WHY STANDARDS MATTER

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You have probably noticed the current trend for dismissing experts and claiming that the detail isn't important. It may be unfashionable to say so, but expertise and detail really do matter. In the field of shipping, transport and trade, these are the factors that underpin the smooth running of millions of supply chains. In the rush towards digitalization, we are increasingly hearing claims that 'there are no data standards being utilized'. That is completely false.

As the digital exchange of data continues to proliferate in the maritime industry, there is a popular misconception that there is a lack of standards. In fact, the maritime industry has been developing, refining and using international standards for many years.

EXISTING STANDARDS

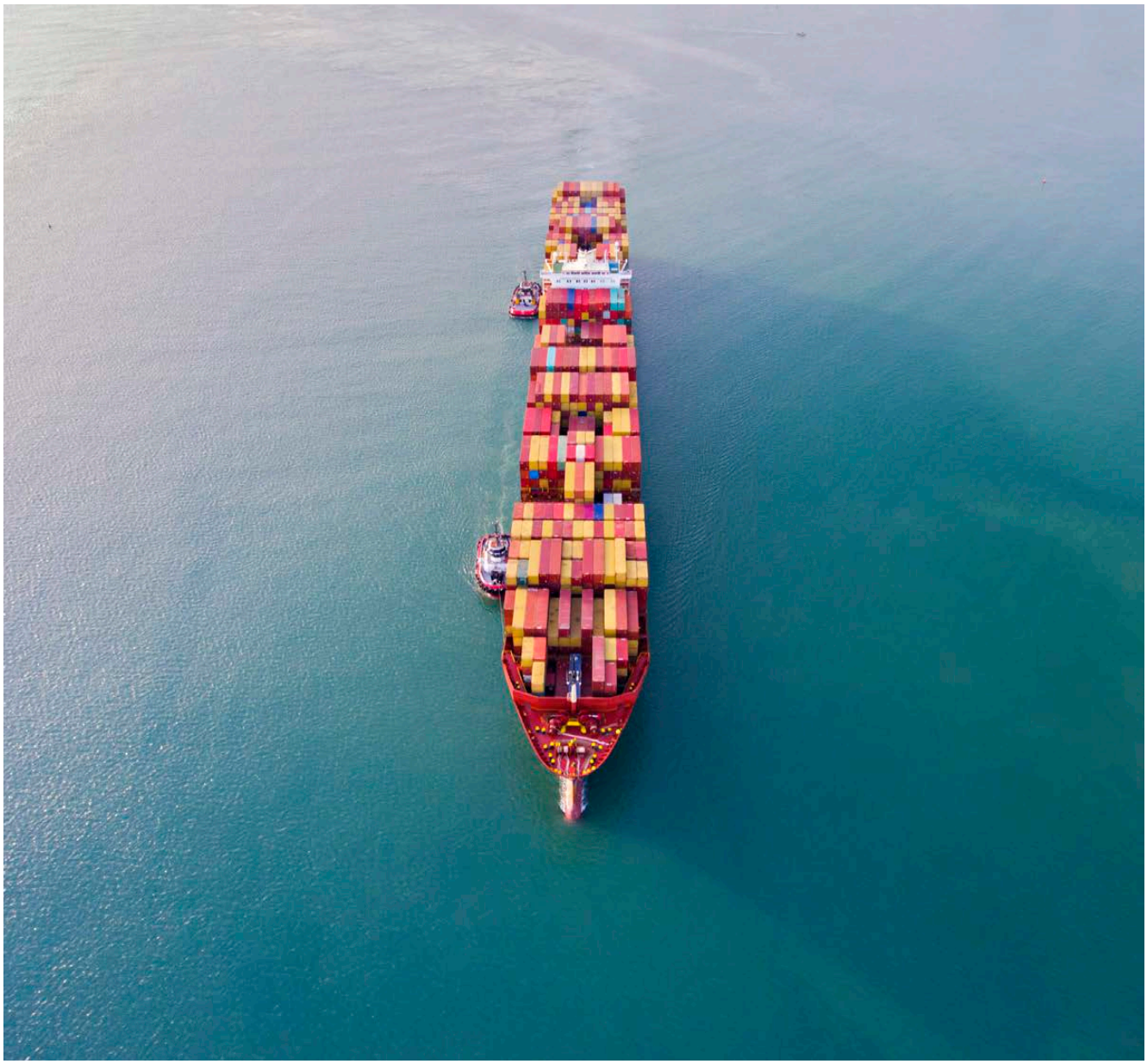
There are three main generators of standardized data models. The majority of the industry is using EDIFACT messaging, as well as linking into World Customs Organization (WCO) data models. A third part of the jigsaw is the International Standards Organization (ISO), which has multiple sets of internationally recognized standards.

