

KONECRANES®

LIFT TRUCKS QUARTERLY

DECEMBER 2016



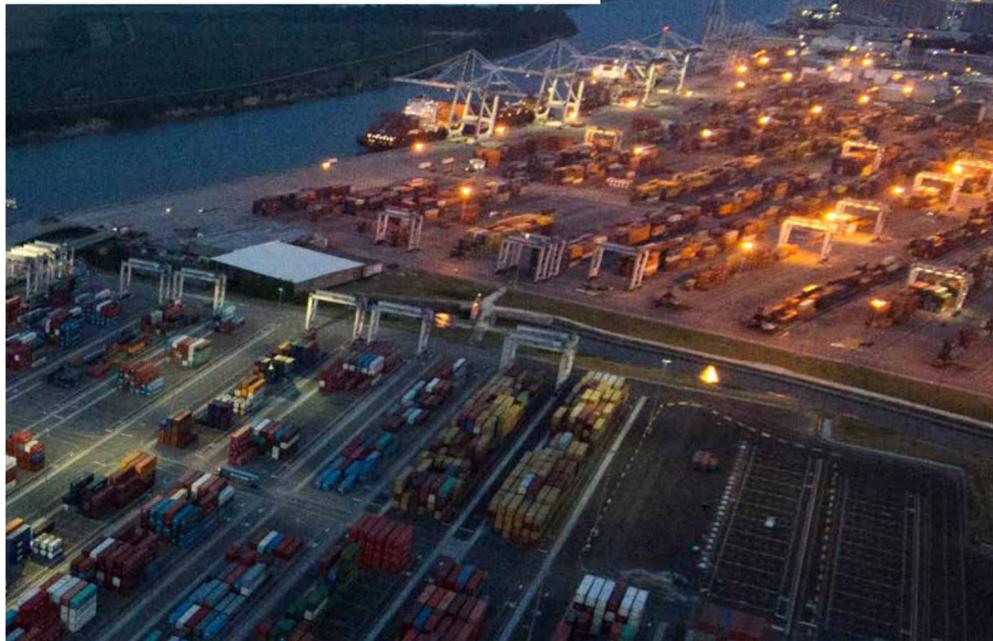
- New Technology for Economical Lift Truck Usage
- Five Steps to Digital Innovation

All news



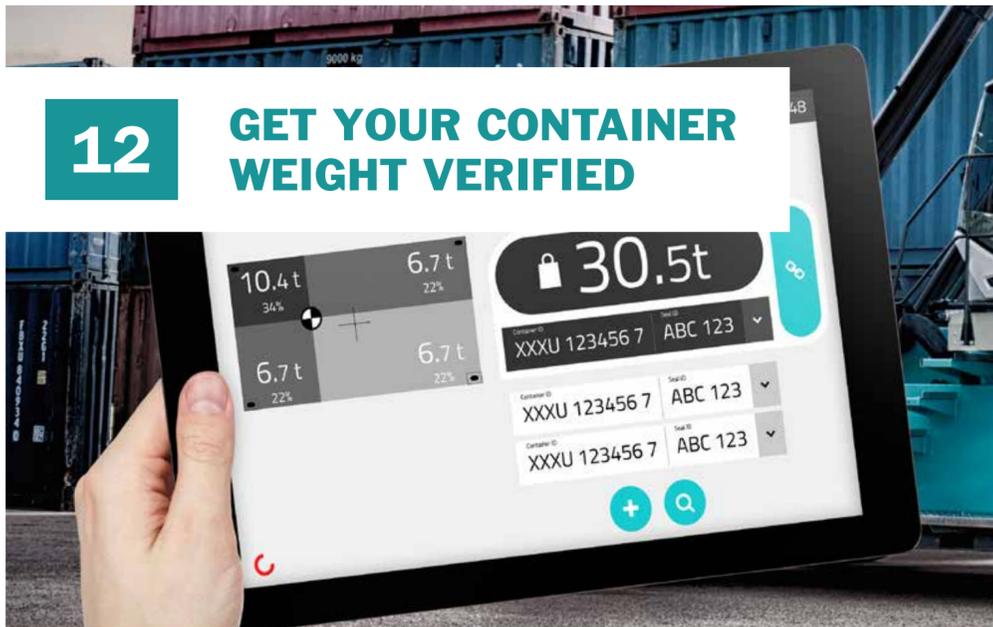
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MACRO ECONOMIC TRENDS

MANUFACTURING ON A STRONG GROWTH TRACK IN EUROPE, WITH US ALSO SEEING YEAR-BEST FIGURES IN MANUFACTURING GROWTH.



