EFFICIENCY AND EFFECTIVENESS:
DATA SHARING AMONG SUPPLY CHAIN

2018 AAPA SMART PORTS CONFERENCE

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WHAT IS HAPPENING AT THE PORT/TERMINAL?

- Agents & Port Community
- Traffic Management
- Pilot Scheduling
- Tug Scheduling
- Port Services Planning
- Vessel Operations
- Berth Operations
- Apron to Storage
- Storage
- Gate Processing
- Intermodal Transfer
- Cargo & Dangerous Goods
- Warehouse Management
- Billing & Accounting

SAAB
CHANGES TAKING PLACE IN THE INDUSTRY

- Globalization
- Bigger ships
- Rising cost of infrastructure development
- Regulations
- The environment, especially emissions (CO2)
- New levels of security along with new threats
- The world economy affecting the import/export balance
MANAGING INFORMATION IS A COMPLEX TASK

- Volume of Information
- Various types of users
- Information Dispersed
- Different Information Formats
- Different views of information (data, graphical)
- Dispersed locations of input and reporting
- Extensive Reporting Choices (Detailed, General, Formal)
INFORMATION DUPLICATION

- Paper, carbon copy, fax, notes
- White boards
- Magnetic boards
- Rulers
- Sticky notes
- Cargo manifest
- Agent request, confirmation
- Service providers, request, confirmation, change
CHALLENGE

- Silos of Information
- Independent processes between departments and groups
- Need to communicate and share accurate data
- Have to operate in more efficient & timely way
What do you want to achieve?

- Cost and Operational efficiency,
- Improved customer service,
- Increase traffic capacity,
- Regulatory demands,
- Expansion,
- Modernisation
IS THERE A SOLUTION?

- Business Strategy
- Maritime Industry Practices
- Information Technology
• Think about the port as a system of systems.
• A process has inputs & outputs
• When you have many parts it gets complex
• Issues to deal with in complex systems thinking
  – Are the outputs what I want?
  – Are there unintended consequences?
  – Are the inputs going to the right parts of the system?
  – Which parts could be more efficient?
HOW TO IMPROVE EFFICIENCY?

• Provide everyone with secure and consistent information
• Deliver information “anytime and anywhere”
• Create effective business processes with partners
• Make it easy to collaborate and share information
• Streamline communication
• Collect and use real data to optimize the outcome
HOW TO GET THERE?

1. Integrated system – Data
2. Integrated communication platform – Communication
3. Common Operating Picture (COP) – Information
4. Collaboration Decision Making (CDM) – Collaboration
5. Operation Optimization – Efficiency
STEP 1 - INTEGRATED SYSTEM

If I put two or more things together, the result should be better than the parts alone

Visit Management
Resource Management
Cargo Management
Billing Management
Property Management
STEP 2 - INTEGRATED COMMUNICATION

• EDI and other 3rd party interfaces
• Email, SMS or other type of messages
• Customs or regulatory reporting needs
• Management & Customer reporting
• Web interface for General Public, Shipping lines, Agents, Service Providers
STEP 3 – COP – INFORMATION SHARING

A **COMMON** view of everything happening, planned or that has happened

**HOW**
- Presented on the web
- Presented on a map
- Presented in layers
- Feeds from other systems

**WHY?**
- Anyone who has access can see it on any computer or device
- Every piece of information is located geographically, for context
- Layers can be switched on or off to show what you need to see
- To get the best collected representation of reality
Collaborative Decision Making (CDM) is an approach for making better decisions that:

- Brings the **right people** together,
- Enables them to work collectively from a **common picture with better information**,
- In order to develop a **shared understanding and mutual commitment**,
- And ultimately **improve both the safety and efficiency** of operations.
STEP 5 - OPTIMIZATION

- Define what you want to optimize
- Understand the data
- Define rules (hard and soft)
- Create operation model
SIMPLE VIEW OF ADVANCED SITUATION

CDM (collaboration)  COP (information)

Optimization (efficiency)

System of Systems (data)

Reports and Interfaces (communication)
FAIRWAY TO FREEWAY CONCEPT
EXPERT SYSTEMS / WORKFLOW AUTOMATION

USER INTERFACE + KNOWLEDGE INCREASES FOCUS FOR EACH ROLE
THANK YOU

Questions?

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INTRODUCTION

• Presenter: Pavel Skournik
  – Head of Ports and Terminals Management, Maritime Traffic Management, Saab
  – Managing Director, Saab Technologies LTD

• Our Why: “We Make Maritime Trade Safe and Efficient Around the World”

• Maritime Traffic Management
  – Operations in Canada, Australia, Netherlands, Belgium, India, Sweden, Hong Kong, USA
  – Fairway to Freeway solutions – integrated end-to-end solutions for ports
  – Coastal Surveillance solutions – integrated solutions for countries and coastlines

• Solutions include
  – Port Management Information Systems - PORTCONTROL
  – VTS and VTMIS solutions – MARITIMECONTROL
  – Terminal Operating System - TERMINALCONTROL