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**APRIL-MAY 2020** Volume 20 Issue 3

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# Learning to adapt

ittle did I expect to be writing this comment in isolation at home when I was sat among my colleagues in the office just a few weeks ago. Yet here I am, set up with my computer, busy working to keep the industry informed – as is the whole KHL editorial team.

In fact, if you would like to receive a digital copy of the magazine, or have your paper version redirected to your home address, please contact us by e-mail at circulation@khl.com

We are all having to adapt very guickly, and the rental industry has been doing an exceptional job of this. Associations have leapt into action, lobbying governments and doing their best to feed information through to their members and answer their questions.

Meanwhile, rental companies have reorganised themselves to align with social distancing measures and are playing a key role in supporting critical industries. Indeed, their equipment is being used on the front line in the fight against the virus.

This pandemic is socially tragic and economically crippling. However, there is hope that we can take from the experience some valuable lessons, one of them being the virtue of collaboration; by pulling together we can overcome adversity and prosper when times are good.

An equally important lesson is how little control we really have. When something as invisibly small as a virus can cause entire states to shut down and the global economy to stall, it begs the question: what other unseen threats might we face?

One threat, rather than being invisibly small, is intangibly massive. Without the large amounts of data collected by scientists across the globe, climate change might be hard to see.

It is a threat of which we are increasingly aware, and for which we can prepare. So this issue of IRN puts focus on the topic of sustainability, looking at how rental can help to make efficient use of resources and reduce pollution. Alongside features on Hybrid and Electric Equipment, and Extending the Life of Equipment, there is an article on the European Rental Association's new campaign promoting rental's 'green' credentials.

I wish you good health in these challenging times.

#### **Thomas Allen**

**Editor** 

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SOCIAL MEDIA

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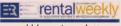


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A-Plant rebrands; LiuGong acquires Herc Rentals China; Strong Loxam braces for slowdown; Cramo CEO resigns.

#### THE APPLETON COLUMN

With the situation on the ground changing so rapidly, Kevin Appleton refrains from giving any specific business advice regarding the coronavirus crisis and instead offers some insights about the longer-term impacts.

#### **ERA PAGE**

The 2020 ERA Convention – 'Smart Rental' – has been postponed to 9 and 10 September, 2020, as a result of the coronavirus outbreak.

#### **ROUSE PAGE**

Used equipment values and other rental statistics.

#### **EVENTS**

#### **UPDATE: IRE/APEX**

International Rental Exhibition and APEX rescheduled for later in the year as a result of the coronavirus outbreak.





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Subscribe to our weekly e-Newsletter at the website.

#### **PODCAST**



Kevin Appleton on the impact of coronavirus. Click to listen.

**EXCLUSIVE** DIGITAL CONTENT

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#### **SUSTAINABILITY FOCUS**

#### **HYBRID & ELECTRIC EQUIPMENT**

As more options open up, it can be difficult to know what power system to go with. Thomas Allen discovers that one solution could be to take a modular approach.

#### ERA SUSTAINABILITY CAMPAIGN

The European Rental Association recently launched a campaign to promote rental as a sustainable practice.

#### **USED EQUIPMENT**

As well as improving a company's 'green' credentials, reconditioning old machines and buying used products can be a good way to flex a fleet in response to demand.



#### SPECIAL NEWS REPORT: **CORONAVIRUS**

The industry is coming together in support of one another and of essential services in the face of the Covid-19 crisis.

#### **ENGINES**

Engine suppliers emphasise aftermarket support in an effort to persuade rental companies to demand their engines in the equipment they buy. Thomas Allen reports

#### RENTAL TECH

Artificial intelligence is opening up a world of possibilities, according to Joel Särkkä of Renta Group.

#### **TELEMATICS**

38

Telematics providers look towards a future that is more connected than ever before. Jenny Lescohier reports.

# ...outside

Riwal aids care home visit with scissor lift.



#### **DIARY DATES**

#### 2020

# INTERNATIONAL RENTAL EXHIBITION (IRE)

8-10 September, 2020 Maastricht, The Netherlands

#### EUROPEAN RENTAL AWARDS

9 September, 2020 Maastricht, The Netherlands

#### **ERA CONVENTION**

9-10 September, 2020 Maastricht, The Netherlands

#### **APEX 2020**

8-10 September, 2020 Maastricht, The Netherlands

#### **PLATFORMERS' DAYS**

18-19 September, 2020 Karlsruhe, Germany

#### **SMOPYC**

23-26 September, 2020 Zaragoza, Spain

#### **IAPA AWARDS**

8 October, 2020 London, UK

#### **IPAF SUMMIT**

8 October, 2020 London, UK

#### **SAMOTER**

21-25 October, 2020 Verona, Italy

#### **ALH CONFERENCE**

23 October, 2020 Chicago, IL, US

## INTERNATIONAL RENTAL CONFERENCE (IRC)

23 November, 2020 Shanghai, China

# **A-Plant rebrands**

Ashtead's UK business A-Plant will be rebranded as Sunbelt Rentals from 1 May, 2020.

At the same time, the company has announced that Andy Wright is the new Chief Executive Officer (CEO) of the UK business.

Wright said, "Our rebranding to Sunbelt Rentals is the culmination of work to unify our UK brands under one powerful banner."

This change will align the group's UK operations with its North American business Sunbelt Rentals, which trades in the US and Canada.

Wright said, "With our unrivalled range of specialist products and services, this change simplifies our cross-selling as we deliver Availability, Reliability and Ease to our broad customer base."

Wright succeeds outgoing CEO Richard Thomas, who joined A-Plant as Finance Director at the end of 2011 before becoming Managing Director of the company's specialist products division in 2015 and then its CEO in 2018.



Wright said, "I'm delighted and proud to be appointed as the CEO of A-Plant and I'm looking forward to the exciting opportunity ahead.

"A-Plant is an incredible business, that's grown significantly in the last decade. We've some unbelievably talented and dedicated people that are undoubtedly experts in the markets that we operate in."

Ashtead's Chief Executive Brendan Horgan said, "Over the last several months, Andy has clearly Andy Wright, the new CEO of A-Plant, soon to be rebranded as Sunbelt Rentals

demonstrated his ability to guide our organisation through a period of change in a thoughtful and inclusive manner, leveraging both his leadership and broad industry knowledge."

Wright joined A-Plant from Speedy Hire in February 2019 as Chief Operating Officer (COO).

He has more than 30 years of experience working in the equipment rental industry in the UK and internationally, previously holding positions with Aggreko, Speedy Hire and Lavendon Group.

Wright said, "We've undertaken a strategic review which has enabled us to make exciting and robust plans for the future."

Wright intends to introduce new products and services, and to invest in technology that will improve the customer experience. He will also be putting special focus on staff development.

# **LiuGong acquires Herc Rentals China**

Chinese equipment manufacturer LiuGong has acquired Herc Holding's Chinese business Herc Rentals China for an undisclosed amount.

Herc Rentals China is based in Shanghai and began operations in July 2008. Since then, it has been serving a range of construction and industrial customers, as well as shipbuilding and mining operations, throughout central China.

This acquisition follows the recent announcement by LiuGong that it is launching a new Global Rental and Used Equipment Business, reported on in the March issue of *IRN*.

Herc Rentals China serves a range of construction and industrial customers, as well as shipbuilding and mining operations, throughout central China, with a focus on aerial work platforms (AWPs).

It has 1,500 units in its fleet, and LiuGong plans to double this over the next five years by investmenting \$125 million in the company.

That money will not be spent solely

on equipment though; it will also be used to double the number of rental outlets over the same period. Herc Rentals China currently has six main branches and five depots, according to Cassinelli.

Kevin Thieneman, Vice President of LiuGong, said this acquisition will enable LiuGong and its dealers to accelerate the development of rental solutions in China and around the world.

# Digital issues...

For those of you now working from home, we remind you that you can read IRN, and all other KHL titles, in digital format.

You can subscribe for free at KHL.com.

If you would like us to temporarily redirect your paper copy to a home address, we can do that. Please contact us by e-mail at: circulation@khl.com

We have a rolling news story on coronavirus on our website, providing stories and information from all over the world.

We are also now producing a high-frequency newsletter, Construction & Coronavirus, focusing on the impact that COVID-19 is having on construction — on sites, in factories, and in offices. Once again, you can subscribe to this on the KHI website

We are doing our best to provide readers with a seamless service, with online news updated regularly and normal magazines being published as scheduled.





#### **NEWS IN BRIEF**

- Netherlands-based equipment manufacturer Tobroco-Giant has revealed its new G2700 range of wheeled loaders. It comprises the G2700 HD, G2700 X-TRA HD. G2700 HD+ and the G2700 X-TRA HD+ models. The range was described as a modern powerhouse with compact dimensions. All the models feature a Stage V-compliant 3-cylinder Kubota engine and are powered by a hydrostatic all-wheel drive with automotive steering.
- JCB has entered the North American power generation market with a range of dedicated Tier 4 Final (T4F) generator sets: the G79RS, G125RS, G220RS, G400RS and G625RS. The five new trailer-mounted RS generators offer outputs from 56kW to 500kW. Adam Holland, Managing Director of JCB Power Products, said, "America offers a huge opportunity for JCB Power Products. The US power generation sector is the second largest in the world, with sales of more than 140,000 generators a year, and the rental industry alone is worth more than \$1 billion."
- UK-based GAP Hire Solutions has completed the relocation of three of its London depots to a new site in Feltham, near Heathrow Airport, to the west of the capital city. The company's Lifting depot, Survey & Safety depot and Tools & Access depot known collectively as Hatten Cross – have been moved. Gavin Smith, GAP's Property Manager, said, "It is a newly refurbished unit which allows us to meet the increasing demand for our services in London, with a secure yard and good access to the main truck routes."

**German rental company HKL Baumaschinen is providing** a telescopic loader to help with ground consolidation work being carried out on a site in the German city of Gelsenkirchen. Civil engineering company Geopier Spezialtiefbau has been called in to consolidate the ground on the residential and commercial area called 'Living by the Water'. The company is renting a Merlo P38.13 telescopic handler from HKL's working platform and telescopic center (ATC) in Dortmund.

# **Strong Loxam braces** for slowdown

Looking back at a 'major year of transformation', European rental giant Loxam has recorded a solid performance in 2019, helped by the acquisition of Ramirent, though it is preparing for a slower market.

The shutdown caused by the coronavirus will be managed as an 'unusual winter distruption'.

Gérard Déprez, Chairman and CEO of Loxam, said, "Our liquidity is high and we have no major debt repayment in the year."

Group revenues for the full year were up 26.3% to €1.87 million. though on a like-for-like basis revenues rose by 1.9%. In Q4, Loxam's revenues remained flat on a like-for-like basis, while Ramirent's revenues declined by 1.9%.

Déprez said, "2019 has been an outstanding year of transformation for the Loxam Group. Thanks to the acquisition of Ramirent, we have created a pan-European leader in equipment rental."

# Please complete the **RentalTracker survey**

The European Rental Association (ERA) and IRN would be grateful if rental companies in Europe could complete the online Q1 2020 ERA/IRN RentalTracker survey.

It takes less than five minutes to complete. The results will be published online at www.khl.com in mid-April and in the June issue of IRN. The results are aggregated, so individual responses are anonymous.



The survey is available in English, French, German, Italian, Spanish and Russian, and can be accessed under the RentalTracker tab on the IRN site.



**Rental guru Kevin Appleton** speaks with Murray Pollok, Managing Editor of IRN, about the effects of the coronavirus outbreak on rental. The audio podcast can be viewed on KHL. com, under the Podcasts tab.

## **Kiloutou** continues spending spree

French rental group Kiloutou has continued to expand its footprint in Germany and France with the acquisitions of Wiesecker Werkzeugvermietung Locamodul.

Wiesecker is located 70km north of Frankfurt, providing access and general equipment rentals from its 24,000m<sup>2</sup> depot, which also operates an IPAF training centre.

The company's 85 employees maintain a fleet of more than 2,500 units, including 650 aerial work platforms reaching up to 70m; 100 excavators; and a range of on-site equipment, telehandlers, forklift trucks and tools.

Said to have good potential to grow, the acquisition of Wiesecker will enable Kiloutou to serve Frankfurt, while also developing its range of non-access equipment.

Meanwhile, Locamodul is a leading portable accommodation renter in the Rhône-Alpes region, with two depots - in Annecy and Grenoble – and a fleet of more than 3.500 modules and containers. The business has customers in the construction, industrial and events.

This transaction grows Kiloutou's modular space activity in France, adding to the company's existing operations in Ile-de-France, Angers, Nantes, Toulouse and Bordeaux.

**SHARE PRICES** 

## **IRN** Rental Share Index

COMPANY		Start date 07/01/06	Previous mth 14/02/20	Current mth 06/04/20	% change
Aggreko (UK)	£	2.75	9.9	5.31	-46.4%
Ashtead Group (UK/US)	UK£	1.83	35.24	19.73	-44%
Cramo (Fin)	€	13.0	13.75	13.23	-3.8%
Emeco	US\$	- 18 18	2.07	0.85	-58.9%
GAM SA (Spain)	€	8	1.95	1.2	-38.5%
Herc Rentals	US\$	283	43.85	18.57	-57.7%
HSS Hire	UK£	100 -	43.88	25.1	-42.8%
H&E Equipment	US\$	- 1 1 I I	29.75	13.47	-54.7%
Kanamoto	Yen	- T	2726	1967	-27.8%
Mobile Mini (US)	US\$	46.2	42.33	21.38	-49.5%
Ramirent (Finland)	€	23.43	8.77	8.77	0%
Speedy Hire (UK)	UK£	8.32	0.86	0.47	-45.3%
United Rentals (US)	US\$	24.9	160.08	91.07	-43.1%
VP PLC	UK£	-	10.1	6.56	35%
IRN INDEX		100	475	268	-43.6%

Note: The index is based on aggregate changes in market values of the companies in the list. The initial index value of 100 is based on values on 11 January 2006.

#### **PEOPLE NEWS**

- Speedy Hire has appointed Andrew Briggs as the new Managing Director of its powered access business. The rental company, which operates a fleet of approximately 8,500 machines from over 200 sites across the UK and Ireland, said Briggs would be responsible for overseeing the business's growth and for improving its product and equipment offering. He will also take up a position on the company's board.
- US-based crane rental company Maxim Crane Works Holdings has appointed Michael Kneeland as Chairman of its board of directors. Kneeland, who remains as Non-Executive Chairman of United Rentals, served as President and CEO of United from August 2008 to March 2018, and as CEO until May 2019. Kneeland will be replacing Larry Berg, who will step down from the position but remain on the board as a director.
- Josh Nickell, CEO of Nickell Rental, has joined the board of consultancy company Peer Executive Groups (PEG). Described as a rental industry guru by the US-based consultancy, Nickell will support the nationwide operations of PEG's teams and help its rental clients maximise opportunities.
- Thwaites has strengthened its sales team by appointing Will **Redman** as Distribution Manager North Region, in the UK. Redman is familiar with the market and has experience supporting distributors to profitably grow and develop their business. He previously spent five years managing the sales distribution channel for UK-based hydraulic excavator attachment manufacturer Arrowhead.

