



# IT Service Investment Board

November 13, 2012

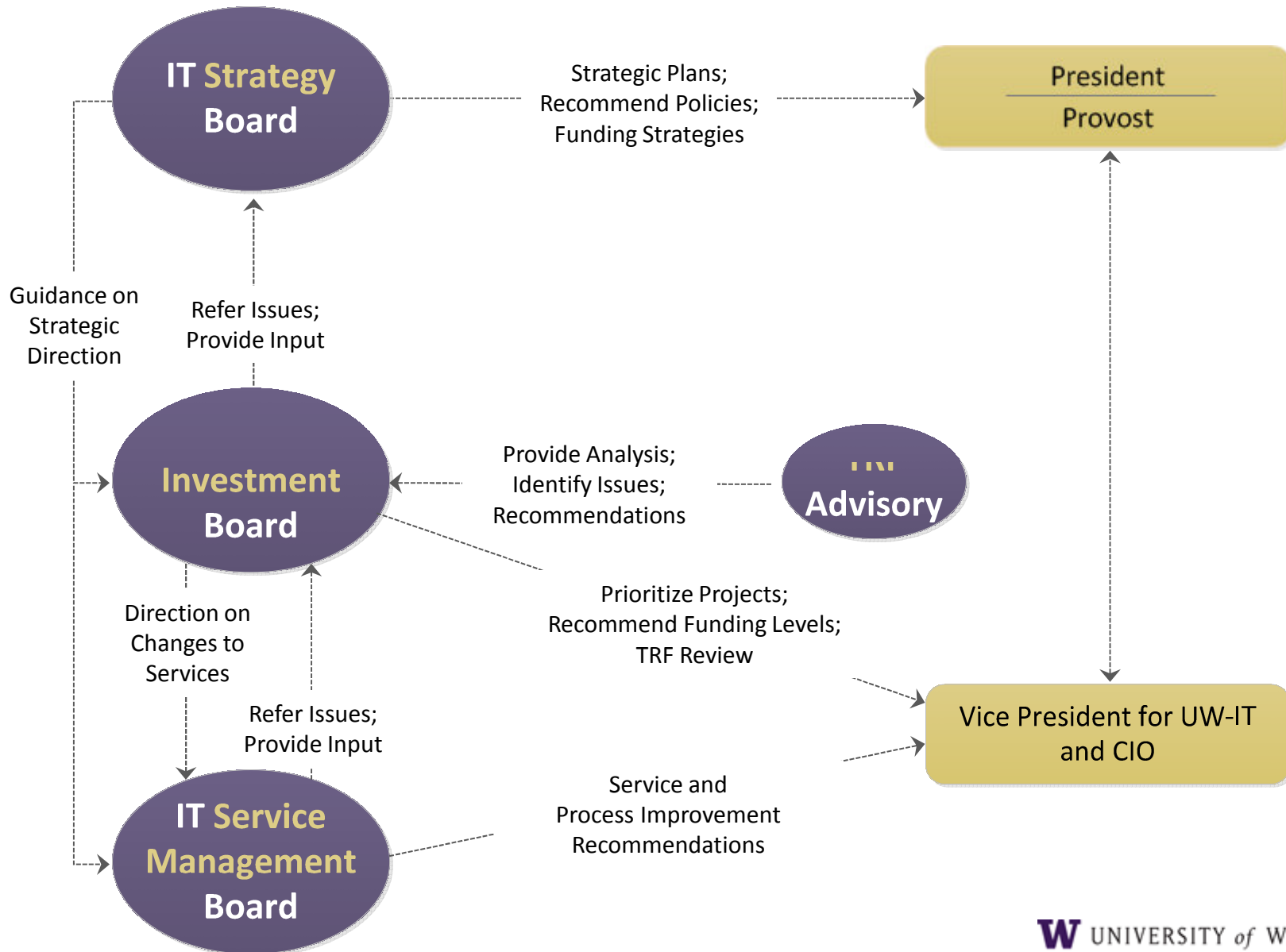
UNIVERSITY *of* WASHINGTON



# Agenda

- Technology at the UW
- Technology Recharge Fee Advisory Committee Update
- FY 2014 Investment Opportunities

# Information Technology (IT) Governance



# IT Governance Membership

## IT Strategy Board

<b>Thomas Baillie</b> School of Pharmacy Chair
Gerald Baldasty Academic and Student Affairs
Thomas Daniel Biology
James Fine UW Medicine
Paul Jenny Office of Planning & Budgeting
Edward Lazowska Computer Science & Engineering
Mary Lidstrom Office of Research
John Slattery School of Medicine
Kellye Testy School of Law
Kelli Trosvig UW Information Technology
V'ella Warren Finance & Facilities

## IT Service Investment Board

<b>Kellye Testy</b> School of Law Chair
David Anderson Health Sciences Administration
Susan Astley Epidemiology & Pediatrics
Susan Camber Financial Management
Walt Dryfoos University Advancement
Vikram Jandhyala College of Engineering
Mary Fran Joseph UW School of Medicine
Stephen Majeski College of Arts & Sciences
Harlan Patterson UW Tacoma
Liz Shirley UW Medicine
Gary Quarfoth Office of Planning & Budgeting
Kelli Trosvig UW Information Technology
Bill Ferris, Ex-Officio UW Information Technology

