

# Strategic Plan

## The College of New Jersey Information Technology



Information Technology

The College of New Jersey

# Introduction

Information Technology at The College of New Jersey is comprised of four separate but highly integrated operating units: Enterprise Applications, Network and Technical Services, User Support Services, and an administrative layer called IT Administration. This document is a compilation of the strategic plans for these units.

As an overview of the inter-connection of the various operating units, a brief description of each follows:

## **IT Administration:**

This team of central staff works to develop the structure that guides the various IT departments as they develop short and long term goals. This group leads the initiatives to replace our core administrative systems and provides the project management of these implementations. Included in this group are the Vice President, Executive Assistant and Secretary for Information Technology and Enrollment Services.

## **Enterprise Applications (EA):**

Enterprise Applications (EA) provides large-scale applications that support the day-to-day administrative work of the college. This area is responsible for maintaining integrated enterprise systems that support the business of The College. Enterprise Applications develops and implements new systems, customizes packaged software and produces reports based on the enterprise data for the campus community.

## **Networking and Technical Services (NTS):**

Networking and Technical Services is responsible for The College's communications infrastructure including the cabling, electronic equipment and termination equipment needed to deliver voice, data and CATV. NTS also provides the back office server needs of The College's faculty, staff, and students, including file and application sharing (Novell), email capabilities (UNIX), and other network driven applications.

## **User Support Services (USS):**

User Support Services provides support for computer workstations and peripherals, media equipment and instructional technology to the campus. USS includes Computer Support Services (Help Desk, Training, Repair and Distribution Facility), Media & Technology Support Services, Instructional Technology Services, the Web Development Team, the Support Specialists, the computer labs and RES.net.

# IT Strategic Plan

The goal for the IT strategic plan is to establish a process to tie the College's Strategic Aspirations, Enduring Goals and Key Performance Indicators to the local IT goals, strategies and plans.

## Strategic aspirations:

1. Encourage, advocate for, and support the use of technology by academic, research, and administrative areas of the College to insure that technology is used to its full potential in the delivery of curriculum and business processes.
2. Optimize, protect and insure the College's computing resources with a robust and secure technology infrastructure.

## Enduring Goals

1. Maintain and develop management information systems and tools to facilitate effective decision-making.
2. Using proven technology, extend teaching and learning opportunities outside the traditional academic classroom. Actively engage the academic community to build strategic plans and align IT with the needs of the academic units and the teacher scholar model.
3. Ensure a robust, reliable network including redundancy and disaster planning; protect the College's networks, servers, workstations, and data elements.
4. Manage financial resources to ensure appropriate levels of funding to support the College's strategic plans.
5. Identify, develop and support highly functioning data, voice, and web based communications infrastructure and applications to support internal and external stakeholders.

## Enduring Goals and Related IT Strategies

- 1 **Maintain and develop management information systems and tools to facilitate effective decision-making**
  - a) To make sound management decisions based on evidence, to limit redundancy, and to seek to improve efficiency while still providing excellent service, tools and support for the administration of The College. To provide seamless, state of the art tools in support of the administrative processes of The College.
  - b) To provide efficient and cost-effective management tools which enhance the institution's ability to conduct assessment projects and to plan effectively for the future.
  - c) Strategies:
    - i) We will be an "early follower" of new technologies positioning ourselves to take advantage of tested state-of-the-art software and products.

