AGENDA

> Call to Order
> Finance Transformation
> Strategies for Student Services
> Strategic Service Portfolio and Strategy Management
> Wrap up
# Proposed Strategy Board Agenda 2016 - 2017

<table>
<thead>
<tr>
<th>Month</th>
<th>IT Strategy Board Topic</th>
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</thead>
</table>
| September 27, 2016 | ▪ Proposed Strategy Board Meeting Agenda  
▪ Research High Performance Computing Strategy  
▪ Major Projects Update  
  ▪ EPIC Migration  
  ▪ HR/Payroll Modernization  
  ▪ Integrated Service Center Update |
| April 3, 2017     | ▪ Research Computing – Data Science Strategy  
  ▪ eScience Institute Strategy and Future Directions  
  ▪ Data Analysis  
  ▪ HR/P Modernization Update  
  ▪ Integrated Service Center Update |
| May 8, 2017       | ▪ HR/P Modernization Update  
▪ Student Analytics |
UW Finance Transformation (UWFT)

Cheryl DeBoise
Assistant Vice President, Finance Transformation Program
Finance Transformation Agenda

> Executive Alignment retreat
> Current Governance
> Work Streams
> Timeline
UW Finance Transformation Executive Alignment Retreat
Executive Alignment Retreat Held
March 2016

> Jerry Baldasty (Provost)
> Paul Jenny, Ruth Johnston, Sarah Hall (Planning & Management)
> Kelli Trosvig, Aaron Powell (UW-IT)
> Elizabeth Cherry, Ann Anderson, Sue Camber (Finance & Facilities)
> Jacque Cabe, Ruth Mahan, Mary Fran Joseph (UW Medicine)
> Mary Lidstrom (Office of Research)
> Bob Stacey, Linda Nelson, Sandra Archibald, Sean Sullivan, Mary Clark (Deans/Administrators)
> Ana Karaman (UW Bothell), Harlan Patterson (UW Tacoma)
> Cheryl DeBoise (AVP, UWFT)

Case Studies:
1. HRPM Implementation
2. Bill & Melinda Gates Foundation financial system implementation
3. Deficits in UW-IT, Law School and School of Dentistry
4. State of Washington Audit of GOF/DOF funds
Executive Alignment Retreat Lessons Learned Summary

> Executive leadership must be engaged early and throughout
> ONE Executive Sponsor
> Leadership alignment is critical
> Campus engagement must start early and be sustained
> Define the “as-is” end-to-end financial processes
  – Hire-to-Retire instead of recruiting, benefits, payroll, retire
> Simplify the tools/systems before implementation
> Drive consistent financial terminology early
> Robust program management is required
> Funding plan must be in place
UW Finance Transformation
Current Governance
UW Finance Transformation Team Members

**Decision Makers**

- Ana Mari Cauce, President
- Jerry Baldasty, Provost & Executive Vice President
- Jeffrey Scott, EVP Finance & Administration, **Exec Sponsor**

**Sponsors**

- Jeffrey Scott, EVP Finance & Admin., **Exec Sponsor**
- Sandy Archibald, Chair of the Board of Deans
- Ann Anderson, Assoc. VP & Controller, Fin. Management
- Jacque Cabe, CFO, UW Medicine & VP of Medical Affairs
- Elizabeth Cherry, Assoc. VP, Compliance & Risk Services
- Cheryl DeBoise, Asst. VP, UWFT (**Ex-officio**)
- Mary Lidstrom, VP for Research, Office of Research
- Ruth Mahan, CBO, UW Medicine & VP of Medical Affairs
- Aaron Powell, Interim VP UW-IT & CIO for UW

**Finance Leadership Group**

- Cheryl DeBoise, Asst. VP, UWFT (**Program Director**)
- Ann Anderson, Assoc. VP & Controller, Fin. Management
- Tammy Ayyoub, Acting Controller, UWM Medical Centers
- Lynn Barnhart, Accounting Director, UWM Medical Centers
- Anja Canfield-Budde, Interim Assoc. VP, Information Mgmt
- Susan Camber, Assoc. VP, Financial Management
- Richard Cordova, Exec. Director, Internal Audit (**Ex-officio**)
- Dave Green, CFO, School of Medicine
- Sarah Hall, Assoc. VP, Office of Planning & Budgeting
- Chris Malins, Assoc. Vice President, Treasury
- Linda Nelson, Director of Fin. & Admin., Arts & Sciences
UW Finance Transformation Team Members

**Advisors**

Zoe Barsness, Chair, UW Faculty Senate  
Mo Broom, Enterprise Fin. Officer, UW Medicine  
Mary Clark, Asst. Dean, Planning & Admin., The iSchool  
Ruth Johnston, Vice Chancellor, Fin. & Admin., UW Bothell  
Mary Fran Joseph, Assoc. Dean, Fin. & Admin., UW Med  
Robert Stacy, Dean, College of Arts & Sciences  
Sean Sullivan, Dean, School of Pharmacy  
Others to be identified

**Program Team**

Cheryl DeBoise, Asst. VP & Program Director  
Carole Davison, Executive Assistant  
Jenn Dickey, Sr. Project Lead  
Jeanne Marie Isola, Project Director  
Gwen Trentham, Business Architect

Working groups will be created for specific tasks, with defined work and timelines, as needed, throughout the life of the program.

