Section 4

Plan To Meet Identified Needs

Land Use, Acquisition, Divestiture Plans

The College's number 9 priority in the 2001 Master Plan was to acquire land to satisfy the growth at the LaPlata Campus. The LaPlata campus has less than five buildable acres. The solution envisioned in 2001 of acquiring additional land near the campus no longer satisfies the needs of a regional college. In large part this is due to the forty- four percent increase in enrollment and the corresponding need for advanced programs to satisfy current and future technological needs. Not only is LaPlata lacking in acreage, but a similar condition will exist at the Prince Frederick (75 acres) and Leonardtown (62 acres) campuses unless each academic offering is evaluated for facility impact both at the campus level and college-wide.

A good example is the demand for offerings in the health care field. Programs in this field are costly due to the sophistication of equipment and the amount of space required. This would lead to the obvious conclusion that it would be unaffordable to duplicate health training facilities on all three campuses. The alternative is to locate them on one campus, but this would create an unfair burden on students at the other campuses since the distance between each is forty miles or more. The best solution is not to seek land adjacent to the LaPlata Campus, but to acquire a parcel central to all three campuses.

A centralized facility would allow the college to expand health care offerings. This is extremely important since employment opportunities in this field are growing at a rapid pace. Health care needs and health education over the next decade will change dramatically. The increased demand for services due to the aging population coupled with the concurrent aging of both the health care workforce and health educators will result in a significant mismatch between the supply and demand of skilled workers. The Maryland Hospital Association and the Governor's Workforce Investment Board both site the looming shortage of qualified professionals in the health care industry as a critical problem. The nursing and allied health vacancy rate is anticipated to reach 40% by 2020, resulting in a need for over 16,000 allied health and nursing professionals.

While the shortage of nurses in Maryland is well documented, other healthcare professions are also experiencing deficits. Rehabilitation professionals, particularly, are noted to be in short supply in community based healthcare settings. As a result, several professions are expected to experience substantial growth at the assistant and technician levels. The employment of speech language pathology assistants, occupational therapist assistants, and physical therapist assistants is expected to increase as the collaborative relationship between the assistant and the therapist allows for greater individual access to health care.

Land Use, Acquisition, Divestiture Plans

With the allocation of adequate resources, the Health Sciences Division at CSM is positioned to become the primary supplier of the health care workforce in southern Maryland. Areas of Calvert, Charles, and St Mary's counties currently hold federal medically underserved designations; therefore access to adequate health care resources will have a substantial impact on these populations.

The Health Sciences division programs cannot expand beyond their current capacity and the division cannot add any new programs without significant additional resources. Each health area will need significant storage space for unique supplies and equipment and specialized space for laboratory practice. Much of the specialized equipment needed for these programs will need to be installed on a permanent basis. This equipment is expensive, bulky, and in many instances specially calibrated, making dismantling of equipment and sharing of space extremely difficult.

A modern centralized health training facility would allow the college to expand and/or add the following programs:

Massage Therapy

Health Information Technology

Surgical Technology

Diagnostic Medical Sonography/Radiology

Dental Hygiene

Physical Therapist Assistant

Respiratory Therapy

Occupational Therapist Assistant

Speech Language Pathology Therapist Assistant

Nursing Program

Allocation of physical resources for the health sciences programs will contribute to improved health care career preparedness and opportunities for career change and mobility. In addition, the division will be in a position to promote use of innovative technology and best practices in health care education. The result will be the development of a sustainable supply of qualified people entering health care fields in southern Maryland.

Land Use, Acquisition, Divestiture Plans

As with Health Technology, other programs would benefit from this centralized approach. For example:

- The Center for Trades & Energy that is temporarily located in a leased facility in Waldorf Maryland. This program will supply hundreds of trained technicians to the area. All three counties have similar needs and would benefit from this training program.

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- Field based athletic facilities currently located at the LaPlata Campus should be in a central location to benefit all students without costly duplication of facilities.

- The college's 2005 Master Plan Update listed the LaPlata Campus Fine Arts Center as the number 6 priority. Due to its age and condition the facility requires a major renovation or replacement. In addition, the Phase II Project for the Prince Frederick Campus included a Fine Arts Center. Unfortunately this was put on hold due to other academic needs. Prior to planning and designing either of these projects the college should study the benefits of constructing a centralized facility to serve all three campuses.

