

INSPIRING OUR FUTURE PLENARY WEBINAR "DIGITALISATION AND AUTOMATION"

Moderator: Raymond Troch, Committee Chair

Speakers:

"Bulkchain: digital collaboration in breakbulk" Hans De Hondt, Sales & Marketing Manager, Port+

"Developing standards and frameworks for container shipping" Dominique Willems, Director, Public Affairs and Government Regulations, the Digital Container Shipping Association



INSPIRING OUR FUTURE PLENARY WEBINAR "DIGITALISATION AND AUTOMATION"

Programme:

Opening: Raymond Troch, Committee Chair

Welcome: Aziz Mantrach, FONASBA President

Introduction to Speakers: Raymond Troch

Presentations: Hans De Hondt: Port+, Dominique Willems: DCSA

Thanks and Closing Remarks: Raymond Troch



INSPIRING OUR FUTURE PLENARY WEBINAR "DIGITALISATION AND AUTOMATION"

Welcome Address: Aziz Mantrach, FONASBA President



Building the breakbulk ports of the **future**











MEET THE SPEAKER

HANS DE HONDT

DIGITAL SOLUTIONS PORT+ HANS.DEHONDT@PORTPLUS.BE





and







Collaborative data sharing platform for the maritime industry www.nxtport.com



Maritime information service provider focused on data based digital solutions www.portplus.be

BULKCHAINWHAT IS BULKCHAIN



BULKCHAIN WHAT IS BULKCHAIN

Collaborative data sharing platform
Digitalize administrative processes and
communication
Share data from early in the supply chain
Reduce time spent on administration





- Breakbulk plays major role in ports
- One of the most labour intensive administrative processes
- In a sector with little or no digitalization or innovation
- Big potential for more efficiency/new technologies







PROJECT APPROACH





±5 co-envision sessions with stakeholders in the (Antwerp) breakbulk industry

In-depth analysis with confirmation by committed & involved stakeholders

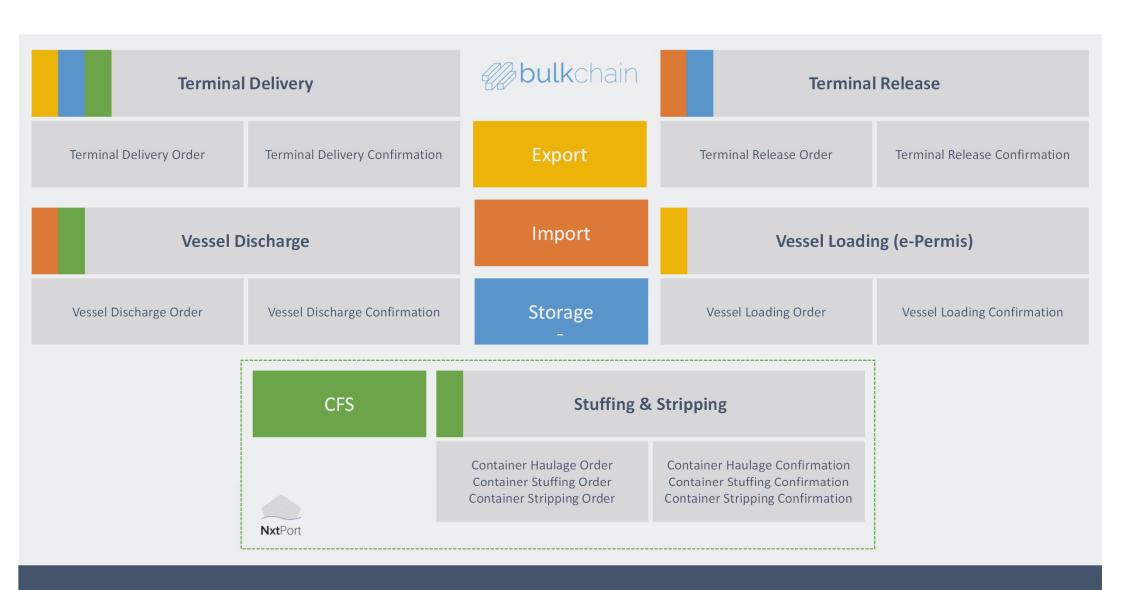
Clear and transparent documentation available for all interested parties

Involvement of (Belgian) customs

Technology based on functional/technical analysis and current standards

BULKCHAIN 5 MODULES





Terminal Delivery

Forwarders can pre-announce cargo shipments towards Terminal (and other stakeholders)

Multi-modal transport supported (truck, rail, barge)

Terminal operators can confirm receipt of cargo, damages, storage locations, ...

