The mission of the Digital Container Shipping Association (DCSA) is to become the de facto technology standards body in container shipping. Since DCSA's launch in April 2019, we have made strong progress on building a team, driving standardisation initiatives with our member companies, and generating broad awareness and support for our mission around the world.

To drive industry-wide adoption of DCSA standards, we must actively and frequently communicate with our key stakeholders, including our carrier members, customers, ecosystem partners, regulatory bodies and industry influencers. This newsletter is a key step towards informing the industry about the business benefits that can be gained by adopting DCSA standards and our progress on enabling change.

In this first edition, we've highlighted some exciting activities we've engaged in during 2019. To bring you up to date on our standardisation work, we've summarised four initiatives underway on the following pages. These initiatives are building a solid foundation for cross-industry collaboration and enabling innovation for container shipping.

**Highlights**

- **Building a team** - We are on track to have 23 full time employees by the end of 2020. We have already hired eight and identified seven for Q1. Bringing expertise in-house enables us to build knowledge, strengthen our relationships with stakeholders and pick up the pace.

- **Spreading the word** - In 2019 DCSA presented at more than 20 conferences. We are planning our 2020 event calendar, and will be speaking at TPM 2020 among others.

- **Engaging with regulators** - Regulators are increasingly focused on data protection and digitisation of transport and logistics. We actively engage with many, such as the Digital Transportation & Logistics Forum (DTLF), Federal Maritime Commission (FMC) and the U.S. Customs and Border Protection (CBP).
Even though DCSA was only established a few months ago, we have made great strides in enabling mutually beneficial collaboration among carriers. In October 2019, we published the Industry Blueprint (see below for more), outlining a syndicated set of events agreed upon by nine of the largest carriers in the world. It sets the foundation for other projects to deliver tangible business benefits.

In January 2020, we will publish our second set of standards for aligning data definitions and interfaces (see the next page for more). This milestone is very exciting because, with the same operational definitions, underlying data definitions and data architecture, a customer will be able to use our syndicated API design to track containers across all nine carriers with uninterrupted visibility.

Of course, customers will only see the value of our work after DCSA members have implemented the standards. We count on you to drive adoption within your company and are ready to support you.

**Industry blueprint, creating a common language**

For many years customers have requested more transparency in the services provided so that shipping follows a similar process for all carriers. To enable transparency and facilitate collaboration in the shipping industry, we embarked on a foundational project to align our processes in a blueprint. All stakeholders can now access the result of this project on the DCSA website. This is an important step to facilitate standards creation and enable digitisation.

The Blueprint has enabled us to agree on the definition of specific transport events for customer track and trace purposes. For instance, the meaning of “vessel arrival” is now clearly defined to mean “once the vessel is berthed at the port terminal and mooring has been completed”. In total we have defined more than 50 events which will enable carriers and customers to have the same understanding. Not only are we speaking the same language, we are also using the same vocabulary.
Alignment of data definitions and interfaces

Information and data are critical for the container shipping industry not only for use within the individual liner carriers, but also for sharing vital updates across the industry. Today the data landscape in the industry is complex. Carriers, customers and third parties use many different technologies, data definitions and data exchange methods when communicating with each other.

To reach alignment, we have developed a shared data language and logical data model for the container shipping industry, called the “DCSA Information Model”. It will serve as the foundational data language for the industry. The Information Model is based on the business terms defined in the Blueprint and has been mapped by DCSA against other popular data models and IT standards. This mapping is key because it will ensure that we speak the same business and data language across standards.

As our first use case for data and interface standards, we focused on Track & Trace, specifying a common set of interfaces that can be used by carriers and third parties for end-to-end shipment tracking. The same data definitions and business rules are applied across different implementations, such as for integration with legacy EDIs or new APIs, email notifications or website presentation.

In January 2020, we will publish a machine-readable version of the Track & Trace standards, enabling carriers and third parties to directly implement the interface data requirements without having to program the definitions. This will reduce implementation time and simplify standard compliance across carriers.

IoT standards for container shipping

The objective here is to provide a reliable basis for DCSA members to share requirements and specifications for IoT solutions installed on containers, such as GPS tracking and smart containers. By establishing a framework of standards, we aim to enable scalability of IoT solutions as well as ensuring operational efficiencies and interoperability between carriers.

To achieve these goals, we have defined two tracks for this project:

1. Network Connectivity
2. Devices & Gateways

Kicked off in October 2019, the Network Connectivity track addresses the communication technology layers of IoT solutions. We expect to complete these standards by May 2020.

The Devices & Gateways track will be kicked off in 2020, focusing on defining the properties of IoT devices mounted on the container and gateways in terminals, warehouses and vessels.

Cybersecurity onboard ships

In an age where IT and operational technology is increasingly connected and automated, the ability to prevent cyber attacks is a core competency every carrier must have – on shore and onboard ships.

The International Maritime Organisation (IMO) has adopted a resolution that cyber risks should be appropriately addressed in safety management systems no later than the first annual verification of a company’s Document of Compliance, starting on 1 January 2021. This means every carrier must prepare an implementation framework to address cyber risks onboard ships during 2020.

To help carriers meet this timeline, we have kicked off the cybersecurity initiative to facilitate framework creation and provide best practice guidance to carriers. The implementation consists of a series of practical recommendations wrapped around the NIST Framework which is the recognised authority on cyber risk management.
About DCSA:

Digital Container Shipping Association (DCSA) is a neutral, non-profit group founded by major ocean carriers to digitise and standardise the container shipping industry. 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. DCSA member carriers include: MSC, Maersk, CMA CGM, Hapag-Lloyd, ONE, Evergreen, Yang Ming, HMM and ZIM. Please download DCSA standards at dcsa.org.

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