Public Service Commission

IT Plan 2014

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1. Executive Summary

The Montana Public Service Commission (PSC), also known as the Department of Public Service Regulation, generally regulates private investor-owned natural gas, electric, telephone, and water and sewer companies doing business in Montana. The Commissioner's office is responsible for ensuring that public utilities in Montana provide adequate service to customers at reasonable rates.

This document contains the PSC Information Technology (IT) goals and the IT department's objectives. The objectives are specific and measurable, and are listed under the goal they support. The objectives include activities that were completed for the 2012-2014 biennium, those underway or planned for the 2014-2015 biennium, and any that can be foreseen for the 2015-2017 biennium. The objective number or the order that they are presented does not imply priority.

2. Environment, Success, and Capabilities

The PSC IT department's business is information technology. The department is responsible for development, maintenance, and support of technology services for the PSC. Technology is an essential resource required for the PSC to meet its mission and statutory requirements. IT is integrated into nearly every function of the agency; from the creation and storage of digital content to the delivery of services and data in numerous forms.

The department provides systems and user administration, applications development, and support services. IT is responsible for the planning, development, implementation and maintenance of comprehensive internal, and state-wide IT solutions to better provide services to the agency's employees, partners, and the public.

3. IT Contributions and Strategies

Like all other state agencies, the PSC is totally dependent on information technology, not just to support and enhance its business, but to enable it. The department's mission is to support the PSC mission by promoting, developing, delivering, and facilitating the use of Information Technology services and resources. The department's primary contributions and strategies are listed as the following:

- The need to continue the existing focus on e-Services and legacy system upgrades.
- The need to ensure that technology properly provides solutions to current business challenges including:
    - Increasing customer and user centricity;
    - Improving operational efficiency;
    - Ensuring operational resilience—business continuity and security;
    - Increasing information intensity and availability; and

- Maintaining a close watch on new technologies

4. IT Principles

Many of PSC IT principles have their roots in MITA and the principles outlined in Montana's State Strategic Plan for IT 2014.

- Resources and funding will be allocated to the IT projects that contribute the greatest net value and benefit to stakeholders.
- Unwarranted duplication will be minimized by sharing data, IT infrastructure, systems, applications and IT services.
- Shared inter-state systems will be used to minimize IT expenditures, improve service delivery and accelerate service implementation.
- Information technology will be used to provide educational opportunities, create quality jobs, a favorable business climate, improve government, protect individual privacy and protect the privacy of IT information, and enable business continuity for state government.
- IT resources will be used in an organized, deliberative and cost-effective manner.
- IT systems will provide delivery channels that allow citizens to determine when, where, and how they interact with state agencies.
- Mitigation of risks is a priority to protect individual privacy and the privacy of IT systems information.
- Service offerings will incorporate security controls based on federal National Institute of Standards and Technology (NIST) security standards.

5. IT Governance

The PSC is ever more dependent on their information systems. Managing how the agency uses and leverages technology is crucial. In today's evolving technology environment, effective IT governance can be the difference between success and failure. Governance for PSC IT' service delivery function rests with the PSC IT Director.

6. IT Financial Management

PSC IT is mainly funded through a proprietary fund. PSC IT does not generate any revenue.

7. IT Services and Processes

The scope of PSC IT service offerings is broad and very similar to peer agencies.

8. IT Infrastructure, Staffing and Resources

Infrastructure

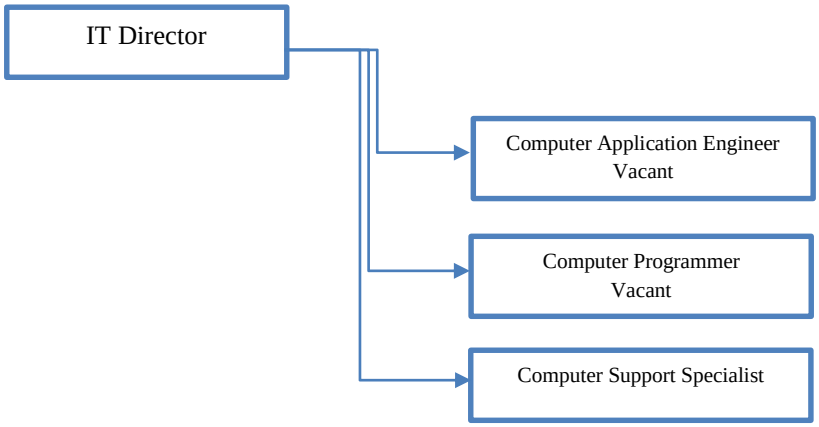
The PSC IT Infrastructure consists of Hyper-V R2 host deployed on DELL PowerEdge R720 servers configured in a failover cluster with replication and backup to a secondary site. These are then connected to SANs of PowerVault MD3200i/MD12000 array in an ISCI fashion. The network infrastructure consists of PowerConnect 5524 dually stack for optimal IO (Input/Output) performance. This infrastructure is comprised of 6 network traffic types: 1 Virtual Machine Network, 1 Cluster Public Network, 1 Cluster Private Network, 1 1 Network for the cluster shared Volumes, 1 Live Migration Network and 1 ISCSI traffic network. All network traffic types share both physical switches and are isolated using a highly tuned VLANs. . The SANs are setup with different RAID type (RAID 1, RAID 10, and RAID 5) for our different LUNs to better boost/increase our application and system's needs.