**Examples of Possible Working Groups:**

- Funding working group
- HRP Fiscal Management Working Group
UW Finance Transformation
Work Streams
Finance Transformation Work Streams

> HRP Fiscal Management Strategy
> Process Framework
> Operations Strategy and Alignment
> Finance ERP Sourcing Strategy
Finance Transformation Work Streams

**HRP Fiscal Management Strategy** – Analyze impact of HRPM to fiscal management functions and identify what can be:

> Incorporated in go-live
> Deferred until after stabilization or to Finance Transformation
> Support HRP Program on training/change management

**Process Framework** (utilize FSNA & FSSR work that established requirement, side system and reporting inventory)

> Financial Process (process inventory; as-is; future state)
> Financial Data Model (elements that drive reporting)
> System Assessment and Strategy
Finance Transformation Work Streams

Operations Strategy and Alignment

> Link Legacy Financial System with UWFT Governance
> Legacy System Pre-transition – simplify the landscape
> Enterprise Financial Project Portfolio – prioritize work/resources

Finance ERP Sourcing Strategy – Issued RFP for consulting support

> Update fit gap/gather data
> Draft/validate system strategy
> Business Case, Roadmap and funding model
> Define Phase I scope, including analysis of scope of UW Medicine
> Analyze trade-off between Phase II finance, Phase II HPRM or start of student modernization
> Submit investment plan to State/BOR Approvals
UW Finance Transformation Timeline
Finance Transformation Timeline

Through Fall 2017
> Kick-off financial process work
> Define scope and phasing
> Update fit gap/gather data
> Draft/validate system strategy
> Business case, roadmap and funding model

Fall 2017 to Summer 2018
> Obtain State and BOR Approvals
> Select system
> Continue financial process work
> Transition key HPRM staff to UWFT

Summer 2018
> Kick-off Implementation of Phase I
QUESTIONS
Strategies for Student Services

Phil Reid
Associate Vice Provost, Academic Services
and Deputy Chief Information Officer, UW-IT

Nate McKee
Director, Learning Technologies, UW-IT
2017: Academic Services in UW-IT

AXDD: Academic Experience Design & Delivery
(Services for Teaching, Learning, and Collaboration)

AT: Accessible Technologies
(Services for Accessibility and Universal Design)

CTE: Classroom Technologies and Events
(Services for Synchronous and Asynchronous Instruction)

LT: Learning Technologies
(Support Services for Instructors and Students)

P&F: Planning and Facilities
(Services that Improve Working Spaces)

STU: Student Programs
(Services that Improve the Student Experience)
Recent Accomplishments: AXDD

**Increased usage of central T&L services:** Canvas LMS contains ~3800 courses serving 55,000 students. **Panopto** lecture capture contains ~10,000 hours of content with 160K views. **Poll Everywhere** to meet ASUW demand for low-cost, universal personal response system.

**MyUW:** Total rebuild of student service employing user centered design. **Event prioritized** display of information. MyUW for faculty/staff rebuild up next!

**Targeted technology:** **Husky Experience** and **Thrive** initiatives with Office of the Provost. **Scout** for student resources (study areas, food, etc.). **Notify** for class notification (and course demand analytics).

**Democratization of data/analytics:** Course demand dashboards in BI portal. **Pivot** to guide students in selecting a major. **Civitas** for student success. **Pathways** to improve LMS instructional design.
2017 Goals: AXDD

> MyUW rebuild for faculty and staff
> Increase Canvas adoption through instructional design and feature enhancement
> Data analytics to improve the student and faculty experience
> Lead the rollout of the Training Management System
> Continue to support the Husky Experience/Thrive initiative
Canvas/Catalyst Strategy

Proposed deprecation of the following Catalyst tools: CommonView (website), GoPost (discussion board), Collectit (Dropbox) and QuickPoll (one-off surveys)
# Canvas/Catalyst Strategy

## Proposed timeline:

<table>
<thead>
<tr>
<th>Catalyst Tools</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collectit</td>
<td>December 22, 2017</td>
<td>June 15, 2018</td>
<td>August 24, 2018</td>
</tr>
<tr>
<td>CommonView</td>
<td>Disable class lists and creation of new tools</td>
<td>Disable access to tools for non-owners</td>
<td>Disable access to tool owners</td>
</tr>
<tr>
<td>GoPost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QuickPoll</td>
<td></td>
<td></td>
<td></td>
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## Potential issues:

