

Summary from BIMCO Workshop
on
Harmonisation of Maritime Digital Interfaces
BIMCO House, Copenhagen, March 18-19, 2026

1 Summary

The workshop, organised by BIMCO in close collaboration with ITS Norway and the DYNAPORT project, brought together 45 representatives from across the maritime sector to examine how harmonisation of digital interfaces between shipping, ports, authorities and solution providers can be accelerated in practice. The workshop was held under the Chatham House Rule.

Discussions were structured around three closely related themes:

- 1) how business value drives adoption and convergence of digital solutions;
- 2) how information payloads, semantics and transport mechanisms can be aligned to support interoperability at scale; and
- 3) how identity, authentication and trust can be handled in an international, multi stakeholder environment.

Three key conclusions emerged from the discussions. First, the IMO Compendium was consistently recognised as the essential semantic foundation for maritime digitalisation, providing alignment on definitions and meaning, but not as an operational or technical blueprint. Second, participants agreed that federated architectural approaches offer the most realistic way forward, allowing existing systems and platforms to interoperate without creating new centralised solutions. Third, secure and scalable international data exchange depends on robust identity, authentication and trust frameworks, supported by clear governance and international coordination.

Building on these conclusions, the workshop found that despite broad agreement on direction, the maritime sector continues to struggle with fragmentation at the level of implementation. The primary challenge has shifted from defining what data should be exchanged to ensuring that existing standards and references are applied in a consistent, scalable and inclusive manner across regions, segments and solution providers.

Against this backdrop, the workshop emphasised that future ship-shore data exchange is unlikely to rely on a single standard or system for both semantic and technical interoperability. Instead, progress depends on practical, principle-based harmonisation that enables interoperability across diverse solutions, supported by common semantics, shared implementation principles and coordinated governance at international level. In this context, the IMO Compendium was consistently recognised as the key semantic reference, acting as a common “glue” to support alignment across diverse implementations.

To translate this broad alignment into more coordinated and consistent implementation, the workshop supported the development of a short, principle-based industry Declaration – the “Golden Rules for Maritime Digitalisation” – intended as a shared, high-level reference for stakeholders across the sector.

2 Introduction

Over the past decade, the maritime sector has launched a wide range of digital initiatives aimed at improving ship–shore information exchange. While many of these efforts have delivered value in specific use cases or regions, the overall landscape remains fragmented. Overlapping standards, differing interpretations of reporting requirements, and a growing number of regional and proprietary platforms continue to drive cost, complexity and limited scalability.

At the same time, experience across the sector shows that no single standard, system or architecture can accommodate the diversity of operational, regulatory and regional requirements that characterise global maritime operations. As a result, the challenge facing maritime digitalisation is no longer a lack of standards or technical capability, but the absence of consistent implementation, coordination and shared discipline in how existing work is applied.

This context formed the basis for the BIMCO workshop, which focused not on developing new standards, but on identifying how existing references, principles and governance arrangements can be used more effectively to support scalable, inclusive and internationally harmonised maritime digitalisation.

Digitalisation in the maritime industry is accelerating, with digital information exchange increasingly becoming the default rather than the exception. As shipping is truly global and involves a wide range of public and private actors, these exchanges routinely take place across borders, between shipping segments and across multiple platforms and systems. To sustain this development efficiently, a sufficient level of international and cross-segment harmonisation is essential.

Numerous initiatives have addressed ship-shore information exchange, often with a particular focus on the Maritime Single Window. A recurring conclusion across these efforts is that no single, universal standard can fully accommodate the diversity of operational, regulatory and regional (national) requirements that characterise maritime operations. As a result, progress has been achieved in many areas, but global consistency remains limited.

While digital interfaces and standards have matured, effective harmonisation is still constrained by fragmented implementation. Differences persist between industry segments, geographic regions and solution providers, often driven by local interpretations, bespoke requirements or proprietary approaches. This fragmentation complicates interoperability, increases cost and slows adoption, underscoring the continued need for structured dialogue and alignment across the maritime digitalised ecosystem.