# **Gustafsson resigns** from Cramo

Leif Gustafsson has resigned as President and CEO of Finlandbased Cramo, which was recently acquired by Boels Rental.

Martin Holmgren, currently the Senior Vice President of Fleet Management, will take his place with immediate effect.

Gustafsson, who has been President and CEO since the start of 2016, said, "It has been a privilege to lead this organisation. Now that Cramo is starting its next chapter as a part of the Boels organisation, the announced



Martin **Holmaren** is set to take **Gustafsson's** place as the new President and CEO

Leif Gustafsson, outaoina **President and CEO of Cramo** 

change of ownership feels like a natural moment for me to

leave the company.

Gustafsson has agreed to remain in the company until the beginning of August of this year to ensure a smooth handover.

In due course, the new Boels-Cramo organisation will be divided into two main business areas — Central Europe and Northern Europe. Central Europe will operate under the Boels brand and be headed by Pierre Boels. Northern Europe will continue operating under the Cramo brand and be headed by Martin Holmgren.

#### **ON TWITTER**



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This week is Women in Construction Week!! We want to help @NAWICnational raise awareness about women in the construction industry. Fun Fact: Did you know women currently make up 10.3% of the construction workforce with 3.4% working in the

@Makinexusa

3 March, 2020



A lovely, brand new 9t @ wackerneuson\_uk Dual View dumper available for hire now from GAP's Plant & Tools depot in Sighthill, Edinburgh!

#### @GAPGroupHire

2 March, 2020

The #EUClimateLaw is out today. We welcome the goal of climate neutrality and, as a circular model, the #equipmentrental industry is well placed to help the EU achieve its goals by lowering the #carbonfootprint of the #construction sector

@era rental

4 March, 2020

# **BigRentz and Lizzy Lifts merger**

Illinois-based equipment rental company Lizzy Lift has merged with online rental specialist BigRentz. Terms of the deal have not been disclosed.

Founded in 2012, BigRentz is an online construction equipment rental marketplace. The company has more than 2,500 rental partners across 8.500 US locations.

Lizzy Lift has been co-owned by sisters Jennifer DuBose-Lombard and Elizabeth Faruzzi for more than 20 vears.

The merger increases BigRentz's client base, catalogue and rental partner network, and Lizzy Lift clients will have access to the BigRentz automated platform to allow online bookings.

"Our goal has always been to make heavy equipment rentals easier for our clients by leveraging technology and automation," said DuBose-Lombard, Senior Vice President of LIzzy Lift.

"BigRentz has the technology infrastructure that completely automates the equipment rental workflow and the user interface that makes it easier for clients to not just book rentals, but also invoice management and equipment logistics. It's a win-win for our customers and BigRentz," DuBose-Lombard added.

### Rental information from IRN

In addition to the published magazine, IRN provides rental news and information in a variety of formats:

#### IRN news App and tablet edition



news as soon as it happens, KHL has a news App covering all sectors of the market, including rental. For details of our tablet edition in Apple and Android

formats, search the App stores or use the Pocketmaps app or website.

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#### **Online news**

KHL's team of journalists in Europe, North America and South America are constantly uploading stories to KHL. com. The site has dedicated pages for each sector - rental, construction, access, canes and demolition.



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Subscribe to our weekly rental newsletter, which compiles all the previous week's most important rental, access and construction stories. It is free to register at:

www.khl.com/enewsletter/

IRN also produces the weekly ERARentalNewsletter for members of the European Rental Association (ERA).

rental newsletter

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IRN APRIL-MAY 2020 www.khl.com/news



# The Brand New Generation of XG Series A Dazzling Debut



#### **NEWS IN BRIEF**

- Haulotte has developed a range of new accessories to aid operators of aerial platforms, including hostile environment packs, outrigger pads and a device to reduce noise disturbance onsite. The hostile environment packs are designed to protect self-propelled booms against dust, sand, salt fog, humidity or fine particles that may cause irreparable damage to booms. The new outrigger pads distribute the weight of the boom on a larger surface, thus significantly reducing the ground pressure. The new white noise alarm concentrates its sound in the danger zone.
- The IPAF Summit and IAPAs 2020, scheduled to be held in London, UK, on 23 April, 2020, has been postponed and will now be held on 8 October, owing to ongoing concerns and contingency planning in response to the worldwide coronavirus outbreak. The decision was taken jointly by event organisers the International Powered Access Federation (IPAF) and KHL Group. The event will be held at the original venue, the Millennium Gloucester Hotel in Kensington, London.
- Magni Telescopic Handlers debuted the world's largest rotating telehandler during ConExpo 2020. The RTH 6.51 has a maximum lifting height of 51m and a maximum forward reach of 35m. Its maximum lifting capacity is 5,987kg. The telehandler features a number of technological advancements, including two attachment modes: strength mode M2 and stability mode M1. M2 allows the heaviest loads to be lifted but with a limited extension while M1 allows for greater extension with limited load weights.
- China-based Sinoboom is making a move into North America and is in search of a partner based in the US. Charlie Li, Regional Manager in North America at Sinoboom, said the company has major ambitions and in five years' time would like to be one of the largest OEMs in the continent. The North American division is based in Katy, Texas, which acts as an equipment depot and provider of spare parts. Li said the company aims to establish more branches in the Nort, West and East of the US, and in two or three years would add assemly capabilities.

# Ruthmann acquires ReachMaster

Truck-mounted aerials supplier Ruthmann has bought North American distributor ReachMaster.

ReachMaster has been a provider of compact aerial equipment and material handling equipment in North America for the past 20 years and has marketed Ruthmann Bluelift produts for more than 10 years across the US and Canada.

Uwe Strotmann, Head of Sales at Ruthmann and previously President of Ruthmann North America, said, "With this acquisition, we will adopt and expand ReachMaster's existing operational framework. Additional jobs in sales and service will be created. This is another major milestone in Ruthmann's ongoing internationalisation strategy."

Rolf Kulawik, Managing Director of Ruthmann, added, "Ruthmann benefits from many years of experience and a large network. This enables us greater access to the North American market. We welcome the ReachMaster employees to the Ruthmann family and look forward to expanding the professionals at work

company together."

Ebbe Christensen, who was previously President of ReachMaster, will head up the new company as its President and CEO.

RUTHMANN

Kulawik will assume the position of Chairman of the Board and Uwe Strotmann will become an executive board member.

# ANSI dates pushed back

The ANSI Accredited Standards Developers (ASC) voted to extend the effective date of the A92 standards to 1 June.

The vote came after 10 companies and organisations filed a petition in mid-February 2020 with the A92 secretariat to end the appeals process and publish the standards on 1 March.

Originally approved in November 2018, the standards faced two appeals in May 2019, which caused setbacks.

Tutus Solutions and the American Rental Association (ARA) appealed separate parts of the standards, with the ARA opposing the Manual of Responsibilities (MoR) portion and Tutus Solutions opposing that additions to a mobile elevating work platform (MEWP) cannot be made without the manufacturer's permission. The effective date was then pushed to December 2019.

In October 2019, following a meeting with the A92 committee members, that date was again pushed back — this time to 1 March — due to language within the standards. Manufacturers, associations and rental companies have spent the majority of the past two years preparing for the standards' implementation.

According to the Association of

Equipment Manufacturers, two appeals still remain unresolved, and appeal hearings will will take place in due course.

The new standards will cover: A92.20-2018: Design, Calculations, Safety Requirements and Test Methods for mobile elevating work platforms (MEWPs); A92.22-2018: Safe Use of MEWPs; and A92.24-2018: Training Requirements for the Use, Operation, Inspection, Testing and Maintenance of MEWPs.

Of the 100 votes, 66 voted in favour of extending the deadline.

# Painting the world with Haulotte

Haulotte has taken note of street art from around the world that has been created by artists using its aerial platforms.

The access equipment manufacturer has released a number of images

depicting urban artwork in France, Malaysia, Morocco and the UK.

The company said that street artists were using its access equipment to help create the works of art which, in addition to being very large, are located on hard-to-reach surfaces.

Haulotte said, "They need a comfortable access platform which ensures maximum safety and high productivity. Haulotte scissors and articulating booms are particularly valued for their versatility."



## Alimak appoints CEO

Sweden-based Alimak Group has appointed Ole Kristian Jødahl as its President and CEO.

Jødahl will succeed Tormod Gunleiksrud when he joins on 1 June this year. As previously reported, Gunleiksrud leaves the company after eight years as president and CEO.

Jødahl was previously CEO of safety equipment producer Hultafors Group, and before that worked in operations management and held positions within SKF Group, most recently as Director of Sales and Marketing for the industrial market. He also holds an economics qualification from the School of Economics (NHH Norges Handelshøyskole), in his home country of Norway.



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**FUTURE** 

With the situation on the ground changing so rapidly, Kevin Appleton refrains from giving any specific business advice regarding the coronavirus crisis and instead offers some insights about the longer-term impacts

# Life after Coronavirus

'm writing this on 26 March. It feels important to say that, because by the time you're reading this in another five weeks or so it will seem like that was ten years ago, because things are moving so fast. And so slow. For many of us the frantic energy being poured into conference calls with lenders, suppliers and shareholders is a stark contrast with the periods in-between — when life has been reduced to walking pace and conducted largely within the confines of our own homes.

In truth it's pointless me giving any business advice



**KEVIN APPLETON** is an experienced senior executive and advisor in the rental, logistics and construction service industries. He is a former CEO of Lavendon Group and Travis Perkins Builders Merchants and is currently chairman and/or non-executive director of a number of companies in the rental, construction services and logistics sectors. To comment on these articles e-mail: IRNfeedback@khl.com

on how to weather the storm because by the time you read this you'll either be well on the way to doing it or it will probably be too late. But the job of journalism is to give opinion and insight, so I'm going to give you some reflections rather than advice.

The appetite for being highly leveraged as a business goes in and out of fashion, but this crisis shows us that being prudent about the debt carrying capacity of your business is not just about riding economic cycles. Almost everyone, I suspect, figures they will see sufficient early warning signs of an economic crisis to manage their debt and cash position ahead of its impact. Well not with coronavirus. We went from never having heard of it in November to most of Europe having rental demand levels some 50% lower in March and still falling. The businesses in the best shape to weather this are the ones who applied the age-old wisdom of "all things in moderation". A bit of debt to help grow, yes, but not 5X, 6x or 7x "normal" cash flow.

The people we tend to view as "numbers" are the very ones that count when society goes into shutdown. This period has required calm leadership from senior management teams within businesses for sure, but society has been kept functioning by cleaners, carers, nurses, drivers, retail workers and customer service staff remote working from their kitchen table, as well as the doctors and scientists. Many of the careers we are encouraged to aspire to seem suddenly pointless when society goes back to its basic needs. We need to remember that

We used to have a real problem recruiting for X in this area... now we realise they don't even need to be in this area!

when and if things get back to normal and ensure we treat people in those roles with the respect they deserve.

The customer contact and administration element of business will never be quite the same again. So many businesses have discovered that they can operate quite happily with half or more of their staff working from home, that the need to have offices and sites full of people in future will come under severe question. I have already heard companies saying "we used to have a real problem recruiting for X in this area... now we realise they don't even need to be in this area!"

We have come face-to-face, again, with the truth that as individuals and as societies we are very fragile. I personally see this crisis as an incredibly helpful (if painful and tragic) reminder that we are not gods. In truth there is nothing over which we have absolute control (at my age even bathroom functions come into this category) and we delude ourselves massively if we believe it is otherwise. I have had many conversations over these past couple of weeks which have been so much deeper than the standard "did you see the game at the weekend?" or "what do you think of the new Jaguar hybrid?". We are human. We have deep emotional, psychological and spiritual complexity, and we manage these complexities better when we face into them.

In truth, most of us spend our lives running from questions around our purpose and destiny, but now "trapped" at home, those questions start to reassert themselves. I would encourage you to face up to those questions, because it might help you to recognise your own frailty and, paradoxically, feel stronger for doing so.

At a personal level I hope and pray that you have been left untouched by tragedy through this time. I hope and pray also that we will not file our experiences of these weeks and months in the "forget" pile and dash back to banality. Life, like leadership, benefits from deep thought and reflection... and this is our chance to do just that.

# Rental responds to coronavirus

# As companies batten down the hatches, the industry is coming together in support of one another and of essential services. Thomas Allen reports

n this unprecedented situation, the equipment rental industry is rallying together to overcome the challenges posed by the coronavirus outbreak and support essential services.

There is a sense of solidarity, with industry leaders such as Pierre Boels, CEO of Boels Rental and President of the European Rental Association (ERA), saying, "Providing help and service to these crucial pillars of our society is our highest priority."

Gérard Déprez, Chairman of Loxam, said, "It is our responsibility, and indeed we are very keen, to help out our country in this crisis by offering our teams' support."

And in Australia, Kennards Hire's COO Stuart Dean said, "As a family business, we believe in the power of a supportive community and will continue to support our people, our customers and the industry."

Associations are also working hard to coordinate efforts and support their members. The European Rental Association (ERA), for instance, has launched an information page on its website, which is regularly updated with the latest developments and advice. Also, its Committee of National Associations has been organising emergency virtual meetings with rental associations across the continent, coordinated by Spanish rental association ASEAMAC.

While the economic consequences of the coronavirus outbreak are significant, it is expected that the industry could bounce back quickly. China offers some hope here, as it begins to pull out of the crisis and resumes normal operations.

#### CHINA

Shanghai Horizon Equipment & Engineering, one of China's largest rental companies, reported increased activity during March, compared to February, as a result of the improving situation in the country.

Chen Li, Shanghai Horizon's senior sales manager, industry equipment (MEWPs), said the business was recovering and nearly all branches have reopened, except in Wuhan city, where the virus began, and the surrounding HuBei province. He added that utilisation was now at more than 50% and construction sites

# Rolling news update

KHL's editorial team around the world is working to keep you updated with the latest coronavirus-related developments in the construction industry. Visit KHL.com to see our Construction and Covid-19 rolling news update.



Shi Yang, Director of Research at OHR China

were working hard to catch up, following a twomonth delay for many projects in the country.

All Shanghai Horizon employees are still required to have their temperature tested when entering the office and to wear face masks.

Beijing-based Shi Yang, Director of Research at Off-Highway Research (OHR) China, says "With the encouraging policies for construction activity, the dealers are more confident and in a better position than businesses in other industries."

An increase in government investment is now being used as a tool to make up the gap in economic activity suffered since the end of January. A number of new investment plans have been announced at the local level, according to Yang.

"However, we see that central government is trying to balance the need to restore growth with the requirement to minimise the exposure to risk, in the context of a highly leveraged economy," he says.

Domestic demand is being driven by an acceleration in investment from the low levels in the first two months of the year, but this demand mainly comes from ongoing projects.

China has reported more than 81,500 cases of coronavirus and in excess of 3,300 deaths, but the situation appears to have been brough under control with the number of new cases dropping close to zero.

#### **SOUTH KOREA**

South Korean rental company AJ Neworks has been forging ahead, keeping all of its depots open to serve construction sites in the country, the majority of which are continuing to operate.

There have been just a few construction site closures in the cities of Daegu and Pusan due to reported coronavirus infections. While existing construction sites remain open, projects that were scheduled to start recently have been delayed.

