



**TECHNOLOGY COMMITTEE
JULY 21, 2010
8:30 a.m.**

**BOARD ROOM
WELLS FARGO PLACE
30 7TH STREET EAST
SAINT PAUL, MN**

Please note: Committee/Board meeting times are tentative. Committee/Board meetings may begin up to 45 minutes earlier than the times listed below if the previous committee meeting concludes its business before the end of its allotted time slot.

Committee Chair David Paskach calls the meeting to order.

- (1) Vice Chancellor Overview Process (pp 1-6)
- (2) Students First Update (pp 7-11)
- (3) Brief Primer on Information Technology Services (pp 11 - 35)
- (4) Discussion of Committee Goals

Members

David Paskach, Chair
Christopher Frederick, Vice Chair
Cheryl Dickson
Jacob Englund
Phil Krinkie
James Van Houten
Michael Vekich

Bolded items indicate action required.

**MINNESOTA STATE COLLEGES AND UNIVERSITIES
BOARD OF TRUSTEES**

Agenda Item Summary Sheet

Committee: Technology Committee

Date of Meeting: July 21, 2010

Agenda Item: Vice Chancellor Overview Process

- Proposed Policy Change Approvals Required by Policy Other Approvals Monitoring
- Information

Cite policy requirement, or explain why item is on the Board agenda:

Vice Chancellor Darrel Huish will provide information on the overview process used to gather information since he joined the Minnesota State Colleges and Universities system in April.

Scheduled Presenter(s): Darrel Huish, Vice Chancellor – Chief Information Officer

Outline of Key Points/Policy Issues:

Background Information:

Darrel Huish, vice chancellor for information technology services/ CIO assumed this role in April of 2010.

**BOARD OF TRUSTEES
MINNESOTA STATE COLLEGES AND UNIVERSITIES**

INFORMATION ITEM
VICE CHANCELLOR OVERVIEW PROCESS

BACKGROUND

Vice Chancellor Darrel Huish will provide information on the overview process used to gather information since he joined the Minnesota State Colleges and Universities system in April.



Vice Chancellor's Overview Process

- **Vice Chancellor's initial report**
Darrel Huish

Slide 1



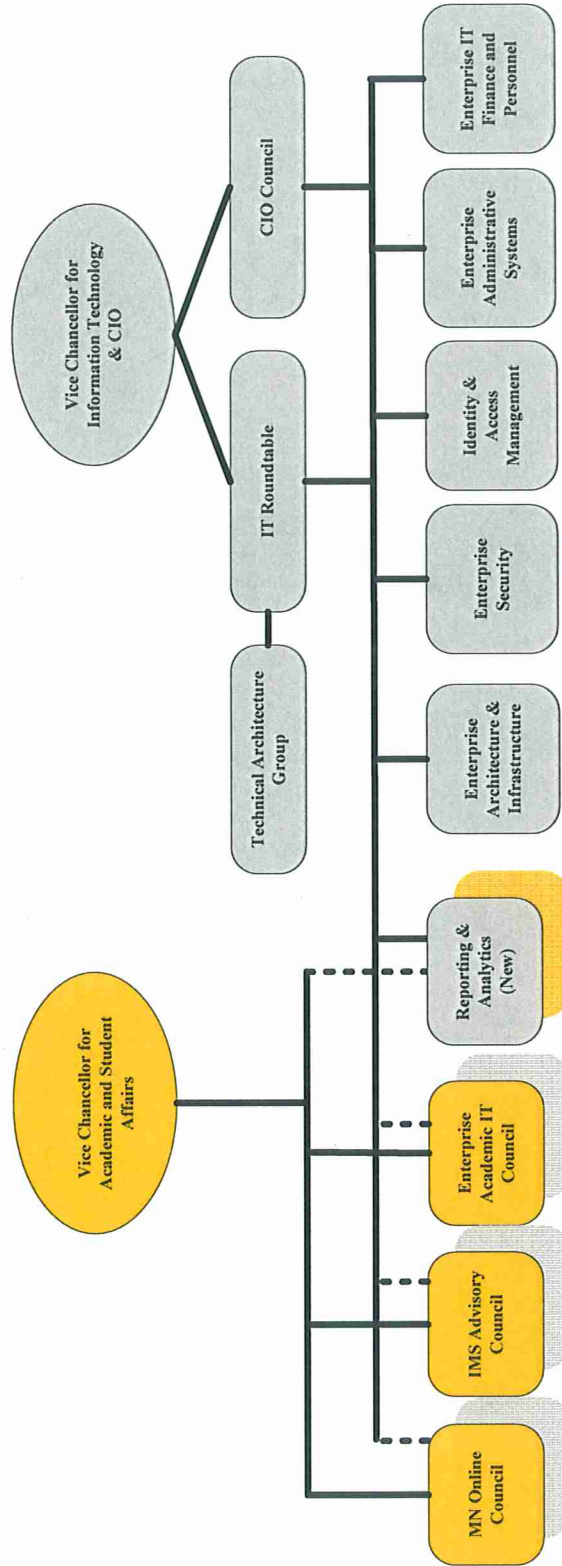
It's a big system: initial activities

- Trustees
- Presidents, campus visits, Chancellor's cabinet
- Student leadership
- Faculty leadership
- System CIO's (Chief Information Officers)
- ITS leadership
- ITS staff
- External partners (e.g. UM and Office of Enterprise Technology)
- Strategic vendors

