

# DOCKSTHEFUTURE

defining the concept of "Port of the Future"

Event: Ports, Maritime Transport & Insularity

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# What is DocksTheFuture?



Co-funded by the Horizon 2020 programme  
of the European Union

- **DTF** is a **project funded by the European Commission** under **Horizon 2020**.
- As a **Coordination and Support Action (CSA)** it will support the EC (DG MOVE and INEA) in covering coordination and networking of Research and Innovation projects, Programmes and policies.
- **Starting date: January 2018** (implementation time **30 months**).
- **Grant Awarded** : about **1,2 million Euro**.

## The main assets of DocksTheFuture:

- the **largest “non commercial” port Database (ISL)**;
- the **largest maritime and logistics communication and stakeholder’s interactive digital platform** ([www.onthemosway.eu](http://www.onthemosway.eu)) with already nearly 1.600 stakeholders engaged (Members of European Parliament, MS Ministries of Transport, European Commission, Regions and Municipalities, Associations, Port Authorities, Transport and Logistics operators, Shipping companies, Port Business, Universities);
- all **329 TEN-T Core and Comprehensive ports as a main target for communication.**

# Who is involved in DocksTheFuture?



Co-funded by the Horizon 2020 programme  
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DOCKSTHEFUTURE



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UNIVERSITÀ DEGLI STUDI  
DI GENOVA

The project is coordinated by **Circle srl (Italy)** as the leader of the Working Group including:

**ISL - Institut für Seeverkehrswirtschaft und Logistik**  
(Germany)

**Magellan**  
(Portugal)

**PortExpertise**  
(Belgium)

**University of Genoa**  
(Italy)





- for the Port of the future concept (TU Delft)
- For the port-city relation (AIVP)
- For sustainability (Llyod's Register)

- 1.600 already identified stakeholders via [www.onthemosway.eu](http://www.onthemosway.eu);
- Direct involvement of the 329 TEN-T core and comprehensive ports;
- Engagement of more than 30 experts in the different identified topics, including clustered projects managers and Associations / EU Platforms (e.g. Alice);
- Advisory Board (5 top experts)



# Why DocksTheFuture?



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- ## DocksTheFuture will focus on:

- clustering Port of the Future proposals;
  - identifying appropriate KPIs;
  - monitoring + evaluating results of actions stemming from the Port of the Future Call for Proposal, from other H2020 calls and ongoing activities in the domain of interest.
- In line with the Union's strategy for international cooperation in Research and Innovation, **international cooperation**, in particular with Mediterranean and other Neighbouring Partner Countries, will be properly taken into account.

# How to execute DocksTheFuture?



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DocksTheFuture already addressed:

- a **preliminary research** on the “**Port of Future**” concept;
- the definition of several “**Port of the Future topics**” to be addressed and their related **targets** in **2030**;
  - Port infrastructure and management
  - Accessibility and fulfillment of European standards
  - Integration in the supply chain and synchromodality
  - Environmental concern
  - Sustainability
  - Safety and security
  - Digitalisation
  - Port-city relation
  - Port Governance
  - Human element
- a preliminary list of projects for clustering with the RIA retained proposals

DocksTheFuture will:

- Define the “Port of Future” concept(s),
- Define the Port of the Future topics and their related targets in 2030

Define (and use) the list of projects to be clustered together with the Port of the Future retained proposals;

- Identify and collect appropriate Port of the Future related KPIs (“Key Performance Indicators”);
- Lead to the “Port of the Future Road Map for 2030” including number of exploitation elements such as tools for the transferability of Port of the Future solutions, R&D and policy recommendations, training packages and the creation of a “Port of the Future Network of Excellence”.





# Digitalisation in ports

## Background for research and preliminary outcomes



The goal of the agreement is to reduce the time needed to import goods by over a day and a half and to export goods by almost two days, representing a reduction of 47 per cent and 81 per cent respectively over the current average.

[illegible]

- FAL convention adopted 1965
- 118 Contracting Governments
- Contains standard and recommended practice
- Standardised documentation by FAL forms
- FAL 40 – enter into force 2018, mandatory establishment of systems for electronic exchange of info by 8 april 2019 with a transition (paper + digital) of one year



## WCO-NEW TOOLS AND NEW APPROACH TO DATA ANALYTICS

## Digitally connected supply chain

## Data Pipeline-Interconnectivity & Interoperability

- Globally Networked Customs
    - » Mutual Recognition of Control
    - » AEO Mutual Recognition
    - » Re-usable or Prepopulated Regulatory data (My Export as your Import)
    - » Transit
  - Interoperability of IT Systems – Single Windows
    - » Data exchange
    - » e-LPCO exchange
    - » Connecting other stakeholders
    - » Provenance of data
    - » New technologies - Blockchains

## Legal initiative EU SW enviroment for customs

**Impact Assessment:**

*External study: To be conducted Q1 2018-Q1 2019*

*Customs 2020 Project Group (key stakeholder consultation-MS and Trader's Association)*

