

Making Global Maritime Trade Safe

10th Philippines Port and Shipping 2019



Introduction

- Presenter: Everhardus (Van) van den Heuvel
 - Deputy Head of Global Sales and Marketing, Maritime Traffic Management, Saab
 - Background: Maritime transportation; Naval combat systems; Telecommunications
- 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 coasts
- Solutions include
 - Terminal Operating System - **TERMINALCONTROL**
 - Port Management Information Systems - **PORTCONTROL**
 - VTS and VTMS solutions – **MARITIMECONTROL**
 - Coastal Incident Management solutions - **COASTCONTROL**



ARE YOU READY TO MAKE THE WINNING MOVE?

Managing maritime traffic requires solving immediate challenges and planning ahead. The choice of supporting tools is strategic one. What you decide on is likely to be with you for years to come.

Ports can distinguish themselves by getting cargo from ship to follow-on transport with minimal delay. In our *Fairway to Freeway* concept, Saab solutions work together to make that happen, keeping all resources optimally in play. The immediate result is a more efficient and profitable port.

Saab offers a comprehensive suite of innovative products to make your maritime operations safer, more efficient and more secure. We supply proven solutions for:

- Visual Traffic Services
- AIS solutions and networks
- Coastal Surveillance
- Port and Terminal Management
- Pilot Dispatch
- Hydrography

The world does not stand still, and neither does Saab. Thanks to our *thinking edge*, we have a unique ability to stay ahead of technological, operational and environmental developments. Let our staff apply their broad maritime expertise to deliver a comprehensive solution to meet your specific needs. Contact us at marinfo@saabgroup.com or visit us at www.saab.com.

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What is happening in the Port?



