ANGRY !!!
Anger Management !!!

From

To
Voyage management
Support planning and dynamic re-planning

Flow management
Area management and flow optimization

PortCDM
Approach and Port synchronization

STM Strategic Concepts & Operational Services

Voyage Optimization & Traffic coordination

Port Call Synchronization

Co-financed by the European Union
Connecting Europe Facility
Cost Distribution in Sea Transports

100% of the cost (fence to fence)

27% (berth to berth)

Bunker cost (70%)

Inbound & outbound transportation

Port Operations

Sea Voyage

Port Operations

Inbound & outbound transportation

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Connecting Europe Facility
CONCERNS OF SEA TRAFFIC MANAGEMENT

The problem: The need to increase efficiency in operations within and between ports

- Optimal bunker use (from berth to berth)
- Right routeing (-12 %)
- Green steaming (-25 % for anchoring vessels)

Maximize the utilization of the facilities in ports
Minimize the use of energy to steam between two ports

constrained by safety considerations

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Connecting Europe Facility
Desired PortCDM Effects

- Fast turn-around
- Optimal resource utilization
- High degree of predictability
- Just-in-time operations
- Minimal waiting times
- Green Steaming

Vessel

Port

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Towards Synchronised Information Sharing
All ports work differently


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Integrating with Existing Systems as the Source
Is built upon and has been a source for the development of

PORT CALL
MESSAGE STANDARD

Is applied in approaches for

PORT call synchronization

PORT call optimization

Has been reviewed and is of use for

Maritime authorities, Port authorities and other port actors, BIMCO, Shipping companies, Service Providers, (Bridge) Equipment suppliers, Platform providers, Standardization organizations (like GS1)

STM
Sea Traffic Management

Co-financed by the European Union
Connecting Europe Facility
STM Validation Project

Validating concepts at:
- 300 ships
- 13 ports
- 5 service centres

Co-financed by the European Union
Connecting Europe Facility
Victoria Alexandra & Dream II
### Improved Safety

<table>
<thead>
<tr>
<th>Risk reduction rate</th>
<th>Flow Management by flow optimisation</th>
<th>Flow Management by enhanced monitoring</th>
<th>Dynamic Voyage Management by route exchange</th>
<th>Weighted combined rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collisions</td>
<td>58%</td>
<td>5%</td>
<td>52%</td>
<td>81%</td>
</tr>
<tr>
<td>Groundings</td>
<td>6%</td>
<td>64%</td>
<td>8%</td>
<td>69%</td>
</tr>
</tbody>
</table>

Source: *ML2 D2 FSA – Formal Safety Assessment*
Thank you!