- Wide administrative use of Catalyst tools (not just a teaching and learning issue)
- Many Catalyst tools are approved by IRB; need similar approval for alternatives
- Change fatigue in campus community
### Canvas/Catalyst Strategy

#### Survey results (N = 1400):

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>Moderately</th>
<th>Somewhat</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on processes</td>
<td>61%</td>
<td>23%</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>Time and effort required to select a suitable replacement tool</td>
<td>59%</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Suitability of replacement tool</td>
<td>57%</td>
<td>25%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>Resources required for the migration</td>
<td>53%</td>
<td>22%</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td>Training yourself and other staff on new system</td>
<td>47%</td>
<td>26%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Privacy/Security compliance of replacement tool</td>
<td>30%</td>
<td>18%</td>
<td>13%</td>
<td>39%</td>
</tr>
<tr>
<td>Training your end users or other staff you support</td>
<td>28%</td>
<td>25%</td>
<td>21%</td>
<td>26%</td>
</tr>
</tbody>
</table>

“The only one who likes change is a man in wet pants.” Mark Twain
Overview: Student Programs

- Support all services involving the Student Data Base
- Develop curriculum-oriented services for students, faculty and staff (MyPlan, CM, etc.)
- Leading IT modernization efforts in Enrollment Management
- Provide business-process analysis, design, development and operation of services involving students
Recent Accomplishments: Student Programs

**Undergraduate Admissions Modernization:** In 2016 processed over 48,000 applications in new, paperless service.

**Financial Aid Modernization:** Paperless document management in CRM platform. ~30,000 documents processed to date.

**MyPlan:** Academic planning, program exploration, and registration platform w/ 81% adoption.

**Curriculum Management:** Curriculum curation and electronic workflow for course approval in place. Academic programs being incorporated now.
2017 Goals: Student Programs

> **Undergraduate Admissions Modernization**: Coalition application go-live on July 1, 2017; begin work on transfer and post-bac admissions

> **Continuum College Admissions Modernization**: Continuum College students in fee-based programs will register through existing workflows using MyPlan

> **Financial Aid Modernization**: Project 2, or improvements to packaging; alignment with strategy to couple admissions and financial aid, and make offers earlier to students

> **MyPlan**: Continue with Academic Explorer build out; develop long-term roadmap for improvements to registration and begin work

> **Curriculum Management**: Complete incorporation of academic program information into system; this will require significant collaboration with Curriculum Management Oversight Committee
Student Programs Strategy

Given that a Student Information System replacement is >5 years away, we propose the following strategy:

> Continue bringing value to high-value services through continual service improvement

> Monitor SaaS Student Information Service providers:

  – **Workday**: Have just issues a “configurable” SIS; recruiting, admission and enrollment management are of 1.0 maturity

  – **KualiCo**: Have existing enrollment management service (we subscribe to this); enrollment is close to release

  – **Oracle**: Creating a cloud offering, but focusing on continuing education market (modest functional requirements and a growing market)

  – **Ellucian**: Have recruiting and admission (we subscribe to this); other features are maturing, but significant functional gaps exist

  – **Unit 4**: Developed for UK market with nascent presence in North America
Recent UW-IT Developments via Student Technology Fee Committee

High Performance Computing Support

> Hyak nodes
> Amazon AWS support for student High Performance Computing Club

Scout and SpaceScout

> Development of resource finder application named “SpaceScout” that later evolved to include STFC-funded hardware as well as study spaces, eateries and informal learning environments with specific amenities under the new name “Scout”

Student Web Publishing

> Provides students on all three UW campuses with the capability to publish course work, create Web sites and collaborate on research and other projects on the Web

Evolution of Learning Commons (Central Student Computing Facility)

> Exploring new ways to improve speed and efficiency of lab management
> Redesigning workstations to take advantage of native operating system capabilities
> Future plans include student focus groups and feedback avenues for improvement opportunities
Development of Block Funding via Student Technology Fee Committee

> STFC is now offering guaranteed, repeated annual funding to designated “blocks”
> Blocks are departments, units or groups that receive continuous funding from the STF over multiple years. The continuous funding model is offered to organizations that have shown remarkable, efficient and widespread value gained from STF expenditures.
> Block owners can spend the money at their discretion without a proposal as long as it is in the spirit of previous proposals
> Future plans include building a consistent workstation replacement schedule, regular data analysis presentations to demonstrate usage trends, and further integration with student-focused applications like Scout
> Odegaard Learning Commons and Student Technology Loan Program are the first blocks to be considered
QUESTIONS
UW-IT Service Portfolio

