involved in the design, testing, training, maintenance, and initial operation of the system. This resource will be primarily responsible for business process design, testing, and providing assistance with implementation activities. The Business Analyst 1 will also have responsibility for creation of the training materials and conducting the training classes.</p>	<p>\$100</p>

Research Analyst	The Research Analyst is involved in data gathering and data analysis as directed by CGI project management personnel. The Research Analyst is also responsible for disseminating relevant research and for communicating the data analysis to CGI project team members and the Commonwealth of Virginia Agency stakeholders.	\$100
Documentation Specialist	The Documentation Specialist is responsible for writing end user documentation which includes online help, printed user guides, installation guides, and release notes. The Documentation Specialist utilizes design specifications as well as interviews with subject matter experts to develop the technical documentation.	\$63
Project Support/Administrative Staff	The Project Support/Administrative Staff handles logistics and support for the CGI team members. This support includes, but is not limited to travel arrangements, hotel reservations, and purchasing supplies.	\$63

Category	Detailed Description of Skills, Knowledge and Abilities	Hourly Rate
CGI SOUTHWEST VIRGINIA ECM RATES		
Technical Team Leader	The Technical Team Leader will prepare and monitor development task lists and schedules at the direction of the CGI project management personnel. The Technical Team Leader will plan, coordinate, and monitor the tasks of multiple programmer/analysts working on the ECM solution and provide technical leadership for the project. The Technical Team Leader will also coordinate and lead software design activities and will ensure that development processes and standards are being followed and met. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.	\$120

<p>Functional Team Leader</p>	<p>The Functional Team Leader manages and guides the team of CGI functional staff members in meeting project milestones and providing high quality project deliverables. The Functional Team Leader oversees the effort in developing business requirements, designing business processes, and recommending solutions to meet the Commonwealth of Virginia Agency's business objectives. The Functional Team Leader also has responsibility for test preparation and execution, training, and functional implementation activities. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$120</p>
<p>Systems Integration Team Leader</p>	<p>The Systems Integration Team Leader will oversee and manage a CGI team of technical members (e.g. Integration Engineer) from blueprint through deployment of the ECM solution. The Systems Integration Team Leader will review the system application and architecture deliverables throughout development to ensure completeness, consistency, quality and requirement traceability. The Systems Integration Team Leader will ensure that the system components work together to meet the objectives and performance goals as defined in the requirements for the ECM solution. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$120</p>
<p>Senior P8 Platform Administrator</p>	<p>The Senior P8 Platform Administrator has solid experience in administering the P8 server and oversees and guides the P8 Platform Administrator. The Senior P8 Platform Administrator will also monitor and analyze FileNet system performance and make recommendations for system tuning. In addition, the Senior P8 Platform Administrator will be involved in troubleshooting system issues and perform preventative maintenance. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$105</p>

<p>Senior Programmer/Analyst</p>	<p>The Senior Programmer/Analyst provides technical and business knowledge and application development for projects utilizing current computing architectures. The Senior Programmer/Analyst will define customer requirements and system interfaces, assess available technologies, and develop and present solutions. The Senior Programmer/Analyst will also guide and manage the Programmer/Analysts on project deliverables such as designing, testing, and coding software. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$105</p>
<p>Senior Business Analyst</p>	<p>The Senior Business Analyst serves in a functional capacity. The Senior Business Analyst guides and manages the Business Analysts with respect to the assigned deliverables. The Senior Business Analyst is also involved in the design, testing, training, maintenance, and initial operation of the system. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$105</p>
<p>Senior Training Specialist</p>	<p>The Senior Training Specialist guides and manages the Training Specialists. The Senior Training Specialist oversees the creation of training materials and class delivery for the ECM solution. The Senior Training Specialist will also be involved in training the Commonwealth of Virginia Agency personnel and management staff on the ECM solution. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$105</p>