Against this background, BIMCO, ITS Norway and the DYNAPORT project convened a two-day workshop in Copenhagen to review the current state of maritime digitalisation, share practical experience and identify where alignment is most urgently needed.

The objective was not to develop new technical standards, but to examine how existing work can be applied more consistently and effectively to support scalable and inclusive maritime digitalisation.

The workshop was structured around three interrelated themes.

- The first examined how business value drives adoption and harmonisation, focusing on the conditions under which digital solutions are taken up at scale across a highly fragmented industry.
- The second explored practical approaches to maritime data exchange, including how information payloads are structured, how semantic meaning is provided through data models, and how different transfer mechanisms can coexist while remaining interoperability across the industry.
- The third addressed identity, authentication and trust as critical enablers for secure international data exchange, focusing on requirements for identifying ships, legal entities and individuals, and on the governance arrangements needed to support trust across multiple jurisdictions and systems.

Each session opened with a series of short presentations [1] related to the subject, to set the scene and provide context for the discussion.

This report summarises the key outcomes of the workshop discussions and highlights the conclusions and recommendations that emerged across the three sessions.

3 Discussions from the workshop

The following provides a structured summary of the outcomes from the workshop discussions, grouped by session.

Session 1: Turning maritime digitalisation into business value - adoption, scale, and global harmonisation

The first-day discussions focused on how maritime digitalisation can move from siloed implementations to scalable, globally aligned solutions that deliver clear business value. Participants broadly agreed that the maritime sector has reached maturity in terms of *direction*, but that progress now depends on improving *consistency and coordination* in how digital solutions are implemented.

Takeaways from the session

- **Solutions must reflect the structure of the shipping industry.** With around 85% of shipowners operating fewer than five vessels, digital solutions must be simple, lightweight, affordable and easy to implement.
- **Inclusivity of smaller and medium-sized actors is essential for global impact.** Smaller ports and operators must be actively included to avoid fragmentation and ensure ecosystem-wide benefits.
- **Operational efficiency is the strongest driver for adoption.** Predictability, safety improvements and workload reduction consistently outweigh other incentives. Business value must be demonstrated before adoption and scale up.
- **Fragmentation and silo thinking remain the main structural barriers.** Ecosystem value is achieved by building bridges between maritime actors through cooperative and federated approaches, ensuring that progress moves beyond isolated pilots and trials toward scalable, real-world market adoption.

- **Standardisation and harmonisation are a prerequisite for scalability and cost efficiency.** Harmonised data definitions and aligned processes are essential to scaling solutions and controlling costs; the IMO Compendium [3] is a key enabler for semantic standards; The IAPH Port Call Optimization (PCO) Guide **Error! Reference source not found.** provides the basis for common harmonised processes across ports and types of cargo.
- **Interoperability depends on shared principles, not a single system.** Agreement on semantics, payload structures and process logic matter more than the choice of specific platforms, APIs or transport technologies.
- **The IMO strategy on maritime digitalisation (under development).** Aims to improve awareness across industry and other maritime stakeholders of developments in the regulatory framework. As such, the IMO strategy can be an important driver towards more adoption of harmonised processes and standards across the maritime and ports industry.
- **Effective cooperation and trust-building require collective effort and sustainable funding.** Developing common solutions and specifications depends on coordinated engagement across the sector, yet securing long-term funding for this work remains a key challenge.

Relevant notes of the Session 1

A recurring theme was that the core challenge is no longer “*what*” kind of data should be exchanged, but rather “*how*” that data is exchanged in a consistent and scalable manner. There was strong alignment across the participants representing ports, regulators, shipowners and solution providers that information requirements are largely understood.

- *“We already agree on the data – the problem is that everyone implements it differently.”*

In this context, the IMO Compendium was widely recognised as having addressed much of the complexity around data definitions and scope. Participants consistently described the IMO Compendium as a global reference catalogue, rather than a rigid technical standard or full system specification. This flexibility was seen as a key strength, allowing stakeholders to implement subsets and tailored use cases while remaining aligned internationally.

