



Commonwealth of Virginia  
Virginia Information Technologies Agency

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

Date: December 4, 2007

Contract #: VA-071114-BP

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

Contractor: Bearing Point  
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Term: November 14, 2007 – November 13, 2010

Payment: Net 30 days

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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>





# **Information Technology Services and Software Contract**

between

**The Virginia Information Technologies Agency**

on behalf of

**The Commonwealth of Virginia**

and

**BearingPoint, Inc.**

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## 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 BearingPoint, 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 as determined by the Authorized User in the applicable 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 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 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**

Ninety (90) days from Acceptance of the Deliverables by the Authorized User as outlined in the SOW.

**R. Work Product**

Work Product shall be considered a "work made for hire" under applicable US copyright laws and shall become the property of Authorized User. This includes inventions, combinations, machines, , software designs, software customizations, software interfaces, computer programs, 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, Supplier's proprietary tools, methods, templates, and know-how, pre-existing or otherwise; however, Supplier grants the Commonwealth a royalty free, fully paid-up, worldwide non-exclusive license to use the Supplier's proprietary tools, methods, templates and know-how incorporated in the Work Product for the Commonwealth's internal purposes.

**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 an order may survive the expiration of the term of this Contract, and all terms and conditions required for the operation of such order shall remain in full force and effect until Services pursuant to such order have met the final acceptance criteria of the applicable Authorized User.

**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 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 fifteen (15) days to cure the failure/nonperformance. If Supplier fails to answer the Show Cause Notice, or does not correct the deficiencies noted, VITA may immediately terminate this Contract or any order issued hereunder, in whole or in part, or the Authorized User may immediately 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 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 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 User's 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. 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](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](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."

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 shall ensure 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 ensure 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 ensure 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 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 Exhibit D, to such Authorized User to maintain the Deliverables in accordance with the Requirements:

**1. Known Defects**

Promptly notify all Authorized Users of any 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) days of Supplier’s knowledge of such defect or malfunction.

**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 or Software Publisher.

**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.

**4. Service Levels**

Supplier provides the following service levels. Service levels not met are subject to escalation.

Metric	Allowable range
Number of open tickets	Less than 10% of user population for first two weeks.
Duration of level 1 tickets	90% 1 <sup>st</sup> call resolution
Duration of level 2 tickets	90% closed 2 days or less
System availability	System available 90% of time 1 <sup>st</sup> two weeks following deployment
Defects identified post-implementation	Less than 3% of total requirements

**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**

Variance	Escalation Level
Within 2% of schedule	None
Within 5% of schedule	Agency Senior management, BearingPoint Vice President. Notification to next higher level.
Within 10% of schedule	Agency Executive management, BearingPoint Senior Vice President. Notification to next higher level
Greater than 10% of schedule	VITA, Agency Executive Management, BearingPoint Executive Vice president or CEO.

**7. Remedies**

If Supplier is unable to restore the Deliverable to a condition in which such Deliverable meets, in all material respects, the Requirements or the Software Publisher’s specifications, 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 (a) during the Warranty Period, return all monies paid by such Authorized User for the returned Deliverable and Documentation or (b) 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 or product.

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, if purchased, shall be a term of one (1) year beginning at Acceptance of the Deliverable and renewable at the Authorized User’s request. Supplier shall notify the Authorized User not less than sixty (60) 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. Supplier will provide pricing on Maintenance at the Authorized User’s request.

**G. Documentation of Supplier Services**

Any documentation required for an Authorized User to have full benefit 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 reconstruct the configuration of 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. 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**

Any training necessary for an Authorized User to have full benefit of the Service 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 ensuring confidentiality and protecting proprietary data.

#### **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 best 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. The Supplier shall provide phase-in, phase-out services, at no additional cost to any Authorized User, as long as such Authorized User has an active 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. In the event of a termination for breach and/or default of Supplier or a termination due to Supplier's status as a party excluded from Federal Procurement and Nonprocurement Programs, Supplier shall perform such obligations at no charge or fee to VITA or any Authorized User; otherwise, 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 failure to perform any installation Services of the ECM Software in accordance with the schedule set forth in the applicable SOW shall constitute a material breach of this Contract, resulting in damages to the Authorized User. As an estimate of the damages such Authorized User shall suffer, Supplier agrees to credit such Authorized User an amount equal to five percent (5%) of the total ECM Software license fee.

#### **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.

#### **B. Acceptance**

Service(s) and Deliverables shall be deemed accepted when the Authorized User determines that such Service(s) and Deliverables meet the Requirements or written criteria set forth in the applicable SOW. At a minimum, 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. Prior to final Acceptance, 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. Supplier agrees to provide to the Authorized User such assistance and advice as the Authorized User may reasonably require, at no additional cost, during the period of such Acceptance testing.. Authorized User shall provide to Supplier written notice of Acceptance upon completion of installation and successful Acceptance testing.

#### **C. Cure Period**

Supplier shall correct any 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 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, Supplier hereby grants to the Commonwealth or the Authorized

User 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. 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.

**C. 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 ensure 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 ensure 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 failure of Supplier to perform its obligations pursuant to this Section.

**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;
- 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 specified by VITA or the Authorized User in the order or SOW and in this Contract, and Supplier is possessed of superior knowledge with respect to the Services and Deliverables and is aware that all Authorized Users are relying on Supplier's skill and judgment in providing the Services and Deliverables;
- iii). If the Services are pursuant to a particular quote or Request for Quote (RFQ), such Services and any associated Deliverables shall be fit for the particular purposes specified by the Authorized User requesting such quote or issuing such RFQ, and Supplier is possessed of superior knowledge with respect to the Services and Deliverables and is aware that such Authorized User is relying on Supplier's skill and judgment in providing the Services and Deliverables;
- iv). The Services and Deliverables shall meet or exceed the 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;
- vii). The documentation which Supplier is required to provide under this Contract shall be sufficient in detail and content to allow an appropriately trained user or beneficiary of the Services 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 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 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. This Warranty is contingent upon proper use of the Deliverable. Improper use is defined to the extent that (a) it has been modified in any way by the Authorized User, unless Supplier has agreed otherwise in writing or; (b) introduction of any third party code or software by Authorized User, unless Supplier has agreed otherwise in writing; or (c) there are errors or deficiencies in any other software programs, databases or hardware not provided by Supplier that interact with the Deliverable.

**D. Malicious Code**

Supplier has used its best 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.**

**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 shall 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 an order, based upon a mutually executed Statement of Work, placed by an Authorized User through the eVA electronic procurement website portal (<http://www.eva.state.va.us>). 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 all Authorized Users in writing in accordance with the above and shall not become effective for sixty (60) days thereafter. Supplier agrees to offer price reductions to ensure compliance with the Competitive Pricing Section.

#### **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 arrears 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](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](mailto: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 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 any and all 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 attorneys' and accountants' fees and disbursements) and costs (each, a "Claim" and collectively, "Claims"), 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: (i) any intentional or willful

misconduct or negligence of any employee, agent, or subcontractor of Supplier, (ii) any act or omission of any employee, agent, or subcontractor of Supplier, (iii) breach of any representation, warranty or covenant of Supplier contained herein, (iv) any defect in the Services or Deliverables provided by Supplier, or (v) 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.

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 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.

## **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, (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 not covered by unlimited liability above, to the maximum extent permitted by applicable law, the Supplier's liability under this contract for loss or for Services delivered under this Contract shall not exceed the greater of \$1,000,000 or the total amount of the affected order to be paid to the Supplier resulting from a Statement of Work (SOW) under this contract as of the date of the event or circumstance giving rise to Supplier's liability.

**FOR ALL OTHER CONTRACTUAL CLAIMS, 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.**

**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 occurrence.

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 local laws in Supplier's jurisdiction, as well as all 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, should Supplier hire an employee of an Authorized User who has substantially worked on any project covered by this Contract without prior written consent, the Supplier shall be billed for fifty percent (50%) of the employee's annual salary in effect at the time of termination.

**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

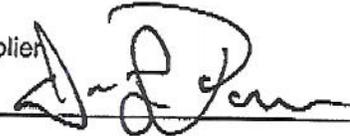
This Contract, its Exhibits, and any prior non-disclosure agreement constitute the entire agreement between VITA and Supplier and supersede any and all previous representations, understandings, discussions or agreements between VITA and Supplier as to the subject matter hereof. Any and all terms and 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: 

(Signature)

Name: DON L. PARR

(Print)

Title: MANAGING DIRECTOR

Date: 4/27/07

Address for Notice:

4860 Cox Rd Suite 200  
Glen Allen, VA 23060

VITA

By: 

(Signature)

Name: James T. Roberts

(Print)

Title: Director Finance + Administration

Date: 4/27/07

Address for Notice:

\_\_\_\_\_  
\_\_\_\_\_

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

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

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

## **DETAILED DESCRIPTION OF PROPOSED SOLUTION(S)**

BearingPoint has responded below by item number to VITA/DEQ questions. We have detailed our proposed solution and included information regarding our processes, methodologies, resources, and qualifications.

Certain responses below describe capabilities that ObjectBuilders can provide. We believe that the proposal of these capabilities enhances the options from which DEQ can choose. It is understood that there may be cases in which we (DEQ, BearingPoint and/or ObjectBuilders) may elect to forgo the use of these capabilities.

### **Base 1: Can you provide the necessary services for the required storage capacity estimation?**

Yes. BearingPoint routinely sizes FileNet applications for both new and existing systems.

References: New York Department of Finance, Veterans Administration.

Approach: FileNet systems depend on six areas of major storage (both temporary and permanent):

- Capture cache at the scanning workstation
- Capture cache on the central servers
- Permanent storage (SAN, optical, or other)
- Off-line/Near-line or Disaster recovery storage
- Retrieval cache on the servers
- Retrieval cache on the client workstation (for browsers, this is typically browser cache)

Current and proposed VITA computer standards provide adequate cache for scanning and retrieval at the workstation assuming the workstations are not used for major storage or processing of other applications.

Server cache for scanning and retrieval is configurable within the FileNet administration tools and is limited by the physical resources of the server(s). Capture cache holds new documents waiting to be written to permanent storage. Based upon the supplied statistics, daily scanning volumes appear to be a maximum of 77,000 pages. To minimize risk of loss of work, all new documents should be committed to permanent storage as quickly as possible

(certainly in one work day). However, we recommend over-sizing capture cache to permit flexibility in managing server and network performance, and so would recommend a minimum of 5 days available storage for inbound capture cache. (Please note that documents are available for use prior to permanent storage.)

VITA has referenced the possibility of 'near line' storage, but we do not see a need for this at this time. SAN storage is so cost effective that we feel simplifying the architecture and storage approach can be done by simply keeping all active documents on the SAN. This is especially true for new applications in customer sites when the technology is first being deployed. This approach minimizes cost and can give VITA the most flexibility in making future records management decisions. This storage also provides the fastest overall retrieval performance.

Disaster recovery for document images is essential, and we recommend that the SAN be backed up, employing the technology of choice for DEQ. If desired, optical storage devices can be added to the SAN, and configured within FileNet software to write new documents to optical at the same time. The optical media can then be removed and stored as a backup copy. Our calculations for storage exceed DEQ's by about 25%, but we assumed maximum scanning capacity for each work-day, and were not able to factor in the number of future documents that would be stored in 'native mode' rather than scanned.

Retrieval cache is determined by measuring the number of document retrievals per user (on average) and the number of active users (on average). As the workstation requirements are adequate, only server sizing needs to be calculated. This calculation will be completed when we are able to establish the total number of documents used during workflow processing. While many estimates assume that only the work item is being viewed, our experience suggests that during work processing, additional documents are retrieved during research, or should be included as part of the initial work item for reference.

**Base 2: Can you provide the necessary services for the required storage options analysis?**

Yes. BearingPoint can provide the technical services to perform storage analysis, and has been actively engaged with current clients in developing solutions that include the latest stable technologies.

References: New York Department of Finance, Veterans Administration.

Approach:

Based upon the information supplied we believe that DEQ can be best served by the simplest approach. FileNet records management software should be employed for retention schedule management, and DEQ should use the existing SAN with appropriate disaster recovery capabilities. Although documents often have periods of long inactivity after initial use, the cost of SAN and cost of adding additional storage complexity don't, in our opinion, justify more than standard SAN storage. Benefits of this approach include the following:

- Common performance expectations for all retrievals and users – no technical 'special cases' for performance
- Cost of storage and administration and security
- Ability to re-use SAN storage and manage it dynamically
- Simplicity of administration
- Ability to locate SAN storage at different points on the network to enhance performance or mitigate network loading.
- Ease of expandability as work volumes increase

With WAN traffic being somewhat dynamic over time, we are not able to predict with confidence the total WAN performance. However, it has been our experience that on mature WAN/LANs that are not near their peak traffic levels on needed segments, regular users can get satisfactory performance without specific 'image system enhancements.'

There are two exceptions to this: high volume printing, and high volume scanning. These both share a unique 'user perception' question:

For printing, when a shared printer is used for high volume work, the printer and the contention of users is more critical than the volume of work submitted. In effect, the network need not be any faster than the fastest print speed, because once the printer starts printing, all work is queued up, and the network only needs to exceed the speed of the printer/spooler. For high volume printing, we recommend using FileNet print services for the reasons DEQ has recognized – efficient print queue management and compression. In addition, print services can also be administered as part of the FileNet environment.

For the capture of new documents, the question revolves around the user's perception of delivery of new documents. A user will often initially expect work to be scanned and delivered as fast as possible. In work processing reality, however, the typical user is not waiting for a new work item to arrive, as they are working on the work already received. This is most often the case (although we have supported financial service systems that had 45 minute service level agreements.) From the work processes described, we believe that DEQ should NOT invest in excessive network performance for capture. During actual implementation we will confirm the requirements, of course, but given current data, we believe the standard network with some additional configuration will meet the majority of capture requirements. The calculation for WAN utilization and performance can then be made using overall utilization across the segments impacted by scanning, and the actual scanning volumes. FileNet offers the capability to support local 'caching' for capture to facilitate 'bleeding' large volumes across the WAN to minimize impact, but at this time we do not see the requirement for that.

**Base 3: Can you provide the necessary services for the required network infrastructure analysis?**

Yes. BearingPoint can provide network analysis and capacity planning.

References: New York Department of Finance, Veterans Administration.

Approach:

BearingPoint has dedicated professionals that perform network analysis and have done so for document management systems. The City of New York and The Veterans administration both employed BearingPoint to analyze and engineer the network architecture for their applications.

Typical calculations are illustrated below:

**Sample Traffic Analysis**

Key parameters driving this analysis include:

- Images/Year
- Images/Month
- Images/Day
- Images/Hour
- Images/Minute
- Kbits/Minute
- Bandwidth Utilization

**Sample Response Time Calculation**

Image Size: 50Kbytes

Average Number of Image/Documents per folder: 300 (assumption)

Average Folder size: 300 x 50K = 15,000KBytes

Average Folder size: (Kbits) = 15,000 x 8 = 120,000

Small Volume Sites

Up to 50 users

30% users: 15

Medium Volume Sites

50-100 users

30% users: 30

High Volume Sites

> 100 users (360 users)

30% users: 108

Average Utilization averaged over 1 hour if 30% of users at each site requested an entire folder: (“busy period”)

500 Kbps (small site)

1000 Kbps (medium site)

3600 Kbps (large site)

Image Size: 50K

Document Size: Average number of images/document x 50Kbytes x 8 = XX Kbits

Available bandwidth = T1 bandwidth – Average Utilization – Existing Utilization

Response time to retrieve 1 document in a “busy period”: Document size/Available bandwidth

We believe that DEQ is best served with centralized SAN storage as this permits the greatest flexibility to the changing business traffic DEQ has noted (moving to electronic document storage rather than scanning, increased web and wide area network submissions, etc.)

However, depending on the local connectivity of regional offices and link utilization, some distributed permanent storage may be necessary to cope with the idiosyncrasies of low-speed WAN links.

Much of the processing is done on the server, but dial-up and low speed WAN connections may result in a deterioration of speed. That said, the decrease in speed will only affect data being sent across the internet and low speed WAN networks, as server processing will not be affected. The low speeds will not affect the usability and functionality of the system.

**Base 4: Can you provide the necessary services for the required analysis of workstations and monitors?**

Yes.

References: New York Department of Finance, Veterans Administration.

Approach:

Current and proposed DEQ computer standards provide adequate hardware for typical retrieval and workflow activity. In assessing this performance requirement we recommend that DEQ keep in mind two critical elements:

Users commonly need two kinds of information from an ECM system regarding documents: a) “Is the document here?” (the indexing meta data) b) “What does the image tell me?”

Users needing to look at documents need to actually see them. Their “consumption speed” of documents is related to their need to read the content and digest it. Poorly indexed documents, or poorly designed workflows create situations where users seek to pull dozens of documents and skim them, looking for required information. We will address this problem aggressively in our indexing and database design, as this component correctly built delivers one of the single highest benefits for users.

Retrieval and workflow users are typically not the high volume participants in an ECM solution – the printers and scanners typically create and process much more mechanical work than the user population.

For these reasons we believe the workstation and laptop specifications are adequate.

**Base 5: Can you provide the necessary services for the required analysis of scanners?**

Yes. FileNet systems have been deployed with a wide array of scanning systems, including integrations with a variety of engineering applications.

Approach:

All scanners listed in appendix D to the RFP are compatible with the Kofax software. It should be noted that the majority of these models are no longer in production and if they are more than 4 years old, should be considered for replacement as newer scanners are typically connected via FireWire or USB. This eliminates the need for SCSI or Kofax Adrenaline interface boards.

There is also a list of supported and compatible scanners available from the Kofax web site ([www.kofax.com](http://www.kofax.com)).

Application, business process & throughput requirements are all factors in the determination capture devices.

The following factors are used when evaluating scanners to meet specific application and business process requirements:

- Scanning Speed
  - Pages Per Minute (PPM)
  - Typical Average Daily Scanning Volume
  - Recommended Peak Daily Volume
- Key Characteristics
  - Simplex and/or Duplex Scanning
  - Black and White or Color Scanning
  -
- Image processing features
  - Maximum output resolution for B&W, Grayscale, and Color
  - Image cleanup and correction (Skew Correction, Auto Crop, Noise Filtering, etc).
- Document feeding capabilities
  - ADF Feeder Capacity
  - Flatbed scanning for documents that are not able to be auto-fed and exceptions.
- Scanner Reliability and Support Requirements – Based on our experience some scanners are more reliable and some require more support than others.

In the event capture devices not supported by Kofax are required, we have the ability to use the device's default software to output an image file to directory location where Kofax can import it and submit it to capture process for that batch class.

**Base 6: Can you provide the necessary services for the required remote access?**

Yes.

Approach:

BearingPoint understands that DEQ personnel require access to information away from central offices, such as in the field conducting inspections or performing other tasks as mobile workers. BearingPoint routinely deploys ECM systems over VPN and other remote access topologies.

The DEQ ECM solution will be architected so that it can be remotely accessed (via the VPN capabilities using the secured, HTTPS protocol and with DEQ assistance, in accordance with DEQ security policy). Provided that the remote user has the necessary hardware (e.g., scanner or camera, if needed) and connectivity, he or she will be able to use the ECM solution to capture and upload documents. Users will also be able to access documents remotely from the ECM solution. Access to the ECM solution will be web-based and provided using IBM's WebSphere portal. For this access, we will configure and deploy what are known as "portlets" into the portal.

VITA and DEQ should note that VPN connections can add network overhead that is beyond BearingPoint's control of the ECM solution and may impact expected performance.

In addition, we are able to explore options with the DEQ that can enable users to work in a "disconnected" state – that is, disconnected from the DEQ network. These options can be used with various types of devices such as laptops, tablet PCs, PDAs and cell phones. They will allow packets of data containing scheduling, pre-populated forms, historical records, instructions and other content to be delivered to a user's remote device for work. The users can then continue productively off-line. Upon completion of the off-line work, the user can then connect and upload the results, with the system managing synchronization. These options could prove particularly valuable if a Continuity of Operations (CoOP) scenario arose.

The DEQ has noted that web access for FOIA requests needed to be accommodated through IBM's WebSphere portal as well. We can do this, and security can be configured on documents to control/provide appropriate access to content.

**Base 7: Can you provide the necessary services for the required implementation of the capture capability?**

Yes.

Approach:

BearingPoint will implement all capture set-up and integration including the necessary release scripts. The ObjectBuilder solution will meet all the requirements mentioned. Release scripts are normally provided by the scanning software that interfaces with FileNet.

BearingPoint recommends that all scanners be Kofax compatible.

Kofax can acquire images from scanners and from various file import routines as well. In the event there is a role specific capture device, such as an MFP, Large Format Scanner, photo, video, voice, etc. these files can be identified and processed against other metadata and submitted to the FileNet ECM system.

Batch class rules will determine and control any file format conversions.

We can also employ tools from Kofax Ascent capture to identify and extract information from Fax, Email, as well as direct file import. Attachments to emails can be separated and converted to TIFF or PDF and ingested to the FileNet ECM system as a batch class import process.

eDocs can be incorporated through Kofax for submission to the ECM system.

**Base 8: Can you provide the necessary services to implement the required scanning capability?**

Yes.

References: New York Department of Finance, Veterans Administration.

Approach:

The regional office model depicted in the RFP represents a standard approach in meeting this kind of requirement, and in fact is the very same as the one we implemented at the Veterans Administration (although FileNet Capture Software was used).

Kofax scanning software provides release scripts to interface with FileNet software, so integration effort is minimal. This assumes that Kofax supports the implemented version of FileNet at the time of deployment, and that the scanners selected at that time are supported by Kofax.

Integration with CEDS can be done via customization during the capture process, and is also a common model for deployment of ECM systems. After initial indexing (whether by bar code or keying) the capture module will connect to the external data sources and execute a query to retrieve the required data. Based upon the response, the index values are updated. This processing is performed as a background activity, and requires no operator intervention.

The BearingPoint Team has designed and implemented a number of decentralized and centralized scanning & capture operations with the Kofax Ascent product line. These include applications with average daily scan volumes exceeding 600,000 pages per day from 15 scanners as well as operations having peak volumes exceeding 1 million pages per day from 35 scanners.

We are experienced in the acquisition of "E" sized drawings and larger into the Kofax Ascent system and typically make extensive use of database lookups, validations and data re-organization routines and logic. This is accomplished via large format scanners, direct file import, eDoc assimilation as well as referential file transmission.

Our team has extensive experience in logical design for constructing release scripts as well as indexing validation tools and protocols.

To facilitate the requirements for DEQ, a combination of Kofax technology can be deployed. Using Kofax Ascent Capture Internet Services (ACIS) remote offices can capture documents in their local domains, index, QC and release them to the central site for submission to FileNet. Reconciliation reporting can be constructed to monitor the submission vs. receipt of documents to the FileNet ECM system in order to identify and deal with submission exceptions. Retry logic can be built into these routines further increasing throughput and reducing errors.

Remote sites operating under the ACIS model can be autonomous to the core site, allowing them to run discretely with no impact to the WAN. This allows scheduling of submissions and reduces dependencies on the availability of the WAN. ACIS transmits via HTTPS providing a secure transmission package.

ACIS functions are now bi-directional. This allows work scanned in one location to be indexed in another. Not only does this provide redundancy, better disaster recovery and increased opportunity to maintain process availability, it provides the option of centralizing certain jobs and skill sets. One such example is that of exception processing and quality control. While scanning and indexing can be performed in the remote sites, any error correction, research, customer contact, etc. can be handled from a centralized department. This optimizes people and skill sets and increases the ability to provide a consistent process and performance capability.

Another option for DEQ with respect to distributed scanning is the Document Scan Server (DSS) from Kofax. This provides the ability to create a web-based application that drives a discrete scanning device configured on the network or WAN as an IP device. This provides Zero Footprint on the workstation requiring no software, drivers, boards or other components. This is particularly applicable for "Kiosk", front counter or customer facing types of applications. In this example a customer would come to the counter with their respective documents the workflow system may have requested from them or instructed them to bring. They would log into the web application and be prompted to insert the specific document into the scanner and press a button on the web page. As the web application would already have the indexing information the document would be captured and submitted to the Kofax system for further validation or, the images could be fed directly to the business application in the FileNet ECM system. This would be particularly valuable in streamlining the acquisition of "trailing" documents to a permitting process or for conflict resolution, disputes, etc.

**Base 9: Can you provide the necessary services for the required integration and support associated with eMail retention?**

Yes.

Approach:

FileNet Email Manager software (with Outlook integration) will meet these requirements, and BearingPoint recommends its use over any custom integration. Doing so will ensure upgrades and product compatibility going forward, and minimize maintenance and integration costs.

The benefit of IBM FileNet Email Manager being natively integrated with IBM FileNet P8 platform is the ease in which email messages and attachments can be used to launch workflows or merge/trigger an existing workflow. IBM FileNet Email Manager's unique abilities to capture and index email based on the business value of its content or metadata is the basis for integrating to workflow. Additionally, IBM FileNet Email Manager uses its templates, rules, and profiles to identify the email, consider it for 'review' or verification, index it, and potentially place it in a particular location within the repository.

**Base 10: Can you provide the necessary services for the required set-up, implementation and integration of electronic native documents?**

Yes.

Approach:

FileNet P8 software provides this capability out-of-the-box. After finalizing the requirements with DEQ, the functionality will be deployed as described for office documents.

Companies that offer capture solutions often provide functionality to store the content and indexes into FileNet. Many of these companies also provide components that can be incorporated into the FileNet Capture Path, but for those that do not, FileNet provides a File Import capability to import content and index objects into the repository.

For direct inbound faxing into the FileNet, FileNet Fax integrates with FileNet Capture to provide a way for faxed images to go directly into the repository by using the capture paths.

Once the documents are added to the Content Manager repository, it allows for automatic invocation of workflow, often referred to as "Active Content."

**Base 11: Can you provide the necessary services for the required database transfer?**

Yes.

Approach:

FileNet provides access and search capabilities for content stored in content repositories of various formats. Federated searching will be a large part of the DEQ solution and will integrate documents and data from across repositories into a single, standardized architecture. This will result in information being made available electronically to the DEQ staff in all regions.

BearingPoint proposes adding the office location as part of the metadata for documents. This would allow users in regional offices to narrow their searches based on location. We can add an additional property that will be associated to each document for a specific region, and then include it in the indexing schema for rapid searches. All proposed database modifications and instructions will be documented and presented to the DEQ staff for review and approval.

In addition to federated search, the BearingPoint Team has experience in migration of documents into FileNet P8. For the Energy Engineering Solution, we successfully migrated documents from external systems, and also key documentation from existing systems to FileNet P8.

**Option 1: Can you provide the necessary services for database transfer?**

Yes.

Approach:

BearingPoint routinely provides database design analysis and has experience with indexing schemas. We will facilitate indexing schema design review meetings with the DEQ stakeholders to review the existing indexing schema, as well as the proposed indexing schema and the retrieval patterns. During these meetings, we will identify and capture the data required for retrieval patterns and incorporate them into the schema design.

We will also seek to identify any unnecessary metadata currently being captured and retained in the document profile. We will remove any metadata that is not an essential part of the retrieval patterns and remove any unnecessary database fields. We will also add fields, change fields, or globally change document names that have been agreed upon, and then migrate the required index information and metadata to the new system (subject to DEQ/VITA standards, review, and approval). The newly proposed indexing schema should be applicable to the business and retrieval patterns and take into account overall performance and usage.

**Base 12: Can you provide the necessary services for the required analysis, integration and implementation associated with the search requirements?**

Yes. The design, configuration, and construction of custom retrieval routines are common to most ECM implementations.

Reference: The City of New York. The Veterans Administration

Approach:

FileNet P8 software provides these capabilities. Index search is standard. Full text and key word search is most commonly performed on the text of electronic documents. Property and content-based search capabilities are provided for all document and file types as applicable. However, files in formats that do not provide access to specific content (e.g., TIF, JPG, etc.) can be searched based on properties only.