## TRF Advisory Committee

<b>Bill Ferris</b> UW Information Technology Co-Chair
<b>Tom Sparks</b> College of Engineering Co-Chair
Cristi Chapman Management Accounting & Analysis
David Green School of Medicine
Amy Floit Office of Planning & Budgeting
Jonathan Franklin School of Law
Paul Ishizuka UW Medicine
Linda Rose Nelson College of Arts & Sciences

## IT Service Management Board

<b>Scott Barker</b> Information School Chair
Mark Baratta College of Built Environments
Kate Bouchard Foster School of Business
John Drew The Graduate School
Jean Garber School of Dentistry
Brad Greer UW Information Technology
Paul Henderson UW Medicine IT Services
Erik Lundberg UW Information Technology
Linda Rose Nelson College of Arts & Sciences
Gary Pedersen Chemistry
Barb Prentiss School of Medicine
Roland Rivera UW Information Technology
Bill Shirey UW Information Technology
Tom Sparks College of Engineering
Tammy Stockton UW Information Technology
Betsy Tippens UW Bothell

# IT Service Investment Board Charge

- Review services provided by UW Information Technology (UW-IT)
- Conduct annual review of Technology Recharge Fee (TRF) and recommend changes as needed
- Review major UW-IT projects and make recommendations about investment priorities

# Technology at the UW

## Technology Pain Points:

### Unit



#### **Compliance:**

- Inadequate systems supporting compliance infrastructure
- Annual medical compliance tracking by clinic directors (TB test, HIPAA, etc.)

#### **Software and Equipment:**

- Better classroom IT facilities
- Wi-Fi access a problem in some buildings
- Lack of shared infrastructure for collaborating
- Changes to network/data are costly pinch points that define critical program change path
- Demand to quickly deploy new technology
- Lack of systems redundancy
- End user devices: Need easily updated desktops; where people can move to different locations in building. Server based? Inexpensive?

#### **Calendaring and Meetings:**

- Multiple systems: event systems, calendar synch, Meeting Maker
- Calendar synchronization (EE and UW) makes it hard to schedule

#### **Administrative Systems:**

- Admin shadow systems and financial reporting
- Admin Business System (too many individual, homegrown fixes)
- Units have multiple systems - meaningful use is a pain point!
- Inadequate administrative systems and need to rely on shadow systems

#### **Data, Information, Metrics:**

- Easy, accessible, consistent financial reporting and metrics
- Data
- Getting enterprise data into the Enterprise Data Warehouse
- Better Business Intelligence software to do ABB reports

#### **Technology Leadership:**

- No unit leader has strategic vision and competency for all tech needs

## Technology Pain Points: Personal

### Calendaring and Meetings:

- Calendaring
- Meeting Maker! The early 1990s lives on
- Meetings

### Email:

- Email: not thoughtful, respectful of time
- UW email system clunky, does not meet needs: storage space, opening documents
- Size of email inbox

### Information Overload:

- Too much information, too many devices
- Keeping up

### Administrative Systems:

- Admin Business Systems
- Need better tools to manage space; GeoSIMS is an improvement



### Data, Information, Metrics:

- Business Intelligence reports
- Difficulty pulling Business Intelligence reports
- Easy, accessible, consistent financial reporting and metrics
- Accessible metrics

### Software and Equipment:

- Scientific computing too complex
- Lack of transferability by devices
- Lose favorites (bookmarks, apps, and contacts) when upgrade phones, tablets, etc.
- Access to high-performance scientific computing is difficult, non-transparent; leads to personalized, alternative solutions

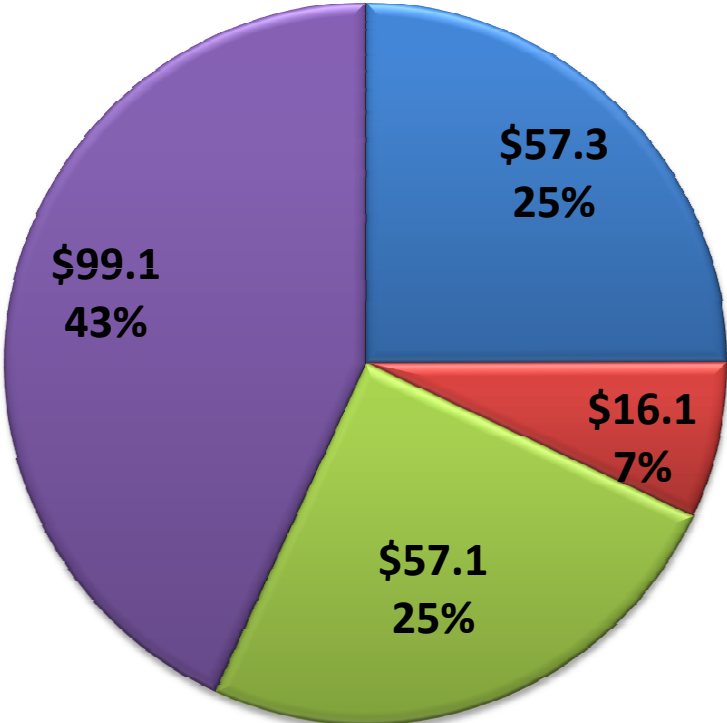
### Misc:

