Guam Community College
Information Technology Strategic Plan

Guam Community College is an institution of higher learning created to serve the technical, vocational, and occupational training and other educational needs of the citizens of Guam. The College was established by the enactment of Public Law 14-77, "The Community College Act of 1977." The administration and operation of the College are under the control of a nine-member Board of Trustees appointed by the Governor with the advice and consent of the Legislature. The College is a part of the Government of Guam. The Law states the purposes of the College are to:

- Establish technical, vocational and other related occupational training and education courses of instruction aimed at developing educated and skilled workers on Guam;
- Coordinate vocational-technical programs in all public schools on Guam;
- Establish and maintain short-term extension and apprenticeship training programs on Guam;
- Expand and maintain secondary and postsecondary educational programs in the vocational-technical fields;
- Award appropriate certificates, degrees, and diplomas to qualified students; and
- Serve as the Board of Control for vocational education for purposes of the United States Vocational Education Act of 1946 and 1963 and subsequent amendments thereto.

1. Background

Guam Community College (GCC), like most other organizations, has acquired a assortment of technology over the almost 30 years of its existence. The technology has been acquired at different times, for different purposes, for different users, and with different requirements. GCC has also not had an enterprise architecture or a technology

strategic plan to guide its acquisition and implementation of technology. As a consequence, the technology is not always compatible, various components become obsolete at different times, and the replacement strategy is often driven more by funding availability than business needs or architectural considerations.

The College is both a business enterprise and an educational institution. These two facets of the enterprise often have conflicting technological needs, expectations, and desires. The business side wants stable, robust systems that have proven themselves over time and place. The educational side frequently wants 'state-of-the-art' tools and techniques that allow it to be at the forefront of the technological world. Yet both parts of the College must work together to establish a technology infrastructure that meets both sets of needs and delivers the College an effective, efficient, and responsive system (s).

To make maximum use of its limited technology resources and funding, GCC decided to develop an information technology strategic plan and enterprise architecture to guide its technology investments. The enterprise-wide strategic plan defines how technology will be used to achieve the College's educational and business goals, while the enterprise-wide target architecture establishes information technology (IT) standards and design guidelines. The Information Technology Strategic Plan (ITSP) and Enterprise Architecture (EA) are companion documents that detail what the IT environment of the future will be (the Enterprise Architecture) and how GCC will achieve this future environment (the ITSP). The architecture and strategic plan cover all areas of information, communication, building, and academic systems technology that have any effect on the operations of the College.

What is an ITSP?

The ITSP is a top-down enterprise-wide strategic plan created to achieve GCC's strategic educational and business goals. The plan details how to (1) implement the Enterprise Architecture, (2) develop the staff skills needed to manage GCC's IT resources, (3) establish the processes and structures to manage information technology as an enterprise resource, and (4) transition from the current environment to the desired future state. This

future environment requires technology that can communicate, interoperate, and share data and resources while reducing the costs associated with training, maintenance, and support through the implementation of the Enterprise Architecture.

The ITSP is not intended to limit or constrain creativity among GCC users, but to provide a stable, robust, modern infrastructure and environment in which to solve their business problems and allow departments to collaborate on significant cross-departmental efforts. The plan is built on an IT model of management which employs the best features of both centralized and decentralized IT management, support, and decision-making.

Why develop an ITSP?

The ITSP provides a focus for GCC and its departments to discuss and come to agreement on the application of information technology to the College's business needs. It serves as a framework for budgeting, planning, and managing GCC's IT resources. The plan provides direction, establishes IT management processes, and documents the desired future state of IT in GCC.

What do we do with the ITSP?

The ITSP is used to implement the Enterprise Architecture and achieve GCC's vision for its IT future. By following the plans contained in the ITSP, GCC can develop the technical environment it needs, the human resource skills necessary to manage the new environment, and the oversight and leadership mechanisms for fulfilling its strategic goals.

The ITSP and the Enterprise Architecture (EA)

The Enterprise Architecture and ITSP are complementary documents. The EA describes the current IT environment, the desired target architecture, and the actions needed to transition from the current to the target architecture. It focuses primarily on the technical issues involved in changing the IT environment. The ITSP takes a broader perspective on the transition process. It identifies the strategic goals that must be achieved for GCC to provide leadership and oversight of its IT resources. It addresses the management,

budget, and governance challenges facing the transition and develops specific action plans to resolve the issues. Implementing the EA and ITSP together, GCC can provide both the technical and organizational leadership needed to fulfill its IT mission.

