Update on the Seven Opportunities from the 2011 IT Assessment

In 2011, Penn State conducted a University-wide assessment of information technology.[1] The assessment, which was led by the University and facilitated by an outside consultant, originated from goal six[2] of the 2009–14 Penn State Strategic Plan and focused on three broad objectives:

1) To quantify and understand Penn State's current level of investment in technology

2) To recommend changes to improve the efficiency and effectiveness of IT services, with particular focus on optimizing the balance between distributed and common services

3) To recommend changes to IT governance (planning, prioritization, assessment, and decision making) to improve the University's collective ability to manage its investment in technology

Through the assessment, seven opportunities were identified as being key factors in improving the effectiveness of technology and the ability to balance common and distributed IT services at Penn State. This document outlines the status of those seven opportunities as of **June 2014**.

OPPORTUNITY

Deploy a common email and calendaring solution for faculty and staff.

STATUS

The **University Collaboration Suite**[3] (UCS) was centrally funded in 2011 and now has 14,674 UCS email users (11,018 faculty and staff members and 185 student workers) and approximately 3,471 UCS calendar users (the calendar users migrated to UCS but forward email elsewhere). As of late June 2014, there were 3,631 mobile UCS users and the average mailbox size was approximately one gigabyte. In ongoing efforts to evaluate future directions for a common email solution, an Information Technology Leadership Council (ITLC) task force submitted their recommendation for email and calendaring services in December 2013.

University Collaboration Suite primary contact: **Pablo Garaitonandia**

Service owner: **Administrative Information Services**

OPPORTUNITY

Create a new University service to meet the shared needs for long-term data storage and archiving.

STATUS

Management, archiving, and preservation of research data is now supported by **ScholarSphere**,[4] a joint initiative of ITS and the University Libraries. ScholarSphere is a secure repository service that enables the Penn State community to share its research and scholarly work with a worldwide audience. Faculty, staff, and students can use ScholarSphere to collect their work in one location and create a durable record of their papers, presentations, publications, data sets, or other scholarly creations. Through this service, Penn State researchers can also comply with grant-funding agency requirements for sharing and managing research data.

ScholarSphere primary contact: **Mairéad Martin**

Service owner: **Services and Solutions**

OPPORTUNITY (CONTINUED)

Create a new University service to meet the shared needs for long-term data storage and archiving.

STATUS

ArchiveSphere[5] will support the long-term management of University electronic records and archival materials. There are four phases in ArchiveSphere development: 1) ingest and preservation services for archive staff, 2) administrative tools for managing, arranging, and describing submissions for public access and discovery interfaces, 3) integration with ArchivesSpace for holistic management of archival context around repository materials, and 4) alternative submission tools, including self-deposit options for institutional records. Phase one has been in production since January 2014. ArchiveSphere is a joint development between ITS and the University Libraries.

ArchiveSphere primary contact: **Mairéad Martin**

Service owner: **Services and Solutions**

As of June 2014, there were 12,389 accounts active in Penn State's enterprise **Box** service. Account users have stored an aggregate 12.5 terabytes of data since the service was first offered in October 2013 and are sharing data with 1,914 external Box users at other institutions. Since November 2013, Penn State students, faculty, and staff have been able to self-provision their own Box accounts through Single Sign On. In early 2014, the Box service team repatriated 1,330 free commercial Box accounts that were using some form of a psu.edu address and 311 Office of Physical Plant users who had been on a separate pilot of Box. An important addition to the service has been Non-Person Accounts—accounts that can be used by departments, committees, groups, etc., for group collaboration. The Penn State Box service team provides full user support through the IT Service Desk; offers an informational website (box.psu.edu) with news, use cases, and support information; uses a Yammer group for user discussion; and gives scheduled training and training on demand.

Box primary contact: **Kurt Baker**

Service owner: **Services and Solutions**

OPPORTUNITY

Expand ITS' server colocation and virtualization services in a manner that is cost competitive with units providing the service on their own. Commit first to increasing use of this service for administrative applications that require high availability and redundancy.

STATUS

Throughout the University, adoption of **VM Hosting**[6] increased more than 75 percent during fiscal year 2013–14 (more than 200 virtual servers were added).

In addition, the **vLearning**[7] pilot that began during fall semester 2013 is being extended through spring 2015. At this point, the pilot has included nine unique classes for 300 students at four campuses. The pilot provides the following:

- A safe, consistent environment where every student can run the necessary software using a web browser
- A virtual classroom where students can do their work wherever they have an Internet connection
- Data safety and consistency for students—viruses, malware, or hardware issues no longer cause students issues in relation to educational work

To gain a better understanding of customer requirements, financial/cost models, and requirements for service design, the vLearning pilot will soon be entering the service strategy phase.