Expenditures and Strategic Allocation

Erik Lundberg
Assistant Vice President, Research Computing, Collaboration & Strategy, UW-IT
Service Portfolio

- Seven strategic categories
- Tied to strategic goals, supported by Strategy Management practice
- IT Strategy Board balances the investment and spend allocation across the Service Portfolio
- IT Service Investment Board prioritizes investment within Service Categories, based on the allocation profile
Service Categories

> Teaching and Learning
> Research
> Administration/Information
> Infrastructure
> Collaboration (cross-cutting)
> Enterprise Risk (cross-cutting)
> IT Management (organizational overhead)
UW-IT Service Portfolio
Strategic Allocation† - FY17

Investment Pct within Service Category

Category Spend
- Teaching & Learning: 9%
- Research Computing: 0%
- Admin Business Services: 35%
- Infrastructure (incl. Telecom, Datacenter, NW): 41%
- Collaboration Tools: 4%
- Enterprise Risk: 7%
- IT Management: 4%

Investment Allocation
- 0%
- 1%
- 52%
- 39%
- 1%
- 6%
- 1%

†Annualized labor cost, planned
UW-IT Service Portfolio (w/ORIS) Strategic Allocation† - FY17

Category Spend

<table>
<thead>
<tr>
<th>Category</th>
<th>Investment</th>
<th>Run Cost</th>
<th>ORIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching &amp; Learning</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Research Computing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Admin Business Services</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Infrastructure (INCL. TELECOM, DATACENTER, NW)</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Collaboration Tools</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Enterprise Risk</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>IT Management</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Investment Allocation

| Category             | 0%         | 1%       | 69%  | 25%  | 1%   | 4%   | 1%   |

†Annualized labor cost, planned
Research Investments

> FY15, FY16
  - ORIS: Research Portal (eIRB, eIACUC, Federal Reporting, Portal.1)
  - Campus Infrastructure: storage, 40Gb Campus Network, and misc. (Open Science Grid, common tools, Matlab licensing)
  - Engage with eScience incubator efforts

> FY 17
  - NextGen Hyak: initial deployment
  - 85 tracked cloud adoption case studies in flight across UW and UW Medicine
  - Three major successes for cloud adoption in molecular engineering and genomics that include open publication of tools and datasets
  - Throughput for large data transfers increased by more than 500% using Science DMZ (campus firewall bypass)
  - Student HPC Club: support for Cloud Computing, augmented by AWS grants, plus additional support for HPC through STF funding. Serving hundreds of students in dozens of departments
  - Two proposals for Provost Reinvestment Funds, to start up a self-sustaining research computing consultancy and a “secure research computing environment” (HIPPA, FISMA, etc.)
UW-IT Strategy Management Practice

An ongoing, inclusive, and actionable process
> UW-IT Strategy Management Practice overview
> UW-IT Service Portfolio and Business Services
> Strategy-on-a-Page (SoaP)
> Service Portfolio and SoaPs
> Strategy Drives Investment
Strategy Management Practice for UW-IT

- Align with multiple UW strategies, as well as within itself
- Build capacity for an ongoing strategy management practice
- Drive alignment with campus partners and within UW-IT
- Bring financials, organizational structure, and services into alignment with the strategic goals
- Assess and realign strategies continuously as the drivers and the environment change
- Communicate and collaborate with our campus partners in their strategy development
Connecting with Campus

Gartner and CEB highlight tight linkage between business and IT:

> Successful enterprises find ways to link business and technology planning
> Leverage opportunities presented by both
> Mitigate risks present in each

Practice at the UW

> UW-IT’s Strategy management must align with our UW partners’ strategic goals and roadmaps
> UW partners define a need for a new technology or service
> Business leadership defines overall direction and goals for the University.
> UW-IT’s strategy management practice responds quickly and effectively to these needs while supporting the University’s strategic goals
UW-IT Service Portfolio and Business Services

The Basis of the Service Catalog
Enable Innovative Teaching and Learning

Enable students & teaching faculty to excel!
Classroom Technologies
Instructional Labs
Teaching and Learning Tools

Modernize Information & Business Systems

Enable administrators to better serve students, faculty, staff, & others
Ancillary Administrative Systems
Data and Analytics
Document Management
Finance Systems
HR/Payroll Systems
Student Systems

Enhance Collaboration

Enable everyone at the UW to work together
Email, Calendaring and Collaboration

Teaching & Learning

Research

Information & Business Systems

IT Infrastructure

Collaboration

Enterprise Risk Management

IT Management

Better IT Management

Enable IT staff throughout the UW to be more effective
Communications
Consulting
Customer Support Management
Enterprise Architecture
IT Administration
Service Management
Software Licenses
Strategic Sourcing