Slide 2



Governance and decision-making





Compliance – on the right track

- Response to Office of Legislative Audit
 - Excellent progress with reducing reliance on 3rd party consultants including contract oversight
 - Just beginning to improve process for prioritizing IT projects
- Significant improvements with prior audit findings
 - Have implemented a system to track the findings, responses, and up-to-date status
 - Implementing new software and processes to improve user access controls

Slide 4



Hallmarks and Opportunities

- Align
 - Strategic goals
 - Action plans
 - Institutional initiatives
- Use portfolio management
 - Comprehensive
 - Inclusive
 - Seeking architectural solutions (hybrid of build and buy)
 - Transparent

Slide 5



Hallmarks and Opportunities (cont'd)

- Communicate
 - Transparent
 - Timely
 - Constructive
- Assess and articulate the business value of ITS
- Embrace our role as citizens of the system
 - Service and leadership
 - Risk assessment and management
 - Fiscal responsibility

Slide 6



Hallmarks and Opportunities (cont'd)

- Focus upon customer service and campus awareness
- Strengthen ITS strategic planning
- Ensure ongoing reasons for all to continue to be proud of ITS' contributions

Slide 7

**MINNESOTA STATE COLLEGES AND UNIVERSITIES
BOARD OF TRUSTEES**

Agenda Item Summary Sheet

Committee: Technology Committee

Date of Meeting: July 21, 2010

Agenda Item: Students First Update

Proposed
Policy Change

Approvals
Required by
Policy

Other
Approvals

Monitoring

Information

Cite policy requirement, or explain why item is on the Board agenda:

Information will be presented on the system-wide Students First initiative.

Scheduled Presenter(s): Jonathan Eichten, Students First Director

Darrel Huish, Vice Chancellor – Chief Information Officer

Outline of Key Points/Policy Issues:

Students First embodies projects in several key areas of student services, including application, registration, billing, payment, academic planning, and shared services.

Background Information:

Jonathan Eichten assumed the Students First Director role on July 1, 2010.

**BOARD OF TRUSTEES
MINNESOTA STATE COLLEGES AND UNIVERSITIES**

INFORMATION ITEM
STUDENTS FIRST UPDATE

BACKGROUND

Information will be presented on the system-wide Students First initiative.



Students First Update

- **Initial report as new Students First Director, Dr. Jon Eichten**
- **Transition from Dr. John O'Brien**

Slide 1



Guiding Principles

- Deliver tangible benefits in a short time frame
- Understandable and uniform student services
- Capture data only once
- Improve operational efficiency
- Communicate and assess progress

Slide 2



Project Management Process

- Defining needs completed
- First tier policies and procedures established
- Deliverables moving forward in various phases of software development
- Testing and implementation protocol prepared

Slide 3



Key Milestones To Date

- Single Search alpha website tested
- E-transcripts for transfer students completed
- Student applicants merge of duplicate records completed
- redLantern graduation planner selected to be purchased
- Course waitlist with email functionality completed
- Financial aid loan certification software development started

Slide 4



Campus Preparedness Plan

- Each deliverable will be analyzed for action
 - Campus support
 - Office of the Chancellor support
 - Business practices
- Communication plan for campuses

Slide 5



Next Steps

- Keep informed at www.studentsfirst.project.mnscu.edu

Slide 6

**MINNESOTA STATE COLLEGES AND UNIVERSITIES
BOARD OF TRUSTEES**

Agenda Item Summary Sheet

Committee: Technology Committee

Date of Meeting: July 21, 2010

Agenda Item: Brief Primer on Information Technology Services

- Proposed Policy Change Approvals Required by Policy Other Approvals Monitoring
- Information

Cite policy requirement, or explain why item is on the Board agenda:

The purpose of this brief Primer on Information Technology Services is to provide an overview of Information Technologies:

- a) Functional areas
- b) Budget
- c) Major accomplishments of FY10
- d) Work plan for FY11

Scheduled Presenter(s): Darrel Huish, Vice Chancellor – Chief Information Officer
Carolyn Parnell, Chief Operations Officer

Outline of Key Points/Policy Issues:

Background Information:

**BOARD OF TRUSTEES
MINNESOTA STATE COLLEGES AND UNIVERSITIES**

INFORMATION ITEM
BRIEF PRIMER ON ITS

BACKGROUND

Brief Primer on Information Technology Services

- a) Functional areas
- b) Budget
- c) Major accomplishments of FY10
- d) Work plan for FY11