VM Hosting primary contact: Mike Burns
vLearning primary contact: John Schubert

Service owners: Services and Solutions, Data Centers

OPPORTUNITY

Extend the ITS computer lab management service to all campuses and colleges and begin to develop a similar solution to manage administrative desktops.

STATUS

Two small-scale **Virtual Desktop Infrastructure**[8] (VDI) pilots have been completed to better understand desktop virtualization technologies and inform future decisions on a virtual desktop service for Penn State. The first pilot began in June 2012 with approximately thirty participants and the second pilot began in January 2013 with approximately twenty people. Work is currently being done to evaluate customer requirements, financial and cost models, and service design requirements for the VDI service.

Virtual Desktop Infrastructure primary contact: **Blake Ferchalk**

Service owner: **Services and Solutions**

OPPORTUNITY

Reduce the cost of software purchases by extending the use of shared, server-based software licenses instead of licensing software for every individual computer.

STATUS

Launched on July 1, 2013, **Software at Penn State**[9] evolved from the former Computer Store. Current initiatives include:

- Collaborating with Penn State campuses on a project to expand software titles at shared costs
- Managing the implementation and support for a new Adobe enterprise license and distribution/cost sharing model
- Gathering proposals from vendors for a software catalog that will increase the breadth of offerings to large- and small-volume customers
- Supporting fifteen communities of practice around software through user meetings and Yammer groups
- Gathering stakeholder requirements and evaluating tool options for a University-wide software repository to better coordinate software license usage
- Focusing on software compliance
- Exploring the possibility of a University-wide Microsoft Office 356 software offering

As a result of leveraged discounts, the University saved $21 million during fiscal year 2012–13. In addition, streamlining internal processes has increased overall efficiencies.

Software at Penn State primary contact: **Sue Gavazzi**

Service owner: **Services and Solutions**

OPPORTUNITY

Implement a common help desk system and knowledge base to improve the productivity of IT staff and the quality of user support services.

STATUS

As part of the larger Information Technology Service Management (ITSM) project, Penn State IT has been working with **Third Sky**,[10] an IT service management consultant, to develop a **Shared Service Desk** and evaluate and choose a service desk software solution.

Shared service desk tool evaluations are complete, a final tool will be selected by the end of June 2014, and process workshops will conclude in July 2014. The new tool and processes will be implemented in a phased rollout throughout the coming months.

Shared Service Desk System primary contact: Allen Stubblefield

Service owner: Services and Solutions

OPPORTUNITY

Make wireless networking at University Park campus a common service to achieve greater network coverage and a more consistent experience for faculty, students, and staff as they move about campus.

STATUS

On May 3, 2013, the Penn State Board of Trustees approved a **wireless networking**[11] effort expected to be complete by 2016. Substantial progress has been made to establish a common good wireless networking service across the University. As of June 2014, the management of most of the College of Engineering's wireless network has been transferred to Telecommunications and Networking Services (which was a high-priority goal), while forty-one of approximately 480 buildings have been upgraded and equipped to support wireless service standards (with installations underway in nine more buildings). Installations have also been completed and wireless services activated in all but a few residence halls across University Park. Before the start of classes in fall 2014, wireless service standards will be met within most classroom buildings at University Park campus.

Wireless Networking primary contact: Chuck Enfield

Service owner: Telecommunications and Networking Services

Related Projects

Although the following are not part of the seven opportunities from the 2011 IT Assessment, they have resulted from those initiatives and/or are closely related to the seven opportunities.

Data Centers

As part of the ITS server colocation and virtualization services opportunity, Penn State **Data Centers**[12] has been working with the Virtualization and Colocation Task Force since its inception. The Colocation Center is experiencing significant growth due to an increasing number of requests from units throughout the University. Those requesting colocation space for physical servers are asked to first consider, when applicable, the ITS Virtual Colocation service (VM Hosting). If they cannot move to VM Hosting, rack space is provisioned in the Colocation Center. In addition to the physical space, networking, power, and cooling offered in the Colocation Center, the Data Centers team works directly with each customer to help them transition from their current location. An inventory process is underway to identify at-risk and small server spaces that are candidates for consolidation. A new data center is expected to be fully operational by 2017.