The discussion strongly reinforced the need to prioritise harmonisation over the development of new standards. The maritime sector was repeatedly described as suffering not from a lack of standards, but from an abundance of overlapping regional, national and proprietary solutions making it difficult to develop truly global solutions. Eventually, this will increase cost and complexity without delivering proportional value.

- *“We don’t need more standards – we need fewer interpretations and more discipline in using the ones we already have.”*

The discussion also highlighted the inherent structural complexity of the maritime sector. While large liner operators have generally achieved a relatively high level of digital maturity, they represent only a small share—approximately five per cent—of the global fleet. The vast majority of shipowners operate smaller fleets with more limited resources and differing operational realities, underscoring the need for solutions that are scalable and applicable beyond the most advanced segments.

In addition, varying degrees of trust between stakeholders—such as between ship agents and ship operators, or between terminals and port authorities—were identified as factors that further complicate harmonisation efforts.

Participants also highlighted the challenge of so-called “split incentives”, where those required to invest time and resources in digital improvements are not necessarily those who capture the primary benefits. This was considered particularly relevant in the context of standardisation and harmonisation work, which demands significant effort from contributing organisations while delivering value largely at ecosystem level. In a highly competitive industry characterised by tight margins, this misalignment of costs and benefits was recognised as a material barrier to sustained engagement and progress.

The meeting emphasised that successful adoption depends on starting small and practical. Minimum viable datasets, derived as purpose-driven subsets of the IMO Compendium, were seen as essential to lowering entry barriers and enabling adoption across organisations with very different levels of digital maturity. This was particularly important for smaller shipowners and ports. This sentiment was well captured by one participant, who cautioned that:

- *“If we design this for the top ten percent only, the remaining ninety percent will simply opt out.”*

Incremental implementation was therefore viewed as more important than technical completeness or sophistication. Throughout the session, business value was clearly identified as the decisive factor for uptake. Participants agreed that digitalisation will not succeed if driven solely by compliance obligations or technical ambition. Participants highlighted that shipowners, operators and agencies hold a pivotal enabling role in achieving broad market adoption, owing to their central position within the industry’s operational and administrative workflows.

Reduced administrative burden, improved predictability, and support for just-in-time operations (rather than compliance) were highlighted as the main value drivers. As one contributor stated bluntly,

- *“Compliance does not sell – efficiency and reduced cost do.”*

Concrete examples, such as time savings achieved through digitalised passage planning, implementation of just-in-time concepts and simplified global data exchange principles demonstrated that significant benefits can be realised when standards are applied pragmatically. Despite broad alignment on objectives, several structural barriers remain. Participants highlighted persistent silo thinking across organisations, industry segments and individual projects, leading to sub-optimisation at an ecosystem level as being the main barrier. Solution providers noted that without harmonised data definitions and processes, digital solutions cannot scale and costs increase rapidly, which in practice excludes smaller actors. And this may be achieved through the full implementation of the IMO Compendium.

- *“Optimising one port or one company does not optimise the whole shipping ecosystem.”*

Finally, the session underlined the importance of governance, versioning, and change management as critical but underdeveloped enablers. Participants recognised the tension between the need for stable standards (without too many amendments over time) and the reality of evolving operational

and regulatory requirements to accommodate the needs. Clearer and more predictable mechanisms for updates, version control, and clear reasons and transparency in the decision-making were seen as necessary to avoid continuous re-engineering of existing systems and the resulting loss of confidence. In parallel, limited awareness of existing IMO outputs - particularly among solution providers - continues to drive fragmentation, highlighting the need for stronger communication and sustained institutional support when it comes to which new requirements are in the pipeline and in particular what is the strategic drivers behind them.

Session 2: Evolving Maritime Data Exchange - Architectures, Standards, and Interoperability Approaches

Session 2 focused on how maritime data exchange can be organised in practice, given the diversity of existing systems, platforms and initiatives. The discussion demonstrated a strong convergence among stakeholders on both the strategic direction and the practical constraints shaping maritime digitalisation.

Overall, Session 2 reinforced that maritime digitalisation does not require radical new technical frameworks. Instead, progress depends on disciplined use of existing references, clearer separation between semantics and data transfer, and stronger coordination across the many initiatives already in operation.

