

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

# Agency IT Strategic Plan

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Agency Profile & Strategic Direction

### Agency Mission Statement:

The Virginia Institute of Marine Science (VIMS)/School of Marine Science of the College of William and Mary is charged with a tripartite mission of research, education, and advisory service. The School of Marine Science offers graduate level programs leading to the M.A. and Ph.D. degrees in Marine Science. Section 28.2-1100 of the Code of Virginia charges the Institute with performing basic and applied research related to marine resources of the Commonwealth. The Institute is also heavily involved in advisory service efforts. This activity provides support to all levels of citizens in the Commonwealth including resource management agencies, members of the legislature, and corporate and private citizens.

### Agency IT Vision Statement:

VIMS is a relatively small agency in terms of its population but the quantity, quality and complexity of the Information Technology environment that is required to support VIMS is substantial. As a world class marine research laboratory and multi-disciplinary graduate level education institution, the VIMS community IT resource requirements are very diverse.

The first requirement is a high capacity, manageable and secure campus network infrastructure that provides unhindered access to Campus resources. The campus network infrastructure must provide Quality of Service manageability to support video conferencing and Voice over IP telephones while reliably providing access to large data stores and high capacity compute engines. This network infrastructure provides access to a wide variety of network services such as E-mail, web server, data storage, data integrity, network security, applications servers. These services must be coupled with a support staff, skilled in implementing, trouble shooting and repairing hardware and software in a very heterogenous and inter-operable IT environment.

The campus network must then provide connectivity to the external networks, people and resources. VIMS requires commodity internet access, which is done through Network Virginia, and via national research networks such as Internet II and the evolving optical national networks such as National Lambda Rail or the Southern eCorridors projects. This external connectivity allows the VIMS community to provide or receive distance learning opportunities, cost effectively participate in meetings and to collaborate with professional colleagues. High bandwidth connections will allow VIMS to be a participant in evolving grid computing networks. VIMS's future participation in the SURA (Southeastern Universities Research Association) sponsored SCOOP (Southeastern Coastal Ocean Observing Program) will require access to grid computing resources.

To summarize the vision of IT for VIMS; IT is critical to the success of VIMS fulfilling its missions. The IT architecture must provide the VIMS community access to a flexible, dynamic, yet cost effective technology environment that can be implemented and managed by a small staff. The sole purpose of this environment is to allow the intellectual capital of VIMS (the talent and creativity of its people) to flourish and to share the benefits of this endeavor with mankind. Given this environment VIMS can play a substantial role in Governor Warner's desire for Virginia to reap the benefits of an increased share of research funding.

Total Employees: 450

Total IT Employees: 11

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Project Selection Criteria:

Information Technology project selection is driven by two primary forces.

First, is the resource requirements of the VIMS community. Requirements are often researched by the Information Technology and Network Services (ITNS) group to determine an adequate, and cost effective solution.

The second project selection source is ITNS determining that IT functionality needs to be added, updated, or improved. Technology evolution and cost/benefit value often dictate the project selection.

Considerable effort is spent determining how a project will fit into the VIMS IT environment. Issues such as network connectivity and long term support are evaluated. Since VIMS has a very small technical staff we must limit the capabilities and products we can support.

VIMS has a formal advisory group called the Information Technology Advisory Committee (ITAC). ITAC is comprised of representatives from several academic and administrative constituencies within VIMS that are impacted by the VIMS IT environment. ITAC is charged with providing feedback and guidance to ITNS to assure that the IT requirements of its constituents are being met in an efficient, timely, and cost effective manner.

## Business Case Development:

Since VIMS is a research facility, many of the "business cases" are defined by research requirements of the Commonwealth and research grant proposals. The principal investigator interacts with ITNS to determine the impact of their research project on existing IT resources and the need for any major additional IT resources.

