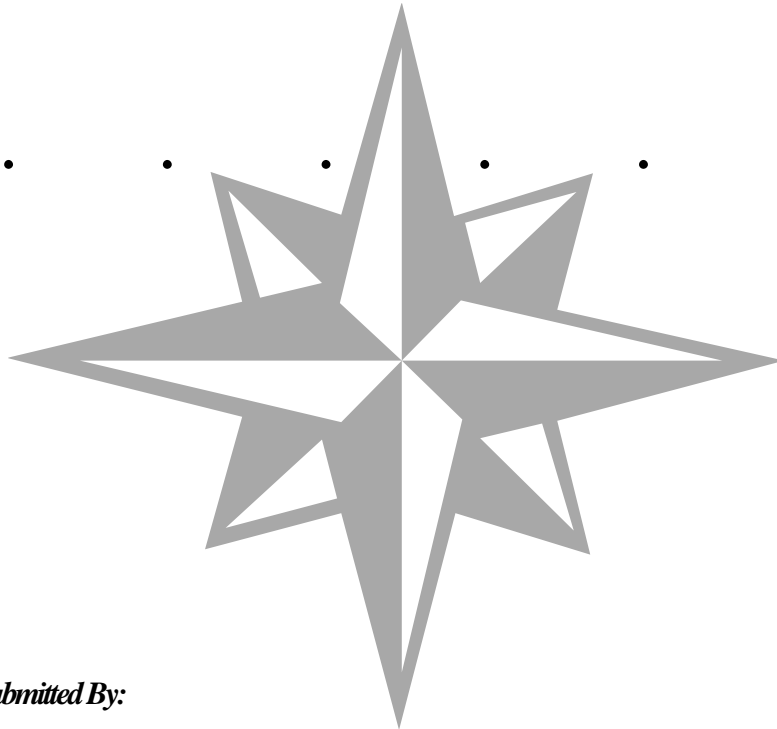


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**University of Florida  
Information Technology  
Strategic Plan Recommendations**



*Submitted By:*

***Information Technology Advisory Council --  
Network Infrastructure Subcommittee***

*February 26, 2002*

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## **Background**

This report was prepared as a result of an initiative by the Information Technology Advisory Council (ITAC) to prepare a strategic plan for the information technology resources for the University of Florida. As part of the preparation of the overall strategic plan, ITAC sought input from its various subcommittees. The strategic recommendations in this report were prepared by the members of the Information Technology Advisory Council – Network Infrastructure (ITAC-NI) subcommittee.

The subcommittee met on two occasions to brainstorm various ideas on issues, needs and goals for information technology at the university. The ideas were then classified into various categories. Several focus areas were then developed for each of the categories. The following section of this report lists the various focus areas, their associated objective, implementation strategies and the expected benefit outcome to the university.

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## Focus Area #1:

### Security of IT Resources

#### Description:

Develop plans and policies, and implement practices to provide for secure networking, computer systems and data.

#### Implementation Strategies:

1. Continue to refine UF security policy and publish widely. The security policies should not be procedural in nature, nor tied to specific technologies or software. They are the guiding principles for security and should not change often.
2. Develop suggested procedures for implementing the security policy.
  - a. These are technology-dependent, and may change fairly rapidly with evolving technology and security exploits.
  - b. Some data and systems are more sensitive than others. For example, the recommended procedures may be less stringent for a user's desktop than for a server that hosts e-commerce information such as credit card data.
  - c. Possible areas of coverage include: PKI, certificates, single sign on, password standards, middleware deployment, and antivirus protection for servers, office desktops, home desktops and email.
3. Audit campus systems on a periodic basis.
  - a. Automated auditing via software agents. Could be performed on all campus systems on a periodic basis. Results for a unit's systems should be made available to that unit's security manager via authenticated web access.
  - b. Human auditing. Given the vast number of systems on campus, perhaps a statistical sampling method could be used. If the sampled machines in a given unit are highly secure, then it could be assumed that the rest of the population is similarly secure. On the other hand, if the sampled machines are grossly insecure, then perhaps all the machines in that unit should be audited.