Brief Primer on Information Technology Services

- **ITS Organization**
- **Functional Areas**
 - Enterprise ISRS Software
 - Portfolio Management
 - Infrastructure
 - Data Management & Reporting
 - IT Finance and Administration
 - Information Security
 - MnSAT



- **Enterprise ISRS**
 - Design, Development, Support and Integration
 - Application architecture, tools and technologies
 - Quality Assurance
 - Production Support
 - Help Desk
 - Customer Support
 - Integration with 3rd party systems and software



- **Portfolio Management**
 - Project management for EIC and internal IT
 - Project reporting and budget tracking
- **Data Management and Reporting**
 - Data Warehouse
 - Replicated Database and servers
 - Report and query services for research
 - Report and query services for institutions
 - Student, course and program analytics



- **Infrastructure**
 - Wide area network and campus internet access
 - Primary and secondary data centers
 - Server, OS and network hardware management
 - Security firewalls
 - Enterprise database management
 - Enterprise data storage
 - Data backups
 - Enterprise academic system support
 - Identity and access management
 - OOC support (desktop, LAN, video conferencing)
 - Web site design, maintenance and support

- **IT Finance and Administration**

- Administrative and governance support
- Budgeting
- Financial reporting
- Technology purchasing
- ITS space lease management
- ITS contract management
- HR support





- **Information Security**
 - Security program design and development
 - System security risk assessment and mitigation
 - Design and training for info security best practices
 - Guidelines for information security assurance
- **MnSAT**
 - Develop video media for OOC and campuses
 - Offer video/audio feed for various media outlets



2006-2010 Review

- In 2006, MnSCU leadership recognized the need to develop a long-term strategy for IT investments
- Obtained an objective, third-party assessment and recommended investment plan
- Resulted in the development of the “2006 ITS Investment Strategy Report”
 - Fed into the operating budget development process
 - Basis for the FY08-FY09 Legislative funding request
- Garnered wide support from students, faculty and staff
- Approved by Board and Presidents



Legislative Request

Four Major Goals:

- Provide easy and reliable access to the technology network and tools, including round-the-clock availability for students, faculty and staff
- Significantly enhance protection against security breaches
- Modernize software for student records, finance and human resources to streamline access and provide up-to-date functionality
- Make it easier and faster for students, faculty and staff to complete computer-related tasks

Through:

- Strengthening technology network foundation
- Enhancing local campus networks and wireless networks
- Improving security and identity management
- Upgrading and expanding online services to all users

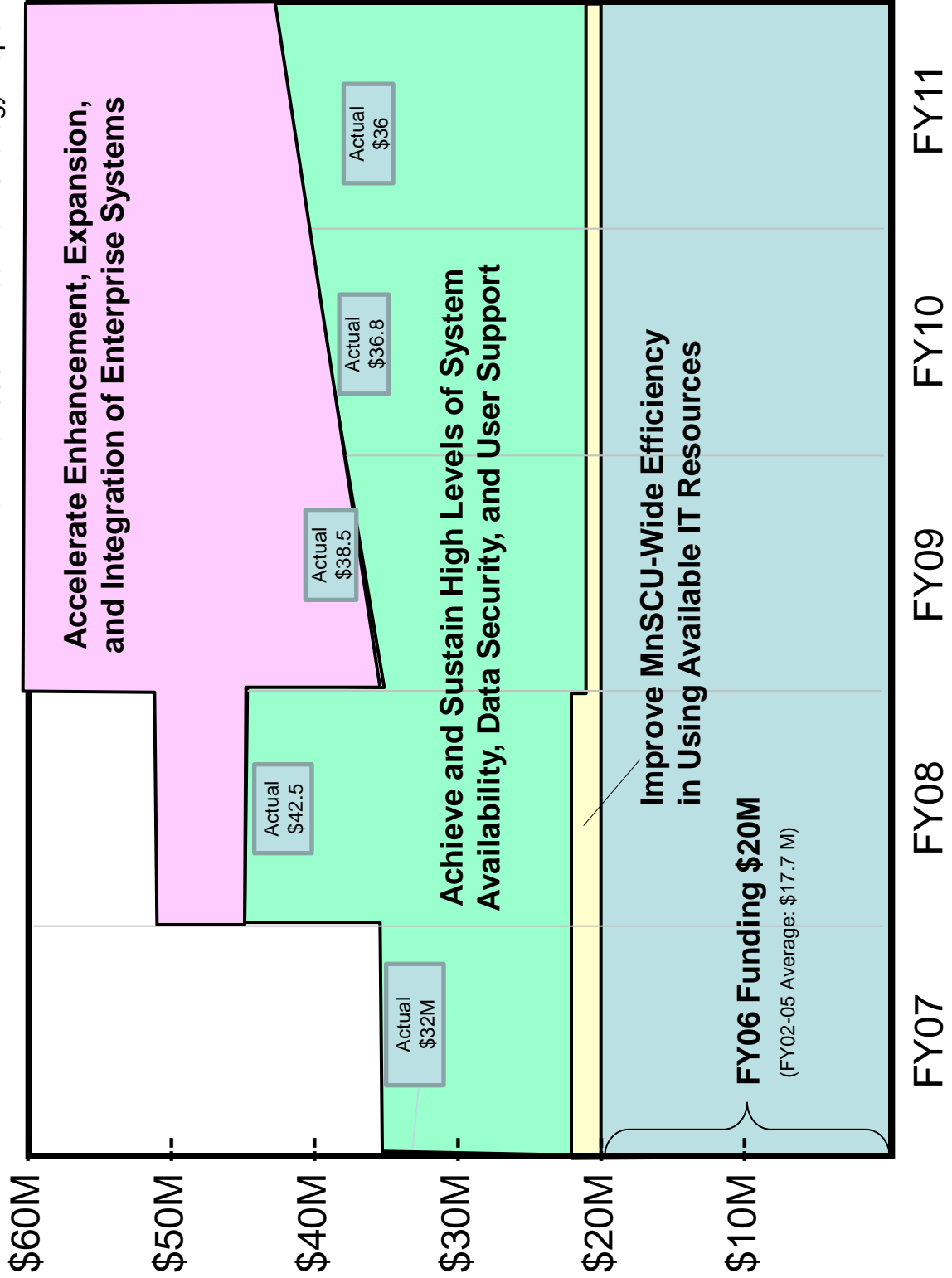
By Investing In:

- Replacement of aging technology infrastructure
- Hiring staff with sophisticated IT skills to re-engineer networks and tools
- Improving campus technology infrastructure



Recommended IT Investment Strategy

From the 2006 IT Investment Strategy Report



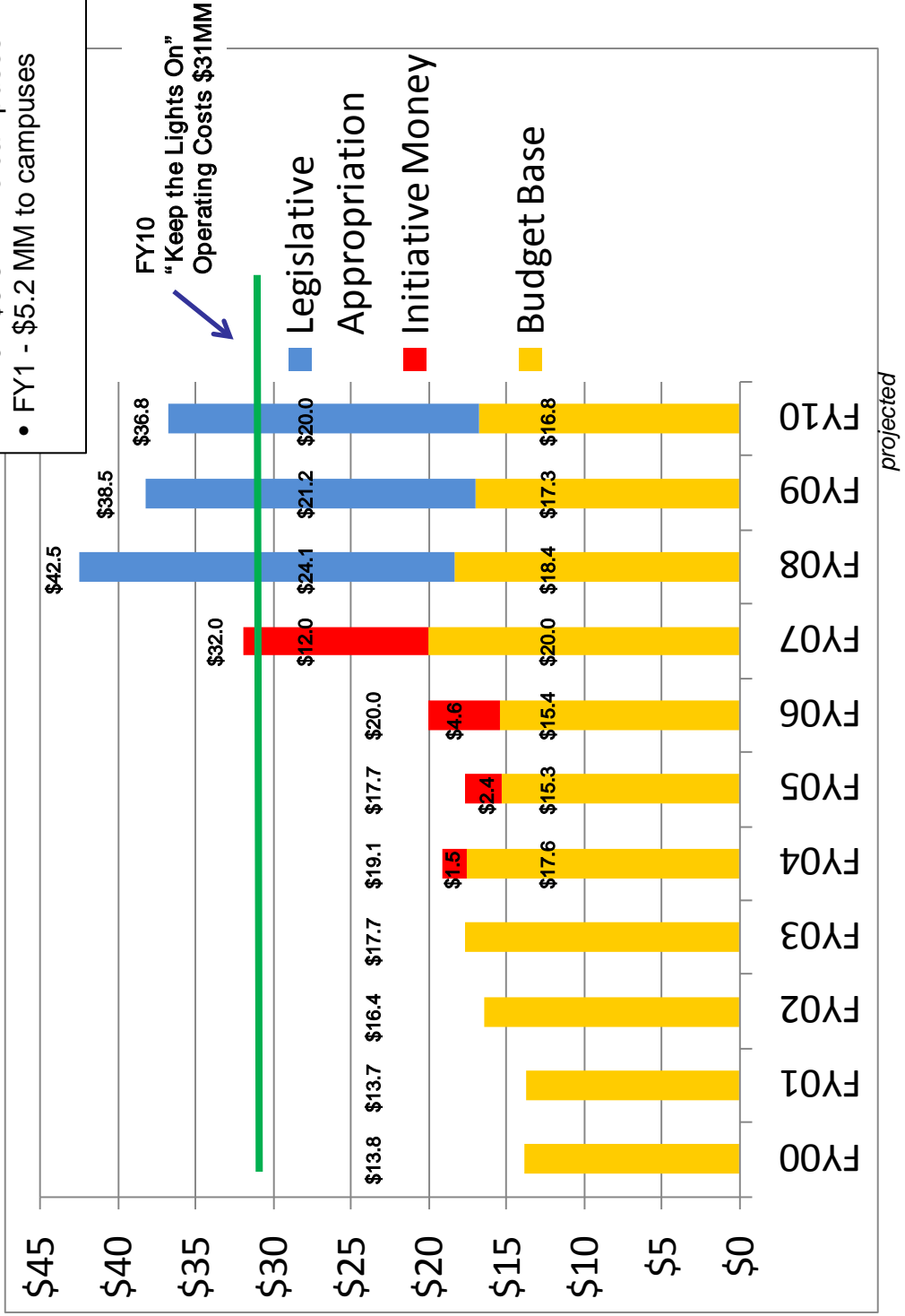


Enterprise Technology Funding

Excludes the following:

- FY08 - \$5.0 MM to campuses
- FY09 - \$7.5 MM to campuses
- FY10 - \$5.3 MM to campuses
- FY11 - \$5.2 MM to campuses

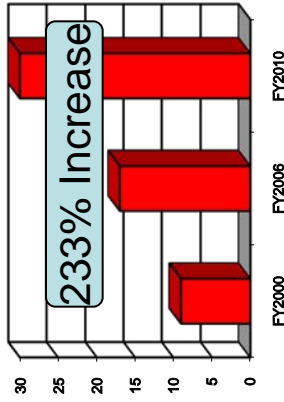
\$ Million