Takeaways from the session

- **Shared principles and stronger uptake of existing IMO work are needed to turn alignment into action.** While consensus already exists, progress now depends on committing to a limited set of common data-exchange principles and significantly improving awareness, guidance and uptake of existing IMO outputs, notably the IMO Compendium.
- **The challenge is no longer what data to exchange, but how to do so consistently.** The IMO Compendium already provides alignment on information needs; remaining barriers relate to process harmonisation, governance and consistent implementation.
- **Harmonisation matters more than creating new standards.** Overlapping global, regional and proprietary solutions increase cost and complexity without delivering proportional value.
- **The IMO Compendium should be used as a common reference, not a prescriptive solution.** It should function as a semantic catalogue that supports pragmatic implementation through specific use cases and subsets while maintaining global alignment.
- **Minimum viable datasets are essential for adoption and scale.** Small, purpose-driven subsets lower entry barriers, support smaller ports and shipowners, and accelerate implementation.
- **Federated architectures are the most realistic way forward.** Given the existing and emerging landscape of platforms and digital corridors, value lies in federation and reuse rather than creating new centralised systems.
- **Payload (the “what”) must be clearly separated from transport (the “how”).** Stable agreement on data semantics and business processes ensures long-term interoperability, while transport technologies can evolve independently.

Relevant notes of the Session 2

There was broad agreement that the IMO Compendium must remain the common semantic reference for maritime data exchange being the glue between digital systems and platforms. Participants consistently stressed that the Compendium provides a shared catalogue of data definitions and meanings across the sector, but should not be treated as an operational blueprint.

- *“The Compendium tells us what the data means – it does not tell us how to run our systems.”*

Its strength lies in enabling consistency and alignment at semantic level, while allowing operational models, profiles and message specifications to be developed closer to real-world implementation. Interoperability was repeatedly framed as an issue of shared principles rather than technical uniformity. The workshop cautioned against renewed attempts to mandate single platforms, APIs or data transfer technologies. Instead, participants argued that alignment should focus on semantics, payload structures and business processes.

The IAPH Port Call Optimization (PCO) Guide [4] was acknowledged to provide a robust starting point for business process designs that are both “tailored” for a specific port environment and based on common best practices for planning and managing ships calling on a port. This would facilitate that ships calling on different ports will be able to engage with all these ports based on the same principles using (largely) the same processes.

- *“Interoperability is about meaning and process, not forcing everyone onto the same pipe.”*

The workshop illustrated its discussions using a bow-tie model (see Figure in Annex 1), which conceptualises ship–shore communication with shipboard systems on one side, shore-side reporting and regulatory requirements on the other, and data-exchange principles forming the connection between them.

In this context, participants emphasised that the IMO Compendium should be understood as the union of operational maritime data models, rather than as a sector-specific or system-specific standard. Its role is to provide a single, shared semantic reference that allows all ships—across sizes, segments and levels of digital maturity—to exchange information with all ports and shore-side systems, regardless of the underlying technical solutions used.

As illustrated by the bow-tie model in Annex 1, the IMO Compendium provides the common semantic “knot” that connects diverse shipboard operational systems on one side with an equally diverse landscape of shore-side reporting, regulatory and operational systems on the other. This semantic convergence is a prerequisite for scalable interoperability in a federated maritime digital ecosystem.

The workshop noted that existing international work has largely focused on the shore-side systems and reporting frameworks, with comparatively limited attention given to how shipboard systems provide structured data to the shore-side, i.e. the “knot” of the bow-tie model.

Given that ships operate globally and that owners and managers may be located in different jurisdictions, the workshop emphasised the need for common specifications governing the transmission of information from shipboard systems to shore-side systems. If shore-side solutions adopt divergent technical specifications, the expected benefits of digitalisation and process automation will be difficult, if not impossible, to realise.

- *“To ensure the security and integrity of data exchange, a harmonised approach is necessary regarding security, authentication, identities and payload.”*

In this context, the coexistence of different technical formats was considered acceptable and unavoidable. Participants acknowledged that both XML and JSON (and others) will need to coexist for the foreseeable future, reflecting legacy systems, different validation needs and varying levels of digital maturity.