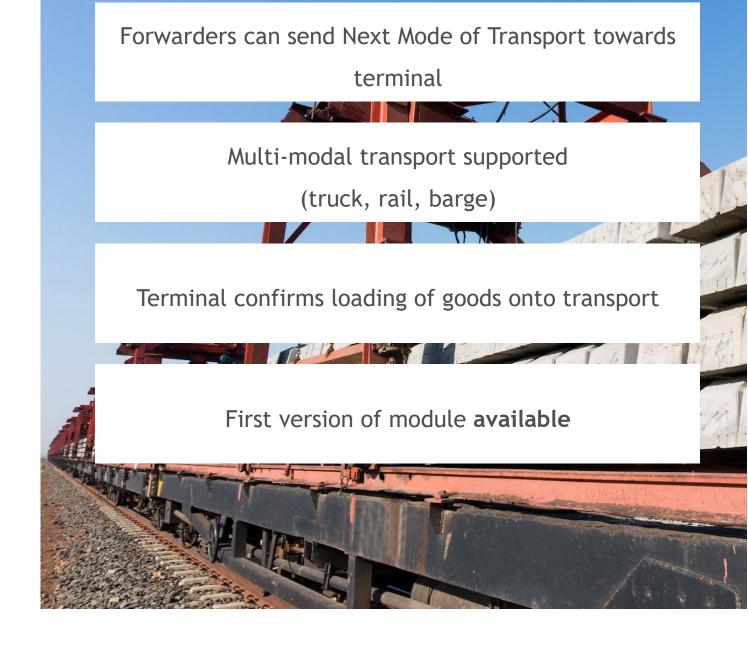
Arrival can trigger "Arrival at Exit" confirmation towards Customs

