Navigating the IAM Roadmap
Presentation Objectives

• Describe how our planning approach enabled us to roll out new IAM services as part of a major IAM program at Harvard University.
• Explain how adopting the use of the Scaled Agile for Planning helped us.
• Discuss roadmap challenges that we face, and foster discussion.
Provide users, application owners, and IT administrative staff with secure, easy access to applications; solutions that require fewer logins; the ability to collaborate across and beyond Harvard; and improved security and auditing.

iam.harvard.edu

IAM Program at Harvard: Vision
### Vision

#### Key Objectives

<table>
<thead>
<tr>
<th>Simplify User Experience</th>
<th>Protect University Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simplify and improve access to applications and information inside and outside of the University</td>
<td>Establish a strong foundation for IAM to enable user and technology innovation</td>
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<tr>
<td>New user account management solution, HarvardKey</td>
<td>Automate account provisioning and deprovisioning with IAM and other applications</td>
</tr>
<tr>
<td>Self-service for enrollment in services</td>
<td>New user account management solution</td>
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</table>

<table>
<thead>
<tr>
<th>Facilitate Technology Innovation</th>
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<tr>
<td>Establish a strong foundation for IAM to enable user and technology innovation</td>
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<tr>
<td>HarvardKey, new user account management solution</td>
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</tbody>
</table>

#### Key Deliverables

- New user account management solution
- HarvardKey
- InCommon Federation (Incommon.org)
- Duo two-factor authentication
- Stronger password management
- Two-factor verification (DUO)
- Identity Registry with APIs to replace point-to-point file transfers (in progress)
- Groups (in progress)
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- InCommon Federation (Incommon.org)
- Groups (in progress)
- Identity Registry with APIs to replace point-to-point file transfers (in progress)

- Technologies to support unified access regardless of new and/or disruptive technologies
- Enhanced user experience
### Stakeholders Perspective: "Imagine If…"

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Outcome</th>
<th>Solution Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty and Staff</td>
<td>• Faculty and staff could access information and perform research across schools and with other institutions without having to use several sets of credentials. &lt;br&gt;• Faculty and staff could manage their own accounts and sponsor others through a centralized web application.</td>
<td>COMPLETE</td>
</tr>
<tr>
<td>Students</td>
<td>• Students could choose to use their home school credentials to login into applications across the University. &lt;br&gt;• Students could keep using the same set of credentials after they graduate.</td>
<td>COMPLETE</td>
</tr>
<tr>
<td>Technical Staff</td>
<td>• Automated provisioning could reduce the burden on IT staff and increase the security posture of the University. &lt;br&gt;• Application teams could easily integrate Harvard users with internal and external applications.</td>
<td>COMPLETE</td>
</tr>
<tr>
<td>External Users</td>
<td>• External access to Harvard resources based with either federated or sponsored accounts &lt;br&gt;• External users could access Harvard applications using credentials native to their home institution.</td>
<td>COMPLETE</td>
</tr>
</tbody>
</table>

At the onset of the IAM project, we imagined a list of key ideas that represented an ideal state for our stakeholder groups. "Imagine if..."
<table>
<thead>
<tr>
<th>Services Achieved</th>
<th>Business Value Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Migration</td>
<td></td>
</tr>
<tr>
<td>Financial Services</td>
<td></td>
</tr>
<tr>
<td>Supply Chain</td>
<td></td>
</tr>
<tr>
<td>Property Services</td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td></td>
</tr>
<tr>
<td>Support Services</td>
<td></td>
</tr>
<tr>
<td>Human Resources</td>
<td></td>
</tr>
</tbody>
</table>

**Business Value Achieved**

- Increased efficiency and productivity
- Enhanced customer satisfaction
- Improved cost savings
- strengthened market position
- Increased revenue
- Expanded market reach
- Enhanced product offerings
- Improved employee engagement
- Enhanced product offerings
- Increased revenue
- Expanded market reach
- Enhanced employee engagement
- Improved product offerings
- Increased revenue
- Expanded market reach
<table>
<thead>
<tr>
<th>Strategic Objectives</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating</td>
<td></td>
</tr>
<tr>
<td>IAM Strategic Objectives</td>
<td></td>
</tr>
<tr>
<td>Facilitate Technology Innovation</td>
<td></td>
</tr>
<tr>
<td>Improved participation in higher education community...</td>
<td></td>
</tr>
<tr>
<td>Expressed as Benefits</td>
<td></td>
</tr>
<tr>
<td>Simplify the User Experience</td>
<td></td>
</tr>
<tr>
<td>Enable Research and Collaboration</td>
<td></td>
</tr>
<tr>
<td>Improved access to university resources...</td>
<td></td>
</tr>
<tr>
<td>Protect University Resources</td>
<td></td>
</tr>
<tr>
<td>University-wide adoption of standardized and improved passwords with</td>
<td></td>
</tr>
<tr>
<td>Better security...</td>
<td></td>
</tr>
<tr>
<td>Improved sponsored guest accounts and external federation allow...</td>
<td></td>
</tr>
<tr>
<td>Applications that enable university email, library services, and over 2,700 other</td>
<td></td>
</tr>
<tr>
<td>All schools across Harvard are integrated with common user identities</td>
<td></td>
</tr>
<tr>
<td>Less passwords to remember...</td>
<td></td>
</tr>
<tr>
<td>Across Harvard</td>
<td></td>
</tr>
<tr>
<td>One login for life has replaced an average of over 6 logins per user</td>
<td></td>
</tr>
</tbody>
</table>
Planning Approach