Capital Projects In Progress

LaPlata Campus –

Renovation/Expansion BU & CE Buildings –

The BU Building started construction in December 2010 and is scheduled to be completed by March 2012. This is the first phase of a two phase project. The BU & CE Buildings have been completely redesigned from small inefficient one story structures to modern multi-story academic buildings. The BU design is complete and the building is in the construction phase. Once completed the BU Building will provide seven classrooms, four computer laboratories, and a centralized facility for the Division of Financial & Administrative Services.

The CE design is in the Design Development phase. The design is scheduled for completion in the spring 2011. The CE will remain in service until the BU construction phase is complete. Once completed, the CE Building will provide classrooms, computer laboratories, offices and conference rooms.

Leonardtown Campus –

Wellness & Aquatics Center -

This project is complete and opened September 2010. The center houses a fitness center, two wellness rooms, a therapy pool, a competition pool with an associated viewing area, and offices.

Prince Frederick Campus –

Phase II of Campus Development - is in the final design phase with construction planned for the 1st half of 2011.

The Phase II building will be the second structure at the Prince Frederick Campus. It will house classrooms, computer laboratories, faculty and staff offices, a large multi-purpose meeting space and laboratory and classroom space for the Nuclear Engineering Training program. The project includes 150 additional parking spaces. The building will be designed with a Silver Rating on the US Green Building Council Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

Projects Proposed in the FY2013 – FY2018 Planning Cycle

Central Location

Due to the many reasons outlined previously in this section, the college's major effort during this planning cycle will be the purchase and development of a central site. The primary goal is to extend specialized educational opportunities to students at all campuses at an affordable cost. This is extremely important for students interested in employment in the health and construction fields.

Off Campus Property Development – To satisfy a long standing need to expand the acreage at the LaPlata campus the college's 1st priority is to acquire and develop a new site. The major change in planning is to centralize the location between the three campuses. This effort is paramount to the expansion and development of key programs without expensive duplication at all campuses.

Center for Trades & Energy Training – This program is currently housed in a leased facility in Waldorf Maryland. Due to its location student accessibility is very limited. The new facility will be a design/build structure and/or a prefabricated building located at the central site. Once completed, the college will be able to expand its offerings.

Health Care Training Facility – Planning is in progress for the expansion of existing programs and the development of other health programs. The new facility will be designed to provide both classroom and clinical training.

Physical Education Facilities – The field based activities currently located at the LaPlata Campus will be transferred to the new site. This will provide the LaPlata Campus additional buildable acreage.

Fine Arts Center – Construction of a facility at this location will eliminate the need for a major renovation at the LaPlata Campus and the development of similar facilities at the other campuses.

Projects Proposed in the FY2013 – FY2018 Planning Cycle

Prince Frederick Campus

Based on enrollment projections the campus will require a third building to satisfy student growth. It is anticipated that the campus will ultimately require seven buildings.

College-wide

During the ten year planning cycle the college will need to upgrade the college telecomm, PBX, and security systems. The justification and requirements for this project are detailed in the College Technology Plan on the following pages.

LaPlata Campus

Two major projects will be required to address the deficiencies in the CBI and Bookstore Buildings.

Leonardtown Campus

The final project within the 10-year planning cycle will be the construction of an additional building to address future growth.

College Technology Plan 2011-2013 - Executive Summary

I. The Vision: Technology That Enables Learning and Institutional Success

The purpose of the College Technology Plan is to identify college technology requirements in the context of our mission, strategic initiatives, and strategic objectives. The College Technology Council develops the plan.

The College Technology Plan is based on the premise that cost effective use of information technology is best achieved when all units of the college share a common vision of how the college should use technology, teach with technology, support technology, and learn with technology.

II. Requirements

A. Defining Requirements

The College Technology Council (CTC) coordinates and reviews long term technology plans and yearly budget priorities including cost estimates established by the Information Technology Services, and the Distance Learning and Faculty Development Division to ensure that the college long-term and short-term technology needs are met. In late summer and fall 2010, the CTC gathered requests from stakeholders at all campuses for their ideas—their vision, plans for innovation, and direction—for the College Technology Plan.

B. Across the Institution

The current baseline technology environment is largely a reflection of the institution-wide infrastructure requirements. Many of these requirements were documented in an Information Technology strategic planning effort that culminated in 2009 that included network and telecommunications infrastructure for the next three to five years for voice, data, and video communication services.

- One of the most striking features of the stakeholder interviews was the number and scope of new initiatives, programs, and projects across the institution.
- These and other new initiatives, programs, and projects drive several top-level requirements for the college-wide technology environment.

Agile: Review of the stakeholder interviews and an analysis of the numerous initiatives, programs, and projects provide strong evidence that our technology environment must be agile. The college must be able to quickly and easily build or add new features and functionality into the technology environment without having to expend large amounts of human or financial capital.