AJ Networks says that demand for rental equipment is 15% lower than had previously been expected.





The ERA has launched a Covid-19 information page on its website

The company has reported no problems with the logistics of moving equipment. Its staff are supplied with masks and hand sanitiser, and access to depots is strictly controlled. When trucks return equipment to the depots they are asked to unload it nearby and then staff use forklift trucks to bring it into the depot.

To date, South Korea has reported almost 10,000 cases of the virus and 169 deaths from the disease.

#### **JAPAN**

This year's Olympic and Paralympic Games, due to be held in Tokyo, Japan, have been postponed to an unconfirmed date in summer 2021 due to the coronavirus outbreak. Aggreko, the company set to provide temporary power for the two events, has entered discussions with the Tokyo Organising Committee of the Olympic and Paralympic Games (TOCOG) following its decision.

The initial value of the contract was approximately \$200 million, although it was announced in March that this was expected to rise to around \$250 million

Aggreko's contract provides a framework for the discussions, but the commercial terms and operational impact surrounding the postponement will need to be worked through in detail.

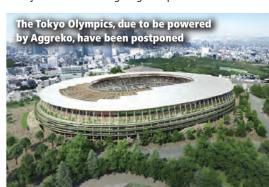
Japanese rental firm Aktio has reported little disruption to operations, with all depots still open and no effect on logistics. The company said most construction sites in the country remain operational.

Japan has reported almost 2,400 cases of coronavirus to date, with 57 dead.

#### ITALY

Rental firms have been scaling back in Italy, currently one of the worst affected countries in Europe.

They have been facing large drops in demand





for equipment as a result of restrictions imposed by the Italian government to slow the spread of coronavirus.

Providing *IRN* with an update in mid-March, Marco Prosperi, Director of Italian rental association Assodimi-Assonolo, said companies providing services that support operations that are still open,

including construction sites, can themselves remain open — on the condition that they implement stringent protocol to contain the virus.

"The hirers are very good in managing the security protocol," he says, "They have committed themselves to the disinfection of machines at every exit and return."



Pier Angelo Cantù, Director of Rental Academy

While the majority of rental companies remain open – just 14% have opted for full closure so far – most of those that have remained open have limited their activities, closing some branches and non-main services

Construction sites have stayed open and, on the whole, are operational, according to Prosperi.

However, he says, "The association representing construction companies has asked for the closure of all construction site activities."

Assodimi-Assonolo is working to keep its members informed via its website and social media.

Making the best of a bad situation though, Italian rental consultancy and training provider Rental Academy has been offering free webinars to Italian rental companies.

"We are doing this as a way to remain close to the customer during these difficult times and support the industry," says Pier Angelo Cantù, Director of Rental Academy and its online portal Rental Blog.

The first four webinars were held in March, with more planned for April.

Italy has reported more than 110,500 cases of coronavirus so far, and more than 13,100 deaths.

#### **SPAIN**

Jose Blanco, Secretary General of Spanish rental association ASEAMAC, told *IRN* [on 26 March] that the picture in Spain was very mixed, depending on the type of rental company, the sector it's working in and the region in which it is operating.

"Anyone related with events received a big hit," says Blanco, "As most of the season will already be gone when the market bounces back."

This is the case even for those who are providing services to emergency response efforts such as temporary hospitals, which are demanding things like toilets and modular space.

Since speaking with Blanco, the Spanish government has shut down all construction sites.

ASEAMAC is working to help support its members by providing them with the latest information via a

dedicated page on its website.

Spain's largest rental company, GAM, is serving critical industries and customers such as hospitals, pharmaceutical firms, chemical facilities and food companies during the crisis.

The company's main depots remain operational but with a reduced number of staff working in shifts. Its equipment delivery infrastructure has so far not been severely impacted.

#### **FRANCE**

Europe's largest rental company, France-based Loxam, has seen a fall in activity in the European countries worst affected by the coronavirus outbreak – France, Italy and Spain – but is turning its focus to supporting priority sectors.

In these regions, the company is now restricting access to most of its depots and head offices.

However, its branches do remain open and have been mobilised to assist sectors such as healthcare and power, as well as construction professionals.

For example, in the French city of Vichy, Loxam's teams recently installed about ten temporary shelters in less than 24 hours for the deployment of a medical outpost at the town's hospital.

The company has implemented cost reduction measures across the business. It has stopped its 2020 capex plan and cancelled orders where possible.

Meanwhile, another France-based rental giant Kiloutou is also supporting critical services.

Although all 444 depots in France have been closed until further notice, along with the majority of its 20 depots in Spain, an exceptional agreement has been arrived at in France for the company to rent and deliver essential equipment for emergencies relating to public health and public utilities, and to fulfil requests from state authorities.

The company's nine German depots and 34 Polish depots remain open.

In Spain, it is the depots in urban areas that have been closed, with technical and operational centres continuing to provide a limited service.

To date, almost 57,000 infections have been reported in France, and more than 4,000 deaths.

#### **GERMANY**

In Germany, Zeppelin Rental's main country of operation, demand for rental equipment has remained stable and even increased for certain types of equipment as customers try to complete projects more quickly before construction sites are potentially shut down, said Peter Schrader, the company's Managing Director and COO.

Similarly, in Slovakia, the Czech Republic and Nordic countries, construction is largely uninterrupted, but some work in Austria has been halted.

Zeppelin's rental depots remain open, and its supply chains and logistics are in good working order.

The company has seen an increase in demand for some equipment types, such as construction site safety, modular space and sanitary systems from public authorities, healthcare and industrial

clients.

Almost 78,000 cases of coronavirus have been reported in Germany, with 931 deaths.

Peter Schrader, Managing Director and COO of Zeppelin Rental



Kiloutou has closed all 444 of its French depots

#### UK

MHM Plant in the UK has also put in place measures to maintain an emergency service.

While all its depots are now closed, the company can still be contacted for requirements such as power generation, site lighting and fluid storage.

Although MHM Plant is not guaranteeing a full service, it is still trying to satisfy requests. All staff are working from home but certain employees have access to depots for urgent supplies.

Meanwhile, Vp plc has begun to feel the effects of the coronavirus pandemic, with revenues taking a hit towards the end of March 2020. Although the impact has been limited in Vp plc's UK businesses, the trend is expected to continue.

This is true not only in the UK but also in Vp plc's international markets, where government action has limited activity to all but essential business.

Similarly, Speedy Hire has also felt the pinch of coronavirus, according to a recent trading update.

Activity levels in the market have started to drop, but Speedy's 200 depots currently remain open and operational. Its central service teams have begun to work from home.

Looking ahead, Speedy said the full impact of the coronavirus will depend on the length and severity of the disruption to activity in the market.

More than 29,400 infections have been reported in the UK to date, and more than 2,300 deaths.

#### THE NETHERLANDS

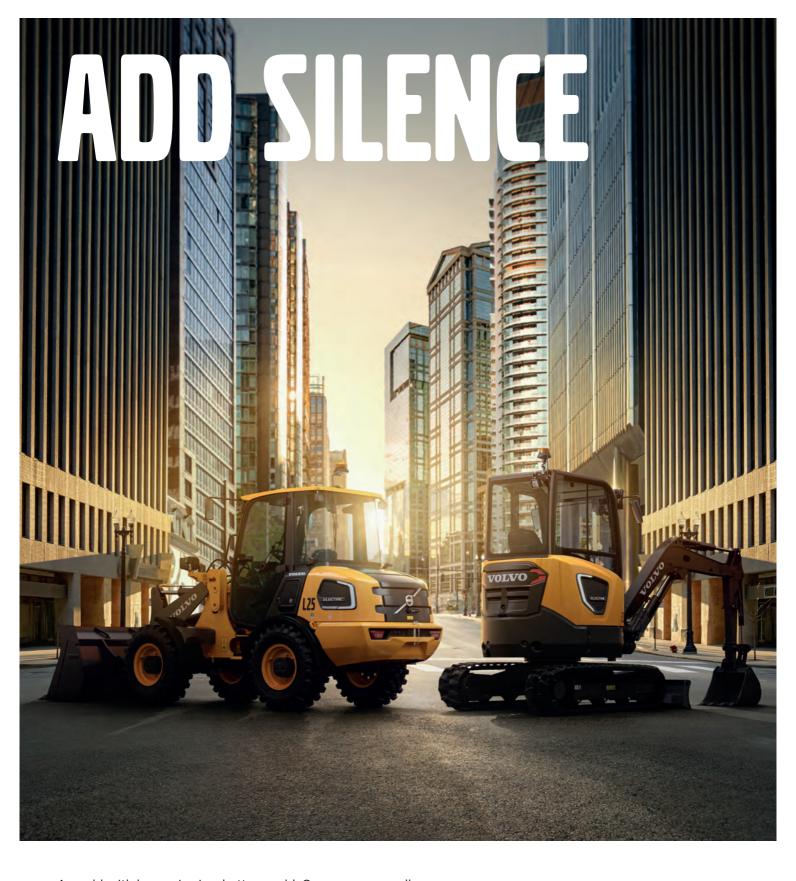
So far, demand for equipment has remained relatively stable for Netherlands-based Boels Rental.

"In most branches, our customers remain fully operational for now, which keeps the demand stable," says Boels.

"But we also see an increase in demand by so-called vital pillars of our society, for example governments, supermarkets, hospitals and other care institutions. They have a strong demand for mobile units, sanitation, power, crowd management and fencing, climate control, and traffic services, etc."

He added, "In the Nordic and Baltic countries and the UK, we haven't experienced a lot of change in >





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construction so far."

At the moment, Boels' depots are operational, delivering services and rental equipment to customers, in line with government guidelines.

The country has so far reported more than 13,600 infections and in excess of 1,170 deaths.



Demand for equipment was said to have remained stable for Boels so far

#### DENMARK

Denmark-based GSV Materieludlejning has adjusted to the coronavirus with a new way of working.

Company CEO Dan Vorsholt said amid the closure of all public amenities, shopping malls, bars and restaurants, construction activity in the country remains relatively strong.

He added, "Soon after the first announcement from the government, we set up a new way to work. We have revolving teams, so team one works in week one, and team two works in week two, and so on." At the weekend the facilities are not used and are prepared for the following working week, ensuring there is 48 hours before the next team takes over, therefore reducing the risk of infection.

Vorsholt adds, "We have a fairly normal operation in terms of turnover, number of orders, material preparation etc., but it can change from day-to-day."

At present, over 3,300 coronavirus cases have been reported in Denmark, with 104 deaths.

#### TURKEY

While there has been an increase in demand for some equipment types, generally the demand for rental equipment across Turkey has fallen, and rental firms are expecting customers to cut contracts short.

However, construction sites in the country remain open and fully functional, and rental companies are keeping their depots open to serve them.

According to IMDER (Turkey Construction Equipment Distributors and Manufacturers Association) and ISDER (Material Handling, Storage and Industrial Equipment Association of Turkey) — which represent rental companies and distributors in Turkey — one example of the type of equipment seeing greater demand is forklift trucks. They are needed by the retail, food and packaging industries.

Delivery times for new equipment were said to have lengthened, especially for companies that import their machines from the EU.

There have been more than 15,600 reported infections in Turkey so far, and 277 deaths.

#### RUSSIA

According to an article written by the Russian Rental Association, HAACT, the opinions of rental companies in the country are divided as the full effects of the coronavirus crisis are yet to be felt.

For instance, Oleg Malakhovsky, the Managing Director of Rental Tech, was optimistic; "This situation has a beneficial effect on the work of our company, since it has now become clear which non-

# The wider construction industry

Countries across Europe are imposing drastic measures to prevent the spread of the coronavirus, yet a large number of construction sites remain active.

Questions are being asked about whether construction workers constitute key workers, as there seem to be numerous instances, not only of projects continuing, but of the rules of social distancing being broken.

Currently, Italy, Spain, France, the UK and Belgium are in lockdown, with other major nations, including Germany, Portugal and Austria, imposing severe restrictions on the movements of their respective citizens.

The heads of most governments in Europe have stated that all but essential work must stop. Yet, after the Italian Prime Minister, Giuseppe Conte, called for a full lockdown, France's President Emmanuel Macron said last week, "We have to continue to produce and to keep the country running."

Following the UK Prime Minister Boris Johnson's 'lockdown' statement on 23 March, Paul Hamer, CEO of contractor Sir Robert McAlpine, said, "We, like the rest of the UK, are adhering to government guidance and many of our sites and offices are now closed."



Roberta Prandi, Associate Publisher at KHL's Power division

French construction giant Vinci has put a large number of French construction sites on hold, and said it has been talking with public authorities to define conditions under which work can gradually resume.

In Germany, however, the government has allowed public infrastructure projects to continue, in agreement with some of the country's largest industry associations.

Commenting on Italy, the worst-affected country in Europe, Roberta Prandi, Associate Publisher at KHL's Power division, said, on 26 March, "The situation, especially in the north, is still very difficult, but the past three days have shown some positive signs as the curve of new positive cases has started to flatten out."

Many workers have protested that their safety was not being prioritised and the government is coming under pressure to extend its list of non-essential activities.

Meanwhile, Austria's largest construction group Strabag is gradually resuming work on more than 1,000 construction sites in the country after almost 10 days of suspended activity.

Over in the US, federal guidance is suggesting that US construction could continue. The Associated General Contractors of America (AGC) has urged the Department of Homeland Security (DHS) to declare construction an essential industry.

New guidance has been released making it clear that construction activities are included in the list of essential critical infrastructure works, according to Stephen Sandherr, CEO of AGC.

efficient internal processes need to be optimised."

Customer demand has so far remained in line with the company's forecasts.

Meanwhile, the CEO of Vertex, Dmitry Pankin, has a different opinion; "The situation is not straightforward. The difficulty is that we can't estimate how long the crisis will last. Now we are paying special attention to receivables – many of our clients have decided that it is not necessary to pay for rental services."

In northern regions of Russia, the construction season has not yet begun, so it is difficult to assess the impact. In general, rental companies have not yet faced a reduction in orders or the closure of sites.

The week of 30 March was declared as non-working, so a decline in demand is possible in the near future, but HAACT expects the market to grow again by September.

Currently, more than 3,500 cases of coronavirus have been reported in Russia, with 30 deaths.

#### Ш

The American Rental Association (ARA) has asked for \$20 billion in financial aid for the equipment and rental industry to be included in the US government's Covid-19 financial relief bill.

John McClelland, ARA Vice President of Government Affairs and Chief Economist, said, "Right now, there is an overwhelming need for the federal government to aid all businesses – but, especially small businesses – in the equipment and event rental industry."

Tony Conant, ARA CEO, said, "Like many industries, the equipment and event rental industry is being severely affected. The shelter in place directives and social distancing recommendations have caused virtually every planned event to be cancelled. These wide sweeping conditions have shuttered many event rental operations and most companies have laid off all staff as we wait on recovery measures.

"As states continue to tighten restrictions on business activities, it's likely that our general tool and construction members will also be negatively impacted."

United Rentals, the largest rental company in the US and the world, is keeping its depots open for business. The firm has been designated as 'essential' since it supplies sectors that are critical to the country's health, safety, infrastructure and security.

