



# Information Technology Enterprise Strategic Plan

**Presented to the Technology Committee of the Board of  
Trustees**

**April 18, 2006**



# Project structure

- IT Advisory Committee of campus leadership
- 5 regional open forums for campus input
- Leadership Council involvement
- Assisted by In-Sight Consulting firm



# Future state

- “Best in class” educational support services
- Integrated, seamless core administrative services
- Strong, flexible statewide technology backbone



# Long range enterprise IT goals

- Achieve and sustain continuous reliability and integrity of essential Information Technology services
- Introduce innovations – new systems or major improvements to existing systems – that directly and significantly increase MnSCU’s competitive strength
- Enhance current systems to extend their benefits in ways that are important but only indirectly related to competitive strength



# Recommended strategic goals

- #1 – Achieve significant improvements in IT capacity, reliability and availability.
- #2 – Achieve significant improvements in IT system usability and user training and support.
- #3 – Substantially improve capacity to implement innovative IT solutions to administrative and academic process issues.
- #4- Invest resources needed for fast implementation of needed business process improvements through the application of technology.
- #5- Achieve significant improvements in educational outcomes due to the transformative application of technology.



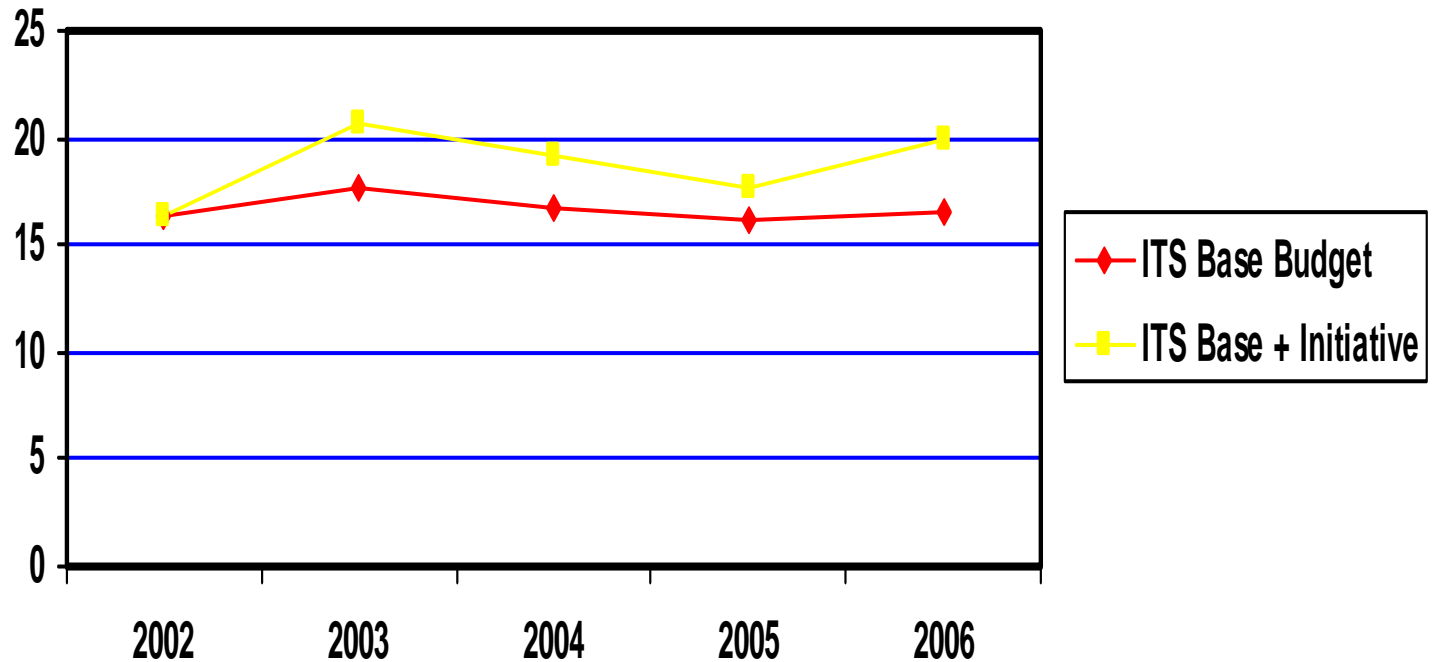
# Strategic imperative for action

- IT strength underpins entire MnSCU strategic plan
- Profusion of technology mediated learning
- Growing student expectations
- Increasing numbers of multi-institutional students
- Recent federal financial aid rules changes increasing competition from private online providers