- IRB (Institutional Review Board) human subjects research review
- IRB - still paper and pencil
- Faculty perspective
- Don't want to have to pay for *New York Times*



# UW-IT Represents 1/3 of Total IT Cost at UW

## Estimated Annual Unit IT Costs



- UW-IT
- UW-IT Information Management
- UW Medicine ITS (Clinical)
- Estimated Campus Units including School of Medicine

Excluded: major capital projects, utilities, distributed IT at UW Medicine

\$1.1B five-year steady-state cost

**\$229.6M Total**

# IT Services - At Central and Unit Level

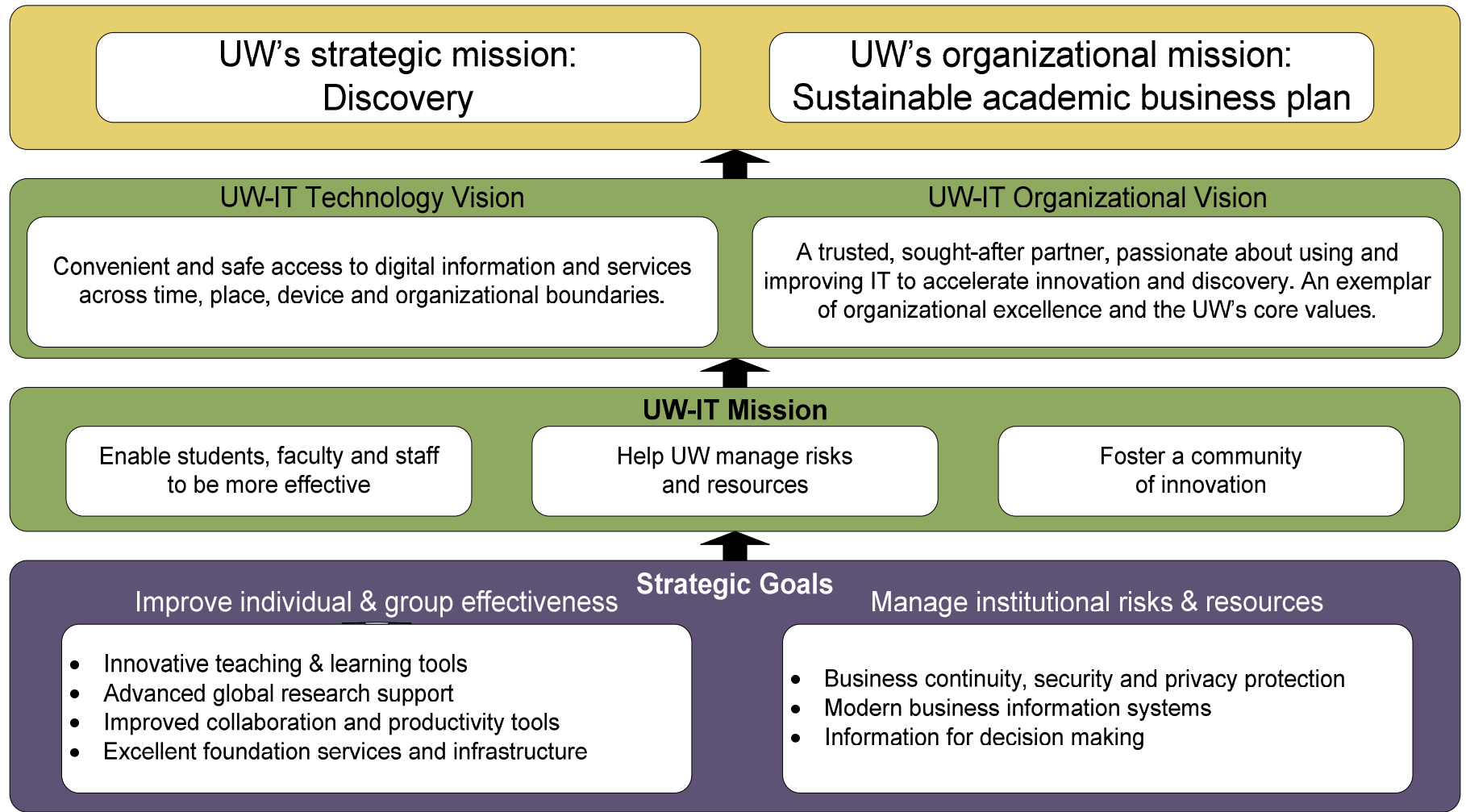
	Admin Systems	Data Networks	Data Centers	Email, Cal & Collab Tools	Telecom	Application Support	Course & Learning Mgmt	End-User Support	Student Computer Labs	Multimedia Svcs	Web Services
UW Information Technology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Academic Units</b>											
Campus/School/Colleges/Departments				✓		✓	✓	✓	✓	✓	✓
<b>Administrative Units</b>				✓		✓		✓			✓
Finance, Research, Student, Advancement						✓		✓			
UW Medical Centers IT				✓	✓	✓		✓		✓	✓

Largest Unit Expenses: Application Support & End User Support  
 UW-IT is working with Units to find ways to be more efficient.