The company is also supporting the special business needs customers may have as a result of the pandemic, including generators, traffic control systems and lighting towers.

Herc Rentals also remains in operation, with its depots still open and staff continuing to work. Considered an 'essential service', Herc is conducting its operations in support of critical industries and services during the coronavirus crisis.

Larry Silber, President and CEO of Herc, said, "We are currently responding to hospitals and healthcare

facilities with temporary structures, portable power and lighting, climate control and similar equipment."

John McClelland, ARA Vice President of Government Affairs and Chief Economist

#### **Tony Conant, ARA CEO**

The US is currently the worst-affected country in the world, with more than 215,300 infections and in excess of 5,100 deaths reported.

#### BRAZIL

Brazilian rental association Alec has written a letter to the government

stressing the importance of the rental sector in serving hospitals, municipalities and government bodies.

The letter highlighted the fact that they supply essential machines for maintenance, ventilation, hygiene and sterilisation, such as generators and construction equipment for field hospitals.

Brazilian rental company RCB Plataformas has been experiencing a mixed reaction from customers as they come to terms with the crisis.

Marcello Plonski, who is manager of a branch close to Sao Paulo, said the country is already experiencing a slowdown and a number of customers are asking to terminate their contracts and for payment delays. However, he added, "It is a bit of a strange situation because, we have customers who are still demanding and asking for new rentals."

Brazil has so far reported almost 7,000 cases of coronavirus and 244 deaths.

#### **AUSTRALIA**

The Hire and Rental Industry Association Australia (HRIA), Elevating Work Platform Association of Australia (EWPA) and Telescopic Handler Association of Australia (TSHA) are lobbying to get rental services classified as 'essential'. This will enable them to provide equipment to various government departments, emergency services and essential infrastructure projects during a period of lockdown.

To this end, the associations have been in contact with state and territory Members of Parliament (MPs) as well as federal MPs whose portfolios include emergency services.

From a more operational perspective, they have also been in correspondence with the state and



territory Emergency Management Centres who coordinate resources and equipment in times of emergency.

Australia-based Kennards Hire is currently keeping all of its Australian depots open, while a number of its New Zealand branches have been temporarily closed, due to government measures.

Those that remain open in New Zealand are dedicated to supporting

essential services.

The company has introduced a new 'contactless service' approach, both in branch and with its delivery service, which helps limit physical contact between people. Kennards expects this will also help it to become more agile in its service delivery.

To date, more than 5,100 cases of the virus have been confirmed in Australia, and 25 deaths.

#### **SOUTH AFRICA**

Burma Plant Hire in South Africa has closed its Rustdal, Benoni and Kathu depots, following the announcement by the country's President Cyril Ramaphosa on 26 March that the country was going into lockdown.

With its staff continuing to work remotely from home, Burma Plant Hire remains in operation to provide support to customers operating in essential services to the best of the company's ability.

To date, more than 1,300 cases of coronavirus have been confirmed in South Africa, and there have been five deaths from the disease.



# **Equipment suppliers**

The coronavirus pandemic has begun to impact Caterpillar's supply chain, but the manufacturer is continuing to run the majority of its operations in the US and in other parts of the world, where permitted.

Production at some facilities is has been suspended, and there may be further suspensions depending on how the situation develops.

Cat said it was executing business continuity plans, including the use of alternative sources for parts, redirecting orders to other distribution centres, and prioritising the redistribution of the most important parts.

Meanwhile, Komatsu is temporarily closing its manufacturing facilities in Europe, Brazil and India. Its factories in Japan continue to function, as do its Chinese facilities which were fully functional by 17 February.

UK-based manufacturer JCB is suspending UK production until at least the end of April, while continuing to pay affected employees 80% of their salaries.

The firm's nine manufacturing plants in Staffordshire, Derbyshire and Wrexham closed on 18 March.

A flash survey carried out by CECE (Committee for European Construction Equipment) showed that almost one third of its members are being "significantly affected" by the coronavirus pandemic, with 30% already closing factories.

In China, major manufacturers reopened their factories towards the end of February. However, production was slowed in the first two weeks by a lack of components, transport issues and the absence of some employees.

But Shi Yang of Off-Highway Research China said, "As a general trend, the manufacturers had restored productions to normal levels by the beginning of March."











# Show pushed back

### The International Rental Exhibition and APEX aerial platform show have been rescheduled for later in the year as a result of the coronavirus outbreak

■ he aerial platform exhibition APEX and the International Rental exhibition (IRE), which were scheduled to be held from 9 to 11 June, 2020, in Maastricht, the Netherlands, have been postponed to 8 to 10 September, 2020, because of the coronavirus outbreak.

The European Rental Association (ERA) is also rescheduling its annual convention from 10 to 11 June to 9 to 10 September to coincide with the IRE show. The European Rental Awards will now take place in Maastricht on 9 September, 2020.

The organisers of the shows, BV Industrial Promotions International (IPI) and KHL Group, and the supporting associations - IPAF for APEX and ERA for the IRE rental show - are agreed that postponement is the best course of action given the global health crisis and the measures being taken to prevent the spread of the virus. The venue for the events will remain the MECC exhibition centre in Maastricht.

Tony Kenter, Managing Director of IPI, said, "We have listened to our partner associations, the exhibitors and the official advice from government bodies, and have taken the decision to postpone the

"We are making this decision now, 11 weeks before the events, because it will eliminate any uncertainty and allow both exhibitors and visitors to plan in advance for the new dates. Europe is facing



Toro's eDingo electric compact utility loader

an unprecedented health crisis: we wish the best for the access and rental industries as they negotiate this difficult period."

James King, Managing Director of KHL Group, said he was certain it was the correct decision; "We have to think about the health and safety of exhibitors, visitors, MECC employees and our own staff. That is what determined our decision.

"We hope that APEX and IRE in September will help our industry 'get back to business'. For the moment, we all have to focus our efforts on managing the virus."

#### **Kickstarting activity**

The events will be a great opportunity to kick-start activity once the coronavirus pandemic is behind us, with plenty of exciting exhibits to look forward to.

For instance, US-based manufacturer Toro will be using the IRE show to launch the new electric version of its Dingo compact utility loader into the European market.

Toro, which is already well established in the US, is looking to tap into the European market; "For this, the e-Dingo is a flagship model," according to Anthony Nadalin, Senior Marketing Manager at

The eDingo 500 is the company's first electric Dingo compact utility loader.

Nadalin added, "Listening to end users and channel partners, there is demand for electric. In part, it is also a response to public pressure to have environmental products. This is a trend across Toro's

Based on the company's 323 Dingo, the eDingo 500 has an operating capacity of 233kg and is powered by lithium-ion batteries. It was said to be designed specifically with rental in mind.

Lowering emissions will also be a focus for Ammann at IRE, along with connectivity.

Ammann will be presenting a customised version of its APF 15/40 vibratory plate, developed for Boels

Guy Cremer of Boels Rental said, "Positively TCO [total cost of ownership] influencing aspects have convinced us to invest in such a solution. With its







## **New dates for** the diary

IRE and APEX: 8-10 September, 2020 ERA Convention: 9-10 September, 2020 European Rental Awards: 9 September, 2020 Venue: MECC exhibition centre. **Maastricht, the Netherlands** 

#### WEBSITES:

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prolonged service intervals, which will clearly reduce fleet maintenance costs, we are convinced we have the right answer for bigger fleets.

"The new Vanguard-powered plate compactors offer customers an enhanced user experience by way of an easier simplified starting process and lower vibration, while providing powerful compaction."

With regard to connectivity, the Ammann ServiceLink fleet management solution will be showcased.

Available on all Ammann branded equipment, it gives equipment owners visibility of their machines' operating data, including location, usage and maintenance requirements.

Patrick Stellwag, Key Account Manager Rentals at Ammann, said, "The Ammann ServiceLink has a direct impact on a fleet owners' profitability. With ServiceLink, rental houses can remotely monitor all equipment to ensure that it is properly used, maintained and billed. Of course, rental customers can get access too so that they gain control over their rented equipment on the different sites".

We look forward to seeing you there in September, to get the show back on the road!

## As more options open up, it can be difficult to know what power system to go with. Thomas Allen discovers that one solution could be to take a modular approach

■ lectric equipment offers the benefits of lower emissions, reduced noise levels, fewer ■ vibrations, and access to emissions-regulated sites and indoor or underground spaces. However, this comes at a cost.

When asked what rental companies are saying about it, Glen Hampson, Business Development Manager for Construction at Kubota UK, tells IRN, "Demand is being driven by the need to meet emission regulations and lower noise. These are the key points that rental firms can use to justify the higher cost and sell the product to their customers."

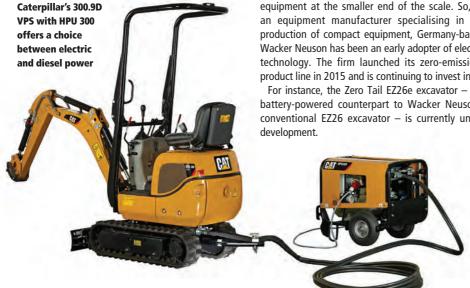
He adds, "There is currently an undeniable global shift towards electric vehicles. At Kubota, we have seen some interest from rental companies following the launch of our electric prototype excavator."

Kubota recently unveiled a prototype electric mini excavator in Japan. The company is also developing an alternative fuel model using liquefied petroleum gas (LPG), which is due to be launched this year, with commercial production scheduled for 2021. More information about this and other alternative-power mini excavator developments can be found in the Mini Excavators feature in the March issue of IRN.

This begs the question of whether Kubota is hedging its bets. In what direction does it see the industry going?

LPG is regarded as the middle ground between traditional diesel and full electrification, according to Hampson; "The benefits of gas are the initial purchase price - which is significantly lower than electric - and the ability to perform a full day's work without specialist infrastructure for charging. Operators can change the gas cylinder of the unit in less than three minutes.

"Gas machinery also emits both low noise and low vibration compared to diesel, whilst retaining engine



# Decisions,



durability due to having the same core design."

However, these machines still use a fossil fuel that will eventually become depleted.

#### **Electric evolution**

Meanwhile, Hampson says, "Electric technology is certainly evolving and, on the face of it, it's evolving fast. There has been an undeniable global shift towards electric vehicles, with demand being mainly driven by increased emissions regulations."

As mentioned, cost is a big challenge; "The machines carry a higher price tag and this won't be for everyone. It will probably have the biggest impact on adoption across the industry," Hampson says.

Another challenge is the time it takes to charge electric machines, and the operating times they are

Hampson adds, "However, given the pace of technological development, it's likely a full range of electric machines will be feasible in the future."

Electrification is particularly applicable to equipment at the smaller end of the scale. So, as an equipment manufacturer specialising in the production of compact equipment, Germany-based Wacker Neuson has been an early adopter of electric technology. The firm launched its zero-emissions product line in 2015 and is continuing to invest in it.

For instance, the Zero Tail EZ26e excavator - the battery-powered counterpart to Wacker Neuson's conventional EZ26 excavator - is currently under



**Glen Hampson, Business Development Manager for Construction at Kubota UK** 

In an effort to drive the adoption of batterypowered construction equipment, Wacker Neuson offers customers in Germany the option of leasing its modular lithium-ion battery at a monthly rate. In this way, customers can get regular battery updates and the risk of battery failure is minimised.

Also, the manufacturer regularly rents electric equipment to customers to test it out on site.

In addition to the challenge of encouraging acceptance in the market, there is also the issue of electric infrastructure. However, a spokesperson from the company said, "Recently, further manufacturers have been starting to offer electrically powered solutions as well. This is a positive development, as it helps develop the respective infrastructure and broadens the acceptance of such equipment with construction companies.

"The more manufacturers get involved and help to create standards in our industry, the faster there will be progress in this area."

Although there is a clear trend towards electrification, Wacker Neuson does not believe that in the medium term all products will be completely

# decisions

electric. It recognises that the electric drive is not the universal solution for all product groups.

"Electric machines will find their place, especially in cities and in classic indoor applications, such as demolition, tunnel or renovation work," said the company spokesperson.

Wacker Neuson predicts that a much more differentiated picture will emerge across the entire range of construction machinery, with a wide variety of alternative drive systems, hybrid drives, synthetic fuels and other innovations entering the marketplace.

For this reason, Wacker Neuson is testing alternative drive technologies and collaborating with universities and start-up companies.

Caterpillar also acknowledges the increasing diversity in the marketplace. The company's electrification strategy involves what it describes as a 'versatile approach' that allows it to match the right product to a given application.

This means the manufacturer is developing a range of solutions from which its customers can choose.

Cat's full-electric products, featuring nonengine electric power sources, are best suited to environments where eliminating emissions is the priority, such as underground or indoors. For example, in 2017, Cat created a proof-ofconcept R1300 underground loader with a batteryelectric powertrain. This model is now driving the development of the company's next generation battery-powered R1700 Mining Loader.

#### **Providing options**

The diesel-electric products connect an engine to an electric generator, AC drive motor or other source of electric power. They are targeted at operations where fuel usage needs to be minimised. Examples in Cat's portfolio include the 794 AC and 795 AC electric drive trucks, as well as the D7E dozer that was first introduced in 2009.

Meanwhile, Cat's hybrid products, which combine an engine with various other power sources, such as batteries, hydraulic accumulators and high-speed flywheels, are good for reducing emissions.

Advancements in these different power systems are only possible through collaboration though, according to the company. Cat's dealers around the world are on the front line of the electrification movement, adapting existing Cat products to specific regional or jobsite requirements.

For example, Germany-based dealer Zeppelin has been working with Cat to develop a tethered, electrified material handler primarily for use indoors. It has also turned a Cat 302.7D CR mini excavator into a dual-power machine that can switch between a diesel engine and electric.

Another example is Pon Equipment, which has been building eight fully electric excavators, based on Cat's 323F model, for the Norwegian market. They will run on electric motors, controllers and heavy-

In terms of the development of electric and hybrid machines, Ammann has some projects already underway in light compaction, says Bernd Holz,



**Bernd Holz, Managing Director and Sales Director Europe West at Ammann Group** 

Managing Director and Sales Director Europe West at Ammann Group, including some hybrid units.

However, he acknowledges that in pure electric machines, Ammann is still watching and waiting to see how the market develops. He thinks at this relatively early stage, there are other considerations that impact on CO<sub>2</sub> emissions, such as the production process for batteries and the source of power for recharging on sites, such as a diesel gensets. And he thinks, for example, that it might make more sense if different OEMs were using shared, interchangeable

"We have some plans", he tells IRN, speaking on Ammann's stand at the ConExpo show. "We think we could launch electric plates or rollers in the next year or two. If customers are telling us they need and want to buy, that's a different story."

He says full testing of electric machines needs several years and requires specialist know-how to develop; "It's not so easy." He thinks that a joint

# Intelligent charging

Dutch rental company Riwal has introduced a new charging station for electric aerial platforms that it developed together with digital technology provider ABB.

Riwal recognised a problem on some construction sites: there are a growing number of electric machines – namely aerial work platforms - which all get plugged in to charge at the end of the day, creating a large spike in demand for electricity. This can lead to some equipment not getting charged.