- *“We are not starting from scratch – backwards compatibility matters.”*

The discussion converged strongly around a federated architectural approach as the only realistic way forward. Participants recognised that the maritime digital landscape already consists of numerous maritime single windows, port community systems, regional platforms, digital corridors and commercial solutions. Creating additional centralised systems was therefore viewed as impractical and likely to increase fragmentation.

- *“The maritime industry does not need more systems – it needs a way to connect the ones it already has.”*

Federation was seen as an effective way to enable interoperability across existing solutions by using shared semantics (preferable according to the IMO Compendium), agreed information exchange principles and common coordination mechanisms, while still respecting national sovereignty and regulatory diversity. In maritime digitalisation, a federated approach means that independent actors retain control over their own systems and data, but are able to interoperate through shared rules, standards, procedures and trust arrangements.

Importantly, participants stressed that federation is not solely a technical challenge, but equally a matter of governance. Several warned that without clear oversight, federation risks becoming fragmentation under a different label. This concern was captured by one participant, who cautioned that

- *“Federation only works if there are rules of the road – otherwise it is just organised chaos.”*

Neutral governance structures, lifecycle management and coordination between international organisations such as IMO, IHO, IALA and ISO were therefore seen as essential to making federated approaches viable and sustainable over time. At the same time, it was emphasised that any solution to be used and implemented must rely on the trustworthiness and robustness as guaranteed by the status of an international organisation.

Parts of the discussion also touched on so-called “data-space” approaches, where information is accessed directly from the data provider rather than exchanged through predefined message flows. While such models were acknowledged as potentially relevant in the longer term (see, for example, IDSA [2]), participants generally considered them to be insufficiently mature for near-term implementation in the maritime context.

Session 3: Enabling Secure Maritime Connectivity - Identity, Authentication, and Trust Services in International Operations

Session 3 focused on identity, authentication and trust as foundational enablers for secure and scalable maritime digitalisation. Participants broadly agreed that these elements are no longer secondary technical issues, but central prerequisites for interoperability, federation and long-term resilience across the maritime digital ecosystem.

Overall, Session 3 reinforced that secure maritime connectivity depends on getting identity, authentication and trust right from the outset. These elements are central to enabling federation, interoperability and confidence across the maritime digital ecosystem, and they require sustained coordination, clear governance and international alignment.

Takeaways from the session

- **Identity, authentication and trust are foundational to maritime digitalisation.** Without interoperable digital identities for ships, legal entities and seafarers, secure and scalable international information exchange cannot be achieved.
- **Federated trust frameworks are the most realistic way forward.** Given the existing landscape of solutions and actors, federated approaches to identity and trust are essential; centralised solutions will not scale globally.
- **Interoperability infrastructures enable “connect once, connect all” outcomes.** Identity registers, service registries, access points and semantic networks were highlighted as critical enablers for reusable and scalable connectivity. IMO must give guidance to ensure global alignment.
- **Governance, versioning and change management must be systematically addressed.** Clear mechanisms for governance, updates and decision-making are required to balance evolving operational needs with stability and to avoid continuous re-engineering.
- **IMO should play a coordinating role on identity and trust services.** There was strong support for IMO-level guidance, including possible coordination of a symposium on identification and authentication and the development of governance frameworks beyond purely commercial solutions.

Relevant notes of Session 3

The discussion addressed ship identity, legal-entity identity and seafarer identity, noting that technical solutions already exist across different parts of the maritime ecosystem. The changing set of actors involved can also introduce potential security risks if there is no proper ‘digital chain of trust’ in place. For example, ships may submit, in the future, data directly to shore-based systems such as Maritime Single Window or Port Community System. However, participants expressed concern that continued uncoordinated development risks creating new silos, potentially undermining interoperability rather than supporting it.

- *“Multiple identity solutions are not the problem – lack of coordination and trust between them is.”*

There was clear agreement that a single, global identity provider is neither realistic nor desirable in an international and highly diverse maritime sector. Instead, participants supported the coexistence of multiple identity solutions operating within interoperable and federated frameworks, governed by

shared principles and oversight. Identity was therefore framed less as a purely technical challenge and more as a trust challenge, encompassing legal certainty, auditability, liability and clear allocation of responsibilities.