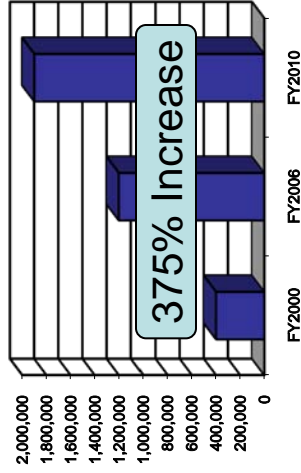


ITS Metrics Comparison FY2000 – FY2010

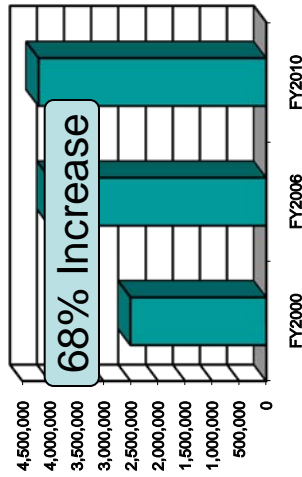
Enterprise Software Applications



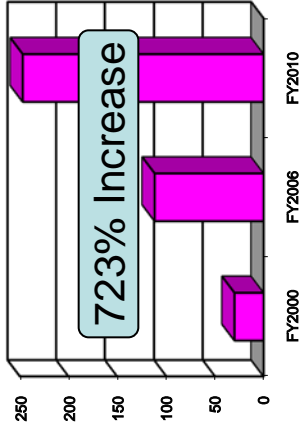
Production Database Rows of Data



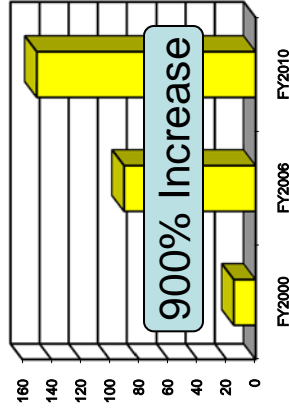
Lines of ISRS Programming Code



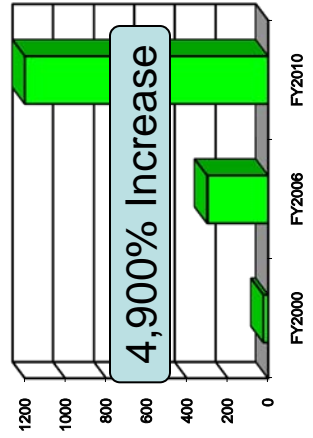
Critical Function Central Servers



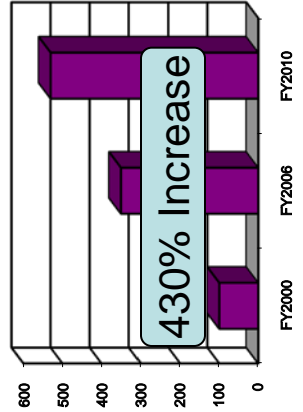
Servers with 24/7 Operations



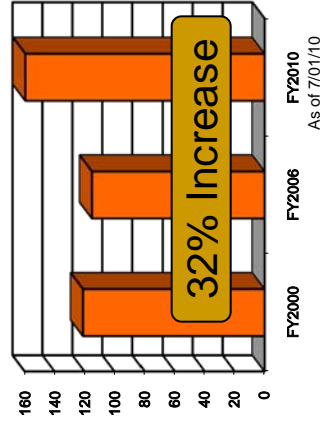
Network Bandwidth (in Megabits per second)



