

CAPITAL EQUIPMENT¹ NEWS

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NOVEMBER 2023



COMPACT EXCAVATORS: Wacker Neuson thrills with mini line-up

JAPAN MOBILITY SHOW: Isuzu Group unveils mobility solutions

MATERIALS HANDLING: Telematics and automation for warehouse management

TRUCK TECHNOLOGY

Up close with the UD
Trucks Quon GW 6X4

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BE CONSIDERATE OF TRUCK DRIVERS

As October drew to a close, I had the privilege of attending the Japan Mobility Show in Tokyo, courtesy of an invitation from UD Trucks South Africa. This event, formerly known as the Tokyo Car Show, offered a unique opportunity to witness UD Trucks' global reputation unfold in its homeland.

At the Japan Mobility Show, one theme resonated throughout: Safety. Whether it was autonomous driving, the crafting of safer vehicles, driver safety enhancements, or the advancement in telematics and engine technology, each exhibitor's focus was unified – the aspiration for safer, more efficient roads and vehicles.

Post-show, the South African delegation was hosted by UD Trucks at their Experience Centre, where we had the rare opportunity to take the helm of three UD Trucks models. The centre boasts an exclusive oval testing track, allowing for an immersive experience in navigating these impressive vehicles.

The act of driving a heavy-haul truck for the first time is both thrilling and sobering. The moment you ascend into the driver's seat, the immense scale of

the vehicle is immediately palpable. Gripping the steering wheel, you feel a potent sense of control, underscored by the engine's deep rumble. However, this power comes with an acute awareness of responsibility. Steering such a massive vehicle necessitates unwavering attentiveness, particularly in braking. The truck's substantial weight, often laden with heavy cargo, drastically affects its stopping distance. This requires you to anticipate braking much earlier than in smaller vehicles, applying brakes in a gradual yet firm manner. Every manoeuvre, every stop is intensified by the truck's magnitude and inertia. This experience fosters a profound respect for the truck's capabilities alongside a meticulous regard for safety – both your own and that of others on the road.

In South Africa, however, consideration for truck drivers often gets lost amidst the frenetic pace of our highways. The hectic nature of our roads seems to diminish empathy for truck drivers and the vital cargo they carry.

This month, Webfleet released its second annual Road Safety Report. Conducted between June and August, the study gathered responses from 54 individuals representing 7,948 trucks operating in South Africa. Alarming, the report recorded 1,313 collisions, a significant rise from the previous year's 1,252 incidents among 14,073 trucks.

Notably, of the respondents most impacted – accounting for 87% of incidents – half reported that most accidents occurred nocturnally, between 10pm and 6am. When probing the predominant causes of these incidents, other drivers, deteriorating road conditions, and criminal activity were identified as key contributors. While this doesn't absolve truck drivers of their role in collisions, it does highlight the

need for other drivers and infrastructure improvements to create safer roads.

Challenges in maintaining road safety were numerous. Respondents cited poor road conditions (59.26%), driver behaviour (59.26%), compliance issues (44.44%), and the cultivation of a safety culture (31.48%) as primary concerns. Other factors included fatigue management, driver training, vehicle maintenance, budget constraints, technological limitations, and criminality.

The most common methods for evaluating road safety policies included driver incident reports and analysis (72.22%) and driver behaviour monitoring through telematics or GPS tracking (66.67%). Additionally, vehicle maintenance and inspection records, vehicle collision data and analysis, and safety protocol compliance were used as metrics.

Interestingly, around 80% of respondents advocated for increased government funding for road infrastructure development and maintenance. More than half called for improved road signage and markings, and 50% sought enhanced driver education and licensing requirements.

This insight into the world of trucking highlights a pressing need: we must collectively strive for a greater understanding and appreciation of the challenges faced by truck drivers. As a society, we must support initiatives that not only enhance the safety of our roads but also acknowledge the invaluable role truck drivers play in our economy and daily lives.