<p>Business Consultant</p>	<p>The Business Consultant is involved in partnering with the business functional groups to communicate and clarify business needs, contribute to development of the ECM solution plans, and ensure products and services are aligned with business needs. The Business Consultant will also provide strategic support to assigned stakeholders in analyzing and defining business requirements; designing business processes and researching and identifying enabling technologies based on stakeholder requirements. In addition, the Business Consultant will assess near-term needs utilizing structured interview processes to establish business priorities; consult with technical subject matter experts and develop alternative technical solutions; advise on options, risks, cost versus benefit, and impact on other business processes and technology priorities. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$90</p>
<p>Application Engineer</p>	<p>The Application Engineer will document technical requirements and configurations, functional and technical architecture directions and operating models for the ECM solution. The Application Engineer will perform data gathering and data analysis, will design data models and data diagrams, and develop use cases. The Application Engineer will also provide technical support and troubleshoot issues that are raised regarding the ECM solution. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$90</p>
<p>Integration Engineer</p>	<p>The Integration Engineer will be involved in identifying and implementing processes, policies, and procedures to ensure application and systems deployment, availability and reliability. The Integration Engineer will also be responsible for designing, coding, testing, debugging, documenting and maintaining moderately complex programs. In addition, the Integration Engineer will be providing escalated technical support and resolve integration and deployment issues. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$90</p>

<p>P8 Platform Administrator</p>	<p>The P8 Platform Administrator is involved in administering the P8 server and performing quality assurance (QA). The P8 Administrator also performs the back up of the servers and reviews the daily checklist with respect to server operations. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$90</p>
<p>System Administrator</p>	<p>The System Administrator is responsible for installing new hardware/software and upgrades for all standard business configurations. The System Administrator also maintains software and server hardware by performing scheduled maintenance. In addition, the System Administrator is involved in troubleshooting application and networking issues. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$75</p>
<p>Programmer/Analyst 2</p>	<p>The Programmer/Analyst 2 will be involved in the design, development, training, implementation, maintenance, and operation of the system. The Programmer/Analyst 2 will be experienced in the use of programming languages and development tools that are required for the project. In addition, the Programmer/Analyst 2 will maintain and administer the version and change control systems and assist with the development of system documentation. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$75</p>
<p>Business Analyst 2</p>	<p>The Business Analyst 2 will be involved in the design, testing, training, maintenance, and initial operation of the system. This resource will be primarily responsible for business process design, testing, and providing assistance with implementation activities. The Business Analyst 2 will also have responsibility for creation of the training materials and conducting the training classes. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$75</p>

<p>Training Specialist</p>	<p>The Training Specialist will be involved in creation of the training materials and training class delivery. The Training Specialist is primarily responsible for training the Commonwealth of Virginia Agency personnel and management staff and/or trainers on the ECM solution. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$75</p>
<p>Programmer/Analyst 1</p>	<p>The Programmer/Analyst 1 will be involved in the design, development, training, maintenance, and operation of the systems. The Programmer/Analyst 1 will be experienced in the use of programming languages and development tools that are required for the project. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$65</p>
<p>Business Analyst 1</p>	<p>The Business Analyst 1 will be involved in the design, testing, training, maintenance, and initial operation of the system. This resource will be primarily responsible for business process design, testing, and providing assistance with implementation activities. The Business Analyst 1 will also have responsibility for creation of the training materials and conducting the training classes. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$65</p>
<p>Research Analyst</p>	<p>The Research Analyst is involved in data gathering and data analysis as directed by CGI project management personnel. The Research Analyst is also responsible for disseminating relevant research and for communicating the data analysis to CGI project team members and the Commonwealth of Virginia Agency stakeholders. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.</p>	<p>\$65</p>

Documentation Specialist	The Documentation Specialist is responsible for writing end user documentation which includes online help, printed user guides, installation guides, and release notes. The Documentation Specialist utilizes design specifications as well as interviews with subject matter experts to develop the technical documentation. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.	\$55
Project Support/Administrative Staff	The Project Support/Administrative Staff handles logistics and support for the CGI team members. This support includes, but is not limited to travel arrangements, hotel reservations, and purchasing supplies. This resource provides remote assistance from CGI's Southwest Virginia Center of Excellence.	\$55

EXHIBIT E: CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- i). No Federal appropriated funds have been paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.
- ii). If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- iii). The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and Contracts under grants, loans and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature:

Dean C Merrill

Printed Name:

Dean C Merrill

Organization:

CAI

Date:

NOV 9, 2007