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Robust and Stable: Our technology environment must also be robust (i.e., sturdy) and stable. Our application systems (e.g.. Colleague, Blackboard, ImageNow, and others) require an environment that is stable and consistent if they are to be reliable. The environment must also be robust to meet user requirements for availability and reliability of network based applications and services

Supportable and Cost Effective: Our technology environment must be supportable and cost effective.

Connectivity and Bandwidth: The requirement to provide reliable connectivity between and within our campuses and to the larger world is driven by the need to insure that the new College of Southern Maryland is seen and functions as a unified, seamless organization. When coupled with the bandwidth intensive applications of many of the college's new initiatives, programs, and projects, the net result is an urgent requirement to increase bandwidth at both the LAN, WAN, and Internet levels.

C. Major Initiatives

A number of new initiatives, programs, and projects are underway. Several of these affect most, if not all, of the college and its customers and are also very technology intensive.

***Capital Projects (10 year Master Plan)* –** It has been determined by the College Technology Council (CTC) and the Information Technology Services Department that the existing infrastructure is aging for the College's long-term and short-term technology needs. In particular, there are significant variations in the infrastructure resulting in dissimilar performance and reliability levels at our various locations. Bandwidth performance is not consistent throughout the college.

Network Security and Intrusion detection – Separation of networks between the academic, administrative and financial computing groups have been recommended through an external security audit security firm in the fall of 2010. To enhance the network security the college needs an intrusion detection system. An IDS is a device and/or software application that monitors network and/or system activities for malicious activities or policy violations and produces reports to a management station. Intrusion detection and prevention systems are primarily focused on identifying possible incidents, logging information about them, attempting to stop them, and reporting them to security administrators.

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Phone System (PBX) - The current phone systems are at or near end of life and could cause down time and limit growth and expansion for the College. Upgrading phone systems is difficult in small increments. When they reach their end of life then need to be replaced at one time and system-wide location by location.

Network Server Room – La Plata's server rooms were never designed to support the volume of equipment that is presently located in the two rooms in separate buildings. The conduit system is nearly at capacity and the physical space has been exhausted. A new computer room needs to be designed and built with security and disaster avoidance in mind. In order to accomplish this, a single raised floor environment should be selected for consolidating and upgrading the main server room.

Teleconferencing Facilities – The College has extensively used video teleconferencing on all campuses to offer academic programs. In addition, the college has tried to limit cross campus travel by the use of teleconferencing technologies. All campuses need a dedicated teleconference room which has been designed for this purpose which is capable of seating a minimum of 12 people.

Generators – In Southern Maryland we experience extended periods of power loss. We have had to close the campus because of the lack of power to elevators and emergency lighting. We have 7 buildings that are without a generator.

Availability of services – CSM needs to be planning for the rapid growth of bandwidth requirements. With the profusion of network access for voice, video, teleconference, and course requirements bandwidth will increasingly be a bottleneck for both academic and administrative uses. Additionally the college needs to ensure that there is redundancy built into all new or expanding facilities. The core systems are centrally located at La Plata and the connectivity is needed to ensure proper services of key systems.

Card Access System – Four years ago the college began using a photo ID card for students and staff. The card is imprinted with a bar code of the holders college ID number and a magnetic strip which can be used for other information (sometimes called a OneCard solution). Presently the card is used just to identify a person in areas such as the testing center and in the library when checking out books. Newer cards can be encoded with additional information which could be used for many other purposes if the IT infrastructure is built.

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Among the areas where the card could be used to provide more efficiency in operations are:

I. Campus Life: A OneCard ID could be used in areas, vending machines to make purchase easier without the need for cash. At activities and events the OneCard can be used to monitor attendance, used for tracking use in fitness centers and at events for cash free ticket sales.

II. Academic Support In the bookstore purchases could be mad eliminating fees associated with traditional charge cards. In the library and computer labs the OneCard can be used check out books, monitor lab usage and grant different access privileges based on type of customer. The card can also be used to charge back printing costs. The card can also be used to track student use of services such as tutoring and advisement. This data could be used to improve services that lead to student success.

III. Payments Vendors offer services to manage payments, award financial aid, and credit card processing using the One card accounts.

IV. Access and Security The OneCard can be used with electronic locks to limit access to facilities. Locks can also be set to lock and unlock at specific times.

D. Division and Department Programs

Technology planning is an ongoing process within the major divisions of the college. The Information Management Team will schedule early April meetings with each division of the college to learn about plans, programs, and initiatives for the next year.