Support World-Class Research

Enable research faculty & students to innovate
Cloud and Data Solutions
High Performance Computing
Research Cyberinfrastructure

Provide Access to Excellent Infrastructure

Enable IT staff throughout the UW to create solutions
Computing and Storage
Data Centers
Data Networks
Identity and Access Management
Infrastructure Tools
Telecommunications

Reduce Enterprise Risk

Enable leaders throughout the UW to manage risk
Accessible Technologies
Information Security and Privacy
Operational Resiliency

Note: In addition to the above business services, two major programs are underway to modernize business systems: HR/Payroll Modernization Program and Finance Transformation Program
How UW-IT Strategic Goals Support the UW

### UW-IT Strategic Goals

**Enable Innovative Teaching & Learning**
Provide technology to support and improve the teaching and learning experience.

**Support World-Class Research**
Support UW research with up-to-date tools and resources.

**Modernize Information & Business Systems**
Provide modern, flexible and integrated business information systems to support a complex, global research institution and access to better information for planning and analysis.

**Provide Access to Excellent Infrastructure**
Make sure UW has highly functional, reliable and invisible IT infrastructure that just works—and doesn’t get in the way.

**Enhance Collaboration**
Provide excellent productivity tools, and enable easy, secure collaboration with partners at the UW and beyond.

**Reduce Enterprise Risk**
Support UW’s risk management objectives by promoting privacy, security, business continuity and compliance.

**Better IT Management**
Improve the operational efficiency and transparency of UW-IT, and potentially other IT organizations at the UW.

### UW Strategic Framework

**Source:** Sustainable Academic Business Plan
Strategy-on-a-Page

The Foundation
Strategy-on-a-Page (SoaP) Template

**Strategy Statement:** To enable ____, we ____.

**Vision:** What is the future you envision as a result of your strategy?

<table>
<thead>
<tr>
<th>Change Drivers:</th>
<th>Initiatives:</th>
<th>Outcomes:</th>
</tr>
</thead>
</table>
| *What big changes in the environment are driving your strategy -- business, technology, financial, etc.?* | *What are you doing in response to your drivers to create different outcomes?* | *What will be different as a result of your initiatives? What business value will result?*
| Current | Approved active business cases | Approved business cases, not active yet |
| Planned | Proposed business cases | |
| Future | | |
Service Portfolio and SoaPs

A Strategic Framework
Service Portfolio and SoaPs

- Comprehensive (top-down and bottom-up)
- Inclusive (involvement and accountability at all levels of the organization)
- Accessible (from inside and outside UW-IT)
- Actionable (supports annual service assessments)
UW-IT Strategic Service Portfolio

7 Strategic Goals
~30 Business Services
~130 Service Offerings
**Strategy Statement:** UW-IT provides IT infrastructure that works without getting in the way, is designed to meet constantly increasing needs for coverage, bandwidth, and mobility, and is cost-effective for the UW.

**Vision:** Provide standardized, reliable, affordable and helpful IT infrastructure services that enables the UW staff, faculty, and students to be productively engaged in their teaching, learning, and research activities.

