ECASBA
EUROPEAN SEMINAR 2023

BRUSSELS

20th JUNE 2023

SHIP REPORTING: NEMO PROJECT
SARI TURKKILA, FINNISH ASSOCIATION

NEMO project

"Finding Nemo" a practical solution
to a new Maritime Single Window in Finland
Slides/Olli Soininen, Fintraffic VTS
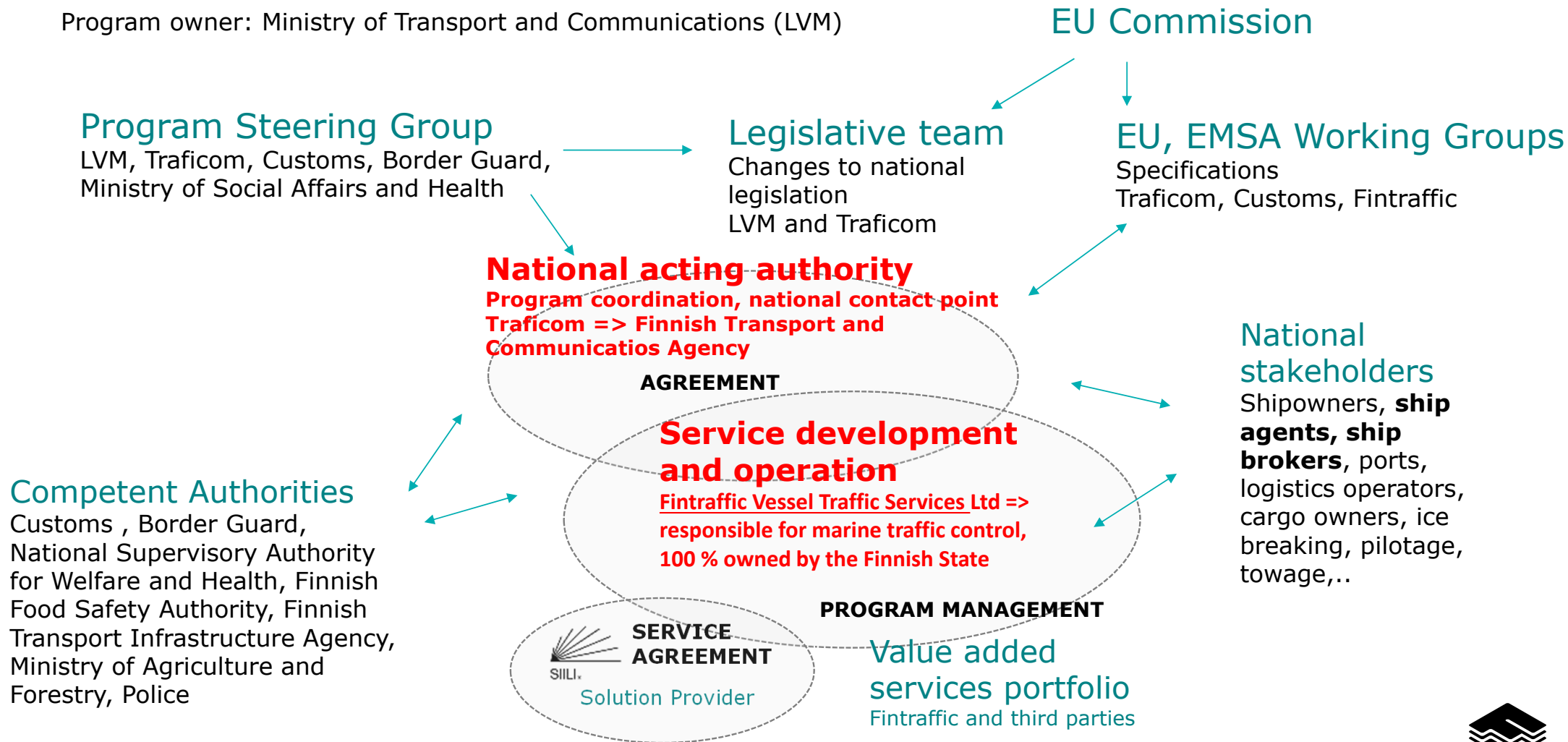Presentation/Sari Turkkila, Shipbrokers Finland