If DEQ desires to have full text search of scanned documents, optical character recognition and keyword search indexing can be accomplished by the addition of the recognition capabilities.

Full text OCR can be provided as an option; however, OCR typically slows down capture time considerably, should be taken into account for any calculations.

ObjectBuilder’s pre-built solution components may be used to assemble fully customized search screens. Unlike other solutions where a generic search screen may be displayed to a user with unnecessary and confusing options and fields, the custom search screens will enable users to see just what they need and with the business terms they recognize. The search screens may search multiple repositories and data sources of varying types simultaneously. Cross-reference tables will be created as part of the development of the search capability to allow searches on any CEDS ID.

**A Note on Image Recognition:** OCR processed image searches are not included as part of the FileNet package. Licensed customers of the FileNet product suite have license to use the included Verity® search engine within the FileNet repositories. FileNet Capture Professional also provides a way to convert images to PDF using the OCR process. In doing so, content and full text searches can be performed while preserving the scanned image display. When you process a document through Full Text OCR, the output file is a PDF file. Image content searches and searches across non-FileNet repositories will require the design and build of a FileNet Image Services Gateway.

**Content And Property Search** – The ECM will be configured to index the content and property values in a given FileNet object store. With the proper design and configuration of the Object store taxonomy and schema, users will be able to search property fields of the document and the content of a document.

**Searches Across Multiple FileNet Object Stores Relevancy Ranking** – The FileNet ECM will be configured to provide ranked search results. The search engine processes the query, and assigns a relevancy ranking between 0.01 and 1.0 (1.0 equaling 100%) to indicate which results more closely match the search criteria. This feature can be turned on or off as desired. There are some variations on the ranking formula depending on the operator(<, >, =, and so on) used.

**Keyword, Phrase, And Full-Text Searches** – The FileNet Suite provides a comprehensive search engine for single word and phrase searches. Some examples of the types of searches that can be performed on single words and phrases include:

- |   |  |
|---|--|
| ✓ Search for a single word with the exact spelling and case-sensitivity | ✓ Search for a single word allowing for other forms of case-sensitivity        |
| ✓ Search for stemmed versions of a single word                          | ✓ Search for a word, specifying a wildcard character                           |
| ✓ Exclude a word from the search  | ✓ Search for a phrase with the exact spelling and case-sensitivity             |
| ✓ Search for words located near each other                              | ✓ Search for words located in the same sentence                                |
| ✓ Search for words located in the same paragraph                        | ✓ Search the HTML/XML tag, “Header,” for one or more words (aka Zone searches) |
| ✓ Search for any of the specified words                                 | ✓ Search for all of the specified words  |
| ✓ Sounds-like (or Soundex) searches                                     | ✓ Wildcard   |
| ✓ Typo searches   | ✓ Thesaurus searches   |

**Base 13: Can you provide the necessary services for the required image retrieval and viewing capability?**

Yes.

Approach:

FileNet’s Image Manager Active Edition allows image retrieval and viewing in the correct format. The viewer manages the file format by associating the extension type of the document by looking at the mime type. The Image Manager already has built-in advanced caching mechanisms and paging that allows fast access to large objects.

FileNet supports a 'chained tiff' format, the original FileNet format, which can help address issues of performance for large document sizes.

We can provide the ability for a user preference to be set and saved to specify the default size and location of the viewer to be optimized for their environment.

**Base 14: Can you provide the necessary services for the required web access capability?**

Yes.

Approach:

Our understanding is that document and image retrieval will be performed through the WebSphere portal interface, whereby the general public as well as employees working remotely can access content.

FileNet document retrieval and workflow are both web accessible, and allow users to retrieve their work queues and perform searches against the repository via an internet interface out-of-the-box.

The BearingPoint team has also provided thin client application development for legacy and new applications. In the past we have developed a framework that leverages FileNet P8 architecture (Business Process Manager, Image Manager, and Content Manager) to streamline and automate the overall business process and workloads; capture, convert and store forms and other printed matter in digital format within the a folder; connect with internal databases and external data sources; and make content available as needed and defined by the business process.

Since the application will be web-accessible, we would need to implement web security such as firewall, access control, and FileNet's built-in security mechanisms.

The "Assemble Once, Deploy Anywhere" capability of the ObjectBuilders components means that once the application is assembled, it can be rendered in a variety of deployment styles (such as thick client, thin client, rich client plug-in, disconnected, or PDA).

**Base 15: Can you provide the necessary services for the required printing capability?**

Yes. Print capabilities are a common application requirement.

Approach:

BearingPoint recommends using FileNet print services to provide the desired fast printing options.

Printing an entire folder of documents will be provided via custom coding. As a browser application, local printing, via the browser menu bar, is also available.

**Base 16: Can you provide the necessary services for the required analysis, assistance, and support for system security?**

Yes.

Approach:

FileNet supports the role, folder and even document level security out of the box. BearingPoint believes that the success of the DEQ implementation will be to keep the security schema manageable and not excessively complex. Typical tasks include developing matrices of users (and/or groups of users) and ECM objects and rights (or roles, like scanner, indexer, etc.), and then analyzing the matrices for maintenance, support and business needs. With these matrices complete, the group and individual access rights are entered into FileNet.

Authentication will take place via LDAP, and then FileNet can apply permissions for objects within its environment by using the LDAP user id as the reference key.

In working with content management applications, DEQ may find that the administration of "business access permissions" (work queues for instance) can be separated from typical system security administration activities to permit DEQ management to control business access rights, while security professionals monitor security rights. This option is available, but must be considered in light of VITA polices and standards.

**Base 17: Can you provide the necessary services for the required records management capability?**

Yes.

Approach:

To control retention and disposition of records, BearingPoint will define and associate a disposition schedule with record containers and record types. In the disposition schedule, we will specify the retention rules for records and instructions for disposing of them at the end of the retention period. It will be based only on the origination date and retention requirements. The disposition instructions include:

- Review
- Transfer to an archive for permanent preservation
- Export to another location
- Destruction

Prior to purging, a Library of Virginia compliant notification will be generated that contains a list of each of the documents that will be purged. Once authorization has been received, the documents can be purged by the system. We define different phases through which a record should pass in a disposition schedule and each phase has a defined retention period. We understand that the period of retention is triggered by a date in CEDS. This date will be accessible to the ECM system and if the date is deleted from this field, the system will verify this date and cancel the scheduled destruction. The system will be able to administer a single document that is associated with multiple retention schedules.

At the end of each phase, the specified action is performed on records, and then the records pass to the next phase. It should be noted that the disposition schedule is interrupted for entities on which a hold has been placed. It will be resumed after all holds are removed.

We can associate a disposition schedule with a record category, a record folder, or a record type. A record folder can have its own disposition schedule or it can inherit the disposition schedule associated with a parent record category.

We can 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. We can create a record type, associate the required retention schedule with this record type and assign this record type to the record. Record series that contain ECM documents should be operational as part of this deliverable. We will provide support services to implement a records management system at DEQ that provides the implementation, integration, reports, redaction, and processes to meet the current requirements of the Library of Virginia.

**Base 18: Can you provide the necessary services for the required Enterprise Report Management?**

Yes.

Approach:

Generally BearingPoint transfers the documents into the FileNet system rather than provide reports through a print stream. However, we have in the past, provided a custom routine to print out the reports as described.

**Base 19: Can you provide the necessary services for the required analysis, services, integration, and implementation of the capabilities described by the General System Features?**

Yes.

Approach:

Out-of-the-box FileNet supports storage of files in their native format and the checkin-checkout capabilities described. BearingPoint will provide the necessary services to establish multiple environments. In addition to development, test, and production, DEQ may wish to include a training environment that can be 'reset' so that training materials and courses can match the environment.

Redaction will be provided via custom software developed specifically for that task. The redaction solution makes a copy of the original document, permits manual redacting of the selected areas, and adds the new redacted document back to the repository. DEQ can optionally have the original document flagged (re-indexed) so that its security is more limited, and the redacted copy can be indexed to create the 'public' copy. By preserving the original copy, a document history is created, and with this approach, multiple redacted copies can be made if necessary. Redaction is performed on image files, rather than original format files, as the original text format files may be subject to compromise.

**Option 2: Can you provide the necessary services for fax capture and integration?**

Yes.

Approach:

There are multiple ways to capture fax. One recommended way is to incorporate FileNet Email Manager. This provides rendering all faxes into an email and storing it in the FileNet repository. There is also the FileNet Fax solution product, where incoming faxes are assimilated into the ECM system via the FileNet Capture Professional Inbound Link directly. Another way is the Fax2mail product, which renders faxes to emails that are assimilated by the FileNet Email Manager.

**Option 3: Can you provide the necessary services for eForms capture and implementation?**

Yes.

Approach:

We can provide the necessary services for eForms capture and implementation. The BearingPoint Team has extensive experience in eForms capture and implementation. We have worked on an integrated justice system where we defined with the client, 13 workflows for online document management and more than 100 electronic forms that today enhance both data entry and correspondence with the client's non-profit constituents.

We have the flexibility to use eForms for high fidelity documents or using ObjectBuilders components if specific graphical or interactive performance is needed. The solutions will integrate with the FileNet workflow and content management products.

- Air Compliance

We can provide an implementation associated with Air Compliance by first understanding the presentation layer of the e-Form. This should be an exact image of the paper form and can be created using FileNet eForms' designer tool. The business logic is then captured from the processes and incorporated for the form through the Business Process Manager. We can also add data validation if necessary.

- Tanks

We can provide an implementation associated with Tanks in a similar manner Air Compliance. The Tanks eForm requires an electronic or digital signature which can be leveraged by the security features of FileNet P8, such as Microsoft CryptoAPI and FileNet I-Sign. Electronic or digital signatures allow legally bound electronic communication.

We can also install optional plug-ins to give eForms additional functionality. For example, we can install the Java Database Connectivity (JDBC) plug-in, which is a Java API that enables applications to interact with SQL-compliant database systems.

**Option 4: Can you provide the necessary services for records management reports?**

Yes.

Approach:

BearingPoint recommends using the FileNet Records Product to meet this requirement. The Records Manager product provides a number of reports that provide a statistical view of different activities performed. If required, we can generate reports that allow DEQ records manager to screen various records and see which records meet certain criteria. The Records Manager product has preconfigured reports as well as the ability to create custom reports. For example, the product can generate reports to show the electronic folders created within a given time period or the review decisions made for entities during a given time period.

**Base 20: Can you provide the necessary services to DEQ for the required analysis and implementation for CEDS integration?**

Yes.

Approach:

BearingPoint recommends providing a solution with minimal impact to the CEDS and the ECM system, when changes are made. This creates a more flexible approach, requiring more design work initially, but less maintenance effort in the future.

The BearingPoint Team will use the ObjectBuilder's assembly software components. These components use a composite application technology to facilitate data integration, data transfer and federated data (including search) capabilities. This creates a Virtual Business Object Model that abstracts the data sources, services, workflow engines, and ECM repositories.

The data sources are then interrelated using a connector strategy. Connectors are provided out of the box for Oracle, FileNet Content Management, FileNet Process engine as well as others. The connectors enable a data source or service to be consumed instantly into the Virtual Business Object Model.

Without manual coding, an abstraction is created that facilitates data integration, transfer and federation. The layer of abstraction allows data from multiple sources and technologies to be inter-related and therefore exchanged.

Application components and screens assembled on top of the Virtual Business Object Model seamlessly interact with the various data sources without requiring any knowledge of where the data resides or in what product or technology it lives. Fundamentally, this approach enables a true service-oriented architecture, while still allowing for a quick and low risk implementation. This integration allows for ease of bi-directional updates.

We recommend the indexing to be implemented as a portal application so that indexing can be performed from any location. FileNet Content Manager provides robust search capabilities with its vendor specific portlet and JSR 168 standards based portal support. We can provide a portlet which will search for the scanned document and another portlet for manually entering in additional metadata. Based on the document ID, we can query the CEDS oracle database for the metadata already present and populate the portlet fields with that information. We've done this in the past by creating a framework for a portlet that queries an external source for information to be displayed. BearingPoint will provide the support for the integration during deployment phases 1, 2, 3 and 5.

For the Records Management module, we can use an event-driven architecture which is triggered by updates to the dates in CEDS. This in turn modifies the ECM database. At one client, the BearingPoint team used this approach to build a user management engine that plugged into the existing organization's infrastructure and dynamically triggered application updates when source system changes occurred through the 3rd party user management tools.

CEDS will be integrated with the Records Management module, driven by events providing real time changes between the two systems. These events will be triggered by at least five trigger dates from CEDS that will trigger a specified state of the records.

**Option 5: Can you provide the necessary services to DEQ for analysis and implementation for CEDS integration?**

Yes.

Approach:

To display a "hit list" of available documents, we can provide a button on the screen to query the database for the specific facility and/or function and display the results in a scrollable table format. These results can be links to the

actual document so that a user can click on them to view the document. The detail design document will specify all the screens that will be integrated to ECM and explain the query needed to retrieve the "hit list" associated to that screen.

Since CEDS is an Oracle based data system, abstracting the data model enables users to employ federated searches across all of these data sources. A single request is made to each of the data sources and the results are combined by the engine. Applications can be built as if the data was in one location when in fact it resides in many locations and products. Once the abstractions are created for CEDS and the other data sources, access to the data for all functions including creation of business transactions is possible. We can relate and integrate workflow with other systems and services, including MS Word, by configuring the rest of the application in this way.

**Base 21: Can you provide the necessary services for the required portal integration?**

Yes.

Approach:

WebSphere can allow access to information from across the enterprise. WebSphere also provides a rules capability that allows the administrator to create different security settings for different user groups. Customization and personalization can be achieved by configuring these rules to create different views and access levels in the portal.

WebSphere can refine access rights down to the object level, giving more granular access or restrictions on information within the system. These security rights will be made evident in the type of information that is displayed throughout the portal depending on the type of user logged in.

We will configure the access so that public/guest users would not have access to internal proprietary content by hiding relevant pages and portlets. This protection is in addition to FileNet's built-in security mechanisms. Users accessing the system should at first have a guest level access where they have access to public information only. There should be an option to log in whereby a user can enter their credentials and receive an authenticated view.

BearingPoint has experience with implementing custom single sign-on for portal implementations. If a client is unable to use the out-of-the-box single sign-on capabilities of the portal for FileNet, BearingPoint has the necessary experience to integrate the portal with 3rd party authentication products by customizing the SSO interfaces at the API level. We also have experience with portal administration as well as integration and development. Security configurations are standard practice for administration.

**Option 6: Can you provide the necessary services for GIS integration?**

Yes.

Approach:

As we have described, our approach will employ both a data abstraction and connector approach. A connector will be used to integrate with the GIS package. It is anticipated that the GIS package will use one of the existing connectors (data based, java API, etc) enabling the integration to be assembled.

**Option 7: Can you provide the necessary services to DEQ for eDMR integration?**

Yes.

Approach:

We will use the data abstraction approach to facilitate the data integration between eDMR and ECM. The ECM solution will have the ability to generate DMR forms from an XML document. The DMR forms will be processed as XML and appropriate representations will be created in an automated fashion. A style template will be created as part of the implementation services. This style template will contain the mapping from the XML for the DMR forms into a visual representation. This visual representation will be available by users of the ECM repository. As was requested, the representation pulled from the ECM repository will contain appropriate notices that the document is not a legal representation.

**Option 8: Can you provide the necessary services for eForm without an electronic signature?**

Yes.

Approach:

We will use our data abstraction approach to facilitate the data integration, transfer, and federation between ECM and CEDS. The layer of abstraction allows data from CEDS to populate the eForm under programmatic control. Once the eForm is completed, the data abstraction model works for the other direction and the information from the form can be uploaded into CEDS.

**Option 9: Can you provide the necessary services for eForm with an electronic signature?**

Yes.

Approach:

The approach for an eForm with electronic signatures is similar for one without. FileNet eForms supports certificate based digital signature. As part of the signing process, MS CryptoAPI validates the user's certificate and follows the certificate chain in order to validate the root certificate. Digital signatures are stored in the form data and as such, are part of the document

**Base 22: Can you provide the necessary services for the required workflow?**

Yes.

References: Montana Department of Labor

Approach: Business workflows can be seen as employing a number of common routines combined together to process work. For example:

- Capture (scan and initial index)
- Index update (either by lookup to data sources, or by user keying during the process)
- File Building (associating historical documents with the active case; adding new documents)
- Work processing (routing, pending, tracking, reporting, reminders)
- External data source updates (to and from the workflow item)
- History Log (a processing history of the item including system and staff actions)
- Pend for receipt of additional information (set item status, send request for information, unpend if information received or deadline passes)
- Disposition of the work item after completion

These components are all used in the DEQ examples provided, and are components we will provide, in conjunction with FileNet workflow. The history log referred to above is NOT a native FileNet log, but a custom component we provide that permits user routing messages to be added to the log and preserved for a complete processing narrative. VITA's experience with DEQ deployment of these components will have additional benefit to subsequent agencies and departments as their workflow analysis and requirements development can become more attuned to the value of the available system capabilities.

**Base 23: Can you provide the necessary services for the required Phase 1 implementation deployment?**

Yes.

References: Montana Department of Labor

The BearingPoint Team will support the phased approach taken and will follow the deployment list outlined below. We have experience with installations and configuration of FileNet P8 as well as migration from external systems to FileNet.

For phase one, BearingPoint will deploy the ECM system and perform core deployment tasks for permits, compliance, and enforcement for the selected Air regional office.

A certified FileNet installer from BearingPoint will be responsible for installing FileNet on the server environments. As the installs are being performed, the installer will take notes and create an install document that can be followed for the subsequent deployment phases. Any issues related to installations will be documented for knowledge transfer to the DEQ staff.

During the Detailed Design process, an experienced database administrator will review the draft indexing schema and provide input and expertise on any modifications that should be made. We can attend meetings with DEQ staff to discuss and validate the proposed recommendations so that all parties are in accordance and in agreement with the schema changes. We will provide a database schema change document describing any changes to be made and then the database administrator will then install the new indexing schema and provide an explanatory install guide and any lessons learned developed from the process.

We will put together a team to be responsible for converting the Keyfile indices, metadata and imaged Keyfile documents to the new system. We will develop a separate conversion plan and a test plan for the migration.

We will perform the required integration between CEDS and Ascent Capture, implement the Electronic Report Management requirements, install the Electronic Records Management document types and retention schedule, implement the workflows, and implement a basic integrated application.

The stated approach describes the base tasks we recommend. In reviewing the database schema (and elsewhere as appropriate) we want to review the applicable state standards (naming conventions etc.). For the retrieval and workflow user interfaces we can also provide prototypes to assist users and management in becoming familiar with the behavior and operation of systems of this type. As part of this effort we will also provide program and project management. Additional tasks we feel DEQ should consider include the following:

Communications Plan – Whether simple or complex, a good plan will help allay user concerns, control expectations, and elicit staff involvement.

Change Management Plan – The implementation of ECM and workflow systems often change jobs, roles, and responsibilities. The initial deployments are often conservative in the amount of change initiated, which is appropriate. Over time, however, users and management will seek to introduce changes to improve constituent service, worker satisfaction, or to meet new legislative and regulatory demands. Established early, a change management plan can be a framework for setting expectations around future changes and the way in which the changes are considered and implemented. This can diminish staff concerns, and be leveraged across all agencies involved.

Training Plan – ECM and workflow systems require more than technology training. Timeframes have changed, job functions may be different, and priorities and escalation procedures may change. A training plan should clearly identify the technology and business components that need attention for the initial deployment as well as ongoing. Agency trainers should be involved to address business changes, and to integrate the new technology back into existing job training.

Facilities Plan – On occasion, state furniture and facilities may not accommodate larger screens, additional computers, and so on. We like to provide our clients with a facility checklist for new deployments to help identify any changes that may be needed.

For large deployments, these plans can be significant work efforts in and of themselves. For DEQ's initial pilot deployment we would like to suggest that VITA use the opportunity to gain experience with smaller versions of the plans to enable VITA to find the best use, fit, and resourcing for the efforts. In conjunction with a post implementation review, these 'trial plans' offer a vehicle for improving future deployments by incorporating 'lessons learned.'

**Base 24: Can you provide the necessary services for the required Phase 1 validation services?**

Yes.

Approach:

BearingPoint will validate all work done in phase one by following a strict QA methodology. Test plans will be created and reviewed by DEQ staff prior to installations and integrations. The test plans will be followed by a dedicated test team that will test the basic functionality of the software as well as the integration points and workflow process. Our testing methodology is explained later in this document.

**Base 25: Can you provide the necessary services for the required phase 2 implementation deployment?**

Yes.

Approach:

For phase two, we will perform the core deployment tasks detailed on Phase 1 for permits, compliance, and enforcement for the remainder of the air functional area, encompassing six additional regional offices and two satellite offices, and Voluntary Remediation. BearingPoint will follow and update if necessary, the install guides created during phase one.

In addition we will perform integration of the ECM system to IBM's WebSphere for all regional offices. Since the WebSphere portal will be used as the front-end access point to FileNet, we will configure it in line with the requirements to provide web access. WebSphere installation will be carried out by an experienced WebSphere SME. Although WebSphere will be integrated, public access to the ECM system through WebSphere will occur in phase three.

**Base 26: Can you provide the necessary services for the required Phase 3 implementation deployment?**

Yes.

Approach:

For phase three, we will perform the core deployment tasks detailed on phase 1 for the petroleum tank functional area. BearingPoint will follow the install guides created during phase one.

We will work with DEQ staff to analyze and develop requirements and implement public access to the ECM system through IBM's WebSphere. Any network configurations, firewall settings and access control will be analyzed to provide a secure yet accessible configuration. A governance document will be prepared to list rules and policies on portal usage as well as access rights. We will define a user's access control based on a combination of roles and access areas and defining what actions the user will be able to perform on elements in the different access areas.

**Option 10: Can you provide the necessary services for the Phase 3 validation services?**

Yes.

Approach:

BearingPoint will validate all work done in phase three. The largest challenge of validating phase three is testing the security access of different types of users. Test user accounts would be created to validate the different access levels implemented in the portal.

**Option 11: Can you provide the necessary services for the Phase 4 implementation services?**

Yes.

The BearingPoint Team has consistently been able to implement and install an eForms solution and integrate it with Content Manager and Business Process Manager on many occasions. For example: BearingPoint's Money Movement BPM Solution turned a manually intensive, paper-based process into an efficient electronic application that can deliver significant benefits to financial institutions, including:

- Providing a real-time view into any money movement request
- Decreasing human error and increasing processing speed

- Accelerating the security of funds, thus positively impacting the bottom line
- Increasing customer confidence, loyalty and service levels
- Improving information capture, trend and financial analysis abilities
- Aggregating information for better process management at a transaction level
- Creating both predefined and ad hoc reports

We will provide GIS and eDMR integration points.

**Base 27: Can you provide the necessary services for the required Phase 5 implementation deployment?**

Yes.

Approach:

BearingPoint will review the draft indexing schema with DEQ staff for each functional area for permits, compliance and enforcement. As required, we will meet with the DEQ stakeholders (technical and business) to provide recommendations and propose any modifications to the indexing schema. Once all parties agree upon an indexing schema, a database schema installation write-up will be created for use in installing the new index.

If required, we will perform the following services:

- Meet with DEQ staff to validate and recommend changes to the proposed indexing schema as appropriate
- Install the new indexing schema
- Perform the required integration between CEDS and Ascent Capture as defined under CEDS integration subsequently in this document
- Implement the Enterprise Report Management requirements based upon our analysis and user input
- Install the Electronic Records Management document types and Retention Schedules, either general or agency specific
- 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

**Option 12: Can you provide the necessary services for the Phase 5 validation services?**

Yes.

Approach:

For each of the options implemented for phase five, we will provide the necessary services for validating and verifying successful implementation of each of the integrations.

As with the previous validation services, we will incorporate our own testing methodologies as required.

**Base 28: Describe your relevant experience, capabilities and approach to project management.**

**Approach and capability to control and integrate the proposed system**

Our approach and capability to control and integrate the proposed system is provided through the strategic integration of three key management levers:

- The right staff and organizational approach
- Use of PMBOK and VITA recognized project management standards to manage risk
- Baked-in quality assurance that the solution developed meets the DEQ needs

For the **first and most critical lever**, BearingPoint has selected a project staff of individuals with highly relevant skills, talent and Commonwealth customer knowledge to work on this engagement. These individuals will be aligned to a project organization structure which incorporates DEQ business leadership and technical leadership roles to provide a spherical view of the objectives, DEQ environment, VITA oversight, and runtime implement needs of the solution.

The practitioners identified in this proposal have an average of 12+ years of experience. Our project manager has over 25 years experience, is PMI certified and has worked in project management roles for the Commonwealth continuously for the past four years in multiple executive level agencies. Our project organization structure embeds DEQ personnel in key thought leadership roles and leverages native business knowledge into the overall delivery approach and project communications and control activities to maintain alignment of design to delivery.

The **second lever** to control and integrate the project is to reduce risk by following a project management method, in accordance to PMBOK, VITA Project Management Standards and BearingPoint's ProvenCourse delivery methodology. This includes development of the project planning document suite in accordance with, and execution of work tasks according to plan. During execution BearingPoint will adhere to the project control disciplines for maintaining status, managing change, and following the communications plans, including continuous awareness of project status to DEQ leadership through formal status communications and side-by-side work integration. In addition, BearingPoint will maintain the project working papers, follow the project suite management plans, and track task earned value and estimate to complete. Variances to project plan will be identifiable from actual vs. planned for project tasks and milestones, and through negative or positive variances between budgeted cost of work scheduled (BCWS) vs. actual cost of work performed (ACWP). Additional information on our project management approach and detailed information on our methodology is available in section 0

Project Management Documentation Suite	
Project Charter	<b>Change Management Plan</b>
Project Management Plan	<b>Communications Plan</b>
Organizational Breakdown Structure	<b>Work Breakdown Structure</b>
Financial Plan	<b>Configuration Management Plan</b>
<b>Procurement Plan</b>	<b>Resource Management Plan</b>

The **third lever** for controlling the project is to maintain delivery alignment to what the customer expects. Within the program office we have assigned a quality assurance management role to validate that the project management documentation suite follows the prescribed standards for both content and completeness, and verify requirements traceability from specification to development, testing and delivery, and that all necessary approvals and reviews are conducted and documented.

**Organization structure, key functions and experience**

BearingPoint's Project Management Experience:

At BearingPoint we are management and technology consultants and as such have managed projects across the Commonwealth and around the world. Our project management experience extends to clients in a wide range of markets and sectors including federal, state and local government agencies as well as institutions of higher education and defense organizations. Following is a high level overview of just the public sector clients we serve:

**Federal and National Government**

- Serving all 15 US Federal Cabinet-level Departments
- Top 25 federal contractor
- 60 developing countries
- Serving all major US government health organizations

**State, Local, Provincial Government & Education**

- 23 U.S. states
- 9 of the 10 most populous US municipalities
- 3 Canadian provinces
- 80% of US research institutions

**Healthcare**

- 60% of the top US health systems
- 80% of the largest managed care organizations
- All major government healthcare organizations

## Project Organizational Structure

### Project Team Organization Structure and Key Personnel Functions

From our experience and observation, people are what make the difference between implementation success and failure.

DEQ needs a partner with people who:

- Have successfully implemented large, complex systems for other clients
- Understand the demands and requirements of the facing state agencies
- Bring a local commitment to the project

This is where the BearingPoint team adds value for DEQ. For the DEQ we will bring:

- **Experienced professionals.** One of the largest systems integrators in the public sector, BearingPoint has earned a reputation for delivering successful projects, on time and within budget. Over the last 30 years, we have helped many states and hundreds of local governments use technology to improve services.
- **Technical know-how.** Our technical staff has deep experience in applying technology to produce creative solutions for retirement systems.
- **Collaborative approach.** It is critical that this project be a true public-private partnership. The project team will be staffed with personnel from BearingPoint, our identified subcontractors, and DEQ.