Because, when we consider the slew of challenges truck drivers face, and after sitting in a cab you realise just being on the road is an act of courage, as presented in the latest Road Safety Report. 🚛

Adriaan Roets - EDITOR



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SCANIA

SANY celebrates 18 years in South Africa

SANY, a leading player in the construction and mining sectors, is commemorating 18 years of delivering top-quality Original Equipment Manufacturer (OEM) products and services to the South African market. Since its inception, SANY has earned a reputation as a trusted and valued one-stop solution partner for southern Africa's construction and mining industries, offering a comprehensive range of yellow machinery for purchase, rental, service, and financing, if needed.

In 2006, SANY marked its presence in South Africa by establishing its head office in Boksburg. Over the years, the company has expanded its footprint by opening branches in key locations, including Middelburg, Rustenburg, and Richards Bay. This strategic expansion has enabled SANY to enhance its accessibility and support for customers throughout the country.

SANY's commitment to serving its customers extends to its substantial investment in spare parts, with a current holding of R170 million in South Africa. To further bolster its support infrastructure, the company is planning to increase its spare parts stockholding in the country to R270 million within the next year. Moreover, SANY's dedication to customer satisfaction is exemplified by its 24/7 after-sales service, ensuring that customers' needs are promptly addressed.

SANY's impressive product lineup includes a wide range of heavy machinery, such as excavators spanning from 5.5 to 125 tons, wheel loaders in the 5 to 7-ton range, robust dump trucks ranging from 60 to 136 tons, versatile drum rollers weighing between 12 to 20 tons, and efficient 14-foot graders. In addition to delivering superior machinery, SANY offers a comprehensive suite of round-the-clock after-sales services, ensuring that its customers' machines operate at peak performance levels.

Samuel Zhang, Managing Director of SANY, expressed the company's pride in celebrating 18 years of operations in southern Africa.

"For almost two decades, we have built strong relationships with our customers and partners and are committed to contributing to the region's development through sustainable, innovative, and reliable machinery. Through our national footprint, we can help customers get what they need when they need it. We are grateful for the support of our customers and employees, and we look forward to many more years of success in southern

Werner Pumps and Hino Pupkewitz collaborate

Werner Pumps, a prominent South African manufacturer known for its high-pressure jetting and vacuum equipment, has recently unveiled its pioneering custom truck-mounted combination jetting and suction unit.

This innovation is the result of a partnership with Hino Pupkewitz, an authorised Hino dealer in Namibia. The impressive vehicle was handed over to the Walvis Bay municipality in Namibia, marking a significant milestone in their collaboration.

Primarily designed for the critical tasks of cleaning and maintaining sewerage and stormwater lines, the custom truck-mounted combination unit showcases remarkable versatility. Its applications extend beyond routine maintenance, including spill cleanup and the cleaning of PSTs (Primary Settlement Tanks) and sumps in wastewater treatment plants, among other functions.

The partnership between Werner Pumps and Hino Pupkewitz brings together the expertise of a leading equipment manufacturer and a renowned dealer in Namibia. The collaboration aims to provide the Namibian market with top-quality truck-mounted units built on Hino chassis, meeting the specific needs of the region.

Werner Pumps has established itself as a trusted name in the industry for over three decades. Specialising in the design, manufacturing, supply, and maintenance of high-pressure jetting equipment, the company has earned a reputation for delivering durable, low-maintenance, 100% South African manufactured products that



The Werner Trucks Impi Combi truck.

align with client budgets.

Beyond its manufacturing capabilities, Werner Pumps offers an extensive range of services, including the supply and maintenance of high-pressure jetting equipment, German high-pressure pumps, high-pressure sewer cleaning hoses, Swiss-engineered Nozzles by ENZ, as well as high-pressure guns, lances, and cleaning equipment.

The collaboration between Werner Pumps and Hino Pupkewitz represents an exciting step forward in delivering innovative solutions to meet the demands of municipalities and industries in Namibia. This custom truck-mounted combination jetting and suction unit not only showcases their dedication to quality and functionality but also their commitment to enhancing essential services and infrastructure maintenance. 🌟

Africa," says Zhang.