So Riwal and ABB worked together to develop a way of better processing that jump in demand.

Servie Huybers, Product Marketing Specialist at ABB, explained that the charging unit is equipped with a so-called load balancer; "The aerial platforms have dynamic chargers that demand a lot of power in the beginning and as time goes on it decreases.

"To better distribute the requested power among the different chargers, if the load becomes too high due to one or more chargers, the load balancer will switch it off temporarily. This intelligent system keeps the energy supply intact and ensures that all connected aerial platforms are charged during the night."

venture of some kind with another company that has similar products, on a 'plug and pay' basis, might make sense.

Holz says up to 2.5 tonne asphalt rollers could go electric, but for larger machines hybrid technology will work better.

#### **Continued growth**

On the wider topic of Europe's rental scene, he is not altogether welcoming of the continued growth of the biggest rental companies; "They are getting too big and they will try to dictate price. I prefer it if we have more medium-sized players."

The use of electric technologies also has the >





Ahcène Nedjimi, electrics & electronics systems lead engineer and electromobility specialist at Volvo CE

potential to change the very shape of construction equipment in the future, due to the design possibilities it opens up. So says Ahcène Nedjimi, electrics and electronics systems lead engineer and electromobility specialist at Volvo Construction Equipment (Volvo CE).

Nedjimi has been working on electric power in his role for more than a decade; he was project leader for the launch of the EX2, Volvo CE's electric compact excavator prototype, in 2017.

"Without an internal combustion engine and a fuel tank, there are new design possibilities to explore," Nedjimi says. "In most of those vehicles, there is a large engine usually located in a single place and a fuel tank that takes up space in the vehicle.

"While there is a need for battery and electric motor placement in electric vehicles, designers are not locked into this traditional framework and are able to package the batteries and motors differently."

The Sweden-based company announced last year that it has decided to shift its production of compact excavators and wheeled loaders entirely to electric models from mid-2020.

Nedjimi says, "As a specialist in electromobility, I can tell you that it's now obvious that we are standing before a shift towards electromobility. Volvo CE would like to be part of it, and to drive it."

Case Construction Equipment, part of CNH Industrial, recently introduced "Project Zeus," the 580 EV (Electric Vehicle), which the company said is

the first fully electric backhoe loader.

The 580 EV was said to deliver equivalent power and performance to diesel-powered equivalents in Case's portfolio, while producing no emissions and less noise, and offering lower daily operating costs.

"The 580 EV is a significant step forward in our commitment to sustainability, the evolution of earthmoving equipment and truly practical innovation that drives real savings and competitive advantages for backhoe owners," said Leandro Lecheta, head of construction equipment, North America, CNH Industrial.

The 580 EV is powered by a 480V, 90kWh lithiumion battery pack that can be charged by any 220V/ three-phase connection. It was said to last for most common eight-hour workdays on a full charge.

The battery separately powers the drivetrain and hydraulic motors, resulting in hydraulic breakout forces equal to diesel-powered machines and improved performance during simultaneous loader and drivetrain operation.

The manufacturer estimates that, in some cases, the 580 EV could save fleets as much as 90% in annual vehicle service and maintenance costs. This takes into account the reduction and even elimination of diesel, engine oil, diesel exhaust fluid, regular preventive maintenance and long-term engine maintenance — plus the associated labour costs and time savings.

Doosan is also investing in electric and hybrid technology in response to customer demand. The South Korean manufacturer has introduced its prototype DX17Z-5 Electric mini excavator, aimed at the US market.

The zero tail swing model answers the call from customers who are working on jobsites where







exhaust gases are restricted or even prohibited.

The 1.5 tonne size class was selected for this first model because of customer requests for a narrow mini excavator that could work in confined spaces.

Rather than a traditional diesel engine, the DX17Z-5 mini excavator is powered by a battery, located where the machine's engine and fuel tank would usually be. The battery supplies power to an electric motor that is used to operate the hydraulic system.

Doosan is aiming to make the DX17Z-5 commercially available in 2022.

#### **Prototype hybrid**

The company has also unveiled a prototype hybrid version of its standard DL200-5 loader, called the DL Hybrid, which could become available in 2023.

Aaron Kleingartner, Product and Dealer Marketing Manager, Doosan Infracore North America, said, "The electric motor and diesel engine work in tandem to provide the same level of torque and output that a larger diesel-only engine does."

The model uses a smaller diesel engine, which helps to lower the wheeled loader's fuel consumption.

Doosan suggested it may apply similar hybrid technology to wheeled loader models in the

Looking at other alternative power sources, Hyundai Construction Equipment (HCE) has joined forces with Hyundai Motors and Hyundai Mobis to develop hydrogenpowered medium- and large-capacity

excavators and forklifts.

According to the Memorandum of Understanding signed by the three business units in South Korea, Hyundai Motors and

Hyundai Mobis will design and manufacture hydrogen fuel cell systems, including power packs, while Hyundai Construction Equipment will design, manufacture and evaluate the performance of excavators and forklifts.

Development work will begin this year, with a target date for mass production and distribution set in 2023.

Hwang Jong-hyun, Head of the Research and Development Division for Hyundai Material Handling at HCE, said, "With this latest agreement, we've prepared a foundation upon which we can secure core technology in hydrogen-powered construction equipment ahead of our competitors.

"Hyundai Construction Equipment will do its very best to meet the challenges that lie ahead as countries around the world attempt to establish global standards in terms of certifying the performance of equipment and legislating relevant laws for the commercialisation of hydrogen-powered construction equipment, and play a leading role in



the market moving forward."

Unlike conventional diesel engine-based equipment, hydrogen-based electric machines use electricity produced by a chemical reaction between hydrogen and oxygen as its power source, meaning no toxic gases are emitted.

HCE said that, compared to lithium batteries, which face structural issues limiting attempts to increase battery capacity, hydrogen fuel cells are easier to expand, making them a better choice for large forklifts or excavators.

Since the end of 2018, HCE has also been working with engine manufacturer Cummins on a 100% electric-powered excavator.

Over in Japan, Komatsu recently introduced a new electric mini excavator to the Japanese market, aimed initially at the rental sector.

The PC30E-5, based on the manufacturer's experience with developing hybrid construction

equipment and electric forklift trucks, was said to offer the same level of performance as its diesel-powered equivalent. The 4.7 tonne machine has a 0.09m³ bucket capacity and measures 4.95m long, 1.74m wide and 2.58m tall.

Originally launched at Bauma Munich as a prototype in 2019, the new electric model has been tested on a number of customer jobsites. Although it is being sold to the rental sector in Japan to begin with, it will later be marketed more widely.

With standard charging, the PC30E-5 can be fully charged over night or when the machine is not being used for a long period. With the rapid charging option, the 36kWh battery can be charge to 80% of their capacity in a shorter period of time, such as during a lunch break, according to Komatsu.

The battery has been designed to be easy and safe to maintain. No electrolytic liquid needs to be added, and the routine check-up areas are separate from high-voltage areas of the machine.

Over the past few years, Netherlands-based Tobroco Giant has been focussing on the development of electric equipment by expanding its engineering department and opening a research and development centre at its factory in 2016.

The initial results of this investment were seen last year when the manufacturer launched its first electric compact loader, the G2200E. Tobroco Giant is also planning to introduce an electric version of its G2200 X-TRA model soon.

The G2200E, with a lifting height of

An electric version of Tobroco Giant's G2200 X-TRA loader is due to be released soon 2.85m and capacity of 1,650kg, is powered by a 48V lithium-ion battery that fills the space traditionally used for the engine.

The use of two separate electric motors – a 6.5kW motor to drive the machine and a 11.5kW motor for the hydraulics – ensures there is always enough power to perform tasks precisely.

Customers can choose from three different battery options: 12.3kWh, 18.4kWh or 24.6 kWh, offering 4, 6 or 8 working hours, respectively.

The battery is protected by its own intelligent battery management system and can be charged whenever, without affecting the battery lifetime. This was highlighted as being of particular benefit to rental companies.

The electric loader can be equipped with either a 40 or 60A on-board charger that can be connected to a standard 230V power supply. External chargers are also available, ranging from 40 to 300A, offering the









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## The European Rental Association recently launched a campaign to promote rental as a sustainable practice.

#### Thomas Allen reports

he European Rental Association (ERA) has launched a promotional and lobbying campaign to highlight equipment rental as a sustainable option in the construction process.

The goal of the campaign is to promote rental as a cost-effective and 'green' solution in comparison to other options. It will be linked to the goals of the EU's recently announced European Green Deal (see box story below).

Huw Longton, the ERA's Communications Manager who is responsible for the campaign, told *IRN* the aim is to make sure that rental is encouraged as part of the Green Deal, which targets a no net emissions economy by 2050.

"[Rental has to be] exemplified as a good practice to avoid carbon emissions, for example in green public procurement", says Longton, "and to drive awareness of the environmental benefits of rental, backed by the results of the ERA's recent Carbon Footprint of Construction Equipment study."

Longton added; "EU policies should recognise and encourage practices that optimise or minimise the climate impact of construction equipment use.

"Circular Economy 2.0, European Green Deal, Green Public Procurement, Decarbonisation Package – all of these [EU policies] should progress in the first half of this year."

As well as participating in events, the ERA will be organising media briefings and sending out press releases.

"In short, we'll be making as much noise as possible about the sustainability and efficiency of

# **European Green Deal**

To mitigate climate change and environmental degradation, it has been recognised that Europe needs a new growth strategy.

The European Union intends to transform the economy so that it is resource-efficient and produces zero net emissions by 2050. This involves decoupling economic growth from resource use.

The European Green Deal provides a roadmap to achieving this. Included in it is the goal to boost the efficient use of resources by moving to a clean, circular economy.

As part of this, a European Climate Law has been proposed, which will turn political commitment into a legal obligation, thereby triggering investment in areas such as environmentally friendly technology. The EU will also be supporting industry to innovate.

One key priority in the European Green Deal is the new circular economy action plan, which is part of the EU's broader industrial strategy.

# ERA promotes sustainability



the equipment rental industry and emphasising the benefits it provides," he said.

Although the ERA's campaign is targeted at the EU and national levels, it is expected that the message will trickle down to the regional and city levels.

"Personally, I think a lot of change will happen at the city level," says Longton. "There are lots of events and potential partner organisations where they're working on innovating at the city level and local level. And so we'll be targeting people who can make decisions and make a difference."

#### **Leaflet and video**

The team has been working with communications consultancy Grayling to produce a leaflet and a short video, which are being shared on social media and sent to national associations and ERA members, along with a 'toolkit' to help them communicate the message at national and local levels.

"The next immediate steps will be to send out the study with the leaflet and link to the video to key policy, industry and civil society stakeholders," says Longton.

The leaflet and video focus on delivering the message that rental, as a circular model, can help to cut carbon emissions in the construction sector — a critical step to meet the Paris climate goals.



Huw Longton, the communications manager responsible for the campaign

They highlight the fact that rental ensures the appropriate type of equipment is used for a given task, reduces transport distances due to the proximity of rental depots, enhances utilisation rates, and makes sure equipment is well maintained to increase its efficiency and lifespan.

Going forwards, media briefings will be organised, more press releases will be sent out, and the team will be looking to get involved in events where the message can be promoted.

## **Carbon footprint of equipment**

A study commissioned by the ERA to look at the carbon footprint of renting rather than owning equipment was presented at last year's ERA Convention.

Although it did not provide any simple answers, it paved the way for the creation of a CO<sub>2</sub> Calculator, which will help companies to make informed, environmentally friendly decisions.

The study was conducted by Climate Neutral Group (CNG), working in collaboration with CE Delft and SGS Search.

They took a representative selection of equipment types and broke down their life spans into three phases – production, usage and end-of-life – to weight up the environmental costs and benefits.

# Making it last

As well as improving the sustainability credentials of equipment, reconditioning old machines and buying used products can also be a good way to flex a fleet in response to changing demand. Thomas Allen reports

quipment reconditioning is not only an environmentally friendly option that extends the life of a machine, but it can also be a useful way of managing a fleet to meet changing demands.

Bob Bartley, Genie Senior Director of Product Support and Service Solutions, Terex AWP, told *IRN*, "Fleet reconditioning enables rental store owners to maintain a blended fleet of older and new equipment to best meet the changing demands of rental customers. And, keeping equipment in service longer is a greener alternative than disposal."

He added that fleet reconditioning gives rental companies the option to have a unit configured to meet a customer's particular specifications regarding power, drive and other add-on features.

Bartley joined Genie Industries in 2000 as a field service representative. Prior to that, he spent 23 years as service manager for aerial lift dealer Adco Equipment, which was acquired by United Rentals.

Genie offers fleet reconditioning services to customers in North America through its reconditioning centre in Oklahoma, US. The models it reconditions include Genie Z (articulated) and S (telescopic) booms, as well as big-deck GS scissor models.

Each machine is inspected to determine the services needed, and then components are repaired, rebuilt or replaced as required.

This process includes everything from the hydraulic, mechanical and electrical systems, engine components, decals and manuals. It also

# Taking the guesswork out of residuals

Used equipment specialist Rouse Services has launched Rouse Residual Values, a self-service portal through which customers can get residual value estimates across a range of equipment, including aerial work platforms, telehandlers, heavy earthmoving, cranes, trucks, and trailers.

Rouse collects data for more than US\$14 billion worth of new and used equipment sales transactions annually. It can use this historical data to generate residual value estimates for equipment up to eight years into the future.

This was said to be a useful tool for informing fleet management decisions.

includes warranty work and updates issued in product bulletins and safety recalls.

Bartley said, "With a reconditioned machine, rental store owners can expect to get five more years of reliable and efficient operation from a unit they already own."

Steve Couling, Managing Director of Access Platform Sales (APS), the UK and Ireland authorised distributor for Hinowa and a UK approved distributor for Genie and Niftylift, predicts that the increased focus on sustainability in the access rental market will lead to a change in financial model that takes into account the full lifetime value of equipment.

Couling has been Managing Director of APS since 2014, having previously worked as Managing Director at vehicle mounted specialist Versalift UK for 10 years.

Rather than looking at units in terms of their up-front cost, companies will become more interested in the cost per week or month, according to Couling.

#### **Multiple lives**

As a result, access platforms will be designed so that they can have three or four lives rather than just one or two.

"A new platform will start off being supplied under a lease arrangement to a large and established hire company," Couling says. "It might then be sold on to a start-up hire company. Then it might be refurbished and move into the end-user market."

This model is made possible by the growing reliability of access platforms which, in large part, is based on the increasingly sophisticated sensor and telemetry systems they are fitted with. The data can be used by manufacturers to better predict machine reliability and maintenance costs.

However, this can be a double-edged sword when it comes to refurbishment. Sensors and telemetry also enable design boundaries to be pushed, which leads to additional strain being placed on platform frames. This can shorten a unit's life, depending on the type of platform.

APS refurbishes platforms for rental companies or for resale under the company's Approved Used brand.

Couling said, "Some manufacturers are good at supporting refurbishment. Niftylift, for example, is one of them. To refurbish a platform fully we need access to key parts like boom arms perhaps 10 years down the line, which may not always be the case.