2. Approach to Developing the ITSP

The development of the ITSP was a collaborative effort involving GCC faculty administrative staff, and executives. The Graduate School, USDA, provided consultants to facilitate the development process. Participants in the development effort considered the needs, interests, and concerns of all departments and users throughout the process.

Scope

The EA and ITSP apply to all components of GCC, but only to GCC. The architectural principles and standards apply to all IT products, systems and projects. At this time the ITSP addresses governance and staffing issues relevant to GCC.

Methodology

Staff selected from GCC faculty and administration developed the ITSP with facilitation support from consultants from the Graduate School, USDA. The College's Technology Advisory Committee (TAC) provided oversight and direction to the development process. The TAC conducted a SWOC (Strengths, Weaknesses, Opportunities, and Constraints) analysis. It then discussed guiding principles for the IT environment of the future and technological trends that will affect that environment.

Using all of this information as background, the team discussed the issues and opportunities facing GCC. The team described the current IT environment and envisioned the future IT environment it would like to create for the College (see Appendix I). The team then generated a list of goals which, if achieved, would fulfill its vision of the future. These goals were consolidated and prioritized to produce the final strategic goals.

For each strategic goal the ITSP team described the goal, the current situation, the desired future state, and how to reach the future state. They also developed performance measures to indicate whether the future state had been reached. Finally, the team prepared action plans to achieve each strategic goal.

3. Analysis of GCC's IT Needs

In assessing GCC's needs for information technology, the ITSP team developed certain core principles to form the foundation for guiding the development of the Enterprise Architecture and desired future state of IT in the College. The team also analyzed trends in technology to ensure its EA and desired IT future were consistent with and supportive of the direction of the industry and profession. Using this information as a start, the team described the current IT situation in GCC, the desired future state, and the migration path that leads the College from where it is to where it wants to be.

Guiding Principles

One can define many different futures for IT in an enterprise and one can construct many different architectures. With no guidelines or guiding principles, no architectural constructs or values, there is no assurance the end products will meet the needs of the organization. Therefore, the ITSP team articulated a set of overarching guiding principles that would drive both the architecture and the vision of the desired future state for IT. These guiding principles, though few in number and seemingly very simple, determine many of the characteristics of the EA and the IT future state. They affect decisions, or in some cases determine decisions, at every level of the architecture and throughout the definition of the future IT state. These principles are:

- GCC will stay true to its mission.
- GCC will keep the student first.
- Information technology, IT staffing and the IT budget are enterprise resources.
- Information exists to support the educational and business objectives of GCC.

- Technology and technology investments must be viewed from an enterprise perspective.
- The educational and business priorities and functional requirements of the College will determine investments in information technology.
- Information is an enterprise strategic resource.
- GCC must provide electronic access to information and services while maintaining security and privacy.
- The GCC's data must be accurate and collected only once in a timely and efficient manner according to life-cycle standards.
- GCC and its information technology must become an integrated enterprise.

Trends in Technology

Many trends in technology affect the decisions IT organizations make and determine the directions they take. It is difficult, if not impossible to fight the trends, but riding the trends, and planning to take advantage of them, makes the IT function vastly more effective while reducing costs. Some of the trends in technology that will affect GCC's IT future are:

- The rapid creation of new technologies will shorten the useful life of technology.
- The growth of Internet based commerce and customer service will result in an increasing focus on security and privacy.
- The Internet will drive the technical standards for applications and network computing.
- The rapidly expanding use of Internet technology will be used to redesign and redefine business processes.
- There will be a shortage of qualified IT staff.
- The performance of computer hardware will continue to grow exponentially, while costs continue to decline dramatically.
- The convergence of voice, data, and video has begun and will accelerate quickly.
- New ways to connect to the computing environment are appearing.
- Application delivery will be increasingly component based.

- Market forces will continue to dominate over superior technology.
- Data warehousing applications and uses will experience very high growth.
- The drive for interconnectivity and interoperability will blur traditional boundaries (especially organizational boundaries).
- Collaborative computing environments are enabling organizations to better marshal and focus their intellectual resources.
- Enterprises are using new technologies to reduce administrative costs and establish a unified system management approach for corporate computing.