SANY's heavy-duty machinery has played a pivotal role in the construction of critical infrastructure projects worldwide, including the iconic Burj Khalifa, the world's tallest building. Moreover, SANY equipment was instrumental in the construction of the Hong

Kong-Zhuhai-Macao Bridge (HZMB), a project recognised with the 1st Mega Project Award from the International Bridge Conference (IBC) in 2021. The HZMB's innovative features earned it the distinction of being named the Outstanding Project of the Year in the 2021 FIDIC Project Awards. 🌟



Serco won't run out of power at the Boksburg facility

One of the country's leading truck and trailer body building companies, Serco, is now fully powered by solar energy in Gauteng.

The company's ongoing commitment to green initiatives has seen a state-of-the-art 150kW hybrid solar system introduced with 370 x 405W panels, and the latest high voltage inverters coupled with 320kW of batteries, installed at the factory in Boksburg.

This development follows the installation of solar power at Serco's Durban factory in the Phoenix Industrial Park in 2019, which has up to now saved more than 618 tons in carbon emissions.

Whereas the solar system at the Durban buildings provides full power to the premises during the day, with a switch back onto the grid at night when far less electricity is required, Johannesburg's system produces a constant 24-hour supply by using the inverter and batteries.

The system runs the property during load shedding with no need for a generator, resulting in massive savings in diesel as well as removing the noise element.

Durban's 340 kw peak system has the potential to save Serco up to 75% of its electricity costs at the plant.

Next in line to go solar, is Serco's premises in Cape Town where installation should be



The Serco facility in Boksburg, Gauteng.

completed before the end of the year.

The initiatives are part of Serco's drive to reduce its impact on the environment and go hand-in-hand with other 'greening developments' including the recycling of paper and plastic it uses. The green machine approach complements the elevated environmental friendliness of the company's award-winning Protec Steel Frostliner refrigerated vehicles which through improved thermal efficiency use less diesel to power their cooler units thus reducing carbon emissions.

"We believe that businesses have a critical role to play in addressing environmental challenges. Our adoption of solar power is testament to our dedication to sustainable manufacturing and our responsibility towards the planet," said Clinton Holcroft CEO of Serco. 🌱

Mom of three emerges as top driver in SA

Cynthia Noneka Thala, a Bulk Vehicle Operator (BVO), has been honoured with the prestigious IVECO #ThankYouTrucker top award for 2023. This recognition underscores her exceptional contributions to the road freight industry in South Africa.

Thala's journey in the transportation sector commenced as a bus driver, and in 2019, she joined Unitrans Total Alrode Operations. Notably, she stands as the first female BVO at Total Witbank. Thala's remarkable achievement earned her a cash award of R50,000 through the #ThankYouTrucker campaign. She intends to share a portion of this award with her family, including an orphaned child under her care, while the remainder will be invested wisely.

The second place in the competition went to Gerhardus (Pikkie) Klaase from Koegelenberg Transport BK in Vredendal, who received R10,000 in prize money. Nkosinathi Peaceman Chiliza from ACT Logistics in Gauteng secured the third position, earning a R5,000 award.

The IVECO #ThankYouTrucker campaign



Cynthia Noneka Thala.

encourages nominations from company owners, operations managers, direct line managers, or fleet managers, with a focus on South African drivers in the local road freight industry. Additionally, this year, an extra award of R10,000 was allocated to the individual who nominated the winner.

The winners were announced in October 2023, and Thala expressed her gratitude, saying, "I feel abundantly blessed, and I also feel the love of God is with me always. Thank you, IVECO, for making things happen." 🌱

The first global Develon Day in Korea



A scene from the customers' day.

Develon, formerly known as Doosan Construction Equipment, has received a very positive reaction from customers and dealers alike, who attended the brand's first Global Develon Day in South Korea in late September 2023. Held eight months after the new Develon brand was first announced by parent company, HD Hyundai Infracore, the event attracted a truly global audience, with a strong presence from the USA, Europe, South America and the Middle East.

