SafeSeaNet Workshop no. 19   **SSN 19/6/2** (v.1.00)
Agenda item VI   **Lisbon, 26 April 2013**
22 & 23 May 2013

ANY OTHER BUSINESS

Evolution of SSN under the Integrated Maritime Policy (IMP)

Submitted by EMSA

Summary	Informs the SSN group on the IMP project for the the evolution of SSN, in particular regarding the demonstration project to set up a single window at national level for port reporting formalities and the exchange of documents based on Directive 2010/65/EU.
Action to be taken	As per paragraph 7
Related documents	Directive 2010/65/EU

1. BACKGROUND INFORMATION

Within the framework of the Integrated Maritime Policy (IMP) and in accordance with action 3.1 of the "IMP work programme 2011 and 2012", EMSA has been delegated to implement a project regarding the evolution of SafeSeaNet.

The main objective of this project is to evaluate and demonstrate the setting up of a simplified single window at national level and its interfaces as required by the reporting formalities directive 2010/65/EU. This objective will be met through a demonstrator project, which will develop software and services components that will simulate: a National Single Window (NSW); the distribution of data to national authorities and; the exchange of relevant information via the central SSN system.

To avoid building from scratch, EMSA began to develop an understanding of the various issues relating to the demonstrator and the NSW in particular. EMSA approached MSs which had already been involved in a NSW, and met with Finland (19 February), Norway (4 April), Portugal (8 April), the Netherlands (11 April), Germany (2 May) as well as EPSCA and the PROTECT group (25 March). These meetings have shown that there is no precedence in implementing a NSW of the type required by Directive 2010/65/EU, and that even the more advanced national applications need to be updated.

EMSA is also in contact with the coordinators of e-mar and e-freight research and development projects, and has scheduled a meeting with them on 17 May to explore synergies with the demonstrator. Moreover EMSA is looking forward to participation in the tasks of the TEN-T project, which is considered to be complementary to the demonstrator.

Due to the limited time and budget available, the objective of the demonstrator is of limited scope and should be seen as an opportunity to develop knowledge in the area and support the elaboration of the functional and technical specifications. As the objective of the demonstration project is to elaborate the definition of the interfaces with the shipping industry and authorities at national level, EMSA plans to run the demonstrator in collaboration with a limited number of the MS through consultation regarding the design of the prototype. For this purpose, an invitation letter will be sent to MS.

2. OBJECTIVES OF THE DEMONSTRATION PROJECT

The main function of the NSW will be the collection of data related to the Reporting Formalities and the distribution of such data to relevant public authorities (i.e. single reporting, multiple uses of reported data). The collection and dissemination of the data will be based on electronic message standards.

The demonstration project will test the information flows between:

a. the ship data providers (ship agent/master/duly authorised person) and the NSW,
b. the NSW and national authorities (maritime safety, customs, border control, health and others that might be identified), and
c. the central SSN system and the NSW of the Member States.

The demonstration project will focus on the interfaces between these different participants and will include:

* a system-to-system interface (for the link between the central SSN and the NSW),
* web user interfaces (for the interface of the NSW with the authorities),
* both system-to-system and web interfaces system for the link between the ship data providers and the NSW.

The layout showing the interfaces that will be developed within the demonstration project is indicated in Figure 1 below:
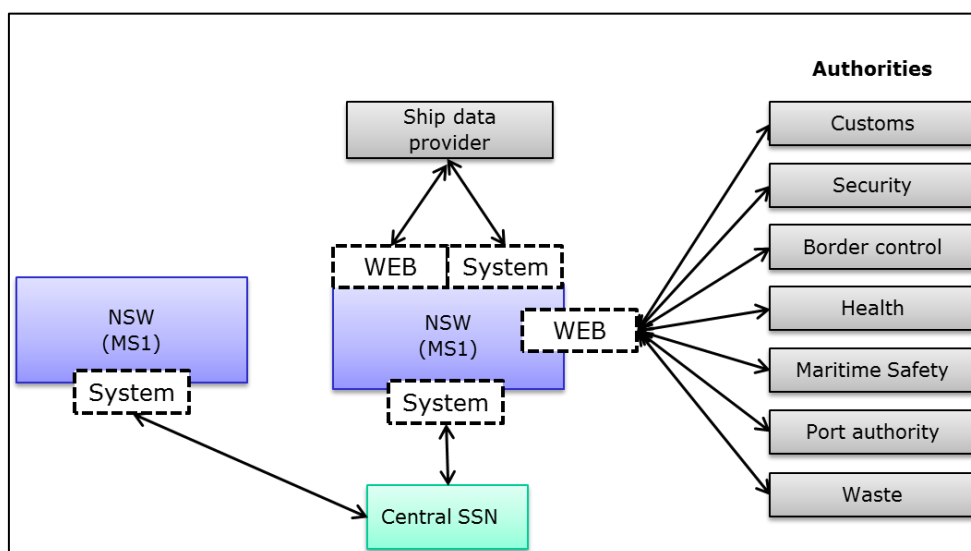

Figure 1: interfaces between participants

The demonstrator's specific objectives are:

Specific objective 1

The basic objective is to comply with the requirements of the IMP programme and demonstrate how the project will provide services to other communities: customs, security, border control, health, port authorities and waste authorities. It will contribute to the definition of standard communication means with the shipping industry, authorities and SSN.