Network Hardware Devices



ITS Staff Positions





Benchmarks

- In FY2006 MnSCU enterprise level IT spending lagged comparable institutions

	FY2006 MnSCU	FY2006 Average of 5 Other Institutions	FY2010 MnSCU
Campuses	53	9	54
Student Headcount	373,115	93,354	382,061
Total Operation Budget	\$1.4B	\$2.2B	\$1.8B
Enterprise Level IT Expenditures	\$17.7M	\$21.8M	\$36.8M
% of Total Operating Budget	1.3%	1.25%	1.94%
\$ Per Student	\$47	\$793	\$96
\$ Per Campus	\$0.32M	\$4.9M	\$0.68M

Source: 2006 Enterprise and Campus IT Investment Survey of Selected Higher Education Systems



Completed Projects – 2007-2009

“Establishing a strong technology foundation to build upon”

- Diploma transfer for H.S. Students
- REGIS
- ISRS Communications Module
- GPS Lifeplan
- eFolio
- Gaming and Simulation Development
- Continued Learning Objects Development
- iSeek Business Solutions
- Web Aid Apply, Failure Notification, Last Date of Attendance, Satisfactory Academic Progress
- Online Library Access and Development
- DARS/CAS
- Student Housing Module Rewrite
- Farm and Small Business Management Web Sites
- Star Alert
- Faculty Credentialing
- Electronic Medical Records/ATHENS
- Seamless Core - Data
- eTranscript
- Fall Readiness Program
- Security Training for Campus Technical Staff
- Action Analytics
- PCIDSS Standards

Students, Faculty & Staff Innovation

- PMO
- Refine and ratify IT governance
- Update Website Design/Collage
- Identity and Access Management
- CAP Application Migration
- Quality Assurance Improvements
- APPS
- Unifier
- Campus Reporting Enhancements
- Primsys
- Budget Module
- APPS Project – BI Improvement
- Unifier/PMIS Integration
- Reporting Enhancements for Campuses
- Budget Module Phase I & II
- eTimesheets
- Reporting Enhancements for Campuses
- Applicant Tracking
- Public Affairs Next-Generation Web Site
- Support Labor Relations and Grievance Management
- Total Compensation Module
- Classification and Compensation
- Tuition Waiver App
- QA Operationalized
- Web App Security Pilot

Enterprise-wide Enablement

- Redundant Network Paths
- Hardware upgrade –Tape Library
- Hardware upgrade – Storage Area Network
- Failover Capability D2L
- Enterprise Performance Monitoring Tools
- Secondary Data Center
- Firewall Replacement
- Security Event Monitoring
- Security Assessment Instruments
- Vulnerability Management
- Incident Response
- RDT to Oracle Conversion ISRS
- Oracle Conversion Replication Database
- Uniface to J2EE Conversion – HR
- ISRS Load/Capacity Performance Tests
- WAN Router Upgrade (40 Routers)
- Bandwidth Increase
- Upgrade Logging/Analysis for WAN and Data Center