Agents & Port Community



Traffic Management



Pilot Scheduling



Tug Scheduling



Port Services Planning



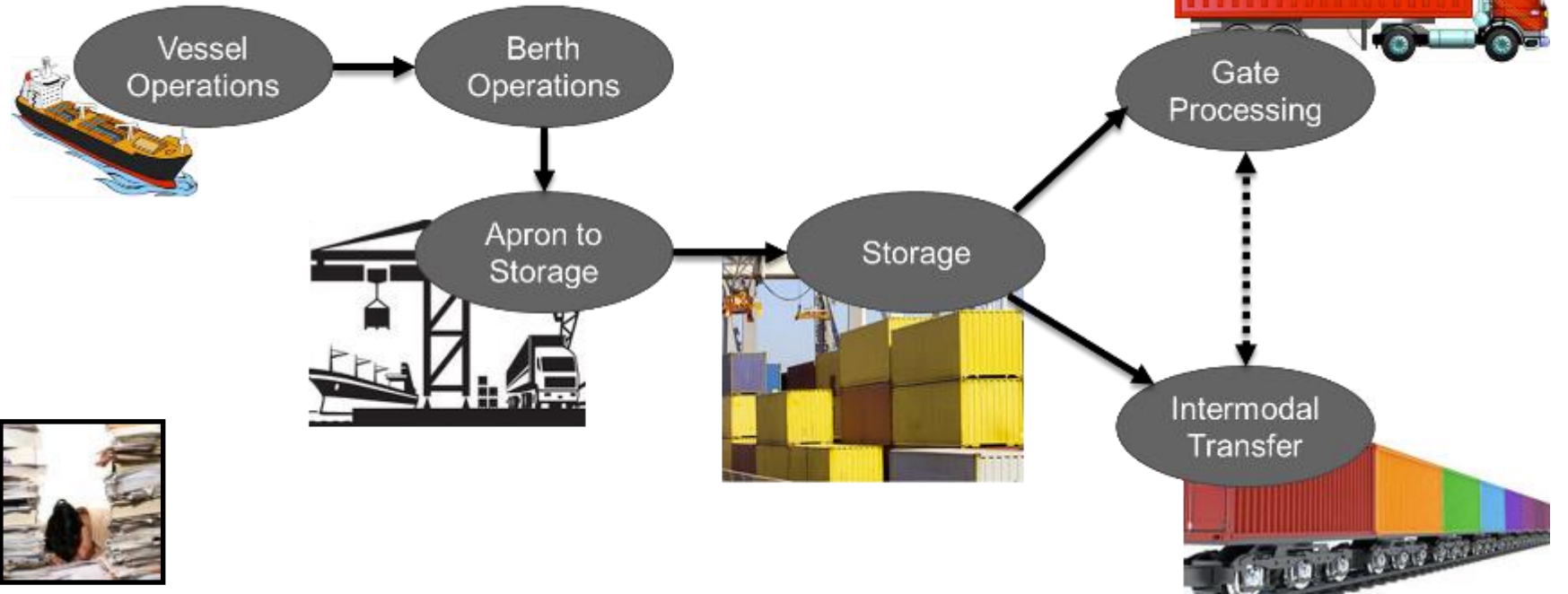
Cargo & Dangerous Goods



Warehouse Management

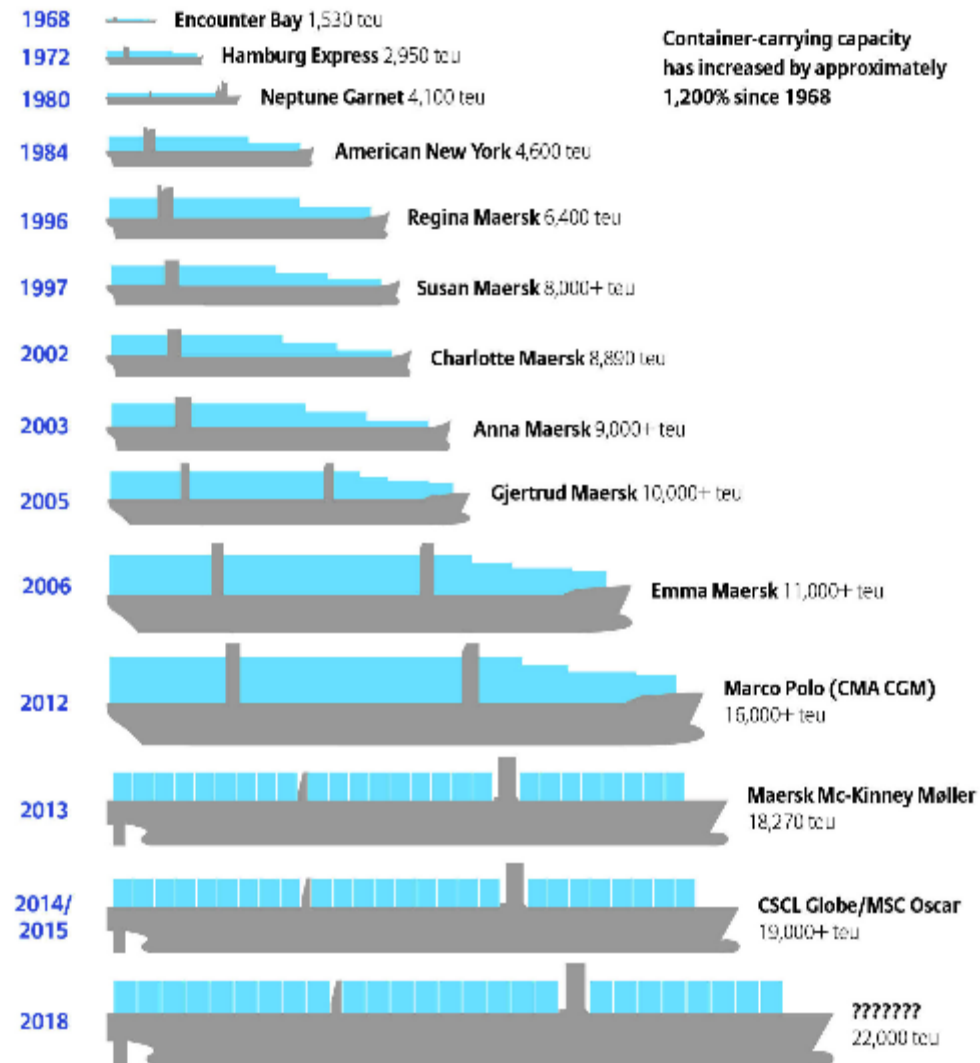


Billing & Accounting



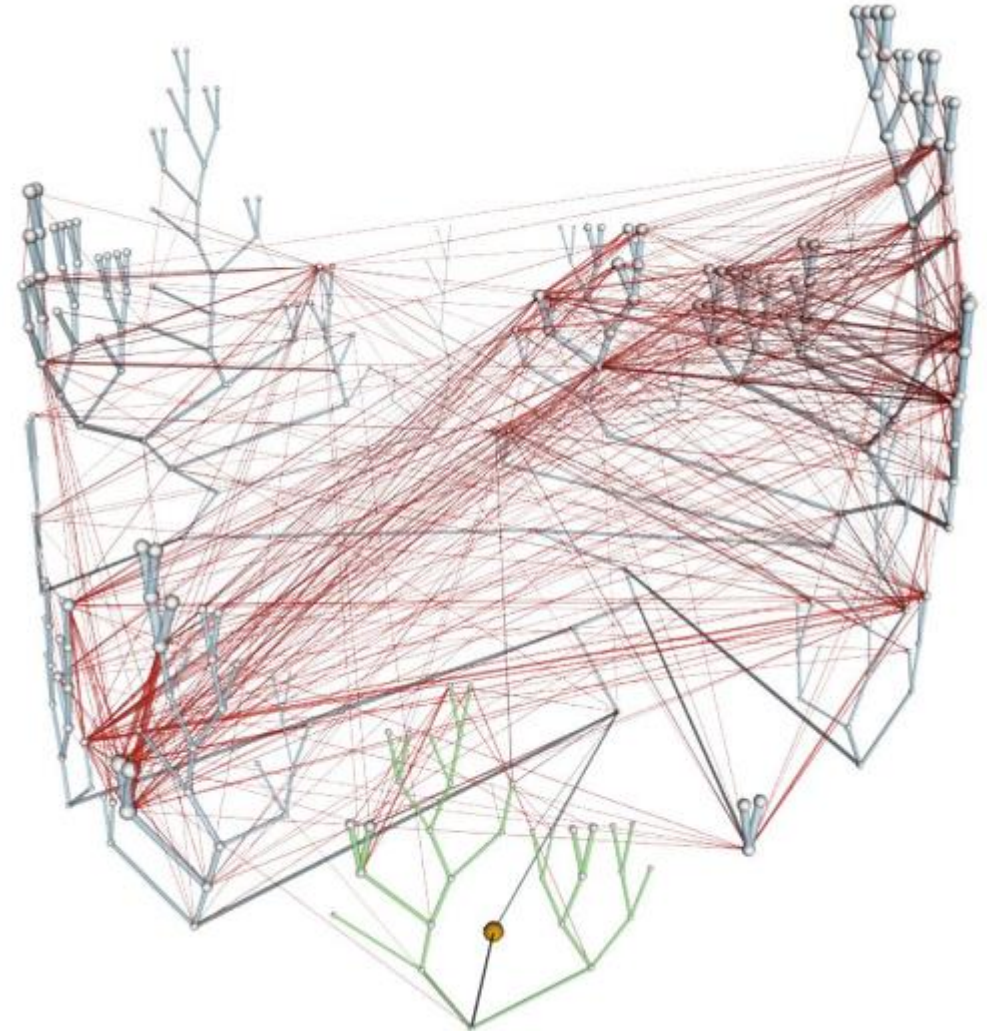
Changes taking place in the industry?