REAL GDP GROWTH

Q3 GDP went up in UK and US, went down in France, remained the same in China and Euro Area.



INDUSTRIAL PRODUCTION

Industrial production levels have gone up year-on-year in France, Italy, Spain, UK, Russia and China but went down in Finland, Sweden, US, Brazil and India.



INFLATION

Inflation went down in Brazil, India and Russia, went up in US, China and Euro Area, remained the same in Japan.



CURRENCIES

In October, Euro depreciated against major currencies except for GBP and SEK.



CAPACITY UTILISATION

Capacity utilisation went up in both EU and US.



POLICY INTEREST RATES

Policy interest rates remained steady in October for major economies.



PURCHASING MANAGERS INDEX

PMI went up in most countries. Went down in UK and Italy.



KEEP READING



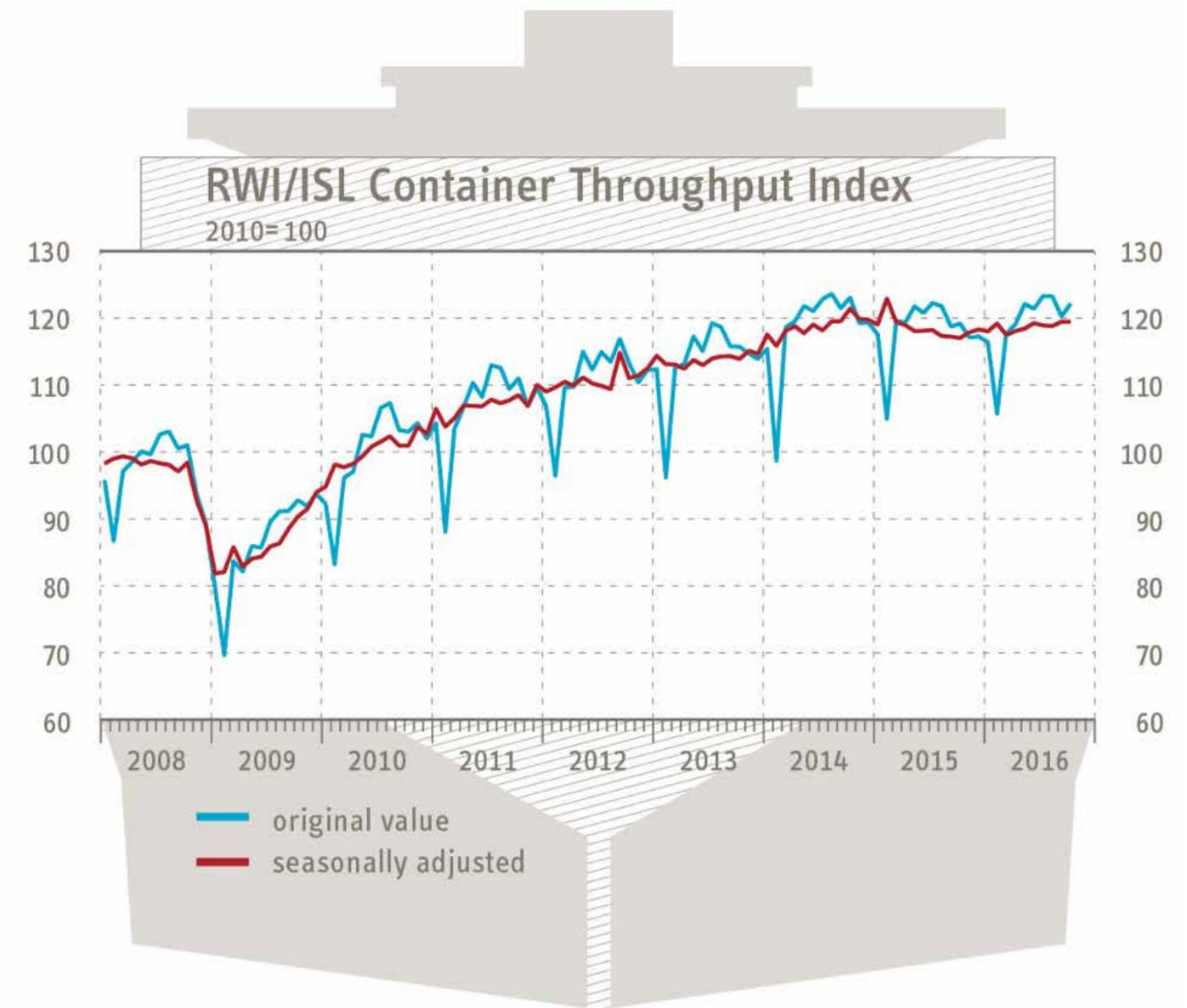
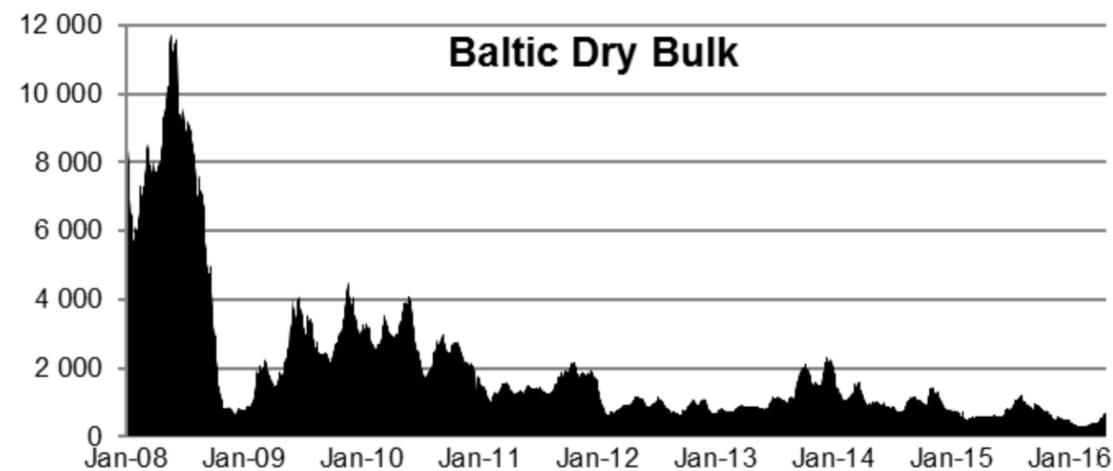