The results of the demonstration project will be an important input to the assessment of the available options for the future evolution of SSN.

Specific objective 2

The demonstration project will support the elaboration of the functional and technical specifications of the interfaces. It will give the possibility to confirm and if necessary realign the specifications of the different interfaces. In particular the pilot project will allow developing and testing the electronic exchange formats and mechanisms for the fulfilment of the reporting formalities and the exchange of "relevant" data elements through SSN.

The demonstration project will not include the development of any interfaces with the Port Community Systems (PCS) because of the complexity of the task and the limited resources. However it will include an analysis of the PCS related issues and draw recommendations on how they can be interfaced with the NSW and the shipping industry.

Specific objective 3

Some or part of the module that will be developed within the framework of the demonstration project could potentially be reused by EMSA for the development of the SSN central application and by MS for the implementation of their actual NSWs. The demonstration project will include a technical feasibility study that will examine if and under which conditions specific components can be reused by the MS.

3. DESCRIPTION OF THE PROTOTYPE

The development of the prototype will be based on the following assertions:

a. Data exchange mechanism between the ship data provider and the NSW will be based on ISO 28005 standard. Other standards may also be considered.

b. A centralised approach is considered where:

- A unique NSW will be built at national level, which distributes the information to the relevant national and local authorities.

- The interface with port community systems will not be implemented.

- The NSW will be interfaced directly with the central SSN system. It will therefore simulate the national SSN system.

- Authentication of users will be supported by the NSW.

c. The NSW covers the 72h pre-arrival notice as required under article 9 of Directive 2009/16/EC on Port State Control, and all formalities from Directive 2010/65/EU with the exception of the Entry Summary Declaration, the FAL 2 (including the cargo manifest) and formalities required by the national legislation.

d. The arrival and departure notifications (ATA and ATD) as required under article 24 of Directive 2009/16/EC are also covered by the NSW in the form of information reported to the NSW by the ship data provider.

e. Communication between the NSW and Central SSN will be based on a revamped PortPlus message (changes of message structure and business rules, but message mechanism remains the same, as far as possible).

f. The implementation of a new version of the Central SSN system will be limited to the exchange of the relevant parts of information (as defined in Article 6 of the Reporting Formalities Directive) between the implementations of NSW.

g. The use case diagram below presents the functionalities offered by the NSW, and relevant functionalities of the central SSN. The use cases which involve the data providers are marked in blue.

h. Services provided to the data provider are implemented in the form of system-to-system interfaces and web user interfaces. Services provided to the authorities and to the national administrators are implemented in the form of web user interfaces.

4. PLANNING / PROTOTYPE CYCLES

The project will use rapid development methodologies with a "time-boxed" constraint:

- Two cycles should be executed before end of September 2013, when the new draft SSN Interface Reference Guide will be finalised and sent to the MS. At that date, the interfaces between the NSW and the shipping industry as well as between the NSW and the central SSN should be defined.

- One cycle should be executed between September 2013 and December 2013. This will focus on the interfaces between the NSW and national authorities and on functionalities of the NSW.

The demonstrator will be composed of the following:

- A generic implementation of a NSW system. A maximum of 6 individual NSW systems is foreseen to be installed for operational testing during the course of the project: 5 NSW systems for 5 individual MS participating the project, and one "centralized" NSW system that will be tested by any MS to enable them familiarise with the functionalities implemented.

- An implementation of a simulation of the Central SSN system (called the "Central SSN system" in this document).

The cycles are further defined as follows:

Prototype cycle 1 *(from end-May to July 2013)*

The purpose of cycle 1 is to design the prototype, including functionalities, business rules, data model, user interface, system interfaces (with ship data providers and central SSN system), architecture, database model and web interface design. This cycle will include a workshop with MSs who will provide comments on:

- The design of the web user interface, (through a series of mock-up screens presenting the design and ergonomics) reflecting all steps of the business logic of the system. The mock-up screens will be amended according to the feedback received (in iterations) and will support the drafting of detailed specifications of cycle 2.

- The business process model.

The workshop will be hosted by EMSA in Lisbon at the end of June 2013.

Prototype cycle 2 *(from July to September 2013)*

The purpose of the prototype cycle 2 is to develop, test, deploy and test a first version of the prototype, which will cover a part of the functionalities presented in this document.

Prototype cycle 2 will be tested in operational conditions with stakeholders. Operational tests will be run by EMSA which will filter and consolidate the feedbacks from the stakeholders. The outcome of the operational tests will be considered and will be taken into consideration for the development of prototype cycle 3.

