IT Service Investment Board
November 13, 2012
Agenda

- Technology at the UW
- Technology Recharge Fee Advisory Committee Update
- FY 2014 Investment Opportunities
Information Technology (IT) Governance

IT Strategy Board
- Strategic Plans; Recommend Policies; Funding Strategies
- Refer Issues; Provide Input
- Guidance on Strategic Direction
  - Refer Issues; Provide Input
  - Direction on Changes to Services

Investment Board
- Provide Analysis; Identify Issues; Recommendations
  - Prioritize Projects; Recommend Funding Levels; TRF Review
  - Service and Process Improvement Recommendations

Advisory

President
Provost

Vice President for UW-IT and CIO
IT Governance Membership

IT Strategy Board

- Thomas Baillie
  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

- Kellye Testy
  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

- Bill Ferris
  UW Information Technology
  Co-Chair
- Tom Sparks
  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

- Scott Barker
  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 Tippen
  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
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?

Technology Pain Points: Unit

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

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

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

*Reflects 10-9-12 input by IT Service Investment Board members
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

*Reflects 10-9-12 input by IT Service Investment Board members
UW-IT Represents 1/3 of Total IT Cost at UW

Estimated Annual Unit IT Costs

- $99.1M (43%)
- $57.1M (25%)
- $57.3M (25%)
- $16.1M (7%)

$229.6M Total

- 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

WTC – All Campus Cost Study on combination of FY09 and FY10
IT Services - At Central and Unit Level

<table>
<thead>
<tr>
<th>Admin Systems</th>
<th>Data Networks</th>
<th>Data Centers</th>
<th>Email, Cal &amp; Collab Tools</th>
<th>Telecom</th>
<th>Application Support</th>
<th>Course &amp; Learning Mgmt</th>
<th>End-User Support</th>
<th>Student Computer Labs</th>
<th>Multimedia Svcs</th>
<th>Web Services</th>
</tr>
</thead>
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<tr>
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Largest Unit Expenses: Application Support & End User Support
UW-IT is working with Units to find ways to be more efficient.

UNIVERSITY of WASHINGTON
IT – Distributed Across Campus
Schools/ Colleges/ Units > Departments > Divisions
UW Information Technology
UW-IT Strategy Map

UW’s strategic mission: Discovery

UW’s organizational mission: Sustainable academic business plan

UW-IT Technology Vision

Convenient and safe access to digital information and services across time, place, device and organizational boundaries.

UW-IT Organizational Vision

A trusted, sought-after partner, passionate about using and improving IT to accelerate innovation and discovery. An exemplar of organizational excellence and the UW’s core values.

UW-IT Mission

Enable students, faculty and staff to be more effective

Help UW manage risks and resources

Foster a community of innovation

Improve individual & group effectiveness

Strategic Goals

Manage institutional risks & resources

- Innovative teaching & learning tools
- Advanced global research support
- Improved collaboration and productivity tools
- Excellent foundation services and infrastructure

- Business continuity, security and privacy protection
- Modern business information systems
- Information for decision making
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

- Administrative Business Systems: 32%
- Networks (Voice & Data): 30%
- IT Infrastructure (Servers & Storage): 11%
- Collaborative Tools: 8%
- Teaching & Learning: 6%
- Regional Networks: 6%
- Other: 2%
- Security & Access Management: 5%
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

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

- 1st to University support (Incl CISO, Data Ctrs, & Student Labs)
- 2nd 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

<table>
<thead>
<tr>
<th></th>
<th>IM</th>
<th>University Support</th>
<th>TRF (Basic Services)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Med</td>
</tr>
<tr>
<td>FY14 Budget*</td>
<td>$10M</td>
<td>$8.7M</td>
<td>$6.2M</td>
</tr>
<tr>
<td>Less GOF DOF</td>
<td>-$10M</td>
<td>-$8.7M</td>
<td>0</td>
</tr>
<tr>
<td>TRF Balance</td>
<td>0</td>
<td>0</td>
<td>$6.2M</td>
</tr>
</tbody>
</table>

### Head Count

|                | 9,575 | 42,454 | 19,386 |

### Monthly TRF

|                | $53.84 | $52.60 |

* Does not include Temp, Self Sustaining, or IM Project Budgets

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**UNIVERSITY of WASHINGTON**
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

<table>
<thead>
<tr>
<th>Apply Students to Units</th>
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<tbody>
<tr>
<td>Admin</td>
<td>(1,274,200)</td>
</tr>
<tr>
<td>Academic (w/o SOM)</td>
<td>2,914,439</td>
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<tr>
<td>School of Medicine</td>
<td>(1,657,797)</td>
</tr>
<tr>
<td>Medical Centers</td>
<td>47,531</td>
</tr>
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</table>
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, Kuali Student, Document Imaging, MyPlan are funded separately by the Provost as specific projects.

UNIVERSITY of WASHINGTON
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

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<td>$6.2M</td>
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<table>
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<tr>
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<th></th>
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<th>19,386</th>
</tr>
</thead>
</table>

| Monthly TRF    |     |                    | $53.84|         | $52.60 |

* Does not include Temp, Self Sustaining, or IM Project Budgets

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UNIVERSITY of WASHINGTON
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

<table>
<thead>
<tr>
<th>IM Added to Model</th>
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<tbody>
<tr>
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<td>(812,300)</td>
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<td>Academic (w/o SOM)</td>
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<tr>
<td>School of Medicine</td>
<td>(1,255,376)</td>
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<tr>
<td>Medical Centers</td>
<td>3,353,820</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Month</th>
<th>TRF Advisory Committee</th>
<th>IT Service Investment Board</th>
</tr>
</thead>
</table>
| 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

- **Awareness (1)**: UW is currently at this level
- **Repeatability (2)**
- **Consistency (3)**
- **Managed (4)**
- **Optimized (5)**

- **$500K Investment**
- **$1M Investment**
## IT Central Security Staffing Peer Analysis

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

Source: Educause CDS 2011 Data
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

Visualize Assets, Threats, and Risks

Identify Key Priorities

THREATS

SITUATIONAL AWARENESS

ALERTS & HELP

UNIVERSITY of WASHINGTON
Building the Capability to Find Malicious Network Traffic

15-25 terabytes of data per day flying in and out of the UW

THREATS

SITUATIONAL AWARENESS

ALERTS & HELP

UNIVERSITY of WASHINGTON
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