RWI/ISL CONTAINER THROUGHPUT INDEX AND BALTIC DRY BULK

Hyundai Merchant Marine, Korea Shipping Association, Korea Line Corporation, private equity firm Hahn & Co and an undisclosed company have submitted initial bids for collapsed Hanjin Shipping's Asia-U.S. business. The companies are carrying out due-diligence on Hanjin Shipping, and final bids are due by November 7.

Meanwhile, Japan's big three shipping conglomerates have outlined plans to establish a joint venture for their container shipping businesses. Nippon Yusen Kaisha's, Mitsui OSK Lines' and K Line's proposed initiative is subject to regulatory approval, but when approved, the joint venture would operate the world's sixth biggest container fleet, with approximately 7% of global capacity.

The companies have previously been in the middle of ferocious industry rivalry. A joint statement by NYK, MOL and K Line states the motives behind the deal relate to low energy price, weak cargo demand and historically low container freight rates. ■





GLOBAL SECTOR SUMMAR

WHAT ARE THE LATEST NEWS OF GENERAL
MANUFACTURING, MINING AND PORTS? READ MORE
ABOUT THE FORECASTS OF DIFFERENT INDUSTRIES.



KEEP READING

- [AUTOMOTIVE](#)
- [GENERAL MANUFACTURING](#)
- [INTERMODAL & RAIL](#)
- [MINING](#)
- [OIL AND GAS](#)
- [PULP & PAPER](#)
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AUTOMOTIVE

CHINESE GOVERNMENT PIVOTS TO CONVENTIONAL HYBRID PRODUCTION

In a major change in strategy, the Chinese government is pivoting toward production and sales of conventional hybrids following years of promoting plug-in vehicles. The government aims for 25% of vehicles in circulation to be plug-less hybrids that run on both gasoline and electricity by 2030. The new goals set constitute significant change for the country following years of policies, which excluded conventional hybrids from subsidies.