ITNS develops the business case for many IT projects. The criteria used by ITNS is driven by the needs to the VIMS community and the need to manage and maintain the IT environment with a very limited staff and minimal resources to outsource support services. For instance, ITNS was approached by the Graduate Dean's office about requiring all student to purchase a laptop computer. Since marine science students require a wide range of sophisticated software packages to be productive scholars and researchers, the the laptop configuration and support requirements would be substantial with a client computer based solution. ITNS recommends that a Microsoft Terminal Server solution be adopted to minimize the laptop cost and greatly simplify the support of applications used by the students. This concept is embraced in the Critical IT Infrastructure project proposal.

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Risk Assessment Methodologies:

IT technology evolves rapidly. To be on the forefront of the use of technology some risk is assumed when choosing new technology, unknown products and unproven vendors.

There are several ways to minimize that risk. The ITNS technical staff are expected to keep abreast of technology developments in their areas of expertise.

Academic communities have traditionally work together both formally and informally to share experiences, knowledge and to "road test" new technology. For example when VIMS implemented its Distance Learning Project, we used the Videoconferencing Cookbook developed by the Video Development Initiative (ViDe) to develop the bid specifications for the project. Since the equipment has been operational VIMS has used the Internet II Commons, which is a large diverse collection of video conferencing equipment, to better understand how to "foreign" sites.

When we move into totally new technology areas, VIMS will seek out expertise within DIT or an external consultant to incorporate substantiated risk assessment into the project selection or project implementation criteria.

## Prioritization Schema:

As indicated in the project selection criteria section, IT projects are defined by ITNS, working with constituents and/or the ITAC group. VIMS has a Policy and Planning committee that assesses the priority of all projects and funding requests that are developed. Once the institutional priority of any IT projects and funding requests have been established, ITNS works with the chief financial officer to define the project and details of the funding request for submission to the Governor.

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

Core Business Activities:

Core Business Activity Title	Core Business Activity Description	Core Business Activity Sub-Function Title	Core Business Activity Sub-Function Description
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Instruction	Efforts to provide higher education instruction and related departmental research.
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Research	Efforts to provide for research that is separately budgeted or carried on in institutes or research centers.
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Academic Support	Efforts to provide higher education support services that directly support the institution's primary function of instruction, research, and public service.
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Institutional Support	Efforts to provide operational support for the day-to-day functioning of the higher education institution (excluding physical plant operations).
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Operation and Maintenance of Plant	Efforts to operate and maintain physical plant facilities at institutions of higher education (excluding self-supporting enterprises and hospitals).
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Financial Assistance for Educational and General Services	Efforts to provide resources for educational and general services through supplementing other activities within the system.

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

Key Customers Associated With Each Core Business Activity :

Core Business Activity Title	Core Business Activity Description	Core Business Activity Sub-Function Title	Core Business Activity Sub-Function Description
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Instruction	Efforts to provide higher education instruction and related departmental research.
<p>Key Customers</p> <ul style="list-style-type: none"> <li>Faculty of the School of Marine Science</li> <li>Graduate and undergraduate students within the College of William and Mary</li> </ul>			
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Research	Efforts to provide for research that is separately budgeted or carried on in institutes or research centers.
<p>Key Customers</p> <ul style="list-style-type: none"> <li>Federal agencies (e.g. National Marine Fisheries, National Science Foundation, Office of Naval Research)</li> <li>Graduate and undergraduate students within the College of William and Mary</li> <li>Industry (including fisheries, aquaculture, biotechnologies, maritime, and emerging technologies)</li> <li>International marine science community</li> <li>K-12 students, teachers and the general public.</li> <li>Local government and management agencies (e.g. General Assembly, Secretary of Natural Resources, VMRC, DEQ, CBLAD, local planning districts)</li> <li>State government and management agencies (e.g. General Assembly, Secretary of Natural Resources, VMRC, DEQ, CBLAD, local planning districts)</li> <li>The national marine science community</li> <li>VIMS faculty and scientist</li> </ul>			
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Academic Support	Efforts to provide higher education support services that directly support the institution's primary function of instruction, research, and public service.
<p>Key Customers</p> <ul style="list-style-type: none"> <li>Faculty of the School of Marine Science</li> </ul>			