Taking place over three days, the exciting global event combined elements of Develon and Korean culture throughout. It began with the Develon Day at the company's Proving Ground facility at Boryeong to the south of the capital, Seoul. The events on the second and third day included a tour of the Develon manufacturing facilities in Incheon, a special visit to the Demilitarised Zone and more cultural highlights, with visits to some of the most famous heritage sites in Korea.

Manitou's MTA series of telehandlers wins choice award



The MTA telehandler at work.

Manitou's all-new MTA Series of construction telehandlers have been named a 2023 Rental Editor's Choice Award winner in America.

The 2023 Rental Editor's Choice Award showcases products that solve problems, enhance efficiencies, lower the total cost of ownership, and allow rental companies to work smarter, not harder.

"We are excited to receive this award and see the benefits of our new series of MTA Construction Telehandlers in the rental industry," said Steve Kiskunas, Manitou Group Telehandler Product Manager.

PPCs new blending plant ensures consistent cement supply

PPC has officially unveiled its state-of-the-art blending plant in the Highveld region, located within the old Highveld Steel Industrial Park in Emalahleni Local Municipality. This new facility marks a significant milestone in PPC's ongoing commitment to enhancing efficiency, reducing turnaround times, providing outstanding customer service, and delivering exceptional quality to stakeholders in the Highveld region's construction and building industries.

The Highveld PPC plant has been strategically positioned to cater to the thriving construction and building sectors in and around the Mpumalanga and Limpopo regions. Previously, serving this area necessitated long-haul transport from Gauteng, leading to inefficiencies for both PPC and its customers.

Bheki Mthembu, Head of PPC's Inland Business Unit, highlighted the significance of the Highveld plant's opening, stating, "This Highveld plant's inauguration allows us to streamline our logistics through localisation, reducing transportation costs and minimising carbon emissions associated with long-distance transport."

Beyond logistical benefits, the new plant aligns with PPC's broader decarbonisation goals by achieving lower overall CO₂ emissions per tonne of cement. This



The new Limpopo PPC blending plant.

reduction is achieved through operational efficiencies and the optimal utilization of fly ash, which lowers the clinker content—a traditionally emissions-intensive component—in its cement production process.

Moreover, the plant is poised to revolutionise the operations of small contractors and entrepreneurs in the region. PPC will now be able to make smaller delivery runs, starting at 12 tonnes (equivalent to 240 bags), and facilitate 'milk runs' where a single truck can serve multiple customers in a single trip. This approach caters to micro-enterprises that previously couldn't afford large material loads.

Mthembu emphasized PPC's commitment to providing more South African builders and clients with access to

high-quality, affordable cement products. He noted that PPC has a solid reputation for delivering trusted, quality products that meet all regulatory requirements in the industry. The Highveld plant offers an opportunity to make this quality readily accessible to industries and individuals in the Highveld region.

The establishment and operation of the PPC Highveld Plant have also had positive implications for local communities. During construction and development, the project created 31% direct employment opportunities and an estimated 69% indirect temporary employment opportunities. Additionally, while the blending plant operates with high automation, it requires minimal manual intervention. 🌱

SANY expands its reach with new Richard's Bay branch

SANY has opened a new branch in Richard's Bay to better serve its customers in the region. The branch is the third in South Africa and forms part of the company's expansion plans for the region.

The expansion into KwaZulu-Natal is motivated by the province's vast scope of industries. The branch will serve the construction, materials handling, mining and forestry industries and will supply front-end loaders, excavators, graders and dump trucks. Backhoe loaders will be available in 2024.

The Richard's Bay branch offers full customer support and after-sales services to maximise optimal uptime for customers. Support for after-sales services will come from the company's state-of-the-art Johannesburg warehouse, which houses over R170 million in spare parts. The branch's team of fully qualified profes-



A SANY bakkie outside of the new branch.

sionals has extensive industry experience to facilitate sales and services.