Our environment fosters a clean separation of concerns between our services and hardware environment, and our development, staging and production environment. This environment is built using best practices in maintaining sound security concepts to protect us against malicious attacks.

The environment also incorporates the National Institute Standards and Technology (NIST) Based Security Standards adopted by the State of Montana in regards to the Confidentiality Availability and Integrity of the PSC Data and Systems are properly followed.

Staffing

PSC IT has a total of 2 FTE. The department is currently in the process of hiring 2 additional FTE to adjust its staffing needs in order to accommodate changes in technologies.



Vendor Partner and Resource

The department uses few services from DOA/SITSD; Enterprise Services Allocation, Lyris Mailing list, Email mailbox, Real time Communication Base Services, Citrix Application hosting and SMDC/MCDC u spaces.

9. Risks and Issues

The following table contains the major risks to PSC's IT strategy. Major risks meet one of two criteria.

- Risks with a probability of medium or high with a high impact.
- Risks with a probability of high with a medium or high impact.

Mitigation strategies are the pro-active actions that PSC IT is using to lessen the probability of the risk occurring and minimizing the impact of the risk.

Primary Risk	Probability	Impact	Mitigation Strategy
Security breach	Medium	High	Our agency has an active security program including, but not limited to, staff training and awareness, data encryption, and security policies.
Difficulty of hiring qualified technical staff	High	High	Increase pay for positions most affected by this issue. Career Ladder Implementation for existing staff.
IT Department is Understaff	High	High	Looking at hiring 2 Additional FTE's
PSC IT Environment is Outdated	High	High	Ongoing effort in bring all systems up to industry standards

10. IT Goals and Objectives

Goal Number 1:

IT Goal 1 Strengthen PSC IT Security

Supporting Objective/Action

Objective 1-1 Ensure trusted and resilient systems and information

Supporting Objective/Action

Objective 1-2 User security awareness and training

Supporting Objective/Action

Objective 1-3 Develop and implement the National Institute of Standards and Technology (NIST) Based Security Standards to ensure the confidentiality, availability, and integrity of PSC data and systems

Goal Number 2:

IT Goal 2 — Develop and maintain accurate, reliable and well-integrated information systems architecture

Supporting Objective/Action

Objective 2-1 — Maintain stable and efficient hardware, software, and network technologies that effectively meet the needs of the PSC

Supporting Objective/Action

Objective 2-2 — Maintain a stable, efficient, maintainable, and well-documented code base

Supporting Objective/Action

Objective 2-3 — Install, maintain, and enhance servers, databases, networks, and personal computers in a manner that promotes efficiency, performance, and availability.

Supporting Objective/Action

Objective 2-3 — Implement new systems that align with Service Oriented Architecture (SOA).

Goal Number 3:

IT Goal 3 — Ensure the accuracy and timeliness of all information provided

Supporting Objective/Action

Objective 3-1 — Provide a reliable infrastructure for maintaining information

Supporting Objective/Action

Objective 3-2 — Provide data in a timely manner and within stated deadlines

Goal Number 4:

IT Goal 4 — Collaboration and integration with the business units in identifying and implementing appropriate, efficient, cost-effective technology solutions to best meet the department's business goals and objectives; utilize IT to enhance PSC operational efficiency