# ITS Historical Budget Essentially Flat

## ITS Budget Levels





# Enterprise IT Growth Demands

Table 2. Rapid Growth in **Enterprise** IT Scale and Complexity

	FY2000	FY2006	% Change
Enterprise Software Applications	9	17	89%
Production Database Rows of Data	400 M	1.2 B	200%
Lines of ISRS Programming Code	2.5 M	4 M	60%
Central Servers With Critical Functions	30	112	273%
Servers with 24/7 Operations	15	90	500%
Network Bandwidth	24 Mbps	300 Mbps	1,150%
Network Hardware Devices	100	350	250%
ITS Staff Positions	121	115	(5%)



# Risks of Critical Deficiencies

- Continued and increasing IT service outages at campuses resulting in:
  - Inability for students to register at peak times
  - Inability for faculty and students to access e-learning courses and development tools
  - Loss of customer satisfaction
  - Loss of market share
  - Administrative services lag competitors
  - In the event of a disaster, NO IT services available for several weeks because of lack of backup facilities



# Peers spending more for Enterprise IT

- Limited, but compelling, comparative data
- National research suggests 4-5% of organizational budget for Enterprise IT; MnSCU spending less than 1.4%
- Study research found range of \$116 - \$1069 per FYE in Enterprise IT spending
- MnSCU Enterprise IT spends \$56 per FYE



# Investment Plan Elements

- Enterprise IT Stabilization
  - Total annual investment of \$35M in FY 2007
  - Total annual investment of \$45M in FY 2008
  - Total annual investment of \$35M in FY 2009
- Innovation Initiatives
  - Annual additional investment of \$5M in 2008
  - Annual additional investment of \$25M in 2009



# Enterprise IT Stabilization

- What will this investment buy?
- To achieve and sustain high levels of system availability for D2L and ISRS we will:
  - Purchase more hardware to keep up with growth and improve performance
  - Continue outside expert analysis of system load capacity and implement improvements as recommended
  - Purchase additional software licenses needed to improve capacity
  - Purchase, build and implement state of the art monitoring tools that provide early warning of performance problems
  - Implement 3<sup>rd</sup> shift coverage and backup staff for days, nights and weekends to ensure 24x7x365 system availability



# Enterprise IT Stabilization

- What will this investment buy?
- To achieve a stable and available statewide network we will:
  - Seek outside experts to review and make recommendations for improving our current network architecture
  - Add a network architect and staff to implement the recommendations to secure and optimize our network
  - Purchase additional state of the art network management and monitoring tools to stability and 24x7 availability
  - Purchase additional bandwidth to ensure adequate capacity
  - Continue to purchase redundant network paths to provide for continued network availability when accidental fiber cuts occur



# Enterprise IT Stabilization

- What will this investment buy?
- To stabilize and improve our Server support operations we will:
  - Add qualified staff to provide Oracle and Microsoft SQL Server Data Base Administration and backup
  - Add qualified staff and improve our training to ensure proper support for D2L, DARS/CAS, ISEEK etc. and improve the availability and reliability of those systems
  - Provide additional training and develop the skill sets of all server support staff so that operational problems with systems are identified and fixed before a crisis occurs



# Enterprise IT Stabilization

- What will this investment buy?
- To eliminate the risks inherent in our current reliance on obsolete technical platforms, we will:
  - Outsource the conversion of ISRS from the Rdb database to Oracle
  - Outsource the conversion of the ISRS presentation layer from Uniface to J2ee
  - These conversions will avoid ongoing licensing costs and ensure that we will not be caught short when support for these soon to be shelved products is dropped by the vendor
  - Plan and implement a disaster recovery strategy and physical site



# Enterprise IT Stabilization

- What will this investment buy?
  - To improve our systemwide security environment, we will:
    - Replace existing outmoded firewalls and other hardware with state of the art equipment
    - Significantly accelerate the implementation of our systemwide Security Program
    - Acquire and install a proactive security assessment and development tool
    - Acquire and install on all campuses servers that will encrypt data and ensure the security of the data warehouse environment
    - Implement a systemwide identity management system



# Improve ITS organization

- Institute best practice management protocols, implement ITIL international standards
- Re-design current IT governance committees
- Build capacity for multi campus technical and purchasing initiatives



# Innovation initiatives

- Accelerate enhancement, expansion and integration of enterprise systems
  - Rapidly address alignment issues
  - Apply modern and user-friendly web interfaces across all student services
  - Study future of administrative operating systems
  - Implement “smart systems” tools for student services



# Financing recommendations

- Three elements:
  - Base funding – currently \$20M/year
  - Additional stabilization funding - additional \$20M/year by FY2008
  - Innovation funding – additional \$20M/year by FY2009



# Phased financing strategy

- Re-allocate system resources in order to finance FY2007 investment of \$15M
- Seek Legislative support of \$30M next biennium
- Consider system wide charge of \$20M/year starting in FY2008



# Next steps

- Board discussion/direction on recommendations
- Incorporation into FY2007 work plan
- Identification of FY2007 system financing
- Development of detailed action plans with deadlines and outcomes