Core Infrastructure



FY10 ITS Budget

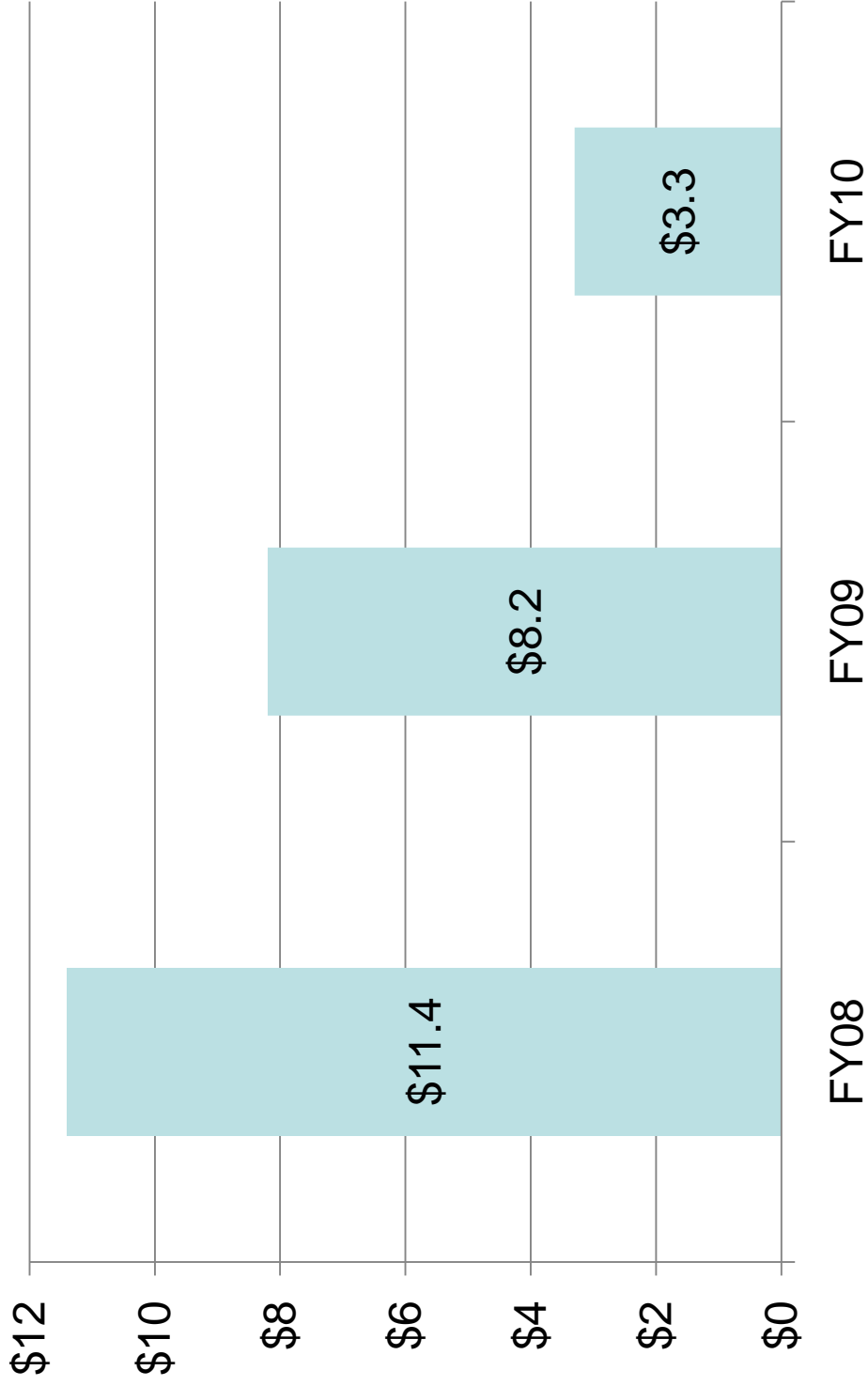
Services	Total Expenses 2009 ¹	% of Total
Direct to Students	\$ 10,391,000	25.2%
System Office (OOC)	\$ 3,385,000	8.2%
Institutions/Campuses	\$ 24,506,000	59.4%
State of MN	\$ 393,000	1.0%
<u>Beyond Students</u>	<u>\$ 2,548,000</u>	<u>6.2%</u>
Totals	\$ 41,223,000	100.0%

¹ Total Includes Funds Carried Over From FY08.



Use of Outside Contractors

Spending on Contractors (Millions)