*Open public Consultation (part of a wider consultation strategy) Q2-Q4 2018*

*Impact assessment report and draft proposal*  
*Q3 2019*

## Objectives

## From «paperless» customs to «paperfree» digital customs

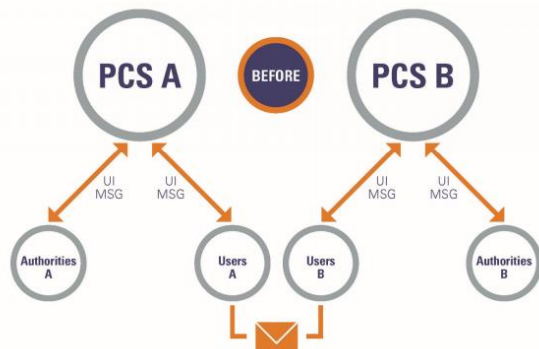
**From 'customs centric' system to fully integrated electronic services to economic operators for cross-border movement of goods: inter-agencies collaboration**

## DG MOVE EU maritime SW – RFD observation

- Paper is still used in some extent in more than 50% of ports, often as a duplication;
- The reporting is fully harmonised only in some EU countries;
- All NSWs implemented are different – no EU level Harmonisation;
- True single window submit only-once reporting is available only in some EU countries;
- The information is seldom shared and re-used, particularly between EU countries;
- The positive impact of national single window to the shipping industry is small, sometimes even being negative.



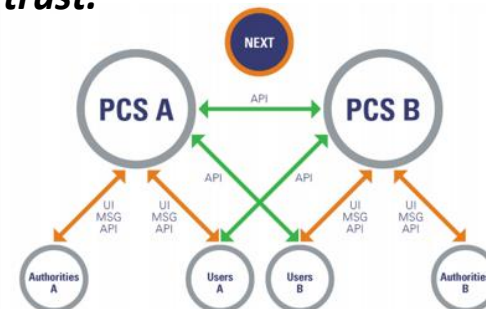
**The IPCSA (International Port Community System Association) purpose is to increase the collaboration and the trust among the different actors involved in the logistics chain.**



## Actual Environment



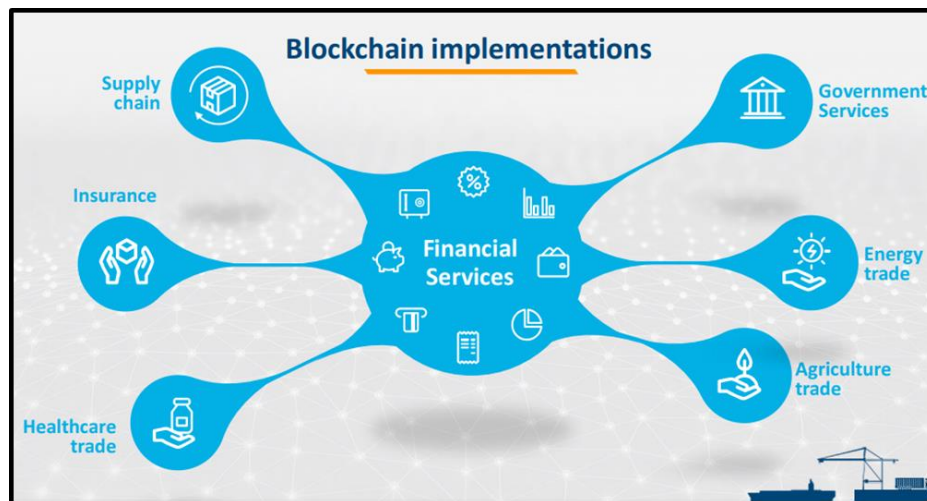
***Actions to increase cooperation and level of trust.***



- PCS as Service or Cloud Services
- Global Services
- Federation
- Microservices
- Distributed Database
- API

*Future Environment*  
*Network of Trusted Network*

## The impact of Blockchain in the maritime trade relate financial and insurance services



Ongoing projects are presented in the port of:

- **Antwerp;**
- **Tallinn;**
- **Israeli Ports** with the digitalization of the bill of lading

## Blockchain in Maritime Trade: Challenges

- *New technology;*
- *Lack of expertise developers;*
- *Long transaction confirmation time;*
- *Legal recognition UNCITRAL published “model law on Electronic Transferable Records” they gave consideration to the possibility to use distributed ledgers technologies;*
- *Interoperability of Blockchain networks;*
- *Using Blockchain when needed.*

## Preliminary outcomes

- **The World Trade Organization's Trade Facilitation Agreement**, which entered into force in February 2017, is a milestone and can be expected to make international business cheaper, faster and easier, aiming at reducing the time to import goods by 47% and the time to export goods by as much as 91%;
- **The 'paperless' dream** for air and sea freight is still in the future. In both modes, there are often more people handling the back office paperwork than physically handling the cargo, and the costs reflect this.
- The **use of technology and data helps business grow** and contributes to the overall economy;
- **Single Window environments** can save resources, reduce human error and speed up trade flows;
- Human resistance to new systems, the **lack of trust between parties** and a reluctance to share information can all hold back collaboration in the supply chain;
- **Technologies such as Blockchain and the Internet of Things** will play a **crucial role in trade facilitation** and the flow of information, particularly in ensuring the accuracy and quality of data;
- The **logistics sector needs to change and become more digital**. If 'traditional' companies don't embrace technology, they are in danger of being left behind; **new technology and 'start-up' companies** will take over their business by changing the business model;
- **Port Community Systems** continue to play a central role in **driving forward the digitalisation agenda**.