From the start, we will focus on breaking down the traditional barriers between vendor and customer and building a single team. The BearingPoint Project Manager, Project Executive, and National Practice Senior Advisor, and the DEQ Project Manager will work together to maximize the resources available to complete the project.

BearingPoint was recognized as "Worldwide Systems Integrator of the Year" for 2004.

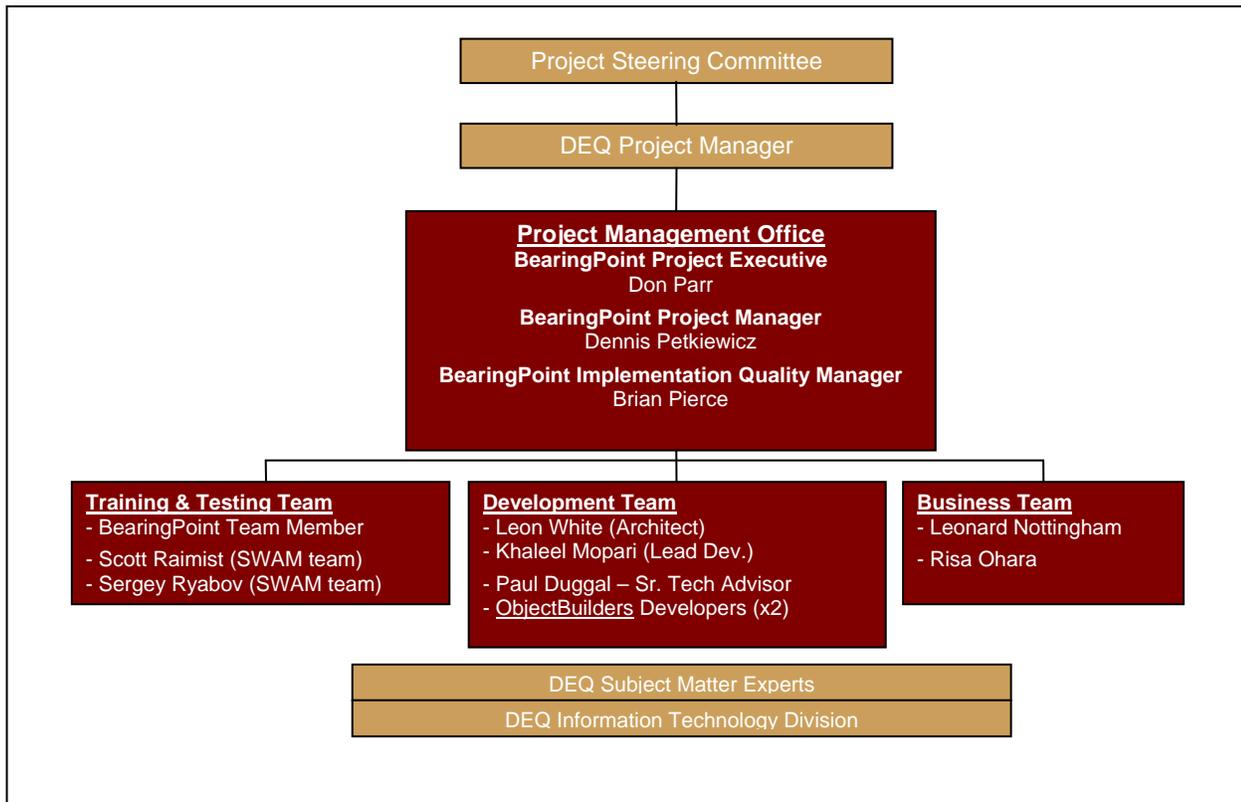
—FileNet Corporation

"[BearingPoint] is highly focused on executing in strategic spots within specific industries and service areas."

—Gartner, Inc.

### BearingPoint's Project Team

Our team will consist of BearingPoint, ObjectBuilder and Raimist Software (SWAM) resources. Our proposed team organization structure can be depicted as follows:



### BearingPoint Project Executive

The BearingPoint Project Executive has overall responsibility within BearingPoint for confirming that the project is completed. The Project Executive will be responsible for resolving any contractual issues that arise, staffing the project, for providing project oversight, and for maintaining customer satisfaction with our services.

**Don Parr** is a Managing Director in BearingPoint's Public Sector State and Local Government practice. He is responsible for the Commonwealth of Virginia Target Account. He has experience with engagements that include enterprise package solutions, program management, and large-scale custom information system development projects. In addition, he has worked with clients to develop project management controls and infrastructure for enterprise-wide project planning and state-wide transformation initiatives.

### BearingPoint Project Manager

The Project Manager will be responsible for planning and managing the work with respect to the scope and schedule to complete the project. The BearingPoint Project Manager will:

- Be responsible for timely completion of all phases of the project
- Be responsible for meeting all contractual requirements for the duration of the project
- Be responsible that deliverables conform to specifications

- Attend status, quality review, and acceptance meetings as required, and present status and progress reports on the project
- Remain assigned to the project full time through final cutover and acceptance by DEQ

**Dennis Petkiewicz** will be our project manager. Mr. Petkiewicz is a Senior Manager in BearingPoint and has over 27 years of broad experience in implementing innovative client solutions to improve operations, increase customer service and reduce cost. Mr. Petkiewicz has direct experience with Organizational Transformation, Data Center Consolidation, Data Services Planning & Delivery, Program Offices, Financial Management of IT, Independent Reviews & Validation, Change Management, Risk Management, Test Management, and leading large systems integration projects. Direct experience with industries includes telecommunications, electric utility, state, local & federal government, gaming, media, medical, entertainment, manufacturing, food & beverage, and transportation. Dennis is a member of the Project Management Institute (PMI), a Certified Project Management Professional (PMP) and has led a number of VITA IV&V engagements for agencies in the Commonwealth, in addition to project management roles in five different Commonwealth agencies.

#### BearingPoint Implementation Quality Manager

The Implementation Quality Manager will be responsible for managing that the content and completeness of project documents and deliverables meet or exceed quality standards, and that there is traceability of requirements through to delivery. . The BearingPoint Implementation Quality Manager will:

- Review all project documents for adherence to VITA Project Management Standards
- Manage project documents through controls and approval processes
- Validate completeness of requirements and traceability of requirements from design to delivery.

**Brian Pierce** will be our Implementation Quality Manager. Brian Pierce is a senior manager in the Public Services Sector of BearingPoint. He is responsible for and focuses on Commonwealth of Virginia agencies and other public sector clients. He is a certified Project Management Professional (PMP) by the Project Management Institute (PMI) and has conducted a number of IV&V project reviews in the Commonwealth. In addition to Mr. Pierce's project management experience, he is also a specialist in the architecture, design, and construction of computer systems based on server-centric and Web technologies. He has a wide range of technical skills focusing on business process improvement, data modeling, integration, and finding innovative technology solutions to complex client problems.

#### Project Management Office Support

The project management office (PMO) will support the project management team and will play a key role in verifying that the project and its tasks are moving according to the plan and schedules. The individuals in the PMO will be responsible for maintaining the resource loaded project plan in Microsoft Project, maintaining the project document library, preparing status reports and general project administrative duties.

#### Training and Testing Team

The team will develop and deliver the training that BearingPoint has proposed in this response (please refer to our response to Base 29) as well as conduct testing on the DEQ ECM solution. This team will consist of BearingPoint and Raimist Software resources.

## Development Team

The Development Team will consist of:

- Lead Architect
- Development Lead
- Application and Integration Developers

### Lead Architect

**The Lead Architect** for the ECM will be responsible for designing the imaging and workflow system and testing its integration with other systems. He will be responsible for designing any additions or modifications to existing workflows as a result of business improvement opportunities. Additional implementation tasks include:

- Providing information and transferring knowledge to DEQ end users to support decision-making
- Developing and performing test plans
- Developing and participating in training activities

**Leon White** will be our Lead Architect. He is a Senior Manager in our Solutions Practice, and has regional responsibility for BearingPoint's document management practice in public services. Prior to his current assignment, he was focused on managing the methodology, training, and maintenance of intellectual capital of the national document management practice. Mr. White was architect or co-designer for numerous FileNet implementations, including the Veterans Administration (reference), New York Department of Finance (reference) and Montana deployments (referenced). His ECM application experience includes health care, law enforcement, lending, finance, and financial audit. Mr. White has been active with FileNet implementations, and the document management and workflow industry since 1986, in areas of analysis, design, software development, project leadership, and implementation.

### Development Lead

**The Development Lead** will be responsible for coordinating the development efforts within the team, mentoring the developers, and participating in development activities.

**Khaleel Mapari** will be our Development Lead. He is a Manager in the Public Services practice of BearingPoint, Inc. He has more than 10 years of consulting experience in software design, development, and implementation of business applications, particularly in the areas of client/server, electronic document management, and workflow. His focus has been in the areas of enterprise content management (ECM), systems integration, and workflow technology. He was the Technical Lead for BearingPoint's FileNet implementations for both the TRSGA and ERSGA projects.

### Sr. Technical Advisor

**The Senior Technical Advisor** brings advanced industry knowledge and helps align technical delivery with business needs and overall client information architecture strategy. The technical advisor will be responsible for reviewing architectural designs, analyzing business needs, understanding DEQs enterprise architecture models and information portal models to provide guidance and recommendations on delivery approach.

**Paul Duggal**, a Managing Director of our Information Management Group will be Technical Advisor. Mr. Duggal is the FileNet/IBM sponsoring MD who oversees the FileNet and content management delivery teams in public services. - including the staff proposed on this project. Mr. Duggal has over 30 years of progressive experience in the information management arena. He has led many large scale projects involving various disciplines to successful completion. He has consistently led the competition in the adoption of new technology and application of

new techniques while minimizing risk. He is widely recognized by his staff, peers, management and vendors as an expert authority on technology matters.

#### Application and Integration Developers

The application developers will be responsible for customizing, developing, and testing FileNet components to meet DEQ's business requirements. The developers will work with the business team to define the necessary technical specifications.

The integration developers will be responsible for developing and testing any software code that is written for integrating the FileNet system with other systems. The developers will work with the business team to define the necessary technical specifications.

#### The Business Team

The business analysts will be responsible for the implementation of each core function as defined in the proposed solution. The business analysts will work with the DEQ subject matter specialists to refine and clarify the requirements, configure the application software, design any modifications necessary, and identify opportunities for business process improvement. Additional implementation tasks include:

- Providing information and transferring knowledge to DEQ end users to support decision-making
- Reviewing and developing interface designs and specifications
- Assisting in data conversion activities
- Developing and performing test plans and updating test scripts

The Business Team will consist of:

**Leonard Nottingham** - Mr. Nottingham is a senior consultant who has been with BearingPoint's Public Service Practice for nine years. He is experienced in project management, system analysis and design, requirements definitions, data modeling, system testing, training material preparation and training delivery, programming (client server and web), database administration, database programming and web site design. Mr. Nottingham's broad range of both functional and technical skills coupled with his collegiate instructional experience and client training background enables him to communicate with clients about their business needs and then translate those needs into the appropriate technology solution. He is PMP certified and has worked on IV&V project management review engagements in the Commonwealth.

**Risa Ohara** – is a Consultant in the Public Services practice of BearingPoint, Inc. She has 7 years of consulting experience with software design/development as well as business analysis. In her most recent engagement, she served as the portal subject matter expert and lead for the development efforts of new requirements and infrastructure implementations for a large DoD agency. In this role, she was responsible for the leadership, development, support and process analysis for the global portal application solution, servicing over 20,000 end users and several hundred communities.

## Responsibility Matrix

Following is the responsibility matrix that identifies the tasks to be performed as part of the DEQ ECM engagement and the 'owners' of those tasks:

Task	Owner
Establish project scope and objectives	DEQ
Develop project management documents	BearingPoint
Approve of project management documents	DEQ
Manage the project plan and project resources	BearingPoint
Coordinate and reporting status and formal reviews	BearingPoint
Identify requirements	DEQ
Maintain traceability matrix	BearingPoint
Provide DEQ business domain knowledge	DEQ
Develop design documents	BearingPoint
Develop test scenarios	SWAM
Approve design and test scenarios	DEQ
Develop system documentation	BearingPoint/SWA M
Conduct testing and training	SWAM
Approve UAT and test results	DEQ
Perform IVV	VITA
Develop project components	BearingPoint/DEQ/ OB
Attending training	DEQ
Coordinate implementation delivery and conversion	BearingPoint
Resolve data cleansing issues in source documents or systems	DEQ
Identify and mitigating project risks	BearingPoint & DEQ
Maintain issues log	BearingPoint
Acquire system hardware	VITA/DEQ
Provide network resources	VITA/DEQ
Provide systems and FileNet SW	VITA/DEQ
Provide DEQ liaisons business and technical	DEQ
Maintain VITA dashboard	DEQ
Operate the application	DEQ
Grant security access for production use	DEQ
Escalate issues or risks	DEQ

Following is our master integrated schedule. The source schedule is included on CD-1. Our master schedule includes teaming with DEQ on business and technical needs, check points and review allowances for documents, and after-implementation production support during this critical period.



### Controlling Project Schedule, Issues and Risk

Included in this proposal, and detailed in the section 0 is our methodology which fully integrates with the VITA Project Management Standard. The methodology addresses how BearingPoint will:

- Control project schedule, detailed in section 0
- Identify, track, escalate, resolve, and report issues such as schedule slippage, or engineering anomalies, including discussion of escalation procedures is in section 0.
- Identify, track, escalate, and report risks and issues associated with the project in section 0. BearingPoint Acknowledges that DEQ reserves the right to require more frequent status reports and more detailed project schedules.
- Support issues associated with Change Management procedures, including steps that should be performed by DEQ and the supplier, respectively, are available in section 0.
- Support issue and risk management process, including escalation criteria and management responsibilities, which can be found in section 0 and 0 respectively, including specific steps required by both DEQ and BearingPoint.

### Matrix of Responsibilities for Change, Issue and Risk Management

Responsibilities matrix for change, issue and risk management is described in the Responsibility Matrix, above. Details on the processes for these areas is detailed in the methodology section.

### Approach for formal review meetings

Our approach to formal review meetings with DEQ is to provide DEQ with accurate and current status at the level of detail and frequency as described and approved by DEQ in the Communications Plan. Status read-outs are typically monthly or quarterly but could be as-needed when special needs warrant. Reporting will include executive-level MS PowerPoint presentations outlining progress planned vs. actual, budget status, written status reports, top issues update/discussion, and risk mitigation status. The meeting is organized by the project manager, and chaired by either the project director or the steering committee executive, with representatives of key areas and subject matter experts. The meetings include a scribe for minutes, and circulating draft minutes for subsequent publishing of and posting to the project team's SharePoint portal sight.

It is BearingPoint's approach to brief the client of concerns or issues prior to the formal meeting so the client is informed and better prepared for the discussions.

**BearingPoint® ProvenCourse® Delivery Framework**

BearingPoint has a firm wide delivery framework named ProvenCourse. BearingPoint will utilize our proprietary implementation framework to delivery this project. The framework contains BearingPoint’s demonstrated delivery assets accumulated from our years of experience in successfully implementing large, complex projects – such as this. We have utilized ProvenCourse to successfully implement FileNet Enterprise Content Management Systems for other large public sector organizations.

The ProvenCourse delivery framework components are classified into four groups as depicted in Exhibit 0-1:

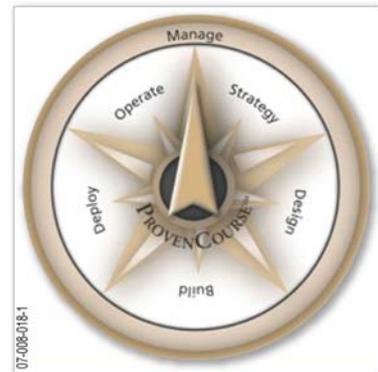
Exhibit 0-1. ProvenCourse Delivery Framework Components



ProvenCourse is a delivery framework for delivering “the right solutions” that meet our clients’ business needs. ProvenCourse facilitates the integration of BearingPoint’s extensive consulting experience and is deeply rooted in solution implementations, methodologies, and delivery tools.

This section gives an overview of ProvenCourse methodology. It describes the methodology for all phases of a project from the Strategy phase through the Operate phase. As ECMS applications are examined and implemented, they will benefit from the application of ProvenCourse strategy, design, and iterative build methodology.

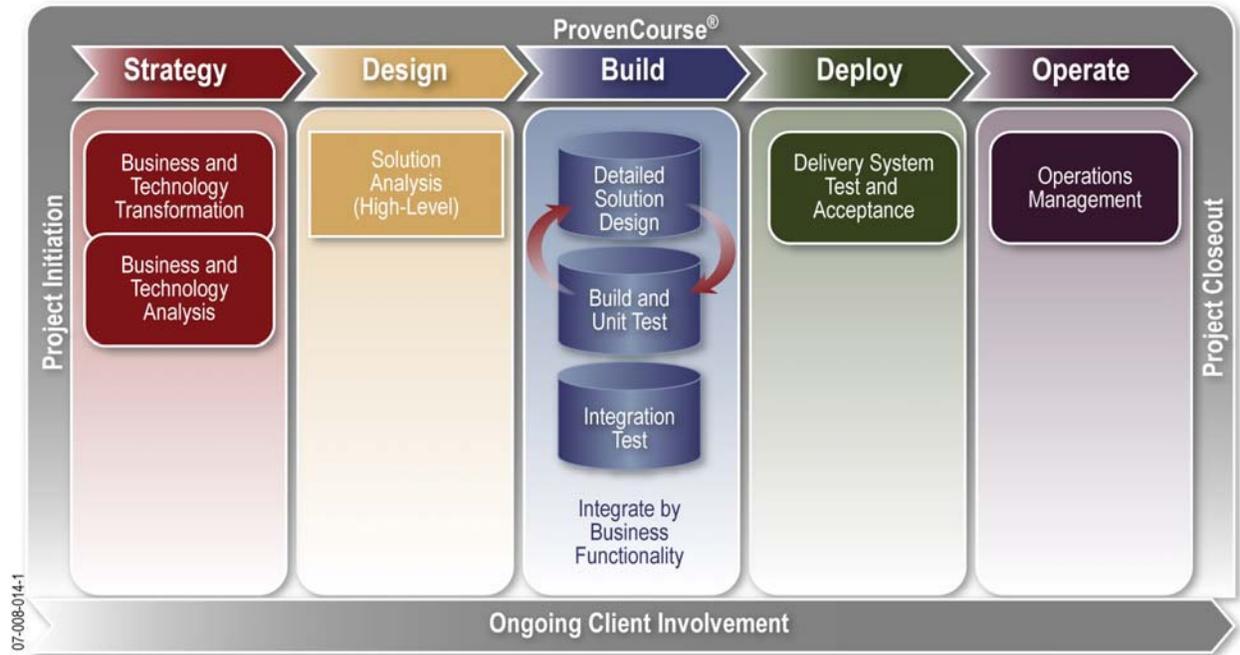
The ProvenCourse software implementation methodology integrates the templates and plans for using the Capability Maturity Model Integration (CMMI) processes defined by the Software Engineering Institute (SEI), and the project management components of Project Management Body of Knowledge (PMBOK) from the Project Management Institute (PMI). ProvenCourse also incorporates other tested project management, development, implementation, and quality assurance processes, and, due to the PMBOK structure, integrates well with the Commonwealth’s demanding project management standards. This integrated approach allows our project teams to work from a common structure. Project management is a central component of our overall methodology, and our tools and templates enhance the ability to perform this function.



ProvenCourse Software Implementation Lifecycle

Exhibit 1.10.1-2 depicts the various phases and high-level tasks within the Software Implementation Lifecycle as defined in ProvenCourse.

Exhibit 0-2. ProvenCourse Software Development Lifecycle



A short description of the software implementation lifecycle phases and their application specific to the DEQ ECMS project follows:

**Project Initiation:** The Project Initiation Phase represents the activities associated with the initial startup and planning for project execution.

**Strategy:** In the Strategy Phase, we will finalize the business and technical architecture. We design the solution in terms of its major business and/or technology systems, and then we integrate the solution within the business system and take the appropriate steps to institutionalize the solution within the client’s business practices. The purpose of the Strategy phase is to focus on business objectives and associated processes before starting any design work, because the business processes are the true source of the initial requirements for any business system.

**Design:** The Design Phase focuses on confirmation of requirements, functionality fit-gap. The result is the detailed configuration for the FileNet components and a detailed design for the integration with the DEQ systems.

When appropriate, the design will make use of Gap-Fit, Rapid Application Development (RAD) and Joint Application Design (JAD) techniques. These techniques will be very appropriate for use on the ECMS applications because the project team will work very closely with DEQ personnel to prototype, validate, and deploy in response to requirements.

**Build:** In the Build Phase we will configure the FileNet solution and develop the integration with other DEQ systems. The configuration and integration are based on the approved designs of

the prior phase. This phase includes the configuration, coding and component or unit testing and the system testing of the overall solution.

**Deploy:** In the Deploy Phase we conduct user acceptance testing and finalize the support and rollout plans culminating in a deployment of changes to production. The DEQ trainers will be trained during this phase and ultimately the trainers will deliver the training to required DEQ staff.

**Operate:** In the Operate Phase, we provide the support to sustain the operation of changes within the system.

We understand that software implementation is a process and not a product. Our ProvenCourse methodology helps us confirm that our processes are repeatable, predictable, and—most importantly—improvable. Our processes reduce the risk of software implementation failures by tackling and resolving the root causes of project failure.

**BearingPoint's Project Management Approach**

Our Project Management Methodology (PMM) consists of project management strategies, control mechanisms, quality assurance protocols, risk mitigation plans, and more. Our PMM has evolved over 35 years of experience implementing effective technology programs and projects and incorporates industry-standard project management methodologies, standards, and practices, such as:

Project Management Institute's (PMI) Project Management Book of Knowledge (PMBOK)

Software Engineering Institute's (SEI) Capability Maturity Model (CMM)

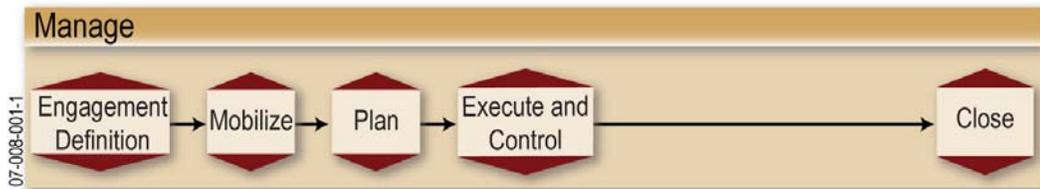
BearingPoint has well-established techniques and tools to build on the effective implementations of large, complex, enterprise-wide implementation and integration efforts for federal and state public service clients.

In this section we describe our PMM, processes, controls, and tools we will use during this project.

**Project Management Methodology**

Our methodology closely follows the PMBOK approach and includes the project management processes for engagement definition, mobilizing, planning, executing and controlling, and closing projects (see Exhibit 0-3). Our experience in applying these disciplines helps projects remain within budget and on schedule, while maintaining a high level of quality for deliverables.

Exhibit 0-3. Project Management Sub-Workstream



Project Management sub-workstream introduces a structure of activities, deliverables, and techniques to support the delivery lifecycle of a project.

Project Management sub-workstream activities fall into all of the Manage workstream phases:

**Engagement Definition:** Identify the initial scope, objective, approach, and execution resources and build the project management plan, business case, and initial project plan.

**Mobilize:** Build detail control processes.

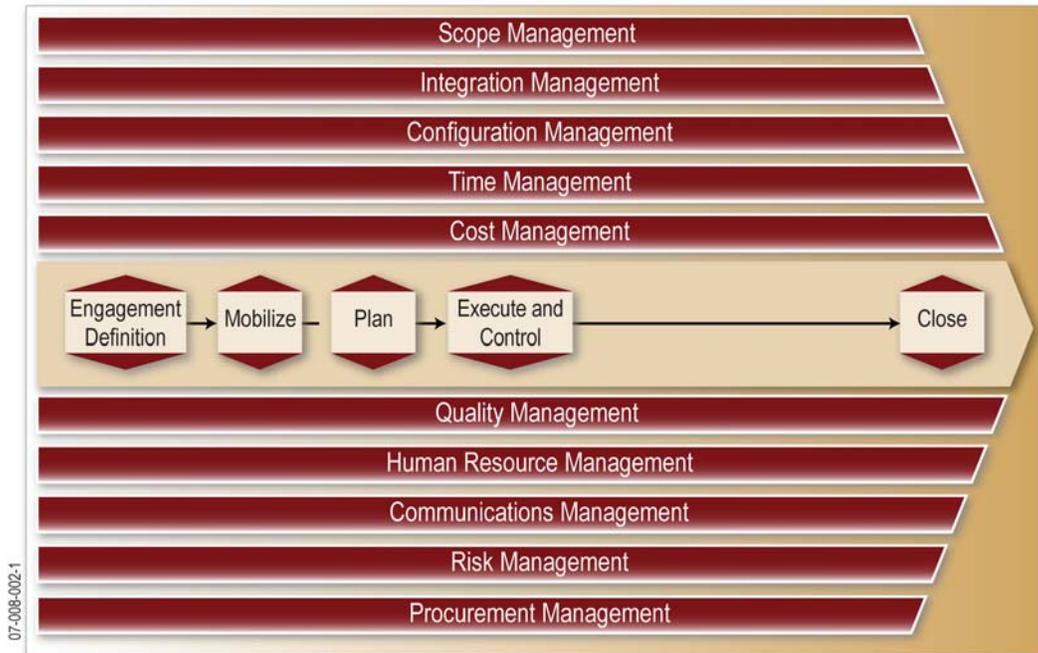
**Plan:** Baseline the detailed project plan, including final scope, objectives, approach, and resources for project commencement.

**Execute and Control:** Conduct, manage, and monitor the defined project work.

**Close:** Transition the project, obtain project sponsor acceptance and signoff, capture lessons learned, measure benefit realization, and formally end the project.

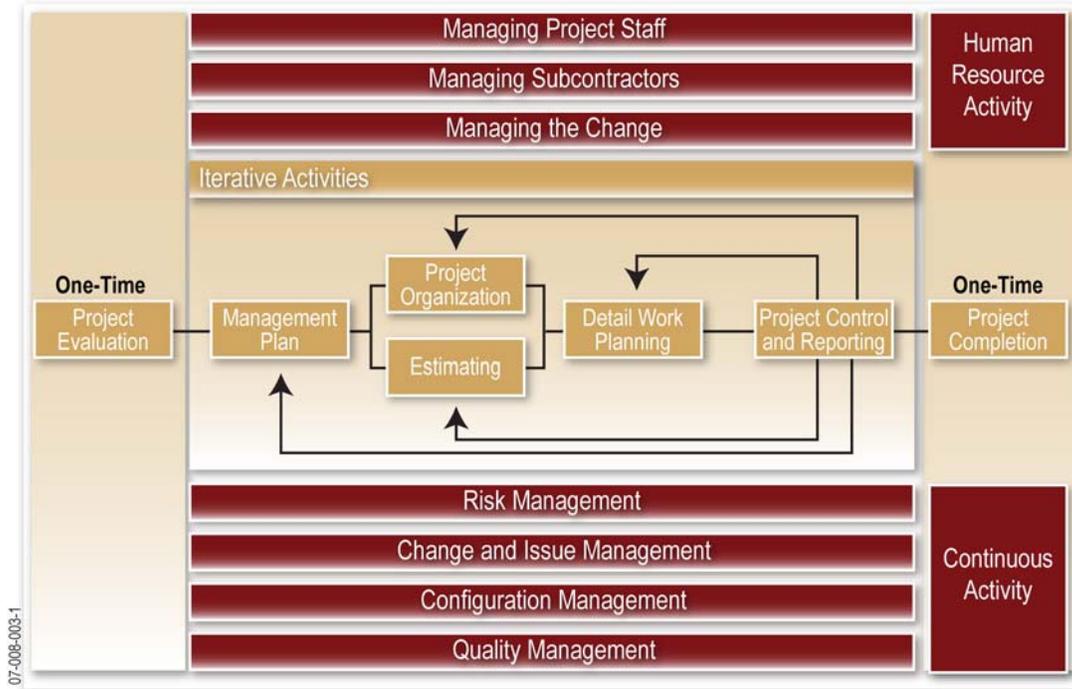
Our PMM is applied on all aspects of the project, as depicted in Exhibit 0-4.

