

Recommendations from MSW Workshop in Oslo: October 3rd, 2022

This workshop was one in a series called "The Future of the Maritime Digital Landscape", organised by the EU-project AEGIS¹ and the Research Council of Norway project ISTS². Presentations were made by several international projects that are aiming at developing or have already developed solutions for maritime single windows (MSW), as well as from some of the international stakeholders, such as the ports and the ship owners.

The workshop was arranged to discuss some of the challenges and issues related to the deadline of January 1st, 2024 for implementation of the electronic MSW. This document summarizes some of the conclusions and recommendations from the workshop. The following organizations have contributed to and support this summary and recommendations:



More information about the workshop and copies of presentations can be found via this link:

<http://ists.mits-forum.org/events/221003-msw/program.html>.

List of recommendations

1 Consider the role of the ships in reporting to ports and shore authorities

Most of the initiatives presented assumed that the party reporting into the MSW was located on land and in the same country as the MSW. This may be the case today as local parties handle most of a ship's MSW reporting obligations. However, this will not be the case in the future because the increasing digitalization of ships will allow them to become a much more active partner in the general communication between ship and port, including the MSW reporting process. This requires technical solutions that support the ships' particular limitations, e.g.:

- a) Use of international standards to ensure reporting interfaces and processes do not vary too much between different countries and ports.
- b) As ships may not always be on-line or reachable by internet connections from ashore, an agreement with the ship should be established specifying how replies to service requests should be delivered.
- c) Consideration should be taken of the possibility of ships having limited bandwidth and quality of service, which could result in longer delays in digital message transmissions between ship and shore.

Some of these limitations also apply to the ship master's principals, such as owner, charterer and manager, and will also enable these to be more active in the communication and reporting processes. In the following, the term "ship" should be read as the ship itself or the ship master's principals.

2 Support automated machine to machine (M2M) communication

As far as practically possible, one should aim for automated M2M exchanges of messages when implementing the MSW to avoid unnecessary manual processing of outgoing or incoming messages. This is where the most

¹ EU's Horizon 2020 R&I programme, grant agreement 859992 (AEGIS). <https://aegis.autonomous-ship.org/>

² Research Council of Norway grant 326679 (ISTS). <http://ists.mits-forum.org/>

benefits of the MSW can be gained, although there are also benefits related to more correct and timely reporting.

Despite that the maximum benefits of electronic information exchange can be achieved through M2M communications, Human-to-Machine (H2M) communication should be supported to allow smaller stakeholders, less developed stakeholders and/or stakeholders with more incidental reporting obligations to exchange information in a manner not requiring the installation of specialized electronic systems.

Both M2M and H2M communication will require:

- a) Authenticity, confidentiality, and integrity of data exchanged through the electronic systems³.
- b) Availability of data is also cited as a requirement for secure information transfer, but here one needs to consider the previous section's examples of ship's communication limitations that may introduce delays in accessing important information residing in the ship systems.

Lastly, in case of failure of electronic systems, communication networks or their interfaces, proper fall-back procedures need to be available.

3 Contribute to the development of robust international standards

The workshop acknowledged that some MSW functions may need locally developed and agile interface specifications to support rapidly changing local demands. However, for functions that are used by ships in international trade, one should use the internationally accepted standards, developed by robust standardization organizations that have proper procedures for development and maintenance of standards.

Most international standards are developed by voluntary contributors, and the development process is demanding both in terms of time and resources spent. To make the standardization process as effective as possible, one should avoid that similar or overlapping standards are developed independently in different organizations.

4 Be compliant with the IMO Compendium

While different and overlapping standards sometimes are necessary to cater for specific requirements in different application domains, one should ensure that overlaps are harmonized through the IMO Compendium when one or more of the relevant standards are commonly used by ships in international trade.

As ships can call on several thousand different ports all over the world, it is very important that these parts of the protocols and data models are compliant with the IMO Compendium. This will ensure interoperability with the most used international standards as well as give a stronger future-proof solution. The IMO Compendium is widely accepted internationally as the de facto reference data model for maritime operations in the administrative, nautical, and operational areas.

5 Limit the functional scope if necessary – focus on international scope

The deadline of January 1st 2024 is approaching rapidly, and it may be prudent to limit the functional scope of the MSW. This will help ensure a high-quality implementation of the most critical functions, which is more important than a wider scope and potentially lower quality. This also applies to M2M functions relying on standards that may not be fully covering all MSW functions or are not yet internationally agreed on.

One possibility is to limit the scope to the most important parts of the FAL Convention, e.g. the specific FAL Forms. In particular, one may not want to give special national reporting obligations a high priority in M2M

³ See, e.g: FAL.5/Circ.46, June 2022: Guidelines on Authentication, Integrity and Confidentiality of Information Exchanges via Maritime Single Windows and Related Services

implementations as it is unlikely that ships in international trade will support the different national obligations in a digital format. This will normally be handled by local agents or other parties.

6 Reach out to ship software providers

To accelerate the implementation of shipboard reporting software, it is important to reach out to the providers of software and inform them about the new possibilities for more efficient ship-shore reporting. In general, most users of these services will rely on software manufacturers to provide the functionality rather than implement such functions themselves.

7 Establish a mechanism for handling national deviations from FAL Convention

The FAL Convention includes the maximum reporting requirements, which a port state should require from a ship calling at one of its ports. In parallel, the IMO Compendium is a harmonized data reference model for the corresponding information elements.

Article VIII of the FAL Convention allows deviations from the Convention's standards, but such deviations should be reported to the IMO Secretary-General. Contracting Governments can also use this article to inform IMO of a later date of implementation of the MSW requirement.

When states add their own special reporting obligations, this creates a problem in that there will not exist corresponding information element definitions in the IMO Compendium. This makes it inconvenient, if not impossible, to include such elements in international reporting standards. The requirements that such deviations shall be reported to the IMO Secretary-General could be used to devise a mechanism that can capture national deviations and, as far as practicable, model the corresponding information elements in the IMO Compendium.

8 Provide examples of MSW implementations

To support implementation of the Convention, the FAL Committee developed IMO Guidelines for setting up a MSW (FAL.5/Circ.42/Rev.2). This is particularly important in the light of the approaching deadline of 01-01-2024.

IMO's FAL Committee encourages Member States to provide detailed information on the implementation of the single window concept in their country in the GISIS module: [Maritime Single Window \(imo.org\)](https://www.imo.org) so that other countries can benefit from the experience gained to date.