

Maritime Single Window and Possibility of Improving Port for Business

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Abstract: *This paper briefly points out the importance and application of the port / maritime single window and the possibilities of their improvement in port operations. "Single Window" (SW - Single Window) concept is formalization of procedures undertaken by the competent services of the European Union through the Center for Trade and Electronic Business in order to achieve efficient exchange of relevant information between trade organizations and government entities. The concept of maritime / port single window is basically founded on formal facilitation of maritime trade and customs and is focused on increasing the efficiency of import / export mechanisms and procedures, where detailed information on cargo must be provided in all maritime cross-border activities. Application of single windows was originally focused on efficient and collaborative cross-border transactions between commercial and state / administrative entities. The paper presents main advantages of the application of single windows in the port industry that can be used as a platform for further improvement of the port and maritime economy.*

Keywords: SW, MSW, NMSW, VTMIS, FAL Convention, single window

1. INTRODUCTION

It is common to assume that maritime industry is globalized in functional, business and regulatory terms. At the same time these are basic elements of a barrier to development of the maritime industry, because all the participants are supposed to follow number of complex administrative procedures, including cooperation and work with customs, tax, immigration, security authorities, waste authorities, seafarers' health and the like. [1].

The United Nations Center for Trade Facilitation and E-Business (UN / CEFACT) defines SWS (Single Windows System - Single Window System) as "a service that allows customers involved in trade and transportation to submit standardized data and documents in order to fulfill all formalities of import, export and transit of goods and passengers, where information in electronic form is submitted only once in the so - called control point "[2].

The concept of SWS is also explained by the World Custom Organization (WCO) as a trade facilitation tool that allows traders or carriers to meet all the conditions of acceptance of goods in transport in a standardized format only once to the authorities that control it (WCO, 2018). However, the SWS cannot be established in a single step, but in individual steps as defined by UNESCAP / UNECE (United Nations Economic and Social Commission for Asia and the Pacific / UN Economic Commission for Europe - United Nations Economic and Social

Commission for Asia and the Pacific) / UN Economic Commission for Europe) during 2012 in the Guidelines for Planning and Implementation through the following levels:

- Level 1: Paperless customs clearance;
- Level 2: Regulatory single window;
- Level 3: Unique window through B2B (Business to business) model;
- Level 4: Fully integrated single window;
- Level 5: Cross-border platform for the exchange of single windows (UNESCAP, 2018).

2. MSW

There are two SW systems, customs and maritime / port SW, and they started to be used during 2013. Within the European Union, some countries are already applying the so-called pilot / prototype (first version of the system) NMSW (National Maritime Single Window): Bulgaria, Greece, Italy, Malta, Romania and Norway, striving to implement the so-called national MSW.

MSW (Maritime Single Window) is a concept that aims to digitize and simplify administrative procedures before a ship enters / leaves a port (s), in accordance with the requirements of the European Union Reporting Formalities Directive (RFD) Formalities Directive, or short Directive 2010/65/EU, which deals with the standardization of electronic exchange of information and the rationalization of formalities for entering / leaving

a ship in / out of port (s). To achieve this, special data entry forms are used, adapted for loading into the MSW or the NMSW system [3].

Therefore, the concept of national maritime SWs is an initiative in the field of transport telematics that emerged as a result of several maritime development policies, especially the influence of the European Commission. It refers to the application of a national system that will be a single point of electronic delivery and exchange of information, different modes of transport, especially maritime transport and should be built on existing telematics applications and systems.

The NMSW model meets the needs of different participants from the local port community. Its architecture integrates and covers communication channels and reduces time and simplifies procedures in port operations (B2P - Business to Port) and operational processes in administration (B2A - Business to Administration) for ship formalities. It is clear that business relations of the port affect customers (B2C - Business to Customer), because they obviously have benefit from efficient and simple procedures with focus on standardization of information exchange. Coordination of NMSW and its function depends on the way it is analyzed. It is important whether it is analyzed as:

- a system focused on customs clearance, ie. import / export activities;
- a port and ship-oriented system with focus on maritime transport; or
- a system focused on increasing the safety and security of (maritime) transport and traffic [4].