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



Other complexities (Technology Challenge)

- Volume of Information; increasing data growth
- Various types of users; internal and external
- Information Dispersed across many systems
- Different Information Formats; integration challenge
- Different views of information (data, graphical)
- Dispersed locations of input and reporting
- Extensive Reporting (Detailed, General, Formal)

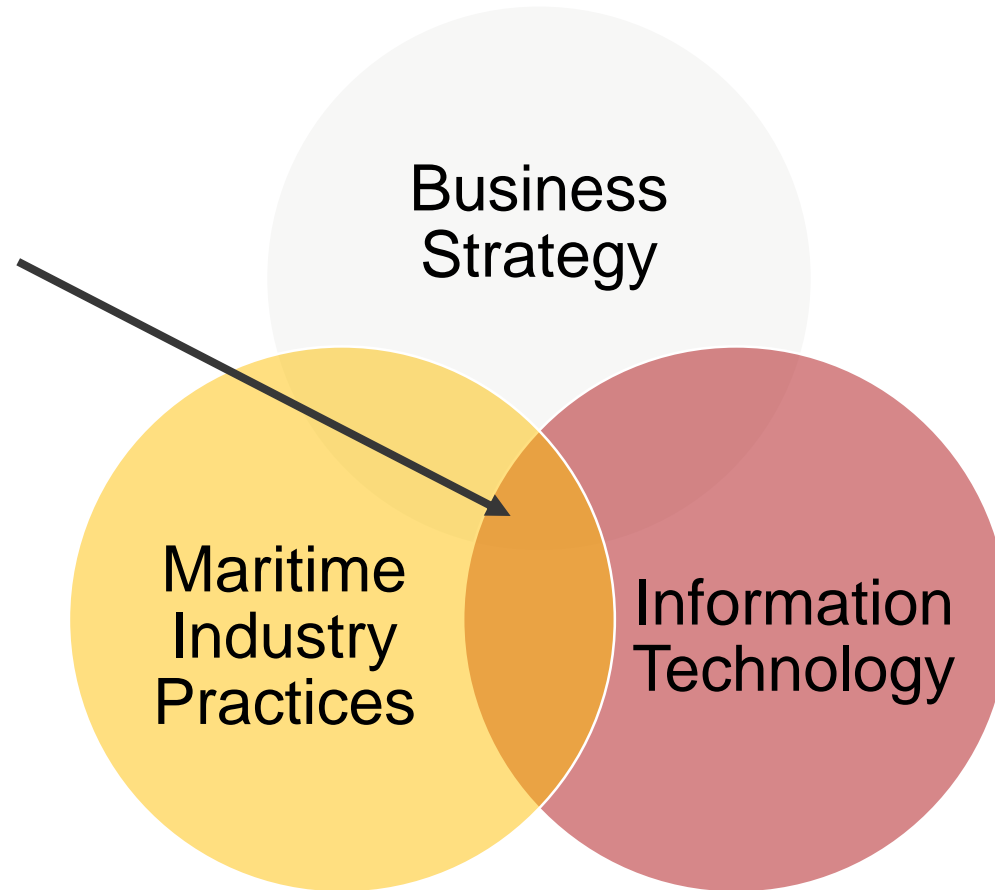


Several areas to address

- **Silos of Information**
- **Independent processes between departments and groups**
- **Need to communicate and share accurate data**
- **Desire to operate in more efficient & timely way**

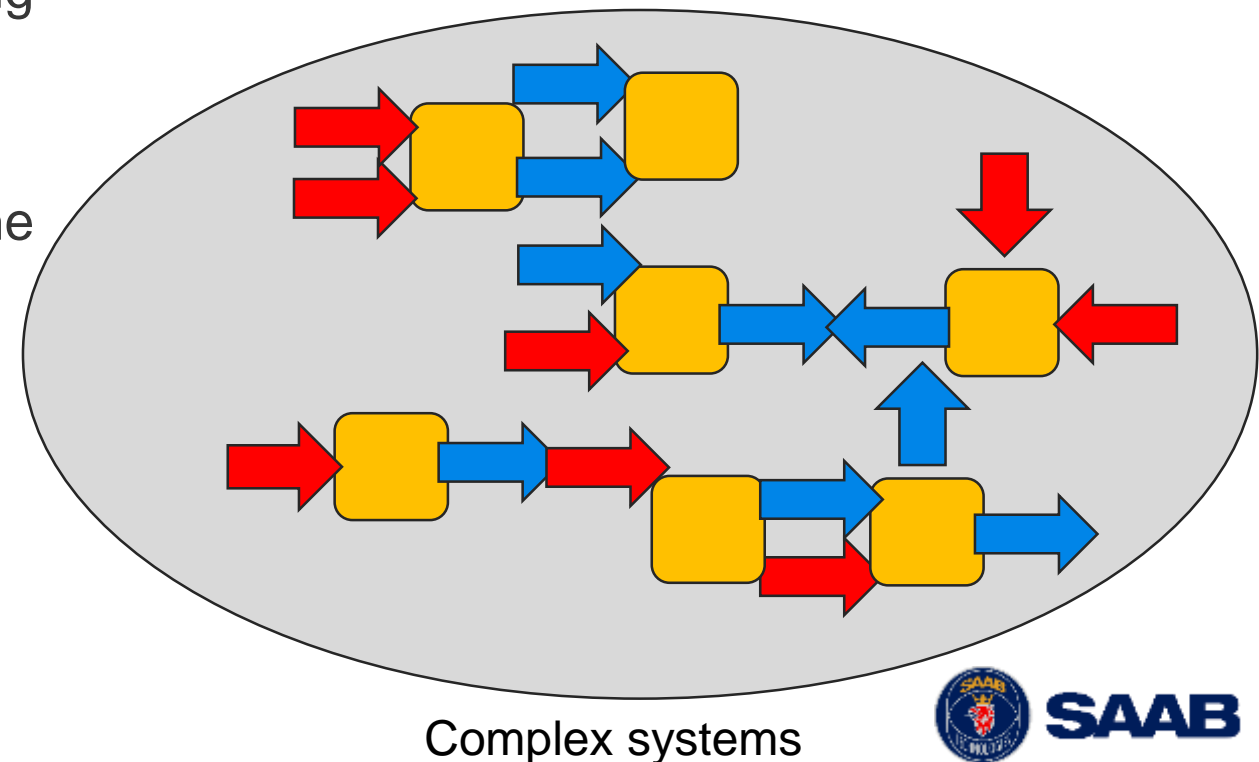
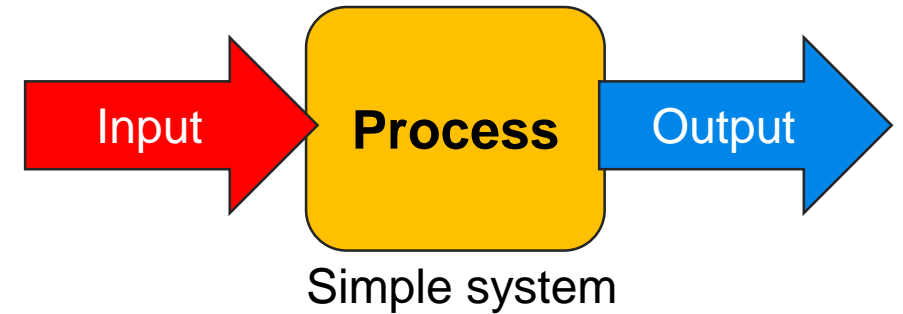
Is there a solution?