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

Graduate and undergraduate students within the College of William and Mary			
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Higher Education Institutional Support	Efforts to provide operational support for the day-to-day functioning of the higher education institution (excluding physical plant operations).
<p>Key Customers</p> <p>VIMS classified and managerial staff</p>			
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Operation and Maintenance of Plant	Efforts to operate and maintain physical plant facilities at institutions of higher education (excluding self-supporting enterprises and hospitals).
<p>Key Customers</p> <p>Federal agencies (e.g. National Marine Fisheries, National Science Foundation, Office of Naval Research)</p> <p>Graduate and undergraduate students within the College of William and Mary</p> <p>Industry (including fisheries, aquaculture, biotechnologies, maritime, and emerging technologies)</p> <p>International marine science community</p> <p>K-12 students, teachers and the general public.</p> <p>Local government and management agencies (e.g. General Assembly, Secretary of Natural Resources, VMRC, DEQ, CBLAD, local planning districts)</p> <p>State government and management agencies (e.g. General Assembly, Secretary of Natural Resources, VMRC, DEQ, CBLAD, local planning districts)</p> <p>The national marine science community</p> <p>VIMS faculty and scientists</p>			
HIGHER EDUCATION	Efforts to coordinate and provide instruction, research and public service through a system of higher education institutions.	Financial Assistance for Educational and General Services	Efforts to provide resources for educational and general services through supplementing other activities within the system.
<p>Key Customers</p> <p>Federal agencies (e.g. National Marine Fisheries, National Science Foundation, Office of Naval Research)</p> <p>Graduate and undergraduate students within the College of William and Mary</p> <p>Industry (including fisheries, aquaculture, biotechnologies, maritime, and emerging technologies)</p> <p>International marine science community</p>			

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

K-12 students, teachers and the general public.

Local government and management agencies (e.g. General Assembly,  
Secretary of Natural Resources, VMRC, DEQ, CBLAD, local planning districts)

State government and management agencies (e.g. General Assembly,  
Secretary of Natural Resources, VMRC, DEQ, CBLAD, local planning districts)

The national marine science community

---

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

Key Activities and Associated Outcomes:

<u>Key Activity</u>	<u>Associated Outcome</u>
Keep academic support hardware, software and processes up to date in good working order	Students and faculty will not be wasting time making IT resources function and will therefore be much more productive scholars and researchers
Provide faculty with IT resources to be effective instructors, mentors and research advisors	Faculty recruitment and retention will be improved if resources are provided to make them productive educators
Provide scientist with leading edge technology to support research activities	VIMS will continue to produce cutting edge research results and advisory service support
Provide students with access to IT resources that enable students to be productive scholars and researchers.	Allow students to expand their learning environment through distance learning and remote collaboration using technology  Develop Marine Scientist that understand how to access and share informaton worldwide.  Develop Marine scientists that understand the tools of their disciplines how to use them to collect, manipulate, analyze and present scientic data.
Provide up to date, high performance and well maintained administrative hardware, software and business systems	Administrative and managerial staff will be very productive and be able to produce timely and accurate results
Scientific data repositories will be created	Scientific colleagues, state and federal agencies, citizens of the Commonwealth and the general public will be able to utilize these data repositories and derivative works
Seeking external grants and contracts	State of the art and adequate capacity IT resources will improve the success rate of being awarded granta and contracts
The network cable plant (utility) will be converted to fiber optic cable	The network cable plant will support high bandwidth traffic and the fiber optic cables will be not conduct lightning which destroy electronic devices such as ethernet switches, computers, etc.

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Major IT Projects

Approved for Preliminary Planning — The following project(s) scheduled for initiation in the 2004-2006 Budget Biennium is (are) approved for inclusion in your IT Strategic Plan. A project proposal must be submitted to the CIO before the project(s) will be considered for planning approval. Procurements in support of the project(s) are not approved for submission to the VITA Project Management Division (PMD) for execution until the project has been Approved for Planning by the CIO. For detailed instructions refer to the Interim Procedures for the Initiation and Approval of Major and Non-major Information Technology Projects.