Module LIVE and implemented



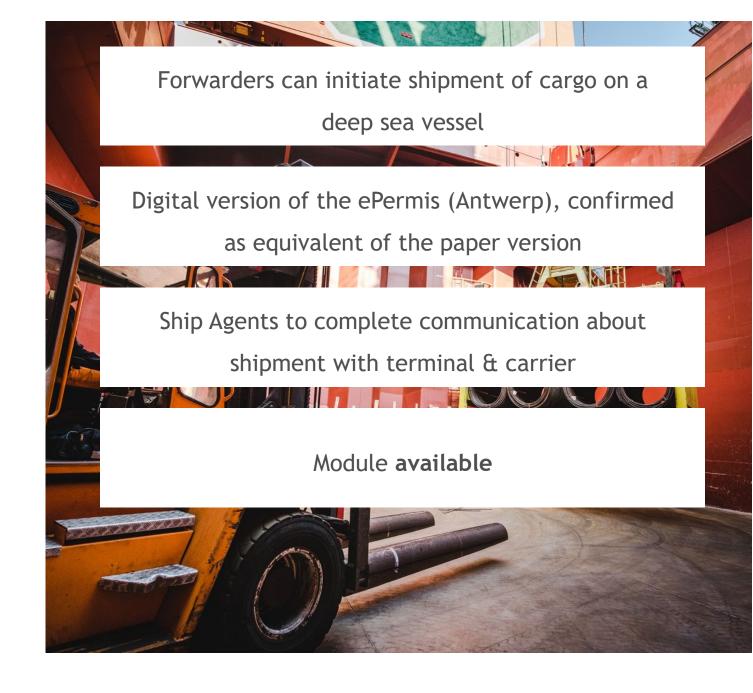


Terminal Release



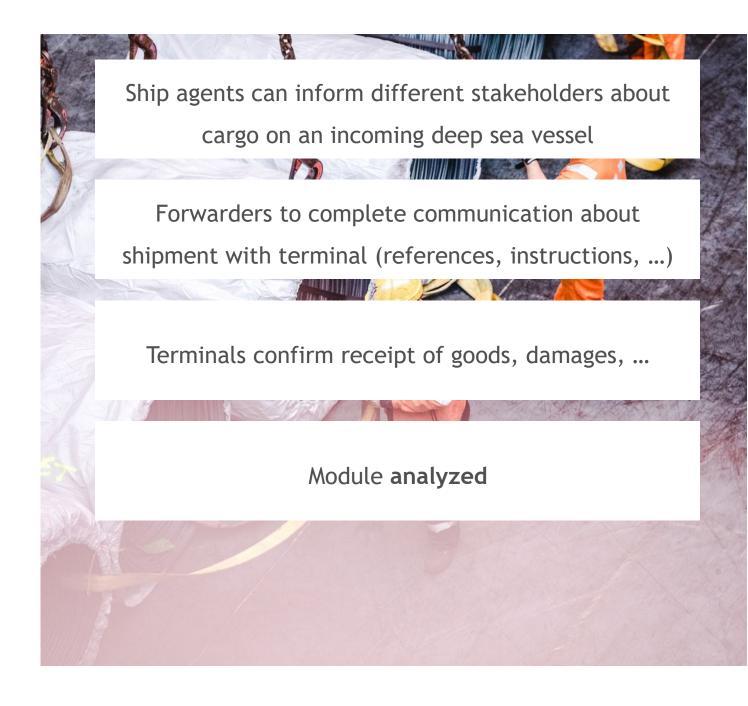


Vessel Loading



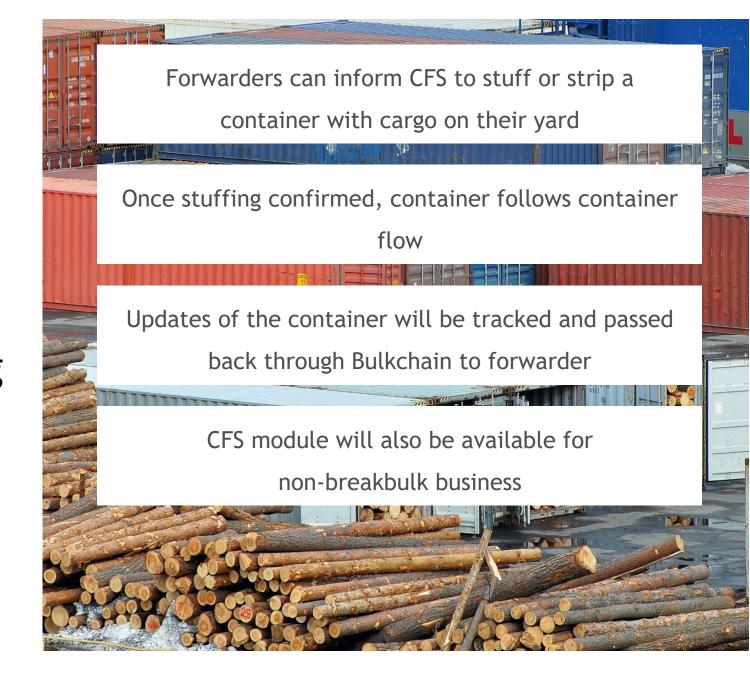


Vessel Discharge

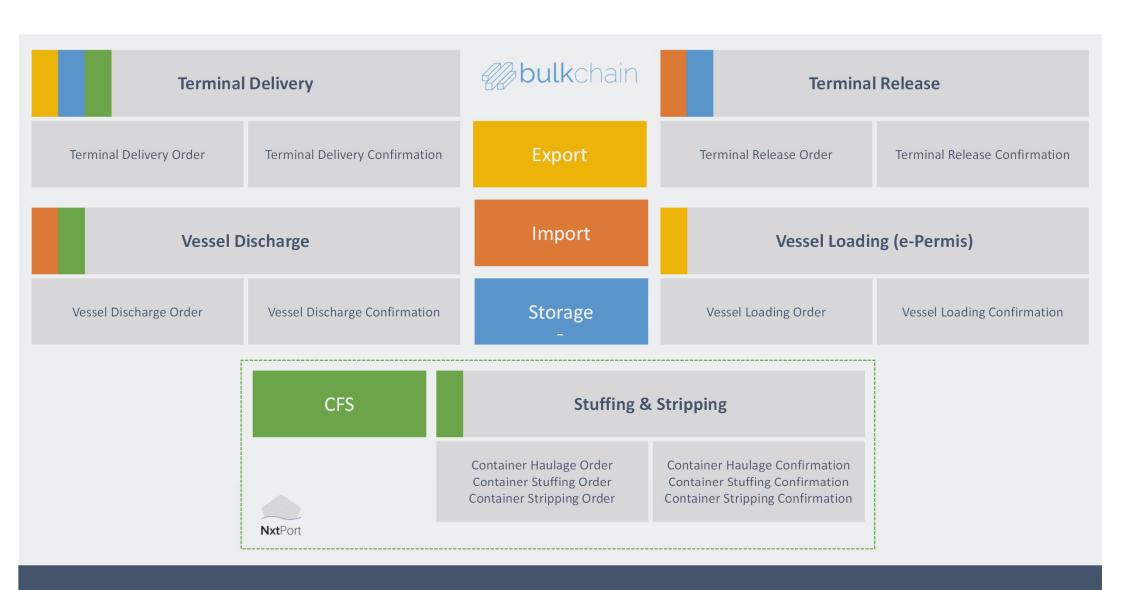




Stuffing/Stripping









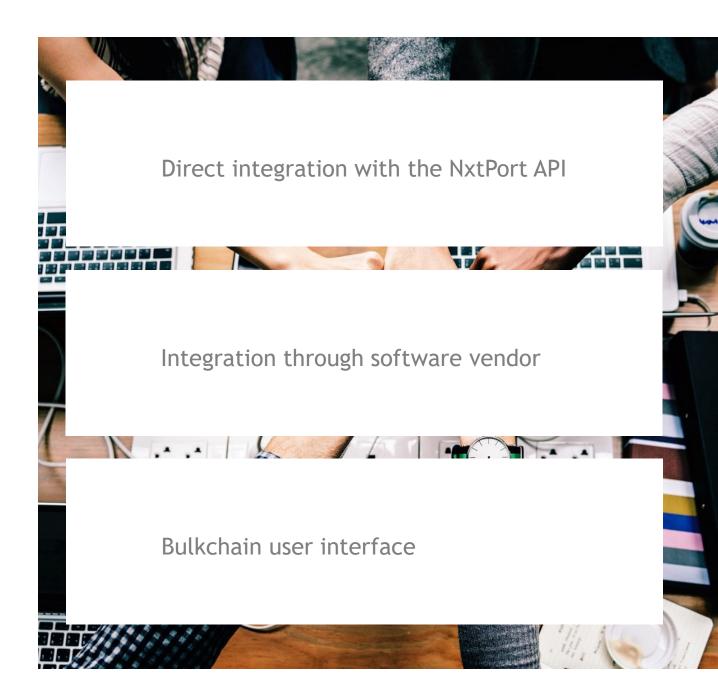


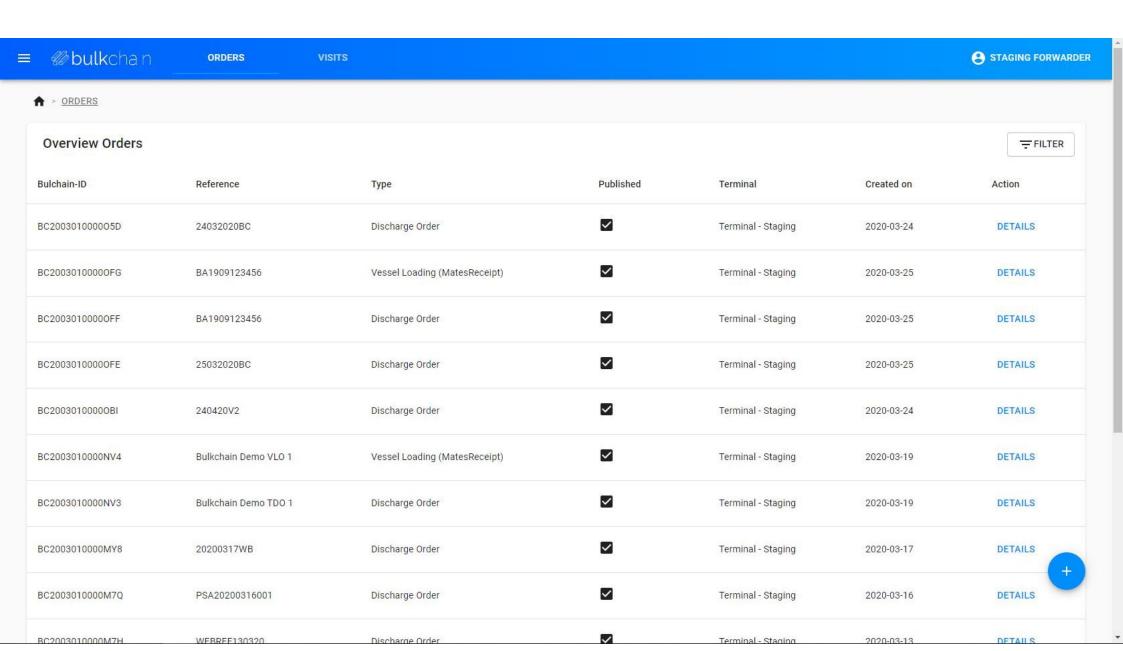


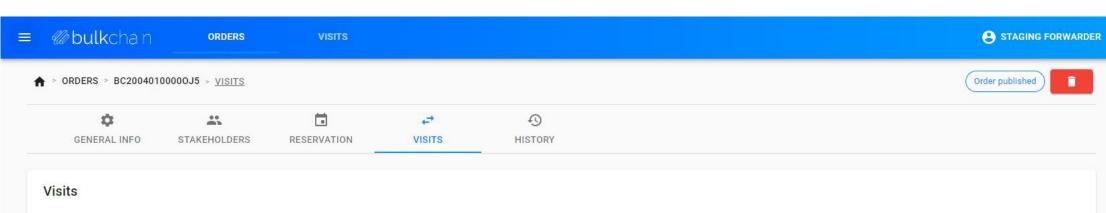
HOW TO











Visits							
Means	Operator	Eta	Visit Reference	Voyage Number	Status	Published	
•	H. Essers	2020-12-10	BC20200414245262	TL3075	Planned	\checkmark	DETAILS
	Van Moer Transport	2020-12-10	BC20200414245235	TL3076	Planned	\checkmark	DETAILS
	H. Essers		BC20200414245235	BC2020041402	Confirmed	\sim	DETAILS
•	Van Moer Transport	2020-10-26	BC20200414245235	BC2020041403	Confirmed	~	DETAILS
						Rows per page: 25	i → 1-4 of 4 < >

PRINCIPLES & GUIDELINES

Low Entry Barrier > every involved party can participate without development needs

NxtPort created a data hub with data service API's,

Port+ built a User Interface

Open for developers to add functionality (eg ePermis viewer, eCRM, eBOL...)

