IT SERVICE INVESTMENT BOARD
April 14, 2015

INFORMATION TECHNOLOGY
UNIVERSITY of WASHINGTON
AGENDA

> Call to Order

> Enterprise Risk
  — Managing Information Security Risk
  — Geographic Resiliency Program Update

> Wrap Up of the Year
  — Portfolio Prioritization
  — Technology Recharge Fee FY 2017

> Wrap up
ENTERPRISE RISK
Managing Information Security Risk

Kirk Bailey
Associate Vice President and Chief Information Security Officer

Ann Nagel
Associate Chief Information Security Officer
Basic Approach

> Utilizes “intelligence-driven” risk management practices
> Optimizes finite resources to mitigate risk around University academic and administrative areas
> Focuses on critical assets and related threat landscape
> Provides reliable counsel and support based on in-depth situational awareness
Key Program Elements

> Strong, well established governance for privacy and information security
> Emerging threat intelligence practices
> Innovative situational awareness practices for intelligence analysis and risk management decisions
> Mature incident response and management capability
> Crucial cybersecurity insurance coverage for information security and privacy events
Key Program Elements - continued

> Thoughtfully developed and maintained industry contacts
> Access to non-public information sharing resources
> Essential institutional policies
> Relevant training and awareness activities and online resources
> Intellectually diverse and innovative staff
Office of CISO

> Total of **15 full-time positions** (1 currently vacant)

> Staff professional credentials include:

  — Certified Information Security Professional (CISSP) – 7
  — Certified Information Security Manager (CISM) – 2
  — Certified Information Security Auditor (CISA) – 1
  — Certified Information Privacy Professional (CIPP/US) – 1
  — Cyber Security Forensic Analyst (CSFA) – 5
  — Certified Ethical Hacker (CEH) – 3

> Staff skills and experience include:

  — Training development
  — Cybersecurity and privacy compliance programs
  — Consulting, audit practices and risk management
  — Technical, architecture and development expertise
  — Threat intelligence analysis skills
Information Security and Privacy Risk Management

Academic and research institutions offer a uniquely attractive target for cyber criminals. These institutions typically have a considerable number of user login credentials that can be stolen to access valuable research data, intellectual property, library resources, and stores of personal information that are potentially exploitable for identity theft.

Below is a suite of resources for understanding and managing security and privacy risks at UW.

Check this webpage frequently to make sure you are using the most recent version of risk management resources. The resources will continuously evolve as new ones are released.

Develop a Security Plan
- Develop an Approach
- Identify Information Assets
- Assess Risk
- Create a Strategy

Document Data Sharing Relationships
- Document Data Flow
- Interdepartmental Data Sharing
- External Data Sharing

Request Help
- Consulting Services
- Questions

http://ciso.washington.edu/
Email & Ticket Trends

Compromised NetIDs disabled

- Average emails / month
  - 2010: 136
  - 2011: 200
  - 2012: 272
  - 2013: 371
  - 2014: 5609

- Average tickets / month
  - 2010: 7069
  - 2011: 7000
  - 2012: 6850
  - 2013: 7432
  - 2014: 678

- Compromised NetIDs disabled
  - 2010: 0
  - 2011: 0
  - 2012: 0
  - 2013: 660
  - 2014: 2625

Average tickets / month:
- 2010: 7069
- 2011: 7000
- 2012: 6850
- 2013: 7432
- 2014: 678
UW-IT Geographic Resiliency Program Update

Erik Lundberg
Assistant Vice President, IT Services & Strategic Sourcing
Topics

UW-IT Geographic Resiliency (GR) Program

> Overview
> Capabilities
> Costs
> Next steps
GR Program Overview

Original Problem Statements (2009)

> UW critical administrative applications maintained and operated by UW-IT are **not fully redundant, nor geographically diverse**

> The **knowledge to recover and restore** UW critical administrative application infrastructure is **not readily available and may be unknown**
GR Program Overview

Original Risk Statements (2009)

An *operational disruption* in the data center (e.g. water leak) has the potential to suspend mission-critical campus operations for several hours or days (e.g., student registration; building safety systems)

A *regional disaster* could cause permanent loss of servers and some data and suspension of mission-critical operations for several days/weeks since all server-based applications and infrastructure (e.g., email) are located in the Puget Sound seismic zone
GR Program Overview

UW-IT response

> Create a Priority 1 Program (series of annual projects)
  
  Key decisions and approaches:
  
  — Focus on IT Systems managed by UW-IT
  
  — Business resumption in functional business units: out of scope
  
  — Rolling rather than Big Bang “migrations” of IT Systems

> Program organization
  
  — Internal governance group
  
  — Standing program team
  
  — Project teams and subject matter experts (as needed)
GR Program Overview

Deliverables for Geographic Resiliency of IT Systems*

☑ Ensure IT Systems are geographically resilient

☑ Service managers and technical staff develop IT disaster recovery plans for their systems

☑ Service managers and technical staff conduct and document disaster recovery tests and exercises for their systems

*IT Systems in scope of the program are infrastructure, supporting systems, and business applications with Minimum Tolerable Downtime of less than 168 hours (as determined by Business Impact Analysis).
GR Program Timeline

- Business Impact Analysis (BIA) Scoping Study
- Begin GR Work On IT Systems
- GR Complete for All Critical IT Systems (<24 hr MTD)
- GR Complete for All Critical & Important IT Systems (<168 hr MTD)
- Start TierPoint & Network Readiness
- TierPoint & Network Established
- Redundant Network Established
- Tabletop Disaster Exercise