In addition to the above, organizations such as the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), GS1 and others have standards used for navigation, shipping and cargo. Also, specific Message Design Groups derived from UN/CEFACT (the United Nations Centre for Trade Facilitation and Electronic Business) activities have been in place and working on the development and maintenance of internationally acknowledged message standards for many years.

These include PROTECT - established by major port authorities in Europe, supported by their Port Community Systems, focusing on standard messages for vessel reporting - and SMDG, which originated with carriers and terminal operators. So, depending on the requirement, there is likely to be a data standard already in use. In a first for the industry, the International Maritime Organization has also been working in collaboration with the WCO, UN/CEFACT and the ISO, in developing its own data reference model to define all the elements of the electronic FAL forms.

THE NEED FOR CLARITY

Why does all this matter? Well, if you don't have any standards, then the result can be a lack of clarity, total confusion or a complete misunderstanding between partners and businesses. By way of an example: what does 'port of arrival' or actual time of arrival (ATA) actually mean? For a port or maritime authority, it generally means when the vessel enters port territory. For customs authorities, it is interpreted as when the vessel is actually alongside the quay. Those are two different places, with a significant time difference between them.



In the case of the Port of Antwerp, the ATA is when the vessel enters the port's boundaries – that being at the Coordination Point, still on the River Scheldt. It will be another two hours before the vessel arrives according to the customs definition – or sometimes longer, if you have to make use of the locks. That's all very well, but if you are the company that needs to deliver provisions to the ship, or one of the many other official visitors needing to get onboard, you could have a long wait.

We do need to speak one language and that is why standards are so vital. What do we mean by data standards? Well, we are not talking about technology, despite what many people think. Technology is the way that you implement the standards. The standards themselves provide precise definitions. As new technologies emerge and new ways of exchanging information evolve, it is even more vital that these data standards are maintained.

THE DETAIL

UN/CEFACT is a subsidiary intergovernmental body of the UN Economic Commission for Europe (UNECE) and serves as a focal point for trade facilitation recommendations, as well as electronic business standards. Its members are experts from intergovernmental organizations, individual countries' authorities and the business community. UN/CEFACT is responsible for the maintenance and development of EDIFACT – the Electronic Data Interchange for Administration, Commerce and Transport.

The EDIFACT standard provides a set of syntax rules to structure, an interactive exchange protocol, and a set of standard messages which enable multi-country and multi-industry exchange of electronic business documents. During its 33rd Forum held in Geneva in April, the UN/CEFACT experts discussed and progressed standards relating to Single Window, Internet of Things, Smart Containers and Data Pipeline. Also discussed were topics such as Sustainable Textile and Leather Traceability and Waste Management – just to give an idea of the kind of detail we are talking about here.

The Forum also discussed the requirements of the IMO's revised Facilitation of International Maritime Traffic (FAL) Convention, which came into force on April 9. This requires that all ports in the world work towards the receipt of electronic FAL documents. This is no longer a guideline but international law – every port should accept and every vessel should submit information electronically. It makes sense that they should all have the same standardised definitions; after

all, the idea is to reduce the administrative burden on ships' officers.

A key part of that simplification comes from painstaking work to avoid asking captains for the same information over and over again across the various FAL forms. That simplification is achieved through old-fashioned attention to detail, by experts. There is no simplification to be had from new technology in isolation.

The IMO data reference model was approved by the FAL Committee in April. UN/CEFACT, the WCO and the ISO will all work now to update their own standard data models based on this reference model, ensuring they can be easily mapped. UN/CEFACT's Core Component Library is home to more than 1,200 data definitions that are widely accepted around the world. An easy-to-recognise example is IFTDGN, the International Forwarding and Transport Dangerous Goods Notification message used universally for declaring dangerous goods to the port. New data reference models are emerging to cover multimodal transport, the end-to-end shipment of goods.

EDIFACT was developed more than 30 years ago, based on the technology that was available then. Yes, there's a tendency to say it is 'old school' against the background of the technology revolution since then – but shipping lines still use this standard most of the time to communicate with ports and terminals. It works – and why change something that works just to incur costs and end up doing the same thing as before?