# UW Information Technology

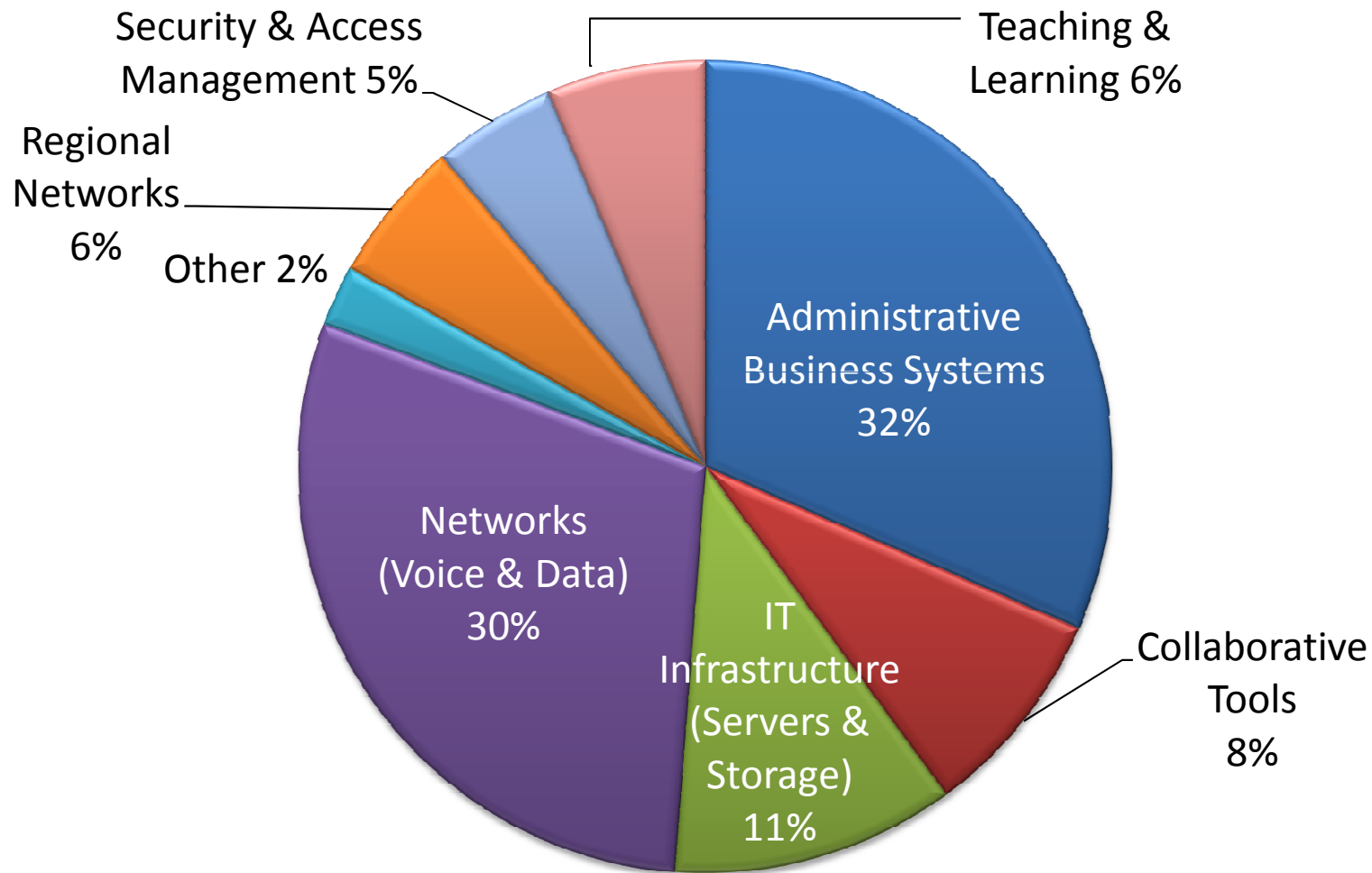
# UW-IT Strategy Map



# UW-IT Services

- Accessible Technologies
- Administrative Systems
- Backups and Mass Storage
- Campus Software Licensing
- Data Center and Facilities
- Data & Mobile Networks
- Email, Calendaring, and Collaboration Tools
- Emergency Preparedness and Business Continuity
- Enterprise Portal
- Identity and Access
- Information Security & Privacy
- Management
- IT Consulting
- Managed Servers and Workstations
- Regional Networks
- Teaching and Learning Tools
- Technology Spaces and Labs
- Telecommunication Services
- UW Support for UWTV and KEXP
- Web Publishing