The scope of prototype cycle 2 will be defined during the cycle 1 and agreed with EMSA. An indicative scope is provided below:

- This cycle will cover the interfaces with the ship data providers (system and Web user interfaces), and

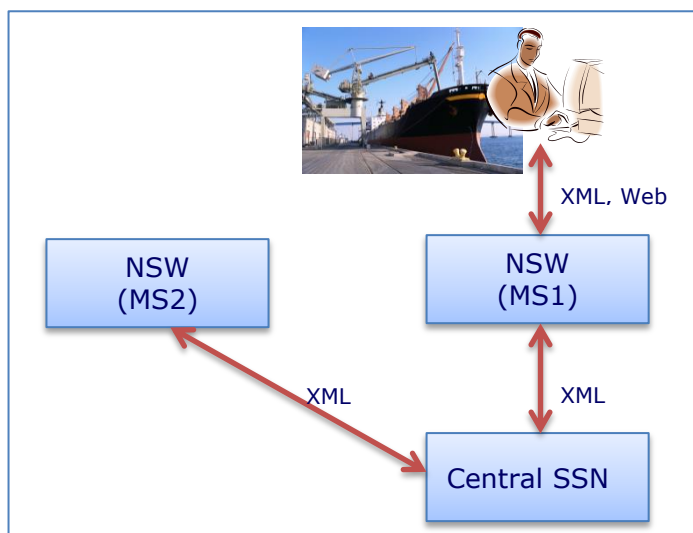- The interface covering the exchange of information with SSN.

Figure 2: concept of prototype cycle 2

Prototype cycle 3 *(from November to December 2013)*

The purpose of cycle 3 is to develop, test, deploy and test a second version of the prototype, which will cover all functionalities and will take into consideration the outcome of the operational tests of cycle 2.

Additional functionalities will cover the following (the list is indicative):

- The distribution of information to authorities through a web user interfaces (one interface for each authority). The outcome of the authorities' actions will be recorded (receipt acknowledgment, identification of incorrect/missing elements etc) and made available to the shipping industry through the web user interface as indicated in Figure 4 below.

- Authentication within the NSW.

An extended period of availability will be given to stakeholders to use the test environment system until end-March 2014, which may be further extended if required.
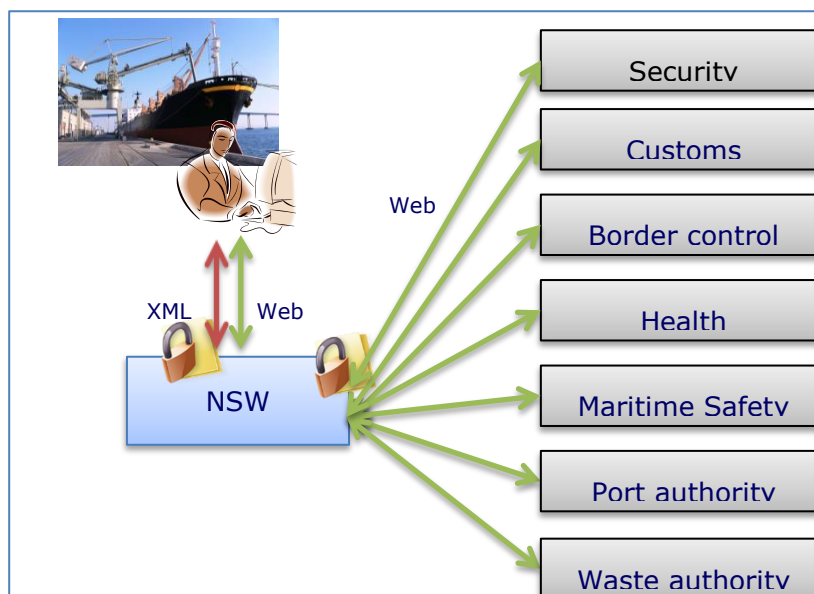
Figure 3: concept of prototype cycle 3

5. TECHNICAL ANALYSIS OF EXISTING SYSTEMS AT NATIONAL LEVEL

A technical analysis of existing systems at national level will also be performed. The study will analyse the national SSN system and authorities' operational systems of the participating MS as well as Port Community Systems (if any). It will include an analysis of the system interfaces offered by these systems. The integration of the arrival and departure notifications (ATA and ATD) to the NSW via system interface with national systems will also be assessed.

Based on the analysis, proposals and recommendation on how they could be interfaced with the prototype will be drawn. This may consist of proposals regarding further improvements of the national systems, the Port Community Systems and of the prototype. Improvements of the central SSN system in order to support additional services to the authorities in relation to the fulfilment and processing of formalities through the NSW and the national SSN systems will also be considered.

Prior to the technical analysis, EMSA will identify the participating MS and Port Community Systems which will be subject to the technical analysis taking into account the limitations in terms of budget and time.

The analysis will be carried out in parallel to cycle 2.

6. POSSIBLE NEXT STEPS

Following the conclusion of the three cycles, the prototype may be improved based on the results of the operational tests. These possible next steps could be planned in 2014.

7. ACTION REQUIRED

The Member States are invited to note the information provided.