<table>
<thead>
<tr>
<th>Change Drivers</th>
<th>Initiatives</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; IT staff need to develop and use marketable skills to stay competitive.</td>
<td>&gt; Provide training classes to staff for core technologies such as Python, Ansible, Agile, Cloud (IaaS).</td>
<td>&gt; Staff learn new, common, and industry standard skills.</td>
</tr>
<tr>
<td>&gt; IT Infrastructure is moving toward being software-defined.</td>
<td>&gt; Focus operational staffing and solutions toward infrastructure-as-software solutions.</td>
<td>&gt; Shared skills allow staff to more easily collaborate and work on new projects.</td>
</tr>
<tr>
<td>&gt; Seattle continues to be increasingly competitive for IT workers.</td>
<td>&gt; Increase the transparency of UW-IT IT Infrastructure capabilities, costs, and compliance.</td>
<td>&gt; The UW remains current with infrastructure trends.</td>
</tr>
<tr>
<td>&gt; Increased diversity of IT solutions complicates decision-making and cost management.</td>
<td>&gt; Utilize self-sustaining (charge-back) service model whenever possible.</td>
<td>&gt; Staff retention and job satisfaction stay high for IT Infrastructure.</td>
</tr>
<tr>
<td>&gt; Departmental IT groups may implement different solutions for the same problems, unless UW-IT is engaged to align efforts.</td>
<td>&gt; Publish standardized and simplified service configurations to encourage re-use and lower costs.</td>
<td>&gt; Consumers of IT Infrastructure services make more informed choices.</td>
</tr>
<tr>
<td>&gt; Increased reliance on big data in both research and administration drives expansion of network and storage infrastructure.</td>
<td>&gt; Deploy highly shared and scalable private cloud solutions (IaaS) to replace aging server and storage infrastructure.</td>
<td>&gt; Standard IT Infrastructure service costs and capabilities will be competitive and encourage use of shared services.</td>
</tr>
<tr>
<td>&gt; Cloud infrastructure offers opportunities in resilience, elasticity, and cost reduction. These services change rapidly, making it difficult for IT staff to learn how to choose and use effectively.</td>
<td>&gt; Utilize hybrid cloud models for IaaS as they mature.</td>
<td>&gt; Hybrid cloud infrastructure and platform offerings both maximize investment in local data centers and increasingly leverage public cloud capabilities to speed solution delivery, expand resiliency, create elasticity, and reduce cost.</td>
</tr>
<tr>
<td>&gt; Planned Retirement of Mainframe system in 2024 (estimated).</td>
<td>&gt; Review, plan and redeploy UW-IT infrastructure systems from TierPoint into the cloud. Deploy no new equipment at TierPoint in 2020.</td>
<td>&gt; Hybrid cloud allows for UW-IT to deploy infrastructure between on-premis and multiple public clouds without any impact to customers, and will allow continual adjusts between clouds to optimize cost and performance.</td>
</tr>
<tr>
<td>&gt; Increased mobility drives expansion of wireless networks and unified communications services.</td>
<td>&gt; Complete the current wireless refresh project and continue to update underlying wireless infrastructure.</td>
<td>&gt; Improved wireless infrastructure supports more mobile devices, higher bandwidth demands, and customized wireless services.</td>
</tr>
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## Strategic Goal: Provide Access to Excellent Infrastructure (page 2 of 2)

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<table>
<thead>
<tr>
<th>Change Drivers</th>
<th>Initiatives</th>
<th>Outcomes</th>
</tr>
</thead>
</table>
| > IT infrastructure is increasingly mission-critical for enabling UW operations and business capabilities.  
> Enterprise Architecture looking to develop common reference architectures that will be shared across service teams and used by projects to deliver solutions faster and at a lower cost. | > Prioritize all infrastructure, operational and maintenance efforts over any other resourcing needs. Resource UW-IT’s projects in priority order: Priority 1 projects, such as HR/P, have precedence.  
> Deploy modern monitoring platform that better integrates with the Help Desk and IT Service Management tools.  
> Support adoption of Development & Operations (DevOps) practices in all new project teams through a DevOps Community of Practice.  
> Engage with UW-IT project teams to implement a Design for Cloud approach to new systems. | > Continue current operational levels for services and systems.  
> Improved monitoring enables better service delivery.  
> Better managed software release practices increase velocity and quality of IT solutions.  
> DevOps teams will result in better operational resource plans, skills development, and create a more agile workforce for UW-IT. |
| > UW faculty, students, and staff increasingly collaborate and engage in research nationally and globally using federated identities.  
> Growth in Identity needs and solutions appropriate to higher education. | > Explore federated authentication and scalable privacy solutions.  
> Deliver new and improved account self-service tools that individuals can use to find, activate, and manage services such as email, storage, blogs, groups, etc.  
> Participate in Trust and Identity in Education and Research program (TIER), as appropriate, to replace local identity infrastructure with community-sourced or commodity solutions. | > Easy provisioning and cost-effective identity services provide improved support for virtual organizations and collaboration (on campus, national, global).  
> Simplified user account and group management services increase user convenience and reduce institutional risk.  
> Move from current custom identity infrastructure to standard solutions from TIER, shifting resources higher up the stack. |
| > Support the UW service mission by sharing network expertise with regional partners. | > Extend the UW optical transport network around Lake Washington. | > Regional network partners (C3, Pacific Northwest Gigapop, K-20, UW Medicine) grow network expertise and take increasing ownership of initiatives. |
Strategy Drives Investments
UW-IT Service Investment Planning

Strategic Service Portfolio

Service Portfolio Review Board

IT Strategy Board

Customers

SoaP

Business Case Development

UW-IT Service Portfolio and Business Services

IT Service Investment Board

Portfolio Review Board, Expend. Review Committee

Investment Plan

Business Case Evaluation

Portfolio Review Board

Service Teams

Business Teams

UW-IT Project Prioritization Criteria

Service Teams

Business Teams

Portfolio Review Board

IT Strategy Board
UW-IT Service Portfolio and Business Services

Enable Innovative Teaching and Learning
- Enable students & teaching faculty to excel
  - Classroom Technologies
  - Instructional Labs
  - Teaching and Learning Tools

Modernize Information & Business Systems
- Enable administrators to better serve students, faculty, staff, & others
  - Ancillary Administrative Systems
  - Data and Analytics
  - Document Management
  - Finance Systems
  - HR/Payroll Systems
  - Student Systems