Current State of Information Technology Resources in GCC

GCC has a fully staffed MIS department with 10 people. The GCC technology inventory includes more than 1000 personal (desktop and laptop) computers. These computers run everything from Windows 98 to Windows XP. There is a growing number of Mac computers used primarily for instruction of digital media courses. There are also a considerable number of spare computers, monitors, printers, and other equipment on campus.

The campus has numerous servers, one AS400 and the rest primarily Dell and IBM Blade servers. Most servers are under MIS control and housed in a centralized server room. Most servers are also dedicated to a single application. Incremental and full backups are performed on each server daily but there is no schedule for testing the restoring of a server. There is little if any redundant capability. If the Integrated Database Management System goes down, there is no immediate way to continue operations in another backup electronic environment. There are spare servers but they are not in use. A few servers are in the faculty area, outside of MIS' control (by mutual arrangement). It appears that certain of these have mirrored backups and are, therefore, more available.

All computers are networked on the centralized LAN and can gain access to the internet via two 10 megabit per second lines provided by a partnership and paid services with MCV, a local cable TV company and GTA a local analog phone and digital cable

company. There is a concern about the adequacy of the bandwidth available, particularly when new applications become a requirement for instruction or operations. Monitoring of bandwidth usage is a constant activity in order to determine if sufficient bandwidth is available to support current operations. There are also at least three DSL lines on campus, but each is separate from the LAN and is used to provide localized wireless access points.

The current Integrated Database Management System allows for a more efficient operation in Human Resources, Business and Finance, Registrar's Office, and the rest of the college.

GCC is becoming a 24/7 operation. More students are taking classes where tests and other materials are online. These students often work jobs during GCC's normal business hours. They attempt to gain access to GCC servers late at night and often are refused access due to IT maintenance activities. MIS runs two shifts and has people available between 8am and 11pm weekdays.

All PC computers are open use computers; no individual user-id and password are required to use a computer. There are no means of tracking user activities back to a specific user. This lack of user authentication seems odd since the rest of the controls on the network are so robust.
The current Integrated Database Management servers are protected from unauthorized access. This security is provided at the access point to the campus network and through use of firewalls, SSL, and through unique user name and passwords.

Desired Future State of Information Technology Resources in GCC

GCC will have a unified enterprise architecture and all IT resources will be compliant with, and components of, this architecture. Standards will be established using 'best practices' and adhered to for all IT resources. At a minimum these standards will address security, data and data sharing, communications, compatibility, contingency plans and

disaster recovery, and back-up/recovery. Systems will interface easily, seamlessly, effectively, and cost-efficiently. GCC-wide IT resources will be applied effectively and cost-efficiently. All IT resources will be current and life cycle management schedules will be developed and funded. GCC will have sufficient qualified IT staff and resources. IT budget and annual spending plans will be developed and managed to maximize the value to the College overall.

GCC will create and operate services on-line that are accessible 24 hours a day, seven days a week. It will deliver integrated enterprise information systems and infrastructure that improve public access to GCC functions and information, streamline business processes to simplify College-public interactions and reduce costs, and meet the legal and business needs of the College. The technology will enable departments to continually improve their efficiency and effectiveness, while also allowing applications to be developed more rapidly, easily, and inexpensively as business needs change. Education will no longer be time and place dependent. All students will have laptops and classrooms will be fully equipped (multi-media, computers, LAN access, etc.). GCC courses will teach the most up-to-date technology and offer certifications in the IT field. End users will be adequately computer literate and proficient. The educational community will communicate its needs to the technology community with sufficient lead time for them to provide the needed support/services. GCC will establish a model classroom with state-of-the-art technology

GCC technology will be 'invisible' to the user and always available when it is needed. The GCC campus will be completely wireless and secure, with no viruses, spam, or system breaches. All satellite sites will be connected. Users and their applications will not be impacted by limited bandwidth. Campus safety and security equipment (fire alarms, smoke alarms, security camera systems, etc.) will be fully integrated and the phone system will be significantly improved at a lower cost.

GCC will be a leader in the Pacific region in the application of technology. The College faculty and staff will anticipate the skills needs of the local business community and

provide training and certification to deliver and develop skills needed in the work force. GCC will establish a technology center where new technology of any type can be prototyped and tested. GCC will provide a 'computer store' where students repair and upgrade systems for both work experience and income. GCC will develop cost-effective means for providing 'niche' training and services, and for providing training and education not in the College curriculum.