Exhibit 0-4. BearingPoint's PMM is applied to all Project Aspects



More specifically, our PMM is applied on system implementation projects, as depicted in Exhibit 0-5.

Exhibit 0-5. BearingPoint's SDLC PM Methodology



This project management approach complements the technical methodology by providing a framework for planning the sequencing and timing of activities, allocating resources, collecting relevant progress and status data, managing project workplan changes and project-related issues, producing meaningful project reports, managing the deliverable review process, and reducing risks.

Our Project Management approach includes each of the following activities:

- Project Schedule
- Issues Management Plan
- Change Management Plan
- Risk Management Plan
- Communications Management
- Training and Knowledge Transfer

These plans will be customized for the DEQ ECMS project during project start-up and will be executed over the life of the project. The following descriptions highlight key areas of our project management approach.

**Project Schedule**

For new development initiatives such as the DEQ ECMS application, BearingPoint will prepare an Overall Project Schedule that shows the task durations and scheduled target dates for completion of tasks. This schedule will be refined early in the project to establish a baseline project schedule. The baseline schedule will be arrived at in collaboration with DEQ. Key features of our Detailed Project Schedule include:

- Uses a multi-phased approach
- Incorporates experiences from previous successful ECMS projects
- Leverages our experience from previous successful ECMS projects, including identification and mitigation of specific project risks

Draws upon work plan estimates validated using our prior experience and estimating tool

Employs our prior work and artifacts

Can be maintained in Primavera

Integrates subproject plans (such as Testing) and QA vendor activities

### Controlling Project Schedule

BearingPoint will control the project schedule *first* by maintaining awareness of actual vs. planned through tracking completed work, progress against milestones, and calculating earned value; *second* by mitigating risk through following a project management method and understanding task dependencies; *third* by actively following the change management and communications management plans; *fourth* by taking corrective actions when needed to return the plan to schedule if there is a variance, such as adjusting resources, timing or scope—as described in the change management plan and approved by the steering committee.

Achievement of tasks and milestones will be tracked through metrics and percent complete on the project plan, evidenced through approved deliverables. Our approach is to integrate DEQ with the project team to maximize client awareness of status during all phases of the project. Variances to project plan will be identifiable from actual vs. planned for project tasks and milestones, and through negative or positive variances between budgeted cost of work scheduled (BCWS) vs. actual cost of work performed (ACWP) supported through the earned value calculations.

Awareness of status is communicated through periodic status reports, distributed to the audience and frequency as described in the communications plans. Status will also be discussed monthly with the project steering committee, with accompanying executive-level MS PowerPoint presentations outlining progress, top issues, and risk mitigation status.

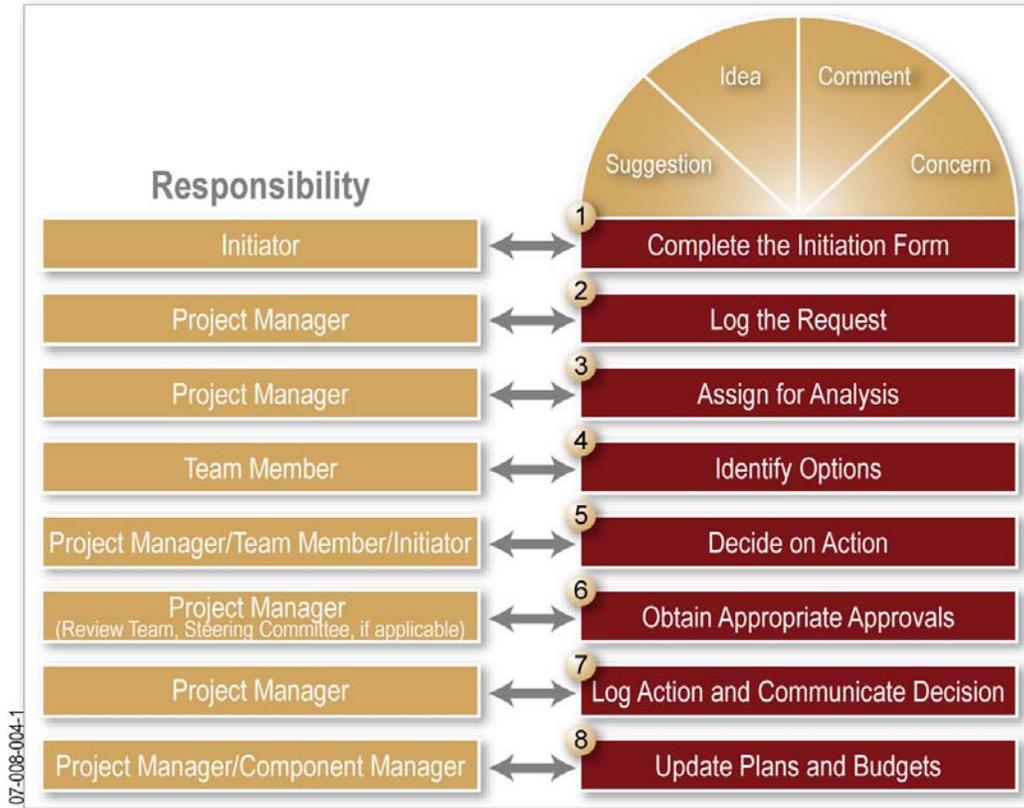
### Issues Management Plan

BearingPoint will maintain an Issues Management Plan during the project life.

A project issue refers to any matter that has to be brought to the attention of the project team and requires an answer. During the course of every project, issues arise—they are normal occurrences and should not be avoided. Left unresolved, issues impede or prohibit project progress or development by delaying or suspending work effort. Uncontrolled issues can lead to escalation of project costs, dissatisfaction among users, lower quality end products, and significant delays in the project schedule.

BearingPoint's Project Management Methodology and tools provide a process for managing project issues. The primary objective of a structured issue resolution process is to standardize the means by which issues are captured and analyzed and how issues are resolved and communicated. Our proposed issue resolution approach provides a well-established process for managing issues within a set of specific project control procedures. Exhibit 0-6 illustrates the activities associated with our issue resolution process.

Exhibit O-6. Issue Resolution Process



Key features of our Issue Management process include:

**Documentation.** BearingPoint’s Internal Tracking is a comprehensive issue tracking database used to document and track project issues in addition to other key project management concepts.

**Accountability.** The issue escalation process will be defined early in the project, based on the project’s clearly defined governance structure. BearingPoint’s Internal Tracking supports the ability to track issue originator, issue owner, and issue resolution.

Variance	Escalation Level
Within 2% of schedule	None
Within 5% of schedule	DEQ Senior management, BearingPoint Vice President. Notification to next higher level.
Within 10% of schedule	DEQ Executive management, BearingPoint Senior Vice President. Notification to next higher level
Greater than 10% of schedule	VITA, DEQ Executive Management, BearingPoint Executive Vice president or CEO.

**Timeliness.** BearingPoint's Internal Tracking supports the ability to track "expected resolution date" versus "actual resolution" to facilitate timely resolution of issues. In addition, its workflow capabilities facilitate timely resolution of issues.

**Reporting.** Issue management reporting is integral to project management reporting.

### Change Management Plan

The scope of change management includes software and systems, plans and procedures, and requirements and deliverables.

BearingPoint will develop a Change Management Plan during project start-up activities, and instill a change management discipline. All changes will be managed using the Change Control process.

**Proactive Control.** The schedule influences are tracked through either risk or issue management. Factors that are anticipated, but clearly outside of the control of the project, are tracked as risks. These risks will be communicated to DEQ management on a regular basis.

Conversely, the project plan will be sufficiently flexible to reduce the impact of unanticipated schedule influences.

**Reactive Control.** Alternatively, there are factors (such as team member health issues) that cannot be anticipated. The Schedule Control Plan will identify contingencies and their impact on the project.

**Corrective Actions.** BearingPoint will work with DEQ's management to identify corrective actions to be taken in response to schedule variations. These corrective actions must take the form of adding additional resources to the project, revisiting timelines and milestones, or any other action designed to keep the project on track.

Change management in the following areas is critical to project success:

**Scope Change Management.** The project scope will be placed under change control, and changes to the project scope will be managed through the project's Change Control process.

**Integrated Change Control.** Changes to the Project Work plan will be managed so that the impacts to the overall project are understood and accommodated within the updated plans. The Project Manager, in conjunction with the DEQ Project Managers, will:

Track and report factors that create change.

Identify potential changes before they occur

Respond to changes and take corrective action

Manage the actual changes when they occur

Update the Project Plan to reflect changes

Document lessons learned

**Change Control Metrics.** The BearingPoint ProvenCourse® integrated project management tool provides functionality to track and report critical change management metrics. The change control reports and charts provide managers a view of the project with respect to the change control items:

**Change Control Scorecard.** This table displays the number of initiated, open, closed, and past due change control items by team member.

**Change Control Aging Report.** This table displays how long items have been pending for all team members.

**Cumulative Change Control by Date.** This chart displays types of change control items by date, based on severity and status.

**Open Change Control by Date.** This chart displays open and closed change control items during the course of the project.

**Change Control by Stage Found.** This charts the severity and the development process stage in which a change control item is found.

**Change Control by Reason Code.** This charts change control items based on reason code, severity, and team member.

**Change Control Reports.** This table displays change control items by stage identified and source.

**Change Control Board.** As part of our commitment to CMM practices, we are required to establish a stand-alone group to make determinations of scope and authorize changes to that scope. Initiators of proposed changes are required to complete an impact analysis to help this group make scope determinations, cost and schedule impacts, and likely benefits to the business.

**Risk Management Plan**

BearingPoint will implement a Risk Management Plan early in the project.

We understand the potential risks associated with this project based on our prior experience. We use a well-defined risk management methodology to manage such risks. During the course of this project many specific project risks will be identified, tracked, and mitigated. The sources of the risks are varied and include those internal and external to the project. According to the PMBOK, there are four major categories of risk (see Exhibit 0-7).

The PMBOK’s categorization demonstrates the variety of risks a project must manage.

Exhibit 0-7. Four Major Categories of Risks

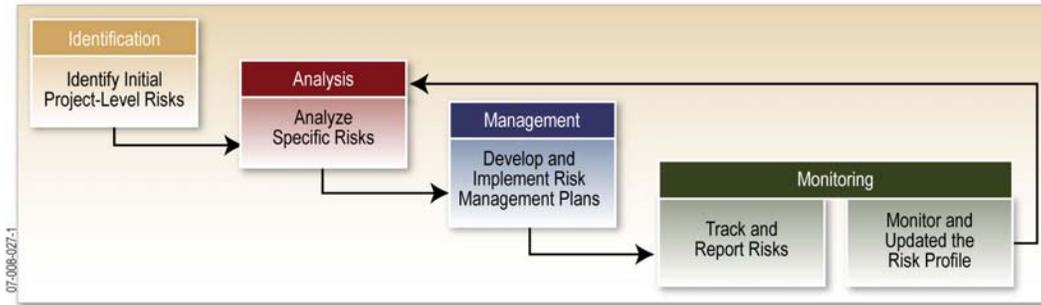
<b>Technical, Quality, or Performance Risks</b>	Reliance on unproven or complex technology, unrealistic performance goals, and changes to the technology used or to industry standards during the project.
<b>Project Management Risks</b>	Poor allocation of time and resources, inadequate quality of the project plan, and poor use of project management disciplines.
<b>Organizational Risks</b>	Cost, time, and scope objectives that are internally inconsistent; lack of prioritization of projects, inadequacy or interruption of funding, and resource conflicts with other projects in the organization.
<b>External Risks</b>	Shifting legal or regulatory environment, labor issues, changing owner priorities, country risk, and weather.

## BearingPoint's Risk Management Approach

Because of the variety of risks, the risk management process must be dynamic and capable of anticipating and responding to emerging risks at every project stage. Risk management is involved in all aspects of our solution development and implementation process.

The basic purpose of risk management is to assist project leaders to be proactive, rather than reactive, in identifying, planning for, and abating risks. As shown in the SEI's Continuous Risk Management (CRM) model illustrated in Exhibit 0-8, communication is the key component of any risk management plan and strategy.

Exhibit 0-8. SEI Continuous Risk Management Model



We have found that open and frank communication is one of the most important elements of this risk mitigation process.

We will engage DEQ's project leadership to help identify, analyze, and mitigate project risks. The risk analysis process is an excellent opportunity for DEQ's leadership to discuss and reach consensus about what represents real threats to the project and the overall organization. The very act of acknowledging and describing risks accelerates the process of mitigating risks. After potential risks are identified, the purpose of risk analysis is to determine the project's relative exposure in terms of time and cost. Risk management is, therefore, concerned with identifying risks, and with reducing risks to an acceptable level.

BearingPoint has extensive experience in the analysis and management of risk and uncertainty in complex projects. Our risk management approach uses the risk management leading practices embodied in the SEI's CRM model. Our project managers are comfortable following the SEI methodology; in fact, we helped SEI develop and refine the SEI methodology described in greater detail below.

### **Specific System Risks**

The following are examples of specific system risks we have managed on previous ECMS projects:

- Availability of resources
- Unanticipated state or department policy or legislative changes
- User disagreement on a single way to do business
- Interfaces to external applications
- Changing IT standards at department or agency levels
- Temporary interfaces to agency legacy systems
- Management of project scope
- Insufficient executive-level sponsorship, support, and issue resolution

**Communications Plan**

BearingPoint will maintain a project Communications Plan. A comprehensive communications plan is a cornerstone for project success. The goal of the following process is to quickly disseminate information to stakeholders.

Project communications are a key focus and integral component of BearingPoint’s proposal. We take a multimedia approach to communications, using a variety of techniques to combine face-to-face events with print and electronic communications to address internal and external customers and users.

This high-level plan addresses stakeholder communications needs, including determining who will need what information, when the information will be needed, and the recommended form and format for presenting it. Within the first 30 days of each phase or major activity, BearingPoint will deliver a project communications plan specific to that phase. BearingPoint knows a revised plan delivered before each phase allows the plan to be more accurate and incorporates lessons learned from each phase. Given the nature of our work for DEQ, some phases may not require a communication plan.

BearingPoint will work collaboratively with DEQ to develop and execute the proposed communications activities. In our experience, this promotes accountability and better positions DEQ for effective future change. BearingPoint will use a variety of techniques to deliver the communications plan.

**Potential Project Communication Activities**

Exhibit 0-9 and the paragraphs that follow describe potential activities and work products designed to deliver effective project communications.

Exhibit 0-9. Project Communication Activities and Work Products

Change Focus Area	Key Activities	Deliverables
Project Communications	Provide avenues for understanding, awareness, and feedback to manage expectations of the proposed pension administration solution Generate confidence among affected user communities regarding the project and new ways of working Educate DEQ’s workforce about the new ways of doing business Engage and involve stakeholders in the development process	Project Communications Deliverables: Startup Communications Environment Assessment High-Level Communications Plan Communications Toolkit Communications Plan for Each Phase

**Training and Knowledge Transfer Plan**

Our project team could achieve success in design, development, and testing, but without proper training for DEQ internal end users (staff and managers), technical staff, and employers, the new system changes would not provide the results the department seeks. The primary objective of our training approach is to provide a learning environment to enable the DEQ trainers to effectively train users on the new system. We know experience is one of the best teachers, but effective training that allows users to become comfortable with the new system is the first step in developing experience among the end-user community and allowing them to become well-versed in the new system.

BearingPoint knows training is most successful when implemented as a continuous process. BearingPoint's approach recognizes several distinct factors:

Training is one component of an integrated project

Training must include full and complete integration of DEQ's personnel

Training is most effective when provided in structured, manageable components

Training builds user competence and confidence

BearingPoint's training plan and methodology will support the mitigation training-related risks by increasing user adoption and reducing the need for additional training and by promoting effective communication of project plans and expectations of resource requirements to DEQ business managers.

### **Capability Maturity Model Integration (CMMI)**

BearingPoint's proposes to operate this project according to the standards and processes outlined by the CMMI. The CMMI is a framework that describes the key elements of an effective software process. It describes an evolutionary improvement path from an ad hoc, immature process to a mature, disciplined process.

The CMMI covers practices for planning, engineering, and managing software development and maintenance. When followed, these key practices improve the ability of organizations to meet goals for cost, schedule, functionality, and product quality. The CMMI establishes a yardstick against which it is possible to judge, in a repeatable way, the maturity of an organization's software process and compare it to the state of the practice of the industry. The CMMI can also be used by an organization to plan improvements to its software process. BearingPoint achieved Level 4 of CMMI compliance on our ECMS implementation at Department of Veterans Affairs.

BearingPoint focuses on six policies to maintain compliance: Peer Reviews, Risk Management, Software Configuration Management, Software Development Plan, Software Quality Assurance, and Training.

#### **Peer Reviews**

The goal of peer reviews is to identify and remove defects in project work products, i.e. document deliverables or application source code prior to their inclusion in a test build or conveyance to the client. Peer Reviews are useful because they provide a second set of eyes and force the originator to pay close attention to the item being delivered and be ready to defend the approach taken. In the case of changes to software code, the reviewer will likely be a person who has extensive experience and has had long-term involvement at DEQ and thus many potential problems will be avoided at an early and less costly stage.

#### **Risk Management**

Risk management is a critical process for managing project activities or circumstances that may result in negative consequences to project or product performance. The project team develops contingency plans to facilitate risk mitigation if agreed-upon conditions are not met. This process complies with BearingPoint policies.

#### **Software Configuration Management**

Software Configuration Management (SCM) is an important component of the Capability Maturity Model. It is important to implement version control and have a repository for storing configuration items/units and associated configuration management records. Software work products will be identified, controlled, and available. Changes to software work products will be controlled. Affected groups and individuals will be informed of the status and content of software baselines. There will be a process for administering the software application code and making sure procedures are followed

when developing and testing code, and moving or releasing software into appropriate environments (for example, development, testing, and production).

An especially important component of SCM is version control. Version control can help pinpoint the cause of issues resulting from program modifications and provides a quick way to compare versions of code or other objects and to roll back changes.

### **Software Development Plan**

A software development plan will be defined and followed to demonstrate maturity in the CMMI model. BearingPoint has a well-defined set of steps that will be followed as software is developed. There are separate development environments to develop and test software changes and there are well-defined steps to track the development and testing of each software change.

### **Software Quality Assurance**

The goals of the Software Quality Assurance process are to enforce adherence to the software development processes and standards that have been adopted for the project and to test software work products and track anomalies identified in the testing process. BearingPoint will work closely with the DEQ to make sure all changes are thoroughly tested and signed off before moving to production.

### **Training**

A comprehensive training program is a key practice for sustaining process improvement and maturity. The training objectives for the DEQ ECMS engagement are:

- To support the DEQ engagement team member in developing and maintaining the skills and knowledge needed to perform management, technical, and software engineering roles
- To implement system and process improvements enabling staff move to other roles or other opportunities
- To communicate changes in functionality effectively to appropriate DEQ staff so that the DEQ's policies and procedures manual can be updated and knowledge of the modifications propagated to the relevant set of staff at DEQ.

### **Base 29: Can you provide the necessary services for the required user training? Please submit a sample of similar training material your firm has created.**

Yes.

Approach:

The BearingPoint Team puts strong emphasis on the support of training initiatives for the technical solution to be implemented at VITA.

Recently, BearingPoint implemented a successful training plan at a Department of Defense agency which had deployed and customized a BEA AquaLogic Portal to over fifteen thousand users. Utilizing off-site office space and 12 full-time trainers, the BearingPoint team trained all end users and all of the community of practice administrators over a period of three months. BearingPoint designed user and administration manuals for the portal users, coordinated the printing and the shipping of the manuals, and assisted the government agency in booking and scheduling classrooms around the country for all users. At the end of this formal training, BearingPoint created computer-based training for the users, accessible through the reference library of the portal, to reinforce the concepts and to allow for additional knowledge transfer. Other major parts of supporting a training effort are the training of those trainers, coordinating the trainer and trainee travel, and allowing for smaller training sessions following the completion of the initial training as on-going support. Samples of training materials are contained in Appendix D of this response. Two references for this training are:

- Mr. Gary Moorman  
IT Project Manager at Defence Contract Management Agency (DCMA)

(703) 254-2134

[gary.moorman@dcma.mil](mailto:gary.moorman@dcma.mil)

- Mr. Gary Thurston  
Deputy CIO at Defence Contract Management Agency (DCMA)  
(703) 428-1321  
[gary.thurston@dcma.mil](mailto:gary.thurston@dcma.mil)

Training is a critical component in the process because it provides users with the skills necessary to smoothly transition their work responsibilities to the new system when the ECM system is launched. We will help schedule and complete the training stage appropriately so that DEQ staff are self-sufficient in the use of the ECM System.

Training will provide users with:

- An overall description and value of the ECM System
- An understanding of the application's capabilities and limitations
- An explanation of how the system is used to perform specific job functions, and each job function's roles and responsibilities using the new system
- A list of help resources such as where, when, and how to obtain further assistance

BearingPoint will provide hands-on training for internal users. Trainees will work in a simulated live environment using ECM data as training samples. The classes are normally kept small with no more than 15 students to one class to maintain a small student to trainer ratio. We feel that this type of setting is a better learning environment.

ECM System training materials will include online help guides and a manual for the new system, a detailed syllabus, a PowerPoint presentation to be used during the training sessions, and a training session agenda. A package of learning materials will be provided to each trainee, including steps to index documents properly. End-user training will emphasize practical, hands-on interaction with the software. Instruction will consist of step-by-step reviews of the tasks performed in the daily operation of the software. Some portion of training time will be devoted to practicing newly acquired skills and will provide ample opportunity for questions and answers. During a training session, however, we use reading materials as little as possible; instead, the focus is on using the ECM System. The training materials provided will be most useful after training as an ongoing help resource. Hard copies will be printed out and bound and an on-line version in PDF format will be created and made available for users.

An on-line computer based training that is Shareable Content Object Reference Model (SCORM 1.2) compliant will be created. We will ensure the ability of the online training to be integrated with the Commonwealth's Learning Management System from Meridian KSI.

We will provide a list of recommended classes tailored towards the different DEQ personnel. The class list will describe the goals of all classes, typical classroom environment, student/instructor ratio, and the instructors' qualification. We will provide an agenda as well as two references from our past training we have performed.

For our training, it is normal for us to do train-the-trainer sessions where the experienced trainer coaches other trainers so that we can meet training schedules. As a ubiquitous global company, we can have staff available to do training in Richmond, VA.

End-user training will emphasize practical, hands-on interaction with the ECM System. For the two main groups of ECM personnel affected—management and employee end users—we will provide step-by-step previews of how tasks are performed using the ECM System and a comparison of "then and now."

### **User Documentation and Help**

BearingPoint will deliver user support documentation—considered to be a key component in the knowledge transfer of ECM System information—during the training and transition periods. The ECM System will also have detailed online help features for the ECM System end-user processes.

## Training Data

An early step in launching the training program will be to collect sample training data from DEQ. The data should represent a fair sample of current transactions and activities from the various DEQ users; the more representative the data is the better the learning experience will be.

## Syllabi

A syllabus will be prepared for each training session. The syllabus will describe the course content and objectives, prerequisites (if any), training materials, and estimated duration for each topic. The separate syllabus for each training session will be developed with other training materials.

## Training Evaluations

Each training session will be evaluated to improve the effectiveness of the training program. Participants will be asked for feedback on a number of quality factors such as the instructor's knowledge and presentation skills, the appropriateness of the facilities, the adequacy of the training materials, and the level of prerequisite preparation.

During the regular project management meetings, training issues that arise will be discussed and resolved. Issues that may arise during training include results of training evaluations and technical difficulties, logistical difficulties, or both.

## Training Modules

The training sessions will focus on a detailed understanding of all aspects of the ECM System and detailed error-resolution procedures. The BearingPoint team will train DEQ personnel on all required functional and technical features of the new ECM System before transitioning the system to DEQ.

We understand that training will occur in phases as this is a phased approach.

### **Base 30: 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.

The BearingPoint technical team will transfer ECM System integration skills and knowledge to DEQ support staff. Technical training for the ECM System will be a combination of classroom briefing and a hand-on approach supplemented by documentation. DEQ staff should attend the functional end-user training for the ECM System and a specially designed technical session that will discuss the ECM System components and focus on maintenance, administration, and troubleshooting of the integration points.

ECM System training materials for system administrators will also include online help guides and a manual for the new system, a detailed syllabus, a PowerPoint presentation to be used during the training sessions, and a training session agenda. This training will emphasize practical, hands-on interaction with the maintenance of the software, including integration, workflow and general system installation. The system administrator will work with our staff full time during implementation to ensure full knowledge transfer. The training materials provided will be most useful after training as an ongoing help resource.

BearingPoint will deliver technical documentation during the training and transition periods.

The ECM System Administration and Operations Manual is composed of the procedures and processes for the ECM System applications and infrastructure. It will consist of detailed explanations and support procedures for ECM System interfaces and software modules. The manual will include operational and functional descriptions of the ECM System functions under the administrative and supervisory staff's responsibility, including:

- System implementation procedures
- Support table maintenance
- Supervisor overrides of normal business functions
- Administrative/supervisory-only functions

- User applications
- Technical Documentation

A sample System Administrator's training manual is provided in Appendix D.

**Base 31: 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.

Approach

The ECM Security Officer training program will provide instruction for those DEQ employees charged with maintaining and managing the security of the system. BearingPoint will help schedule and complete the training stage appropriately so that security officers are able to effectively support functions related to the security administration points of the system operation. We will provide detailed technical training for DEQ security officers.

The ECM Security Administration Manual is composed of the procedures and processes for supporting the security aspects of administration. The manual will include operational and functional descriptions of the ECM System functions under the security staff's responsibility, including:

- Security and authorization setup and administration for ECM
- User accounts setup
- Password maintenance
- Portal security maintenance

The Security Administration training was performed in conjunction with the System Administrator's training and is part of the same manual provided.

**Base 32: Can you provide the required project schedule?**

Yes.

Microsoft Project is the tool of choice to BearingPoint for communicating tasks, timelines and milestones. In compliance with DEQ's requirements, BearingPoint will deliver and communicate its project accomplishments and status using MS Project. Using this tool, the team can ensure dependencies are considered and the ninety-day lead-time required for infrastructure tasks can be tracked and monitored in advance. Our schedule will include a narrative of each task, resource loaded with tasks not to exceed 80 hours, with dependencies identified.

Our proposed project schedule is contained in section 0. As part of our planning processes the proposed project plan will be validated with the DEQ.

**Base 33: Can you provide the required infrastructure requirements?**

Yes.

BearingPoint has provided network and infrastructure analysis services routinely and possess knowledge of network configurations to maximize performance, especially with FileNet software. We will review the current architecture and software requirements at DEQ regional and central offices to recommend server specifications, SAN requirements, network requirements, work station and monitor recommendations.

**Base 34: Can you provide the required detail design document?**

Yes.

References: Department of Veterans Affairs; New York Department of Finance

Approach:

The detailed design is the phase where requirements meet the proposed solution. BearingPoint has experience working with the methodologies preferred by the client. In our own methodology, we often separate design into high-level design, and detail design. The high level design may include a prototype (or prototypes) and establishes the look, feel, and general solution approach in a manner that ties to requirements and can be understood by business and technical users alike. In this scenario, the detailed design is a detailed building specification. It is, by its very nature, more technical and less end-user friendly, as it must address the necessary technical issues. In the detailed design, the mapping of the requirements is carried forward to facilitate the development of use cases and test cases. While the language remains simple and accessible, the concepts and technical terminology may be challenging for a non-technical reader.

