

# **INFORMATION AND COMMUNICATION TECHNOLOGY**

## **STRATEGIC GOALS - 2006**

### **INTRODUCTION**

The ongoing radical changes in information and communication technology is changing the ways in which teaching, learning and academic research are conducted, by removing obstacles of time and place, and increasing the level of interaction in learning.

Our goals clearly seek to introduce the internet as the backbone of our architecture by migrating our client/server institutional processes to the Net, making the internet our institutional business imperative. Application integration will spearhead the automated institutional processes that promote security and availability of management systems.

Technology-supported learning is to be provided both on and off Tshwane University of Technology (TUT) campuses, and will be based on both synchronous and asynchronous communication.

Technology-driven education within Tshwane University of Technology must become innovative in the application of technology to teaching and learning, both for use on TUT campuses to improve the education that its students receive, and also for external use to share and promote the University's best to new learners.

### **GOAL 1**

Plan for the full cost of technology, including on-going replacement and support.

### **OBJECTIVES**

1. Draw an integrated technology plan.
2. Develop the plan for overall central prioritization, coordination and planning essential for multi-million rand, multi-year projects.

### **PERFORMANCE INDICATORS**

1. Divisional and departmental plans are incorporated into the ITP.

2. The plan is submitted and approved by all role-players including the EMC.
3. An overall technology cost is determined.

### **RESPONSIBLE PERSON**

Kabelo Bokala / Johann Gouws

### **TARGET DATE**

December 2005

### **FINANCIAL IMPLICATION**

Total cost of technology.

## **GOAL 2**

Build the institution architecture for a solid and robust foundation of ICT network infrastructure.

### **OBJECTIVES:**

1. Install the Virtual Private Network (VPN).
2. Implement the network/telecommunication management (TMN) model.
3. Plan for a converged telecommunications infrastructure.
4. Make the electronic borders between home, community, work place and campus invisible and at little or no additional cost over current telephone technology.
5. Implement bandwidth management.

### **PERFORMANCE INDICATORS**

1. Tender is advertised, proposals evaluated, company selected and contract drawn.
2. Proposed network topology and the project plan are submitted and approved.
3. Bandwidth allocation plan is submitted and approved.
4. Bandwidth upgrades are completed.
5. Inter-link the three main campuses.
6. Reduce telecommunication costs.

7. Deploy distributed systems and applications across campuses eg. WebCT.

### **RESPONSIBLE PERSON**

Kabelo Bokala / Herman Ohlhoff / Jan Niezen / Sundaram Chatty

### **TARGET DATE**

September 2006

### **FINANCIAL IMPLICATION**

R5 500 000.00

### **GOAL 3**

Integrate distributed systems and applications that work together successfully.

### **OBJECTIVES:**

1. Roll-out the Microsoft Active Directory (AD).
2. Increase access to information resources through the library and WWW.
3. Implement the newest version of the Integrated Tertiary Software (ITS).
4. Provide broad support for basic collaboration technologies such as Web access and email.
5. Introduce and Implement more advanced collaboration technologies that will be systematically deployed throughout TUT.
6. Provide tools that integrate intelligent knowledge acquisition systems.

### **PERFORMANCE INDICATORS**

1. Centralise management of users, applications and devices.
2. Ensure that changes are submitted by authorized users and a record is kept.
3. Single sign-on to network devices.
4. Set standards for access to information processing resources.
5. Create university and department portals.
6. Establish role-based interfaces to multiple inter/intra campus applications.
7. Monitor usage and contribution to the knowledge base.
8. Document sharing and broadcast delivery of university communication.

9. Replace nine (9) servers and consolidate some.

**RESPONSIBLE PERSON**

Kabelo Bokala / Jan Niezen / Sundaram Chatty / Cassie Steenkamp

**TARGET DATE**

March (AD) and July 2006

**FINANCIAL IMPLICATION**

Microsoft Active Directory (AD) – R3 500 000.00

Integrated Tertiary Software (ITS) version #13 – R850 000.00

Replacement of servers – R760 000.00

**GOAL 4**

Build life-cycle replacement into the ICT planning at every level of information technology investment.

**OBJECTIVES**

1. Seek ongoing input on the state of information processing resources on campuses from staff and faculty.
2. Improve the Help desk tools to meet the needs of the TUT community.
3. Continue to refine the existing ICT Services support service role through annual discussions, performance reviews and service agreements established with ICT Services.
4. Support training efforts that serve to raise the level of awareness and effective use of technology.

**PERFORMANCE INDICATORS**

1. Monitor the utilization of processors, main storage, file storage, output devices and communication systems.
2. Identify and avoid potential problems.
3. Planned appropriate remedial action.

4. Create acceptance criteria for upgrades, new versions and new information systems.
5. Upgrade the Help desk.
6. Obtain formal approval of any changes.
7. Monitor staff, faculty and student satisfaction through service level agreements.