GENERAL MANUFACTURING

APAC TO DOMINATE ADOPTION OF SMART MANUFACTURING TECH

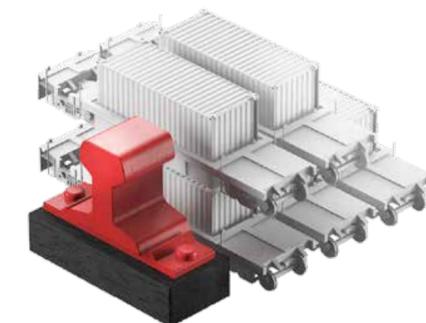
According to a new report from Transparency Market Research the smart manufacturing market globally is expected to expand at a CAGR of 13,2% from 2015 to 2024. In terms of regions, the growth of smart manufacturing of Asia Pasific will show a significant CAGR of 13,6% during the same period due to the growing awareness of better manufacturing technologies amongst producers, growing investments in manufacturing activities and changing lifestyles. A report from Tata Consulting Services expects the installed base of manufacturing IoT devices to swell from 237 million in 2015 to 923 million in 2020.



INTERMODAL AND RAIL

EUROPEAN COMMISSION LAUNCHES EUR 1,9 BILLION FOR KEY EU TRANSPORT PROJECTS

The European Commission has launched the third round of calls for proposals under the Connecting Europe Facility (CEF) for transport, making EUR 1,9 billion available to finance key transport projects. Along with other plans the financing aims at bridging the investment gap in Europe to boost growth and job creation. The new initiative of Commission with EUR 110 million support for smaller cross-border projects and in particular railway connections to help develop local and regional transport infrastructure stimulating development of border regions.





MINING

MEXICAN MINING SECTOR TO REACH USD 17,8 BILLION BY 2020

According to a new report BMI Research report, the value of Mexico's mining industry is set to grow at a CAGR of 3,3% to 2020 reaching USD 17,8 billion. The industry will be driven by the increase in the gold, silver, copper and zinc prices. Gold contributes to 17% of the total value, followed by silver (16%) and zinc (9%). In January to July 2016, Mexico saw its copper and zinc output up 22,3% and 4,50% y/y, respectively, mainly due to low production costs and a robust project pipeline.



OIL AND GAS

OPEC DEAL TO FURTHER IMPACT REFINERS IN ASIA

According to research note by Golden Sachs, oil refineries in APAC, are set to face further issues following the OPEC deal to reduce supply. With crude prices set to rise for consumers through more expensive gasoline, diesel and jet fuel, demand growth will be adversely affected. This could hit Asian refiners hard, they are already making around 40% lower profits y/y, while regional fuel stockpiles in developed economies rose to 174 barrels in June, the highest level for the month seen since 2007.



PULP AND PAPER

INDIAN PAPER OUTPUT TO REACH 20 MILLION BY 2020

JK Paper's vice chairman and managing director Harsh Pati Singhania was recently chief guest of the 55th AGM and Conference of the Federation of Paper Associations in Mumbai. According to Singhania India's domestic sector is currently the fastest growing paper industry in the world. Industry is growing at more than 7% annually and it is projected to grow at more than 4% annually to 2030. Indian paper mills have invested over INR 20,000 crore in the last five years. But it needs investments of INR 90,000 crore to add new capacities by 2030. The paper industry has huge potential to grow as the per capital consumption of India is only 11 kgs as compared to 26 kgs in Asia and 56 kgs globally.





PORTS

PRIVATE INVESTORS SHOW RENEWED INTEREST IN US PORT SECTOR

In the US, infrastructure funds are regaining interest in the development of port public-private partnerships. These unconventional deals include the financing harbor dredging or the underwriting of the purchase of entire ports. Over the last ten years, the valuations of container terminals have fallen significantly. As a result of the fall in earnings, Canadian pension funds and other investment groups, who are looking for reliable, long-term revenue streams, are increasingly looking to the port sector. Despite low returns on capital, ports are still very valuable.

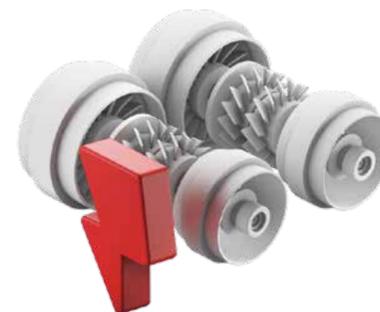


POWER

WASTE TO ENERGY: APAC waste to energy market is expected to grow twofold by 2020. Rapid rise industrial and domestic wastes are provoking governments across the region to support energy production from waste.

FOSSIL FUELS: Mexico's wide-ranging energy reform is expected to reverse the country's declining oil production, increase the share of renewables in the power sector, and slow the growth in carbon emissions.