Some clients prefer a single design document combining both high level and technical detail, which we can also provide.

In either case, the design phase is intended to answer all the questions around “how” the solution will be implemented, and how each requirement is satisfied. We employ matrices to map requirements to solution sections so that all interested parties may be satisfied that the design is ready to guide the building phase.

**Base 35: Can you provide the required user education and training materials?**

Yes.

Each department and functional area will have different needs for the system. We can provide user education and training materials that will provide the detailed user training plan and the process for making updates to the user procedure manuals. It will also address on-going ECM training needs. More training information is included in section 1.41 above.

**Base 36: Can you provide the required systems documentation?**

Yes.

References: Department of Veterans Affairs; New York Department of Finance

Approach:

FileNet documentation is available electronically and will be provided. System design documentation in the form of an “As-Built” design is provided, including the items VITA has identified. As we often are asked to maintain the systems we build (both Veterans and Finance have been under BearingPoint maintenance), we have direct experience with the value of correct and useful documentation for maintenance, troubleshooting, and enhancement.

Technologists involved in the project typically complete their documentation, which is then reviewed by senior staff before being delivered. Practicality and readability are emphasized in this review.

**Base 37: Can you provide the required administrator’s manuals?**

Yes.

References: Veterans Administration; New York Department of Finance

Approach:

All manuals are in electronic format and will be provided by BearingPoint.

**Base 38: Can you provide the required test plan?**

Yes.

The Test Plan encompasses all application based testing required by the users, technical staff and system staff for using and maintaining the system. The following are the types of testing BearingPoint generally perform:

- Unit testing

The goal of unit testing is to ensure that every path or line of new code or every parameter that was configured is executed or exercised by one or more test cases

- Integration testing

The goal of systems integration testing is to verify the interaction between groups of related units, ensuring that each unit functions properly when invoked by another unit and verifying all external interfaces and relationships between screens, parameter passing, and standard control functionality.

- System testing

Primary goal is a verification of the system as a whole (including hardware, software, network, security) from a business process perspective. System Testing will be conducted in the ECM System Test environment, following successful migration and installation of the new/updated components. This testing verifies the migration process, the newly installed components and access across the Internet.

- User acceptance testing (UAT)

UAT is a separate and distinct activity that provides the users with the opportunity to verify that the ECM system meets their original needs functions operate as designed. UAT emphasizes evaluating ECM in a normal business environment.

The entrance and exit criteria for each phase of testing will be different and will be agreed upon and be met prior to commencing testing.

A detailed testing schedule will be provided, which will include the following:

- The timelines of the different phases of testing
- The environment that each phase of testing will be performed on
- The staff performing the testing

We will explain our methodology for classifying, tracking, prioritizing and escalating detected defects. The test plan will also include identified risks and contingencies to mitigate the risks. A change control process will be developed with guidance from DEQ to ensure that no changes are introduced into the production systems without first testing and documenting the change. Test data will be generated as close to the production data. The test plan will also document which tools will be used to perform testing after evaluating the type of reporting required, which will include the supplier and version.

**Base 39: Describe your relevant experience, capabilities and approach to supplier testing. How will you comply with DEQ's requirements for supplier testing?**

BearingPoint follows a consistent methodology for testing and performs testing in most engagements. All test cases for the supplier testing will be reviewed by DEQ staff to ensure all aspects are being tested and also to allow the staff to gain an understanding of the system and the type of testing that is required. We will not commence testing until we meet the entrance criteria described in the test plan. At the conclusion, we will provide the test cases used for testing, which

will include the expected and observed results, a complete list of defects along with the severity, all release notes and the entrance and exit criteria report.

Quality Assurance (QA) activities will be conducted to verify that deviations are identified, documented, and tracked to closure, and that all corrections are verified. Key components of a quality assurance process include:

Activity review process:

- Product audit process
- Product testing process
- Peer reviews process

Automated regression tests are useful and can save time and money during a large-scale implementation such as this. BearingPoint has experience with creating automated test cases and can be implemented for DEQ's future testing needs.

**Base 40: 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?**

BearingPoint will work with DEQ to review and approve the Acceptance Plan. We will ensure that we are in agreement with the following sections

- Entrance Criteria for the testing
- Exit Criteria for the testing
- Schedule for the testing to be performed
- Staff required to perform the testing
- Method of tracking, prioritizing, and escalating detected defects
- Criteria for categorizing the severity of the defects
- Environment the testing will be performed on
- Method for establishing test data
- Tools used to perform the testing (including supplier and version)

We will provide comments on the Acceptance Test Plan as needed. We understand that this document will serve as the basis for acceptance and payment to BearingPoint.

**Base 41: Describe your relevant experience, capabilities and approach to acceptance testing? How will you comply with DEQ's requirements for acceptance testing?**

BearingPoint will support activities during the formal Acceptance Testing as well as prior to, ensuring that the Entrance Criteria is met.

We will provide support for the following:

- Set up the Acceptance Test environment
- Review test cases and expected results

- Create test data
- Defect tracking and resolution
- Review results to ensure Exit Criteria is met

**Base 42: Describe your relevant experience, capabilities and approach to post-implementation review?  
How will you comply with DEQ's requirements for post-implementation review?**

The project management team at BearingPoint has experience with post implementation support including managing release schedules, migration procedures and issues and enhancement reporting processes. We will provide a post implementation report which will be created by performing the following steps:

- We will analyze the observed system performance and compare the performance to the stipulated performance in the contract.
- Upon deployment, we will monitor and keep track of any unanticipated system problems. Any issues that arise will be tested in the preproduction environment and will be analyzed
- We will go back to the initial design and document any design discrepancies. However, we will be verifying the design throughout the project.
- We will document the analysis of any unresolved defects that have been identified during the testing phases, which will include the defect issue, analysis, and recommendation.
- We will provide the issues log, risk log, complete defect list and traceability matrix that have been captured throughout the implementation as part of the deliverable.

Deliverables will be produced according to published standards. Opportunities to enhance established processes will be identified and documented as required.

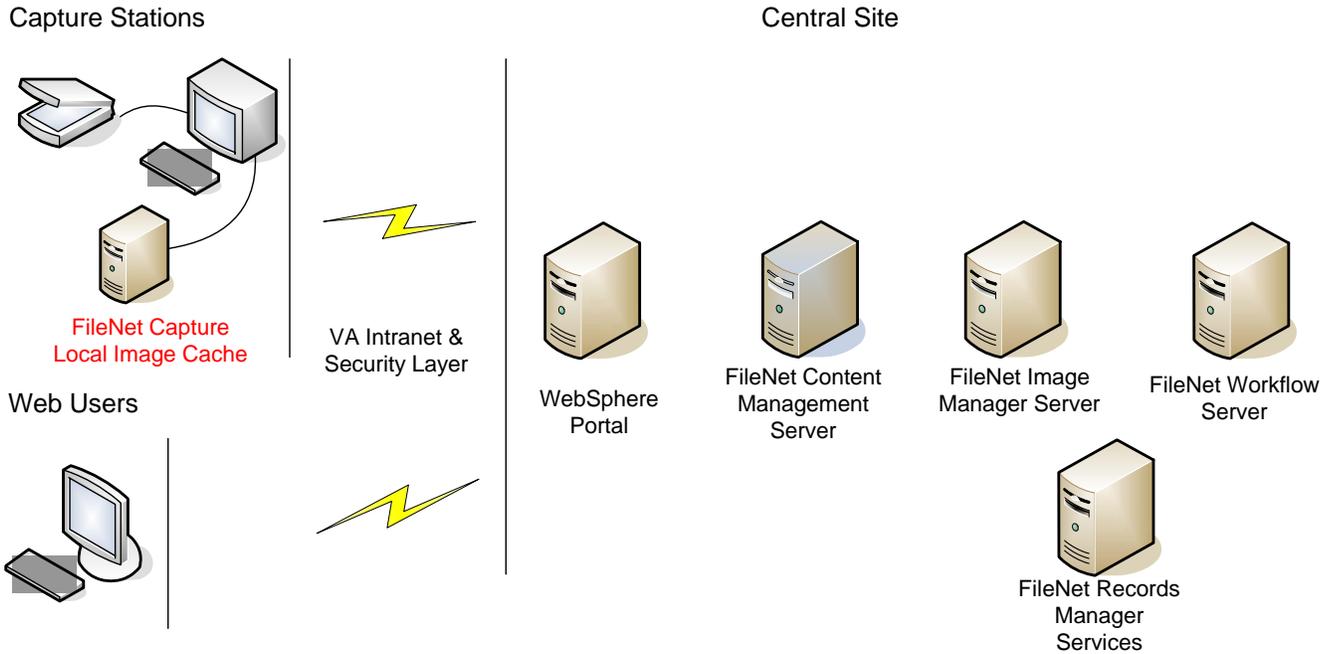
**Base 43: Provide the proposed configuration for DEQ's ECM system.**

Yes.

References: Department of Veterans Affairs; New York Department of Finance

Approach:

Shown below is the high level depiction of our proposed solution.



FileNet software provides a unique opportunity to tailor the operating systems and hardware choices. FileNet can run on SUN, HP, or IBM UNIX versions, as well the Microsoft Windows environments. Databases include both Oracle and MS SQL server.

The diagram illustrates the logical breakdown of individual server components but does not mean each application exists on one server, rather, VITA can choose from a number of best-practice implementations that satisfy technical, logistical, and managerial requirements.

The application servers can be implemented on several types of hardware and software.

**Hardware**

- a series of stand-alone servers linked through built-in FileNet replication support
- a server cluster managed by third-party software (such as Microsoft Cluster server or HPUX/Solaris built-in clustering)
- a blade cluster managed by the blade vendor's software

**Software**

- Windows, HPUX, Solaris operating systems
- Microsoft IIS, Apache, IBM Websphere, BEA Weblogic for web servers

- Microsoft SQL or Oracle for the database backend.

It is possible to utilize multiple platforms to match the needs of the systems and achieve a “best of breed” result. All server communication is accomplished through standard protocols to prevent the necessity of any proprietary components.

The storage system must address the need for short-term high-speed storage (cache) and longer term content storage. Cache storage can be configured to use local server storage in the form of a RAID 5 array, or the SAN through Fibre Channel. All long-term content storage should utilize the SAN. For maximum performance, local cache is recommended.

Windows Hardware Configuration

Shown below is the configuration for the standard windows-intel based server that could be deployed for DEQ. We have used a DELL product in this illustration, but comparably equipped servers from other providers would also meet the requirement. We have also elected to deploy a single configuration for all FileNet related central to minimize configuration and support complexity.

Model	Dell Poweredge 6850 (Intel) or 6950 (AMD)
Processor(s)	2 Dual Core Processors at 3ghz (4 cores available to the OS)
RAM	4gb base RAM (expandable to 32)
CD reader/writer	24x CDRW
Storage	Serial-Attached-SCSI (SAS) Raid 5 array (300gb expandable to 600gb, can substitute Ultra Wide SCSI or SATA disks depending on final specs)**
Network card	Intel Dual Port Gigabit PCI-Express NIC
Operating System	Windows Server 2003 R2
	** Dell offers several external SAS solutions that can allow multiple servers to share one array at the same access speeds as local disks. An external array allows for greater expandability and layout flexibility.

Please note that while this configuration represents our current recommendation at this time, it can be scaled up or down to match the needs of the system

Optimizing VITA hardware and software standards, budget, and preferred platforms can yield savings for the Commonwealth while leveraging currently deployed platforms, data center requirements, and VITA’s preferred purchasing options.

For those reasons, the BearingPoint Team would welcome the opportunity to discuss these options with VITA in an interactive work session. Working with VITA to understand the currently deployed and preferred products, near term future directions for hardware, staff administration skills, and hardware purchasing preferences will enable us to develop a configuration that reflects not only purchase cost considerations, but on-going support costs, future use, and VITA administration staff skills and experience. We have found across our engagements that this approach can yield is a lower risk, lower cost solution.

**General 1: What CRM software have you integrated to IBM FileNet’s P8 software?**

BearingPoint has integrated with most major ERP & CRM systems such as BAAN, Siebel, SAP, PeopleSoft, etc. The BearingPoint solution will utilizes the data abstraction model from ObjectBuilders to provide the integration layer between the CRM and FileNet.

**General 2: What ERP software have you integrated to IBM FileNet’s P8 software?**

In the past, BearingPoint has implemented 3 ERP/FileNet integrations. We have SAP customers with KBR on Houston, along with OPTICanada and Newalta in Calgary. From a PeopleSoft perspective, we’ve integrated for T-Mobile.

**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.**

Yes.

BearingPoint has overseen large back-file conversions. Two conversions of note were:

1. **The ACRIS BackFile Conversion Project** (see reference information for New York City Department of Finance in Supplier Profile section) - The purpose of the ACRIS Backfile Conversion project was to convert New York City (NYC) real and personal property documents, stored as microfilm and hard copy indexed data, to retrievable electronic images and linked index data. This was accomplished through two subcontracts: one for data entry of the City's index records, and one for the conversion of microfilm frames to electronic images. The NYC Department of Finance (DOF) performed Quality Assurance (QA) on the converted data and images to ensure compliance with the minimum performance criteria. To accomplish this QA, a Backfile Conversion Quality Control Application was designed, developed and delivered by BearingPoint.

Image Conversion and QA began in November 2001, with 325,000 images converted the first month. The conversion rate ramped up to a steady state of 2.5 million images per month in July 2002. By January 2004, a total of 48,322,786 images were converted, QA'd and accepted.

Index Conversion and QA began in April 2002 with 3,500 index records per week, increasing to 35,000 index records per week in October 2002. A total of 1,795,220 indexes were converted, QA's and accepted by April 2003.

BearingPoint provided post-production support throughout the conversion efforts. This included assistance to the QA supervisors in daily operations, inventory of converted images and index records prior to borough closeout, identifying missing microfilm reels and index books & pages, managing the search and retrieval of the missing material, shipping and receiving of reels and converted data, and technical assistance for the QC application.

2. **The Unemployment Insurance Technologies Initiative Project for the State of Minnesota** – BearingPoint managed a two-phased conversion of 6 million documents into FileNet. As part of this effort BearingPoint oversaw tasks of a subcontractor that

- Converted images into Tiff format.
- Generated meta data (indexing information) for converted images
- Uploaded converted images to FileNet using custom developed program
- Generated Annotations Data from another source database.
- Uploaded annotations into FileNet.

Also as part of our efforts, BearingPoint:

- Implemented the subcontractor-developed upload program
- Performed QA reviews on sampled documents
- Monitored/tracked conversion/upload efforts

- Uploaded nearly 1 million (of total 6 million) documents into FileNet.

Reference information is the same as provide in the Supplier Profile Section.

**General 4: How will the ECM solution capture Instant Messaging and associated native files obtained via instant messaging?**

Using FileNet Content Manager, any object can be saved and indexed to the repository. It stores all documents in their native format and therefore is able to be retrieved and opened in its native application. FileNet uses the extension type associated with the document to identify which application to use.

IBM FileNet's Email Manager supports FaceTime IMAuditor for the capturing and storing instant messages into the repository. Using the ObjectBuilder pre-built components we will create an Instant Message port which will allow us to treat IM like other data sources.

**General 5: What experience have you had in integrating SharePoint, particularly SharePoint 2003, with FileNet P8?**

BearingPoint has experience with exposing FileNet features through portlets in SharePoint. ObjectBuilders has also integrated with SharePoint and providing components can run as portlets inside the SharePoint 2003 server.

**General 6: What experience have you had in integrating Falcon/DMS or other computer aided drafting and design systems with FileNet P8?**

DEQ will be using ArcGIS 9.2, which provides ESRI component in an SOA environment.

ObjectBuilders components commonly work in SOA structures. We will leverage ObjectBuilders technology in the intersection of XML and SOA. It is important to note that ObjectBuilders has been a FileNet ValueNet partner for nearly 5 years, and like BearingPoint brings significant experience to the integration activities required.

**General 7: Describe your experience with integrating each of the modules in Contract VA-070601-IBM.**

Our partnership with FileNet has provided us with a wide array of experience with many types of different integration projects which has included most, if not all, of FileNet modules, background and detail on this is described throughout our proposal. By collaborating with ObjectBuilders, also a FileNet ValueNet partner, we can take advantage of the modules that are fully integrated with the FileNet components. FileNet can provide the presentation layer such as user interface screens and the integration layer where the business rules and workflow are implanted, through their highly configurable suite of pre-assembled solution modules.

**General 8: Provide all certifications you possess related to FileNet integration projects.**

The following are the current certifications that BearingPoint possess:

- FCP P8 Certified: BPM Administrator 1A
- FCP P8 Certified: BPM Developer 1A
- FCP P8 Certified: BPM Solution Architect 1A
- FCP P8 Certified: CM Administrator 1A
- FCP P8 Certified: CM Developer 1A

FCP P8 Certified: CM Solution Architect 1A  
FCP P8 Certified: CM Technical Support 1A  
FCP P8 Certified: IM (CS) Solution Architect 1A  
FCP P8 Certified: IM (IS) Solution Architect 1A  
FCP P8 Certified: IM (IS) Technical Support 1A  
FCP P8 Certified: IM Administrator 1A  
FCP P8 Certified: IM Developer 1A  
FCP P8 Certified: WCM Administrator 1A  
FCP P8 Certified: WCM Developer 1A  
ECM Essentials Certified 2A  
FCP P8 Certified IMIS Product Technical Support 2A  
FCP P8 Certified: BPM Administrator 2A  
FCP P8 Certified: BPM Developer 2A  
FCP P8 Certified: CM Administrator 2A  
FCP P8 Certified: CM Developer 2A  
FCP P8 Certified: CM Product Technical Support 2A  
FCP P8 Certified: EM Administrator 2A  
FCP P8 Certified: EM Developer 2A  
FCP P8 Certified: FM Administrator 2A  
FCP P8 Certified: FM Developer 2A  
FCP P8 Certified: IM Developer 2A  
FCP P8 Certified: RM Administrator 2A  
FCP P8 Certified: RM Developer 2A  
FCP P8 Certified: RM Product Technical Support 2A  
FCP P8 Certified: Solution Architect 2A  
FCP P8 Certified: TCM Administrator 2A  
FCP P8 Certified: TCM Developer 2A

**General 9: Describe your experience and methodology for performing Business Process Analysis.****Experience with Business Process Analysis**

BearingPoint has extensive Business Process Analysis (BPA) and Business Process Re-engineering (BPR) experience across a number of industries and specific experience with BPA/BPR activities on FileNet engagements. With regard to FileNet and BPA/BPR experience, BearingPoint has produced significant results for our clients. For instance,

- When the New York City Department of Finance needed to reduce the four to six month time lapse between receiving property documents and making them available to the public, it turned to BearingPoint to develop a business process solution, supported by a document management system to replace its legacy systems and manual processes. Using our proven project management methodologies, BearingPoint created an online property tax and land records management application supported by FileNet's document management tools and The Main Line Corporation's (Main Line) business application. The resulting solution, the Automated City Register Information System (ACRIS), has reduced the time lapse from months to minutes, and has allowed the client's staff and customers to access and view property documents quickly and easily via the Internet. ACRIS has been publicly recognized as an asset to the community and an example of efficient project management and public spending. The Citizens' Budget Commission honored the project as an example of good use of city money, and the New York City Department of Information Technology and Telecommunications recognized ACRIS as the application "best serving the public."
- When Montana's Division of Motor Vehicles wanted to replace its microfilm-based document archiving system with an electronic FileNet image repository, it turned to its trusted consulting partner, BearingPoint, for support. Using our FileNet methodology and tools as templates to help the client meet its five-month deadline, we provided support for the design, testing, and implementation of a FileNet imaging repository system. This engagement, in conjunction with the implementation of non-technical "quick hit" process changes identified during the business process reengineering project have not only shortened the turnaround time on a title from two months to five days, but, helped the client to demonstrate fiscal responsibility and receive additional funding from the state to enhance its operations.

Our work with Montana is an excellent example of BearingPoint's ability to become a trusted advisor to a state government agency. We brought in an experienced team of primarily local resources with experience in the motor vehicle agency and familiar with the client's business processes and challenges. This experienced team was able to deliver results that exceeded the client's expectations both functionally and financially. The client continues to view BearingPoint as both a valued strategy and process improvement resource and technical advisor. Demonstrating the degree to which the client values its relationship with BearingPoint, it continued to retain the services of BearingPoint team members between projects to ensure they would not be deployed elsewhere, and even requested the services of BearingPoint's lobbyist as part of a Due Diligence assessment of other states' best practices.

## **Business Process Analysis Methodology**

### The Enterprise View of the Current State

Developing an enterprise process view of the current state is the beginning: certainly for transformational engagements such as this, and also for large strategic engagements. It provides the team with a big picture context. It view should identify the enterprise's business processes and business unit groupings. Often a value chain approach is used.

The example below is a variation on the manufacturing enterprise view from James Martin's book *The Great Transition*. This map is typically developed early in the engagement sometimes before the Statement of Work is completed. The project team must make sure it depicts the actual current state. The enterprise view is typically not changed significantly as a part of a BPD engagement unless it includes a strategy component.

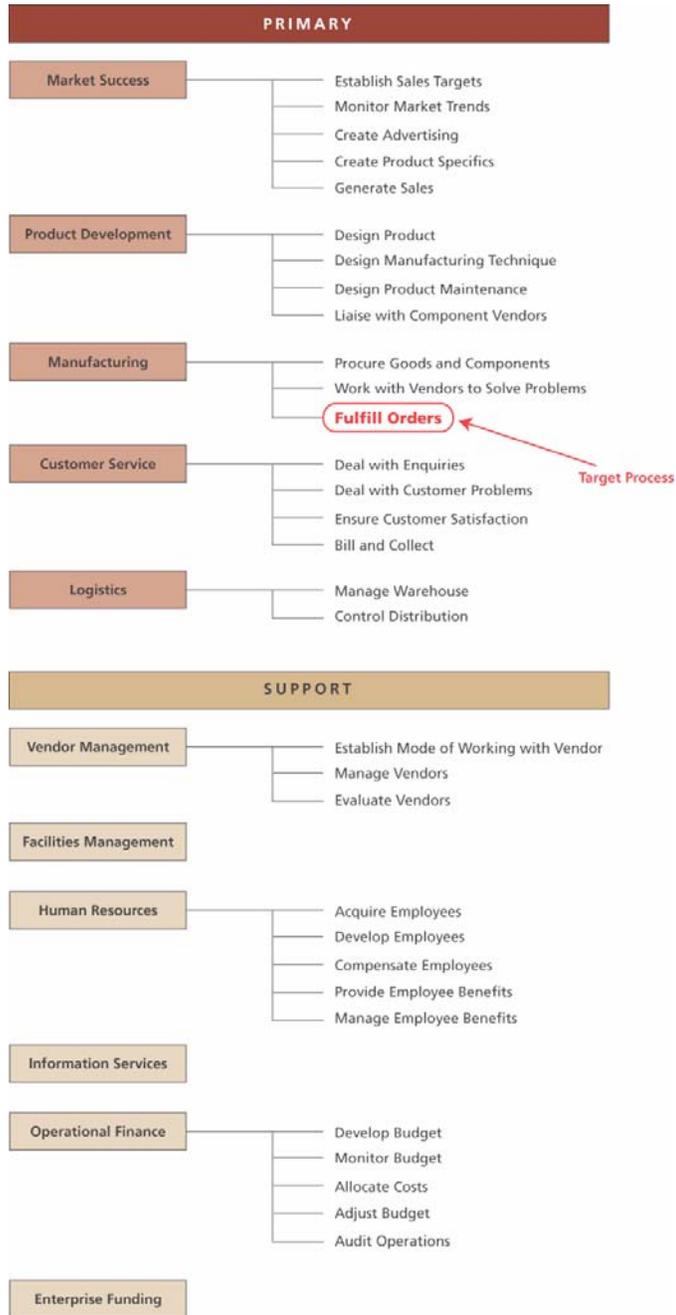


Figure 1 Current State Enterprise View

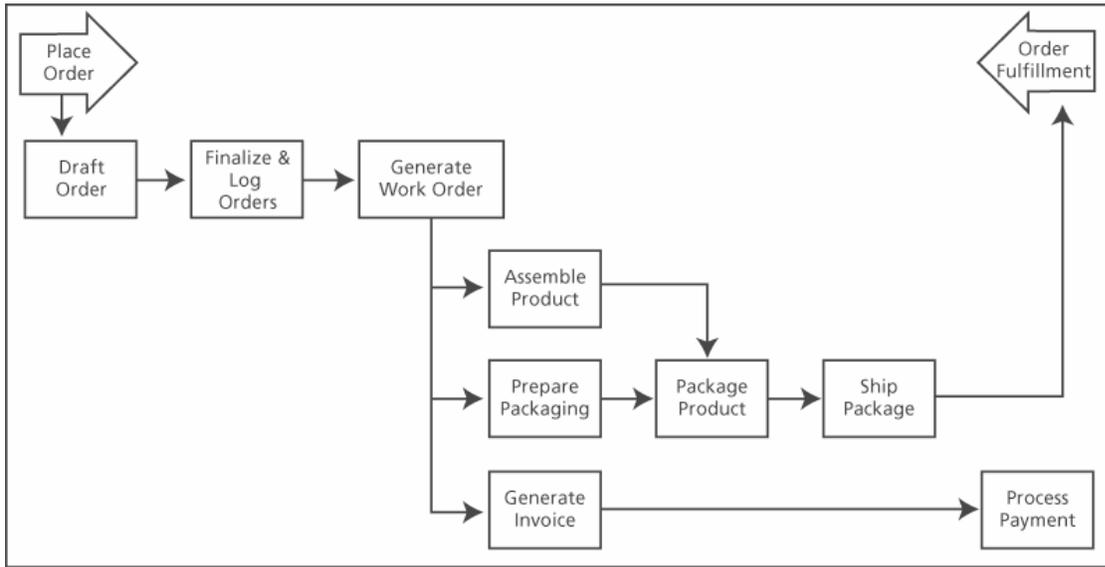
Strawman Process Maps

Strawman process maps are tools that provide a basis for discussion in the Current State Business Process Definition and Validation Workshops. They are not required but they can accelerate the current state mapping effort. The easiest way to develop them is using existing process maps or process description documentation provided by the client. If nothing is available then they can be developed as a part of the initial SME one-to-one interviews.

Strawman maps do not require much detail or supporting process data. In fact the purpose of these tools is help the project team collect that information. They should contain major work activities and describe the flow of work. They should be developed based on the target and the audience. During the course of the Current State Business Process Definition and Validation workshops, the project team may use both business unit and work group views of the processes.

An example of a business unit view strawman is shown below (Figure 2).