Goals of the NEMO program

- Facilitate the **change management** – people and processes
- Facilitate **information exchange** between public and private actors in maritime domain
- Facilitate **digitalization** of maritime logistics
- Implement **data platform** to support information exchange and trade facilitation
- Implement **value-added services**
- Implement new MSW system in Finland following the **European Maritime Single Window** EMSW regulation 2019/1239
- Support **capacity** building

nemo

NEMO Program structure

Program owner: Ministry of Transport and Communications (LVM)

EU Commission

Program Steering Group
LVM, Traficom, Customs, Border Guard,
Ministry of Social Affairs and Health

Legislative team
Changes to national
legislation
LVM and Traficom

EU, EMSA Working Groups
Specifications
Traficom, Customs, Fintraffic

National acting authority
**Program coordination, national contact point
Traficom => Finnish Transport and
Communicatios Agency**

AGREEMENT

Service development and operation
**Fintraffic Vessel Traffic Services Ltd =>
responsible for marine traffic control,
100 % owned by the Finnish State**

PROGRAM MANAGEMENT

National stakeholders
Shipowners, **ship agents, ship brokers**, ports, logistics operators, cargo owners, ice breaking, pilotage, towage,..

Competent Authorities
Customs , Border Guard,
National Supervisory Authority
for Welfare and Health, Finnish
Food Safety Authority, Finnish
Transport Infrastructure Agency,
Ministry of Agriculture and
Forestry, Police

SERVICE AGREEMENT

SIILI.

Solution Provider

Value added services portfolio
Fintraffic and third parties

Stakeholders

Key stakeholders

Fintraffic	Finnish Transport and Communication Agency (Traficom)	Finnish Customs (Tulli)	Finnish Border Guard (RVL)
Ship agents	Shippers	Harbour operators	Shipowners
Freight forwarders	Port operators	Transport Companies	Waste handling companies
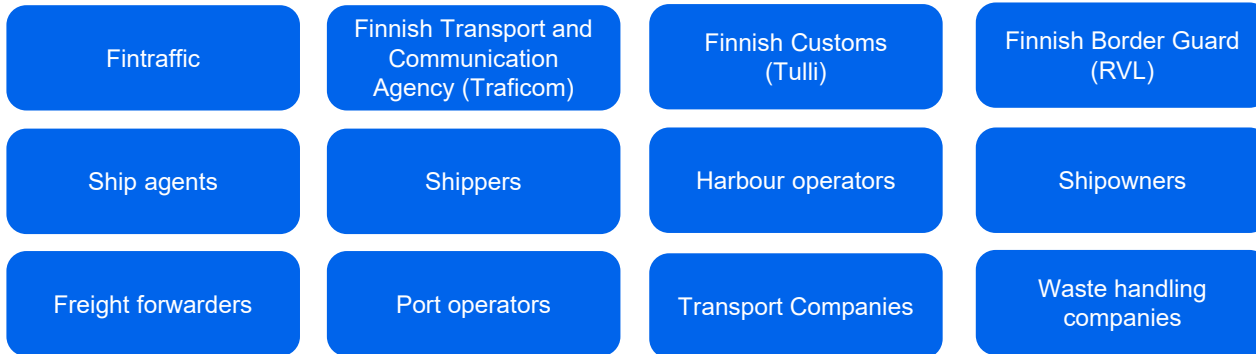
Guiding regulation and centralized

European Comission	The European Maritime Safety Agency (EMSA)

Notification data users: public authorities and special government agencies

VTS-center (operated by Fintraffic)	Finnish Transport Infrastructure Agency (Väylävirasto)	Center for Economic Development, Transport and the Environment (ELY)	Finnish Food Authortiy (Ruokavirasto)	Fire- and rescue authorities
Finnpilot	Finnish Navy	Ministry of Agriculture and Forestry of Finalnd (MMM)	The Finnish Environment Institute (SYKE)	Social and Health Care Areas
Arctia Concrer (Meritaito Ltd.)	Finnish Institute for Health and Welfare (THL)	Finnish Safety and Chemicals Agency (TUKES)	Radiation and Nuclear Safety Authority (STUK)	

Other stakeholders

| |
|---|
| Port Facility Security Officers |
| Persons in charge of PRF equipments |
| Customs authorities from EU-countries |