"I can see refurbishment growing in popularity and there is a case for refurbishing even more



Steve Couling, Managing Director of APS

sophisticated platforms. But manufacturers need to be supportive and there has to be a demand from the marketplace for this trend to grow in strength."

APS Approved Used platforms are sold with a six-month onsite warranty, which means an APS engineer will attend the machine at the customer's depot or jobsite if warranty-backed repairs are needed.

In European countries where Wacker Neuson sells its equipment directly, such as Germany, the company notes the complete rebuilding of



equipment is generally reserved for particularly high-value units, whereas reconditioning is more common for both high- and medium-value equipment. Also, compact equipment is more likely to be reconditioned than smaller equipment.

In those direct sales markets, Wacker Neuson also offers used machines, including those from its rental fleet, which comprises 10,000 units.

These were said to be more popular among smaller, regionally active rental companies for supplementing their fleets. Larger rental firms primarily renew their fleets with new machines, according to Wacker Neuson.

#### 'Premium used'

The used equipment is sold through Wacker Neuson's 'Premium Used' programme, which guarantees that the products are a maximum of 24 months old and are particularly well maintained.

Over in the US, the manufacturer offers a Certified Pre-owned (CPO) equipment programme.

Joe Wick, Dealer Development and Aftermarket Services Manager at Wacker Neuson, told *IRN* that the programme, which has been running for a year, came as a result of demand from dealers.

"Old equipment from dealers' rental fleets gets put into the programme," Wick said. "Preowned equipment goes through an inspection and refurbishment process before being offered through the company's used equipment programme."

While 38 of Wacker Neuson's US dealers are certified to do the inspecting and reconditioning themselves, the manufacturer has also partnered up with industrial equipment supplier Palmer Johnson Power Systems, which has a reconditioning centre in Wisconsin.

Equipment must be no more than 3 years old, have less than 1,500 hours of use, and pass a total fluid analysis test.

The programme is for compact and select light equipment, including skid steers, compact tracked loaders, wheeled loaders, telehandlers, excavators,

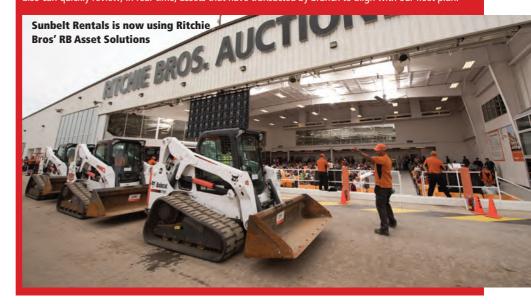


# **Managing used equipment sales**

Sunbelt Rentals is using an asset management system from auction company Ritchie Bros to help manage used equipment sales from its US\$10 billion rental fleet.

The company is using RB Asset Solutions, a cloud-based inventory management system (IMS) and an inspection application. The system includes tools to organise sales, data analytics, personalised webshops and equipment valuations.

Michael Guzman, Fleet Operations Manager at Sunbelt Rentals, said the system was helping it better manage the flow of its assets; "We have better visibility of our fleet, including items we are considering for disposition, which will be remarketed directly by Sunbelt or sold through one of Richie Bros' channels. "We are improving the efficiency of our disposition process as well as recovery on equipment sold. We also can quickly review, in real-time, assets that have transacted by branch to align with our fleet plan."



dumpers and trench rollers.

Wick said, "We'll wait to see how well this model works in the US before potentially introducing it to Europe."

Going with lower cost, used equipment enables a rental company to build its fleet and retain capital that might be better spent on attachments, additional equipment or other areas of the business.

However, there are certain things to look out for when buying used equipment. The condition of the machinery is obviously paramount – it is important to ask to see equipment utilisation, maintenance and repair records. However, Stephen Cook, Senior Manager of Used Equipment at United Rentals, highlights four other important aspects to consider when buying used equipment.

#### Warrantv

The first is warranty, because even the best equipment may need unforeseen servicing or parts replacement.

"Check to see if the equipment provider offers an extended warranty programme that delivers bumper-to-bumper coverage for select components not designed to be replaced during the life of the product," says Cook.

Then there is equipment servicing. This is important especially as equipment becomes more complex, and tightening budgets and timelines make downtime more problematic.

Cook says, "Look to see if the equipment provider offers an equipment servicing programme that includes professional inspections, preventative

The models Genie reconditions include Genie Z (articulated) and S (telescopic) booms, as well as big-deck GS scissor models



An EZ38 excavator that was reconditioned by Palmer Johnson Power Systems

maintenance and repairs by expert technicians."

This can save the cost of maintaining equipment in-house, which requires a parts inventory, workshop space and labour.

The next thing highlighted by Cook is financing; "Financing enables a company to manage the purchase cost over time, often helping to make it easier to buy the equipment."

Financing programmes should cover all equipment-related costs including warranty and freight.

Finally, Cook emphasises the importance of training, saying it is essential to create and maintain a successful safety culture, which drives both worker well-being and worksite productivity.

"Today, training formats have adapted to accommodate learners, often offered in classroom, online and in the field in multiple languages," says Cook.



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# Powers of persuasion

In an effort to encourage rental companies to demand machines powered by their engines,

Thomas Allen discovers that manufacturers of engines are keen to enhance their aftermarket support, while also making it easy for equipment to be modified with their power systems

hat most engine manufacturers do to persuade rental companies to request their engines in the machines they buy is stress commonality of parts and technologies, the ability to monitor and control engine operation in the field, and the speedy provision of service parts anywhere; in short, aftermarket support.

This is something that engine manufacturer Perkins has been putting particular focus on recently, as part of its strategy to better tap into the rental market.

Corey Berry, Business Development Manager of Global Rental at Perkins, told *IRN*, "The rental industry has the largest diesel-powered fleet owners in the world. More than 50% of all diesel-powered machines find their first life in rental, globally. It's a big market.

"And Perkins supplies relevant engines — that's to say, smaller engines for compact equipment."

Berry has been in the rental industry for 25 years and in his current role at Perkins his focus is on supporting rental companies. He has been working with Andy Zuckermann, Global Rental Manager at Perkins, to develop the company's rental strategy, Perkins Rental Support.

Noting the increased importance of providing support to rental companies as they make the transition to Tier 4 Final and Stage V compliant equipment, Berry said, "We've put all rental-specific services provided by Perkins in one place online."

#### **Website update**

As part of a broader update of Perkins' website, the rental section has been reconfigured to bring together a range of tools that used to be disparate, such as training and parts.

Berry said, "This makes it easier for rental companies to access diagnostic tools and hardware, service training and personalised support. It empowers rental companies."

As part of this update, the engine



Corey Berry, Business Development Manager of Global Rental at Perkins

manufacturer recently launched its new Perkins Rental Customer Portal, which is available globally. It acts as a centralised hub that gives direct access to things such as parts ordering, operation and service manuals, warranty submissions, and free online

service training.

"It's targeted primarily at fleet managers and service managers," said Berry. "It's a one-stop-shop where they can find everything specific to rental support, from operations and maintenance manuals to contacts for local service support."

Rental companies are growing in their buying power, according to Cummins' Marketing Communications Director Steve Nendick, who said this is especially true in North America where there is a greater demand from rental firms for larger equipment. Smaller equipment is generally outside >





Kohler's new dual-fuel CH440DF engine can run on gasoline or propane

# **Easing the transition**

Volvo Penta has been working to help OEMs and rental companies as they make the transition to Stage V.

Ilenia Procicchiani, Sales Manager Industrial, Italy and Spain, told *IRN*, "As new emissions steps and engine solutions are being introduced to the market, it's critical for OEM customers and end-customers to understand what it means — everything from installation and operation to maintenance."

With a particular focus on gensets, Procicchiani said that, although it has always been important to use the right machine for a given job, it is now even more so. Before the introduction of exhaust aftertreatment systems (EATS), this was less critical

She added, "Knowledge about this is important to minimise the risk that the engine might end up working with very low load, which is not the best condition for any engine with an EATS system."

condition for any engine with an EATS system."

One example of the initiatives that Volvo Penta has introduced to educate the industry is the seminar it held with genset manufacturers and rental companies at the Distributed Power Europe exhibition in Rimini, Italy, towards the end of last year.

Rental companies that attended from Italy, Spain and the UK were told how Volvo Penta Stage V engines should be used to maximise their lifetime and productivity, with information provided about Volvo Penta's Stage V technology, new legislation and engine load recommendations.

The engine supplier has plans to organise similar workshops in the future, ideally at manufacturers' sites, involving their rental customers

Murray Pollok speaks to Perkins at ConExpo about how it's targeting rental and has enhanced its App. Videos on KHL.com **Cummins' Performance Series** 

is now available with an extended warranty

of Cummins' engine range.
In response to this, Nendick said,

managers who are responsible for the rental houses – the Hercs and Sunbelts – just like we would have for Komatsu or Hyundai or John Deere."

"We now have, in our head office in the US, account

These account managers are building relationships with rental companies and working to better understand their expectations.

One outcome has been the recent introduction of a new extended warranty. Cummins' Encompass Extra warranty applies to its latest Stage V Performance Series engines: the F3.8, B4.5, B6.7 and L9.

Cummins' standard engine warranty is two years or 2,000 hours — whichever occurs first — or one year with unlimited hours if the 2,000 hours is exceed in the first year.

The new extended warranty programme, however, provides a range of engine coverage options up to five years with unlimited hours.

It can cover parts and labour or parts, labour and travel, depending on customer needs.

Additional coverage is also available for

Cummins' aftertreatment system.

Nendick said, "I think it's particularly beneficial for the rental market because with a rental house, my perception is that they're looking to protect themselves and minimise the risk. So

The K-Hem 2504 comprises a 55.4kW KDI 2504TCR diesel engine and a 48V electric motor



This move has been made possible by the simplification of Cummins' Performance Series engines.

"In the past emissions steps, the engines have always got more complex, there's been more technology added," said Nendick. "Whereas because we've improved the capability of our aftertreatment system, we can take some of the technology off the engine, make it simpler and lighter, easier to install for an OEM, but also easier and cheaper to service for a rental company."

The Encompass Extra warranty will also become available on Cummins' X12 and X15 engines in the next month or two.

Rolls Royce is also offering a warranty extension of up to five years on new hardware. A spokesperson from Rolls Royce said, "Previously, the warranty was valid for two years; the warranty extension gives customers an all-encompassing warranty which covers them up to, and including, engine replacement."

This is one element in the manufacturer's strategy to make its engines attractive to rental companies. Another is the provision of digital enhancements.

"Our Digital Solutions team is being expanded continuously, and a data and analytics competence center is currently being set up in Munich," the spokesperson added.

So far, the company has developed two mobile

Apps: MTU Go! Act and MTU Go! Manage. They offer improved customer service and predictive maintenance, at the same time as providing Rolls Royce with data that informs the future development of its engines.

#### **Alternative fuels**

Turning to the topic of alternative fuels, Rolls Royce said its strategy for the future is to become a supplier not simply of engines but of power solutions. To this end, it is collaborating with partners in

various fields.

Although the high power-density of diesel has not yet been replaced by other power sources, the Rolls Royce's spokesperson said, "In the near future, diesel engines will remain an important power source for construction applications but are more and more accompanied by, combined with or even replaced by other power sources, depending on the field of application and the infrastructure in the area of operation."

Hydrogen technology is of central importance here, but it is imperative that the hydrogen is manufactured responsibly; "The company is engaged with partners on several projects for the

Rolls Royce has developed two Apps for its engines: MTU Go! Act and MTU Go! Manage



The Deutz Advanced Configurator modular system forms the basis for integrating E-Deutz drives into machines

climate-neutral manufacture of hydrogen as a basis for producing energy or synthetic gaseous or liquid fuels."

Regarding electrification and hybridisation, Rolls Royce is currently focused on marine, rail and power generation applications. However, it intends to take lessons from this and apply them to construction and industrial applications in the future.

"The classic drivetrain will be electrified in the years to come to a far greater degree than it is at present," said Rolls Royce's spokesperson. "There will be very few systems around with no electric drive component."

In the general drive towards sustainability, no one knows which technological solutions will ultimately prevail, and so engine manufacturers increasingly find themselves investing in the exploration of a range of alternative power sources. And as new technologies become available, they are also tasked with developing different solutions for specific customer requirements.

This is why Deutz introduced its Advanced Configurator modular product design toolbox.

"The Deutz Advanced Configurator enables us to design a drive system that is tailored to customer preferences, for example regarding performance and emissions," said Michael Wellenzohn, member of the Deutz Board of Management responsible for Sales, Service and Marketing.

The Deutz Advanced Configurator modular system forms the basis for integrating E-Deutz drives.

Various factors must be taken into account when selecting the appropriate drive system. When it comes to electric motors, design engineers are faced with the challenge of adapting individual components precisely to the requirements of the respective machine. Assembly space, weight, load profile, temperature and mechanical stress vary greatly, especially in off-highway applications.

The Deutz Advanced Configurator modular system offers a range of options, from diesel and gas to hybrid and all-electric, and then additional





components can be scaled to fit.

A key benefit of this modular approach is that only the relevant components need adapting, rather than the entire system. This gives Deutz the flexibility to respond quickly to technological developments, shortening the time to market.

In one example, E-Deutz engineers created two prototype alternatives to Manitou's MT 1335 telescopic handler. The process took just six months.

The standard model features a 75kW Deutz TCD 3.6 diesel engine. Deutz's engineers created a hybrid version, in which the TCD 3.6 engine was replaced with a smaller 55kW TCD 2.2 plus a 20kW electric motor, and an all-electric version, which used a 360V on-board electrical system and a 60kW electric motor plus a 30kWh capacity battery.

As part of its efforts to pioneer the development of environmentally friendly engines, Deutz recently

signed a letter of intent with Munich-based Keyou to collaborate on the creation of hydrogen engines for both off-road and on-road applications, and for power generation.

Keyou is a start-up company specialising in the conversion of conventional engines to run on hydrogen.

The two companies have already developed a prototype 7.8 litre engine. The first prototype vehicle using this technology is expected to be revealed later in 2020.

Deutz CEO, Frank Hiller, said, "The use of alternative fuels such as hydrogen is growing in importance. We believe that this drive solution will be a valuable addition to our electrification strategy and play an integral role in the zero-emission vehicles of the future."

Kohler is also responding to demand for more dynamic and flexible solutions by expanding its hybrid portfolio.

The manufacturer reckons that a number of machines are fitted with oversized engines. This means that their operating cycles do not require all the power that the engine is capable of delivering, or they only need it from time to time.

Kohler has identified two thresholds that are of particular interest: 19kW, which is the limit for Stage V legislation's requirement for the use of a diesel particulate filter (DPF), and 56kW, above which the same legislation also requires the use of selective catalytic reduction (SCR).

#### **Power nodes**

In order to offer an alternative solution that taps into these two power nodes, Kohler is offering its new K-Hem 2504 hybrid unit, which runs alongside the company's first hybrid unit, the K-Hem 1003.

The K-Hem 2504 comprises a 55.4kW KDI 2504TCR diesel engine that complies with Stage V legislation and is without SCR, and a 48V electric motor that delivers a peak power of 19.5kW and 9kW of continuous power.