The College will establish formal, fully accepted processes for IT budgeting, decision-making, resource allocation, project sponsorship, and priority setting. GCC will also have an effective process for integrating and reconciling users' needs with technology capabilities. GCC will have formally adopted a target enterprise architecture (EA) and standards that establishes a broad set of boundaries within which everyone agrees to stay, yet allows flexibility to safely experiment with new tools and technology (one size does not fit all). The target EA will support multiple operating systems.

Migration Path from Current State to Desired Future State

The transition from the current state to the future state will take years. Although major aspects of the transition can be planned, scheduled, and implemented according to planned milestones, many components of the transition occur as external events allow (or dictate) them. For instance, it does not make sense to impose the EA standards and design features on legacy systems, but as these legacy systems are replaced or upgraded, they should be required to conform to the EA. The staff development activities need to start now, but will take years to align staff skills with those required by the EA.

1. Strategic Goals

The TAC brainstormed an extensive list of the activities GCC would need to complete to fulfill its vision of its technology future. These accomplishments were then combined, simplified, clarified, and rephrased as goal statements to produce the list of the TAC's now CTC's strategic goals. These goals in priority order were:

Strategic Goal 1: GCC will develop and implement a target Enterprise Architecture.

This goal defines and implements the technical, business and educational environments GCC wants to have in five years. **Enterprise Architecture** is the practice of applying a comprehensive and rigorous method for describing a current or future structure for an organization's processes, information systems, personnel and organizational sub-units, so that they align with the organization's core goals and strategic direction. Although often associated strictly with information technology, it relates more broadly to the practice of business optimization in that it addresses business architecture, performance management and process architecture as well.

Where are we now?

GCC has made progress toward where we would like our technology to be. It has a topology (network) and an organizational chart and structure. It has an Integrated Database Management System (IDMS) which integrates HRO, Business, Student, and Financial Aid and also has other databases that do not talk to each other and have restrictive and specialized functionality (hard coded and difficult to update).

Some of the College's hardware, operating systems, and applications are obsolete. A minimal number of applications require old operating systems (i.e. Windows 98). System security is not where we would like it to be although we are moving toward compliance with all federal and local requirements (i.e. ADA). An enterprise anti-virus system is in place. Too much spam enters the system while legitimate messages are blocked, either intentionally or inadvertently.

The college has approved new computer standards to promote more user flexibility. There are charters detailing the level of support to be expected and provided; however, service and support expectations vary, often leading to dissatisfied users. Technical support is inadequate. Users need to be more computer literate. The Center for Learning

and Instruction (CLI) provides training for faculty and occasionally administrative staff on technology and its use in the classroom.

Where do we want to be?

GCC will have successfully implemented its target Enterprise Architecture and the Information Technology Strategic Plan. The College will continue to improve on its integrated database and set of applications with the web portal, providing access to students, faculty, staff and the public at any time from anywhere. Users will have access to the information they need, when they need it, and where they need it. The College will have approved standards for information, databases, hardware, software, security, access, networks, business processes, and all other aspects of the technical and educational environment.

College systems will be secure and comply with all federal and local requirements. There will be adequate bandwidth so that no users or applications are adversely affected by lack of bandwidth. GCC will be less reliant on vendors for changes and enhancements to its systems.

GCC will have defined processes and procedures that are understood and complied with by all its users. Faculty and MIS will have improved communications and negotiate service and support agreements to meet the needs of both constituencies. Standards will be developed, approved and adhered to by all users. All users will sign users' agreements after an initial training and familiarization program. Within the approved standards, EA, and support agreements, faculty will be able to 'experiment' with innovative technology and applications. An MIS help desk will be fully operational.

Faculty, staff and students will be trained on the technology and be proficient at a level appropriate for their job duties or educational needs. For each College position GCC will articulate the required technical skills and levels of proficiency. The College will establish minimum annual training standards and plans for staff for each department.

How do we get there?

GCC will develop and implement an Enterprise Architecture, and establish, implement, and enforce policies supporting the EA. The College will continuously assess its progress in implementing the EA. It will also procure a fully integrated information system to meet community, administrative, and educational needs. GCC will obtain additional bandwidth and monitor the need for additional for growth. The College and its users will make more effective use of its bandwidth.

How do we know we did it?