The 500 m² premises are in the city's industrial hub at Unit 4, Elephant Park, 62 Ceramic Curve, Alton, Richards Bay. The location of the branch allows the company to establish itself among the region's most reputable OEMs and big industry players. It also enables customers working in the targeted sectors to easily reach the branch to shorten downtime.

SANY Sales General Manager, Jay

Moodley, conveyed the company's optimism and goals for the branch, "SANY is committed to growth, and we view this new branch as a strategic move toward growing our presence in local industrial activities. Through customer prioritisation, we aim to grow our visibility and expand our overall footprint".

SANY Southern Africa is a part of the SANY Group, a Chinese leading OEM of heavy-duty machinery. 🌱

Steel Awards boosts interest in construction projects

Inspiring steel value chain collaboration between architects, designers, engineers and construction companies delivering world-class projects across the African continent was the highlight of the 2023 Steel Awards, presented by the Southern African Institute for Steel Construction (SAISC).

This red carpet event was held at Emperor's Palace, Gauteng on October 19 and themed Game of Thrones: not only to celebrate the proud legacy of steel through the ages and its pivotal contribution to civilisation but also the significant achievements of the South African steel sector.

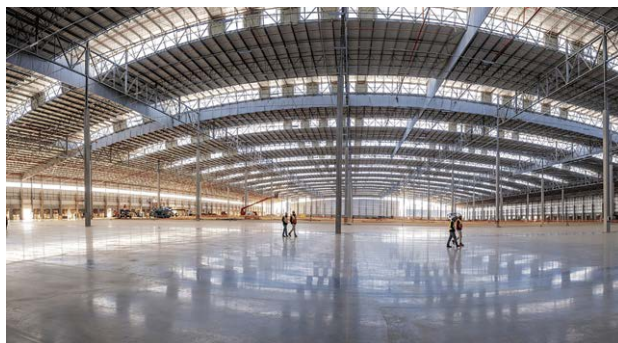
Every year, the SAISC-hosted Steel Awards provide an opportunity for stakeholders across the industry and steel value chain - including designers, architects, engineers, processors, merchants and fabricators - to present their work and be honoured for their outstanding achievements.

Of particular interest to the judges this year was that many of the notable projects nominated were not confined to South Africa, but exported – and in some cases executed – across the continent. This was reflected in the number of

Pan-African projects which won awards and indicated that one of the SAISC's long-held goals – is being realised.

"Fabricators and manufacturers have really forged ahead and made a big leap into Africa. They have built structures in a way that has never been done before, delivering products and innovations which have never been seen before – not only locally but across the continent," says SAISC Chief Executive Officer (CEO) Amanuel Gebremeskel.

"For over a decade, we have been encouraging our industry not only to be a centre of manufacturing excellence but also to get involved in more advanced projects – producing products and innovations that have not been used before in the world. You would expect this in first-world economies like Europe, the US, South Korea or Japan. The fact that we can achieve this standard in South Africa is impressive! We always



An interior view of the Steel Awards 2023 overall winner, Mpumalanga International Fresh Produce Market.

hear that many large African projects are being created by Chinese, Indian or even American contractors. That does not have to be the case. We have the capacity and the engineering capability to do this and that is what the Steel Awards are all about," Gebremeskel enthuses.

He adds that many of the projects showcased at the SAISC 2023 Awards are iconic structures, which have made a lasting contribution to the built environment - and will be a testament to South African steel sector skill for many years. 🌟

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SANY



The E25X is powered by a 102V/32.2kWh cobalt-free battery

NEW HOLLAND UNVEILS REVOLUTIONARY ELECTRIC EQUIPMENT

At Agritechnica 2023, New Holland showcased the latest advancements in electric technology for its light equipment line, aligning with its Clean Energy Leader strategy. This display featured an all-electric mini excavator and a compact wheel loader.