WIND POWER: According to the International Energy Agency's report costs for onshore wind energy will fall 15% while offshore wind could cut costs by half in the next five years.

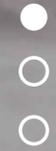


STEEL

WEAKNESS IN INVESTMENT CONTINUES TO HOLD BACK GLOBAL RECOVERY

The World Steel Association forecasts that global steel demand will increase by 0,2% y/y in 2016, following a contraction of -3,0% in 2015. In 2017, it is forecast that global steel demand will grow by 0,5%. Weakness in investment globally continues to hold back a stronger steel demand recovery. However, steel demand in the emerging and developing economies excluding China is expected to accelerate to show 4,0% growth in 2017 thanks to the resilient emerging Asian countries and stabilization of commodity prices. ■





FROM INNOVATION TO DIGITAL COMPETITIVENESS

INNOVATIVE USE OF DIGITAL TECHNOLOGIES CAN INCREASE THE COMPETITIVENESS OF BUSINESS AND CONTRIBUTE TO COMPANY'S TOTAL PRODUCTIVITY. HOW TO GET STARTED WITH DIGITAL INNOVATION? GET TO KNOW THE JOURNEY OF INNOVATION FROM AN IDEA TO REALITY.





FIVE STEPS TO DIGITAL INNOVATION

FIRST YOU NEED TO MAP AND PRIORITIZE THE NEEDS OF YOUR ORGANIZATION. TECHNOLOGY COMES IN SECOND.

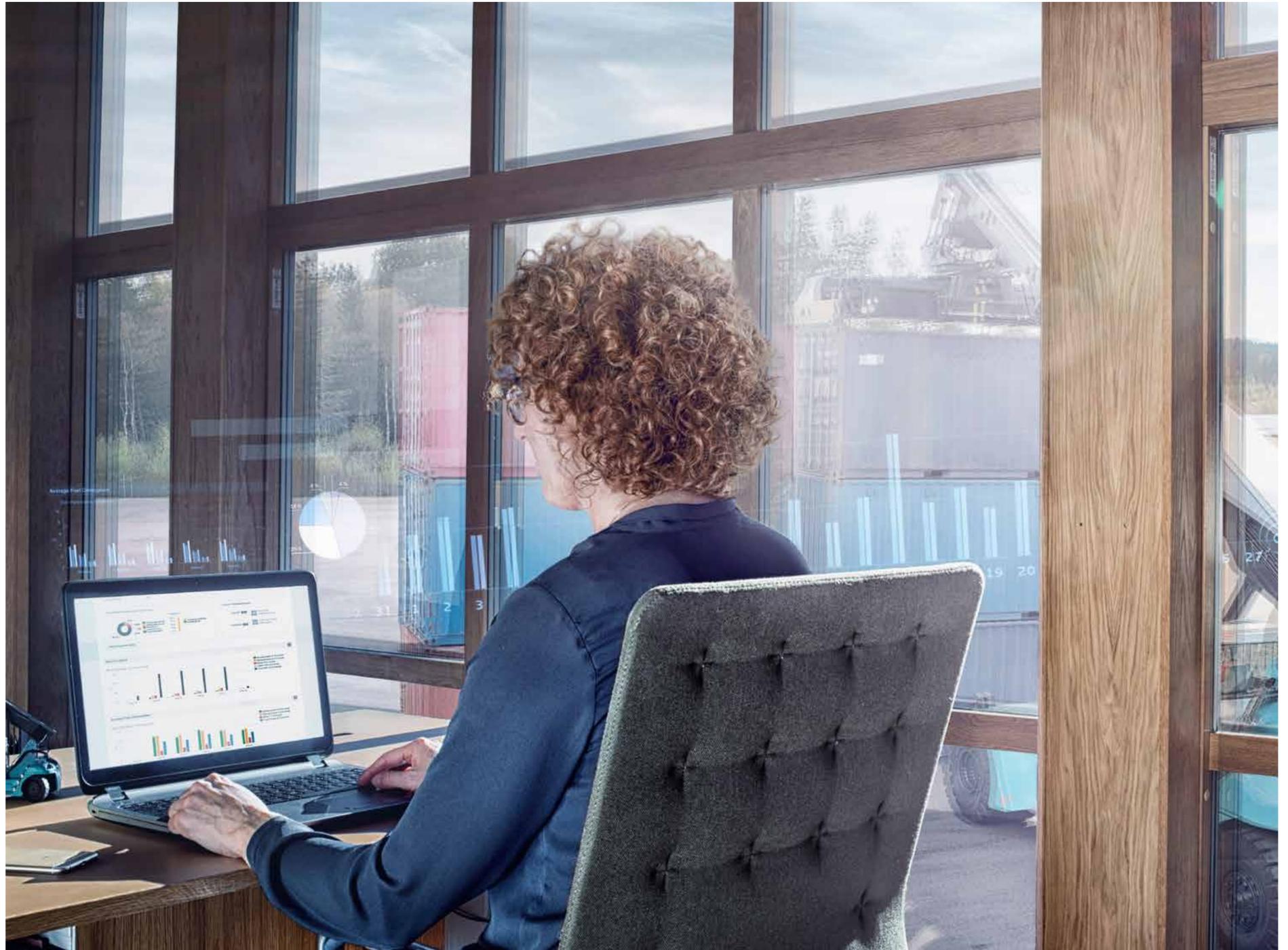
Digital innovation should be a structured process, in which the entire organization should be involved. Get to know the journey of innovation from an idea to reality.