Standardize all messages for easy integration: same (json) format for export, import, stuffing, ...

Digital handshakes and NxtPort security protocols safeguard sensitive information





BULKCHAIN UP AND RUNNING























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Inspiring our Future FONASBA webinar

Dominique Willems, DCSA

December 9, 2020

Agenda





Introduction of DCSA





Digital Container Shipping Association (DCSA) is a neutral, non-profit association with the mission of leading the industry towards systematic collaboration.

DCSA drives initiatives to make container transportation services transparent, reliable, easy to use, secure and environmentally friendly.

DCSA's open-source standards are developed based on input from DCSA member carriers, industry stakeholders and technology experts from other industries.

www.dcsa.org

Digital Container Shipping Association Founded in 2019 by 9 Shipping lines Members currently represent 70% of

Members currently represent 70% o global container transport

To enable system interoperability through open source standards

Non-profit & Vendor neutral

Standards include Track & Trace, e-Bill of Lading, IoT Container Connectivity and Cyber Security

Do's and Don'ts for digitalisation



Digitalisation provides obvious benefits like cost reduction, predictable operations, increased quality & control and improved customer experience. While going digital, it is important to keep in mind the following principles:



Digitalisation is not a goal in itself

Increased efficiency should be the goal – digitalisation is a tool to achieve that



It is not about the technology

It is about how the technology is used. Don't use a chainsaw in the same way you use an axe.



IT is not just for the IT department

IT provides the tools with which we do our daily work. In order to master our profession, we have to master the tools



Don't digitize documents

Instead focus should be on Electronic Exchange of Data. If processes remain the same limited benefits will be achieved



Do more with less

True innovation is a matter of achieving the same goal with less resources, not adding elements onto existing practices



Have fun!

Digitalisation has become a fact of life. It is better to embrace and utilise it, than to fear and ignore it

Most importantly, the main challenge of digitalisation in transport lies not in a lack of digitalisation. In fact, there is an abundance of digital systems, solutions, platforms, etc. The lack of interoperability between them is the main challenge. And that is what DCSA addresses.

Why DCSA was created





"We feel this is the only way to go, and that's why we joined the initiative trying to bring our support to this collaborative effort."

Hapag-Lloyd

"We believe it's now the right point in time to work together, as partners, to strive for a greater degree of standardization. We're looking forward to provide active contribution into this journey."

"We cannot wait. We have to take action now."

M YANG MING

"We believe the shipping business models will be more efficient, innovative and sustainable driven by the waves of digitization and standardization. We also look forward to digital transformation to provide better value-added services to customers."



"ZIM believes that standardization is the right way for the Shipping industry to improve the eco-system efficiency and enable quick adaptation of the new digitized processes."



"This is absolutely the right time for us to leap forward and bring standards so that we can operate better in this industry."

MAERSK

"It's not an additional burden to make this come to life. It's actually a cost decrease over time and an effort decrease over time starting on day one."

EVERGREEN

"In a more and more connected shipping supply chain, we are convinced that standardization is the prerequisite for all associated stakeholders to realizing effective digitalization and interoperability, which are urgently needed not only by us but the whole industry to help carry out the joint pursuit."

HMM

"One of the major issues we need to discuss is to establish standards for a common technology foundation which an individual carrier can't handle. We believe DCSA can facilitate the necessary cooperation among carriers as a neutral party."



DCSA's focus in 2020 and 2021 – driving standards adoption to benefit the industry



Develop standards to address container shipping market needs

Industry Blueprint

Data and Interface standards

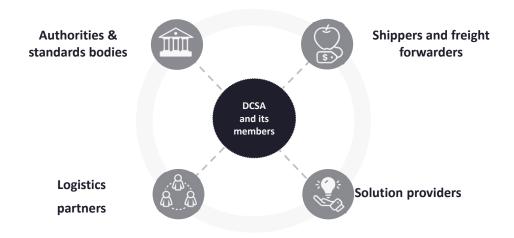
Container Connectivity

Cyber Security standards

Just-in-Time Port Call

eDocumentation

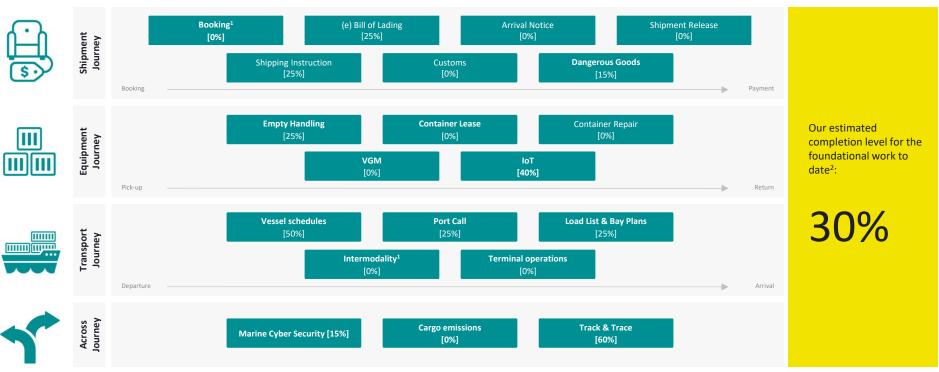
Increase collaboration with stakeholders to drive standards adoption