Stakeholder activities

Stakeholder communication

Validation of concepts and interfaces

Joint discussion

- 2 stakeholder workshops per year

- 2 stakeholder seminars per year

- Several smaller test/validation events

- 3-4 stakeholder letters

- Active participation in stakeholder events

Development of NEMO system began through conceptualization
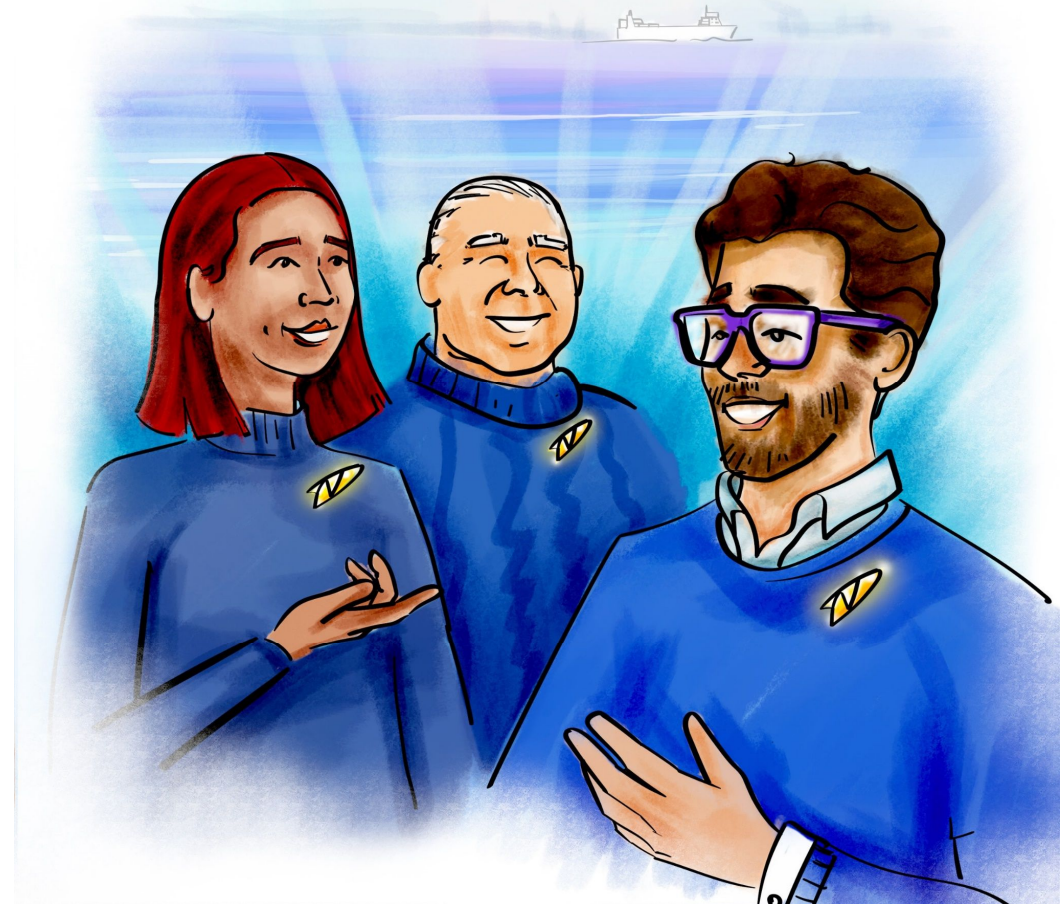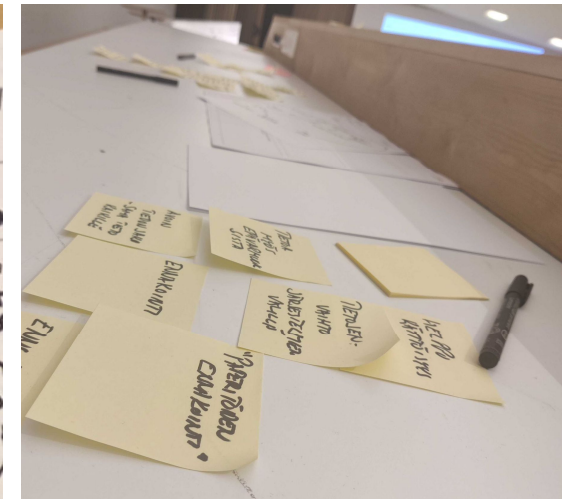
NEMO Vision concept

A visionary maritime data platform of the future that combines public and commercial information in a way that benefits all parties in the maritime ecosystem.