# UW-IT Services



# UW-IT Project Portfolio

- Specific high priority projects supporting UW-IT strategic initiatives
  - New services requested by the campuses
  - Enhancements and modernization to existing services
  - Efforts to improve the overall cost-effectiveness and quality of service
- Portfolio Review Board (PRB) – Oversight
- Project Management Office – PM and Project Tracking



# Technology Recharge Fee Advisory Committee Status

# TRF Committee Update

The TRF Advisory Committee has met 3 times:

- Reviewed current TRF allocation methodology
- Identified key issues to review
- Significant discussion on two major issues:
  1. Should Students be funded with GOF or allocated to academic units?
  2. Should Information Management be included in the TRF model?

# TRF Principles Established by Working Group

- Costs will be fully recovered
- Head count will be a proxy for use
- Results will be actionable
- Process will be transparent
- Simplicity should be maintained
- Administration should be easy

# TRF Current Rates

(FY 2011, FY 2012, & FY 2013)

**Campus Rate**                      **\$52.68 mo**

**Medical Center Rate**   **\$53.43 mo**

<b>Projected (Current Methodology)</b>	<b>FY14</b>	<b>Employees</b>
Admin	\$ 2,990,741	4,738
Academic w/o SOM	\$ 4,624,910	7,327
School of Medicine	\$ 4,622,069	7,322
Medical Centers	\$ 6,186,638	9,575
Total	\$ 18,424,358	28,961

# TRF - Key Decision Points

## **Large Impact:**

- Students funded with GOF or allocated to academic units?
- Bring Information Management into the TRF process?

## **Moderate Impact:**

- Reclassify specific University supported services?
- Change current allocations of basic services to per-capita groups?

## **Lower Impact:**

- Change how we count employees?

# Allocating GOF/DOF to Students

## Current GOF/DOF allocation method

- 1<sup>st</sup> to University support  
(Incl CISO, Data Ctrs, & Student Labs)
- 2<sup>nd</sup> to students
- Balance to campus employees
- 0 to Medical Centers

## Issues

- Students are major cost drivers of IT (40,000)
- Over-emphasis of GOF/DOF to instruction and under-emphasis to research

# TRF Expenses and Funding

	IM	University Support	TRF (Basic Services)			Total
			Med	Students	Campus	
FY14 Budget*	\$10M	\$8.7M	\$6.2M	\$14.3M	\$19.2M	\$58.4M
Less GOF DOF	-\$10M	-\$8.7M	0	-\$14.3M	-\$7.0M	-\$40.0M
<b>TRF Balance</b>	<b>0</b>	<b>0</b>	<b>\$6.2M</b>	<b>0</b>	<b>\$12.2M</b>	<b>\$18.4M</b>

Head Count			9,575	42,454	19,386	
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<b>Monthly TRF</b>			<b>\$53.84</b>		<b>\$52.60</b>	
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\* Does not include Temp, Self Sustaining, or IM Project Budgets

# Allocating GOF/DOF to Students

Is the cost of students an institutional responsibility or that of the individual academic units?

- Majority of committee supports:
  - Students should be seen as a “common good” and funded with GOF (noting that 70% of GOF is from tuition)
  - Students should not be allocated to academic units
  - ABB, is not a mature model, and is not structured to support IT cost of students
- Dissenting point of view from UW Medicine:
  - Students are a major cost driver of IT costs and should be allocated to academic units based on ABB methodology



# Net Impact of Allocating Students to Academic Units

Apply Students to Units	
Admin	(1,274,200)
Academic (w/o SOM)	2,914,439
School of Medicine	(1,657,797)
Medical Centers	47,531

# Information Management - Services

*Not currently included in the TRF – funded with GOF/DOF*

- Finance Program (FIN, EIO, MyFD, BGT)
- HR/Payroll Program (HEPPS, OPAS, OWLS)
- Student Program (SDB)
- Enterprise Information and Integration Services (Data Warehouse)
- Facilities Services
- Alumni & Advancement
- Chemical Tracking System (EH&S)

Modernization efforts including HR/Payroll Replacement, eFECS, Quali Student, Document Imaging, MyPlan are funded separately by the Provost as specific projects

# Should Information Management be Included in the TRF?

## Pros:

- All units share in the benefit of the IM systems
- Allocation of cost would be consistent with other IT services
- Less administrative complexity

## Cons:

- Medical Centers – HMC may utilize admin business systems (including IM) at different capacity than campus
- Significant additional cost burden to Medical Centers

# TRF Expenses and Funding

	IM	University Support	TRF (Basic Services)			Total
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# Should Information Management be Included in the TRF?