Key journeys identified in the DCSA Industry Blueprint



We have started building the foundation, but it is not complete



Notes:

- 1. For "Booking" and "Intermodality" we work on harmonising structures to ease the interactions
- 2. Work related to new technologies, e.g. blockchain, is not included. This is also the case for new activities, which have been identified in our strategy (roadmap) process

Data & interface standards



Challenge

Today's EDI solution is not sufficiently standardised, resulting in hundreds of thousands of individual connections in the industry. This means:

- IT resources are consumed by EDI maintenance, leaving little room for innovation
- EDI expertise is hard to find among young workforce as it is legacy technology
- The volume of messages is rapidly increasing, pushing the industry to adopt new, scalable technology

DCSA goals

To deliver standards for a reference information model and interfaces that enable efficient cross-industry, system-level interoperability

Program shares many projects with others, including:

Shipment journey

- Track & trace (started in 2020)

Equipment journey

- Empty handling (started in 2020)

Vessel journey

- Vessel schedules (started in 2020)
- Load lists & bay plans (started in 2020)

In addition:

- Harmonising code lists and making them available in machine-readable format (e.g. terminal codes)
- Providing Open API definitions and design principles to expedite standards adoption using API, which is easier to maintain than EDI and allows for a self-service offering

Why now

The Program is the pre-requisite for the other initiatives. It sets the foundation for IoT, Just-in-Time Port Call and eDocumentation.

The potential annual savings from reduced communication time alone is estimated at:

€ 80M

There is additional potential to free up significant resources for innovation that are currently spent on EDI maintenance.

¹The calculation is based on reducing time and manual effort required for processing:

- 32M shipments per year
- 142K port calls per year
- \$28 hourly rate of staff wage
- Other assumptions for T&T, vessel schedules, DG, LL&BP available