NEMO MSW concept was produced together with more than 150 stakeholder representatives who represented almost 70 different organizations (public and private)

Concept story
A story set in the future about the different stages of a ship's port call, the benefit achieved by different actors and the value produced.
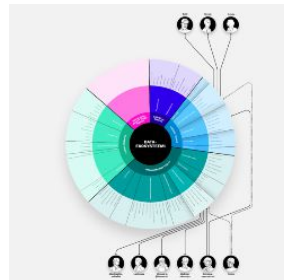
Data journey
Tasks, rights and responsibilities of actors in the concept story, utilization of data in the ecosystem
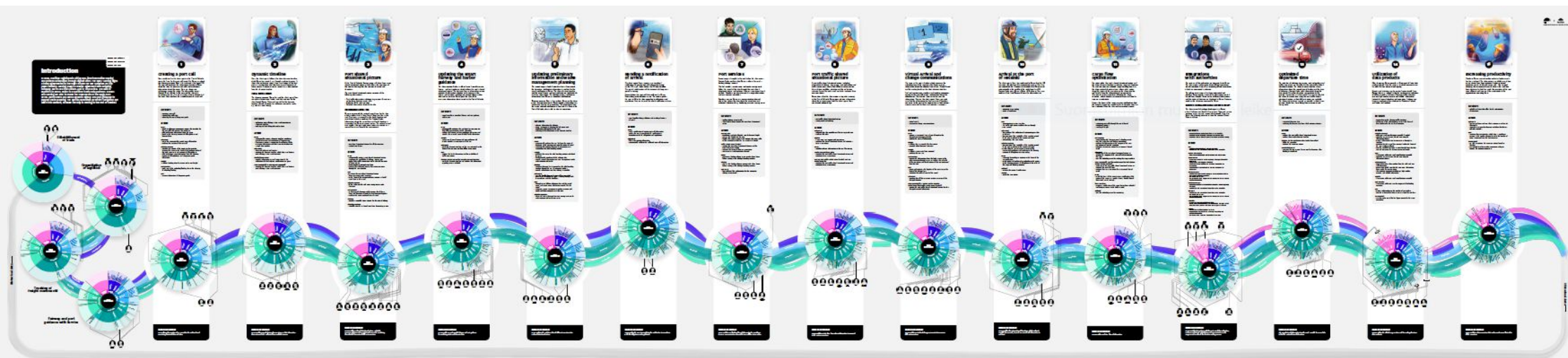

UI proto
A conceptual prototype of a possible future user experience

Blueprint
Summary of the concept story and data journey

Creating a port call

Havu, confirmed as the ship's agent at the Port of Helsinki, opens the base for the port call created by Nemo, on which the shipping company Nova´s Eva estimates the target ETA. The port call combines the information already in Nemo about the ship, its previous port calls and preliminary information about the cargo. There are dangerous substances among the cargo. The information passes through Nemo directly to the port and the ship gets permission to enter. It is clear to Havu what is expected of him next. Havu confirms the establishment of a port call.

KEY EVENTS

- Creating a port call
- Starting data collection
- Informing the port of dangerous goods

ACTIONS

Nemo
- based on Pilotage's assessment, creates the template for the port call and estimates the initial ETA
- adds preliminary information about the cargo
- based on the shipping contract of affreightment and historical data

Ship agent
- opens the automatically created port call template
- confirms the creation of the port call