- *“You can federate systems, but you cannot federate trust unless governance is clear.”*

A federated trust framework allows multiple independent identity and authentication systems to interoperate securely under shared governance, enabling “connect once, trust many” without centralising control.

In this context, IMO-level guidance was seen as critical. Participants emphasised that such guidance should not prescribe specific technical solutions, but rather provide legitimacy, alignment and high-level direction. Several contributors highlighted the importance of IMO’s role in endorsing common frameworks for interoperability and trust, while still allowing innovation and competition at implementation level. Without this coordinating role, identity solutions risk becoming another source of fragmentation rather than a foundation for secure maritime connectivity.

Across the discussion, a consistent message emerged: progress now depends more on coordination and discipline than on new technology. While pilot projects and proofs of concept were recognised as valuable, participants cautioned that these should be used to test agreed principles, not as substitutes for strategic alignment. This was captured clearly by one remark:

- *“Alignment is the scarce resource.”*

Inclusivity was also emphasised as a critical success factor. Several participants warned that identity and trust frameworks must work not only for large operators and advanced systems, but also for smaller shipowners and ports. Without this, solutions are unlikely to scale globally or achieve broad acceptance.

4 Proposed Industry Declaration on Maritime Digitalisation

A clear outcome of the workshop was the recognition that broad consensus already exists on the overall direction of maritime digitalisation, but that progress is increasingly constrained by the lack of shared, high-level commitments guiding implementation. Against this background, the workshop supported the development of a short industry Declaration – referred to as the “Golden Rules for Maritime Digitalisation” – to provide a common reference point for future work.

The purpose of the Declaration would not be to introduce new technical standards or formal obligations, but to articulate a set of common principles that stakeholders are prepared to commit to when developing, procuring, and deploying digital maritime solutions. Several participants described the “Golden Rules” as a practical manifesto for *“disciplined maritime digitalisation”* – capturing shared ambition, direction and intent – translated into the form of a Declaration in order to support broad endorsement across industry and administrations. In this way, the “Golden Rules” would help translate broad alignment into more coordinated and consistent action.

The Declaration is envisaged as a non-binding, technology-neutral statement of intent, capturing areas where the industry already shares a common understanding and ambition.

Importantly, the Declaration would not replace or duplicate existing IMO, ISO, or regional initiatives, but rather reinforce and complement them by providing leadership-level clarity and visible industry commitment. Several participants noted that such a declaration could help align investments, guide solution providers, and strengthen calls to regulators and administrations to avoid further fragmentation.

The Declaration is therefore best understood as a strategic signalling instrument: concise, principle-based, and focused on direction rather than detail, designed to sustain momentum and support coherent implementation across the industry.

5 Conclusions and recommendations

The workshop confirmed that maritime digitalisation has reached a point where the **direction of maritime digitalisation is broadly agreed**, but where further progress depends on improved coordination, discipline and shared principles rather than new technology or additional standards.

First, the **IMO Compendium** remains the essential semantic foundation for maritime digitalisation. In this sense, the Compendium functions as the union of maritime operational data models, enabling semantic interoperability across shipboard and shore-side systems and supporting the objective that all ships can exchange information with all ports. It enables alignment on definitions and meaning across the sector and should continue to function as the primary reference for *what* information is exchanged. However, the workshop consistently cautioned against treating the IMO Compendium as an operational implementation model. Practical deployment requires **use-case-driven subsets, profiles and information exchange principles**, allowing different technical solutions to interoperate while maintaining global alignment.

Second, the workshop strongly reinforced that **harmonisation must focus on semantics, structure and process logic**, rather than on selecting a single platform, interface or transport technology. Participants repeatedly stressed that agreement on the *WHAT* must precede decisions on the *HOW*. While transport technologies, APIs and local infrastructures will continue to evolve, stable definitions and shared business processes provide the long-term foundation for scalability and interoperability.