Thus, the system with a single window is a tool that facilitates maritime and other forms of trade by enabling the entities involved in it to transmit all the necessary data, through a single platform, to the authorities that control and monitor them in order to meet all formalities and requirements [5].

The NMSW platform should be developed in accordance with national rules, European Union legislation and the IMO (International Maritime Organization), and in accordance with the Convention on the Facilitation of International Maritime Traffic (FAL). In its original form, the FAL Convention adopted by the IMO deals with the application of electronic maritime single windows and it includes the definition of procedures for all commercial ships navigating international waters.

In this way, Member States can manage different platforms, but all MSWs must meet the following requirements:

- providing electronic reporting formalities, by e-transmission through single windows by 1 June 2015;
- develop a one-spot reporting platform, that will be available to a number of Member States' authorities and controls;

- receive information in accordance with the reporting formalities provided by EU legislation, which must be available in the national SSN (SafeSeaNet - Safe Maritime Network), as well as to other EU bodies through the SSN system.

Following European and UK regulations on customs, taxes, immigration, security, health and safety, as well as waste management, there are additional, more detailed requirements in the UK than those prescribed by the FAL in the European Union. As NMSW is a new tool for providing detailed electronic reports and it does not expand the set and content of existing reporting requirements, including an environment for collecting, disseminating and exchanging of information, reporting from ships with a structured and commonly defined data structure, rules and access rights management, which are in accordance with the relevant international, national and local legal requirements, the following text briefly explains information flow in generation of the report, as one of the most important segments, on the example of the British prototype NMSW.

3. INFORMATION FLOWS IN CREATING MSW REPORTS

As already pointed out, the purpose of NMSW is, above all, delivery of electronic instead of paper documents, and users receive automatic confirmation if sent documents are received correctly, plus the document is received by the multiple entities at the same time. Below is a schematic presentation of the information flow within the NMSW system that is applied when generating reports in the UK. Since it is a prototype, detailed instructions for using NMSW for e.g. in the UK is likely to undergo changes very soon in the future. Currently, this system requires user registration when accessing by entering company data and user e-mail address, after which it enables and supports the entry of all relevant and requested documents in the form of attachments [6, p.7].

Access to the British NMSW model is protected, and data on the registered user is not passed on to unauthorized parties. The data is not used without the prior consent and consultation of users, e.g. when a system outage is expected or planned. A schematic presentation of sending reports in the direction of NMSW and VTMS (Vessel Traffic Management Information System), or SSN, is shown in Figure 1.

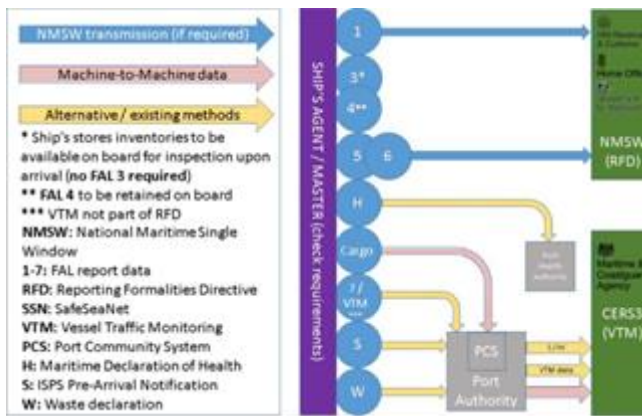


Figure 1. Information flow from the ship to NMSW and CERS (Consolidated European Reporting System) European reporting system) on the example of Great Britain (source: [4, p.11])

VTMIS forms the basis of an electronic platform for the exchange of information at the level of the European Union (as SSN) and includes aspects related to maritime affairs: security, safety, environmental protection, control, prevention of marine and coastal pollution, fisheries control, border control, etc., in compliance with legal regulations. In addition, VTMIS is largely linked to the physical control of ship traffic. VTMIS aims to increase the safety and efficiency of maritime transport (goods and passengers) and maritime transport (ships) on the basis of regular information, exchange and sharing of information.