Shipping company
- provides an estimate of the target ETA for maritime transport for Nemo on the basis of the loading window of the trade agreement and contract of affreightment
- adds preliminary cargo information from the shipping contract of affreightment, incl. dangerous goods information
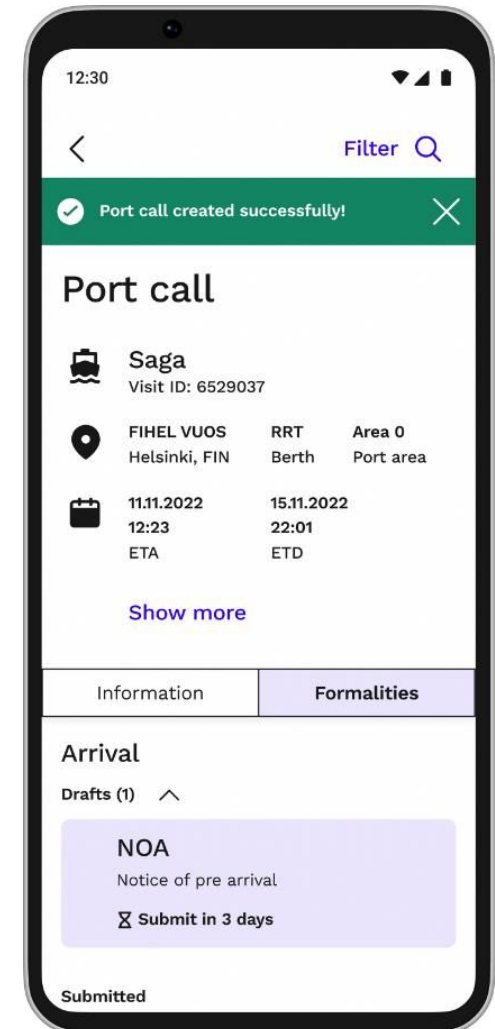
Captain
- validates loading plans for import and export freight

Port operator
- makes use of the unloading/loading plan in the planning of unloading/loading

Port
- receives information of dangerous goods

12:30

<   Filter 🔍

✓ Port call created successfully! ✕

Port call

🚢 **Saga**
Visit ID: 6529037

📍 FIHEL VUOS   RRT   Area 0
Helsinki, FIN   Berth   Port area

📅 11.11.2022   15.11.2022
12:23   22:01
ETA   ETD

Show more

| Information | Formalities |

Arrival

Drafts (1) ⌃

NOA
Notice of pre arrival
⧗ Submit in 3 days

Submitted

3

Port shared situational picture

At the Port of Helsinki, Sami examines all ships from a port shared situational picture, which allows the operators of the port to plan together the services of arrival and departure.

The port shared situational picture consists of the following information:

- Port traffic information: pilotage, tug services & port area icebreaking, harbour master info
- Activities of the port operator
- Detailed information about the berths

RECOMMENDED ARRIVAL TIME

Nemo recommends the optimal arrival time for the ship, which enables Just In Time Arrival. Based on this, in the port, Sami gives a proposal for the berth location and arrival time, which is confirmed by Captain Andre. Information about the arrival time and berth location is transmitted via Nemo to various actors. The optimal arrival time enables the port and various actors to operate in a more efficient and benefit the environment.

KEY EVENTS

- Port shared situational picture for all the operators
- Optimal arrival time

ACTIONS

Nemo

- automatically creates a port shared situational picture, combining the availability of pilotage, towing, port icebreaking, traffic supervisors and berths and forecasts of future events
- recommends an optimal arrival time
- conveys the confirmed time to the various operators through the user interface

Port

- examines the port shared situational picture
- plans port entry and exit services
- on the basis of the recommendation, proposes a berth/ arrival time to the vessel

Shipping company

- defines ship-specific safe zones using port security clearance

Port operator

- performs work planning and determines the delivery times and locations of goods for land transport logistics
- confirms the port's proposed time of arrival

Pilotage

- provides a possible time estimate for the start of pilotage

Fintraffic/Traficom

- Fintraffic provides AI-based travel time forecasting service

nemo ☀ 16°c ③ ms ~ +30cm

Helsinki - Vuosaari

May	31 Sun	01 Mon	02 Tue	03 Wed	04 Thu	05 Fri	06 Sat

At port

m/s Saga - VC3
Cargo ship
ATA 10.05 15:00 → 18:00
ETD 11.05 16:30
⏻ Operations behind schedule

m/s Leia - VC1
Cargo ship
ATA 07.05 16:00
ETD 10.05 17:30
🕐 Operations on schedule