DCSA initiatives and milestones in 2020



Industry Blueprint

Processes, milestones and messages for the container journey

Data & Interfaces

Information model, standards such as Track & Trace, Operational Vessel Schedules

Cyber Security Onboard Ships

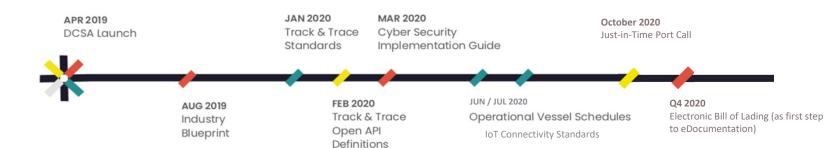
Framework and best practices

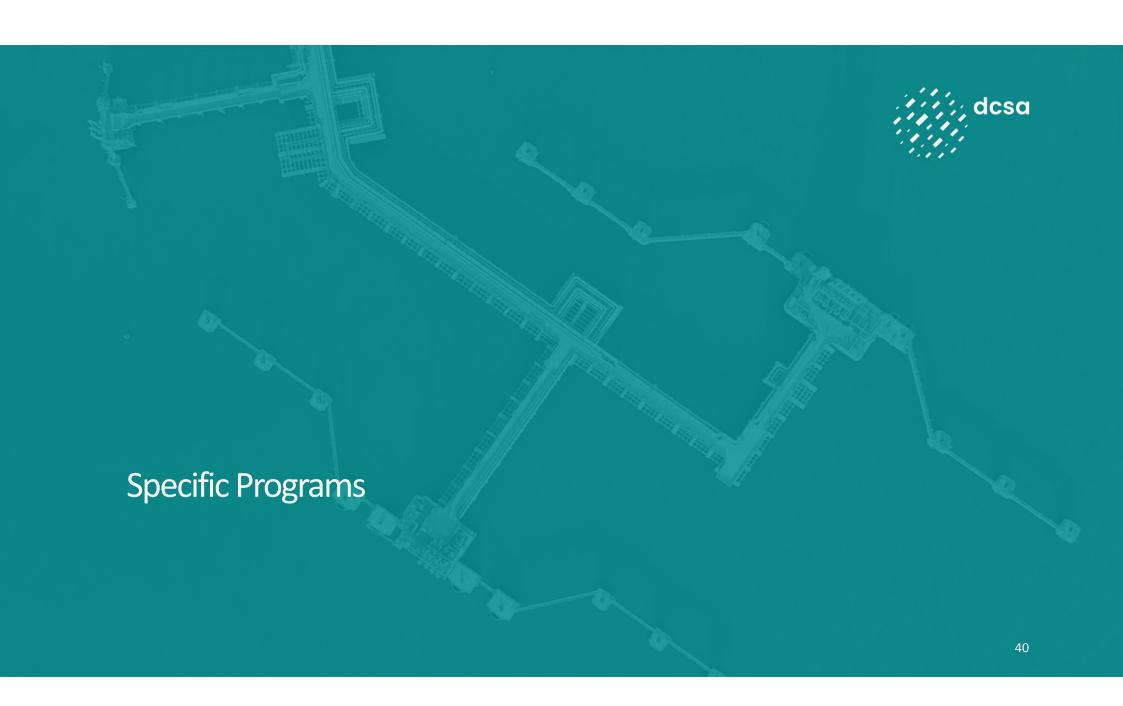
IoT

Network infrastructure connectivity, data structure and handling, physical device specs, security and access management

Just-in-Time Port Call

Less emissions, higher reliability



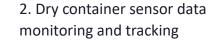


Container Connectivity





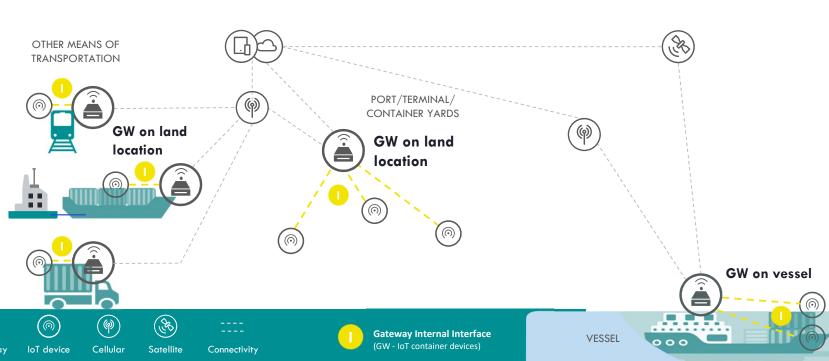
1. Reefer container sensor & other data monitoring, tracking and remote control



3. Automatic electronic container registration

GWs on vessels: GW that enables smart containers' connectivity on the vessel

GWs on land locations: GW that enables smart containers' connectivity in static and moving environments (e.g. barge, trains, trucks) on land







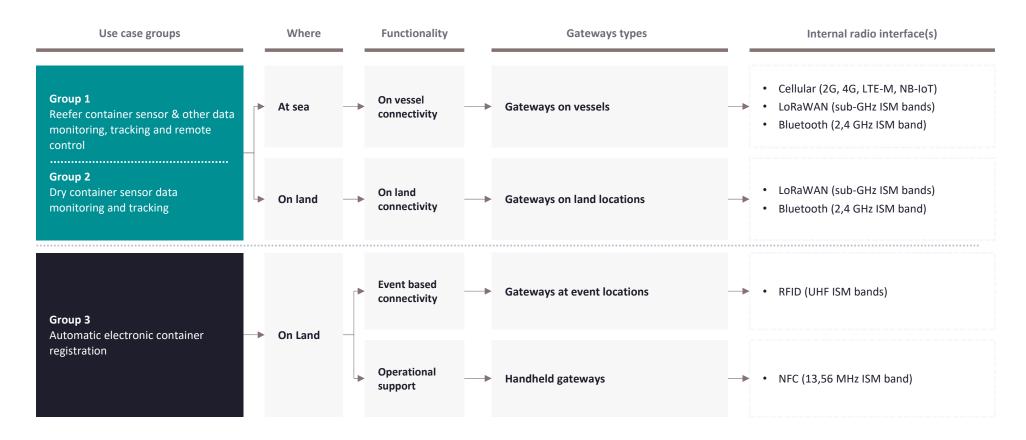






Container Connectivity





Just In Time Port Call

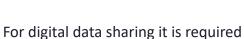


17 timestamps around 5 actual events as basis:

- Input from TIC4.0 indicate potential additions
- Pilot may identify the need for additions, changes or deletions based on input from ports, terminals, carriers



that:



- 1. Carriers, ports and terminals can produce their respective time stamps from their systems
- 2. Carriers, ports and terminals can share the time stamps digitally within the eco system



Work is done/must be done on:

- Web based UI
- Data Model
- Message format(s)
- Communication Protocol
- APIs/EDIs
- Data hub
- Data Sharing Agreement

Just In Time Port Call



Just In Time Port Call Ecosystem

Pilot deliverables:

- 1. Data model tested, agreed and accepted by carriers, ports & terminals
- 2. Carriers and, minimally, 2 ports and 2 terminals participate gradual expansion throughout the pilot
- 3. Detailed IT Business requirements defined
- 4. Basic IT system that supports pilot data exchange
- 5. Proven business case per carrier
- 6. Preparation Go/No Go decision

POC

Validate with member carriers what data is available and how to access it. Prepare for later (ERP) system integration.

