

TOWARDS END-TO-END OPTIMIZATION OF VEHICLE MARITIME FLOWS

Integrating Ro-Ro Operational Vessel Schedules
into the Port Community Systems

Hervé Moulin, Renault

Maritime flows, part of the Vehicle Control Tower

Vehicle Control Tower : an end-to-end vision

A real time single source of Data...

...to improve customer satisfaction !



Real time

Real-time actual position for better Reactivity



One single tool

A unique collaborative platform for all stakeholders



Visibility

Aggregating data from various sources for a better visibility



Vehicle
Control
Tower



End-to-End

Comprehensive tracking of the vehicle's lifecycle, step by step, from launches to final customer delivery



Anticipation

Enhanced efficiency through proactive identification of delays and anomalies



Customer care

On-time delivery

ONE GOAL
CUSTOMER SATISFACTION



RG

ECG Ro-Ro Vessel Schedules — Standardisation Plan

Findings from previous DWG studies :

- Digitalized vehicle tracking is weak in 3 segments :
 1. Rail
 2. Ro-Ro Shipping line schedules, particularly with transshipments
 3. Port activities visibility

BENCHMARK : The container business

DCSA issued Operational Vessel Schedule (OVS) standards in 2023 to enable Port Community System integration

DCSA Member Influence

DCSA members represent about 70% of global container trade driving digital adoption in the shipping sector.

Early Adoption Example

Mediterranean Shipping Company has implemented Commercial Schedules API improving routing visibility and planning.

Growing Adoption Trend

Adoption of DCSA standards is increasing, enhancing operational efficiency and system interoperability.

Why align with DCSA?

- Numerous benefits can be derived from OVS Standardization :
 - Open, carrier-backed standards for Operational & Commercial Vessel Schedules (OVS/CS)
 - Interoperable APIs: one format, all carriers → faster integrations with PCS. Faster and more frequent updates, instant sharing with all concerned parties...
 - Higher ETA/ETD data quality (enhanced by human experience and AI...)
 - Foundation for Just-In-Time port calls and resource planning, from port operators to inland transport.
- Nevertheless, current Port Community Systems Focus Areas are :
 - Containerized cargo
 - High-volume freight flows
 - Highly standardized processes
 - Ro-Ro / new-vehicle traffic is never mentioned as a specific PCS digitalization domain in the available sources.

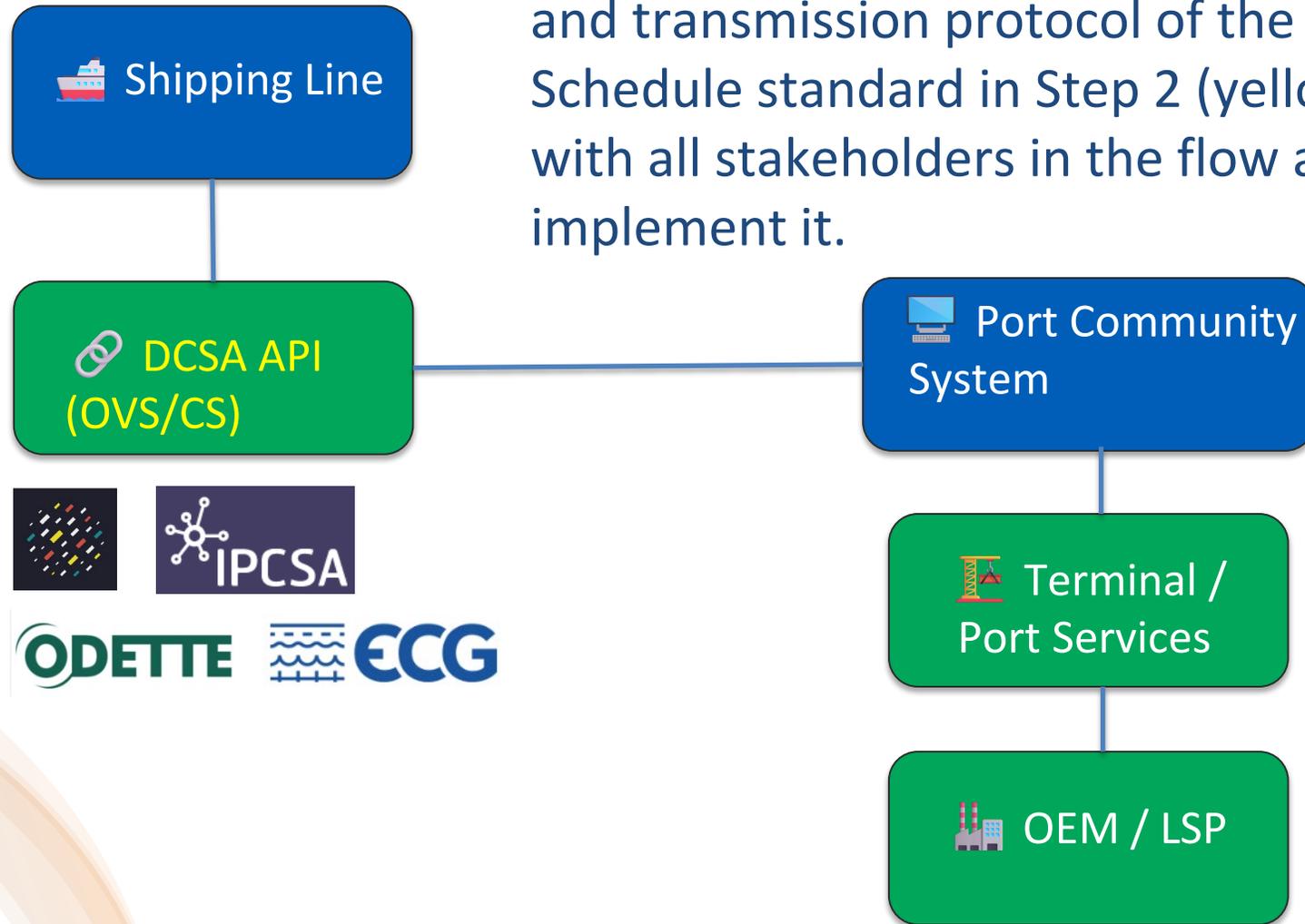
Source: DCSA standards for Operational Vessel Schedules and Commercial Schedules.