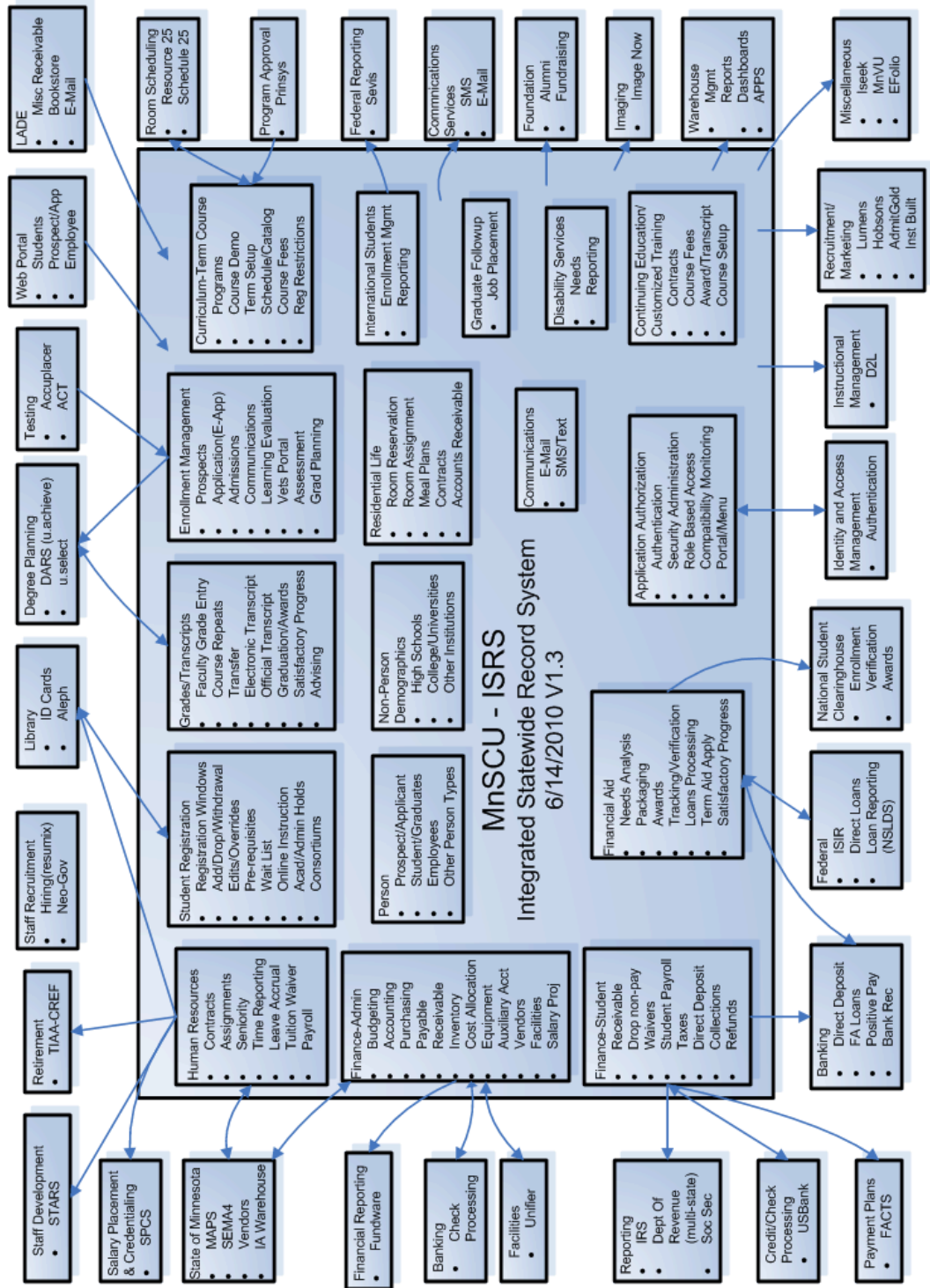




EIC Approved Work Plan FY2010

Project	Funding Allocation
Action Analytics	\$ 215,000
Identity and Access Management	\$ 800,000
Secondary Data Center	\$ 750,000
Security Program	\$ 500,000
Students First	\$ 1,500,000
Total FY10 Enterprise ITS Investment Funding	\$ 3,765,000

ISRS Environment





ISRS Features

- One of the largest single higher education databases in the country
- 1.7 billion rows of data
- Handles up to 50,000 simultaneous queries per second
- Processes more than 100,000 transactions per hour
- Manages a database of information on more than 6 million unique persons
- Processes over 27 million financial transactions each year
- Produces the payroll for 22,000 student employees and manages the HR/Payroll for 45,000 employees
- Runs more than 1000 user defined jobs each night
- Manages set up and registration for more than 3 million courses each academic year
- Processes hundreds of millions of dollars in student tuition and fee payments
- Processes \$169,000,000 in credit card payments each year
- Distributes more than \$941,565,000 to students for scholarships, loans and aid
- “Serves up” 2 million web application pages in a single day
- Produces almost 12,000 reports per day for ISRS users during prime time alone, and over a quarter million report and batch jobs each month
- Produces 247,000 1098s in a typical year
- Accounts for 28.5 billion dollars of financial activity in a year



ISRS Modules

- Prospective Inquiry
- Application
- Admissions
- Registration
- Student Housing
- Assessment/Test Scores
- Disability Services
- Transcript
- Grades
- Curriculum
- Financial Aid
- Accounting
- Budgeting
- Financial Reporting
- Purchasing
- Payroll
- Cost Allocation
- Equipment/Fixed Assets
- Inventory
- Assets
- Accounts Payable
- Direct Deposit
- Check Writing
- Accounts Receivable
- Collections
- Online Payment
- Payment Plan Interface
- Prepayments
- Third Party Billing
- Tuition Waiver
- Timesheet
- HR Licensure
- HR



ITS 2009 KDV Security Audit

Finding:

- Significant deficiencies leading to material weakness due to inaction on prior audit items

Plan for Resolution:

- Assign responsibility for each prior finding (completed)
- Rigorous review monthly with accountability for action plan and time to resolution
- Written progress report to the Chancellor monthly



Looking Forward – FY11

- Cognizant of current economic environment and ongoing budget constraints
- Continuing pressure from Legislature and Board to further improve efficiency and effectiveness of operations
- Continue to implement solutions that benefit students, faculty and staff
- Continue measurement, transparency, accountability



Looking Forward – FY11

Strengths:

- Key technical infrastructure improvements have now positioned the organization to undertake projects that will provide even greater benefits to students, faculty, staff
- More appropriate staffing and accompanying skill-set upgrades
- Broad support for Students First

Challenges:

- Budget constraints and reduction
- Demand continues to escalate – both in quantity of requests and size of scope
- Competing demands for resources
- Delivery and support of new services directly impact the ongoing ITS budget
- The cost to ‘keep the lights on’ will increase every year (currently \$31M)