ARE NEW STANDARDS NECESSARY?

The past two years have seen an evolution towards more recent technology such as web services or APIs – which make use of either XML or JSON, for instance. Blockchain is also gathering pace as a technology that promises 'disruption'. However, any change will be slower than the overnight 'disruption' envisaged by some. Whatever new technology you deploy, the data element and data definition do not need to change; whether it is blockchain, API or another approach, these new technologies are just a way to exchange data. You might buy a new lead for your dog – but it's the same dog that will need the same walk tomorrow.

Also, we should never forget that the data is there not for its own sake, but to enable a process. For example, certain data brought together in a set will create a customs declaration. If there was no need for a declaration, there would be, quite simply, no need for the data. Just because technology is changing, the standards that technology is handling do not need to change. This is because new technology has no impact on the already agreed rules on identifying a vessel by name and number. Yes, you need the technology to implement them – but the actual standards work is all about semantics.

The advance of new technology and messaging will bring new ways of sharing data; the data reference models stipulate the data element and definition, so that when you do exchange data you know that you are exchanging the same thing. We need to make sure that the basics are correct.

LOOKING TO THE FUTURE

Twenty years ago, it would have been a pipedream to imagine the three main standards organizations working around the table within the IMO. In the past, they were working on their own. Now there is more co-creation and a more joint approach. And 20 years in the future? We have a good basis for progress in the coming years. The new European Maritime Single Window regulations refer to the IMO data reference model and the subsequent efforts to be built on this foundation.

The International Port Community Systems Association (IPCSA) is constantly pushing for the use of international standards in all technologies for data definition. The existing data standards organisations have been diverging and we would urge them to work more closely together. Governments, the industry and all those involved in cross-border trade should encourage the convergence of data standards, to ensure that they can be mapped across from one to another – giving the trade choice as well as easier interoperability. We would also implore the standards organizations to streamline their processes for the approval of standards.

Meanwhile, the industry itself should be more proactive. Standards organizations are open to support from the trade but the trade itself tends to sit back and expect others to do it – then complain that there are no standards. It is in the sector's interest to find out, to learn and to contribute its expertise.

We see this already in the newly formed Digital Container Shipping Association (DCSA) and welcome this initiative to help the implementation of standards globally, which will mean that processes and ultimately cargo will flow more cost effectively, thus benefiting the whole supply chain.

UN/CEFACT and the other standards agencies do hugely important work but its achievements haven't been widely publicized. Often its work is simply not known or understood. But let's stop talking about there being 'no data standards'. Let's start talking about developing these existing standards to be fit for today's world.

ABOUT THE AUTHORS

Richard Morton has been Secretary General of the International Port Community Systems Association (IPCSA) since its beginnings as a European organisation in 2011. As an expert in trade facilitation and the exchange of electronic information, Richard is in demand across the globe as an adviser and speaker. He is a member of the Experts Committee of the APEC E-Commerce Business Alliance and an Expert at UN/CEFACT.

Nico De Cauwer is Business Architect Digitalisation & Port Community Projects at the Port of Antwerp. He started his career at the Antwerp Port Authority as a Project Manager & Business Analyst in 1994. He has combined this with his work as a Business Consultant at the Antwerp Port Community System since 2011. Within IPCSA he is chairman of the Standards & Technology Subcommittee. Nico played a major role in the development of the IMO's data reference model approved by the FAL Committee this year, and is Project Lead at UN/CEFACT in its work to define and establish the organisation's new data model based on the IMO work.

ABOUT THE ORGANIZATION

IPCSA is an international association of sea and air Port Community System operators, sea and air port authorities and Single Window operators that is recognised across the globe for providing advice and guidance on the electronic exchange of information across borders and throughout the whole supply chain. Formed in 2011 as a European association, IPCSA became an international association in 2014. The association currently has 41 members from across the globe who handle the exchange of information for Business to Business, Government to Business and Government to Government processes and facilitate the smooth cross-border movement of goods. This equates to the electronic exchange of information relating to more than 500 million TEU movements and 10 billion tonnes of cargo for air, sea and land transport – estimated to be in excess of 20 million electronic messages and exchanges every day. IPCSA focuses on supporting and facilitating systems and innovations for Port Community System members and users, and promoting the use of international data standards in sea and air ports, at border crossings and via Single Window systems around the world. IPCSA is a recognised NGO with consultative status at UNECOSOC and IMO.

ENQUIRIES

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