Why it's harder for Ro-Ro



- Irregular volumes & higher volatility → automation is harder
- Many actors (OEM, logisticians, inspections) → less standardised than containers
- Congestion, delays & infrastructure constraints common in Ro-Ro
- These factors slow digitalisation in practice
- **CONCLUSION:** A special joint effort by the Ro-Ro business partners is needed.

Integration Flow

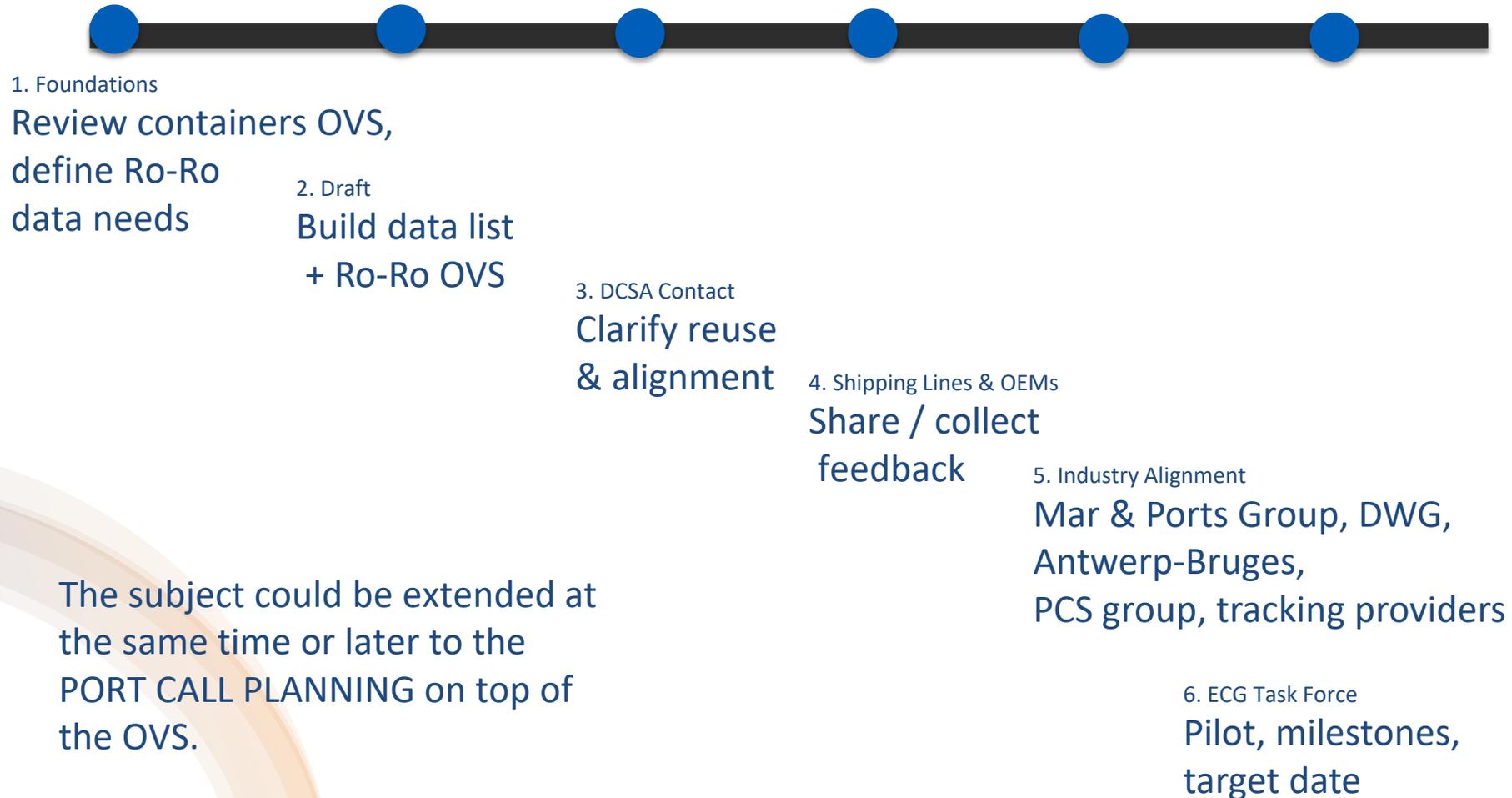


OUR GOAL : Agree on the content, format and transmission protocol of the Vessel Schedule standard in Step 2 (yellow print) with all stakeholders in the flow and implement it.