The K-Hem 2504 also makes for more efficient DPF management because it is possible to take advantage of the temperatures reached when recharging the battery pack.

This means the power system can be sized appropriately because excess energy is

stored and then delivered when required.

The K-Hem 2504 won the award for Best Engine of the Year below 175hp (130kW) at the 2019 Diesel Progress Awards.

Kohler has also expanded its Command Pro engine line-up

with the addition of its new dual-fuel CH440DF engine. This means the Command Pro engines now deliver powers ranging from 3.4 to 10.4kW.

Designed to operate on either gasoline or propane, users can switch between fuels simply by moving a lever.

Perkins is offering four hybrid

Perkins' electric hybrid engine is one of four hybrid concepts

# FPT acquires Potenza

As part of its multi-powertrain strategy, FPT Industrial, a brand of CNH Industrial, recently acquired 100% of UK-based Potenza Technology to extend its electrification capabilities.

Potenza specialises in the design and development of electric and hybrid electric powertrain systems. The company has expertise in functional safety engineering, battery management systems for traction battery packs, and electric and electronic systems design and development.

Annalisa Stupenengo, CEO of FPT Industrial, said, "Thanks to the sustainability benefits of electrification, the powertrain industry needs to focus on this area to overcome the challenges and make it feasible for all potential applications.

"We are doing our part to enhance our engineering capabilities, and we are pleased to welcome aboard the Potenza Technology team, to further contribute to our innovative powertrain solutions in terms of electrification."

Paul Faithfull, Managing Director at Potenza Technology, said, "It is a great opportunity to join the FPT Industrial team not only to advance our business, expanding our solutions to a cross-segment level on a global reach, but to be able to have a broader vision that a large organisation offers, working with experts of different areas."

Potenza specialises in the design and development of electric and hybrid electric powertrain systems



technology concepts that use its Syncro 2.8 litre engine.

Each of the hybrid technologies offers a unique set of benefits at 75kW, all of which allow the diesel exhaust fluid (DEF) system to be eliminated.

Tom Nankervis, electrification marketing manager at Perkins, said, "With our range of hybrid engines, customers can choose to downsize their engine and use the hybrid power for peak-load, or they can reduce output from the diesel engine, choosing to lower fuel consumption up to 20%."

Perkins sees this as a way of providing customers with an affordable and economically sustainable



Vanguard 160 engine

life-cycle solution that minimises the perceived risks of transitioning to an electric machine.

Caterpillar is also looking to the future of engines with its Cat C18 hybrid engine concept. As with Kohler's solution, the parallel hybrid system captures surplus energy and then returns it to the machine when demanded.

James Gardiner, product development manager for the hybrid concept, described it as, "One example of how we're evaluating a variety of technologies and services with the mission of offering more value to our customers.

"Hybrid systems offer many benefits to the OEM and end user: engine downsizing, reduced noise and emissions levels, enhanced machine performance, and many other efficiency gains through proper integration of the complete machine system including the engine, hybrid system, drivetrain and other components with the machine."

The company is continuing to explore alternative power sources and is already using non-traditional fuels to power a variety of applications, as well as power systems integrated with electric the Cat D6 XE dozer and 988 XE wheeled loader.
Caterpillar also emphasises the aftermarket support offered by its dealers through the company's Customer Value Agreements (CVA).

Rob Kruziki, CVA Manager, said, "These agreements are truly about bringing value to the customer. While there is no doubt that preventative maintenance is the baseline of every CVA, engine up-time, cutting-edge support and long-lasting relationships are at the core of what we do."

Regardless of whether a customer has a single machine or a large fleet, the services contained in a CVA can be tailored to fit their business model and requirements. This ranges from a simple preventative maintenance plan to a sophisticated all-inclusive solution.

#### Addition to the family

Briggs & Stratton has launched the latest engine in its single-cylinder horizontal shaft family: the 3.7kW 160 engine.

Like its 200 and 400 siblings, which are already



available, the 160 is built to offer improved starting, reduced maintenance and lower total cost of ownership.

It can be used in various types of equipment that are relevant to rental, such as tillers, pressure washers, generators and compaction plates.

Paul Bramhall, Senior Manager Marketing, commercial engines at Briggs & Stratton, said, "The 160 engine demonstrates how serious we are about meeting the needs of the rental market, with a full line of single-cylinder engines ideal for a broad range of applications."

The Stage V, EPA Phase 3 certified engine comes with a three-year limited warranty.

It also features the Vanguard TransportGuard System, which helps to prevent damage caused by oil and fuel dilution during transportation — a key issue faced by rental companies when they receive equipment that has been out on rent. The system's simultaneous fuel/ignition shutoff ensures that fuel remains in place during transport.

This means the 160 has a 200 hour oil maintenance interval, as well as a 600 hour air filter replacement interval.

The mechanical compression release and choke on the engine optimises starting in temperatures down to -29°C. The 160 is also available as an optional 45° package that keeps equipment

working on slopes and hillsides without power loss, fluid contamination, engine failure, smoking or choking, according to the company.

The engine also accommodates leading competitors' controls, making it an easy drop-in replacement for OEMs. Briggs & Stratton says that switching an existing engine model with the 160 engine typically requires no redesign of the equipment.

T h e final addition to the family, the 300 engine, is scheduled to become available in 2021.

Briggs & Stratton also offers a scalable and serviceable lithium-ion battery pack. The battery, controller and charger were said to work together seamlessly to deliver efficient, flexible power.

The first Vanguard battery pack was applied to a mid-sized unmanned ground vehicle built by Argo XTV, a manufacturer of extreme terrain vehicles.



## Briggs & Stratton's lithium-ion battery pack

In recognition of the trend towards electrification, John Deere Power Systems (JDPS) is also investing in this area, recently releasing the latest iteration of its electric drivetrain components.

Darren Almond, strategic marketing lead for electrification at John Deere Power Systems, said, "We've identified

key electric drivetrain components that will integrate into existing space claims, further streamlining the transition to electrification for OEMs."

JDPS's portfolio of components is modular so that they are easy for OEMs to integrate into their machines. It was said that this flexibility minimises the need to re-engineer vehicle design to begin testing and implementing electrification solutions.

Almond said, "We were among the first to introduce electric drive technology in construction equipment with our 644K and 944K Hybrid Wheel Loaders.

"With this experience, we've developed an effective, proven solution in an emerging market with the durability our customers have come to expect from John Deere."

Diesel engines continue to be of central importance though, and so JDPS has also expanded its engine line-up.

Designed with flexibility, serviceability and durability in mind, the company's new 18 litre engine builds on the design of the 13.6 litre model and offers in excess of 650kW of power.

#### **Ease of servicing**

The top 20 service and repairs issues for larger John Deere engines were taken into consideration when designing the engine to ensure ease of servicing.

David Hoffman, director of worldwide marketing, sales and customer support at JDPS, said, "We utilised a streamlined engine design process to expand our power range. Advanced modelling allowed us to define and optimise engine subsystems to achieve our performance requirements and to deliver on our customers' growing horsepower needs."

The engine is equipped with John Deere engine controls, which enable advanced prognostics capabilities and improved transient response. The 18 litre model also has a high-pressure commonrail fuel system and series turbochargers, and it uses cooled exhaust gas recirculation (EGR).

A rear gear train reduces noise as well as torsional and crank stress.

The 18 litre model will be manufactured at the John Deere Engine Works plant in Iowa, US, and it is planned to go into commercial production in 2022.

JCB has introduced a new diesel engine to the US market. The 3 litre, four-cylinder Tier 4 JCB 430 was said to build upon the success of the company's 4.4 litre US Tier 4

John Deere's new 18 litre engine

## **Cummins powers Hyundai**

Cummins has become the single engine supplier to Hyundai Construction Equipment (HCE) for displacements from 3.8 to 12 litres. The engine manufacturer's Performance Series engines – F3.8, B4,5, B6,7, L9 and X12 (75KW to 382kW) – will be powering 25 construction installations.

"Our Performance Series products were designed as global platforms," said Eric Neal, Executive Director, Global Off-Highway Business. "The engines meet the latest US EPA Tier 4 final and EU Stage V ultra-low emissions levels, and can be tailored to meet China CS4 and India BS4 regulations as well.

"This enables Hyundai to have simplified installations that drive economies of scale in their production and ease of servicing in the field."

The improved Single Module aftertreatment technology on Cummins' Performance Series engines manages the PM and NOx emissions effectively enough for the EGR to be removed from the engines. This makes them lighter, more compact and easier to install, according to the company.

"We know Hyundai has ambitions to grow in North America and see their partnership with Cummins as a key enabler toward this. Their 'Powered by Cummins' programme for wheel loaders and excavators pairs Performance Series power with the latest telematics to deliver true operational efficiency and value to their customers," said Neal.

With regard to telematics, Cummins' Connected Diagnostics capability has been integrated into Hyundai's Hi-Mate system. This includes the new Cummins Software Updates (CSU) feature, which enables remote software updates of engine calibrations to enhance aftermarket support.

The data gathered through the system will also support improvements for future product development, Cummins said.



444 Ecomax engine.

The new model offers a 34% increase in power density compared to the previous generation 444 engine, in a package that is 24% smaller. It was also said to deliver up to 8% greater fuel efficiency.

The 430 engine delivers an output of 55kW at 2,200rpm, and 440Nm of torque at 1,150rpm.

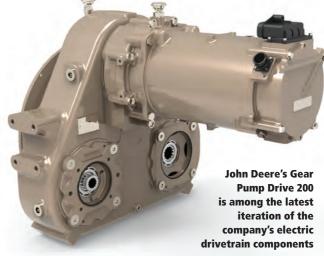
The unit meets US Tier 4 emissions legislation without the need for exhaust aftertreatment, such

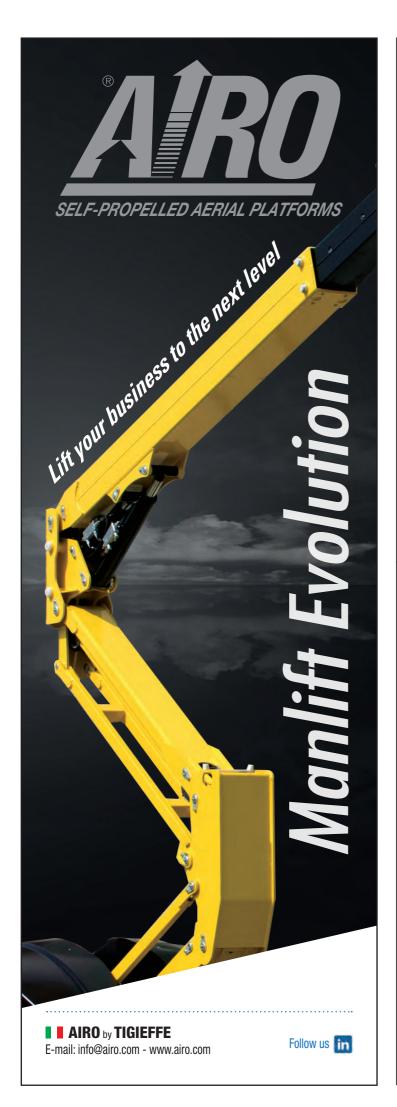
as DPF, SCR and DOC (diesel oxidation catalyst).

JCB has also introduced an OEM engine telematics system that is powered by the company's LiveLink. It enables customers to remotely monitor JCB-powered equipment around the world.

The data link provides real-time information, such as location, fuel use, idle time and service history, so that companies can better plan preventative maintenance.











# Renta predicts demand with Al

Artificial intelligence is opening up a world of possibilities, according to the Finnish rental firm.

The company's Chief Innovation Officer Joel Särkkä spoke with Thomas Allen

inland-based rental company Renta Group has begun to use artificial intelligence (AI) to predict customer demand, through a partnership with Trackunit.

The AI model, which is currently being piloted in Finland, uses location data from Renta's fleet to predict what equipment is likely to be in demand in the near future.

Based on this, Renta can then prioritise servicing on recently returned machines that are most likely to be requested by customers again.

Joel Särkkä, Chief Innovation Officer at Renta, said, "This enables us to better serve our customers because there is a greater likelihood that the machines they are demanding are available."

He added that it helps to increase utilisation rates; "It also ensures that we don't have to over-invest in our existing fleet because it can allow us to serve more customers with a given number of machines."

The technology is due to start rolling out in February and will be used across all of Renta's

Joel Särkkä,

nnovation

Officer at

Chief

regions of operation – Finland, Sweden, Norway and Poland – by the end of 2020.

In the future, Renta also plans to incorporate weather data and information from large construction sites into the model to improve its accuracy.

#### **Recognising the pain point**

This project came as a result of a workshop Renta held with its main telematics provider Trackunit. Return inspections were recognised as a pain point in Renta's processes and the difficulty of predicting demand was identified as central to this.

Almost all of Renta's large machines are telematicsenabled, according to Särkkä, and the firm is installing telematics on the remaining equipment.

In fact, the company has entered a partnership with Heal, an open business platform co-created by Stora Enso and Trä Group, to track smaller equipment.

Partnerships are important to Renta's strategy. The company has created a new division called Renta Digi Office, the function of which is to create solutions and services for business needs.

Digi Office brings together a team of about 30 people from across Renta's various business units, plus an equal number of external partners such as developers and data scientists.

Särkkä said "This is not a single player job. It is essential for us to collaborate with all of the parties and partners we have to eliminate downtime. It is not something one northern European rental company can do by themselves, but we need help from others to do it."

He stressed the importance of nurturing an ecosystem; "We have 25 companies involved in our Digi Office team. You don't necessarily need to have

the talent in-house; you can work with external partners."

He added, "We understand we are not a software company, so in order for us to attract the top talent we have to build up these ecosystems and find the relevant people to work with."

Offering advice on how to go about implementing AI, Särkkä stresses the importance of being clear about what you are aiming to do, how you propose to do it and why you are doing it.

He adds, "Make sure you impact one of your core business processes with it. It's far easier to



Renta's blue sky thinking is helping it predict future demand

generate additional value when you are improving something that already exists."

#### **Keep it simple**

Simplicity is also important. If interaction with AI is not made effortless, it will not be adopted, in Särkkä's experience.

It is easy to be baffled by all the possibilities that Al presents and not know where to begin; "Where can this go? What is possible? Our minds are running with all the possibilities and we have lots of ideas," says Särkkä.

But he insists that rental companies must just take the leap and start on something; "You will make mistakes and get sidetracked, but this is what happens when there is no charted pathway.

"One of the most important things is to be able to tolerate failure and learn from it."

Looking ahead, Renta has twelve different AI initiatives that it intends to push, including a model for predicting return dates.

Särkkä sees AI as a way for the company to make better decisions that will improve the company's operations and its customers' experience; "We see tremendous possibilities in AI."

Renta is a fast-growing Scandinavian rental company that was founded at the start of 2016. It now employs approximately 700 people and turned over €195 million in 2019.

An interview with Renta's CEO, Kari Aulasmaa, can be read in the combined January-February issue of IRN.



# Building a construction

Telematics providers look towards a future that is more connected than ever before. Jenny Lescohier of sister magazine International Construction reports

ot long ago, the word telematics conjured mundane (and possibly anxiety-producing) thoughts of endless machine metrics and piles of incomprehensible data. Today, the term only scratches the surface of a larger concept that presents the modern construction site as an 'ecosystem' characterised by many interconnected moving parts as in any natural environment.