The time of receiving the report is contained in the e-mail sent to the user or users after the successful loading of the report into the system. Port authorities require that information is provided on the arrival of a ship to the port, in order to provide the necessary services in a timely manner, but this request is currently outside the scope of the NMSW.

In order to make it easier to follow the flow of information, some basic explanations related to NMSW, ie, NSW, VTMIS and SSN [6], are given.

Providing that international shipping faces problems in submitting mainly paper documents to national authorities, NMSW is trying to solve the problems of developing and implementing NMSW in creating and exchanging electronic reports and forms. The UK as well as the countries of the European Union have a legal obligation to provide NMSW services in accordance with the RFD.

By providing digital reports and electronic exchange, ships can be sure that their information has been received. The data can be accessed from several different parties, and the same can be used and received by multiple entities. The system is designed to be simple and economical to use, while problems such as the use of inaccurate contact information, faulty or unreliable equipment, unclear handwriting and lack of clarity about reporting are minimized.

The RFD defines the entry of relevant data at least 24 hours before the ship enters UK ports, and if the voyage is shorter than 24 hours, reports should be sent during the ship's departure from the previous port, while if the next port of call changes during the voyage, or is not known at the time of departure, the report should be sent as soon as the information on the next port is available. FAL reports cover reports related to the elements: FAL 1: General declaration reports; FAL 2: Cargo reports; FAL 3: Ship Trade Reports; FAL 4: Crew Performance Reports; FAL 5: Crew list reports; FAL 6: passenger list reports; FAL 7: Reports on the transport of dangerous goods; and reports related to ship-generated waste as well as reports related to seafarers' health are included (Figure 1).

With the introduction of national maritime SWs in all EU Member States, based on the flow of information contained in Forms FAL 1-7, PAN (Pre-Arrival Notification) and the Waste Declaration, it is clear that FAL 1 and FAL 5/6 must be entered in the NMSW, while other forms (announcements / declarations) are optional and communicate through the Ports' Community Services (PCS) and port authorities with VTMIS at the national or SSN level at the European Union level. Starting from June 1, 2015 when leaving the port of Great Britain, ships must send an exit check. This report is sent at the time of leaving the port, via the NMSW portal and must contain FAL 1 (Universal Declaration) and FAL 5/6 (Manifesto or crew / punt list) [6, p. 7]. If the NMSW is not available for any reason, reports should be sent as soon as the system becomes available. Scheduled outages are posted in advance on the user access page, and are usually scheduled at intervals when traffic is reduced.

In case of prolonged interruption, reports can be sent by fax or e-mail. Reports sent from UK ships to the NMSW are forwarded to: Border Police for Security and Immigration Procedures (FAL 1, 5/6) and - HMRC (Her Majesty's Revenue and Customs) to the Customs Service (FAL 1, 5/6). Confirmation of receipt is sent to the official e-mail address of the user. Users can also provide an alternative e-mail address, to which they will also be sent a confirmation of receipt. All those documents that the commander or agent considers relevant can be loaded into the system as additional.

The forms are simple and contain a header with general information about the ship, they can be copied, ie. used in the same form in each subsequent reporting, thus reducing the volume of administrative work and the number of paper documents on board and on land. NMSW and MCA / CERS (Maritime and Coastguard Agency / Consolidated European Reporting System) are currently separate and serve different but not currently unrelated purposes. NMSW is used for reporting from ships, usually through agents, to the police and customs.

CERS is tied to individual ports and directs VTM (Vessel Traffic Monitoring) reports, such as PAN (Pre-arrival Notification) to the MCA, primarily for security purposes. CERS also has access to PCS. CERS is upgrading and the new version will be able to accept FAL 7, the Waste Declaration and the ISPS PAN (International Ship and Port Facility Security Code) by the ports. MCA works with ports in terms of defining methods for automatic exchange of information [7].