OVS/CS = Operational & Commercial Schedules; same API format across carriers enables single ingestion into PCS.

Roadmap — From Concept to Publication

The whole process could take 2 years or more as seen in the container benchmark.

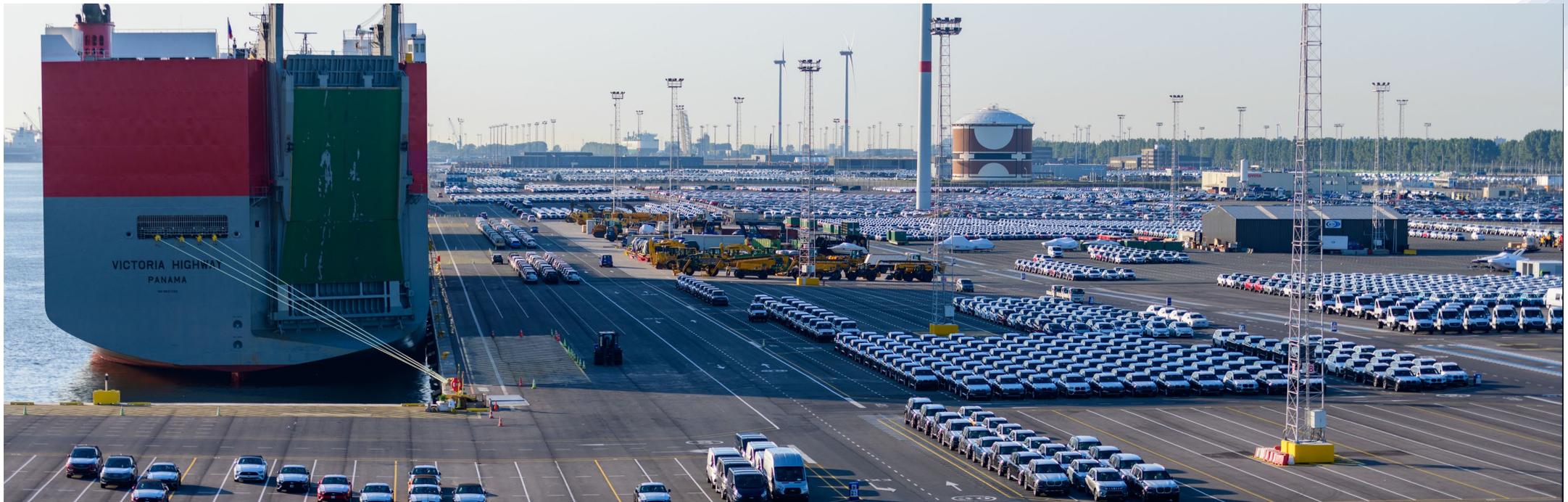


The subject could be extended at the same time or later to the PORT CALL PLANNING on top of the OVS.

After Step 6: publish standard and promote via ECG & DCSA; make it the reference for PCS ingestion.