<http://www.vita.virginia.gov/projects/cpm/cpmDocs/projectInitInterimProcs030903.doc>

There are no major projects approved for preliminary planning.

---

Approved for Planning — The following project(s) scheduled for initiation in the 2004-2006 Budget Biennium is (are) approved for planning. This approval constitutes authorization to undertake the planning necessary to complete a detailed project proposal and project charter for consideration by the Secretariat Oversight Committee and the CIO. Projects "Approved for Planning" must be formally approved for development by the Commonwealth IT Investment Board prior to beginning Phase 3 of the project lifecycle (Project Planning) and execution as defined in the Commonwealth Project Management Guideline. Procurements in support of developing the detailed project proposal and charter are approved for submission to the VITA Project Management Division (PMD) for execution, in accordance with PMD procedures. For detailed instructions refer to the Interim Procedures for the Initiation and Approval of Major and Non-major Information Technology Projects.

<http://www.vita.virginia.gov/projects/cpm/cpmDocs/projectInitInterimProcs030903.doc>

Project Formal Title	Planned Start Date	Planned Completion Date	Estimate At Completion
Critical IT Infrastructure Project	07/01/2004	06/30/2006	\$1,200,000

---

Active Projects — The following project(s) are(is) scheduled to continue in the 2004-2006 Budget Biennium as an Active Project. All Active Projects must be tracked on the Commonwealth Information Technology Major Projects Dashboard and are subject to monthly review by the CIO. The CIO is authorized to assess progress of all Active Projects and recommend termination of a project to the Commonwealth IT Investment Board.

There are no major projects in the active projects category.

---

Collaboration Opportunity — The following project(s) is (are) designated as a Collaboration Opportunity. Your agency should consult with the other agencies listed on the corresponding collaboration report and evaluate whether collaboration between agencies on these projects is feasible. The results of your collaboration efforts and evaluation should be reported when the project is presented to the Commonwealth IT Investment Board for "Development Approval".

### Infrastructure Security

---

Projects associated with securing technology infrastructure are to work with the VITA Security Division.

Critical IT Infrastructure Project

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Major IT Procurements

Approved Major IT Procurements - The following major procurements are approved for submission to the VITA Project Management Division (PMD) for execution in accordance with PMD procedures.

There are no approved major procurements.

---

Disapproved Major IT Procurements - The following major procurements are not approved for submission to the VITA Project Management Division (PMD). The agency should not take any action on the major procurements listed below.

There are no disapproved major procurements.

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Non-major IT Projects

Approved for Planning— The following project(s) scheduled for initiation in the 2004-2006 Budget Biennium is (are) approved for planning. This approval constitutes authorization to undertake the planning necessary to complete a detailed project proposal and project charter for consideration by the CIO. Projects "Approved for Planning" must be formally approved for development by the CIO prior to beginning Phase 3 of the project lifecycle (Project Planning) and execution as defined in the Commonwealth Project Management Guideline. Procurements in support of developing the detailed project proposal and charter are approved for submission to the VITA Project Management Division (PMD) for execution, in accordance with PMD procedures. For detailed instructions refer to the Interim Procedures for the Initiation and Approval of Major and Non-major Information Technology Projects.

<http://www.vita.virginia.gov/projects/cpm/cpmDocs/projectInitInterimProcs030903.doc>

There are no non-major projects approved for planning.

# Agency IT Strategic Plan

Secretariat: Education

Agency Code: 268

Agency: Virginia Institute of Marine Science

---

## Non-major IT Procurements

Approved Non-major IT Procurements - The following non-major procurements are approved for submission to the VITA Project Management Division (PMD) for execution in accordance with PMD procedures.

There are no approved non-major procurements.

---

Disapproved Non-major IT Procurements - The following non-major procurements are not approved for submission to the VITA Project Management Division (PMD). The agency should not take any action on the major procurements listed below.

There are no disapproved non-major procurements.