Supporting Objective/Action

Objective 4-1 — Implement PSC eServices Solutions

Supporting Objective/Action

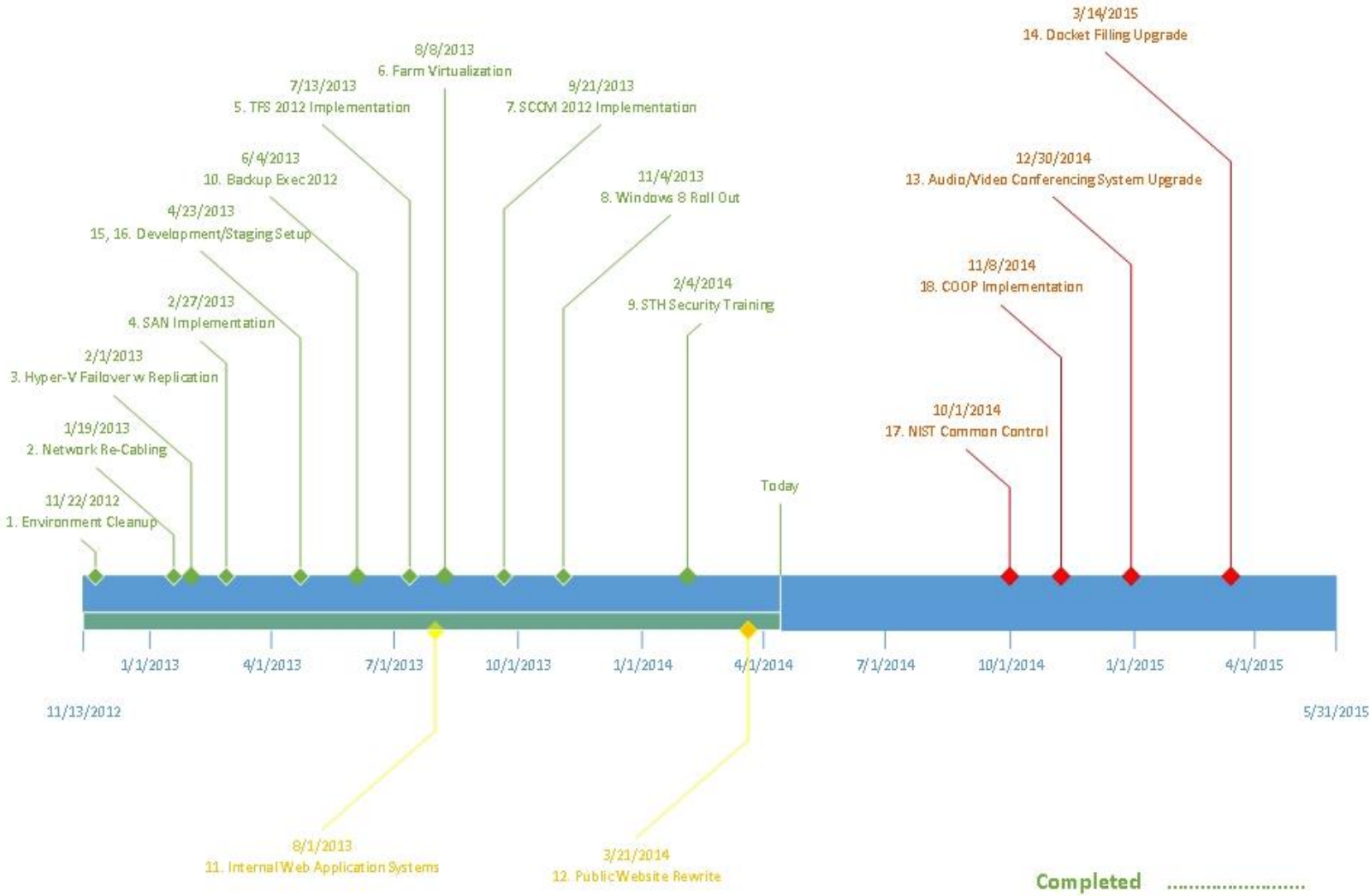
Objective 4-2 — Stay abreast of emerging technologies through research and development in order to best serve PSC stakeholders

Supporting Objective/Action

Objective 4-3 — Migrate legacy platform systems and applications to a State standard platform