ECG Task Force — Governance

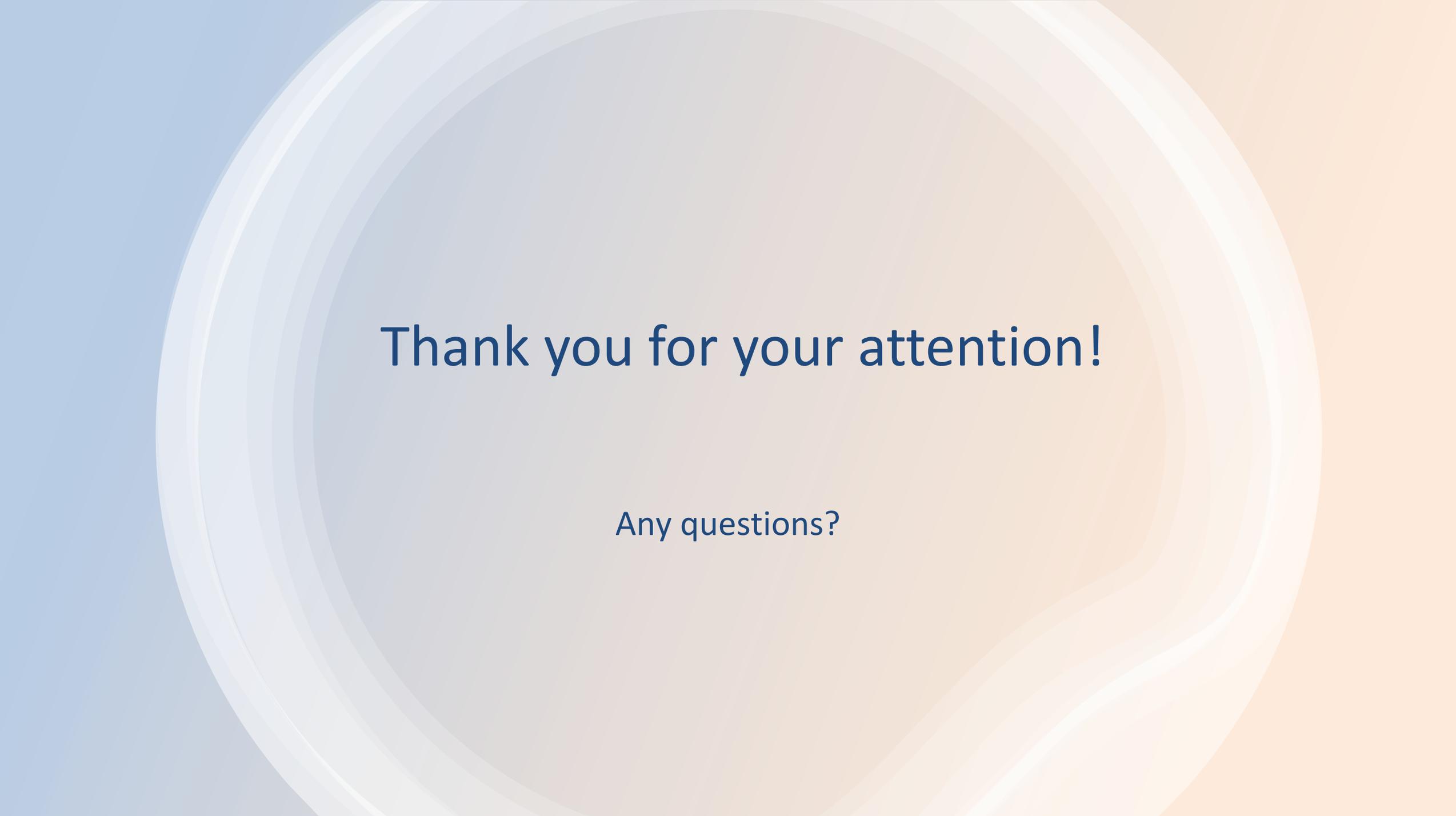
- Members: ECG, ODETTE, Shipping Line(s), OEM(s), Port, PCS rep, Tracking provider
- Leadership: appoint a pilot; define KPIs and milestones
- Deliverables: Final Data List + Standard Vessel Schedule Document
- Alignment: regular checkpoints with DCSA for coherence



Decisions & Next Actions

- Decide scope now: Vessel Schedule only or Vessel Schedule + Port Call Planning
- Confirm DCSA + Antwerp-Bruges joint session date
- Launch ECG Task Force and set target publication date
- Prepare outreach plan for ECG & DCSA promotion





Thank you for your attention!

Any questions?