SOLUTION SPACE



Systems Concept

- 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?



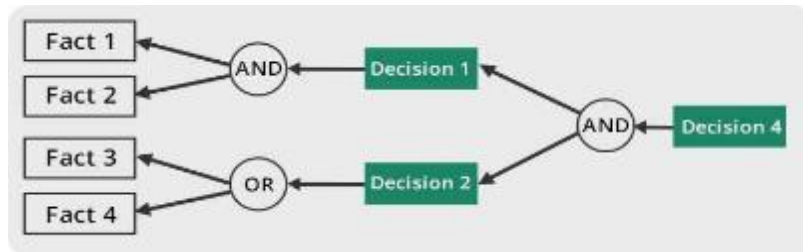
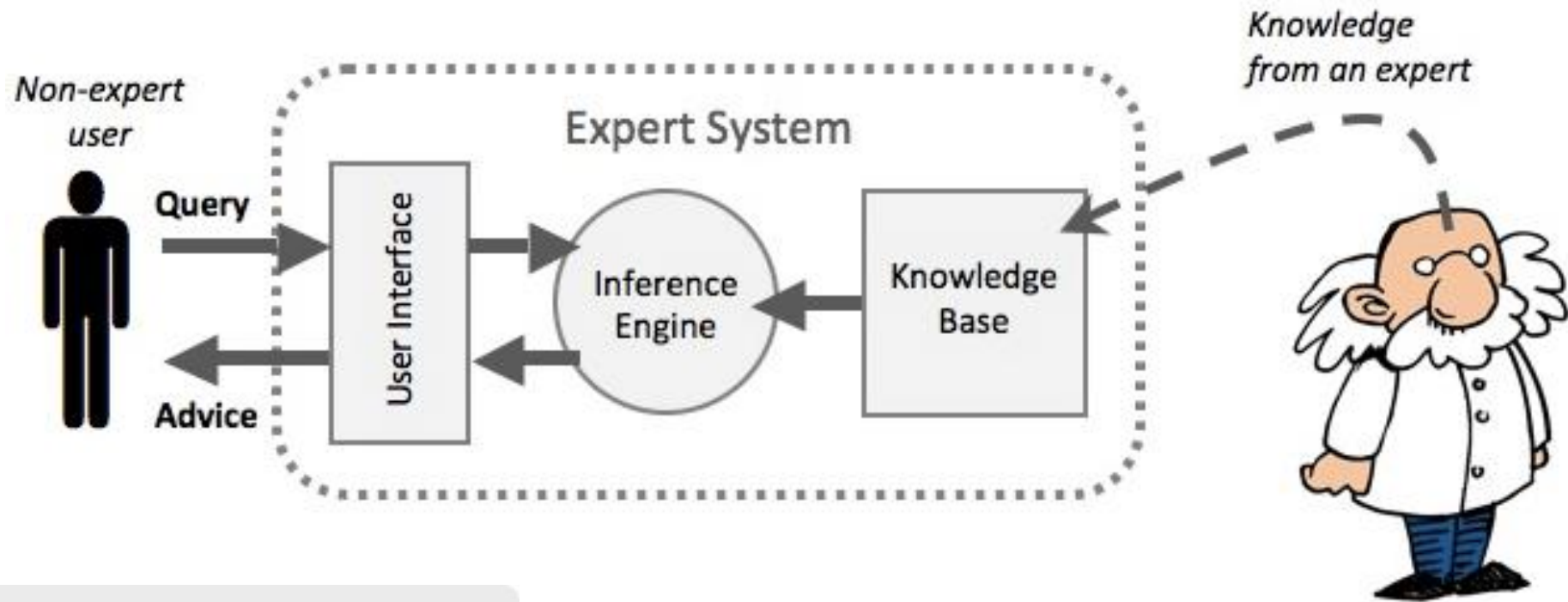
How to improve Safety and Efficiency?

