PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 5b

Date of Meeting December 3, 2013

DATE: November 24, 2013

TO: Tay Yoshitani, Chief Executive Officer

FROM: Peter Garlock, Chief Information Officer
Matt Breed, Assistant Director, ICT Infrastructure Services

SUBJECT: Network Switch Replacement (CIP #C800323)

Amount of This Request:	$1,500,000	**Source of Funds:**	76.8% Airport Development Fund; 23.2% General Fund
Est. Total Project Cost:	$1,500,000		
Est. State and Local Taxes:	$100,000	**Est. Jobs Created:** 0	

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to (1) proceed with the Network Switch Replacement project; (2) authorize the procurement of required hardware, software, and vendor services; and (3) authorize the use of Port staff for implementation, for a total project cost not to exceed $1,500,000.

SYNOPSIS

The Port of Seattle Enterprise network provides the backbone for all enterprise data transmission across multiple Port facilities including P69, Seattle Tacoma International Airport (STIA) and the secondary data center. The network consists of 96 network switches as well as supporting infrastructure that includes routers, servers and racks. It supports over two hundred Port systems such as Peoplesoft Financials and Human Capital Management, Seaport Security Systems, Police Records Management, Port Phones, Email, Sharepoint and many others. Core network components are over nine years old and at the vendors published end-of-life, limiting our access to support or replacement parts.

The purpose of this project is to replace aging network components to ensure availability of critical systems, support exponential data growth and network bandwidth requirements, and improve manageability features. Information Communication Technology (ICT) resources will complete the project. Total project costs are estimated to be $1,500,000. Funding for this project was included in the 2013 – 2017 capital budget and plan of finance. Recurring hardware license and maintenance costs will be budgeted within the ICT department operating budget.

BACKGROUND

A network switch is a connection point allowing networked devices such as computers, servers, and printers or network segments to communicate efficiently. Port switches can be managed and monitored remotely to ensure the best configuration to meet security and performance requirements. The Port's 7 core switches, 4 distribution switches, and 85 access layer switches are dispersed between 16 locations. All were installed over 9 years ago and are long past their published end-of-life. The systems that rely on this aging network are critical to Port operations.

In the last ten years, technology has changed dramatically. Data growth has has increased exponentially, Internet access has become critical to the business, and application and infrastructure technology has evolved to support an increasing reliance on the fast transmission of large amounts of information. Our current switches cannot scale to support the communication requirements our critical applications demand.

PROJECT JUSTIFICATION AND DETAILS

With no support or replacement parts available for our aging network switches, replacement of this equipment is the only recovery for a catastrophic device failure. The impact of a failure in the systems that rely on the switch range from lack of visibility for monitoring security events at our terminals, increasing security and safety concerns, delay of financial operations, to a catastrophic loss of access to all enterprise applications.

There is also significant stress on our current aging network infrastructure because it can't support data transmission speeds of our newer-technology systems such as the recently upgraded Peoplesoft Financials. Corporate data is growing at a rate of 40% every year and the data transmission requirements for our backup processes will soon be unsustainable with our older equipment.

Project Objectives

- Ensure the Enterprise Network environment will support critical Port systems by replacing end of life equipment with devices that meet current and future Port technology requirements.
- Deploy new components with no unplanned outages to critical operational systems.

Scope of Work

- Replacement of approximately 96 Cisco access network switches in communication rooms and data centers with devices that meet Port Technology Standards.

Schedule

Commission Approval	December 2013
System Design Complete	March 2014
Procurement Complete	May 2014
Installation Complete	March 2015

FINANCIAL IMPLICATIONS

Budget/Authorization Summary	Capital	Expense	Total Project
Original Budget	$1,500,000	$0	$1,500,000
Previous Authorizations	$0	$0	$0
Current request for authorization	$1,500,000	$0	$1,500,000
Total Authorizations, including this request	$1,500,000	$0	$1,500,000
Remaining budget to be authorized	$0	$0	$0
Total Estimated Project Cost	$1,500,000	$0	$1,500,000

Project Cost Breakdown	This Request	Total Project
Network Equipment	$1,060,000	$1,060,000
Vendor Services	$15,000	$15,000
Port of Seattle Labor or Contractors	$103,000	$103,000
State & Local Taxes (estimated)	$100,000	$100,000
Contingency ~ 18%	$222,000	$222,000
Total	$1,500,000	$1,500,000

Budget Status and Source of Funds

This project was included in the 2013-2017 capital budget and plan of finance as a $1,500,000 business plan prospective project within CIP #C800323, Network Switch Replacement. The source of funds is 76.8% Airport Development Fund, 17.9% General Fund, and 5.3% General Fund-Real Estate.

Financial Analysis and Summary

CIP Category	Renewal/Enhancement
Project Type	Technology
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	$1,500,000
Business Unit (BU)	Information and Communication Technology
Effect on business performance	N/A
IRR/NPV	N/A
CPE Impact	$.01 in 2014; no change from business plan forecast as this project was included in the plan

Lifecycle Cost and Savings

An estimated $31,000 reduction in Port labor to maintain the system and annual maintenance agreement costs are expected as a result of this project.

STRATEGIES AND OBJECTIVES

This project supports the following Century Agenda strategies:

- *Meet the region's air transportation needs at Sea-Tac Airport for the next 25 years*
- *Position the Puget Sound region as a premier international logistics hub*

Over 200 systems, critical to Port of Seattle communications and operations, depend on the Enterprise network infrastructure for data transmission. This project ensures the availability of the infrastructure required to run these systems.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Replace Equipment As It Fails: There are significant operational impacts for any outage of this equipment. This is not the recommended alternative.

Alternative 2) – Replace All End-Of-Life Network Equipment: Replacement of all aging network switches will reduce the risk of critical system outages as a result of equipment failure and provide adequate transmission speeds to meet current requirements. **This is the recommended alternative.**

ATTACHMENTS TO THIS REQUEST

Network Switch Diagram

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None.