- Percentage of bandwidth used (AP 1.4, 1.5, 1.6)
- Number of stand-alone systems (AP 1.3)
- Number of servers (AP 1.3)
- Number of packets dropped (AP 1.4, 1.5, 1.6)
- Customer satisfaction survey (AP 1.1 – 1.6)
- Number of Work Orders (AP 1.1 – 1.6)
- Number of signed service/support agreements (AP 1.1 – 1.6)
- Number of requests for additional training outside "core" curriculum (AP 1.2)
- Cycle time for closing Work Orders (AP 1.2)

Strategic Goal 2: GCC will develop policies, procedures, and processes to analyze and acquire the components (hardware, software, applications) of the Enterprise Architecture.

GCC needs a formal, structured process for defining user requirements, assessing system capabilities against the requirements, and acquiring the technology that best meets the users' needs. The process would use systems analysis tools and techniques to define needs and/or problems, research options for meeting the needs or solving the problem, develop alternative solutions, test the possible solutions, and select the best solution within budgetary or other constraints. Decisions about technology will be based on reviews of what works and why, and what does not work and why. The technology community will be constantly learning and growing based on its experiences, research,

and testing. This approach to acquiring and using technology will ensure GCC makes the best use of its limited resources and technology.

Where are we now?

- New College Technology Committee
- Bylaws updated and charters drafted with more to be created
- Completed minimum computer standards to be reviewed every six months
- Integrated database in place
- Campus community is becoming more aware that technology issues and policies must be presented to CTC
- Adequately trained personnel not in place to support current and future EA
- Highly externally trained MIS
- College-wide technology literacy proficiency levels need improvement
- Few standards and policies in place for information technology products and tool use
- Need updated technology user agreement

Where do we want to be?

- CTC fully functional
- Charters approved
- College community informed and aware of CTC's role and responsibility
- Standards and policies are in place to address technology products and tool use campus-wide
- Appropriate technology training relative to current and future EA
- Every department establish individual training plans based on institutional needs
- Sufficient FTE to support EA
- Annual technology user agreement signed

How do we get there?

- Approved charters

- Communicate to campus community via website of CTC's role, responsibilities and accomplishments
- Create standards and policies to address technology needs
- Assess technology training needs
- Assess technology staffing needs
- Update current technology user agreement and establish annual signing date (post/secondary, employees)

How do we know we did it?

- Effective policies and procedures published (AP 2.1 & 2.4)
- Departmental technology training plan in place (AP 2.4 & 2.5)
- Standards and policies are adhered to (AP 1.2 & 2.4)
- CTC website is updated weekly (AP 2.3)
- Campus-wide technology survey indicates committee awareness (AP 2.3)

Strategic Goal 3: GCC will acquire the funding needed to implement the Enterprise Architecture.

Implementation of the target EA is a long-term effort requiring a significant amount of funding. Once the target EA is defined and approved by the governance process, the governance entity needs to develop a multi-year budget that matches funding needs to the technology needs of the migration path from the existing architecture to the target architecture. To fund these budget needs, GCC will explore all possibilities—lobby the GCC Foundation and Legislature for additional funds, use GCC's 315 acres of land to generate revenue, apply for grants to fund technology enhancements and meet federal and local regulatory requirements (i.e. Americans with Disabilities Act), and create 'pockets of entrepreneurship' in which specific components of the College provide products and/or services to the public, businesses, and government agencies on a fee basis.

Where are we now?

- We are in a budget crisis

- We have a person responsible for generating income to support college upgrades
- We are attempting to get more grants to support some of the things we feel we have to accomplish
- Funds generated out of CE, our largest pocket of entrepreneurship, go back to support departments needs or fall to the bottom line and help us keep up with financial obligations
- We have the technology fee
- We have MOU/MOA with our ISP (reduced fees)
- Incorporating site licenses as opposed to individual licenses
- Develop partnerships with vendors (e.g. Cisco, 3M, etc.)

Where do we want to be?

- Financially stable
- Able to be the technology leaders with a secure infrastructure as advertised
- We want to be able to upgrade as we need and not when it is an emergency
- We want to have a stable architecture
- We want to be able to trust the needs of the "experts"
- Appropriately trained and staffed technology team
- Financially self-sufficient

How do we get there?