Agritechnica 2023 was a significant platform for New Holland to showcase the latest additions and updates to its light construction equipment range.

This included new developments in electric machines, as well as new models in the mini and midi excavator, compact wheel loader, and track loader categories.

The event, held in Hannover, featured an interactive outdoor demo area where visitors could experience these machines first-hand.

Following CNH Industrial's acquisition of Sampierana and the opening of a new manufacturing site in Cesena, Italy, New Holland has broadened its light equipment range. This expansion reflects the brand's sustainable strategy and commitment to alternative propulsion systems.

More power to the mini

With noise and emissions regulations becoming more widely imposed, machine power development is increasingly focused on electrification across machine types, including light construction equipment. Consequently, and following last year's launch of New



The E20D mini excavator, a short radius model ideal for confined spaces.

Holland's first fully-electric mini excavator – the E15X, the brand now introduces a new, more powerful fully-electric model, the E25X Electric Power.

The E25X is powered by a 102V/32.2kWh cobalt-free battery, with its environmental credentials further enhanced by its use of eco-friendly biological hydraulic oil, which also extends service intervals. Autonomy varies between four and

The W170D wheel loader, part of the upgraded W-series, was on display at Agritechnica 2023.



eight hours, depending on the application and selected working mode, with no energy used when on stand-by.

Battery charge time is just one hour from 0 to 80% charge, or 1.5 hours with the 380V off-board fast charger and 9-10 hours with the 220V on-board system. The E25X also features a variable-width undercarriage which allows the distance between the tracks to be varied from 990-1,300mm, maximising stability and accessibility while maintaining the cab roominess of a higher weight-class excavator.

As a zero-emission vehicle with very low operating noise, the E25X is ideal for projects prioritizing sustainable business practices and for works in areas with emissions and noise restrictions. Its compact dimensions make it well-matched to work requiring access to the tightest spaces or indoor work areas, in applications from agriculture and horticulture to landscaping, digging and demolition in confined workspaces.

The W40X electric wheel loader

Alongside the E25X, the W40X Electric Power compact wheel loader was showcased. This electric model is perfect for indoor, closed, or urban areas and features a 23kWh battery with a 39kW rated power.

It boasts an innovative attachment linkage and automated functions for boom and bucket operations, aimed at enhancing efficiency and ease of control.

The W170D wheel loader, part of the upgraded W-series, was on display at Agritechnica 2023. This model offers increased payload and lifting height, with a range of differential options for heavy-duty axles. The 2024 range includes the W150D, targeting the biogas sector, and the W80C EVO, featuring a revamped operator interface and a top travel speed of 40 km/h.

Enhancing light equipment

New Holland also exhibited the E20D mini excavator, a short-radius model ideal for confined spaces. This excavator is notable for being the first two-piece boom model in the 2t class, offering an enhanced working range and a tilting cab for easy maintenance.

Lastly, the European launch of the C314 mini track loader represents a new equipment category for New Holland. This compact, versatile machine is designed for landscape contractors and residential construction operations, with user-friendly controls and multiple attachment options.

These innovations at Agritechnica 2023 exemplify New Holland's commitment to advancing construction and agriculture equipment technology, particularly in the realm of electric and light equipment, catering to the evolving needs of the industry. ⚡



New Holland introduced a new, more powerful fully-electric mini excavator, the E25X Electric Power, at Agritechnica 2023.



The E25X Electric Power has a variable autonomy between four and eight hours depending on the working mode and application.



Alongside the E25X, New Holland showcased the W40X Electric Power compact wheel loader for indoor, closed, or urban areas.



Agritechnica 2023 marked the European launch of the C314 mini track loader, representing a new product category for New Holland.

QUICK TAKE

The ET35 from Wacker Neuson can also be adapted individually to the customer's requirements.