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4. Investigate deployment of distributed host-based IDS with centralized reporting. Use authenticated web access to allow unit security managers to view data.
5. Continue security education and awareness efforts via ITSAday, security website, mailing list, etc.
6. Evaluate the impact of VPN on campus security.
7. Establish a formal mechanism for determining what incoming/outgoing traffic filters should be applied. Who requests them? What are ramifications beyond the requesting unit? Who approves them? Reporting to the campus community at large via the manager's list.
8. Affected unit managers must be informed ASAP when security measures are taken that affect their unit's systems and/or users.

**Outcome:**

Secure networks, systems, and data.

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## Focus Area #2:

### Information Technology Infrastructure

#### Description:

Provide an IT infrastructure that effectively supports the University's mission.

#### Implementation Strategies:

- Voice:  
Implement ubiquitous IP telephony.
- Video:  
Replace existing analog cable TV system with digital video services.
- Data:
  1. Develop standards for "minimum acceptable service level." This would describe the service that should be provided – at a minimum – in any campus building. Topics covered should include wired access (e.g. switched 100mbps), wireless, etc.
  2. Periodically survey campus buildings for existing infrastructure. Identify those buildings that do not meet the established "minimum acceptable service level." Develop plans to upgrade deficient buildings.
  3. The University should provide the "minimum acceptable service level." Units that desire/require a higher level of service may pay the incremental costs to upgrade.
  4. Deploy a centralized cable management application.
  5. Deploy a consistent infrastructure in classrooms and other public facilities to facilitate nomadic users.
  6. Investigate automated inventory systems.

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7. Home access:
  - a. Collaborate with local ISPs to provide high quality connectivity to campus for faculty, staff and students (peering, etc.)
  - b. Collaborate with local ISPs to develop community-wide wireless service.
  - c. Provide user education to aid University faculty, staff and students in selecting the best ISP for their needs. This could include web sites, connectivity data for local ISPs (# hops, throughput to core, etc.), peer review of services, and even a hands-on evaluation center on campus.
8. Provide UF network managers with access to data describing traffic patterns and network performance.
9. Provide redundant access to Internet services.
10. Develop a policy for exempting units from the ubiquitous service model.

### **Outcome:**

Provides an IT infrastructure that helps units to accomplish their missions efficiently and effectively.

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### Focus Area #3:

#### Create and Enhance Technology Services

#### Description:

Develop and enhance resilient, user-friendly technical services for students, faculty and staff.

#### Implementation Strategies:

##### 1. Survey and assess existing services; identify needs:

- Gatorlink
- LDAP
- Email

##### 2. Expand and build new value-added services:

- Public Key infrastructure
- Directory
- Calendaring
- VoIP
- Unified Messaging
- Partnership for wireless (voice, data, pda)
- UF eBusiness (utilize IT in business processes)

#### Outcome:

Several beneficial outcomes from new and enhanced IT services include:

- Improved communication between students, faculty and staff.
- Standardized secure/authentication process.
- Increased awareness of available services.
- Improve productivity for community.
- Opens up new revenue streams.
- One stop shopping for IT services.

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## Focus Area #4:

### Technical Consultancy

#### Description:

Develop a campus-wide resource pool for information technology services to provide a single source support system for colleges and departmental units.

#### Implementation Strategies:

1. Identify subject matter experts throughout campus for the development team.
2. Support grant writers/non-tech management in bringing their vision to reality.
3. Increase awareness of consultancy service and market availability.
4. Develop course management tools.
5. Develop a mentoring and peer-to-peer skills development program

#### Outcome:

The outcome of this strategic recommendation will:

- Improve use of technology in course instruction
- Enhanced support in obtaining grants
- Formalizes the process of consulting support -- "one stop shopping" for consulting support



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## **Focus Area #5:**

### **UF Help Desk Support**

#### **Description:**

Enhance 24/7 help desk services for students, faculty and staff.

#### **Implementation Strategies:**

1. Implement intelligent help desk software.
2. Identify existing resources and gaps in support.
3. Develop tools to enable support staff:
  - i. PDA
  - ii. Nomadic computing
  - iii. Wireless VoIP
4. Provide user on-line tech support (self-help resources).
5. Train staff to improve customer service delivery.

#### **Outcome:**

Increased response and customer support for students, faculty and staff and increased staff productivity.

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## Focus Area #6:

### Staff Recruitment and Retention

#### Description:

Development of effective structures and methods to recruit and retain IT staff.