**Figure 2 Fulfil Orders – Strawman Process Map For Fulfil Orders**

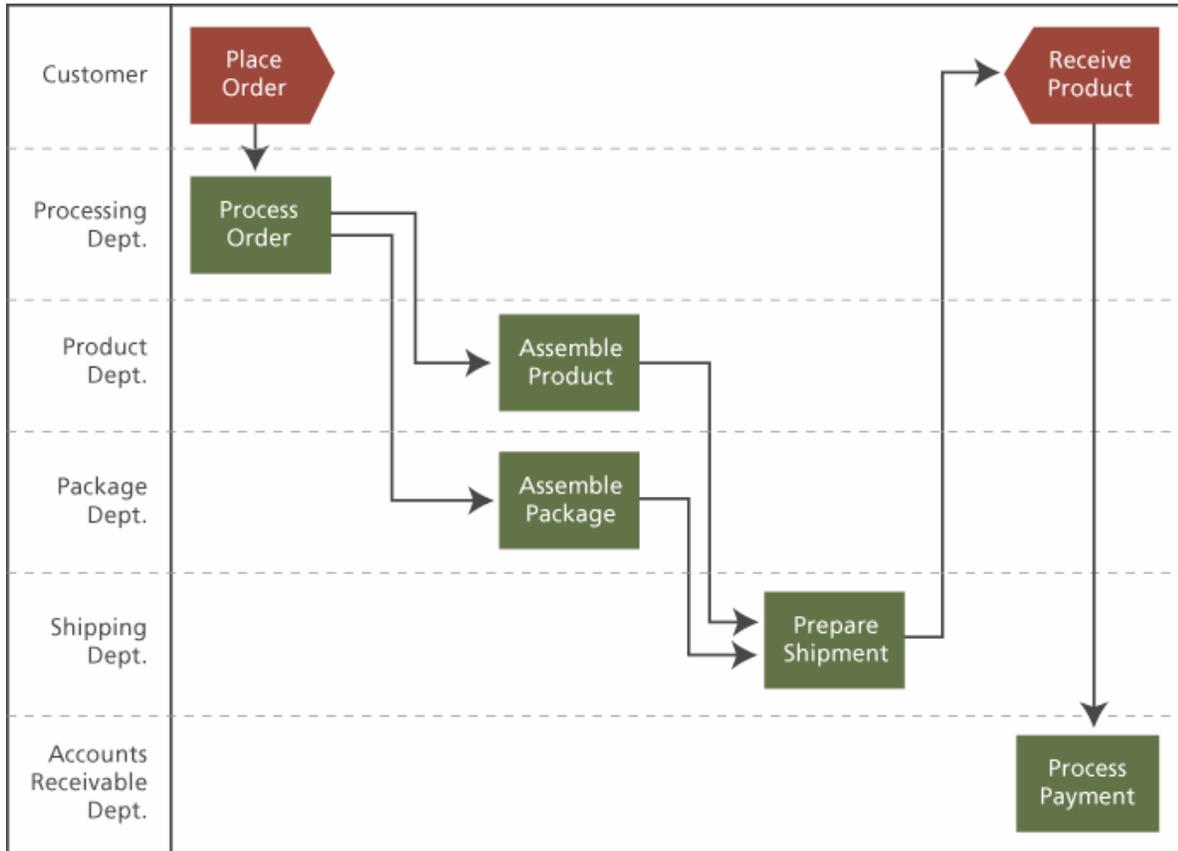


Current State Process Maps

The amount of detail presented in a process map depends on the project team’s objectives. The example below is of a Business Unit View, it is the next level of detail after the Enterprise View. It is the same view as the strawman process map above but it has been corrected to accurately describe the current state process. (Figure 3)

**Figure 3 Fulfil Orders Process Map – Current State Business Unit Level**

Successful process design often is the result of mapping of details that were never recognized or appreciated



in such a way that the hidden salient points become almost obvious.

The following maps provide the next level of detail. They are Work Group Views. One way to leverage them is to distribute them in the Current State Assessment and Future State Design Workshops and have the participants mark them up, identifying or putting detail around inhibitors or with improvement ideas.

The examples include notes that would typically be developed during the Current State Business Process Validation Workshops. This information would be moved to the Issue Table so it could be fully analyzed.

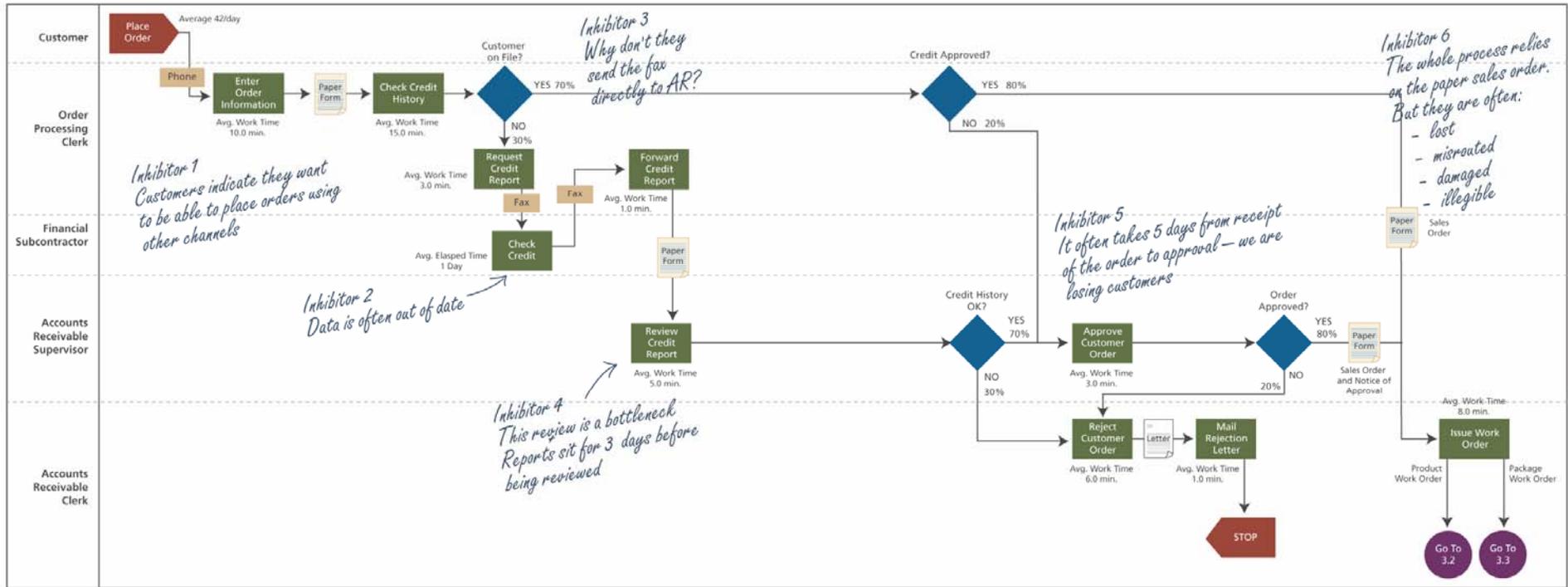
The findings and ideas on these maps will serve as the basis for the future state design examples. (Figures 4 – 8)

**Process:** Process Order  
**Version:** 1.0 (Inhibitor notes added in Workshop)

**Condition:** Current State  
**Version Date:** 1/3/03

**View:** Work Group

**Figure 4 Process Order Map**



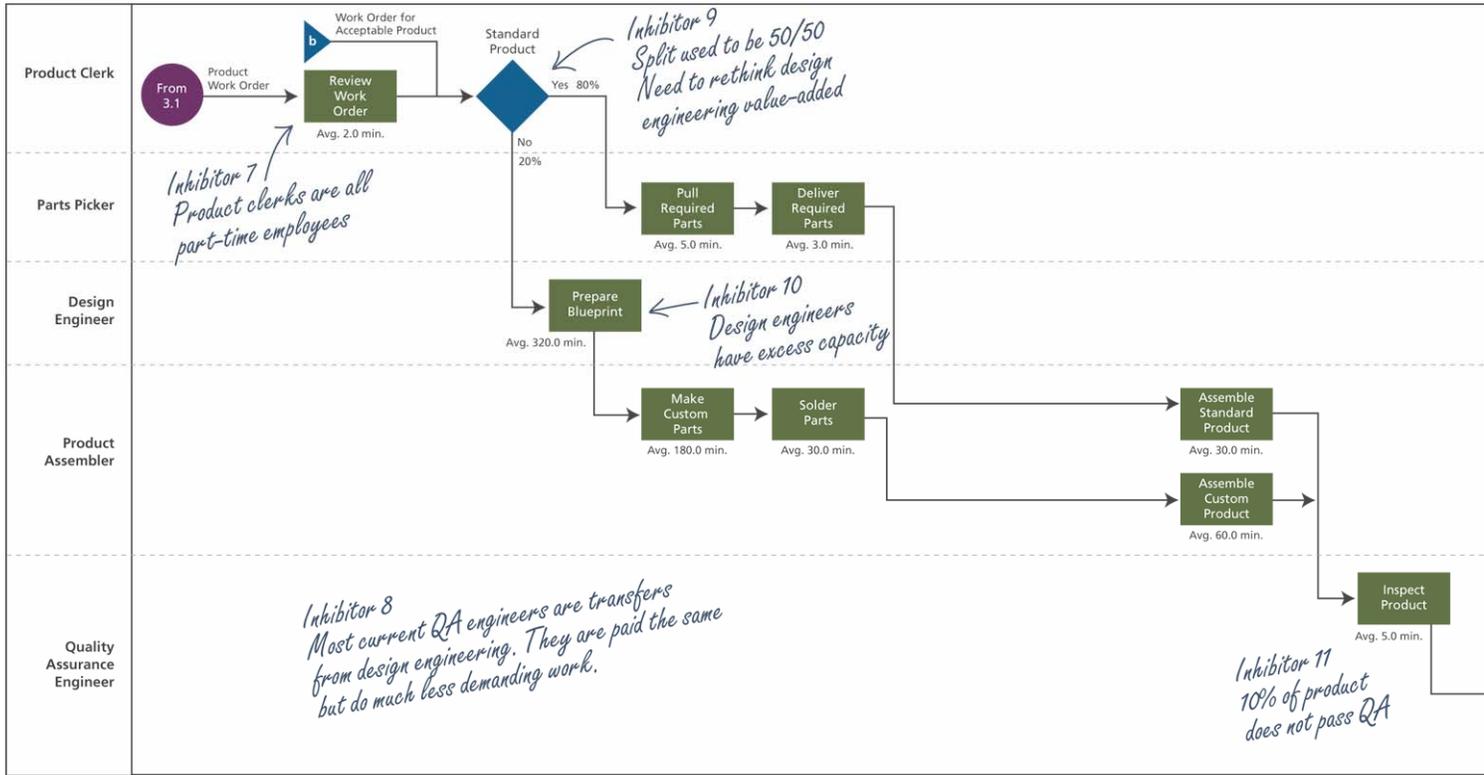
**Process:** Assemble Product  
**View:**

**Condition:** Current State  
**Work Group:**

**Version:** 1.0 (Inhibitor notes added in Workshop)

**Version date:** 1/3/03

**Figure 5 Assemble Product Map**



**Process:** Prepare Shipment

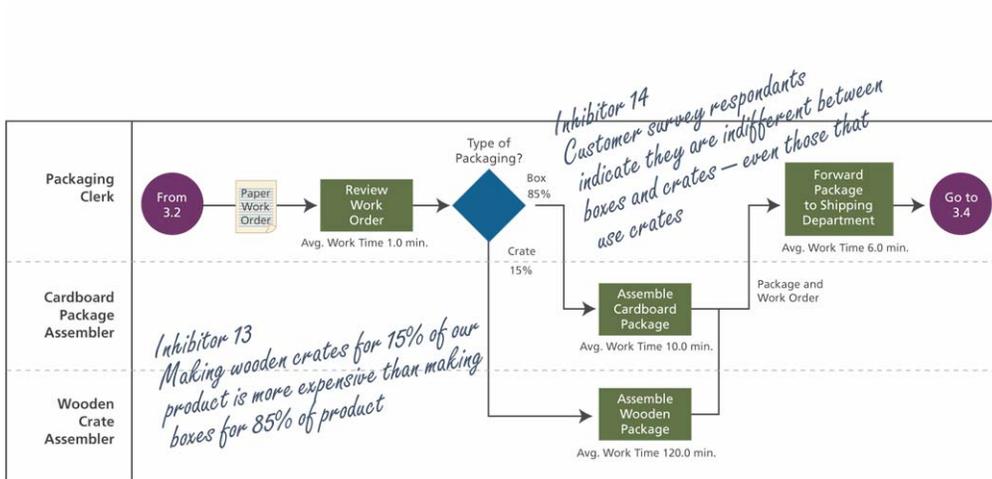
**Condition:** Current State

**View:** Work Group

**Version:** 1.0 (Inhibitor notes added in Workshop)

**Version date:** 1/3/03

**Figure 6 Assemble Package Map – Workshop Mark-ups**



**Process:** Prepare Shipment

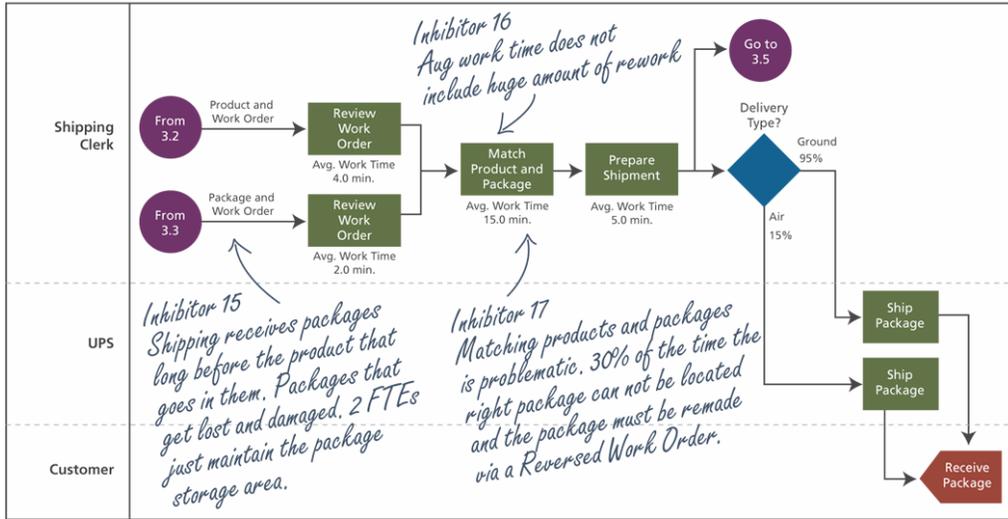
**Condition:** Current State

**View:** Work Group

**Version:** 1.0 (Inhibitor notes added in Workshop)

**Version date:** 1/3/03

**Figure 7 Prepare Shipment – Workshop Mark-ups**



**Process:** Prepare Shipment

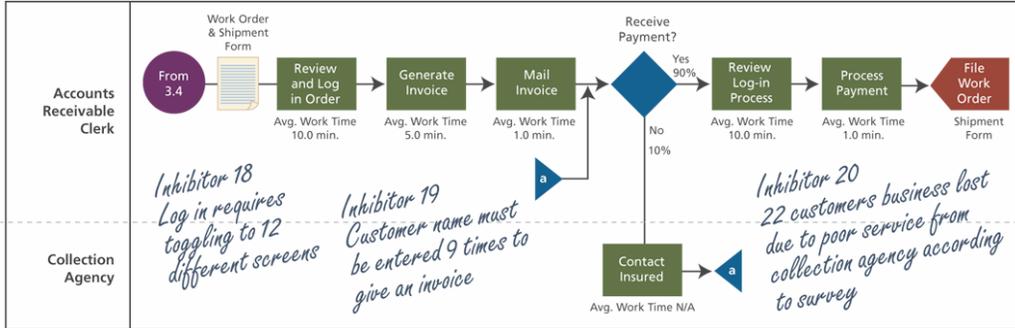
**Condition:** Current State

**View:** Work Group

**Version:** 1.0 (Inhibitor notes added in Workshop)

**Version date:** 1/3/03

**Figure 8 Process Payment – Workshop Mark-ups**



It is rare for the team to need to develop process maps for 'individual process views' which become more important as the project team gets closer to the development of work procedures. Work procedures are typically not a part of the future state design. They are usually developed during prototyping or piloting programs during subsequent phases.

**General 10: Describe your experience and methodology for performing business process re-engineering.****Experience with Business Process re-engineering**

See section 0 for experience

**Business Process Re-Engineering Methodology**

## Introduction

Business Process Reengineering describes ways to help uncover new possibilities and opportunities for process design. Following are seven heuristics that can be used to generate process innovation options. (A heuristic, according to Webster, is an aid to learning, discovery, or problem solving by experimental and especially trial-and-error methods—in other words, a rule of thumb.) These heuristics—also known as the Seven Rs—represent seven dimensions or elements of a process that can be changed. They are intended to demonstrate ways that the team might consider and examine a process in order to improve it. The team will undoubtedly find additional questions and perspectives that help identify improvement opportunities.

## Description

The seven R's in summary:

**Rethink (Why)**

- What is the root cause of the problem?
- What are the reasons for doing it this way?
- What are the assumptions or rules underlying the current model? Are they true? Do they have to be true?
- Is this process valuable enough to continue?

**Reconfigure (What)**

- How can the entire activity be eliminated?
- How can common activities be consolidated?
- How can reconciliation be reduced by putting quality at the source?
- How can information sharing with suppliers and customers improve the process?
- How can intermediaries and non-value-adding work be eliminated?
- How can leading practices from other industries be borrowed and improved upon?

**Reassign (Who)**

- How can existing activities and decisions be moved to a different organization?
- How can the activity be outsourced?
- How can the customer perform this activity?
- How can the organization perform an activity that the customer is currently performing?
- How can cross-training integrate and compress tasks?

- How can suppliers/partners perform this activity?

### **Resequence (When)**

- How can predicting increase efficiency?
- How can postponement increase flexibility?
- How can the number of interconnections and dependencies be minimized?
- How can parallelism reduce time?

### **Relocate (Where)**

- How can the activity be moved closer to the customer or supplier to improve effectiveness?
- How can the activity be moved closer to related activities to improve communication?
- How can we decrease cycle time by reducing travel time and distance?
- How can geographically virtual organizations be created?

### **Reduce (How Much)**

- How can the frequency of the activity be reduced or increased?
- How can critical resources be used more effectively?
- How would less information or fewer controls simplify and improve efficiency?
- How would more information enable greater effectiveness?

### **Retool (How)**

- How can technology transform the process?
- How can the activity be automated?
- How can assets or competencies be leveraged to create competitive advantage?
- How can up-skilling, down-skilling, or multi-skilling improve the process?

### **Application**

#### **Rethink (Why)**

- Rethinking is about surfacing and challenging the rationale and assumptions behind processes and their outcomes. It asks why things are the way they are, and whether they have to be that way. This heuristic is a little different than the other six because challenging an assumption does not necessarily lead to a solution. However, it does allow for more creative thinking, because once the constraints of an assumption are lifted, the imagination can flow in new directions.
- The other six heuristics can then be used to generate new process designs that address the surfaced assumption. In addition, asking the questions associated with the other six heuristics will uncover additional assumptions.

- This heuristic is a reminder to ask big-picture questions such as: What is the root cause of the problem? A problem such as poor sales or high inventory has many potential causes. It is essential to understand the root cause of the problem, in order to focus on the real problem and avoid chasing symptoms. Example: an airline had high costs associated with carrying excess parts inventory, which suggested improvements in its inventory-management processes. However, the real problem was the fact that the airline used its own planes to move parts, viewing them as free transportation. As a result, spare parts were often left on the tarmac to make space for revenue-producing freight. The airline compensated for these self-imposed delays by keeping excess inventory on hand. So the best solution would lie in improving the transportation of parts, rather than in streamlining warehouse operations.
- What are the reasons for doing it this way? Often, the exercise of articulating why the organization does the things it does quickly reveals reasons that are unknown, not compelling, easily changeable, or no longer valid. Or, the reasons may be valid, but not relevant because the desired outcome can be achieved some other way. Once the reasons are articulated, they can be probed and challenged, and either discarded or accepted as explicit constraints to innovation efforts. Example: at one utility, attempts to design the corrective maintenance process at nuclear plants were stymied by people who insisted that Nuclear Regulatory Commission (NRC) regulations banned any changes. A review of the actual regulations revealed that the constraints were not nearly so limiting as thought. In addition, the design team invited NRC input to ensure that none of the changes would put the company out of compliance.
- What are the assumptions or rules underlying the current model? Sometimes, the most powerful barriers to changing the way work is done are invisible. These are the implicit assumptions—about “how we do things around here,” what people value and how people get ahead—that are so ingrained that people are unaware of them. It is important to uncover these rules and assumptions and analyze whether they can be broken—and the possibilities that would be created by doing so. Example: a credit function within a major computer company found that its credit approval process was too time-consuming because of handoffs between various specialists. Process designers could have tried to make the specialist-to-specialist hand-off more efficient. However, the fundamental problem was not the handoffs, but the assumption that all deals had to be handled by specialists. In reality, most of the deals were simple and could be handled by a single generalist. So the handoffs between specialists were eliminated.
- Is this process valuable enough to continue? How does it contribute to the value the organization provides to customers? Should the process be fixed or eliminated? Example: at one bank, the desire to maintain a high level of control led to four copies of cashier's checks being sent to four different locations. The bank realized that amount of activity added little in the way of real control or reduction of risk.

**Getting to the Heart of the Problem**

- A Process Excellence maxim is “treat the disease, not the symptoms”. There are several common symptoms that correspond to underlying process diseases.

Symptom	Disease	Treatment
Extensive information exchange, data redundancy, re-keying.	Arbitrary fragmentation of a natural process.	Share data among organizational units, and/or reintegrate activities into a process.
Complexity, exceptions, and special cases.	“Accumulation onto a simple base,” in which a process starts out being simple, but grows more complex due to new variations.	Do not try to handle all situations with one process; use different versions of a process.
Excessive inventory and inventory buffers.	System slack to cope with uncertainty.	Remove uncertainty by sharing information (for example, coordinating production planning across suppliers and customers), and thereby reduce the need for inventory.
High ratio of checking and control activity to value-added activity.	Fragmentation. Organizations perform checking and control due to the errors and mistrust that are the result of fragmentation.	Remove the fragmentation; integrate activities that make up the process.
Rework and iteration.	Inadequate feedback along chains. Problems are not caught when they happen, but later in the process, requiring more than one step to be redone.	Increase feedback and communication, and simplify the process if possible.

**Surface and Question All Assumptions**

Assumptions lead to rules, which lead to certain results. If the assumptions are untrue, they should be broken.

**Reconfigure (What)**

Reconfiguring centers on the issue of what work is being done—and whether that work is even necessary. It is about analyzing the tasks and activities that are performed, and how similar outcomes can be achieved through different means.

Reconfiguring work goes to the heart of process innovation. When reconfiguring work, it helps to keep the following things in mind:

- Keep the desired process outcome firmly in mind, but assume that everything else can vary. Process innovation is about finding new ways to deliver those outcomes. However: be certain that the outcomes are correct.
- Analyze the process to:
  1. Identify the tasks as value-adding, non-value-adding, or waste.
  2. Understand where delays, costs, and errors come from.
  3. Eliminate as much waste and non-value-adding work as possible.
- Challenge every step in the process.

1. Is there a way to do it cheaper? Faster? Better? Is there a way to not have to do it at all?
  2. Design from the customer's perspective. What attributes must the process have to produce the outcomes the customer wants?
  3. Do not be constrained by what is—determine what really needs to be done to produce the outcome.
- Think out of the box.
  - Consider re-scoping the process if that would produce better results.
  - Borrow ideas from everywhere.
  - Consider starting with a “clean sheet of paper.” If a current process is very poor at delivering outcomes, do not just tweak it.
  - Ask, “What would the perfect solution be if we were starting a new company?”
  - Usually, a reconfigured process is a vastly simpler one—fewer tasks, fewer handoffs, fewer errors, fewer delays, less cost.

## **Reconfigure Examples**

### *How can the Entire Activity be Eliminated?*

When a major motor company designed its parts-procurement process, it eliminated the step of receiving an invoice and matching it to a purchase order. In the new process, goods arriving at the company's receiving dock are checked against a purchase order database. If the shipment matches an outstanding PO, payment is made. If not, the shipment is sent back to the vendor. Eliminating the invoice simplified the process and enabled the motor company to shrink its accounts payable department dramatically.

### *How can Common Activities be Consolidated?*

Many industries have created call centers in recent years, removing some customer-support functions from local offices. The benefits include reduced costs, because one large facility is often cheaper than many decentralized facilities, and improved customer service, because:

- The call takers are dedicated to answering the phone; they are always there and are not distracted by other duties.
- Call centers have the tools to enable call takers to perform more consistently and effectively—everything from headsets to sophisticated computer systems that supply the information that customers need.
- Call centers generally are accessed via toll-free numbers that are both free for the customer and easy to remember.

### *How can Reconciliation be Reduced by Putting Quality at the Source?*

A truck company, its supplier, and one of its engineering suppliers have set up systems for sharing quality assurance data electronically. As a result, the need for duplicate quality tests has been eliminated, because the truck company can monitor the supplier's quality as needed.

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*Can We Eliminate Intermediaries and Non-value-adding Work?*

Previously, when customers had claims with a large insurance company, they would call their agent, who would call a company claims adjuster, who in turn would call the customer. The company established a toll-free number that enables customers to call claims adjusters directly, thereby eliminating the intermediary. The insurance company also has mobile claims adjusters who can go to a crash site shortly after an accident happens.

*How can Information Sharing with Suppliers and Customers Improve the Process?*

To keep up with large superstores, independent retailers carrying a major household appliances organization's products had to maintain large inventories of appliances. The appliances organization established a "virtual inventory" system, in which products are kept in its warehouses and retailers can check inventory and place orders via computer. Orders are shipped directly from the warehouse to customers. As a result, the retailers can offer a full line of products while having only floor samples on hand.

A major retailers system gives about 4,000 suppliers (in addition to internal buyers) direct dial-up access to the retailer's data warehouses. This system allows the retailer and its suppliers to develop a single sales forecast, enabling suppliers to allocate capacity rather than inventory. This forecast can also be shared with transportation partners.

*How can Leading Practices from Other Industries be Borrowed and Improved Upon?*

In recent years, many companies have improved their processes by benchmarking across industry lines. For example:

- A mobile phone company learned delivery-management techniques from a leading pizza delivery company, a company that delivers pizza in 30 minutes or less.
- An office equipment company improved its warehouse productivity by analyzing methods employed by a U.S.-based catalog retailer.
- An international manufacturer got ideas for cost cutting and improving customer service from a computer-parts wholesaler and a major motor company.
- A medical center, realizing that patients judged their hospital experience not only on the quality of care but also on how much time, hassle, and paperwork was involved, used an international hotel operator to help design its admitting process.
- An airline used the leading practices of an Indianapolis 500 pit crew to help develop faster turnaround in its maintenance processes.

**Controlling the Controls**

Control activities do not add value, and multiple controls often have diminishing benefits. Consider eliminating such activities. For example:

- If an organization's budget has been approved, and appropriations are within that budget, then additional approval and control is not necessary.
- Qualified vendor programs eliminate the need to match receipts and invoices. With qualified vendors, simply pay upon receipt.

- Instead of investigating all discrepancies between what was billed and what was paid, implement tolerance levels and focus only on significant discrepancies.
- Instead of reconciling receipts with invoices, a Japanese based motor manufacturer has arranged with suppliers to pay for what it uses, instead of what it receives—meaning that items are tracked only once.

## Reassign (Who)

Reassigning is concerned with the question: who does the work? Today, there is a tremendous array of possible answers to that question. In nearly every industry, organizations are turning to suppliers, customers, strategic partners, outsourcing partners, subsidiaries, temporary workers, and others to do work previously done in-house.

Who does the work is no longer limited by the historical constraints of geographic location, organization, or even skill level. Because of technology and changes in the competitive landscape that are driving intercompany cooperation, workers and organizational partners can come from anywhere. Even direct competitors sometimes find it is better to partner than fight. This wealth of options creates enormous opportunities for process-innovation efforts. Often, when the “who” dimension of a process is changed, the “what” and “how” can change as well, and a new process is born.

Given the broad range of possibilities, how can companies decide when to move all or part of a process to another organization? They need to ask:

- Who can produce the best outcome for the customer? Consider internal and external possibilities. Who has the best skills and assets for serving the customer? Sometimes, it is the customer.
- What are the company’s core competencies and strategies—or what does it want them to be? It may make sense to outsource a non-critical process so that management can focus on more important things. Or a company may want to invest in re-skilling people to enable them to perform at a world-class level in a process it considers strategically important.

Use the Reassign heuristic to think beyond the boundaries of the current organization—be it team, department, division, or company—to perform the work where it makes the most sense and adds the most value.