Data Centers primary contact: **Mark Saussure**

ITSCollab Project Groups

The ITSCollab projects identified in 2013—service portfolio management, project portfolio management, and resource management—became components of the IT Transformation Program (ITX) in 2014. As one of the early adopters of ITX, ITS will begin working with the ITX Program Planning Team to develop shared processes for request fulfillment, incident management, a service catalog, and change management across all ITS units. This work and the implementation of shared processes will be a major step toward fostering one ITS and one IT at Penn State. The ITSCollab community continues to stay engaged in ITX's progress and supports and advocates the changes happening throughout the organization. Additionally, members of ITSCollab have worked to explore, refine, and join communities of practice around IT topics, ITS-wide change management approaches, and forward-thinking input to how staff will work together differently in the 300 North Science Park Road building.

ITSCollab primary contact: **Christy Long**

IT Transformation Program

To meet Penn State's changing needs, IT must be a customer-focused service that supports and facilitates innovation, collaboration, and excellence. The **IT Transformation Program**[13] (ITX) is an initiative to re-evaluate the University's IT service models and approach to customer service by providing services and partnerships at scale. To enhance the value of IT for students, faculty, and staff, the program is focusing on:

- IT governance
- IT portfolio management
- IT service management

ITX is working with **Third Sky**,[10] an IT service management consultant, along with five Penn State IT units to create a baseline for IT services, processes, tools, and structures at the University. To develop these baselines, Third Sky and the ITX program team have conducted process workshops, technical tool evaluations and demos, and peer reviews, fostering the broad involvement of IT staff across the University.

IT Transformation Program primary contact: **Mairéad Martin**

Service owner: **Office of the Vice Provost for IT**

Visitor Wireless

In October 2013, Penn State entered into a two-year agreement with AT&T Wireless to provide easy-to-access **visitor wireless**[14] networking to University guests. The conversion from paid to free Wi-Fi access for visitors began June 26 at University Park campus. Most Penn State campus locations will be converted to free visitor wireless by the end of July 2014. To prepare for the end of the current AT&T visitor wireless service agreement, the visitor wireless committee is investigating high-performance, reduced-cost alternatives. The committee will issue a request for proposals to determine Penn State's future visitor wireless solution by the end of 2014 and implement the new solution by October 2015.

Visitor Wireless primary contact: **Chuck Enfield**

Service owner: **Telecommunications and Networking Services**

Penn State Voice Advocacy Working Group

As part of creating a common email and calendaring solution for the University, the Penn State Voice Advocacy Working Group (Penn State VAWG) developed the following goals and objectives:

- Provide flexibility and options in the provisioning of voice services to University units and campuses that meet the University's requirements and educational needs in a cost effective manner
- Reduce the cost of voice services by 25–50 percent in five years
- Encourage and establish a similar/standard user experience from campus to campus
- Leverage University resources to the greatest extent possible

Penn State VAWG, composed of representatives from throughout Penn State, has completed an analysis of vendor service offerings, gathered stakeholder requirements, and released and evaluated vendor proposals.

Concurrent with this effort, external influences (such as the Active Directory, Microsoft Exchange, and growing expectations for unified communications) caused Penn State VAWG to re-evaluate the viability of the initial plan and approach. After some discussion, Penn State VAWG decided to end its initial effort and transition its focus to the Telephony Expansion Project (TEP). TEP is focused on expanding a Voice over Internet Protocol (VoIP) solution to all Penn State campus locations based on the VoIP platform at University Park campus. The design is scheduled to be complete by December 2014, and initial deployments are expected to take place during the first or second quarter of 2015.

Voice Advocacy Working Group primary contact: Jerry Krawczyk

Service owner: Telecommunications and Networking Services

Related Web Links

1. 2011 IT Assessment
   http://it.psu.edu/strategies/pdf/IT%20Assessment%20Executive%20Summary.pdf

2. Goal Six of the Penn State Strategic Plan
   http://strategicplan.psu.edu/technology

3. University Collaboration Suite (UCS)
   http://ait.its.psu.edu/services/ucs/

4. ScholarSphere
   https://scholarsphere.psu.edu/

5. ArchiveSphere
   http://stewardship.psu.edu/

6. VM Hosting Server Virtualization
   https://www.vmhost.psu.edu

7. vLearning
   https://vlearning.psu.edu/

8. Virtual Desktop Infrastructure (VDI)
   http://desktop.psu.edu

9. Software at Penn State
   http://software.psu.edu/

10. Third Sky
    http://www.thirdsky.com/

11. Wireless Networking
    http://wireless.psu.edu/
    Detailed plans of deployment sequences and schedules
    https://wikispaces.psu.edu/display/PSWP/Penn+State+Wireless+Projects+Home

12. Data Centers
    http://dc.psu.edu/

13. IT Transformation Program (ITX)
    http://sites.psu.edu/ittransformation

14. Visitor Wireless
    http://wireless.psu.edu/visitorwireless.html

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