Driven by IT: Innovations in Port Operations
Dave Wilson, Chief Technology Officer
Topics

• Consumer Technology Innovation
  – Self Publishing
  – Social Networking

• Enterprise Content Management
  – Web Sites to Portals

• Port of Seattle Experience
  – Web Publishing and Collaboration
  – Document and Records Management
  – Airport Operations Dashboard
  – Marine Domain Awareness Portal
• Consumer technology evolves quickly
  – Competitive advantage
• Millions of on-line, social networking users
  – Robust, highly available technology
• Adoption is rapid, almost viral
  – Requiring little or no user training
Social Networking

- Personalized content
- Document & photo upload
- Collaborate with friends

www.facebook.com
Broadcast Communication

Selectable channels

Track news and events
Quick status updates

www.twitter.com
Portal Technology

My site with login/password

Selectable apps/widgets

Multiple views and windows

User defined content

www.google.com
Leveraging Consumer Innovation

• State-of-the-art
• High performance and reliable
• No training provided or needed
Web Sites to Portals

ENTERPRISE CONTENT MANAGEMENT
Enterprise Ready

- Enterprise Content Management (ECM) is the technology used to capture, manage, store, preserve, and deliver digital content and documents related to organizational processes

* AIIM 2005 Definition
Why it’s important …

- Legislation requires access to auditable records
- New communication and collaboration tools need a strong foundation in content services
- Voice, data and video convergence brings both new content opportunities and challenges

We are experiencing tremendous growth in the volume of our information (measured in terabytes)
Document Management

- Individual files
- Departmental files
- Port-wide files
- Team specific files
- Special product files

Features to Note:
- Check In/Out Files
- Version tracking
- Promote to records
- Alerts and messages
- Workflow
Records Management

Documents: create and collaborate

Records: manage and help secure

archive
disposal
Port’s Intranet - Communication

Employee blog

Linked to user portals

Department web authors
My Site – Personal Productivity

- Personal and shared files
- Dynamic web parts
- Customized by employees
Over 600 team sites

Links to web sites

Integrated with phone system
Dashboards and Business Intelligence

PORT OF SEATTLE EXPERIENCE
Business Intelligence

- Information needed for “Dashboards”
  – Who is your audience?
  – What do you want to tell them?
  – When do you need to provide updates?
  – How to collect and present the information?
Airport Operations Dashboard

- Flight Information
- Airport Logs
- WSDOT Image
- Parking Database
Video Surveillance

Department specific camera

Traffic sensor data / metrics
Weather Data

NOAA Image

FAA HTML
Baggage Handling Metrics

TSA Excel Data

POS Excel Data
GIS mapping and layers

Arrive / depart data integration
Marine Domain Awareness

### Seaport Properties

Display all Seaport property information.

#### Commercial Vessel Activity List

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>VESSEL NAME</th>
<th>VESSEL TYPE</th>
<th>ACTIVITY</th>
<th>AGENT/OWNER</th>
<th>REMARKS</th>
<th>STATUS</th>
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</table>

**External Links**

- United States Coast Guard FSE
- Harris Management System

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**Commercial vessel data**

The image shows a screenshot of a website displaying commercial vessel activity data. The table lists various vessels with details such as terminal, vessel name, vessel type, activity, agent/owner, and status.
Incident Command Logs

IC planning, logs and status
Vessel Tracking

GIS mapping and integration

Marine Exchange XML data
Vessel Tracking

Zoom and GIS data layers
Vessel Tracking

Vessel data selection
Traffic Alerts

WS DOT integration
NOAA Weather Integration
Public Affairs and Media

- Supports RSS data feeds
- Marine and shipping news
Summary

- Ports can benefit from rapid innovation in consumer technology sector
- Enterprise content management tools needed to manage explosive growth in digital information
- Port of Seattle adopted many of these technologies to improve operational efficiency