- 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. Expert systems 'best of class' – Workflow optimization
2. Planning and real-time integration – Data availability
3. Integrated communication – Seamless communication
4. Common Operating Platform (COP) – Information access
5. Collaboration Decision Making system (CDM) – Collaborative choices
6. Operational Optimization – Enhanced safety and efficiency

Step 1 – Expert systems / workflow automation



**USER INTERFACE + KNOWLEDGE
INCREASED FOCUS FOR EACH ROLE**

Step 2 – Planning & Real-time integration

PLANNING DOMAIN

Visit Management

Resource Management

Cargo Management

Billing Management

Property Management

Terminal Management



REAL-TIME DOMAIN

AIS Networks Management

Vessel Information Management

Vessel Traffic Management

Coastal Incident Management

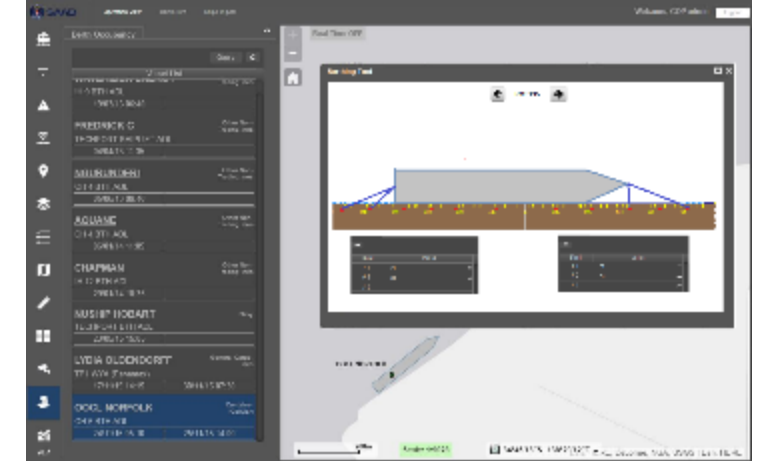
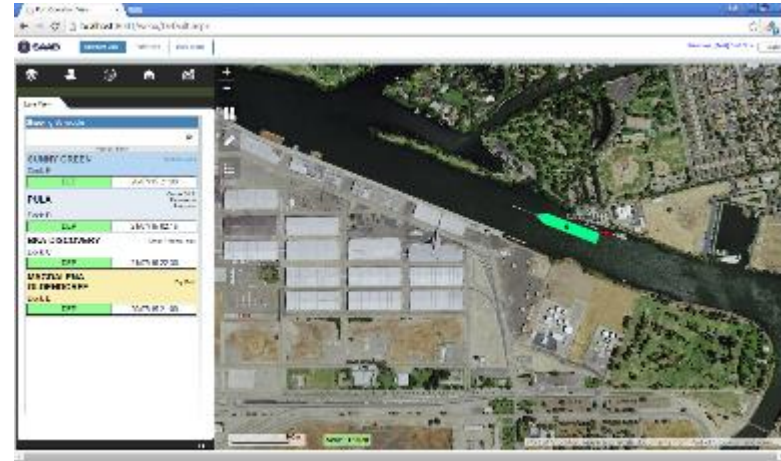
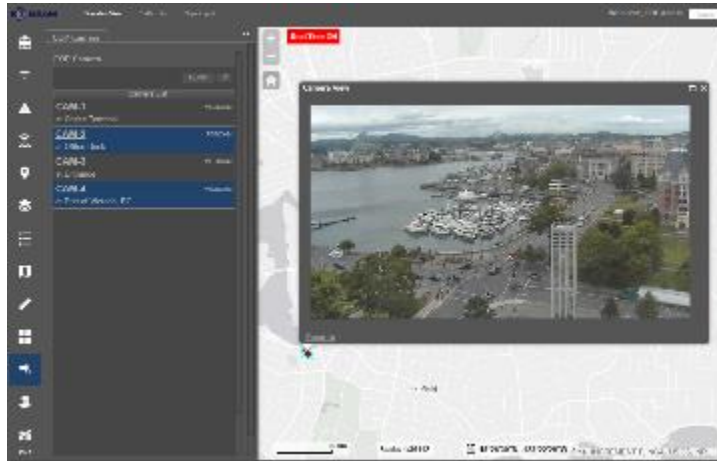
If I put two or more things together the result should be better than the parts alone!

Step 3 – Integrated Communication

- Integrated voice communication
- EDI and other 3rd party interfaces
- Email, SMS or other type of messages
- Customs or regulatory needs reporting
- Management & Customer reporting
- Web interface for General Public, Shipping lines, Agents, Service Providers



Step 4 – Common Operating Picture (COP)



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

HOW

- Web access
- Map based presentation
- Layering of information
- Integrated systems sharing data

WHY?

- Ease of access; independent of device or location
- Geographical orientation
- Relevant information needed
- Best representation and of up-to-date reality

Step 5 – CDM

Collaborative Decision Making (CDM) is an approach for making better decisions that:

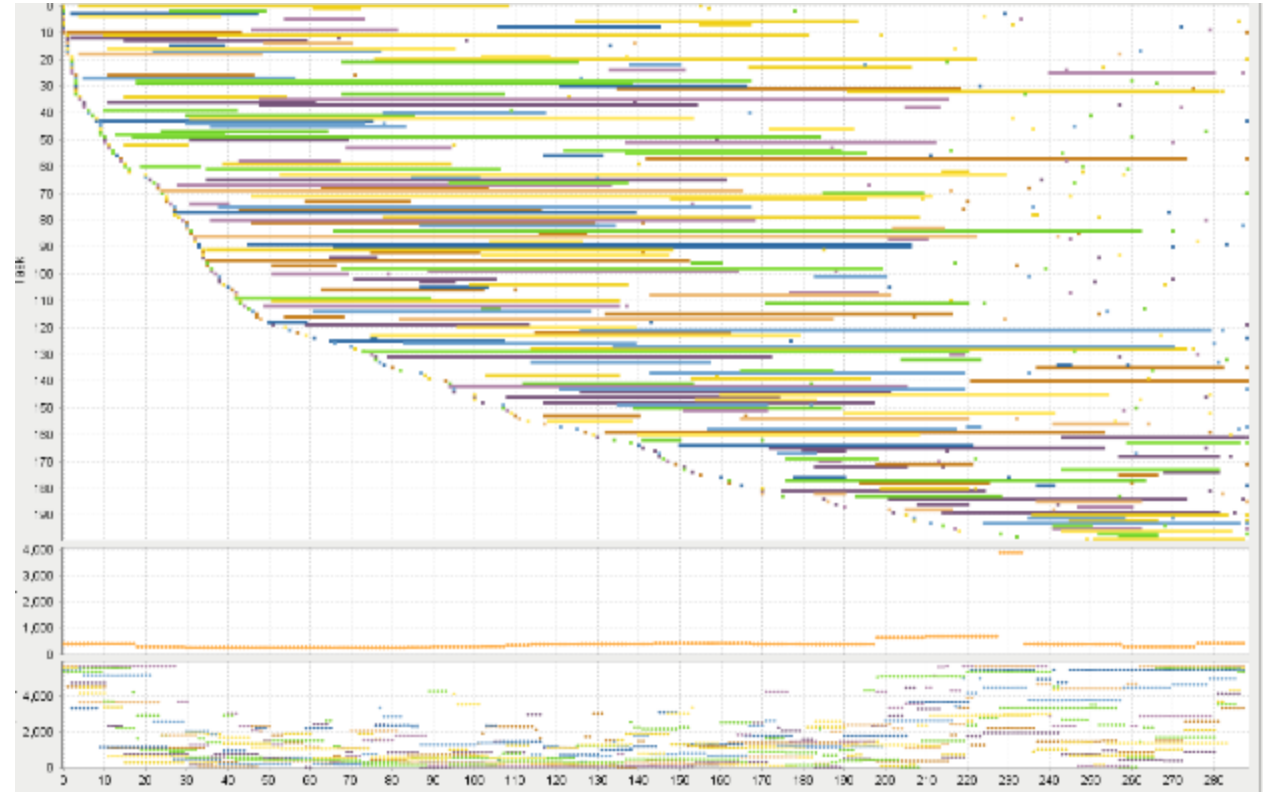
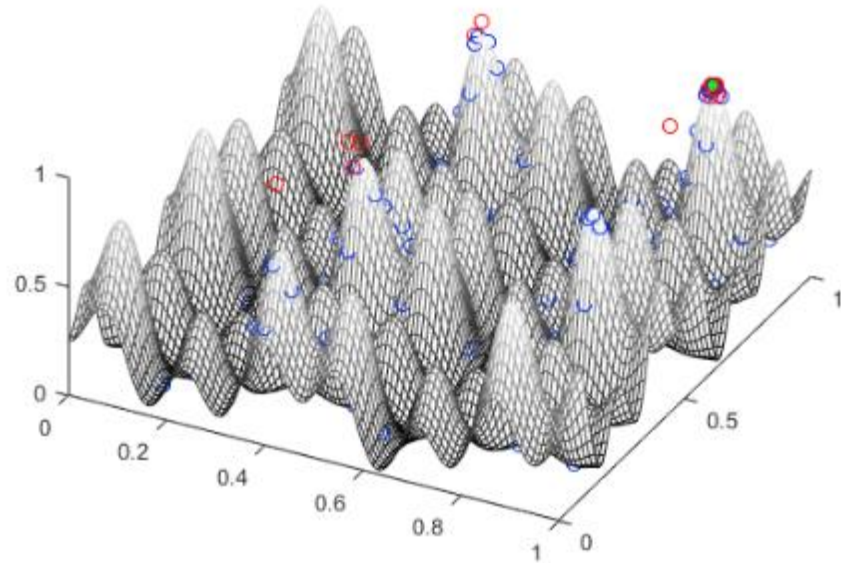
- Brings the **right people** together,
- Enables them to work collectively from a **common picture with better information**,
- In order to develop a **shared understanding and mutual commitment**,
- And ultimately **improve both the safety and efficiency** of operations.

Running Log Time	Type	Description	Updated By
2015/09/29 15:45	Schedule	[Text] VTSO changes: Invoicing Bids, Schedule Time	[Text] Y190
2015/09/29 16:04	Schedule	[Text] VTSO changes: Schedule Time	[Text] Y190
2015/09/29 16:29	Schedule	[Text] VTSO changes: Schedule Time	[Text] Y190
2015/09/29 16:28	Schedule	[Text] VTSO changes: Sch Time 2015-09-30 05:00	[Text] Y190
2015/09/29 16:04	Schedule	[Text] VTSO changes: Sch Time 2015-09-30 16:15	[Text] Y190
2015/09/29 16:22	Pilotage	Service Confirmed	[Text] Pilot Company
2015/09/29 16:55	Schedule	[Text] VTSO changes: Sch Time 2015-09-30 19:15	[Text] Y190
2015/09/29 14:31	Pilotage	Service Confirmed	[Text] Pilot Company
2015/09/29 14:36	Schedule	[Text] VTSO changes: Sch Time 2015-09-30 19:30	[Text] Y190
2015/09/29 14:48	Pilotage	Service Rejected, Reason: No pilot available until 20:15	[Text] Pilot Company
2015/09/29 14:49	Stevedore	Service Rejected, Reason: Loader is broken, back to work at 19:45	[Text] Stevedore SCRUTT
2015/09/29 14:50	Schedule	[Text] VTSO changes: Sch Time 2015-09-30 21:30	[Text] Y190
2015/09/29 15:44	Schedule	[Text] VTSO changes: Sch Time 2015-09-30 21:45	[Text] Y190
2015/09/29 15:44	Pilotage	Service Confirmed	[Text] Pilot Company
2015/09/29 15:45	Stevedore	Service Confirmed	[Text] Stevedore SCRUTT
2015/09/29 15:47	Boatmen	Service Confirmed	[Text] Boatman IML