III. Infrastructure

A. Current Technology Infrastructure and Environment (What We Can Do Now)

Telecommunications and Network Infrastructure: The College's telecommunications and network architecture provides relatively high bandwidth connectivity at each site (10/100 Mbps to 1Gbps) via a local area network (LAN). The sites are then connected in a wide area network (WAN). The WAN is also used to provide access to outside resources such as the Internet and other videoconferencing sites. The Maryland Interactive Distance Learning Network (MIDLN) system operates on its own network provided throughout the state by UMATS.

Desktop Computing Environment: *Desktop Computing Environment:* The college's minimum standard for desktop computing is an IBM compatible PC with at least a Duo Core processor (2 GHz or greater), 2GB of RAM, 80 GB hard drive, and a 100 Mbps Ethernet LAN connection.

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Approximately 95% of faculty and staff computers meet this standard as of January 2010. All computers in instructional spaces meet this standard. The college has standardized with Microsoft Windows XP for the operating system, Microsoft Office Enterprise 2007 for desktop productivity, Novell GroupWise for e-mail, and Internet Explorer for web browsing. Approximately 1,560 computers are in use college wide, including laptops and a small number of Macintosh computers (used primarily in the computer graphics art lab). Printing services are provided by a variety of desktop printers, primarily Dell and HP LaserJets, distributed throughout the network. A distributed printing plan driven in large part by the Integrated Data System (IDS) requirements, has been implemented and multi-function copier, printer, fax machines have been deployed. A total of 27 Xerox Work Center Pro systems have been leased (18 at La Plata, 6 at Leonardtown and 3 at

Prince Frederick). These systems provide relatively high speed copying and network printing with full-featured document finishing capabilities.

Academic/Instructional Technology: Over 100 labs, classrooms, and other locations are areas where technology can be used to teach computers and related software or as a teaching and learning tool. Currently, there are 35 technology intensive labs and classrooms split among the three campuses and the Waldorf Center, all of which are fully networked. These include 3 distance learning classrooms (one each at the LaPlata, Leonardtown, and Prince Frederick Campuses) that are connected to the Maryland Interactive Distance Learning Network (MIDLN). Twenty-one additional labs and classrooms are equipped with Smart Podiums that provide an instructor's computer, a large screen display, DVD/VCR, and switching equipment, or with instructor's stations, which provide computers connected to ceiling-mounted LCD projectors. Of the 1,560 college workstations and laptops, approximately 700 are used in instructional settings and another 140 are located on faculty desktops. Virtually all of the computers used in instructional settings have Intel Duo Core processors with the exception of those used in PC troubleshooting or electronics labs and those in the Macintosh art lab. Almost all faculty now have at least an Intel Duo Core 2GHz computer with 2GB RAM, and a DVD-ROM drive.

Videoconferencing services are provided using the V-Tel compressed video system at each campus and the Waldorf Center (V-Tel videoconferencing is available in three different rooms at LaPlata). The primary means of providing video based distance learning is via MIDLN system with one room at each of the three campuses; Waldorf Center does not have a MIDLN room. The MIDLN system uses equipment donated by Verizon.

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Information Systems: The primary informational system component is built around Datatel's integrated data system product Colleague. In addition, a bookstore Point of Sale and a textbook management system have been installed and integrated to the Colleague system. A Web Portal and Datatel's WebAdvisor system support Colleague web access for the college's students, faculty and staff. Ad Astra which is used for scheduling of classes and ImageNow as our document imaging solution are also integrated with the Colleague system and form part of the suite of applications in place to support the college.

B. Infrastructure Shortfalls and Future Needs (What We Can't Do Now, Where We Need to Go, and How Do We Get There)

The College Technology Council will evaluate and address shortfalls in the technology environment at multiple levels ranging from the baseline environment to the individual user environment.

Network and Telecommunications Infrastructure: The primary areas of institution-wide concern are in bandwidth, capacity, security, reliability, and supportability of the network and telecommunications infrastructure and associated servers and systems. Most of the new initiatives, programs, and projects require graphics and/or data intensive applications and services. Although the current infrastructure has proven to be very capable and robust, it is beginning to reach capacity and bandwidth limits. In addition, the age of much of the network electronics equipment (hubs, switches, routers) is now approaching seven or more years. Information Technology Services has begun the process of designing and implementing a new baseline infrastructure to address these concerns.