- Request more funding from the legislature (but there is no money)
- Continue to pursue grants (maybe with HUD, private foundations, etc.)
- We need to build internal relationships that are win-win so trust can be established
- We need to use internal people for assistance since we can't afford to go external and maybe make it "part of their load" to assist with the overall EA
- Develop profit centers for certain programs (e.g. Electronics for repairs and installation, Business (Accounting) for taxes, Automotive for oil changes, tire replacement, Internet Café, Electronic games, etc.)

- Establish Kinko-like Center
- Have vendors pay college for student interns
- Lobby for taxes to support education

How do we know we did it?

- When people are able to download, install and access needs such as podcasts, movies and programs without interruption or even a blip on the monitoring devices used by MIS (AP 1.4, 1.5, 1.6)
- When people do not experience sluggish response with the internet or Banner (AP 1.4, 1.5, 1.6)
- When students, faculty and staff are able to access the system 22/7 as opposed to 24/7 to enable MIS to do backup and technical maintenance (AP 1.4, 1.5, 1.6)
- When upgrades can be made as we need them and they are not delayed until we are forced to replace them (AP 3.1, 3.5, 3.6)
- Reduce our dependancy on legislative appropriation (AP 3.2, 3.5, 3.6, 3.7)

Strategic Goal 4: GCC will expand the use of technology in education by the College faculty.

Technology is used in many ways in GCC educational and business settings. The technology offers many more opportunities than are currently being used, however. GCC needs to challenge its faculty and staff to creatively design their work environments and practices to more fully take advantage of the power and flexibility of the technology. For this expansion of the use of technology to be successful, GCC employees need to be trained and fully proficient with the technology available to them and the educational and business practices that maximize the use of technological tools. GCC will also need to recruit more students to the College and into the technical fields at the College by increasing its marketing efforts, providing more training and certification programs, and offering additional services to local businesses and government agencies.

Where are we now?

The faculty is at widely varying levels of using technology in the educational process, they are 'all over the map'. Some instructors are heavily into using technology in the classroom, while others have nothing to do with it (and are afraid of it). Instructors use a variety of products (much of it freeware) obtained on-line. There are no standards for the products or tools used in the classroom.

The CLI is in place to help faculty use technology, but many users do not know what questions to ask for help, to find new tools, or to find out what the technology can do for them. No list of resources is available to instructors, staff or administrators. The technology staff assume too much, especially about the knowledge of many of its users.

A few courses are on-line, but limited bandwidth on the campus limits the on-line courses. GCC has launched a new web site (joomla) and a new course management system (Moodle). The technology used varies widely, from computers to multi-media.

Where do we want to be?

All faculty will be able to put courses on-line with minimal constraints. The faculty will have the knowledge and skills necessary to use technology in the educational process. Instructors will be required to receive proactive 'technology certification'. 'Early adopters' will continue to test new technology and new applications of technology in the classroom. Faculty will be so skilled in using technology in the classroom that they will be able to showcase their application of technology in education at professional conferences and meetings.

The College infrastructure will support the faculty in applying technology in course work. The CLI needs to be more effective at supporting the faculty and assisting in technology applications in education. GCC will establish and adopt standards for applying technology in course work. MIS will be more supportive and no longer be perceived as a barrier to faculty innovation.

How do we get there?

Faculty will be encouraged to try technology in their courses in as many ways as possible. GCC needs to put professional training on technology into individual faculty plans and use it as a component of the performance appraisal process. The CLI and MIS staff can identify 'power users' in each department to start applying technology in education and help other faculty try using technology in the classroom. GCC needs to provide more training and more 'hands-on' support for faculty reluctant to try using technology in their instructional methodology. Each department can be requested to identify specific courses that can be put on-line (and then put them on-line). Similarly, each department can be asked to identify opportunities to use technology in its curriculum.

How do we know we did it?

- Number and percentage of courses using technology (AP 4.1, 4.2, 4.3)
- Number of syllabi integrating technology into courses (AP 4.2 & 4.5)
- Number of students enrolling in classes using technology (AP 4.2 & 4.5)
- Number of students enrolled exceeds Number of students on campus (others are online)
- Number of instructors using technology in class (AP 4.5)
- Program assessments can be used to 'encourage' use of tech (AP 4.2 & 4.5)
- Provide adequate technology and bandwidth for instructors and classrooms (AP 4.5)

Strategic Goal 5: GCC will enhance the governance process to provide timely and efficient integration of users' needs into decisions on investments in technology.