A LOOK AT WACKER NEUSON'S MINI AND COMPACT EXCAVATORS

This year marks the 175th anniversary of the Wacker Neuson Group, a journey that began in 1848 when Johann Christian Wacker opened a blacksmith's shop in Dresden, Germany. For the anniversary it's worthwhile to look at the compact and mini excavators distributed by Wacker Neuson Southern Africa, that has formed part of the OEM's ongoing success.

TALKING POINT

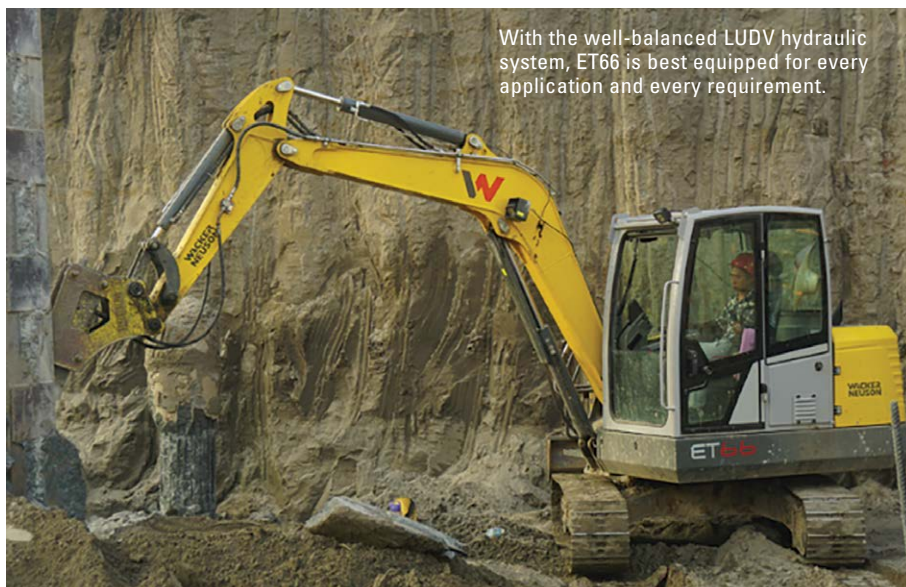


"Our product portfolio includes both conventional and zero-tail configurations, offering models from 1.6 to 7 tons for the local market to ensure adaptability across various applications."

Dennis Vietze, Managing Director: Sub-Saharan Africa

Over the years, Wacker Neuson company has revolutionised the construction industry with its innovative contributions. A notable example is the introduction of the electric vibratory rammer in 1930, a tool still essential for soil compaction. Another significant milestone was in 1973 with the launch of the first reversible vibratory plate.

Since the 1980s, Wacker Neuson's compact machine segment has captivated industry experts, demonstrating the



With the well-balanced LUDV hydraulic system, ET66 is best equipped for every application and every requirement.

impressive versatility and strength of these scaled-down machines. The introduction of the first hydraulic mini-excavator in 1984 marked a significant innovation, followed by articulated wheel loaders and compact telehandlers in 2005, further establishing Wacker Neuson as a premier supplier of world-class compact machines.

The 175th anniversary celebrations in South Africa, which took place in October, featured a unique mini-excavator Putt-Putt game, showcasing the versatility of these machines in a fun and engaging way.

"Mini and compact excavators are indispensable in South Africa, driving market growth in construction and agriculture with their myriad benefits," notes Dennis Vietze, Managing Director: Sub-Saharan Africa.

A big line-up

Mini and compact excavators are highly sought after in the rental industry and on construction sites due to their compact size, exceptional manoeuvrability, and versatility. They are also almost indispensable on farms. "Our product portfolio includes both conventional and zero-tail configurations, offering models from 1.6 to 7 tons for the local market to ensure adaptability across various applications," mentions Vietze, discussing the range of excavators sold by Wacker Neuson.

Trusted versatility

Configurable to specific needs, these excavators come with options like cab or open station, steel or rubber tracks, additional hydraulic flow lines, dipper stick extensions, and mechanical or hydraulic hitches.

"We also offer a wide range of buckets and attachments, allowing our customers to fully utilize these machines," adds Stefan le Roux, Sales Manager: Sub-Saharan Africa.