1. PRIORITIZE NEEDS OF YOUR ORGANIZATION

In the very beginning, one needs to look at the strategic goals of the company, and think about what needs to be done in order to achieve those goals. In this primary stage, the technologies are irrelevant. The focus needs to be kept solely on developing the organization and its functions.

2. HOW TECHNOLOGY CAN HELP YOU?

Digitalization provides the tools for streamlining processes. What needs to be kept in mind is that digitalization is no panacea. Digitalizing existing procedures just for the sake of it rarely leads to the maximum results. Ask yourself what it is that you want to achieve. Technology helps you get there.





3. UNLEASH THE CREATIVITY OF YOUR WORKFORCE

There are already numerous examples and case stories in the world of digitalization and industrial internet from where to draw inspiration. Your own colleagues have the best understanding of your company, its business and environment. Why not utilize that? Digital innovation can mean different things to different players. So, instead of hiring a stranger to work their magic, see what your people can do.

4. IT IS TIME FOR INTERNAL TESTING

As soon as you have a clear view of your company's strategy, processes and human resources, it is time to put the ideas to test. With agile testing methods you can test, say, twenty out of hundred different ideas in a few week's period. The main goal in this stage is to quickly get a perception of which ideas have actual potential business-wise and are worth taking further.

5. READY, SET, PILOT!

After the first round of testing, it's time to evaluate the ideas left in the process against

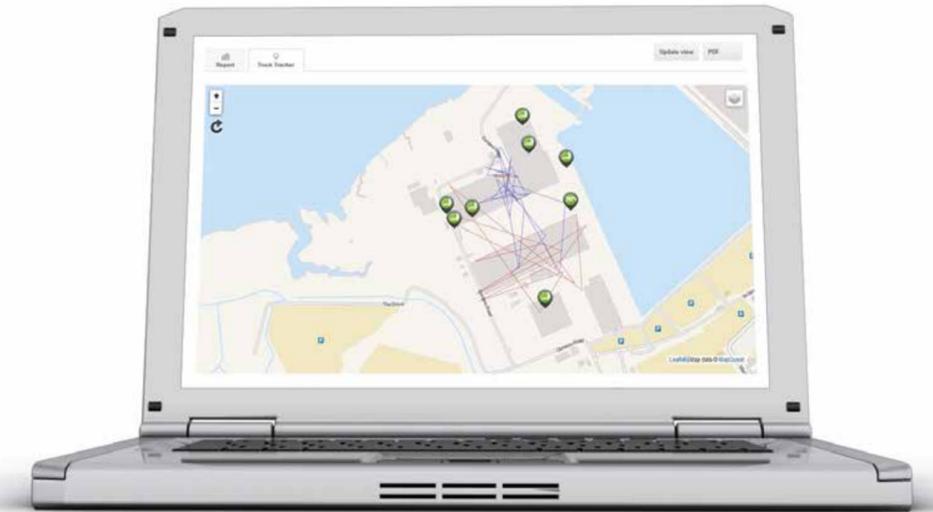
the set business objectives and bring external stakeholders to contribute to the process. Customers, for example, need to really get acquainted with this new thing, a product or a service, to be able to give their extremely valuable feedback. It is not enough just to create something that technically works. That something needs to help the company either increase profit or, on the other hand, decrease costs.