- Revisiting relative priority of the objectives every PI
- Communicating status against the objectives
- Measuring progress on an ongoing basis and reviewing with the team
- Planning the delivery in program increments (PI)
- Mapping deliverables to the business objectives
- Clearly identifying goals and objectives and tying them to the vision
- Maintaining awareness of our organizational values
- Validating that vision with leadership
- Starting with a vision (listening tours)
Getting from Vision to Roadmap with Agile

Roadmap

- Standards
- Evolution of technical standards
- Aging infrastructure

What else affects the planning for what comes next?

- New Security Threats
- Stakeholder Demands
- Commitments to Other IT Service Providers
- Known Problems & Gaps
- Metrics (Usage, Incidents)
- Values and Vision
- Aging Infrastructure
IAM Team liked being Agile

Our transition to Agile methodology got a positive reaction both inside and outside the program team:

• Worked faster
• Delivered completed work more frequently
• Worked better

IAM and Agile

IAM and Agile
From sprint to sprint, there were concerns:

- Team had trouble understanding what was important, and why.
- Constant complaint about changing priorities.
- Lack of ownership of problems due to feeling unempowered as a team.
- Too big a gap between the vision and the sprint objectives.
- Reality of parallel streams of specialized work meant that the team did not work as a team in the true sense of agile.

Planning Problems
Product Vision
Long-term, 12+ months

Product Roadmap
12-18 months, revised quarterly

Release Planning
3-6 months, revised each sprint

Sprint Planning
Every 2 weeks

Daily Planning
Every day

The Missing Piece
Provides a layer of scope in the middle, between “story” and “release”

- Larger scope items in parallel work streams
- Across multiple delivery teams
- Over longer time increments

Provides a framework for extending process to better handle

Experiment: Try Scaled Agile
Increment planning meetings are quarterly team activities that replicate sprint-level activities on a larger scale.

- Retro the prior increment
- Introduce the proposed scope of the new increment
- Identify dependencies and risks that need follow-up work
- Schedule high-level stories into sprint-by-sprint plans
- Size high-level stories
- Team validates scope
- Make a commitment

Four program increments per year – each with 6 sprints.

Program Increment Planning
Understanding of Roadmap By Team Is Key

From Program Plan to Roadmap for Program Increments:

- Started with vision and values; aligned goals and business objectives
- Mapped deliverables to business objectives
- Started with vision and values; aligned goals and business objectives

Program Increment Planning (Each quarter ~ 3 months and 6 sprints)

- Mapped features to business objectives (goals)
- Prioritize – force rank them!
- Broke features into sprints

Program Planning days to focus on PI scope and determining feasibility

- Lay out the future program increments in advance

Keep message consistent for governance and senior leadership

- Measured status against these goals and business objectives
- Measured deliverables to business objectives

From Program Plan to Roadmap for Program Increments:

- Prioritize – force rank them!
- Broke features into sprints
- Mapped features to business objectives (goals)
<table>
<thead>
<tr>
<th>Goal</th>
<th>Program Goal</th>
<th>Status</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 1: Increase adoption of Two Step Verification across the University</td>
<td>#3 Security</td>
<td>● Release schedule set for two-step functionality to be brought into Key</td>
<td>● Communication plan developed</td>
</tr>
<tr>
<td>Goal 2: Implement centrally managed groups to enable distribution lists, access control and authorization to web-based applications</td>
<td>#2 Collaboration</td>
<td>● Work underway to promote initial functionality to the University</td>
<td>● Conversions with HMS ongoing</td>
</tr>
<tr>
<td>Goal 3: Provision identities into a school Active Directory (HKS)</td>
<td>#4 Foundational</td>
<td>● HKS has hired a resource to assist on project</td>
<td>● Planning with HUIT UC underway</td>
</tr>
<tr>
<td>Goal 4: Enable users to opt-in and personalize email services via HarvardKey self-service</td>
<td>#1 Simplification</td>
<td>● Development effort targeted for next quarter to allow for O365 opt-in by FAS, DCE and SEAS affiliates</td>
<td>● Conversations with HMS ongoing</td>
</tr>
<tr>
<td>Goal 5: Partner with HMS to define IAM elements for a retirement strategy of eCommons</td>
<td>#4 Foundational</td>
<td>● Conversations with HMS ongoing</td>
<td>● Conversations with HMS ongoing</td>
</tr>
<tr>
<td>Goal 6: Establish the FY'18 funding model and transition to operational steady state</td>
<td>#4 Foundational</td>
<td>● Official planning effort kicked off to coordinate IAM and Finance team partnerships</td>
<td>● Conversations with HMS ongoing</td>
</tr>
</tbody>
</table>

**KEY**

- **Done**: All tasks completed.
- **Risks Identified**: Risk identified but no significant concerns.
- **Major Risk**: Risk identified requiring significant attention.