- Majority of committee supports:
  - IM should be included in the model for consistency (Hardware vs. Software)
  - Willing to look at alternative ways in how GOF/DOF might be applied to mitigate impact on Medical Centers
- Dissenting point of view from UW Medicine:
  - IM should be treated as University supported and not allocated to Medical Centers

# Net Impact of Including Information Management Into TRF Process

IM Added to Model	
Admin	(812,300)
Academic (w/o SOM)	(1,256,147)
School of Medicine	(1,255,376)
Medical Centers	3,353,820

# Other Decision Points

## Moderate Impact:

- Reclassify specific Univ Supported Svs? (CISO, Data Centers, Student Labs)
  - Committee recommends “Yes” for consistency
- Change current allocations of Basic Services to Per Capita Groups?
  - Committee recommends “No”

## Lower Impact:

- Change how we count employees?
  - Committee recommends “No”

# TRF Annual Review Timeline

Month	TRF Advisory Committee	IT Service Investment Board
September	Meeting 1: September 28 History, current model, identify issues	
October	Meeting 2: October 23 Review budget base, services, and discuss methodology issues	Meeting 1: October 9 Charge, Scope, TRF background and context
November	Meeting 3: November 6 Review preliminary TRF rate and allocation model	Meeting 2: November 13 UW-IT Funding, TRF investments, TRF issues
December	Meeting 4: December 11 Review and make final TRF rate recommendation to IT Service Investment Board	Meeting 3: December 12 Review TRF Advisory Committee rate recommendations



# TRF Advisory Committee Seeks Direction:

Should Students be funded with GOF or  
allocated to academic units?

Should we include Information  
Management into the TRF process?

# Investment Opportunities for Fiscal Year 2014

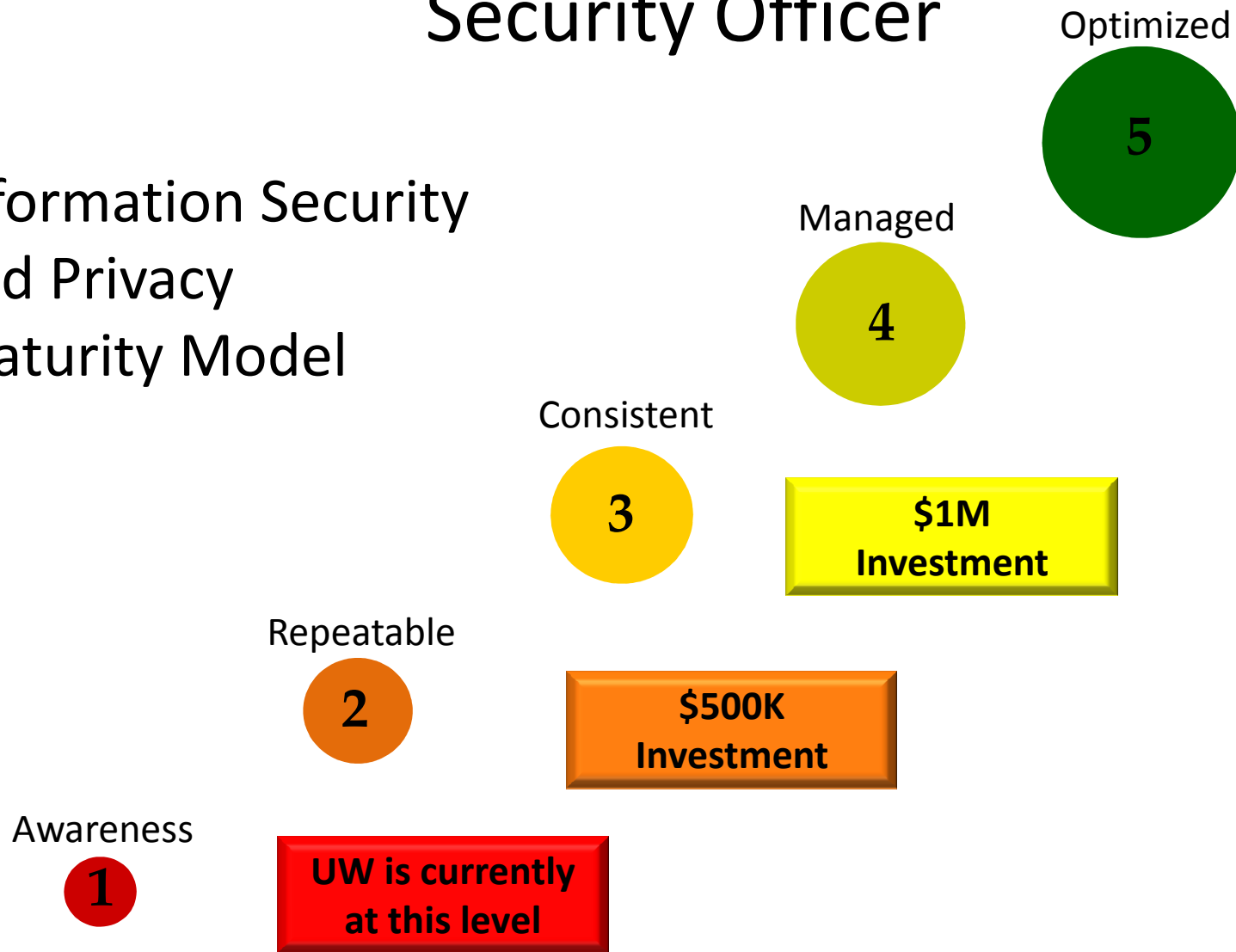
# Investment Opportunities for FY 14

Proposing additional investments for inclusion in the FY 2014 Technology Recharge Fee