Third, it was recognised that the maritime digital ecosystem will remain **hybrid for the foreseeable future**. This implies the coexistence of different data formats, including XML and JSON and other formats already in use, as well as varying levels of digital maturity across regions, ports and companies. The recommended approach is therefore **incremental and inclusive**: start with minimum viable datasets, lower entry barriers for smaller ports and shipowners, and build upwards through reusable and tested components developed in close collaboration across the industry.

Fourth, a **federated architectural approach** was widely seen as the only realistic strategy to connect the existing landscape of systems, platforms and initiatives. Rather than creating new centralised solutions, stakeholders should prioritise federation, reuse and coordination across existing infrastructures. This enables “connect once, connect to many” outcomes, reduces duplication and supports both national sovereignty and regulatory diversity.

Finally, the workshop concluded that **identity, authentication and trust are core enablers**, not secondary technical topics. While multiple identity solutions will inevitably coexist, interoperability depends on shared trust principles, governance arrangements and clear responsibilities. Participants therefore recommended strengthened coordination at IMO level, including further work on identification and authentication frameworks and consideration of dedicated forums or symposia to support global alignment and acceptance.

Based on these conclusions, the workshop recommended that:

- **The IMO Compendium continues to be promoted as the global semantic reference**, with increased focus on practical guidance for sub-setting and profiling to support real-world implementation.
- **The industry considers adopting the IAPH Port Call Optimization (PCO) Guide as a good practice for implementing harmonised business processes**, related to ships calling on ports.
- **Federated approaches be explicitly supported and encouraged**, both technically and institutionally, as the preferred means of achieving scalable interoperability across existing systems.
- **Governance, versioning and change-management mechanisms be strengthened**, providing predictability and stability while accommodating evolving operational and regulatory needs. Strong governance is also necessary to integrate the different solutions into one federated and interoperable system.
- **Industry and administrations prioritise harmonisation over new standards**, reducing overlap, divergent interpretations and bespoke solutions that increase cost without delivering proportional value. While federated approaches are supported, it is essential that the number of different systems remains at a low enough level for the industry to integrate them.
- **Identity, authentication and trust services be addressed as strategic enablement issues**, with IMO playing a coordinating and convening role rather than prescribing technical solutions.
- **Business value and administrative burden reduction be clearly articulated and demonstrated**, particularly to support uptake by smaller shipowners and ports and to enable voluntary adoption at scale.
- **It is recommended that a Declaration, “Golden Rules for Maritime Digitalisation”, be issued and formally endorsed** as a shared high-level commitment by maritime stakeholders, supporting coordinated, harmonised, and implementation-focused maritime digitalisation.

Taken together, these recommendations reflect a shift from experimentation and fragmented pilots towards coordination and execution. The workshop highlighted that the necessary building blocks are largely in place; the key challenge now is to apply them consistently, inclusively and with sufficient governance discipline to deliver sustainable and globally interoperable maritime digitalisation.

6 Dissemination of the work

It was agreed that BIMCO will submit an abstract of this report to the IMO for consideration at the next session of the Facilitation Committee in spring 2027.

It was also agreed that this report should be submitted to the IMO for consideration as part of its development of a comprehensive and overarching strategy on maritime digitalisation.

Finally, it was agreed that a Declaration, “Golden Rules for Maritime Digitalisation”, be developed and circulated among maritime stakeholders to promote awareness, encourage endorsement, and support consistent application across the sector.

BIMCO – April 1st, 2026

References

- [1] Link to folder with presentations ([link from Ørnulf](#))
- [2] International Data Spaces Association ; <https://internationaldataspaces.org/>.
- [3] IMO Compendium;
<https://www.imo.org/en/ourwork/facilitation/pages/imocompendium.aspx>
- [4] IAPH Port Call Optimization (PCO) Guide; https://sustainableworldports.org/wp-content/uploads/PCO-Guide-V1.0_17-March-2026_final_V2.pdf

Annex 1

The bow-tie illustrates the role of the IMO Compendium as the shared semantic 'knot' enabling interoperability across disparate shipboard and shore-side systems.

Bow-tie concept

One solution – may fit the most

