1.1 Service Management
Program Plan
A Guide for Pilot and Early Adopting Units

Version 1.1
February 8, 2016
Revisions and Controls

This section provides document control in alignment with best practices and standards.

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## Control

**Document revision:** Cover page must match last date and revision. Start with 0.1 for drafts. Use 1.0 for first approved revision. Use 1.1, 1.2, 1.3, etc. for each subsequent minor revision. Use 2.0, 3.0, 4.0, etc. for each subsequent major revision. Contributors and approvers cannot be the same. Approval of controlled quality documentation will be completed using the Change Management process by submitting a change request.

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1 Executive Summary

This document provides an initial plan for federated governance, reporting, standards, and funding for the Information Technology Service Management Program at Penn State. It defines decision-making, collaboration expectations, and communication methods based on best practices and standards. To serve the best interests of the University, Penn State IT units are encouraged to subscribe to this program in its entirety—committing to the implementation of the roles, processes, and tools outlined in all the program documents. When a unit’s management subscribes to the program, all departments within that unit are expected to use all parts of the program.

Decisions for this program will be made at multiple levels and locations. Strategic decisions for policy and process adjustments as well as for service and project approval criteria will happen within shared steering committees. Tactical decisions will be made within unit-level portfolio steering committees. Operational decisions will leverage electronic approval paths within ServiceNow.

The program uses a three-tier approach for customer support including first line (Shared Service Desk), second line (subject matter experts), and third line (architects and suppliers). The Shared Service Desk is based on the best practice model of a virtual service desk that leverages distributed (local) agents who use common processes and tools. Program tools include an Automated Call Distribution (ACD) and a cloud-based service management Software-as-a-Service (SaaS), referred to in this plan as ServiceNow. These tools enable the sharing of information across IT units using a consistent method for categorization, prioritization, assignment, notification, reporting, and portfolio views.

End users may also access the Shared Service Desk through a single web portal that is integrated within ServiceNow. This portal supports multiple views that the system customizes based on a user’s directory profile. Regardless of entry point or perspective, the common processes and tools result in consistent marketing, notifications, and alerts for end users.

To support this program, Penn State’s IT organization includes both an IT Service Management Office (SMO) and an IT Project Management Office (PMO) with the director of each office selected by the shared process steering committee mentioned above. These offices use both directly employed staff and unit resources to implement the facilitation, planning, and management of the program policies, processes, and shared procedures. The offices, however, do not own any of the services or projects outright. The SMO will collaborate with unit service owners, unit process managers, staff coordinators, and system DevOps staff. The PMO will collaborate with unit project managers and staff coordinators for project portfolio management, resource management, communications, and training.

Proposals for funding models are ongoing by the steering committees and their associated financial officers.
2 Introduction

This document provides a roadmap for the pilot and early adopting IT units at Penn State as they are implementing shared service management. The content of this document is expected to refine as the program expands into subscription phases. The focus of this document is on the people aspect of the IT Service Management Program. Processes and tools are addressed through their respective workshops and deliverables and standards available through the SMO.

2.1 Service Management Program Governance

Penn State IT exists to serve the University’s mission. To support that mission, IT must make good decisions through governance and provide a decision-making process and body that can stand up to scrutiny. Objectives include the following:

- Serve the best interests of the University
- Establish and maintain trust, transparency, controls, and accountability
- Provide representation of the multiple types and sizes of IT units at Penn State
- Provide an escalation path for service management issues and decisions

The following diagram summarizes governance flow for the program.
2.2 Service Management Program Federated Governance

Federated governance provides a common framework for service management and a subscription model for Penn State IT units.

Subscription by units is discretionary but actively encouraged. The distributed model for funding and reporting within Penn State IT precludes the use of a centralized mandate for service management protocols across the distributed units. A federated governance model allows each IT unit to retain its unique organizational structure and funding, while subscribing to shared governance, processes, and tools. Subscription will be for the entire unit and not individual departments within the unit.

It is important that units subscribe to the program's governance, policy, processes, and tools in their entirety and not adopt just one element (for example, having a competing process, tool, etc.). Smaller scale concerns can be addressed with the SMO at a procedure-level upon subscription. The federated governance may choose to decline or remove admission from units that do not support the program as a whole.

To maintain the integrity of the program, communication between units, the SMO, and governing bodies should remain candid and open at all times. Governing bodies will support a mediation process to resolve differences. Because of the voluntary nature of the agreement, it is paramount that the program be continual and evident in order for participants to remain committed.

2.3 IT Service Management Program Governing Bodies

There are two governing bodies:

- **Shared Service Management Program Steering Committee**: Provides decisions related to process, for example “the how.” This committee provides the Shared Service and Project Portfolio Steering Committee with a framework on which to base decisions.

- **Shared Service and Project Portfolio Steering Committee**: Provides decisions related to the services and projects, for example “the what.” This committee provides input back to the Shared Service Management Program Steering Committee on service management framework improvements.