- Information Security & Privacy
- 40G Campus Research and Science Network
- Cyber-Infrastructure Support

# UW Office of the Chief Information Security Officer

## Information Security and Privacy Maturity Model



# IT Central Security Staffing Peer Analysis

Organization	University FTEs	Professional Personnel	# of FTEs per Prof Security	Student Personnel
The Johns Hopkins University	15,133	25	605	0
Cornell University	20,563	18	1,142	0
University of Wisconsin-Madison	38,511	21	1,833	3
University of Minnesota	42,616	21	2,029	0
MIT	10,277	5	2,055	0
University of North Carolina at Chapel Hill	25,175	11	2,288	0
Indiana University	39,097	14	2,792	0
University of California, Berkeley	34,635	11	3,148	0
→ University of Washington	34,335	10	3,433	0
University of Illinois at Urbana-Champaign	41,199	10	4,119	2
Arizona State University	59,110	7	8,444	0

# Information Security & Privacy

## \$1M Investment

How money would be spent

- Salaries, wages, and benefits for 5 FTE
- Minimal Training
- Equipment

Benefits

- Develop new tools and services to help identify gaps in information security
- Consult with UW colleges, schools, and departments on information security and privacy risks and potential impacts
- Assist units in developing strategies for managing risks

# \$500K Investment

## How money would be spent

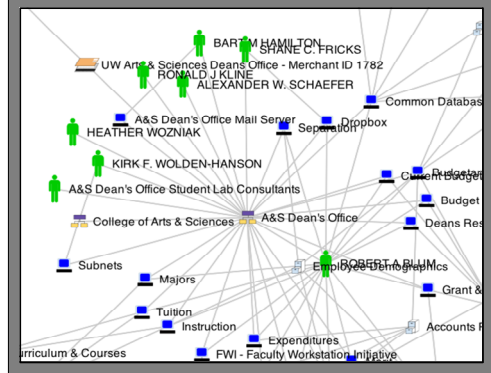
- Salaries, wages, and benefits for 4 FTE
- Equipment

## Benefits

- Develop minimum set of resources for use at the University; departments would develop their own strategies for information security, privacy risks, and threats
- Minimal equipment to perform job duties

# Building Context for Information Security and Privacy

## Relate Disparate Information Sources to Find Critical Information



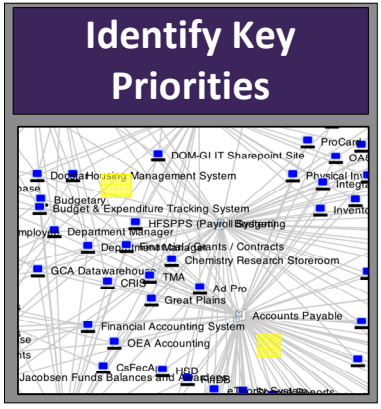
## Increase Transparency of Assets

**General**

Type: **Organization**  
 name: **Office of the Chief Information Security Officer (CISO)**  
 Email: [ciso@uw.edu](mailto:ciso@uw.edu)  
 Phone Number: 206-685-0116  
 Web Site: <http://ciso.uw.edu/>  
 Profile Status: 60% complete

**Summary**

Systems: 59 Internal Systems (10 critical), 28 External Systems (20 critical)  
 People: 15 People In Critical Information Security and Privacy Roles  
 Organization: 15 Sub Organizations  
 Business Functions: 51 Business Functions (20 critical)  
 Laws and Regulations: 19 Information Security Laws and Regulations  
 Notifications: 30 Notifications (3 critical)