Arriving

m/s Aino - VC1
Cargo ship
ETD 10.05 17:30 → 20:15
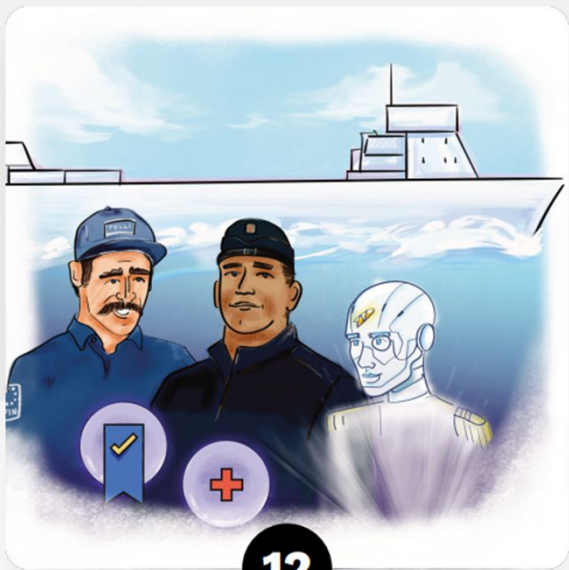⏻ New proposed time of departure

Snapshot

15:30

Mixed waste
The vessel may dispose of its waste in the mixed waste container on the quay. The vessel waste

Integrations with authorities

The systems of the authorities are integrated into Nemo. The ship receives information about official inspections already conducted as well as upcoming official inspections, which are announced in advance.

The toll payment process has been automated and clarified. Nemo provides most of the information needed for toll fares directly. Requests for additional information and the status of decision are displayed in Nemo. Customs confirms the decisions proposed by Nemo.

RECORD OF GARBAGE DISCHARGES AND WASTE RECEIPT

The ship's record of garbage discharges is in Nemo, where Traficom can check it if necessary. The waste service company issues a waste receipt electronically. Based on these, the shipping company retains the acquired Green Value certificate.

KEY EVENTS

- Communications regarding inspections by the authorities
- Electronic record of garbage discharges and waste receipt
- Automated fairway payment process and status of decision-making

ACTIONS

Port
- monitors data on disposed waste and grey water
- monitors the dates of possible inspections by the authorities

Waste service company
- issues an electronic waste receipt for the waste left on board

Traficom/Nemo
- if necessary, checks the record of garbage discharges information from Nemo
- Nemo enables non-staggered discounts
- Nemo collects and combines the necessary information for the decision
- Nemo provides a calculator for the advance assessment of fairway dues

Shipping company
- monitors the vessel's waste management and compliance with the Green Value certificate conditions
- can predict fairway dues
- has a clear view of the progress of the process and the need for any additional information

Captain/vessel crew
- completes/monitors the automatically completed record of garbage discharges
- monitors the dates of possible inspections by the authorities

Ship agent
- monitors the dates of possible inspections by the authorities
- can predict fairway dues
- has a clear view of the progress of the process and the need for any additional information

Authorities
- perform the necessary official inspections
- with two-way communications, can communicate and agree on the inspection dates, provided that these can be agreed in advance

Customs
- confirms the decisions proposed by Nemo
- communicates directly with the ship's agent regarding any additional information
- can access all the necessary information in one place

Participation in development and testing

Declarant

- →

| API-integration | EU RIM interface descriptions Q4/ 2023 | Integration testing Q1/2025 – Q3/2025(will be specified during the autumn of 2023) |

| User Interface | Development stage testing 2022 - 2025 |

Deployment testing
Q4/2024 – Q2/2025

Acceptance testing
Q3/2025

Authorities

Test use
Q4/2024 – Q3/2025

Value-added service user → Workshop and interviews(2022)