- ii) A primary goal in designing systems will be to limit data redundancy
  - (1) We will strive to implement systems so that no data will be entered more than once.
  - (2) There should be one primary data source for every piece of data.
  - (3) We intend to eliminate as many shadow systems as possible.
- iii) Identity Management
  - (1) We will have a “One card strategy” and use the student/faculty/staff id card for financial transactions and for swipe access to buildings and parking lots.
  - (2) Our identity management strategy focuses on integrated user authentication and authorization with a primary source, propagating only a single unique identifier for each member of the community while maintaining data integrity
  - (3) We will develop our own “portal-like” front door to our systems creating a gateway which encourages integration among systems whenever possible
- iv) Software
  - (1) We attempt to have single product solutions used campus wide where possible to save license costs and to insure quality data integrity.
  - (2) IT should be involved in all hardware and software purchases where possible.
  - (3) For application systems, we attempt to use vendor products before home grown.
  - (4) For network and system applications, we will use open and community source where viable.
  - (5) We will adhere to TCNJ developed technical standards in system development methodology and web development approaches.
- v) Administrative Systems
  - (1) We will support and maintain the existing vendor systems and provide new and enhanced delivered functionality based on prioritization and departmental needs.
  - (2) We will attempt to implement Oracle/Peoplesoft modules as vanilla as possible.
  - (3) We apply application patches/fixes singly for specific issues encountered and based on the vendor’s support cycle to ensure continuous support.
  - (4) We upgrade our systems in order to stay current with regulation and legislative update support.
  - (5) We will develop upgrade strategies to our ERP systems which are cost-effective and which meet user needs. We will utilize vendor lab services and targeted consulting services to perform our ERP system upgrades.
  - (6) We will identify and utilize service oriented architecture to provide integration between applications on disparate platforms while moving away from proprietary development.
  - (7) IT staff should function as analysts, collaborating with functional departments to streamline business process using technology.
  - (8) We will bring all enterprise systems to a common architecture thus enabling seamless communication between systems.

- vi) Services and Research and Development
  - (1) IT will provide tools to enable end users to do their own reporting whenever possible.
  - (2) We will provide tools which encourage paperless transactions.
  - (3) We will use prioritization process in order to select projects for implementation based on campus wide priorities
  - (4) We will develop self service/web enabled systems whenever possible.
  - (5) We will stay current in Web 2.0 and evolving technologies and determine how and when to add these tools and services to our suite of development tools.

**2 Using proven technology, extend teaching and learning opportunities outside the traditional academic classroom. Actively engage the academic community to build strategic plans and align IT with the needs of the academic units and the teacher scholar model.**

- a) To provide and support exceptional IT infrastructure, tools and services that facilitates effective use of technology by faculty and students in support of teaching, learning and research.
- b) To support the College's mission to develop a *“diverse community of learners, dedicated to free inquiry and open exchange, to excellence in teaching, creativity, scholarship, and citizenship, and to the transformative power of education in a highly competitive institution.”*
- c) Strategies:
  - i) To remain current with technological advances in order to adopt technology that is to the best long term advantage of The College community, within budget constraints.
  - ii) Our strategy is to implement wireless technology in community spaces around campus, as opposed to individual classrooms. Refer to <http://www.tcnj.edu/~nts/wireless/> for TCNJ's accepted wireless plan.
  - iii) Use the Dean/IT committee to analyze needs annually and to identify IT and Facilities funding possibilities and timelines.
  - iv) Work with the IT Dean's Council, the academic computing advisor, departmental liaisons and ITPC to look for and create opportunities for the campus community to articulate the need for new products, support, and services.
  - v) Service and Support Strategy
    - To provide the highest quality support for the academic enterprise that both targets TCNJ's needs and balances those needs with available resources
    - (1) Provide, within staffing and budget constraints, equipment, access and resources to support academic research and the recruitment of academic faculty.
    - (2) Collaborate with academic area on pilot technology programs.

- (3) Collaborate with departmental liaisons and the designated academic technology analyst to improve services and support of research and the academic enterprise.
- (4) Provide timely user support to the academic areas in terms of responding to service calls, collaboration on software choice and training with special attention to resolving issues which affect class session.
- (5) We utilize a home grown course management system (SOCS), rather than a vendor product due to its current functionality, flexibility and popularity with our faculty.
- (6) Assist faculty members in the development of curriculum and making sound pedagogical choices influenced by IT.
- (7) Provide advanced instructional technology equipment.

**3 Ensure a robust, reliable network including redundancy and disaster planning; protect the College's networks, servers, workstations, and data elements.**

- a) To continually assess and improve the technology, practices and capacity employed to secure and deliver data over The College's networks, servers, and individual workstations.
- b) To provide a robust, secure and reliable network. This includes the security of our campus network, servers, and data.
- c) Strategies:
  - i) Collaboration and Cooperation
    - (1) Collaborate with campus stakeholders to determine network needs.
    - (2) Cooperate with NJEDGE.NET to acquire external bandwidth at consortium pricing.
  - ii) Network Capacity Planning
    - (1) Maintain a state-of-the-art campus network infrastructure to meet the needs of the campus community and support emerging network technologies/standards.
    - (2) Take advantage of campus construction projects to refresh the physical network plant and install additional pathways for network redundancy.
    - (3) Leverage available devices and technologies to control, secure and manage the traffic and bandwidth on the campus network.
    - (4) Maintain aggressive cycle of upgrades for core and edge communications equipment to ensure timely support and reduced downtime.
  - iii) Identity and access management
    - (1) Centralize user identity storage and management in order to better control user access.
    - (2) Limit user access to those systems and services required for their job function.
    - (3) Use current campus identity and access management products to limit access to the campus network to authorized parties.
  - iv) To educate the campus community members on their individual responsibility to insure security of institutional computing resources.