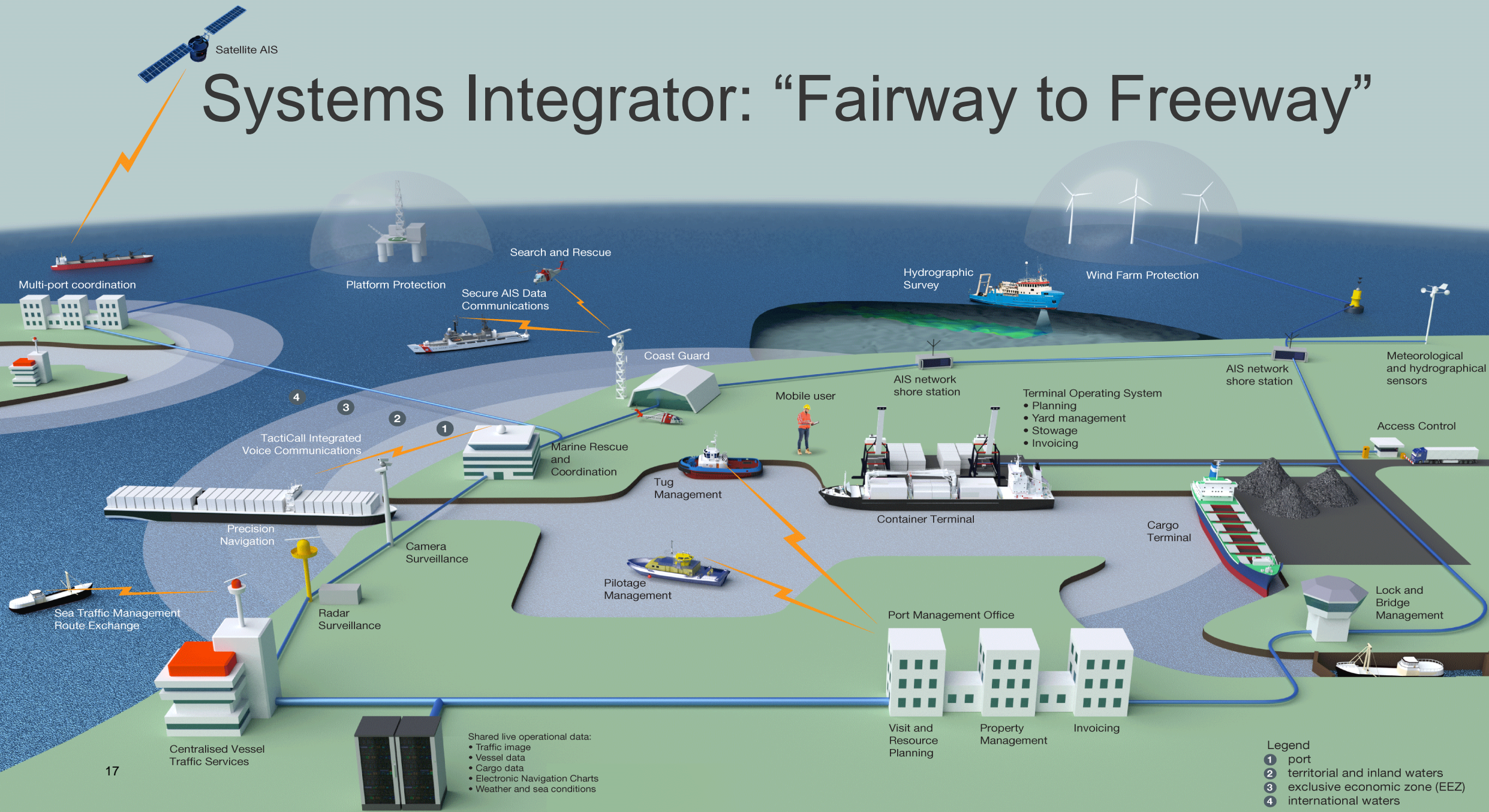
Service Type	Service Desc	Service Company	Status	Decline Reason	Sen
JOLANTA (DRY BULK)					
DEPART FROM STORMONT 5 10/01/2015 05:30 AGENT: JOHN BURKE & CO. LTD. CHANGE LOG					
PILOTAGE	DEP FROM STORMONT 5 TO SEA	BELFAST LOUGH PILOTAGE SERVICES LTD	Declined	Pilot only available from 07:00	
BOATMEN	DEP FROM STORMONT 5	D. FERRAN & SONS	Confirmed		
STEVEDORE	DEP FROM STORMONT 5	(Own Use Stevedore)	Requested		
BLACK WATCH (CRUISE)					
ARRIVE TO STORMONT 2 09/30/2015 21:45 AGENT: JOHN BURKE & CO. LTD. CHANGE LOG					
PILOTAGE	ARR FROM SEA TO STORMONT 2	BELFAST LOUGH PILOTAGE SERVICES LTD	Confirmed		
BOATMEN	ARR TO STORMONT 2	JOHN MCLOUGHLIN & SON	Confirmed		
STEVEDORE	ARR TO STORMONT 2	SCRUTTONS NORTHERN IRELAND LTD	Confirmed		
NORWEGIAN STAR (CRUISE)					
ARRIVE TO STORMONT 4 10/01/2015 07:00 AGENT: JOHN BURKE & CO. LTD. CHANGE LOG					
PILOTAGE	ARR FROM SEA TO STORMONT 4	BELFAST LOUGH PILOTAGE SERVICES LTD	Requested		
BOATMEN	ARR TO STORMONT 4	JOHN MCLOUGHLIN & SON	Requested		
STEVEDORE	ARR TO STORMONT 4	(Own Use Stevedore)	Requested		