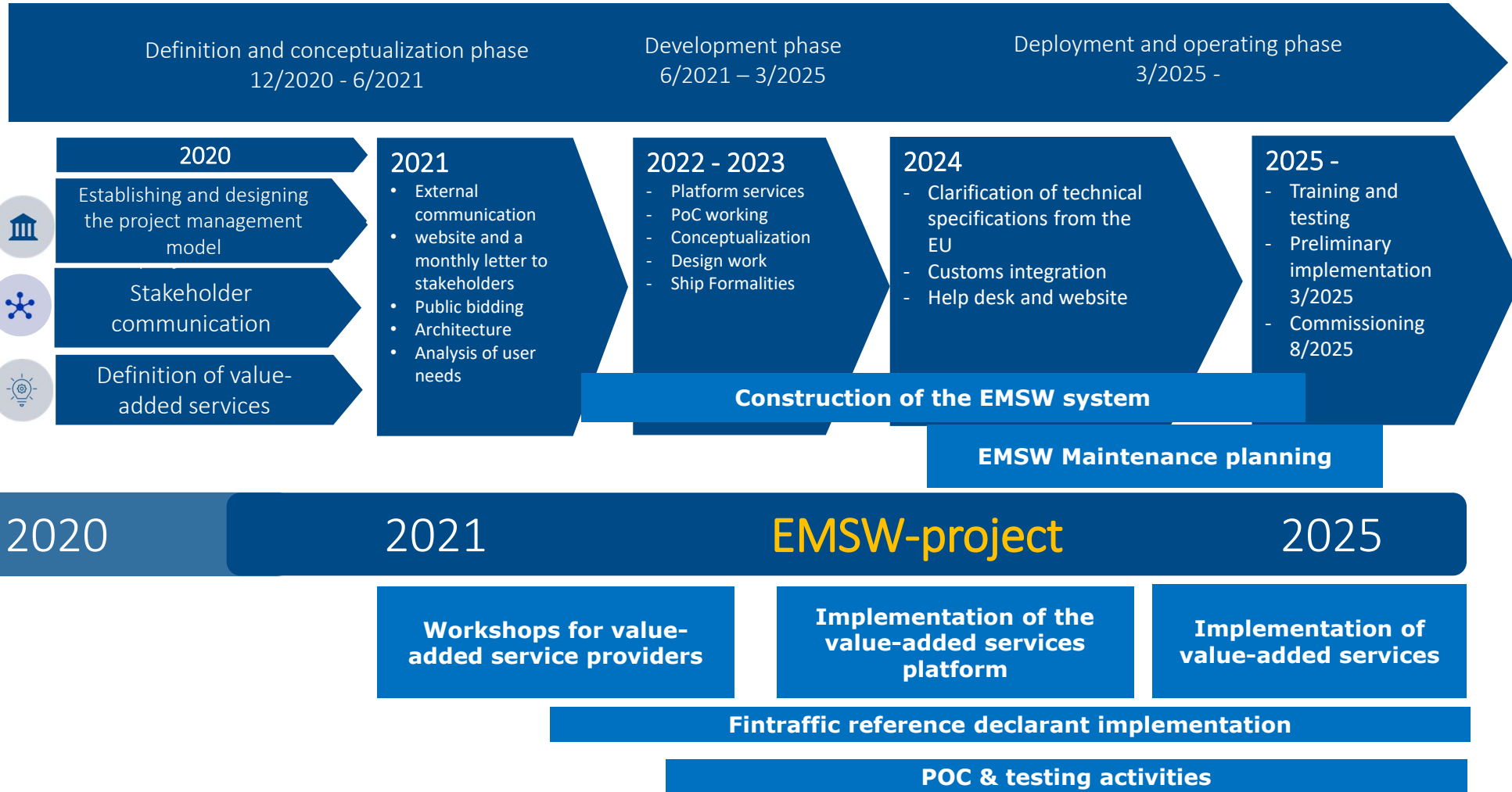NEMO Stakeholder group work and testing as separate entities
Q4/2024 – Q2/2025

Value-added service provider →

Ecosystem work - as part of Fintraffic's ecosystem activities
2023 →

Maritime Single Window Service, project schedule

Definition and conceptualization phase	Development phase	Deployment and operating phase
12/2020 - 6/2021	6/2021 – 3/2025	3/2025 -

2020
- Establishing and designing the project management model
- Stakeholder communication
- Definition of value-added services

2021
- External communication
- website and a monthly letter to stakeholders
- Public bidding
- Architecture
- Analysis of user needs

2022 - 2023
- Platform services
- PoC working
- Conceptualization
- Design work
- Ship Formalities

2024
- Clarification of technical specifications from the EU
- Customs integration
- Help desk and website

2025 -
- Training and testing
- Preliminary implementation 3/2025
- Commissioning 8/2025

Construction of the EMSW system

EMSW Maintenance planning

2020	2021	EMSW-project	2025

Workshops for value-added service providers

Implementation of the value-added services platform

Implementation of value-added services

Fintraffic reference declarant implementation

POC & testing activities

TRAFICOM
Finnish Transport and Communications Agency

Fintraffic

Great expectations – and the reality?

Thank you! Questions?

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