**RESPONSIBLE PERSON**

Kabelo Bokala / Herman Ohlhoff

**TARGET DATE**

June 2006

**FINANCIAL IMPLICATION**

R375 000.00

**GOAL 5**

Establish an Information Security Unit.

**OBJECTIVES:**

1. Draw the information security architecture.
2. Consolidate information security policies and procedures.
3. Develop an action plan for information security improvement at TUT.
4. Align controls with the security requirements of the university.

**PERFORMANCE INDICATORS**

1. Gauge the level of emphasis that management is placing on controls and security through a questionnaire.
2. Appoint an Information Security manager.
3. Schedule regular unit meetings to address security issues.
4. Publish security incidences and weakness.

**RESPONSIBLE PERSON**

Kabelo Bokala / Information Security Manager

**TARGET DATE**

April 2006

**FINANCIAL IMPLICATION**

R450 000.00

**GOAL 6**

Enhance Partnerships with Staff, Faculty and Students.

**OBJECTIVES:**

1. Create a technology environment that accommodates inter-operability.
2. Create fora to discuss solutions and information sharing in a more partner-friendly way.
3. Seek ongoing input from faculty, students and divisions on campuses through the ICT fora and its sub-committees.

**PERFORMANCE INDICATORS**

1. Visible support and commitment to set policies and procedures.
2. Effective marketing of ICT services to all heads of directorates and divisions.
3. Hold inter-departmental progress evaluation meetings.
4. Evaluate ICT Services performance and feedback suggestions for improvement.

**RESPONSIBLE PERSON**

Kabelo Bokala / ICT Services management team

**TARGET DATE**

January 2006

**FINANCIAL IMPLICATION**

None

## **GOAL 7**

Recruit and retain the technical staff needed to support ICT at all campuses.

### **OBJECTIVES:**

1. Review the compensation levels for technology staff in all ICT Services divisions and sections on all campuses.
2. Ensure that technical support is available at the levels needed by staff, faculty and students.
3. Improve upon the skills of the technical staff through training.
4. Encourage the creative use and application of information and communication technology.
5. Continuously try experimentation with discipline-specific and peer education, with appropriate ICT Services staff involving departmental support staff and/or technologically aware faculty in a department or cluster of departments to develop appropriate training for staff.
6. Introduce a balanced system of measurement which is used to evaluate staff performance and suggestions for improvement.

### **PERFORMANCE INDICATORS**

1. Institute leadership shadowing, job rotation and cross training.
2. Evolve new career paths.
3. Expand the skill sets of ICT Services staff.
4. Educate and train staff.
5. Establish appropriate incentives and support.

### **RESPONSIBLE PERSON**

Kabelo Bokala / ICT Services management team

### **TARGET DATE**

June 2006

### **FINANCIAL IMPLICATION**

R750 000.00

## **GOAL 8**

Guard against interruptions to university business processes and activities from the effects of major failures and disasters.

### **OBJECTIVES**

1. Develop plans to maintain and restore university business operations.
2. Implement a Business Continuity Management process throughout TUT.
3. Reduce disruptions and failures caused by security lapses and disasters to acceptable levels.

### **PERFORMANCE INDICATORS**

1. Draw a business continuity plan and the Universal Recovery Methodology.
2. Institute a combination of preventative and recovery controls.
3. Formulate and document the business continuity plans in line with the agreed university strategy
4. Conduct regular testing and updating of the plans.
5. Secure an office recovery facility through outsourcing.
6. Set objectives, a check list and testing the recovery of the systems.
7. Document the testing and conduct a post test evaluation.

### **RESPONSIBLE PERSON**

Prof. Johan Pretorius / Kabelo Bokala

### **TARGET DATE**

January 2006

### **FINANCIAL IMPLICATION**

R320 000.00

## **GOAL 9**

Ensure and monitor the Quality of Services rendered by ICT Services.



**OBJECTIVES:**

1. Establish the Quality Assurance sub-committee.
2. Ensure that quality is inherent in activities of the directorate.
3. Run a quality awareness program for all ICT heads of divisions and sections.

**PERFORMANCE INDICATORS**

1. Information and communication processing facilities are restricted to authorized persons only.
2. All policies and procedures emanating from divisions and sections are written and made available.
3. Policies and procedures governing usage are communicated to the TUT community before implementation.
4. Standards are set for usage of information and communication resources.
5. Attend workshops/conferences organized by the Quality Assurance directorate.
6. Regularly liaise with the Quality Assurance directorate.

**RESPONSIBLE PERSON**

Prof. Johan Pretorius / Kabelo Bokala / ICT Services management team

**TARGET DATE**

January 2006

**FINANCIAL IMPLICATION**

None

## **TELECOMMUNICATION MANAGEMENT NETWORK MODEL**

There will be both technical and organizational challenges which must be addressed through the implementation process, as network management systems and roles will need to adapt to this new model.