Enhance Collaboration
- Enable everyone at the UW to work together
  - Email, Calendaring and Collaboration

Teaching & Learning
- Classroom Technologies
- Instructional Labs
- Teaching and Learning Tools

Research
- Cloud and Data Solutions
- High Performance Computing
- Research Cyberinfrastructure

IT Infrastructure
- Computing and Storage
- Data Centers
- Data Networks
- Identity and Access Management
- Infrastructure Tools
- Telecommunications

Information & Business Systems
- Ancillary Administrative Systems
- Data and Analytics
- Document Management
- Finance Systems
- HR/Payroll Systems
- Student Systems

Collaboration
- Email, Calendaring and Collaboration

Enterprise Risk Management
- Accessible Technologies
- Information Security and Privacy
- Operational Resiliency

IT That Matters Any Time, Any Place, Any Device

Better IT Management
- Enable IT staff throughout the UW to be more effective
  - Communications
  - Consulting
  - Customer Support Management
  - Enterprise Architecture
  - IT Administration
  - Service Management
  - Software Licenses
  - Strategic Sourcing

Reduce Enterprise Risk
- Enable leaders throughout the UW to manage risk
  - Accessible Technologies
  - Information Security and Privacy
  - Operational Resiliency

Note: In addition to the above business services, two major programs are underway to modernize business systems:
  - HR/Payroll Modernization Program
  - Finance Transformation Program
**Strategy Statement:** The UW community applies Identity and Access Management (IAM) solutions in ways that promote trust, privacy, collaboration, and innovation in research and education.

**Vision:** Trusted online identities enriched with the attributes of the UW.

<table>
<thead>
<tr>
<th>Change Drivers</th>
<th>Initiatives</th>
<th>Outcomes</th>
</tr>
</thead>
</table>
| > Misuse of SSN data puts up to one million UW customers at risk of identity theft and fraud. Cost for breach notifications, plus support is $50 per person. | > Current: Support Trust and Identity in Education and Research (TIER).  
> Future: Remove SSNs from Identity Registry. | > Removal of SSN data from Identity Registry reduces enterprise risk. |
| > A rise in the number and kinds of customer relationships, along with increased pre-existing digital identities (Bring-Your-Own-Identity) drives demands on identity infrastructure. | > Current: Support TIER; use of preferred name.  
> Future: SelfSvc5 - User-Centric Profiles & Privacy Controls; Preferred Pronoun. | > Customers control their own identity data, profiles, and privacy with self-service tools.  
> Customers can use trusted identities to access UW resources. |
> Future: HR/P optimization and support. | > IT customers leverage existing infrastructure for identity data integration, reporting, and analytics.  
> Increased use of UW canonical data model, TIER APIs, and community identity data standards. |
| > Software-defined everything – increased adoption and use of Application Program Interfaces (APIs). | > Current: Implement Multi-Factor Authentication Modernization; support TIER; Password Manager Service (LastPass), Pubcookie retirement; Identity Provider 2.0. | > Reduced risk of customer identity theft, breach of UW systems, and unauthorized access to institutional data. |
| > Intensity of password compromises due to phishing, password reuse, etc., increases fraud by cybercriminals. | | |
| > Availability of new devices (bring your own device) creates options for second-factor authentication. | > Current: Support TIER.  
> Future: SelfSvc4 - Groups 3.0. | > A sustainable business model for sourcing IAM solutions aligned with the research and education community's growing needs for collaboration, nationally and globally. |
| > Adoption of industry and community standards for single sign-on (SSO) and federation. | > Current: Support TIER.  
> Future: SelfSvc4 - Groups 3.0. | | |
| > Internet2 TIER pools community resources to provide identity solutions aligned with research and education community needs. | > Current: Support TIER; InCommon Working Group on OpenID Connect and OAuth 2.0 Survey.  
> Future: OAuth for API access; improve accountability for system access to data. | > Modern API authorization methods, like OAuth 2.0, reduce friction and increase developer agility.  
> Ownership and lifecycle of applications is defined and managed. |
| > Demand for authentication methods that streamline and ease application integration. | > Current: Support TIER; SelfSvc1 - Customer Journey Discovery.  
> Future: SelfSvc4 - Groups 3.0; SelfSvc3 - Access Portal 2.0; SelfSvc5 - User-Centric Profiles & Privacy Controls. | > Customers can find and enable IT services more quickly and with lower friction through increase in self-service options.  
> Self-service reduces support costs. |
| > Internet of Things is on the rise; increased number and kinds of devices and non-person entities. | | |
| > Widespread adoption and use of IT services by individuals, teams, and organizations. | | |
| > Need to increase the agility and velocity of IT service delivery; cost of password resets. | | |
# UW-IT Business Case - Improve MFA