## Reassign Examples

### *How can Existing Activities and Decisions be Moved to a Different Organization?*

When a large airline company wanted to offer lower-priced commuter service, it created a separate organization with a culture and processes suited to providing cheaper flights. It rethought everything, from boarding procedures to ticketing, and asked employees to perform many different activities. The degree of culture and skill change necessitated creating an entirely new company.

### *How can the Activity be Outsourced?*

A truck company sells repair parts in the United States through a channel that includes regional warehouses and commercial truck dealers. Dealers complained of stock-outs on critical parts, even as inventory levels soared. Because they could not provide timely repairs, the dealers were losing business. The problem: it was difficult to predict demand for emergency roadside repairs, and if the parts were not readily available, truck

owners went elsewhere. The truck company turned to a leading logistics organization, which began managing a toll-free line and a warehouse in Memphis that is stocked with a full line of truck parts. Now, when dealers need parts for an emergency repair, they call in their order, and the parts are shipped by the logistics organization.

An aerospace company was looking for ways to provide quick delivery of part kits directly to aircraft. It realized that catering trucks make deliveries to every plane, so it teamed up with a catering company to provide delivery service for its parts. The company found a partner not by looking for special expertise, but by looking at how other organizations were interacting with its customers. The lesson: sometimes, an outsourcing or alliance partner may emerge from a less-than-obvious place.

*How can the Customer Perform this Activity?*

A major courier company's shipping software allows customers to schedule pickups, track and confirm deliveries, and print routing bar-code labels. This lets them prepare, process, and track shipments on their own terms, without having to contact an employee from the courier company. It has also reduced the courier company's customer service calls and costs by 60%.

A copier company used to send technicians to customer sites to perform copier repairs. However, most repairs were relatively simple. The copier company now provides customers with the tools and instructions needed to make their own simple repairs. As a result, customers no longer wait several hours for a technician to be sent.

*How can the Organization Perform an Activity that the Customer is Currently Performing?*

A successful clothing retailer uses a direct electronic link to advise retailers on what products and sizes they should carry. The system can create an order for the retailer, and supply the goods pre-ticketed and ready to go on the retailer's shelf.

A major engineering concern used to simply deliver its finished power generators to utility companies. Now, it will install generators, and even build an entire plant to house the generators, allowing customers to focus on managing operations, rather than on construction.

*How can Cross-training Integrate and Compress Activities?*

A large power generation company responds to customer reports of service outages with three activities: getting information from the customer, checking its equipment and lines, and dispatching a repair technician, if required. The three activities were previously handled by three specialists, requiring coordination, handoffs, and communication. Today, all three activities are performed by cross-trained individuals.

*How can Suppliers or Partners Perform this Activity?*

With Vendor Managed Inventory, the vendor and retailer coordinate stock plans. The vendor tracks retail inventories, initiates replenishment based on sell-through, and may also manage the merchandising of the items on the selling floor. In one case, a major consumer products company took on work from a major retail customer, and now manages that company's inventory of disposable diapers. The consumer products company is able to add value because it has the facilities, skills, and information that are appropriate for managing the product.

**Revolutionizing Customer Habits**

When technology transforms a process, it often transforms the behaviour of customers as well—witness the growth of catalogue shopping, or the shift from physical retail bank branches to virtual channels such as ATMs or phone banking. In particular, technology-based self-service is usually perceived as a valuable convenience, rather than a burden. Consumers often prefer to do it themselves—be it tracking their own packages, designing their own windows, looking up their own loan rates, or using pay-at-the-pump technology when refuelling their cars.

### **Cooperation Across the Value Chain**

When rethinking who does what in an extended process, there are several inter-organizational arrangements and techniques to consider. These include:

**The consortium.** Companies can benefit from economies of scale by banding together to share resources. For example, manufacturers of non-competing consumer goods can solve the problem of dealing with infrequent, small shipments to particular regions by cooperating to ship their products together. This situation is win-win-win: The two manufacturers lower their per-unit delivery cost, and customers benefit from more current stock and more responsive order fulfilment.

**Reversing the supply chain.** The traditional view of the supply chain is buy, make, move, sell: Manufacturers acquire materials, make finished products, and move the products to retailers who sell the goods to consumers. This view was based on the projecting of market demand. Because of the uncertainty inherent in projections, businesses put buffers into the supply chain, such as excess manufacturing capacity and inventory. Reversing the supply chain means taking a “sell, move, make, buy” view. All activity is triggered by a consumer sale or order, and supply-chain members respond to consumer actions with only the necessary resources. This approach requires close cooperation and information sharing.

**Supply-chain partnerships.** By partnering up and down the supply chain, participants can minimize total costs while maintaining service and rates of return. Supply-chain partnerships are enabled by:

- **Dedicated capacity.** Suppliers can reserve some amount of production capacity for a particular customer.
- **Shared cost information.** Supply-chain participants share cost-flow and process-flow information to identify win-win opportunities and eliminate non-value-adding activities.
- **Coordinated production planning efforts.** Production planning is coordinated across the supply chain by sharing forecasts and production schedules.
- **Partnering for new product development.** Involving suppliers in design work can bring them up to speed, and reduce supplier-related lag time and errors later in the process.

### **The Extended Enterprise**

Processes not only cross the boundaries between an organization’s immediate suppliers and customers, they also cover the entire extended enterprise, encompassing everything from the supplier’s suppliers to the customer’s customers. In developing innovative designs, consider this entire extended enterprise.

### **Virtual Relationships**

Electronic commerce and the Internet are affecting how and where processes are performed across the supply chain. However, no one knows precisely where these growing connections will lead. Some observers

talk about disintermediation—the elimination of middlemen, such as distributors and retailers, due to direct electronic links. A leading Internet player, for example, distributes much of its browser software in this manner. Others talk about hyper-intermediation—the proliferation of electronic middlemen that add value by organizing and simplifying electronic business. Either way, such developments will accelerate the shifting of work from one place to another.

### Resequence (When)

This heuristic centers on the question of when work is done—on sequencing, timing, and interdependencies. When activities have been performed a certain way for many years, it is easy to assume that some tasks simply must be performed before others. However, there may be fewer real dependencies than first meet the eye. Varying the timing and sequence of work can be a powerful lever for designing not just a faster process, but one that enables greater customization, lower cost, and fewer errors. Once process performance requirements are known, see if re-sequencing the work can help achieve them.

Re-sequencing options include:

Prediction. A process designed around strong capabilities in predicting usage or demand can:

- Enable faster response times (e.g., by starting the build process in advance of orders)
- Improve customer service (e.g., by minimizing stock-outs)

Postponement. A process that postpones key decisions until better information is available can:

- More closely meet customer needs (e.g., if you manufacture to order, rather than manufacture in anticipation of an order)
- Reduce costs (e.g., minimize inventories)

Parallelism. A process with many parallel activities—rather than lengthy, linear ones—can:

- Compress time (e.g., as multiple activities are performed simultaneously rather than sequentially)
- Reduce errors (e.g., as complementary activities provide feedback about potential problems sooner and more frequently)

In addition, look closely at interdependencies in a process. Where critical interdependencies cause delays or errors, find ways to design the process to minimize such links. A simple example: if approvals are a long, tortuous affair, see how many managers can be removed from the loop. Often, multiple approvals are not really necessary; they are simply done because of tradition or politics. It may not be easy to do, but minimizing approvals can be an effective way to speed up a process and get better results.

### Resequence Examples

#### *How can Predicting Increase Efficiency?*

In its admissions process, a hospital accepting transferring patients used to verify the availability of rooms before the patient was moved—a step that took considerable time and sometimes resulted in the loss of the referral to another hospital. However, the hospital realized that it was nearly always able to find a vacant bed, so it now immediately agrees to admit patients upon request, and finds and prepares a room while those patients are in transit to the hospital.

#### *How can Postponement Increase Flexibility?*

A major computer manufacturer produces its machines with interchangeable modules. This allows the company to postpone decisions about the configuration of a given product until it receives an order. Then, it assembles the modules into a custom product.

Instead of making a broad range of colors in their plants, paint manufacturers give hardware stores the base colors and tools needed to mix custom colors on-site. The final decision about color occurs at the very end of the process, when the customer is picking up the paint. This ensures the right color paint is available when the customer wants it.

#### *How can the Number of Interconnections and Dependencies be Minimized?*

In an around-the-clock software development push, a large computer firm questions one of the most fundamental dependencies: the workday. When the company's developers finish their day, they forward the work via network to another location that is just beginning its workday. These employees work on the project, and at the end of their day, they forward it again to another geographic location, and so on.

As a result, the work is no longer dependent on time or geography.

#### *How can Parallelism Reduce Time?*

At one company, a serial product-development process meant that marketing developed an idea and handed it off to engineering, which designed the requirements for the new product and then passed the specs on to tooling and manufacturing. Often, tooling and manufacturing would ask engineering for revisions, based on what could and could not be done with the manufacturing equipment available. Engineering would then go back to marketing, and so forth. Several such iterations were typical, which greatly slowed the product-development process. A new process was designed around a shared data repository that allowed all of this to occur in parallel. A design could be reviewed simultaneously by all the departments during the design phase. Revisions could be incorporated as the design progressed. Manufacturability was, in a real sense, built into the design from the beginning, and overall product-development time was reduced.

### **The Power of Postponing**

An international fashion retail company, which sells its clothing through 7,000 boutiques in 120 countries, has gotten around the problem of rapidly changing fashion by using the "delayed decision" approach. Rather than manufacturing clothes from pre-dyed cloth, the company makes many items of clothing without color. Quantities of specific colors are then determined by current customer demand; as it becomes clear which colors are wanted, the company dyes items shortly before shipment. As a result, stores carrying this company's goods can use EDI to order clothes in response to changing customer tastes, and have the orders filled quickly. The problem of disposing of unsold colors is also greatly reduced.

### **Give Customers What They Want**

Often, the accurate information needed to make decisions can come late in the process, in the form of the customer's actual order. This makes it possible to give customers exactly what they want:

- A leading computer manufacturer's products consist of modules, allowing the company to hold off on building the final product and assemble modules for each customer's order.
- A company that builds stamping dies and injection molds gets its specifications direct from the customer via the Internet.

- A book publisher's processes allow it to offer custom textbooks. Customers specify what they want, and the publisher reconfigures chapters, includes articles from various sources, and produces books in runs as small as 25 pieces—all within a week.

### When to Decide

Key process decisions (what to make, ship, order, etc.) can be made at several points in a process. In general, making decisions later in a process can increase flexibility of the outcome while making decisions earlier in a process can improve efficiency of the outcome. When do you decide earlier and when do you decide later? It depends on when reliable information is available for decision making. A company that anticipates customer tastes or needs incorrectly may well wind up manufacturing and selling products no one wants.

### Relocate (Where)

- This heuristic focuses on the question of where work is done; it is about location, distance, and physical infrastructure. The idea is to minimize distance and maximize communication between the people involved in a process, thereby reducing the costs associated with travel time, handoffs, late error detection, rework, and quality problems. There are several key points to bear in mind when thinking about the location of work:
- Where work happens is changing. In the past, work tended to be associated with a fixed and permanent location—the plant or the office. However, as we move from the industrial age into a knowledge economy, the primacy of physical assets is fading. Work is less physical and tangible, and more intellectual and portable, so where work happens is no longer a given. That opens up numerous possibilities for process innovation.
- Organizations are becoming more permeable. In the past, work on a company's premises was done by employees only. As organizations ask where it makes the most sense to do the work, they are relaxing these once-strict boundaries. Today's more permeable organizations may have customers, suppliers, or temporary workers maintain an on-site presence.
- Virtual organizations are increasingly common. Technology allows work to be done remotely. Today, workers telecommute from home, a software package turns lights and heating, ventilation and air conditioning systems on and off remotely in multiple office buildings, and radiologists can immediately read X-rays in offices far from the hospital where the images were taken. The number of virtual organizations is growing rapidly, driven by lower costs, higher quality of resources, and often higher satisfaction levels of people who can work flexibly across locations.
- New work requires new facilities. A change in the nature of work often requires a change in physical infrastructure. Many innovative processes rely on teamwork for proper execution. This in turn drives a need for plant or office facilities that enable fast-cycle communications and high levels of interaction—shared spaces, shared access to information, and “generic” space that can be used by any member of a constantly changing team. This requires floor plans that are radically different from the usual office with its warren of private offices and cubicles. The payoff is faster processes, fewer errors, and problems that are caught earlier in the cycle because team members are all involved right from the beginning of the activity.

- Just say no to travel. Since travel time is non-value-added time—whether it is a professional flying from city to city for meetings or a worker moving a long distance to the next station on an assembly line—look for ways to design travel time out of the process.

### **Relocate Examples**

#### *How can the Activity be Moved Closer to the Customer or Supplier to Improve Effectiveness?*

At a motor manufacturing plant, major suppliers will assemble components right in the plant, and then fasten those components to new trucks and buses. This will enable high-quality, accurate just-in-time delivery, and the coordination of cost-cutting initiatives.

#### *How can the Activity be Moved Closer to Related Activities to Improve Communication?*

A multimedia publisher, reengineered its product-development process for CD-ROM titles, changing from a fragmented and lengthy sequence of activities to an integrated process that relies on “title development” teams (a title is a particular CD-ROM product). Each team has complete responsibility for a title. This approach is supported by the design of the company's new headquarters. The previous building featured individual offices clustered into departments, but the new space is predicated on the notion that most people will spend their time either working on a title development team or advancing their skills in a discipline-oriented centre of excellence. Therefore, the facility emphasizes moveable workstations organized around shared team space, which accommodates the frequent movement of employees into and out of teams.

#### *How can We Decrease Cycle Time by Reducing Travel Time and Distance?*

A computer company used to ship monitors, keyboards, and modems from suppliers across the United States to its headquarters in Omaha, Nebraska. There, the components were packaged with central processing units and shipped to customers—all of which meant that some parts were crisscrossing the country before final delivery. Now, a logistics company picks up components from manufacturers and CPUs from the computer company, packages them at four regional centers that are closer to end customers, and delivers them. Parts make fewer trips overall, making the process more efficient.

#### *How can Geographically Virtual Organizations be Created?*

An advertising agency has totally reinvented its key offices to better support rapid development and delivery of ad campaigns. Private offices have been replaced by unassigned cubicles, each equipped with a Macintosh computer, table, and chair. Anyone can sit down at a free carrel and work. Project rooms house all the files and materials pertaining to a given customer. Computers are ubiquitous, and no worker is more than 12 feet from a network connection that provides access to e-mail and remote files. All employees have virtual telephone extensions, so that they can be reached anywhere there is a phone.

This question can be applied to distance and communication between companies and their customers, as well. For example, in the United States, many banking institutions have moved into PC-based and phone-based banking, and even supermarket banking—through branches in grocery stores, thereby “bringing the bank to the customer.”

#### *Why Bring Them Together?*

In a manufacturing environment, traditional workspace design often leads to excessive work in progress (WIP)—that is, partially completed products or paperwork that must be moved between operations or sub-processes. Ideally, the amount of WIP should be close to none, with products and pieces flowing smoothly and

immediately from one station to the next, or even being completed at a single, multipurpose workstation. When process performers are widely separated and out of touch with one another:

- Errors and delays increase.
- Workers are less productive, because they have to spend time moving from one position to another.
- Handling costs and cycle times increase.
- The number of supervisory and technical specialists tends to increase.
- Inventory investment increases because excess space is often filled with WIP.

### Reduce (How Much)

This heuristic is about frequencies, volumes, resources, information and quality levels, and determining how much of each is really necessary and appropriate. In spite of its name, the Reduce heuristic encourages designers to explore what kind of process improvements are possible if the frequency of activities varies up or down. Depending on the process outcomes desired, either direction may be the way to go. There are several key points to bear in mind when thinking about “how much”:

- Change the frequency of activities

Essentially, leave the activities the same, but consider changing the frequency with which they are performed. The classic example of this is meter reading by utilities. Rather than read the meter every month to create a bill for actual usage, they read less frequently, and estimate usage. They then reconcile any differences at the end of the year. This saves time and cost, and accomplishes the same objective.

- Vary the amount and type of information captured

Consider the amount of information gathered and used in the course of performing a process. Along with doing things, people also typically report on the things they do. It is not uncommon for companies to be drowning in data, but thirsting for information they can act on. Sometimes, changing the amount of information tracked—again, either more or less—can make a huge difference in the efficiency or effectiveness of a process.

- Make the most of critical resources

Scarce and expensive resources need to be utilized properly. In a hospital, for example, that may mean ensuring that doctors focus more time on diagnosis and treatment of patients, rather than chasing down misplaced charts or prepping examination rooms. In a manufacturing plant, it may mean finding ways to ensure that an expensive piece of equipment has a high utilization rate.

### Reduce Examples

#### *How can the Frequency of the Activity be Reduced or Increased?*

In order to send monthly bills to corporate customers for the use of its photocopiers, the company in question sent meter-read cards to customers and asked them to read the meter, record the count and mail in the results each month. Asking how to improve this process led the company to consider automating these meter readings, which would have required a fairly expensive networking arrangement. Asking how much, however, led to a simpler solution. The company realized it did not need to read actual figures every month—that it

could bill a flat rate on a monthly basis and, based on an actual meter read performed when technicians did annual routine maintenance, send an annual adjustment bill to customers.

*How can Critical Resources be Used More Effectively?*

Manufacturers have learned that instead of sending a delivery truck out full and back empty, they can make or save money on the return leg by carrying cargo for other companies.

When a golf course has too many players at once, it can take a parallel approach and “double tee” customers—start one group at the first hole, and simultaneously start another group at the 10th hole.

*How Would Less Information or Fewer Controls Simplify and Improve Efficiency?*

A hospital was tracking the usage of low-cost supplies, such as bandages and tape, in great detail and sending patients itemized bills. However, because this cost varied little from one patient to the next, the hospital found it more effective to simply bill a flat per-room charge based on average usage of those items. The organization realized that the extensive effort that went into tracking a high level of detail provided little payoff.

A major entertainment company required approvals for all expenditures over \$500. That delayed production schedules as production assistants tried to track down busy executives for relatively minor expenses. The company raised the limit to \$5,000. This eliminated the vast majority of approvals and sped up the production schedule. Budget reports could easily flag any unfavourable trends in expenses.

*How Would More Information Enable Greater Effectiveness?*

A large insurance company realized that by collecting slightly more data from customers, it could better assess risk levels, and therefore more accurately price insurance.

A major greeting-card manufacturer originally tracked cards sold by category (birthday, Christmas, etc.). But it did not know which individual cards sold well or poorly, causing build-ups of unsold stock. It installed sophisticated point-of-sale devices at 250 key stores that captured sales information down to the individual card level. By analyzing the sales of new cards prior to releasing them to 22,000 stores, the company was able to eliminate the poor sellers early, thereby avoiding the costs of unsold cards.

*What is a Critical Resource?*

Understand which resources are most critical to process success and find ways to make the most of them. Example: in delivering primary health care, a doctor’s time is the most scarce and costly resource. Health-care organizations seek to maximize the doctor’s time with patients, as opposed to doing administrative activities. In a company’s Order Fulfilment process, making the most of critical resources may include keeping the plant running and keeping trucks full both outbound and inbound. In delivering excellent customer service, the most critical resource may be keeping the customer database up-to-date and accurate.

*What makes a resource critical?*

- The process cannot operate without it.
- It is a high-cost item (either fixed or variable).
- It differentiates the company from competitors and drives competitive advantage in the marketplace.

## Retool (How)

This heuristic is about how work is accomplished—the technologies, human capital, and competencies that enable organizations to do work. Few truly innovative processes are created without extensive introduction of new technology and skills to an organization. There are several key points to bear in mind when thinking about this dimension:

- Technology can transform processes. Organizations need to think beyond automation when it comes to using technology. Automation may be a sensible move, but it is unlikely to create competitive advantage. The real payoff of technology lies in its power to transform. Not long ago, the use of handheld computers in rental-car return lots was a novelty; now the speed, convenience, and accuracy that the technology brings has created a new standard in the industry. That is the kind of technology-related transformation that process designers should seek—but they should also be wary of pursuing “technology for technology’s sake.” Focus on the process outcome that is desired, and find the technology that enables that.
- Re-skilled human resources can be hard to beat. Think beyond the capabilities of current human resources in designing new processes. Depending on the outcomes desired, employees may need more skills, fewer skills, or just different skills to be effective at performing a new process. Organizations are simply wearing blinders when they insist that a new process must match the current skill levels of employees. Balance the costs of re-skilling against expected benefits of the new process, and expect that some employees will thrive in a new process, and others will not. Re-skilling can be a daunting prospect, but it is one of the hardest things for competitors to match.
- Know the organizational strengths and use them creatively. Understand existing organizational competencies and consider using them in new ways. When a company has a world-class process, or underutilized resources, the best opportunity may lie in extending a process, assets, or capabilities into new areas of the market.

### Retool Examples

#### *How can Technology Transform the Process?*

In the search for innovation, processes and technology go hand in hand. Technology inspires ideas for new processes, while new processes drive the shape of technology.

A car rental company initiated a program that eliminates the time-consuming sign-up process. A member’s billing information is captured once and encoded on a “smart” credit card. That customer can then go directly to the rental lot, choose a car, and check out using the card at the exit booth.

A window manufacturer and installer established a kiosk. Using the kiosk, customers can enter their home floor plan into the system and try out standard window options, or even design their own custom windows. The system tells them what can and cannot be built. When customers have decided what they want, the system automatically generates a parts list and price, and places the order. Increasingly, such applications are being integrated with the Internet and home PCs, moving them even closer to the customer.

A company has been established to work with retail grocers to let customers shop for groceries online. Customers simply use their home PCs to submit a list of groceries, and the new company handles the actual shopping and delivery. This process saves time for customers and lets them shop when it is most convenient. The system also helps the customer by proposing reduced-price alternatives and offering coupons.

*How can the Activity be Automated?*

The U.S. Internal Revenue Service has found the error rate on electronic filings to be just 1.3%, as opposed to approximately 15% for paper forms. Electronic filers generally receive refunds within two to three weeks, compared with a four- to six-week wait for paper filers.

Beware, however: automating an existing process may just accelerate a process that is fundamentally flawed.

*How can Assets or Competencies be Leveraged to Create Competitive Advantage?*

A natural gas company faced increased competition due to deregulation. Executives realized that the right-of-ways used for their pipelines were a tremendous asset—in telecommunications, that is. They used the right-of-ways for fiber-optic cable, created a new company name, and quickly entered a new industry.

*How can Up-Skilling, Down-Skilling, or Multi-Skilling Improve the Process?*

An increase in employees' skill levels can enable each individual to handle a wider range of integrated activities, thereby reducing the need for handoffs. A major health organization considered putting highly skilled personnel on the phone instead of less-skilled health professionals, so that the organization could handle a wider array of patient questions over the phone—rather than in the doctor's office.

At times, lower skill levels may be more cost-effective. When dispersed customer-service specialists are replaced by centralized call centers, the call-center employees will not normally need as wide a range of skills as their predecessors. However, because they are supported by customer and product information via computer, they will typically provide more consistent and cost-effective service.

*Custom Build or Buy?*

As a rule, use packaged software for tactical processes and custom applications for strategic processes. Custom software lends itself to strategic processes in which flexibility is more important than fast implementation. Packaged software lends itself to tactical processes requiring less flexibility and to situations where getting the system quickly installed and operational is more important.

**Tools that Reshape Processes**

There is a wealth of technologies that can totally reshape the way work gets done—and more are appearing every day. Process designers need to stay close to their technologist colleagues to track the latest developments.

Here are just a few:

- The Internet and the World Wide Web provide a kind of “universal connectivity” that has led to new marketing approaches, delivery channels, disintermediation, hyper-intermediation, direct interactive links between manufacturers and consumers, collaboration across distances, and, of course, electronic commerce.
- Intranets use Web pages to share graphical information with a company's internal audiences; extranets use Web pages to share internal company information with customers and suppliers.

- Network computing overcomes the limits of geography, allowing the organization to coordinate processes and work across regions and borders. Customers and suppliers can also be tied into the company's network for increased efficiency.
- EDI allows suppliers and customers to exchange business information—such as purchase orders, shipping documents, invoices, and payments—electronically and without human intervention. The technology makes it possible to forge closer links with organizations up and down the supply chain, and respond more quickly to changing customer tastes. When integrated with a company's internal systems, it can also pave the way to taking tasks out of processes. (Traditionally done over private value-added Networks, EDI is gradually migrating to the Internet, as security on that more universal network improves.)
- Shared databases allow business partners to eliminate transaction-oriented activities between organizations because both partners are working with the same real-time information.
- Data warehousing allows companies to gather and manage huge volumes of data to get a highly detailed view of customers' tastes and segments. It has the potential to provide powerful new sources of feedback to processes, especially in the area of mass customization.

### **Technology Tips and Traps**

- Ensure that the use of technology improves value delivered to the customer. If it does not, is it worthwhile?
  - Keep an eye on the original process vision, and use technology to enable that vision. Process design should be enabled by technology, not driven by it. Watch for warning signs that technology is becoming too dominant a factor, such as automating the way things are done today or accelerating existing process flows.
  - Design new processes and new technology solutions in tandem. Start exploring technology options early in the process design.
  - Do not make the mistake of spending lots of time designing a process, only to discover too late that no technology can support the design.
    1. Recognize the inhibiting side of technology—early. Just as technology can inspire process designs, it can also present barriers to change. Ask questions such as:
      2. Is the technology viable?
      3. Will extensive user training be required?
      4. How much lead time is needed to develop the systems?
      5. Does the organization have the IT skills needed to create and maintain the system?
      6. If the platform is nonstandard, are the benefits worth the costs this will entail?
      7. Is the system flexible enough to change as the process changes?
  - The process design initiative should be owned by operations specialists rather than information specialists. Combine process and technology design teams, so that both disciplines are included in an integrated approach.
-

- Do not focus on one technology. There is a tendency to devote energy and resources to the latest-and-greatest technology, which excludes other potentially valuable technologies. An emphasis on the latest technology can also cause the project team to lose sight of the strategic business objectives.

### Future State Process Maps

Sometimes the project team will introduce significant change alternatives using scenarios, based on the analysis of the reengineering activities. To document and communicate the scenarios, process maps are employed, creating a picture of the ultimate future state. What improvement levers are being added and what will their impact be on the processes? What non-value-added waste is being eliminated? How is the voice of the customer impacting the new process? What is the ultimate benefit the design can provide the client? These are questions the future state process maps should attempt to answer.