Now
## GR Program Costs

<table>
<thead>
<tr>
<th>Year</th>
<th>Project Phase</th>
<th>Project Labor</th>
<th>Project Non-labor</th>
<th>Total Annual Project Cost</th>
<th>Annual Run Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Data Center Coordination</td>
<td>$ 10,000</td>
<td>--</td>
<td>$ 10,000</td>
<td>--</td>
</tr>
<tr>
<td>2009</td>
<td>Business Continuity Scoping Study</td>
<td>$ 247,000</td>
<td>--</td>
<td>$ 247,000</td>
<td>--</td>
</tr>
<tr>
<td>2010</td>
<td>Business Continuity: Initial Implementation</td>
<td>$ 139,000</td>
<td>--</td>
<td>$ 139,000</td>
<td>--</td>
</tr>
<tr>
<td>2012</td>
<td>Geographic Redundancy 2011</td>
<td>$ 187,000</td>
<td>--</td>
<td>$ 187,000</td>
<td>$ 384,000</td>
</tr>
<tr>
<td>2013</td>
<td>Geographic Redundancy FY13</td>
<td>$ 768,000</td>
<td>$ 942,000</td>
<td>$ 1,710,000</td>
<td>$ 534,000</td>
</tr>
<tr>
<td>2014</td>
<td>Geographic Redundancy FY14</td>
<td>$ 660,000</td>
<td>$ 700,000</td>
<td>$ 1,360,000</td>
<td>$ 534,000</td>
</tr>
<tr>
<td>2015</td>
<td>Geographic Resiliency Migration</td>
<td>$ 463,000</td>
<td>$ 277,000</td>
<td>$ 740,000</td>
<td>$ 534,000</td>
</tr>
<tr>
<td></td>
<td>Operationalize TDAT</td>
<td>$ 392,000</td>
<td>--</td>
<td>$ 392,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operationalize Business Continuity Office</td>
<td>$ 291,000</td>
<td>--</td>
<td>$ 291,000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>Geographic Resiliency Migration Final (estim.)</td>
<td>$ 300,000</td>
<td>$ 200,000</td>
<td>$ 500,000</td>
<td>$ 534,000</td>
</tr>
</tbody>
</table>

**Project Total & Estimated Annual Run Cost:**

$ 5,576,000  
$ 650,000
Current Status (2015)

Total Number of Systems: 143

Current Status – April 2015

- Not Started: 16%
- Migrated: 40%
- IT DR Plan: 27%
- IT DR Tested: 17%
Next Steps

2015 and beyond

> Complete the program deliverables
  — Complete dependency analysis by December 2015
  — Complete all “critical” and “important” IT Systems migrations by December 2016

> Shift from build-out to Operating Program
  — Refresh Business Impact Analysis (BIA) - starting in 2016
  — Establish Business Continuity Office - July 2016
To ponder...

> How do we engage most effectively with business partners to ensure that they can operate their critical business processes after a disaster?

> IT Systems testing can be extremely impactful and intrusive to regular operations. Recognizing that live tests are much more revealing, what is the right balance of “live, end-to-end tests” vs “table top” exercises?
WRAP UP OF THE YEAR

Bill Ferris
Chief Financial Officer

Erik Lundberg
Assistant Vice President, IT Services & Strategic Sourcing
Wrap Up of the Year

> Accomplishments

— UW Administrative Systems Modernization Strategy review and input
— FY 2016 UW-IT Portfolio prioritization and input
— FY 2016 Technology Recharge Fee review and recommendation

> Future agenda

— FY 2017 UW-IT Portfolio prioritization
— FY 2017 TRF annual review and recommendation
UW-IT CURRENT PRIORITIES

UW-IT is allocating significant resources in FY 2016 on:

- **HR/P Modernization Intersections**: $8.2M > 61,000 hrs
- **UW Academic Explorer**: $2.4M > 13,000 hrs
- **Curriculum Management**: $1.4M > 12,000 hrs
- **Undergraduate Admissions**: $1.1M > 6,800 hrs
- **Preparing for Financial Modernization**: $5M > 15,000 hrs
- **Supporting Research**: $800K > 6,000 hrs

Total Cost & Hours Estimated for FY 2016 Only
WHILE MAINTAINING MOMENTUM

> Current portfolio has diminished capacity for additional change efforts

> UW-IT will strive to maintain momentum on emerging issues

Capacity for Change

UW-IT Project Prioritization Process
Technology Recharge Fee Approved Recommendation for FY 2016

> Maintain fundamental cost allocation methodology used for prior TRF

> Increase the TRF by under 2% for FY 2016 to help offset rising cost of operations

<table>
<thead>
<tr>
<th></th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14*</th>
<th>FY15</th>
<th>FY16</th>
<th>Chg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus</td>
<td>$52.68</td>
<td>$52.68</td>
<td>$52.68</td>
<td>$54.50</td>
<td>$54.50</td>
<td><strong>$55.51</strong></td>
<td>1.90%</td>
</tr>
<tr>
<td>Medical Ctr*</td>
<td>$53.43</td>
<td>$53.43</td>
<td>$53.43</td>
<td>$50.00</td>
<td>$50.00</td>
<td><strong>$50.91</strong></td>
<td>1.80%</td>
</tr>
</tbody>
</table>

The TRF supplements GOF/DOF resources to provide Basic Services. Reduction of Dial Tone rate resulted in $6M savings to campus.

*Excluded from GOF/DOF subsidy. Network & Telecom billed separately. Effective Rate: $83.69
Technology Recharge Fee - FY 2017

> The TRF Advisory Committee will partner with the Service Management Board to review the basic services and investment level included in the TRF
QUESTIONS AND DISCUSSION