





The chemical industry has a huge amount of ground to make up as it embraces what is widely heralded as the “Fourth Industrial Revolution”. However, it is clear that chemical companies are now making the leap to light speed and implementing powerful new digital systems to deliver real efficiencies and boost competitiveness.

More data has been created in the past two years than in the last two decades, which presents us with a huge challenge both to store and analyze effectively. Data is the currency of this revolution and enables a heightened level of transparency between organizations that reinforces trusting partnerships and business relationships. However, it is also open to manipulation and misuse, so it must be handled with care, sensitivity and total security.

The challenge to any business producing “analogue” products, and wanting to harness the potential of digital revolution, is to create an effective interface between the digital and the physical. That is the critical reason it has taken the chemical industry longer to adopt these new technologies than other sectors. The internet of things (IoT) helps to bridge the gap between the digital and the analogue. Knowing exactly where shipments are, and precisely what conditions they are encountering, offers huge reassurance when you are handling large volumes of potentially volatile and hazardous materials. And by monitoring every shipment at a container level, we can assess risks much more accurately and use the data to develop, engineer and deploy safer and more cost-effective cargo protection solutions.

### **The revolution can't succeed without a rapid evolution in logistics.**

The pace of digital change continues to accelerate. Where the potential of digitization has been the topic of key industry events such as LogiChem in the past, this has now shifted to discussions about real applications of digital technologies which are actively delivering transformational change.

There is no doubt that digitization has the potential to transform value chains, drive higher productivity and create new channels to market. Consequently, the world's major chemical companies are now in a race to derive maximum value from the digital revolution.

However, all these changes are placing new pressures on the logistics teams responsible for the physical transportation of high value and often dangerous goods. Digitization is taking them along new routes, using different modalities and carriers, to new customers. In this changing environment, it is vital to separate the substance from the hype and carefully evaluate what practical operational changes this will mean for the industry. Transporting your cargo more safely, quickly and reliably is critical if your business is to deliver against the heightened customer expectations of the new digital world.



## Successful digital operations rely on optimizing functional excellence at every stage of your supply chain.

In the dash to digital, it is important to take a step back and recognize that digitization is all about enabling functional excellence. Protecting physical cargo right across your supply chain is fundamental to delivering functional excellence. And, to address the pressures of new, more efficient, digital systems, those cargo protection solutions should be fast to apply and error-proof.

To implement them effectively, everyone across the supply chain must be trained to fully understand them and be able to apply them efficiently. Solutions must be designed to match specific modalities, regulations and load types and operatives need to know where each solution should be deployed. Finally, they must be continually improved. As digital systems capture increasing amounts of information about cargo journeys, we can protect cargo more effectively.

Failure to do any of this will inevitably result in damaged goods, supply chain disruption, higher costs and, ultimately, real harm to customer relationships. This is particularly dangerous in a digital world where trust is widely acknowledged to be the single most important commodity. Global research by leading digital marketing agency, iProspect, found that nine out of ten businesses rank trust as the number one priority to drive growth in the digital economy. It is easily lost and almost impossible to regain.

## Digital means nothing without trust.

To derive maximum value from big data, it is crucial that you put your trust in partners whose brands are backed with credibility, relevance and total reliability. This will not only ensure that data is entirely secure, but also that it will be analyzed with the depth of expertise required to realize its full worth.

Innovations like blockchain are helping to create new levels of trust and transparency. Ultimately, that will mean the way that everything about a cargo (including the way it is loaded and secured) will be clear to anyone handling it. As we move towards that point, we must adopt a culture in which cargo protection is engineered to the highest quality and regulatory standards. This is especially important in the chemical industry where any kind of failure can result, quite literally, in disaster.

Digitization is already beginning to offer massive cost and time efficiencies thanks to the increased flexibility of digitally-enhanced routing and tracking. However, to fully leverage these efficiencies, logistics teams must configure and protect their shipments to secure the trust of regulatory bodies such as the IMO and AAR. This will allow them to pass unchallenged from one modality to the next, flowing freely through different international jurisdictions and leveraging new digitally-optimized routing.

Failure to understand the regulations for every modality in every jurisdiction could lead to shipments being delayed or even rejected. The consequences of this can be huge – potentially affecting productivity, profitability and sustainability. If the shipment is to an external customer, this could undermine the trust in that relationship beyond repair. If it is between your facilities, it could affect critical aspects of production impacting your business performance and damaging inter-departmental relations.

Nothing will erode trust faster than cargo that is damaged, delayed or rejected. So, while engineered cargo protection might not appear first on companies' lists of digital priorities, it is possibly the single most important thing to secure as part of your digital implementation strategy.





## The IoT can protect you in a changing environment and help protect the environment from change.

The term, Internet of Things (IoT), is widely used in the digital space, and it's easy to dismiss as being over-hyped. But, when strategically deployed in logistics operations, it can provide data that is invaluable in improving cargo protection solutions. Cordstrap has partnered with Arviem – a leader in the field of IoT to engineer a market-leading digital service, Cordstrap Cargo Monitoring.

Our IoT-equipped “smart containers”, provide real-time vigilance for customers and collect data to provide fresh insights into the life of your cargo wherever it is in the world. As well as monitoring security status, it reports the temperatures your cargo is likely to be subjected to at along any given route, the moisture levels, and the kind of physical forces and shocks that it might be subjected to. That's especially important as loads on some modalities can be subject to forces as high as 4G and new belt and road routes can lead to very high moisture levels.

Armed with these vast, and constantly expanding datasets, Cordstrap can actively predict and plan the protection their customers' cargo will need. This means we can precisely engineer optimal protection for your shipments against movement and moisture damage and your logistics teams can be fully briefed on the risks of new routes and changing trends on existing routes. As the data picture grows, it enables Cordstrap to continually improve and develop more innovative, tailored and efficient cargo protection solutions for a fast-changing world.

Growing awareness of the speed of that change means that many of our customers have specific sustainability targets and Cordstrap are working in partnership to help customers achieve them. Our digitally-optimized securing solutions are designed to maximize efficiency, and deliver significant reductions in material usage and wastage, compared with competitor systems.

## The digital world is global. Is your cargo protection partner?

Digitization allows businesses to operate much more easily throughout the world but that presents new challenges in itself. Having a cargo protection partner with a truly global support network not only means that logistics teams are fully informed about regulatory requirements wherever new markets emerge, but it can also advise on local nuances and likely climate issues. By working with a single partner, businesses can standardize processes globally, enabling any of their facilities to supply any of their customers to the same standards of best practice.

Working in partnership with a cargo protection expert is also critical. A close relationship will allow them to take a more holistic approach to the businesses as it manages the changes associated with digital transformation. As a trusted partner, Cordstrap will work with every aspect of the business supply chain from Health and Safety to Planning and Packaging. And, of course, a proactive partnership enables us to provide ongoing support and advice to your logistics teams, 3PL partners and insurance providers to secure ongoing efficiencies and further drive down costs.

There is only one cargo protection expert who can offer all that. Cordstrap operates out of over 50 countries worldwide and have partnered with many of the chemical industry's biggest players to protect their cargo, their employees and their reputations. Our market-leading cargo protection solutions secure cargo across all modalities and comply with all the world's key regulations. And our cargo protection experts support our customers with unparalleled global and local expertise. For over 50 years, our innovations have led the way powering business performance through superior cargo protection.

## Contact us

Cordstrap B.V.  
Nobelstraat 1  
5807 GA Oostrum  
The Netherlands

t 0031 478 519 000

w [www.cordstrap.com](http://www.cordstrap.com)

***cordstrap***

Keeping the world's cargo safe