## ABSTRACT ESTIMATES

<table>
<thead>
<tr>
<th>Project Duration</th>
<th>&gt; 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributed Labor</td>
<td>&gt; 2,000 Hours</td>
</tr>
<tr>
<td>New FTE</td>
<td>FTE</td>
</tr>
<tr>
<td>Software/Hardware or Vendor/Contractor/Other Cost</td>
<td>None</td>
</tr>
<tr>
<td>Enterprise Information Services</td>
<td>$100 - $500</td>
</tr>
</tbody>
</table>

### Project Summary (What)

These coordinated projects will improve Multi-Factor Authentication (MFA) in the following ways:

- **MFA1**: MFA Replacement: Select a new, improved MFA solution and transition current customers and end-users to its use.
- **MFA2**: Widespread MFA: Enable widespread use of MFA for critical applications and large populations (e.g. all employees as access to Workday).
- **MFA3**: Opt-in MFA: Enable individual end-users to voluntarily opt-in to using MFA when signing in.
- **MFA4**: Align MFA with TIER: Update MFA solution dependencies to align with TIER strategy (e.g. replace Pabuk SSO software).
- **MFA5**: Weblogin 2.0: Improve the usability of the "weblogin" user interface and adjust single sign-on policies to balance usability and security.
- **MFA6**: MFA Expansion: Enable use of MFA on proprietary cloud platforms (e.g. UW Google Apps, Microsoft Azure Active Directory, Amazon Web Services, etc.)

### Objectives & Benefits (Why)

The MFA projects will address increasing demand for solutions to user authentication that are more secure, trustworthy, and resilient to common security threats.

Multi-factor authentication improves the strength of user authentication by verifying that users not only know something, such as a secret password, but also have or possess something physical, such as a mobile phone or security token.

The increased demand for improved MFA solutions coincides with the need to re-source our current vendor solution provided by Entrust Inc. Our current contract expires in November 2016 and cannot be extended again.

The benefits of this project include improved user experience, more efficient processes for issuing and re-issuing credentials to users, improved solutions for managing information security and compliance risks, better alignment with strategic community- and cloud-based sourcing options, and avoiding legal actions if we were to extend our contract with Entrust without going through the selection process included in this project.

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TO COMPLETE FOR BUSINESS CASE

#### Project Deliverables

These coordinated projects will deliver:

- **MFA1**: MFA Replacement: Select a new, improved MFA solution and transition current customers and end-users to its use.
- **MFA2**: Widespread MFA: Enable widespread use of MFA for critical applications and large populations (e.g. all employees as access to Workday).
- **MFA3**: Opt-in MFA: Enable individual end-users to voluntarily opt-in to using MFA when signing in.
- **MFA4**: Align MFA with TIER: Update MFA solution dependencies to align with TIER strategy (e.g. replace Pabuk SSO software).
- **MFA5**: Weblogin 2.0: Improve the usability of the "weblogin" user interface and adjust single sign-on policies to balance usability and security.
- **MFA6**: MFA Expansion: Enable use of MFA on proprietary cloud platforms (e.g. UW Google Apps, Microsoft Azure Active Directory, Amazon Web Services, etc.)

Note: Same info as summary section above.

#### Project Risk & Dependencies

Risks include criticality to the business, direct impact on customers, high visibility, uncertain technologies, moderate customization, external dependencies and span of impact.

Dependencies include Shibboleth 3.2 Upgrade Project and Weblogin 1.2 release (UW brand alignment).

### TIMELINE ESTIMATE

<table>
<thead>
<tr>
<th>Target Start Date</th>
<th>7/1/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target End Date</td>
<td>6/28/2019</td>
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### BUDGET ESTIMATE

<table>
<thead>
<tr>
<th>PROJECT IMPLEMENTATION (TOTAL)</th>
<th>ONGOING OPERATIONS (ANNUAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation: Contributed Labor Hours</td>
<td>Ongoing Operations: Contributed Labor Hours</td>
</tr>
<tr>
<td>5,100.00</td>
<td>784.00</td>
</tr>
<tr>
<td>0.00</td>
<td>0.50</td>
</tr>
<tr>
<td>Implementation: Non-Labor Cost (Software/Hardware/Consultant/Vendor)</td>
<td>Ongoing Operations: Non-Labor Cost (Software/Hardware/Consultant/Vendor)</td>
</tr>
<tr>
<td>$170,000.00</td>
<td>$170,000.00</td>
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</table>

### IMPORTANCE

1. **STRATEGIC VALUE**

   Does this project directly support the UW’s mission? If yes, please explain.

   N/A

2. **SUPPORT FOR COLLABORATION**

   [Signature]
QUESTIONS AND DISCUSSION