Step 6 – Operational Optimization

- Determine what you want to optimize
- Analysis of the data
- Define rules (hard and soft)
- Create improved operation model



Systems Integrator: "Fairway to Freeway"



Satellite AIS

Multi-port coordination

Platform Protection

Search and Rescue

Secure AIS Data Communications

Hydrographic Survey

Wind Farm Protection

Coast Guard

AIS network shore station

AIS network shore station

Meteorological and hydrographical sensors

4

3

2

1

TactiCall Integrated Voice Communications

Marine Rescue and Coordination

Mobile user

Terminal Operating System
 • Planning
 • Yard management
 • Stowage
 • Invoicing

Access Control

Tug Management

Container Terminal

Cargo Terminal

Precision Navigation

Camera Surveillance

Pilotage Management

Port Management Office

Lock and Bridge Management

Sea Traffic Management Route Exchange

Radar Surveillance

Centralised Vessel Traffic Services

Shared live operational data:
 • Traffic image
 • Vessel data
 • Cargo data
 • Electronic Navigation Charts
 • Weather and sea conditions

Visit and Resource Planning

Property Management

Invoicing

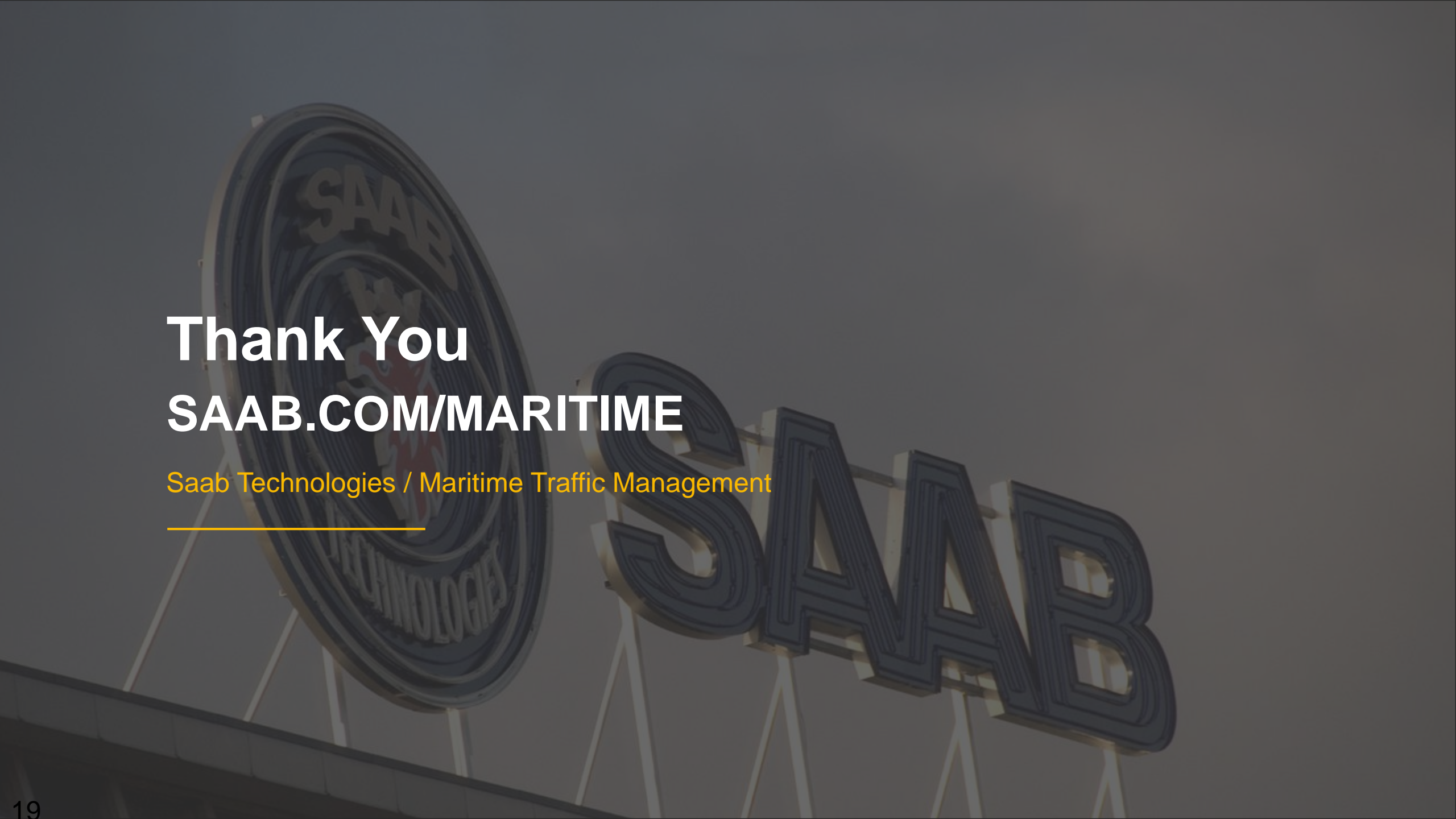
Legend

- 1 port
- 2 territorial and inland waters
- 3 exclusive economic zone (EEZ)
- 4 international waters



SAAB

DELIVERED BY DEDICATED SPECIALISTS SHARING
DECADES OF INDUSTRY KNOWLEDGE,
OUR **THINKING EDGE** GIVES YOU COMPLETE CONTROL
OVER THE SAFETY AND EFFICIENCY OF YOUR MARITIME
OPERATIONS

The background features a large, dark, 3D 'SAAB' sign on the right and a circular 'SAAB TECHNOLOGIES' logo on the left. The text is overlaid on a dark, semi-transparent background.

Thank You

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