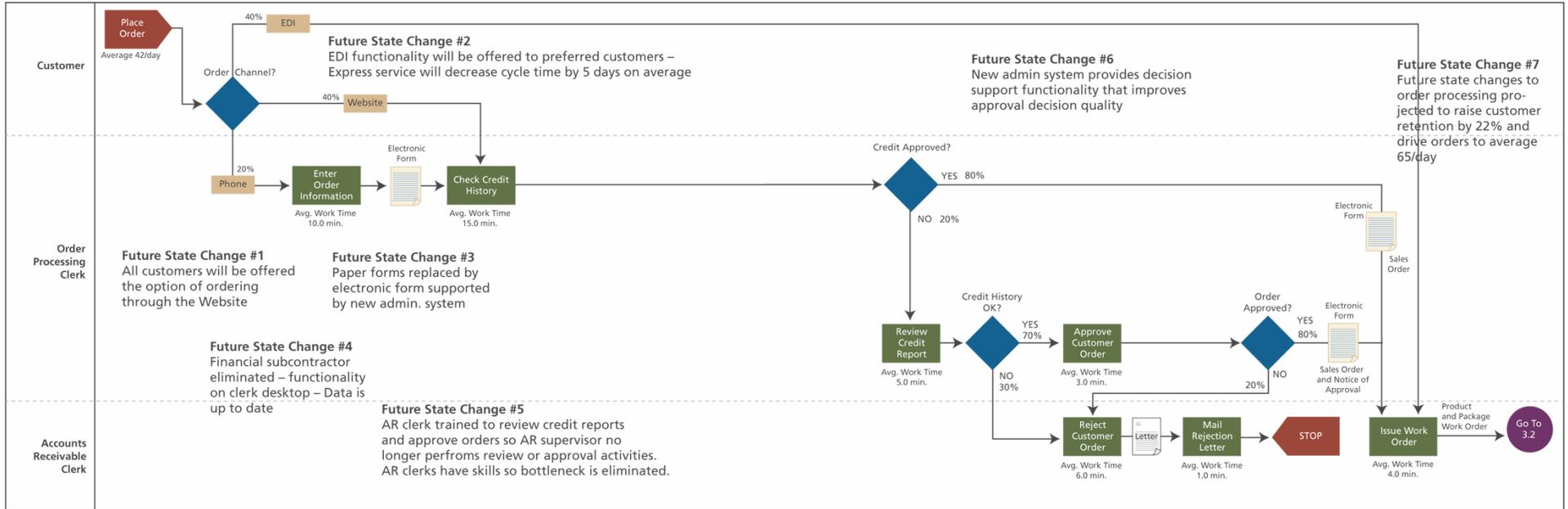
The resulting process maps are very different. The project team might create a set of process maps like these examples. The notes on the maps describe and explain the design changes made. (Figures 9 – 13)

**Process:** Process Order  
**Version:** 1.0 (Inhibitor notes added in Workshop)

**Condition:** Future State  
**Version date:** 1/3/03

**View:** Workgroup

**Figure 9 Process Order**

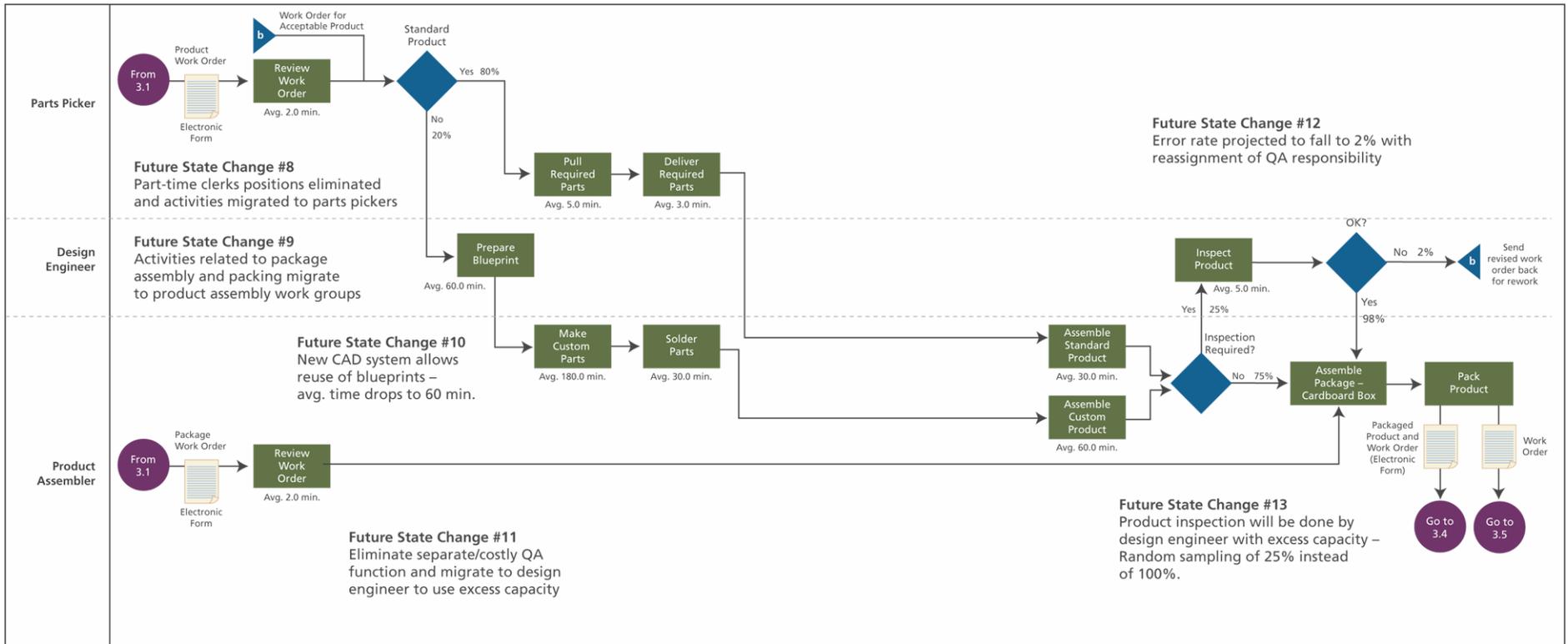


**Process:** Assemble Product and Package  
**Version:** 1.0

**Condition:** Future State  
**Version date:** 1/3/03

**View:** Work Group

**Figure 10 Assemble Product and Package**



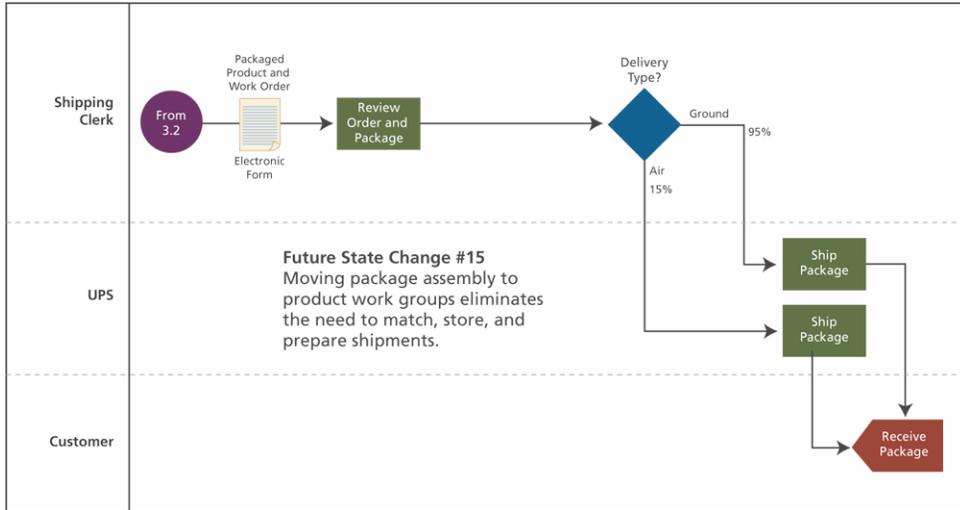


**Process:** Prepare Shipment  
**Version:** 1.0

**Condition:** Future State  
**Version date:** 1/3/03

**View:** Work Group

**Figure 12 Prepare Shipment**

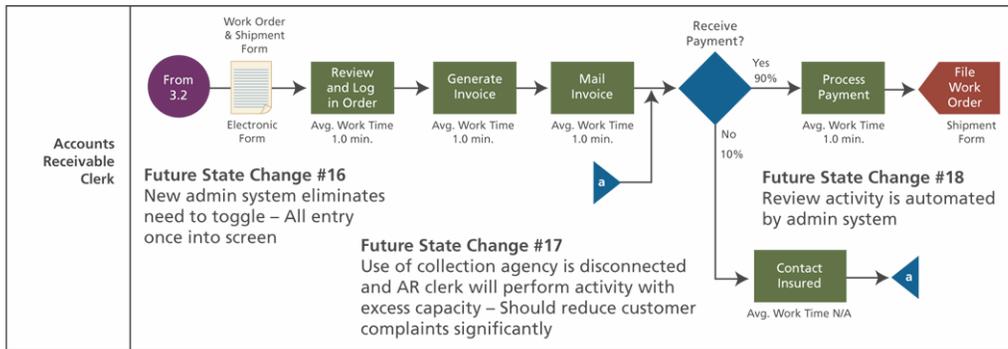


**Process:** Prepare Payment  
**Version:** 1.0

**Condition:** Future State  
**Version date:** 1/3/03

**View:** Work Group

Figure 13 Process Payment



## Day One Process Maps

The future state is done but it will not be fully implemented for at least 18 months and the client wants as much benefit as possible now. How should the project team respond?

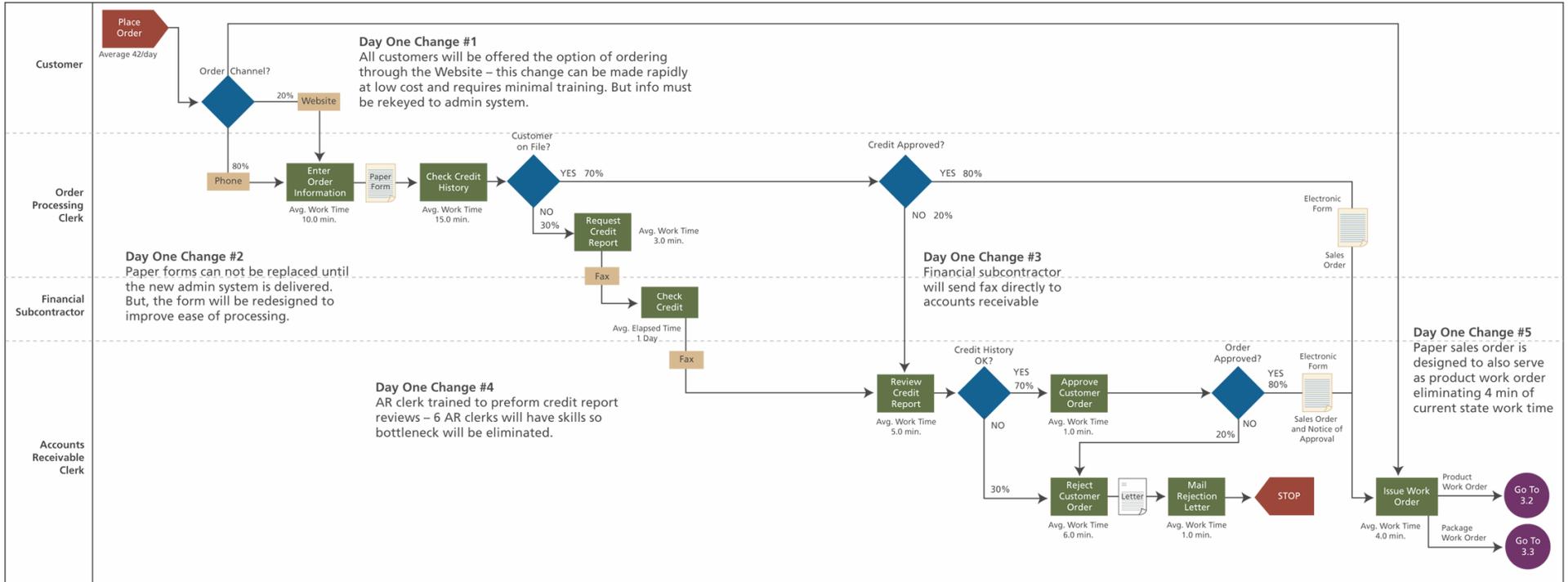
The best way is to take the current state maps and the future state maps together and create another iteration of the process design that considers the current state constraints one by one and determines whether or not any cost-effective improvement can be made in the near-term. This set of designs is often called the Day One Processes. The implementation of these processes can be initiated immediately after they are approved and can run concurrently with the development of the future state. The examples show what Day One process maps might look like using our examples. (Figures 14 – 18)

**Process:** Process Order  
**Version:** 1.0

**Condition:** Day One State  
**Version date:** 1/3/03

**View:** Work Group

**Figure 14 Process Order**

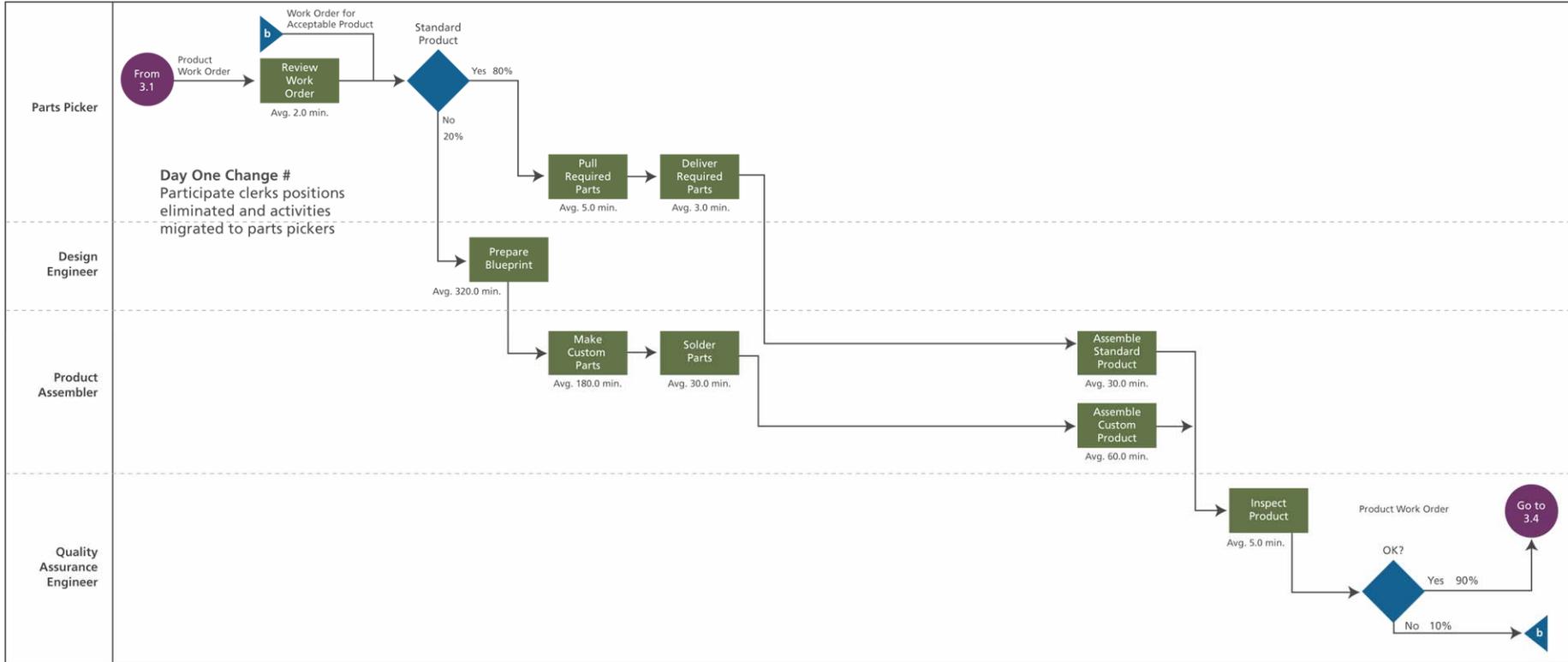


**Process:** Assemble Product  
**Version:** 1.0

**Condition:** Day One State  
**Version date:** 1/3/03

**View:** Workgroup

**Figure 15 Assemble Product**

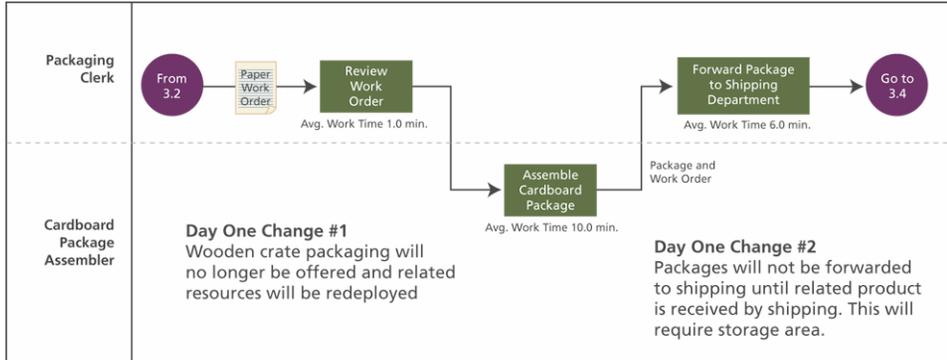


**Process:** Assemble Package  
**Version:** 1.0

**Condition:** Day One State  
**Version date:** 1/3/03

**View:** Work Group

**Figure 16 Assemble Package**

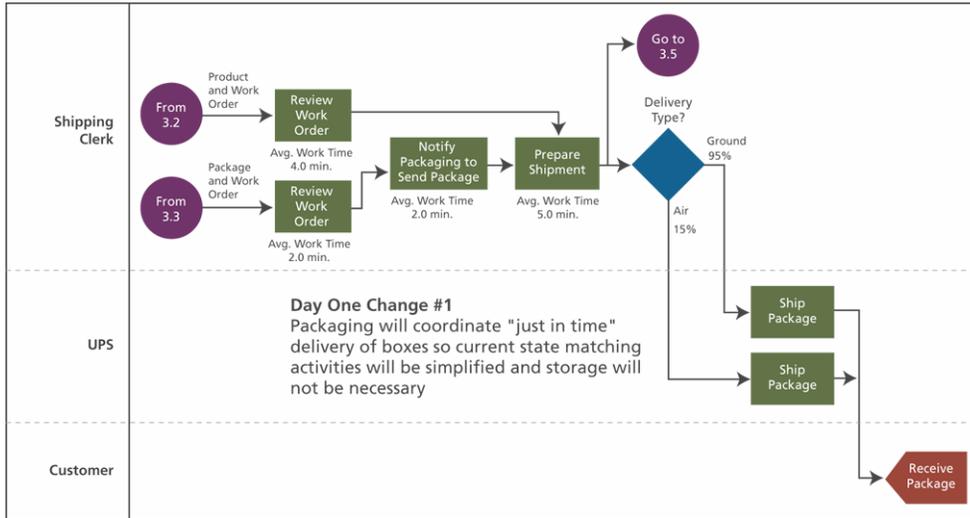


**Process:** Prepare Shipment  
**Version:** 1.0

**Condition:** Day One State  
**Version date:** 1/3/03

**View:** Work Group

**Figure 17 Prepare Shipment**

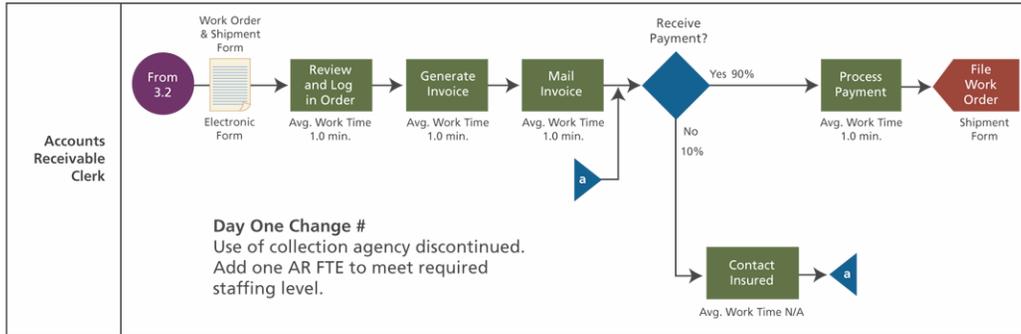


**Process:** Process Payment  
**Version:** 1.0

**Condition:** Day One State  
**Version date:** 1/3/03

**View:** Work Group

**Figure 18 Process Payment**



### **The Staffing Projection**

Only one or two jobs left to do. The client and the project team will want to know what will be required to staff both the future state processes and the day one processes. It will also be necessary to link the future state design and the business case. Tools that provide rigorous simulation functions can make this effort relatively easy. But if the project team does not have access to such things there are other ways.

### **Process Data**

The lists below describe the process data that would be included in a fully loaded process map for a business unit view, a work group view, and an individual view. Usually the project team won't require this much detail. The examples included in this section represent a more typical set of process maps. Process maps can also often include information regarding the technology and systems automating or enabling the process as well as detail around use of information and information storage. Topics related to representing technology and information entities on process maps are not covered here.

Business unit views:

- Inputs
- Triggers
- Activities by organizational unit or work group assignment
- Key decisions
- Connectors
- Outputs
- Stops

Work group views:

- Inputs
- Triggers
- Activities by position or role assignment
- Average work time by activity
- Average elapsed time by activity
- Staffing levels by activity
- Average cycle time by transaction
- Decisions
- Authority levels by position
- Percent work flow by decision alternative
- Return and rework loops

- Capacity or throughput indications
- Connectors
- Outputs
- Stops
- Costs

Individual views:

- Inputs
- Triggers
- Tasks by role or skill assignment
- Procedural rules
- Descriptive narrative
- Task prioritization
- Average work time by task
- Average elapsed time by task
- Staffing levels by task
- Average work breakdown of tasks by required work time
- Authority levels by role
- Decisions (hand-offs or transfers)
- Average productivity by task
- Average quality by task
- Work inventory, aging, variation detail
- Connectors
- Outputs
- Stops
- Costs

**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.**

ObjectBuilders is a long time FileNet ValueNet partner and has a set of Packaged Business Solutions that run over FileNet P8, Business Process Manager and Content Management products. Because these solutions are assembled instead of coded, they can be deployed rapidly, and can be quickly and easily modified to adapt to changing business requirements. The combination of this functionality with FileNet's Business Process Manager and Content Management products will give virtually limitless real-time modification of the entire business solution.

ObjectBuilders Government Mobility Solution, eLicensing, ePermitting, Disconnected Case Management and eResolve solutions are fully integrated FileNet solutions. These solutions come with templates that can be rapidly tailored, without code, to the specific requirements and processes of the Commonwealth of Virginia.

These solutions were designed to offer the ultimate in self-sufficiency to the end-users. As part of the solutions, you will have the productivity tools that non-programmers can utilize to maintain and enhance the applications, thereby driving down the total cost of ownership.

Case studies and more detailed information are available as attachments to this RFP as well as on the ObjectBuilders and IBM / FileNet websites and can also be demonstrated during the Oral phase of this RFP process.

These products were reviewed as part of the original Virginia RFP selection process when the ECM contract was awarded to FileNet.

The Software Factory is a services offering that exists to augment or support the need to scale up and down in order to meet business objectives. When offshore outsourcing is not an alternative, yet you desire the reduced costs, The Software Factory can help.

Complex custom business applications can be 100% assembled, without code.

Therefore, if you can assemble, you can manufacture, and if you can manufacture you can set up a Factory and gain all of the typical advantages of manufacturing.

- Leverage parallel processing to reduce time to market and further reduce costs
- Produce a higher quality product that is predictable and scalable
- An alternative to offshore development
- Cost is competitive with offshore – without the risk
- Most applications can be delivered in 30 to 60 days after the Specification is completed
- Utilizes industrial manufacturing techniques
- Reduces construction time and optimizes the specification process, saving time, money and headaches
- All the benefits of Agile Methodology without the risks
- Quick timeframes, visually oriented, well structured, well specified



**EXHIBIT B-X**  
**CONTRACT NUMBER VA-071114-BP**  
**BETWEEN**  
**VIRGINIA INFORMATION TECHNOLOGIES AGENCY**  
**AND**  
**BEARINGPOINT, INC.**

Exhibit B-X is hereby incorporated into and made an integral part of Contract Number VA-071114-BP (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and BearingPoint, Inc. (“Supplier”).

In the event of any discrepancy between this Exhibit B-X and Contract No. VA-071114-BP, the provisions of Contract No. VA-071114-BP 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)**

<b>Responsibility Matrix</b>	<b>Supplier</b>	<b>Authorized User</b>
Infrastructure – Preparing the system infrastructure that meets the recommended configuration defined in <b>Section 2B herein</b>		√
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-BP**  
**BETWEEN**  
**VIRGINIA INFORMATION TECHNOLOGIES AGENCY**  
**AND**  
**BEARINGPOINT, INC.**

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

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

<b>Labor Category</b>	<b>Description</b>	<b>Hourly Rate. See "Discounts" tab for discounts</b>
<b>Industry Specialist</b>	<ul style="list-style-type: none"> <li>• Capable of managing multiple strategic consulting projects simultaneously or large complex projects</li> <li>• Ability to manage at the highest level of project management</li> <li>• Advanced industry and/or technical knowledge</li> <li>• Recognized internally and externally for knowledge and specialty in field</li> <li>• Fosters environment of continuous improvement</li> </ul>	\$230
<b>Project Executive</b>	<ul style="list-style-type: none"> <li>• 13+ years of overall business experience</li> <li>• Understanding of project management methodology to be utilized</li> <li>• 10 years experience on large scale projects</li> <li>• Ability to communicate at all levels of an organization and third parties</li> <li>• Experience of similar scale roles and organizations</li> <li>• Delivery focused</li> </ul>	\$200
<b>Technology Specialist / Project Manager</b>	<ul style="list-style-type: none"> <li>• 8+ years of overall business or technical experience</li> <li>• Understanding of project management methodology to be utilized</li> <li>• 5 years experience on large scale projects</li> <li>• Ability to communicate at all levels of an organization and third parties</li> <li>• Experience of similar scale roles and organizations</li> <li>• Delivery focused</li> <li>• 5 years experience of project implementation in a consulting role</li> </ul>	\$175
<b>Team Leader</b>	<ul style="list-style-type: none"> <li>• 6-9 years of overall business experience</li> </ul>	\$150

	<ul style="list-style-type: none"> <li>• Applications being implemented</li> <li>• Management knowledge of methodology</li> <li>• Multiple projects in similar organization</li> <li>• Ability to communicate at all levels of an organization and with third parties</li> <li>• Experience of similar scale roles and organizations</li> <li>• Ability to manage issues and direct teams</li> <li>• Ability to communicate functional requirements into configuration</li> <li>• Ability to train users</li> </ul>	
<b>Senior Consultant</b>	<ul style="list-style-type: none"> <li>• 4-6 years of overall business experience</li> <li>• Applications being implemented</li> <li>• Management knowledge of methodology</li> <li>• Multiple projects in similar organization</li> <li>• Ability to communicate at all levels of an organization and third parties</li> <li>• Experience of similar scale roles and organizations</li> <li>• Ability to manage issues and direct teams</li> <li>• Ability to communicate functional requirements into configuration</li> <li>• Ability to train users</li> </ul>	\$135
<b>Consultant</b>	<ul style="list-style-type: none"> <li>• 3-5 years of overall business experience</li> <li>• Knowledge of application being implemented</li> <li>• Knowledge of methodology being adopted</li> <li>• Prior implementation experience in similar organization</li> <li>• Ability to communicate at all levels of an organization and third parties</li> <li>• Experience of similar scale roles and organizations</li> <li>• Ability to communicate functional requirements into configuration</li> <li>• Ability to train users</li> </ul>	\$100
<b>Staff / Programmer Analyst</b>	<ul style="list-style-type: none"> <li>• 0-2 years experience</li> <li>• Fully trained, prior experience with general SI skills in one or more of the following: systems design, integration, software development, interface development, testing</li> <li>• Ability to work with end users and functional consultants to translate requirements from a technical perspective</li> <li>• Experience with similar scale roles and organizations</li> <li>• Ability to translate functional and business requirements into a technical specification</li> <li>• Prior experience working with client teams</li> </ul>	\$90

<b>Administrative Support</b>	<ul style="list-style-type: none"> <li>• Microsoft Office experience</li> <li>• Version control administration experience</li> <li>• Prior experience of large project administration</li> <li>• Ability to communicate at all levels of an organization and third parties</li> <li>• Experience with similar scale roles and organizations</li> <li>• Coordination and task focused</li> </ul>	\$50
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<b>Case Study Proposed Price:</b>	<b>1,550,000.00</b>
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<b>Case Study Proposed Price Breakdown:</b>	
Fees	\$1,290,000.00
Travel estimated 10%	\$120,000.00
Contingency est. 15%	\$140,000.00
<b>Total</b>	<b>\$1,550,000.00</b>

### 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 or an 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:



Printed Name:

Don C Parr

Organization:

BEARING POINT

Date:

1/27/07