PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA **Item No.:** 5i
ACTION ITEM

Date of Meeting: June 14, 2011

DATE: June 6, 2011

TO: Tay Yoshitani, Chief Executive Officer

FROM: Peter Garlock, Chief Information Officer

SUBJECT: Maintenance Planning and Scheduling Software Project

Amount of This Request: $402,000 **Source of Funds:** Airport Development Fund 67%
General Fund 33%

State and Local Taxes Paid: $16,000

Total Project Cost: $402,000

ACTION REQUESTED:

Request authorization for the Chief Executive Officer to approve all work and contracts, including executing and amending any and all necessary contracts and service directives for the Maintenance Planning and Scheduling Software Project in an amount not to exceed $402,000. An estimated annual increase of $25,000 will be included in the Information and Communications Technology (ICT) operating budget for software license and maintenance agreements.

SYNOPSIS:

The Maintenance organizations in the Aviation and Real Estate divisions both strive to meet an industry best practice goal of keeping preventive maintenance at 80% of the total maintenance actions performed on Port facilities and assets, which helps prolong the life of these investments. Planning and scheduling preventive maintenance is a challenging undertaking when performed using manual methods. This project will competitively procure and implement an automated maintenance planning and scheduling software system that integrates with the Port's asset management system, Maximo.

Maintenance Planning and Scheduling software can automate preventive maintenance workload scheduling and reduce manual efforts by as much as 15%.

This project was approved by the Information & Communication Technology (ICT) Governance Board on April 6, 2011.

BACKGROUND:

The Aviation Maintenance Work Management function was created in 2006 as part of an ongoing continuous process improvement effort to align the maintenance department with industry best practices for facilities maintenance. The Marine Maintenance organization followed with a similar effort in 2008. Across both organizations, seven Maintenance Planners now actively plan and schedule crew work.

An effective maintenance work plan involves several components, including long-range planning, scheduling and communication of shutdown or outages, establishing weekly preventive maintenance schedules and daily work plans. Each week, planners in both organizations team up with foremen or crew chiefs to evaluate and prioritize work, coordinate resources, and schedule tasks. For Aviation Maintenance, this manual, time-intensive effort is estimated to consume nearly 40% of a Foreman's time each week.

PROJECT JUSTIFICATION:

The estimated 15% reduction in manual effort to automate preventive maintenance workload scheduling using Maintenance Planning and Scheduling software will allow the maintenance organizations to focus more on maintenance management and unscheduled outages. Other benefits include the following:

- Foremen and Crew Chiefs are able to spend more time on training, supervising, and quality control.
- Better communication with tenants and internal business partners on work order progress.
- Adjustments to the schedule and notifications can occur more quickly.
- Alternative plans and "what if" scenarios can be easily evaluated.

PROJECT STATEMENT AND OBJECTIVES:

Project Statement:

Purchase an automated maintenance workload scheduling and planning software tool through a competitive procurement process and integrate it with our existing asset management software, Maximo.

Project Objectives:

- Improve efficiency of maintenance planning to help achieve a preventive maintenance goal of 80% of total maintenance actions.
- Improve communication of maintenance schedules to tenants and internal business partners.

PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

The scope of work includes the competitive procurement, implementation, testing, and training of maintenance planning and scheduling software that integrates with the Port of Seattle asset

management system, Maximo. The system will be used by the Aviation Maintenance and Marine Maintenance organizations.

Schedule:

Commission Approval	May 2011
Procurement Complete	September 2011
Implementation Complete	July 2012

FINANCIAL IMPLICATIONS:

Budget/Authorization Summary:

Original Budget	$402,000
Budget Increase	$0
Revised Budget	$0
Previous Authorizations this CIP	$0
Current request for authorization	$402,000
Total Authorizations, including this request	$402,000
Remaining budget to be authorized	$0

Project Cost Breakdown:

Port of Seattle Labor or Contracted Services	$140,000
Software License	$170,000
Vendor Services	$15,000
Sales tax	$16,000
Contingency – 20%	$61,000
Total	$402,000

Budget Status and Source of Funds:

Project costs are estimated to be $402,000. This project was originally budgeted as an aviation small capital project for Aviation Maintenance only. Marine Maintenance has now joined the project increasing both the project scope and required budget. Upon Commission Authorization, the $402,000 project budget will be transferred from the Services Technology Small Capital CIP # C800012 into a new CIP.

Financial Analysis and Summary:

CIP Category	Renewal/Enhancement
Project Type	Technology
Risk adjusted Discount rate	7%
Key risk factors	N/A
Project cost for analysis	$402,000

Business Unit (BU)	AV Maintenance/Marine Maintenance
Effect on business performance	N/A
5 Year NPV	N/A
CPE Impact	Included in business plan forecast

Lifecycle Cost and Savings:

An annual increase of $25,000 is estimated for software license and maintenance agreements and will be included in the ICT operating budget.

ECONOMIC IMPACTS AND BUSINESS PLAN OBJECTIVES:

Proceeding with this project is essential to achieve Aviation and Marine Maintenance business goals of 80% preventive maintenance and 20% repair maintenance.

STRATEGIC OBJECTIVES:

This project supports the following Port's strategic objectives:

- Ensure Airport and Seaport vitality by ensuring effective utilization of our resources and that systems are operating efficiently and safely.
- Be a "high performance organization" by striving for industry best practices and comparing measures of our own performance to those of other leading institutions.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

The following alternatives were considered.

1. *Procure and implement Maintenance Planning and Scheduling Software:* The implementation of Maintenance Planning and Scheduling software that integrates with our asset management system, Maximo, will increase efficiency necessary to achieve business goals for preventive maintenance. **This is the recommended alternative**.
2. *Continue with manual planning and scheduling processes:* The amount of time required to manually complete planning and scheduling activities is an inefficient use of management time and will prevent the achievement of business goals for preventive maintenance. This is not the recommended alternative.

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

None

PREVIOUS COMMISSION ACTION OR BRIEFING:

None