Refer to the *Service Management Program Roles & Responsibilities* document for more information on steering committees roles and responsibilities.
2.4 Additional Governing Bodies

In addition to the strategic governing bodies above, the following virtual roles provide electronic approvals within ServiceNow for tactical/operational governance. The Shared Service Management Program Steering Committee will be given the opportunity to review all approval mechanisms and assignments on an annual basis.

- Service request approvers
- Change request approvers
- Finance approvers

Refer to the Service Management Program Roles & Responsibilities document for more information on approvers.

2.5 Service Management Program Governance Process

Governance is based on the following best practices and standards. Governance provides data on which decisions can be made and defended. Subsequently, these best practices and standards reduce controversy and promote compliance. The following is used as a baseline.

- **Service Management**: Information Technology Infrastructure Library (ITIL) Information Technology Service Management (ITSM)
- **Project Management**: Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK)
- **Quality Management**: International Organization for Standardization (ISO) 9001 Quality Management

Note that a quality assurance program in alignment with ISO 9001 standards is currently out of scope and can be added at the discretion of the Shared Service Management Program Steering Committee.
3 Virtual Service Desk Model

The Service Management Program uses ITIL’s virtual service desk model to implement a Shared Service Desk for Penn State.

In this model, service desks from different campuses, colleges, and administrative departments appear as a single entity to all users through distributed people, common processes, common tools, and consistent communications.

- Distributed People
- Common Processes
  - Service request fulfillment
  - Incident management
  - Problem management
  - Knowledge management
- Common Tools
  - Single self-service user portal
  - ServiceNow software
  - Automated call distribution
- Consistent Communications
  - Consistent language
  - Automated email notifications
  - Web alerts
  - Marketing materials

3.1 Distributed People

Though virtual service desk personnel are distributed across multiple campuses, colleges, and administrative units, they use common processes and tools to act as one organization. As part of the Service Management Program, the virtual service desk staff receives orientation and training to facilitate work as one organization. As time goes by, Penn State’s entire IT organization will have the opportunity to mature and better define themselves as first-, second-, and third-line support.

3.1.1 First-Line Support

Any individual in IT recording a request, incident, or problem can be a first-line support/virtual service desk agent. Self-service automation is desired; however, it should never be considered a replacement for first-line support. Initially, second- or third-line support may be involved heavily in first-line support activities. However, use of first-line support should be encouraged and demonstrated to users; the exception would be any users specified as very important person (VIP).

Refer to the Service Management Program Roles & Responsibilities document for more information on requesters.
3.1.2 Second-Line Support

Any individual in IT (subject matter expert or dispatched staff) assigned (vertically escalated) a request, incident, or problem for fulfillment or resolution by first-line support or an automated tool can be second-line support. Second-line support can also route (horizontally escalate) a request, incident, and problem to other second-line support resolution agencies.

Refer to the Service Management Program Roles & Responsibilities document for more information on assignees.

3.1.3 Third-Line Support

Any highly specialized individual (engineers, architects, or third-party suppliers) assigned a request, incident, or problem by first-line or second-line support can be third-line support.

Refer to the Service Management Program Roles & Responsibilities document for more information on assignees.

3.2 Common Processes

Common policies, processes, and roles/responsibilities are used by first-line/virtual service desk, second-line, and third-line support for request, incident, problem, and knowledge management. These processes are documented and approved through facilitated workshops and reviews. Workshops and reviews were conducted using resources across the IT organizations participating in the pilot and early adoption phases. Distributed procedures tailored to each IT organization, in addition to high-level common policies and processes, were developed. Each subscribing IT organization has an opportunity to define their own unit procedures through facilitated workshops and reviews as part of their onboarding.

3.3 Common Tools

Common tools are used by first-line/virtual service desk, second-line, and third-line support for service management. This includes a web-based, single self-service user portal, cloud-based ServiceNow software, Central Directory Service, and Automated Call Distribution. This ensures the following:

- Work is owned in a clear and traceable manner
- Work is completed in a timely manner
- Work is communicated in an appropriate manner
- Work is transparent
- Work information is shared (transparency between IT units)
3.3.1 **One Self-Service User Portal**

Users are directed to one self-service user portal located within Penn State’s intranet and integrated with ServiceNow. This portal routes work, unbeknownst to the user, to different IT departments based on the user’s affiliation with campuses, colleges, and administrative departments based on directory services. The single self-service user portal supports different views including the following: Very Important Person, Student, Online Learning, Faculty, Staff, IT, and Visitor.

Examples of requests on a single self-service user portal include but are not limited to the following:

- Chat with virtual service desk agent
- Check status of incidents and requests
- Contact facilities (electrical, plumbing, building, furniture)
- Contact virtual service desk
- Download software
- Log a complaint
- Make a suggestion
- Onboard new employee
- Open an incident ticket
- Report an IT security threat
- Request a new service
- Request a virtual server
- Request access to an application
- Request a computer
- Request computer software
- Request printer supplies
- Request a telephone
- Request a telephone conference
- Request a video conference
- Request a web conference
- Reset locked account
- Reserve facilities and resources
- Reset password
- Restore a file
- Review frequently asked questions
- Review online training
- Search knowledge base
- Update contact information in the directory
- View alerts
- View change calendar
- View information security policy
- View invoice
- View reports

3.3.2 **ServiceNow Software**

First-line/virtual service desk, second- and third-line support, and IT management use the same cloud-based ServiceNow software. This system is in use by the pilot and early adopters and will be made available to other organizations on a subscription basis.