That is an enormous change, but recent advances in technology promise to make work simpler, more efficient and more productive for construction professionals who see themselves as part of a bigger picture.

Comparing a construction site to a natural ecosystem might sound like a stretch, but it simply refers to the idea of collaboration. According to Soeren Brogaard Jensen, CCO of Trackunit, there is a delicate interplay on today's most advanced jobsites between the OEMs who build the equipment, the rental companies who often supply it, the professionals planning the project and the workers operating the machines.

"We've started to think about telematics as something that is animating and improving collaboration across the ecosystem," he says. "Stakeholders have come to appreciate that if we can let the most relevant data flow freely between corridors, everyone wins. We see more companies getting out of the old habit of creating data silos where whoever pays for the machine owns the data."

Burcin Kaplanoglu, Executive Director of

Innovation, Oracle Construction and Engineering, agrees there is a growing emphasis on aggregating and analysing data for the greater good.

"A lot of this will be driven by a recognition of the benefit of data that can be captured and analysed," he says. "Construction businesses at the cutting edge will be demanding greater transparency, knowledge and collaboration of the construction process to have more control."

But what does data sharing look like to equipment owners on a practical level?

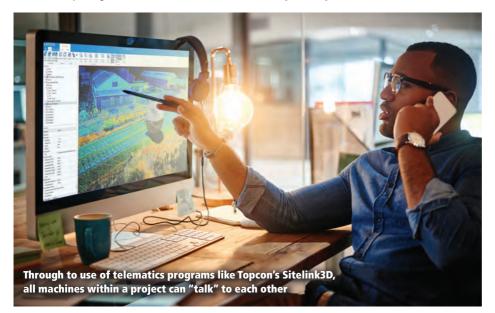
In answer to that question, Trackunit's Jensen recalls that construction professionals used to buy machines and then choose a telematics system and retrofit their fleet with the technology. The data gathered was held by the equipment owner. This is still often the case, but OEMs are increasingly fitting their machines with telematics in the factory as standard equipment.

#### **Relevant data**

There are endless metrics that can be measured, and only a portion are relevant to the average equipment owner. The remaining bulk of the data, however, can be extremely valuable to the OEM and is easily accessible through an application programming interface (API) that connects each piece of equipment with a server that collects information.



Today's telematics solutions, such as Trackunit's, provide equipment owners with valuable insight into actual machine usage and operator performance





In other words, this happens seamlessly, without any effort on the part of the equipment owner or operator.

"The concept of sharing data is central to the benefits a telematics system can offer, since the more information OEMs can gather about actual machine usage, the better they can design equipment for real-world use in the future," Jensen says.

Telematics technology has come a long way in its relatively short history, and the evolution is rapidly picking up speed.

Holger Pietzsch, heavy construction VP of marketing at Hexagon's geosystems division, Leica, explains how telematics provides benefits on three levels: operational efficiencies, asset management, and operator/jobsite performance.

"In its most simplest form, telematics are similar to the evolution of the bar code for supply chain management; it gives you internal operational efficiencies," he says, noting, for example, that an OEM can track the health, location and workload of their sold equipment through telematics. "It provides for better planning internally to improve machine design, parts supply and capacity."

When it comes to asset management, telematics uses a 'data wrapper' on each unit to remotely monitor the equipment and give the owner feedback such as how much fuel that individual machine is consuming or whether the engine is overheating.

Pietzsch says today's telematics systems are also moving in a direction more focused on the actual work being done, enhancing jobsite efficiency.

"You own these excavators to move dirt, and you need them to move dirt on time, upon spec and on budget," he says. "Ultimately, if you don't move the dirt where it needs to be moved and when it needs to be moved, you don't get paid. Our technologies focus more on improving how much dirt is moved and was it the amount it was supposed to be."

With that in mind, companies like Leica are offering technology such as machine control guidance — an

# 'ecosystem'



early form of autonomy – that allows construction professionals to perform their work more precisely.

"Now someone can sit at their computer and design a ditch and then download that design onto a piece of equipment, such as an excavator. The machine actually then becomes spatially aware," Pietzsch says. "When the excavator starts moving dirt, the technology tells the operator they are no longer digging straight or they're too deep or they've got to turn. The technology starts interacting directly with the machine."

#### **Intelligent machines**

Once machines have this basic level of "intelligence," Pietzsch says they can become part of the larger "ecosystem," sensing what needs to be done and providing feedback to the operator so they can adjust their behaviour for greater productivity.

"Al is the big game changer in construction because of the focus on improving productivity in an industry that continues to see competitive pressures," Kaplanoglu speculates. "It's about capturing, analysing and sharing data from projects to mitigate risks, manage issues earlier and continually improve from project to project. Together with a higher standardisation it will enable better insights and will make the invisible visible."

Aggregating data from different owners affords OEMs with the true story of equipment performance based on real users' experiences. This is crucial to equipment design and advancement, and can benefit owners and operators in the long-run.

The average aerial work platform, for example, has a hundred data points that are continuously monitoring the hydraulic systems, the engine and any alarms. Out of all those data points, Jensen says about 30% are relevant to the user of that machine.

"The remaining 70% are really not that relevant to the user," he says. "But OEMs are extremely interested in that data so it can be inserted into how machines are being manufactured for the next generation of equipment."

The majority of data collected is gathered through user response to error codes, which can be as simple as an informational notation, such as the seatbelt is not fastened, or as critical as imminent component failure.

"The data that's produced gets validated by the people in the field," Jensen explains. "We call this 'ground truth.' By sharing this data, suddenly you can augment and improve the information by connecting thousands of users who've acknowledged this error as critical or acknowledged this error as simply informational."

As more data is shared and aggregated through telematics technology, equipment can be manufactured to be increasingly intuitive and intelligent.

"If you look across a population of a half million machines in a territory, you can start predicting what machine to have ready for what type of jobs, and in what depot. It impacts your return cycles and machine availability," Jensen says. "We have a couple of projects running right now where we are trying to take those Al algorithms and think about how can we actually make the data generally available, not just for one customer but as an open source system, almost like the 'brain of construction.'

"What we're trying to push here is internalising data, using it in your own value chain, but also putting it back into an open source community to leverage the power of the ecosystem; the power of many people thinking about the same problems," Jensen continues.

Pietzsch from Leica agrees, adding, "The big change is rather than using telematics to track and monitor one asset, it's now more about how this asset compares to all the others in relation to the work that needs to get done. It's really embedding the information of that machine and what it does into the plan of what's supposed to happen on that iobsite.

"We see increasing focus on using this technology to enable a better collaboration of people and coordination of activities," Pietzsch continues. "You now can dig a ditch while I sit 200km away and I can tell you, by the way, the guy that brings the concrete is going to be half an hour late. Why don't you stop the engine, save fuel and take a break rather than

## 5G a gamechanger

The advent of 5G wireless technology, the fifthgeneration of digital cellular networks, began widespread deployment in 2019 and is allowing telematics technology to expand on today's jobsites at an ever-faster pace.

"The rapid growth and expansion of global cellular networks allows for faster data transmission," explains Christine Zeznick, Genie Director of Business Development, Telematics, Terex AWP. "With the shortage of technicians in the industry, leveraging telematics – like the data the Genie Lift Connect solution provides – allows a service technician to remotely troubleshoot a customer's concern and potentially avoid a costly on-site service visit. These type of savings in both time and labour can add up quickly."

The ability to effectively monitor maintenance from afar is another powerful aspect of telematics.

"Long-term rentals have traditionally posed a problem for knowing when maintenance is due," Zeznick notes. "As a result, customers often set a calendar-based schedule to visit the machine and perform engine maintenance. This has resulted in potentially servicing the machines more than required or not as frequently as needed. Telematics allows a rental company to see precise machine hours remotely and manage the maintenance of long-term rentals more efficiently."



Genie's Lift Connect telematics solution allows service technicians to remotely troubleshoot to avoid costly on-site visits

sitting there waiting? The technologies allow us to collaborate on a common project."

Telematics technology has already brought many benefits to today's construction jobsites, and that trend promises to continue – and accelerate – as more data is shared between stakeholders.



Genie's Lift Connect solution gives equipment owners the ability to see precise machine hours remotely to help manage their long-term maintenance



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# ERA Convention COVID-19 - information and postponed

### The 2020 ERA Convention – 'Smart Rental' – has been postponed to 9 and 10 September, 2020, as a result of the coronavirus outbreak

ue to the ongoing spread of the coronavirus, the 2020 ERA Convention will now take place on 9 and 10 September. The event, originally scheduled to take place on 10 and 11 June, will still be held at MECC Maastricht in the Netherlands alongside the European Rental Awards, the International Rental Exhibition and the aerial platform exhibition APEX, which have also been postponed.

The convention, themed around 'Smart Rental', is otherwise unchanged. It will explore the role of data and digitalisation in the equipment rental industry and feature sessions on digital platforms in the construction sector, the importance of technological innovation, using data to improve customer experiences and transforming a business with digital technology. With the coronavirus

pandemic disrupting rental companies' usual modes of operation, these topics are given additional focus.

The 13th annual European Rental Awards will take place on the evening of 9 September following the conclusion of the first day of the convention. The awards will celebrate excellence in the equipment rental industry, including in digital innovation and sustainability.

In addition to the convention and awards, the ERA will be present on all three days of the International Rental Exhibition, 8 to 10 September.

Registrations for the convention and awards dinner remain valid for the new dates.

Find out more about the ERA Convention at https://erarental.org/en/events/convention/eraconvention-2020 or contact era@erarental.org if you have any further questions. **IRN** 

# updates relevant to the sector

The ERA has set up a dedicated webpage to provide useful links to information provided by national and international rental associations, as well as other information relevant to the sector. This includes policy updates at the European level, industry news and information from partners in the construction and other associated

This page will be continually updated as new information becomes available and should serve as a one-stop-shop for Europe-wide coronavirus information on the equipment rental industry.

Please find the page here: https://erarental. org/en/covid-19



The ERA has set up a dedicated webpage with coronavirus updates



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F-MAII ·

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#### **About the ERA**

The European Rental Association was created in 2006 to represent national rental associations and equipment rental companies in Europe. Today, the membership includes more than 5,000 rental companies, either directly or through 14 rental associations. The ERA is active through its committees in the fields of Promotion, Sustainability, Statistics and Technical, and through its Future Group.

Extensive information on the ERA's activities, reports and publications is available at www.erarental.org



The postponed 2020 ERA Convention will still take place at MECC Maastricht in the Netherlands

### **Coronavirus and the rental industry**

With the coronavirus continuing to spread across Europe, the rental industry is increasingly being affected by reduced activity in the construction sector, including the closure of some construction sites, and the cancellation of events. The events industry has been particularly hit in some countries, with near total

To facilitate the sharing of knowledge and experiences among our members, the ERA is convening regular video conferences with national associations and is liaising on an ad hoc basis with our international partners in the Global Rental Alliance and representatives of related sectors, such as construction.

Of primary immediate concern for rental companies is the health and safety of staff members, with rental companies needing to change their procedures for customer visits, provide personal protective equipment for staff, which is not always possible as there are shortages in some countries, and decontaminate machinery.

The cancellation or suspension of rental contracts also presents rental companies with difficulties. Customer liabilities may be connected to whether governments mandate the shutdown of sites and the suspension of contracts raises the question of who is responsible for the equipment during

Indeed, with a reduction in business, rental companies need to manage the storage and maintenance of equipment and machinery that is not in use, the latter of which may be affected by the disruption of cross border supply chains. Furthermore, the retention and payment of staff is problematic in these difficult times. Reductions in business leave rental companies with difficult decisions to make concerning the payment of salaries and temporary reductions in staff. Government support is often imperative to help rental companies and their staff through this time.



# Metric trends

### **Rouse Services reports on the latest metrics** for construction equipment value trends and US auction rates

ebruary market results showed some stability after a continuation of value declines through the back half of the previous year and into January.

The softening appeared predominately through the auction channels with retail pricing showing more moderated weakness.

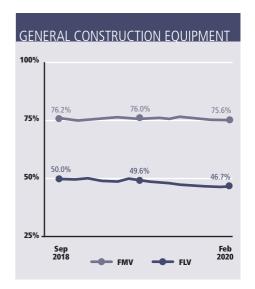
This was also true in January, when heavy earthmoving products showed downward movements in both auction and retail.

These trends were fairly consistent across each of the core products: excavators, dozers, wheeled loaders and articulated trucks.

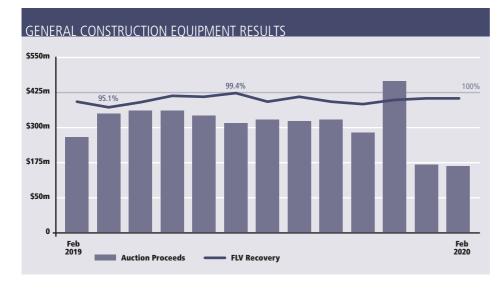
Within the heavy earthmoving equipment grouping in February, dozers and excavators showed resilience in the auction markets.

In contrast, retail values were flat to slightly

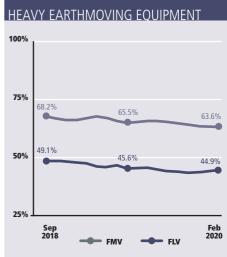
While the picture was mixed in January, overall general construction in February was flat across retail and auction channels with a slight uptick in retail for aerial equipment.



Retail and auction values demonstrate moderate stability in the latest month after a recent trend of underperformance



■ Retail achievements were marginally below the prior month's market benchmark for general construction equipment sales. Meanwhile, volume of sales are down both year over year and month over month



Retail values continue to show weakness while auction has shown moderate improvement in the latest month

#### With nearly 100 years of industry experience, Rouse Services offers business intelligence backed by constantly updated aggregation of equipment values and rental metrics. Rouse Analytics provides monthly comparisons of pricing and key performance metrics to local market industry benchmarks and tracks in excess of US\$500 million (€447 million) of revenue monthly with 52 clients across more than 80 markets.

For more information go to: www.rouseservices.com

## **Definitions:**

#### **Rouse Forced Liquidation** Value Index

The average auction (Forced Liquidation Value) recoveries expressed as a percentage of Original Equipment Cost.

#### **Forced Liquidation Value** (FLV) The estimated gross

amount expressed in terms

of money that equipment will typically realise at a properly conducted public auction when the seller is compelled to sell as of a specific date within an approximately one month period.

#### **Rouse Rate Index**

Achieved rental rates relative to January 2011 (when Rouse Analytics started tracking rate data) for a basket of commonly rented items.

#### **Physical Utilisation**

The percentage of fleet cost which is on-rent during a given period. A unit is "on-rent" if it is at a jobsite earning rental revenue.

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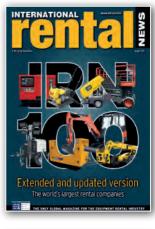
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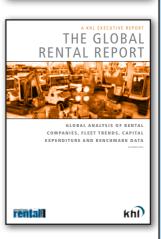


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