DIGITAL INNOVATION IS EVERYBODY'S BUSINESS

Anybody who has ever been involved in the process of innovation surely knows that the journey from having just a hint of an idea that could possibly grow into something bigger, to introducing the first prototypes of a given digital innovation is certainly long and eventful.

In the very beginning of the innovation process the more heterogenic bunch of people throwing in their initial ideas and brainstorming together, the better. Interaction between all kinds of people from different parts of the organization enables going through a broader set of perspectives. ■

Source: Industrial Internet Now



TRUCONNECT® Remote Service, digital innovation of Konecranes, takes advantage of digital-industrial data connecting data, machines and people together.

**SEE MORE INFORMATION
AND VIDEO ON TRUCONNECT®**

GET YOUR CONTAINER WEIGHT VERIFIED IN 5 SECONDS

Konecranes Static Weighing System allows your reach stacker to hydraulically measure the weight of the lifted container with 1% full scale accuracy. It interchanges data seamlessly between your truck and TOS/TMS or ERP systems via your Konecranes cloud services.



SEE HOW IT WORKS

DISCOVER THE BENEFITS



KONECRANES®



POWER DRIVE – SAME PERFORMANCE, LESS FUEL

KONECRANES POWER DRIVE IS NEW DRIVELINE TECHNOLOGY THAT BRINGS REMARKABLE FUEL SAVINGS WITHOUT COMPROMISING ON THE PERFORMANCE.



KEEP READING



GET FUEL SAVINGS AND MAINTAIN THE SAME POWER

Konecranes Power Drive is a new option for even more eco-efficient and economical lift truck usage.

Konecranes has designed a system to cut the fuel consumption whilst the power is unaffected, by adding a new hydraulic system configuration and optimizing the rpm in addition to a transmission with lock-up function. Power Drive system saves thousands of euros annually compared to lift trucks with normal driveline. Additionally it reduces noise level and pays itself back in less than year.

AVAILABLE FOR HEAVY MACHINES

Power Drive is available for all Konecranes heavy duty lift trucks that uses a 11 liter engine from Volvo.

SMARTER WHERE IT MATTERS

For Konecranes, fuel saving technologies, without compromising on the performance, has always been a focus by heart. In 2013 we launched the world's first Hybrid Reach stacker, which reduces fuel consumption by between 30% and 50% and reduced CO2 emissions by an impressive 20 kg per running hour. ■



Customers who take advantage of this new feature will find that savings in fuel costs will according to our estimates have paid for the Power Drive in about 6 months or less.

Andreas Falk

Marketing Director of Konecranes
Business Unit Lift Trucks

POWER DRIVE VS. NORMAL DRIVELINE

**UP TO 15–25 %
FUEL SAVING**

Maintains the same performance

Payback in about 6 months or less

**EXPLORE POWER DRIVE AND OTHER
SMART TECHNOLOGIES**



60 SECONDS WITH

PAUL AVERY
 EDITORIAL DIRECTOR OF
 WORLDCARGO NEWS

WHAT IS YOUR ROLE WITHIN THE LIFT TRUCK INDUSTRY?

I am the editorial director at WorldCargo News and we cover the lift truck industry extensively, mostly focusing on larger trucks over 9t capacity. I did, many years ago, have a summer job loading swap body trucks with a forklift, where I learnt some very important lessons about safety and load moments!

WHAT IMPACT DO YOU BELIEVE MEDIA, SUCH AS YOURS, HAS ON THE INDUSTRY?

We play an important role in informing the market on core developments from lift truck manufacturers and component suppliers. This includes engines, alternative fuels, tyres and the development of sensors that can be used for object detection and collision avoidance.

WHAT IS THE MOST REVOLUTIONARY NEWS YOU'VE EVER HAD/HEARD WITHIN THE INDUSTRY?

The lift truck industry is more evolutionary than revolutionary, but there have been some very important technology changes over the years. When I first started in the industry variable displacement hydraulics were considered revolutionary, and not all manufacturers thought it offered significant benefits. The same can be said with regard to CAN Bus wiring and electronics, which are now virtually standard in the industry. Without these

two developments machines would not be as fuel efficient, or have the platform for remote monitoring that we see today.