Governance is the set of rules, processes, and structures by which IT resources are managed. Studies have shown that an effective governance structure is the single most important factor in maximizing the value of IT investments. The governance process covers the creation and implementation of the target enterprise architecture, management

of the Information Technology Strategic Plan (ITSP), and decision-making for IT budgets and investments. The governance structure also establishes processes for the entire life-cycle of integrated enterprise projects—project planning, project initiation, project management, configuration management, systems development, systems implementation, maintenance, ongoing enhancements, support, project monitoring and evaluation, project/system termination, and project accountability.

The governance process comprises the information sharing, data collection, stakeholder involvement, agency-wide communication, and decision making activities involved in creating and implementing the target enterprise architecture. The process includes configuration management of the current architecture as it evolves into the target architecture. It requires a continuous dialogue among technology users, GCC stakeholders, and the IT community regarding changes or upgrades in the technology environment. The governance process typically addresses budgeting to meet technology needs, assimilating users' needs, prioritizing needs within budget constraints, making decisions affecting the technology environment and the architecture, and providing oversight for project initiation and implementation.

Where are we now?

The College Technology Committee (CTC) is comprised of representatives from the faculty and the administration. The CTC is an advisory body responsible for making policy recommendations related to technology and technology issues. The CTC reports to the College Governing Council, which makes its recommendations to the College President.

The CTC makes policy recommendations, but the MIS function also has some influence in the decision making process. MIS can stop an acquisition by saying the selected technology does not meet the standards or support is not in place. In addition to the CTC there are also working groups established to address functional and operational issues related to the integrated database management system and website.

Where do we want to be?

The IT governance structure and processes are formalized, recognized, clearly defined, and actively used in the decision-making process for all IT issues. The governance structure manages and directs the Enterprise Architecture, the ITSP, and IT planning, budget, and funding processes. The governance structure also has established and oversees the processes for the entire life-cycle of integrated enterprise projects—project planning, project initiation, project management, configuration management, systems development, systems implementation, maintenance, ongoing enhancements, support, project monitoring and evaluation, project/system termination, and project accountability. The governance process will be simplified, responsive, proactive, effective, timely, results oriented, and involves all stakeholders (or representatives of all stakeholders).

How do we get there?

The current governance process has just been revisited. The various groups need to clarify roles and responsibilities, and how processes are going to work. As the process gets developed and matures, the College can adjust it as needed to evolve it into its desired future state.

How do we know we did it?

- Number of technical issues identified needing policies (AP 5.3)
- Percentage of these issues for which the CTC issues policies (AP 5.3)
- All department charters signed, approved (rules of engagement) (AP 5.2)
- CTC recommendations are perceived in high regard (AP 5.1)

Strategic Goal 6: GCC will build partnerships with external business and government organizations to expand business, educational, and funding opportunities.

To expand its technology opportunities, GCC needs to build strong partnerships with business, government agencies, and the local community. As with all partnerships, these

arrangements would provide benefits to both partners. GCC would benefit by obtaining additional technology, funding, students, teachers, and opportunities for its graduates. The business and government partners would receive well trained and/or certified graduates as potential employees, access to the skills of the GCC faculty and staff, and facilities to prototype and test their technology before acquisition or implementation.

Where are we now?

- Partnership with the FAA for student interns leading to FT employment
- Partnerships with online testing organizations such as PAN, HOST, PROMETRIC, and Pearson Vue.
- Good relationship with employers, DOL, AHRD, and GCA Trades Academy
- Partnership with MCV for internet bandwidth resource
- Training activities with NCTAMS and AAFB Base Comm.
- Active Advisory Committees
- Good direct relationship with construction companies who need highly technical training

Where do we want to be?

- Continue to improve current partnerships
- Number one training facility on Guam for Govt. of Guam, civilian and military sectors
- Expand partnerships on Guam and in the regions
- Establish partnerships that will provide for research, development, and testing of new technology.
- Increase more national certificate testing opportunities and certification courses

How do we get there?

- Utilize the Office of Development and Alumni Relations and Continuing Education to assist with outreach
- Encourage the Departments to become more entrepreneurial

- Encourage diverse memberships on advisory committees representative of local businesses and needs on Guam
- Increase publicity so the community is truly aware of what GCC is doing and is capable of doing.

How do we know we did it?

- Increased number of partners
- Greater number of testing options
- Use advisory committee comments to generate course and/or program changes