Grow number of key port call stakeholders (deliverables 2, 5, 6)

The more actors join, the more standardised data will be shared, making port calls more transparent and easier to improve for all actors.



Capture and share key events in a standardised way across the port call ecosystem (deliverables 1, 6)

Standardised timestamps lead to more data that is shared, which will create more (real-time) insights to unlock business value potential.

Build digital port call (re)planning process (deliverables 3, 4, 5, 6)

Higher levels of digitalisation lead to more real-time situational awareness, better planning, improved reliability and enhanced speed optimisation.

The pilot program is driven by DCSA members with input from ports and terminals

Just In Time Port Call





Terminal operators

Local ports

& terminals











M P A SINGAPORE

Maritime and Port Authority of Singapore



- o PSA
- o MPA



- Port of Hamburg
 - Port Authority
 - o HVCC



- Port of Antwerp
- Port Authority
- o MPET
- o TIL
- NxtPort



- Port of Rotterdam
 - Port Authority
 - PortXchange



Port of Valencia



- Port of Longbeach
 - Port Authority

External bodies







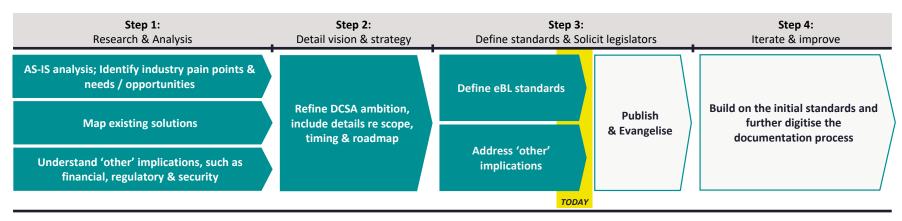




Electronic Bill of Lading



From May till now we have concluded step 1, 2 and 3. We are about to finalise setting the first standards focussed on the Bill of Lading



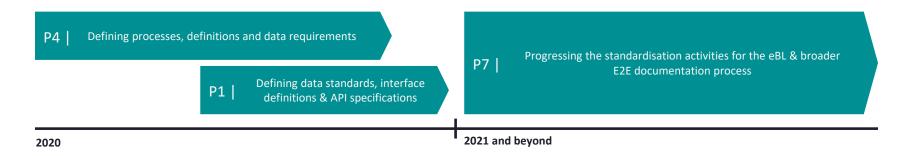
Both our members as well as many other industry players have been involved in step 1, 2 and 3 through interviews, bi-weekly meetings, demo's, workshops, etc.

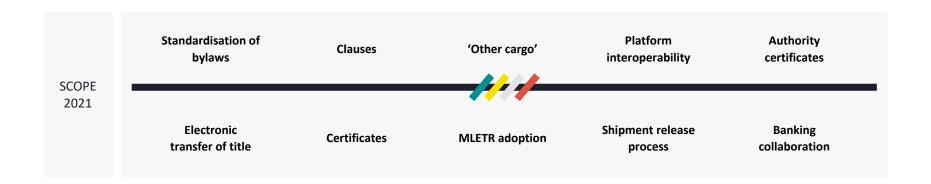


Electronic Bill of Lading



As of 2021 eDocumentation will be a separate program







Cooperation between FONASBA & DCSA





At DCSA we believe that only through cooperation across the industry, digitalisation can be made a success for all.

FONSABA, its Members and the companies they represent are a key stakeholders when it comes to information exchange and efficiency in shipping

We sincerely hope that this webinar will be the start of a fruitful and mutually beneficial relationship between FONASBA & DCSA

What can we cooperate on?

Exchange of knowledge & ideas

Support each others' development

Join forces towards authorities & international organisations

Make digitalization a success for all

More info & Contact



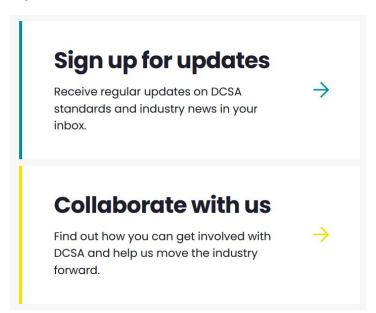
To find out more about DCSA, its work and to stay involved, please visit

https://dcsa.org/get-involved

We want to hear from you

Frequently asked questions

- General frequently asked questions (FAQs)
- FAQs about Track & Trace standards and API definitions
- FAQs about IoT standards for container connectivity





Thank you for your attention



THANK YOU FOR JOINING US!

Up next:

Ship Agent Plenary Webinar,

Wednesday, 13th January 2021

See you there!

Until then, Season's Greetings and Happy Holidays!



#seafarersdeliveringchristmas

Together we can make Christmas 2020 and other seasonal festivities special