- (1) To proactively provide education and communication regarding national issues in information security – such as illegal music downloading and appropriate use of computing resources.
- (2) To be attentive to concerns which might put the campus at risk in the area of information security.
- (3) To conduct periodic internal audits to review the success of our security measures.

#### **4 Manage financial resources to ensure appropriate levels of funding to support the College's strategic plans.**

- a) To secure and effectively manage the financial resources necessary to enact the Information Technology guiding principles.
- b) Overall Planning Strategy:
  - i) Align IT Strategy with College Institutional Planning
  - ii) Conduct yearly updates of IT White Papers; share with Cabinet and ITPC.
  - iii) Incorporate project management concepts into IT projects where possible, including the use of MS Project as planning tool for yearly IT projects.
- c) Budgetary Planning
  - i) Maintain a centralized budget, purchasing and support model.
  - ii) Maintain a 4 year replacement cycle for desktop equipment.
  - iii) Maintain multi-year replacement cycle plan for network and server equipment.
  - iv) Maintain multi-year budget plans including building IT reserves for maintenance and replacement of network equipment, servers, media equipment in classrooms.
- d) Staff Development Strategies
  - (1) Support the ongoing training and development of IT staff by encouraging staff to attend and present at professional conferences, identifying and encouraging staff to attend appropriate training, and using a committee to identify and provide cost effective methods of staff development within the division.
  - (2) Attend to the issues of recruitment and retention and professional development of IT staff.
- e) IT Awareness Strategy

Raising campus awareness of choices, concepts, resources, standards, procedures in order to leverage existing processes, improve service and minimize redundancy

  - i) The Vice President for Information Technology should serve on the President's Cabinet.
  - ii) The Information Technology Planning Council (ITPC), a college wide governance council, is a source of input and feedback.
  - iii) Encourage staff to participate in professional organizations, make presentations at conferences and share experiences and expertise with the higher education community in formal and informal settings.
  - iv) Customer Service Strategy:

Provide quality customer service that is timely, responsive, and flexible.

- (1) Operate in a transparent, accountable and flexible manner by providing opportunities for feedback and participation in important information technology decisions.
- (2) Look for and create opportunities for the campus community to articulate the need for new products, support, and services.

**5 Identify, develop and support highly functioning data, voice, and web based communications infrastructure and applications to support internal and external stakeholders.**

- a) To provide state of the art technology to enable and support electronic communication and to leverage electronic communication to enhance interactions with external constituents and expand The College's pool of stakeholders, advocates and supporters.
- b) To develop and review short and long term technology and business strategies for voice and data communications on campus.
  - i) To stay current in our knowledge of vendor offerings, costs and technology options.
  - ii) To encourage the campus leadership to review and re-assess our communication assumptions and service offerings.
- c) Strategies:
  - i) Collaboration and Cooperation
    - (1) Suggest and evaluate technological solutions to address stakeholders' challenges providing information to their target audience.
    - (2) Develop and maintain working relationships with stakeholders to assess their communications needs.
    - (3) Stay aware of the level of usage of new products by our faculty, staff and student body and adjust our offerings to address their expectations.
    - (4) Provide economical and efficient solutions to stakeholders' communications needs by leveraging existing technologies or implementing new technologies as required. Develop long range technology and business plans for how to upgrade our communications infrastructure.
  - ii) Technology Approaches
    - (1) Use current products to provide and maintain quality service on traditional communications avenues.
    - (2) Leverage new technologies that have a proven track record to meet the communications needs of new facilities on campus.
    - (3) Use existing and new technologies to provide solutions that efficiently and economically extend communications infrastructure to internal College facilities as well as outside the main campus.
    - (4) Determine the appropriate level of "convergence" for data and voice technologies.
    - (5) Provide a limited set of campus resources available directly from the Internet and require VPN authentication/access for other on-campus resources.