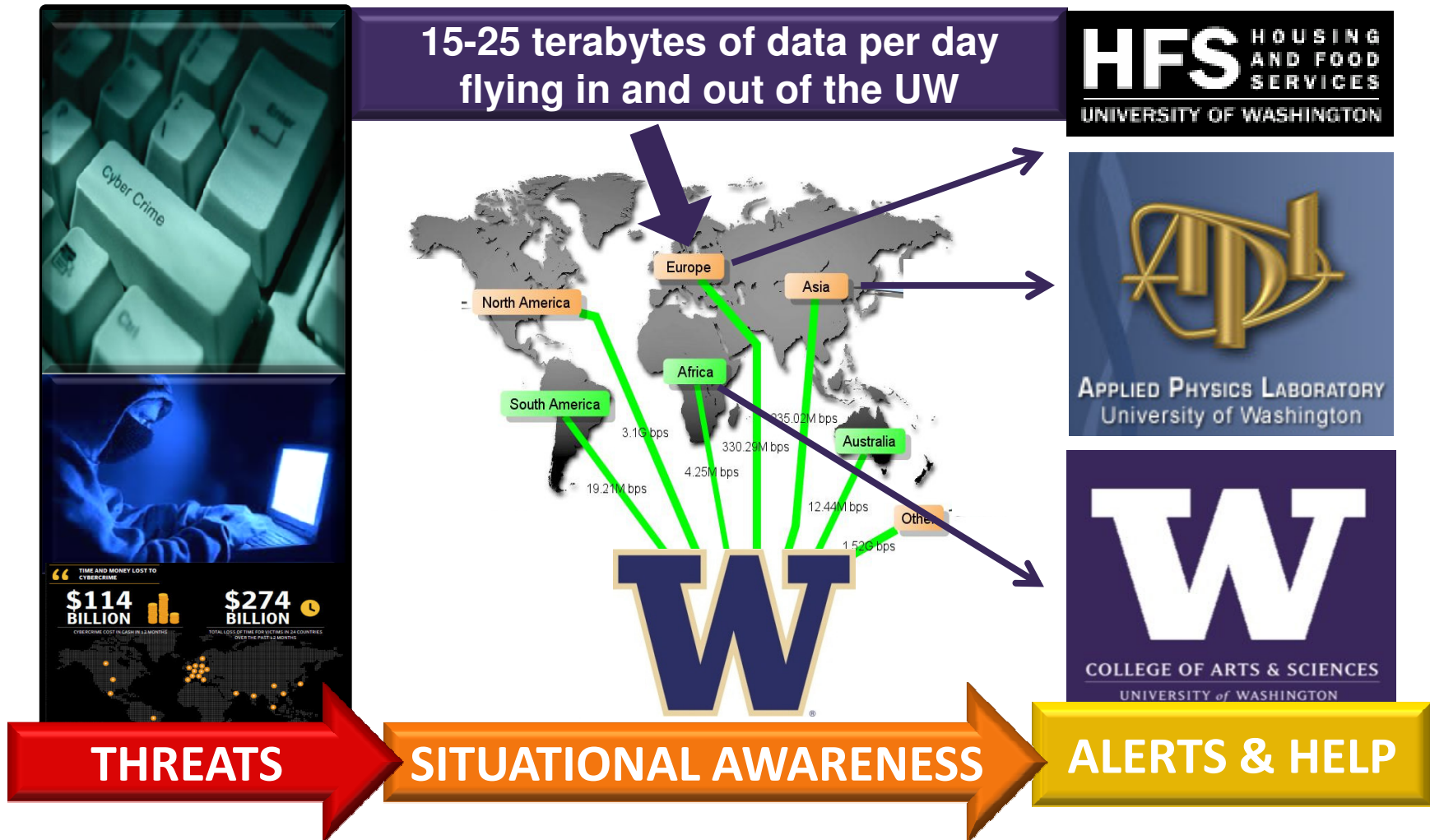


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# Building the Capability to Find Malicious Network Traffic



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# 40G Campus Research and Science Network

- Design, implement and support a dedicated 40G Research and Science network
- Provide dedicated 10G bandwidth to 15 research locations, including Hyak and data storage
- Connect the campus 40G network to the advanced 100G Pacific Northwest Gigapop and Internet2
- Leverage \$800K in NSF grants
- Invest \$1.4M for FY 14 and \$1.4M for FY 15

# 40G Campus Research & Science Network

“The advent of a high-speed research network will transform how data is analyzed.”

- *Robert H Waterston, Genome Sciences*

“Increased research bandwidth is essential to driving our research forward.”

- *Thomas P. Ackerman, Atmospheric Sciences*

“This project will serve as an exemplar for the interoperability between UW resources and national resources.”

- *Thomas R Quinn, Astronomy and Physics*

“Improved bandwidth between the Science DMZ and external networks will improve our ability to download large data sets for analysis.”

- *Martin Savage, Physics*

“To keep the University of Washington among the nation's leading research-intensive universities ...the single most important thing that UW IT can do is to keep UW at the leading edge of R&E (research and education) networking.”

- *Edward Lazowska, Computer Science and Engineering*

# Cyber-Infrastructure Support for Research

Develop a new service for Cyber-Infrastructure support of research computing

- Consulting - Provide subsidized, fee for service assistance in the tools and techniques of scalable
- Storage – Provide lower cost, enterprise-class storage for research data by changing the lolo storage cost model to be on-par with “departmental” storage
- Collaboration - Offer partnership opportunities and easy access to services and communities to improve research
- \$280K year

# Impact of Investment on the TRF

Estimated incremental increase on the current monthly TRF rate:

▪ Info Security @ \$1M	\$2.77	+5.3%
▪ Research Network @ \$1.4M	\$5.42	+10%
Not Shared by UW Medical Centers		
▪ Cyber Research @\$280K	\$0.77	+1.5%

Actual impact on TRF won't be determined until TRF review is complete

# Service Investment Board

## Objectives for Next Meeting

- Review Technology Recharge Fee recommendations
- Recommendations on new investments opportunities

# Questions & Discussion