11. IT Projects

Item	Description	Goals
Initiative 1	PSC Environment Cleanup	2, 3
Initiative 2	PSC Network Re-Cabling Upgrade	2, 3
Initiative 3	Hyper-V Failover with Replication and Backup Implementation	1,2,3
Initiative 4	Shared Network Storage Implementation	1,2
Initiative 5	Team Foundation Server 2012 Implementation	2
Initiative 6	Servers Virtualization and Servers Operating Systems Upgrade	1,2,3
Initiative 7	System Center Configuration Manager 2012 Implementation	2,3
Initiative 8	PSC Users Desktop Upgrade to Windows 8	1,2,3,4
Initiative 9	STH Online Security Training Roll-Out	1
Initiative 10	Backup Exec 2012 Implementation	2,3,4
Initiative 11	PSC Internal Web Application System Rewrite	1,2,3,4
Initiative 12	PSC Public Website Rewrite	1,2,3,4
Initiative 13	PSC Audio/Video Conferencing System Upgrade	1,2,3,4
Initiative 14	PSC Docket Filling Upgrade	1,2,3,4
Initiative 15	Dedicated Development Environment Setup	1,2
Initiative 16	Dedicated Staging Environment Setup	1,2
Initiative 17	State of Montana NIST Common Control Security Adoption	1,2
Initiative 18	COOP Implementation	1,2,3,4



Initiatives Timeline

12. Security and Business Continuity Programs

Information Security Management (ISM) Program General Description

The PSC will be implementing a department-wide (agency) information security management program compliant with §2-15-114, MCA and State Information Technology Systems Division *Information Security Programs* policy with adoption of the National Institute of Standards and Technology (NIST) Special Publication 800 series as guides for establishing appropriate security procedures. This is in alignment with the State of Information Technology Service's direction for an enterprise approach to protect sensitive and critical information being housed and shared on State and/or external/commercial information assets or systems.

As described in NIST SP 800-39, the agency will develop and adopt the Information Risk Management Strategy to guide the agency through information security lifecycle architecture with application of risk management. This structure provides a programmatic approach to reducing the level of risk to an acceptable level, while ensuring legal and regulatory mandates are met in accordance with MCA §2-15-114.

The agency's program has four components, which interact with each other in a continuous improvement cycle. They are as follows:

- Risk Frame – Establishes the context for making risk-based decisions
- Risk Assessment – Addresses how the agency will assess risk within the context of the risk frame; identifying threats, harm, impact, vulnerabilities and likelihood of occurrence
- Risk Response – Addresses how the agency responds to risk once the level of risk is determined based on the results of the risk assessment; e.g., avoid, mitigate, accept risk, share or transfer
- Risk Monitoring – Addresses how the agency monitors risk over time; "Are we achieving desired outcomes?"

The agency's information security management program is challenged with limited manpower and funding resources. While alternatives are reviewed and mitigation efforts are implemented, the level of acceptable risk is constantly challenged by ever-changing technology and associated risks from growing attacks and social structure changes. Specific vulnerabilities have been identified which require restructure, new equipment, or personnel positions (funds increase), which are addressed below in our future plans.

Continuity of Operations (COOP) Capability Program General Description

The PSC will join with the Department of Administration *Continuity Services* for the development of our agency's Continuity of Operations Capabilities, which will provide the plans and structure to facilitate response and recovery capabilities to ensure the continued performance of the State Essential Functions of Government. This program involves two blocks of focus. The first is to complete the Business Continuity Plans (BCP) involving two phases. The second block works on the specific business processes or activity plans such as Emergency Action Plans (EAP), Information System Contingency Plan (ISCP), Communications Plans, Incident Management Plans, and more. This program is not a standalone process in that information which is identified and recorded under this structure can, and often, exists in the

Records Management Program, and associates with Information Security Management Program requirements.

Integration of these three programs is critical to the confidentiality, integrity, and availability of information, which is associated with each program

13. Planned IT Expenditures

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
IT personal services	$150,000	$150,000	$290,000	$290,000	Unknown	Unknown
IT operating expenses	$60,000	$60,000	$60,000	$60,000	Unknown	Unknown
IT initiatives	--	--	--	--	Unknown	Unknown
Other	--	--	--	--	Unknown	Unknown
Total	$210,000	$210,000	$350,000	$350,000	Unknown	Unknown

14. Administrative Information

Role: Plan Owner

Name: Bill Gallagher, Chairman – Agency Head
Telephone Number: 444-6169
Email Address: bgallagher@mt.gov

Role: IT Contact

Name: Ousmane Loum, IT Director
Telephone Number: 444-6172
Email Address: oloum@mt.gov

Role: IT Contact and Information Security Manager (ISM)

Name: Ousmane Loum, IT Director
Telephone Number: 444-6172
Email Address: oloum@mt.gov