In the future, work will be done on the development of interaction and unification of NMSW and CERS, and any decision on this issue will be forwarded to the users of both systems. For now, in this British prototype there is only an experimental link between NMSW and CERS.

4. ADVANTAGES OF MSW IN IMPROVING PORT BUSINESS

Regardless of numerous implementation problems, a number of key benefits are highlighted below, which MSW provides to the shipping and port industry and onshore administrations involved in maritime transport:

- MSW is a flexible and user-friendly tool for automatically linking relevant information on ships, passengers, crew and / or cargo, related to reporting from the ship to the coast and port and vice versa;
- By exchanging information on the ship, passengers / crew / cargo, among all participants involved in the reporting process, the application of MSW respects the right of access to information;
- The implementation of MSW significantly reduces the time to send reports, which frees the crew from part of the administrative work and provides a better focus on the tasks of direct ship management, increasing the safety of navigation;
- Total reporting costs are reduced and the need to hire intermediaries is eliminated;
- IT complexity is reduced by using simple solutions in the field of maritime transport / traffic, full reporting is provided, ie, monitoring of ships at the local, regional, (supra) national level (s);
- Compliance with international standards is ensured, such as: ISO 28005, WCO, EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport), including specific EU requirements [8, p.14] etc.
- Maritime and logistical procedures have been simplified;
- Shipping services have been improved in business terms, with a significant reduction in delays, as the most important element in reducing maritime operating costs;

- The need for direct contact is reduced by reducing costs and increasing data transparency;
- Transaction security is increased, and data transfer is adapted to all (included) business systems;
- Paper transactions are eliminated, and the universal single point for entering relevant data avoids duplication of data entry and exchange;
- The system is protected from intrusions, information leaks and viruses;
- The system is scalable with simplified procedures for activating new customer services.

5. PROBLEMS IN THE IMPLEMENTATION OF MSW

The development and implementation of SW can be analyzed from an international, national, regional or local aspect. All EU members, as well as associate members, are connected (or will soon be) to a central national body that will be the official liaison with the SSN, to which EMSA (European Maritime Safety Agency) is responsible [4].

The most important problems related to the implementation of MSW relate to the issue of ownership, because it is not yet clear whether it represents: public, private or public-private ownership. From the point of view of costs, the question arises whether the services provided by the system are free for users or are paid, that is, who pays for them and how much.

In many cases, the Port SW is identified with the PCS (Port communication System), which is based on integrated procedures, rules, standards and ICT solutions that support automatic data exchange, ie, documents relating to the ship, crew, passengers and cargo, when entering, staying in port and / or leaving the ship.

However, although the PCS supports the requests of national agencies and entities interested in cargo, it covers customs and cargo handling requirements, as well as the exchange of information related to services provided in the port to the ship and cargo, emphasizing private and commercial information related to ordering and charging for port services, rather than just tracking the ship.

On the other hand, EPC (Electronic Port Clearance) is a concept that is more related to ships and their electronic management of formalities related to documentation and procedures at entry / departure, ie, during the ship's stay in port [4].

Finally, there is a need to combine these two (PCS and EPC) very complex and so far incompatible systems that can be combined with a single MSW.

6. CONCLUDING REMARKS

Initiatives to establish a European environment with a single window in port and maritime transport solve the problems of the current inefficiency of the environment in reporting in port transport for maritime transport operators, which arose from some limitations of the RFD directive of the European Union. However, the currently valid directives do not provide precisely defined guidelines or define obligations that can guarantee development of a common and integrated model and data exchange flows in maritime transport. Therefore, the main challenge is to harmonize procedures that may be imposed by national regulations, given that inconsistent reporting at EU level is a lengthy process that simultaneously burdens both shipping, ports, seafarers and maritime and transport companies operating in the international market. However, the most important thing is that the whole port community recognizes the benefits of adopting the MSW model, because only in this way can the entire supply chain through ports and the maritime economy be an efficient and simple model of communication and information exchange tailored to users.

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