PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 4e

Date of Meeting March 22, 2016

DATE: March 14, 2016

TO: Ted Fick, Chief Executive Officer

FROM: Mike Ehl, Director Airport Operations
Peter Garlock, Chief Information Officer

SUBJECT: Airport Voice Paging System Upgrade (CIP #C800709)

Amount of This Request:	$1,600,000	**Source of Funds:**	Airport Development Fund
Est. Total Project Cost:	$1,600,000		
Est. State and Local Taxes:	$62,000		

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to (1) proceed with the Airport Voice Paging upgrade project at Seattle-Tacoma International Airport; (2) procure required hardware, software, vendor services, and maintenance; and (3) use Port staff for implementation, for a total project cost not to exceed $1,600,000.

SYNOPSIS

This project will upgrade the current common-use Voice Paging system that is used throughout the airport by Airport Operations and Airline Personnel for passenger announcements. The Voice Paging system hardware cannot support growth, and is well beyond manufacturer published service life. As a result, the current system is driving up maintenance costs, and is vulnerable to extended outages.

The project will replace the equipment and software components that impede expansion and increase the risk of system failure. Information & Communication Technology (ICT), Aviation Maintenance, and Port Construction Services (PCS) resources will complete the project. Total project costs are estimated to be $1,600,000. Funding for this project was included in the 2016-2020 capital budget and plan of finance. Recurring hardware license and maintenance costs will be budgeted within the Aviation Maintenance department's operating budget.

BACKGROUND

The AVPS system, a product of Innovative Electronic Design (IED), was first installed as part of the South Terminal Expansion Project in 2004. A subsequent project added the communication system to the rest of the Airport in 2007. The Airport Voice Paging System (AVPS) is an essential passenger communication tool used throughout Seattle-Tacoma International Airport (Sea-Tac) by Airline and Airport Operations to provide travelers with flight, gate, baggage, and

emergency information, as well as provide voice paging messages and background music throughout the terminal. The current system cannot meet the increased capacity requirements of the International Arrivals Facility (IAF) and North Satellite expansion programs. In addition, replacement parts, software updates, and security patches are no longer available. As an example, the current system's computers still use the MS-DOS operating system because of their age. Application development and support ceased on this operating system 16 years ago.

PROJECT JUSTIFICATION AND DETAILS

Requirements for new speaker zones to accommodate the North Satellite and IAF expansion projects, and other Port projects, cannot be supported because of limitations of the current system's aging hardware and software. In addition, replacement hardware, software updates, and security patches are no longer available for the existing system.

Project Objectives

- Increase system capacity to meet needs driven by IAF, North Satellite expansion, and other requests as required
- Ensure system availability and reliability.

Scope of Work

Upgrade the existing AVPS by replacing software and equipment components that restrict expansion and are at risk of failure. These components include amplifiers, network switches, mainframe controllers, servers, and announcement control software.

Schedule

Commission Approval	March 2016
Procurement Complete	May 2016
Installation Complete	May 2017

FINANCIAL IMPLICATIONS

Budget/Authorization Summary	Capital	Expense	Total Project
Original Budget	$1,600,000	$0	$1,600,000
Previous Authorizations	$0	$0	$0
Current request for authorization	$1,600,000	$0	$1,600,000
Total Authorizations, including this request	$1,600,000	$0	$1,600,000
Remaining budget to be authorized	$0	$0	$0
Total Estimated Project Cost	$1,600,000	$0	$1,600,000

Project Cost Breakdown	This Request	Total Project
Hardware and Software	$650,000	$650,000
Vendor Services	$500,000	$500,000

ICT Labor	$308,000	$308,000
PCS	$80,000	$80,000
State & Local Taxes (estimated)	$62,000	$62,000
Total	$1,600,000	$1,600,000

Budget Status and Source of Funds

This project was included in the 2016-2020 capital budget and plan of finance as a $1,600,000 business plan prospective project within CIP #C800709, Airport Voice Paging System Upgrade. The source of funds is the Airport Development Fund.

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	$1,600,000
Business Unit (BU)	Terminal Building
Effect on business performance	N/A
IRR/NPV	N/A
CPE Impact	$.01

Lifecycle Cost and Savings

An estimated $24,000 increase in annual hardware maintenance costs are expected as a result of this project. This additional $24,000 will be budgeted in the Aviation Maintenance Annual Operating Budget, and is not included as part of the $1,600,000 project cost.

STRATEGIES AND OBJECTIVES

This project will support the following Century Agenda and Aviation Strategic Goals.

- Advance this region as a leading tourism destination and business gateway
- 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

Successful airport and airline operations depend on a reliable voice paging system to communicate information to travelers and for Department of Homeland Security compliance. This project will add the capacity required by the IAF and North Satellite expansion projects, and ensure continued system availability and long-term reliable performance.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Fully replace the existing AVPS with a different vendor selected via a competitive procurement.

Cost: $5,000,000 - $10,000,000

Pros:

- Other systems that meet system requirements may be available that could marginally lower costs.

Cons:

- The cost of a full system replacement is estimated between $5,000,000 and $10,000,000 because these systems utilize proprietary hardware, and it cannot be determined before a competitive procurement if any of the existing infrastructure could be re-used by another vendor. The cost of this alternative is significantly higher than the cost to only replace the aging components.
- If selected, other leading vendor solutions would likely require a full cabling replacement, causing significant disruption to terminal operations. In addition to significantly higher cost, this alternative would add 12-24 months to the project schedule for construction,
- All airlines and airport operations personnel would need to be trained on the new system.

This is not the recommended alternative.

Alternative 2) – Use existing vendor (IED) and upgrade all key equipment regardless of age.

Cost: $2,200,000

Pros:

- The existing system uses equipment that will likely need to be replaced in five years. Replacing them at this time will eliminate future project costs for construction and implementation.

Cons:

- The replacement of this equipment would require an additional $600,000 in project capital costs, and is unnecessary at this time.

This is not the recommended alternative.

Alternative 3) – Use the existing equipment vendor (IED), and replace only the software and equipment that are past service life, and required to add capacity.

Cost: $1,600,000

Pros:

- Less costly than a full system replacement
- Provides the reliability and capacity needed for critical airport and airline operations.
- IED, our current voice paging product vendor, is a leader in Voice Paging systems with hundreds of airport installations

Cons:

- Equipment not replaced now will likely need to be upgraded in the next five years.

This is the recommended alternative.

ATTACHMENTS TO THIS REQUEST

- None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- None