More recently the most revolutionary change is the availability of all electric forklifts in progressively higher lifting capacities, and the development of alternative fuels. How long will it be till the industry sees an electric empty container handler? One very important factor here could be that the Ports of Los Angeles and Long Beach have announced that they want all the cargo handling equipment at their terminals to be zero-emissions by 2030. There are currently just over 600 diesel powered lift trucks at both ports, so this is going to be very challenging to meet.

WHAT'S WORLD CARGO NEWS' AIM FOR 2017?

In 2017 we intent to continue our core coverage of machines and components, while bringing in new developments in IT and related technology that have the potential to change the operator's working environment. At the moment machines are not really integrated with the software systems that decide what work they should be doing. Drivers typically have to look at a vehicle mounted computer, or talk to a person by radio to get their next task, then remember that information and drive the lift truck. This is likely to change as new tools like augmented reality and heads up displays become more common.

TELL US SOMETHING NO ONE KNOWS ABOUT YOU!

I'm very fond of classic Volkswagens, and would one day like to own a 1969 VW1500 or Karmann Ghia.

TECH TODAY

SMART KIDS CLOTHING MOTIVATES FOR OUTDOOR ACTIVITIES

Parents are worried about kids not moving enough, as they are so attracted to consoles and mobile gaming.

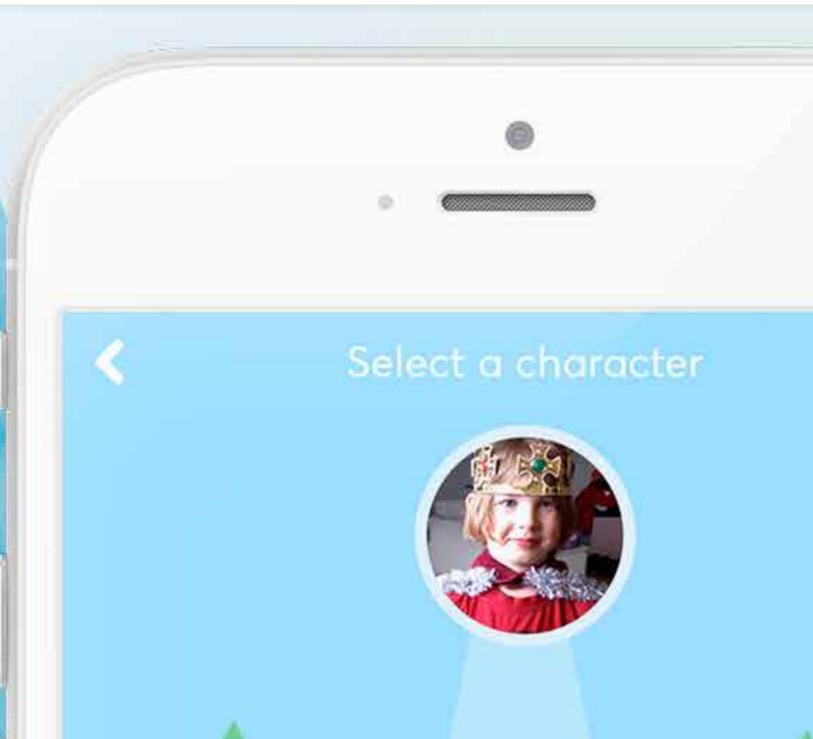
Finnish children's wear brand Reima® takes a stand against the current trend by offering new cloth that rewards kids for being active. The ReimaGO® movement sensor has been especially developed for

kids using fitness watcher maker Suunto's Movesense® technology in tracking movement.

ReimaGO® measures the intensity and duration of kids' physical activity during the day. It wakes up whenever kids start to move. The waterproof sensor attaches to the clothing inside the designated pocket.

ReimaGO turns tracked data into game that lets kids see their progress and gather rewards for activity.

The activity data is read into the ReimaGO® application that works on iOS and can be downloaded for free from the App store. The new smart kids clothing concept are available to consumers in autumn 2016.



EVENT CALENDAR



PRECAST

2–4 March

Cleveland, Ohio

Meet us at stand 599B!

[READ MORE](#)

ICHCA International – Dangerous Goods Seminar

6 March

London

[READ MORE](#)

*Happy Holidays and Best Wishes
for a Wonderful New Year*

Konecranes Lift Trucks team

THANK YOU FOR READING!

If you have questions about Lift Trucks or about this newsletter please contact us:
communication.lifttrucks@konecranes.com

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WELCOME TO MEET US AT PRECAST

2-4 March
Cleveland, Ohio
Meet us at stand 599B!

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