#### Implementation Strategies:

##### Recruitment:

1. Revise A&P hiring restrictions (remove college degree requirement)
2. Revise position descriptions for IT
3. Develop career progression
4. Develop high profile presence via hosting national level conferences, return of IT fair and virtual hosting of events.
5. Implement retention items below

##### Retention:

1. Salary Increases that are competitive to the marketplace.
2. Clear career path and opportunities.
3. Establish resources for on and off campus training and certification, meetings, seminars and professional development.
4. Access to the latest technologies.
5. More education for end-users.

#### Outcome:

The expected outcome of this strategic recommendation include:

- Low turnover of IT staff.
- Qualified, stable IT pool at UF.
- Supports the UF mission to achieve top 10 public university status.

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## Focus Area #7:

### Continuing Strategic Planning Process

#### Description:

Develop a process to continue to update the roadmap for the university's IT initiatives.

#### Implementation Strategies:

1. Continuing infrastructure review and planning needs to be put in place.
2. Integrate main campus processes with IAIMS
3. Review of operations and technologies for outsourcing and converging.
4. Develop plans for piloting new technologies and incorporate the "Chief Technologies Officer" and CIO.
5. Planning:
  - i. Establish a project planning and tracking group
  - ii. Establish mechanism for setting (task) priorities
  - iii. Establish an on-going process review (e.g. business processes – best practices)
  - iv. Solicit user input to technology planning
  - v. Setup a skunk works organization (e.g. MIT – multimedia lab)
  - vi. Make regular use of benchmarking
  - vii. Plan life cycle upgrade of classroom technology

#### Outcome:

A continuously updated strategic plan that charts the universities direction in information technology.

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## Focus Area #8:

### Synchronous and Asynchronous Learning

#### Description:

Provides resources and incentives to enable development of a comprehensive and effective synch/async-learning program.

#### Implementation Strategies:

1. Distance learning plan
2. Campus-wide wireless plan
3. Campus wide video-conferencing integration
4. Incentives for faculty and staff to use technology (work in this area counts towards tenure and promotion.)
5. Identify existing resources and target audiences
6. Coordinate network infrastructure upgrades to implement plan and keep technology current.

#### Outcome:

Facilitates the appropriate use of technology in the classroom.  
Coordinates campus wide synch/async course offerings.

Note: For the Office of Information Technology to succeed the program needs to be supported financially and philosophically providing appropriate incentives for faculty, students and staff to matriculate.

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## **Focus Area #9:**

### **Resources for Advisory Committee**

#### **Description:**

Various committees have been developed to converge the campus I.T. operations and require resources to effectively achieve these goals.

#### **Implementation Strategies:**

1. Devise a re-occurring budgeting process for the committee structure.
2. Access to appropriate administrative support for contracting, purchasing and payables.

#### **Outcome:**

- Increased access to appropriate expertise.
- Increased ability to accomplish specific tasks charged to committees.

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## Focus Area #10:

### Management Infrastructure Evaluation

#### Description:

Evaluate management infrastructure to ensure the network meets the needs of the individual units.

#### Implementation Strategies:

1. Evaluate network management: Network Services
  - Produce reports on: downtime, outage frequency and scope
  - OIT provide reports on network expenditures
2. Evaluate Network Strategies: Network Services produces reports on level of current network technology as well as report on growth and coverage of general technology for the next 18 to 24 months.
3. Evaluation of user satisfaction: Provost office will conduct annual surveys of network management satisfaction as well as general university user satisfaction.

#### Outcome:

- Statistical reports on network function
- Reports on Network cost
- Reports on user satisfaction

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## Focus Area #11:

### University Funding of IT

#### Description:

Insure a sustainable, predictable funding source for IT resources.

#### Implementation Strategies:

1. Create IT endowment fund as percentage of foundation collections.
2. Create IT representation in ERP Process.
3. Change accounting rules to provide for rental, leasing and outsourcing of IT services.
4. Create campus-wide partnerships with IT vendors, encouraging donating, gifts and special agreements.
5. Establish a 3-year technology refresh cycle. Revise the depreciation schedule to reflect actual conditions.

#### Outcome:

- Recurrent foundation funding for IT.
- Formal IT representation in ERP.
- Beneficial campus-wide programs with IT vendors.
- Increased financial flexibility.