This common system is used by all subscriber IT personnel to record, prioritize, categorize, assign/escalate, notify, approve, resolve/fulfill, and close requests, incidents, and problems. It also gives all first-line/virtual service desk agents and second- and third-line support access to a common knowledge base. State and status are monitored through the request, incident, and problem lifecycle.

The system is configured to leverage common prioritization and service categorization (matching the service catalog) to drive escalation of requests, incidents, and problems to distributed resolution agencies across the IT organization. Service response and resolution measurements ensure work is not lost and meets targets.
3.3.3 **Automated Call Distribution**

Upon subscription, existing Automated Call Distribution will be configured to support transfer of calls between service desks:

- Warm transfer
- Overflow transfer
- After-hours transfer

The following diagram illustrates capability. Note that numbers and addresses are fictitious.
3.4 Common Communications

First-line/virtual service desk, second- and third-line support, and IT management all use the same consistent language based on Information Technology Infrastructure Library® (ITIL) best practices. A no-cost ITIL® Glossary and Abbreviations list is distributed and made available to all personnel as part of Penn State Service Management Program training. In addition, ITIL® Foundation training is available at the University through IT Training Services and online through the Office of Human Resources’ SkillPort.

Automated email notifications are consistently sent to users, requesters, and IT assignees by ServiceNow for state/status changes and to drive workflow. These emails are delivered from the same email address using the same basic format. In addition, these notifications direct users to the same web addresses and telephone numbers reinforcing the perception of a single entity. While the body of the email may be the same, different IT organizations may want their own header/footer including their own telephone phone number, email address, etc. If desired, this option can also be supported.

Web alerts are consistently generated through the common incident management process and Major Incident Alert Form/Template.

An effort will be made by the subscribers to use consistent promotional materials, nurturing coordination between virtualized service desks.
4 Service Management Office

The Service Management Office (SMO) supports the following:

- Entire enterprise across IT
- Shared management
- Strategic, tactical, and operational perspectives
- Consolidated processes
- Separate process owner and manager roles
- Option for each unit to separate or consolidate manager roles
- Center of Excellence/Community of Practice

SMO directors and owner requirements will be defined. The Shared Service Management Program Steering Committee will review candidates interested in positions within the SMO. If process owner identification is pending, process managers will temporarily report to the SMO director with the director fulfilling the responsibilities of the owner positions. Process ownership will be initially defined for incident and change management. As implementation phases progress, the addition of other processes will be added to the ownership role. As the organization matures and lessons are learned, the SMO organizational structure may change. A low-risk transition plan will be used to ensure process ownership and management of key performance indicators remains constant.

The following diagram provides an overview of the SMO organizational structure with further definition of the roles and responsibilities following the diagram.

Refer to the Service Management Program Roles & Responsibilities document for more information on program roles.
4.1 Service Management Office Organization
5 Project Portfolio Management Office

The Project Portfolio Management Office (PPMO) supports the following:

- Entire enterprise across IT
- Projects in support services
- Shared portfolio management
- Strategic and tactical perspectives
- Center of Excellence/Community of Practice
- Project Managers liaison with the PPMO to provide project plan, schedule, and status

The following diagram provides an overview of the PPMO organizational structure with further definition of the roles and responsibilities following the diagram.

Refer to the Service Management Program Roles & Responsibilities document for more information on program roles.
5.1 Project Portfolio Management Office Organization

- Senior IT Management
  - Shared Service/Project Steering Committee
  - Shared Program Steering Committee
  - Project Portfolio Management Office Director
  - Penn State IT Service Management Office Director
  - Unit Service/Project Steering Committee
  - Resource Portfolio Management Owner
  - Senior Project Manager and Methodology Owner
  - Outreach Project Managers
    - ITS Project Managers
    - Smeal Project Managers
    - Harrisburg Project Managers
    - York Project Managers
  - Service/Project Owners
    - Assignment Group Managers
  - Assignment Group Managers
6 Funding Needs

The following operational expenses need to be funded:

- **People**
  - SMO personnel
  - PPMO personnel
- **Processes**
  - Quality assurance/audit
  - Continual improvement
- **Tools**
  - ServiceNow software subscription costs
  - Labor costs (DevOps)

Proposals for funding models are ongoing by the steering committees and their associated financial officers.
7  Conclusion

If you have any questions regarding this document, please contact John Williams of the Service Management Office at jzw9@psu.edu.
Appendix A: Contributors and Reviewers

This appendix alphabetically lists individuals who have contributed to this document development. The charter Information Technology Transformation (ITX) Program Steering Committee worked with consultants from ThirdSky, staff from the SMO and the ITX Program Team to develop a plan to serve all of IT at Penn State.

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Appendix B: Revision History

This table shows the changes that were made in the document revisions. The most recent document is presented at the top.

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