**Progress Against FY17 Goals**
<table>
<thead>
<tr>
<th>PI</th>
<th>21%</th>
<th>5</th>
<th>%</th>
<th>0%</th>
<th>0</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>21%</td>
<td>3</td>
<td>21%</td>
<td>3</td>
<td>21%</td>
<td>WILL Carry Over</td>
</tr>
<tr>
<td>PI</td>
<td>4%</td>
<td>1</td>
<td>%</td>
<td>0%</td>
<td>0</td>
<td>Pull Out</td>
</tr>
<tr>
<td>PI</td>
<td>37.5%</td>
<td>9</td>
<td>50%</td>
<td>7</td>
<td>50%</td>
<td>WILL Complete</td>
</tr>
<tr>
<td>PI</td>
<td>37.5%</td>
<td>9</td>
<td>50%</td>
<td>7</td>
<td>50%</td>
<td>WILL Complete</td>
</tr>
<tr>
<td>PI-7 %</td>
<td>21%</td>
<td>4</td>
<td>%</td>
<td>29%</td>
<td>4</td>
<td>Completed</td>
</tr>
</tbody>
</table>

**PI-8 Successes - Scrum Teams**

- 24 Features
- Completed: FASMail Decommissioning, Community Support, Broadcast Community Planning
- Pulled Out: 0
- Will Carry Over: Provisioning/De-Provisioning Enhancements, AuthN/CAS/IDP, Duo Enhancements, SSN Security, AD

- Total: 14 Features
- Completed: 9
- Will Complete: 7
- Pulled Out: 1
- Will Carry Over: 3
business objectives map to epics in jira
individual stories are tagged
use of a high-level pi board to prioritize the high-level objectives
each team has their own board, but the use of epics spans the boards and captures cross-team work.

We are in the home stretch of the Program, and we are also preparing for the transition to operations.

**Customer Requests:**
- Migrate CAADs service to AD so they can shut it down (Security)
- Community adjustments to support provisioning
- Database Refresh (Prod to Stage)
- New POI role types for UHS, Radcliffe
- Address CISSO priorities for AD
- Ensure two-step verification adoption
- Complete SSN remediation
- Multiple design projects related to Registry, XID, MIDAS for PI

**Technical Debt & Cloud:**
- Migrate AZP to the cloud
- Updates to database and environment to prepare for cloud migration
- Prepare H-LDAP with new attributes to enable H-LDAP migration
- Multiple design projects related to Registry, XID, MIDAS for PI

**Security:**
- New POI role types for UHS, Radcliffe
- Provisioning
- Community adjustments to support
- Complete SSN remediation
- Address CISSO priorities for AD
- Ensure two-step verification adoption
- Migrate AZP to the cloud

**Critical Themes:**
- P1-9 Themes: Balancing Multiple Priorities
- Critical that the team can understand the roadmap, and have input.
- Team can work on at the same time.
BO: Finish the Program by end of FY17

1. Group Service
2. Upgrade IIQ so it can handle group provisioning; optimize performance
3. 0365 licensing via IIQ
4. Eliminate Waveset (by end of PI-10)
5. Turn off the PIN system

Details:

- Consulting support from IIQ to assist with IIQ related work, including the IIQ upgrade
- 0365 scope includes Graduate Students from the CAPLUS schools, HKS and HLS
• Making a decision when it is *all* important (or so they say!)

  Right thing
• How much to talk about the „why” to sell them on the reasons for doing the

  Political realities
• Balancing all the voices that are weighing in on what you should do

  Interests of the stakeholders
• Identifying the interests of the stakeholders and the link to objectives

  – Political realities
• Explaining the vision and values, and the link to objectives

  – From your lowest level user to executive level are stakeholders
• Hearing everyone, because upon examination, they are all stakeholders

Challenges: The Roadmap Traffic Cop Has A Tough Job
Preparing a roadmap is like preparing for a negotiation

• Identifying interests (which are different than objectives)
• Understanding the value of possible objectives to the stakeholders
• Iterating and communicating – not only to stakeholders, but to the team
• All that honking and traffic is the norm

Traffic: A fact of life

Things never actually really settle down

Closing Thoughts

Let the structure of the process help you keep your bearings

All that honking and traffic is the norm
Thank you!