Desktop Computing: Desktop computing concerns center around continued refresh of desktop systems in both instructional and administrative settings. A four-year computer refresh plan for each campus has been developed and must continue to be maintained. Almost all computers located in instructional settings (classrooms and labs) are being maintained on a four-year refresh cycle and are a relatively homogeneous mix of Dell machines. Faculty and administrative desktops are a mix of Dell desktop and older laptop computers. If current refresh plans continue to be supported, all desktop computers with a few exceptions. By providing a relatively homogeneous desktop hardware environment, this plan can dramatically lower the support requirements, minimize total cost of ownership for these systems, and offer improved reliability to the user. The implementation of a planned refresh cycle for hardware has allowed us to more accurately predict and budget desktop computer hardware costs. The college has entered into a statewide Microsoft Enterprise Agreement and a Novell site agreement that will provide similar benefits for desktop and network computer operating system and common user productivity applications (Office Suite and e-mail).

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The Microsoft Enterprise agreement provides operating system (Windows), office productivity suite (Microsoft Office), and Microsoft's Visual Development Studio for a fixed price of less than $25 per desktop per year. Plans are also in place to migrate the desktop operating system to Windows 7 in late summer.

The Novell site license provides unlimited licenses for network operating system, client, and GroupWise e-mail. Migration to GroupWise 8 will occur during the fall 2010 semester providing improved reliability and additional functionality.

Academic/Instructional Technology: The interviews with academic divisions and departments provided tremendous insight into their future plans and needs. Plans for improving the network infrastructure and desktop refreshes will provide the baseline environment needed to support many of those requirements such as distance education. With the growth of the use of social networking tools including video feeds, all classrooms should have video conferencing capabilities.

Learning Centers and Library: Expansion of online and electronic resources provided by the Library, as well as other student services areas, will be critical as the college continues to increase the number of courses delivered via distance learning over the next several years. Plans for improving the network infrastructure will provide the baseline environment for this expansion.

Information Systems: The primary informational system component is built around Datatel's integrated data system product Colleague. In addition, a bookstore Point of Sale and a textbook management system have been installed and integrated to the Colleague system. A Web Portal and Datatel's WebAdvisor system support Colleague web access for the college's students, faculty and staff. Ad Astra which is used for scheduling of classes and ImageNow as our document imaging solution are also integrated with the Colleague system and form part of the suite of applications in place to support the college.

The production Colleague system and the various other applications run on an HP RX-6600 UNIX platform purchased and installed in the fall of 2009. Technical responsibility for the information systems resides with the Information Technology Services Department (ITS) which is responsible for the system servers, network connectivity, and software support.

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The ITS group will continue to strive and improve systems availability by reducing system down time, improving access and data security and increasing the capabilities for the services we support. Future projects include installing a web driven user interface for the Colleague system, implementing a sound disaster/recovery methodology and acquiring an integrated Business Reporting solution among others.

IV. Support

A. Technology Support

The Information Technology Services Department (ITS) and Distance Learning and Faculty support (DLF), provides technology hardware, software, staffing, infrastructure, and related services at the college. Specialized or dedicated technology centers or services are at least partially supported by other college units (e.g., nursing labs, the learning lab). The CTC provides oversight.

The ITS serves the college's need for shared data and common information management systems and serves the college's need, for interactive telecommunications (voice, data, and video) systems and end-user support. End user refers to students, faculty, staff, and where appropriate the larger community.

DLF serves the college's need for continuous instructional development and faculty support in the use of technologies.

B. Professional Development and Training

Section IV. Support, B. Professional Development and Training

Professional development and training of users is a key component to the successful and productive use of technology resources. The Technical Training program was initially developed in 2001 to exclusively provide Colleague related training to employees. Since 2005, the program continues expansion to support staff and faculty by development and coordination of training opportunities relating to a variety of technology and software applications used to perform college business function. The program encompasses both vendor delivered training as well as internal opportunities provided by college employees' willingness to share subject matter expertise through teaching fellow employees.

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Technical training will continue to develop as technology evolves.

All future software implementation plans should include a requirement for training delivery, materials and documentation to assure all end users receive proper levels of training.

Emerging technologies will be used to deliver training in a variety of formats to allow easy accessibility.

Expansion can be realized by encouraging employees to participate as training initiators and leaders in line with expertise in areas of college business and/or processes.

Two other areas of the college offer additional development opportunities. The Distance Learning and Faculty Development department carries much of the responsibility for faculty specific training and the Human Resources department coordinates training and development activities related to such topics as customer services, leadership, sexual harassment and the like. While some strides have been made to provide employees a one-stop option for training information (i.e. staff/faculty training web page, consolidated calendar and advertisements), ideally providing a united area for all training and development would be a strong alternative.