As versatile tool carriers, these machines are designed to create a "multi-tool" tailored to customer needs.

"Our lineup includes specialised models and basic machines, all known for their reliability and solid performance under African conditions. They are equipped with sturdy aluminium combination coolers for optimal operation in hot and humid climates and have convenient service access," Le Roux explains.

Impressive performance

Wacker Neuson excavators are not only agile but also achieve maximum performance at reduced engine revolutions, offering fuel savings of up to 30% compared to other brands. The addition of telematics allows remote

QUICK TAKE

Wacker Neuson's legacy began in 1848 at a blacksmith's shop in Dresden, Germany, marking 175 years of industry-leading innovations.

The company introduced the first hydraulic mini-excavator in 1984, a significant advancement in the compact machine segment.

Wacker Neuson's compact and mini excavators offer versatile configurations, including options for cabs and stations, tracks, and attachments.

Wacker Neuson has introduced a 1.7-ton Zero Emission excavator in South Africa, showcasing a commitment to sustainability.

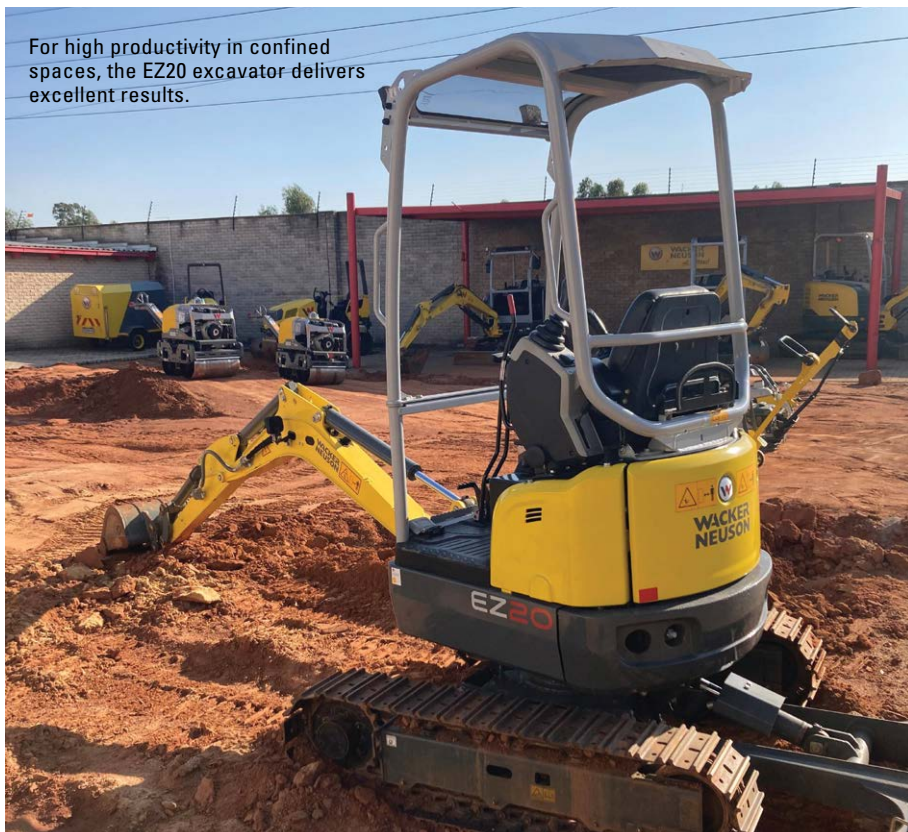
"Our lineup includes specialised models and basic machines, all known for their reliability and solid performance under African conditions. They are equipped with sturdy aluminium combination coolers for optimal operation in hot and humid climates and have convenient service access."

Stefan le Roux, Sales Manager: Sub-Saharan Africa



TALKING POINT

For high productivity in confined spaces, the EZ20 excavator delivers excellent results.



A compact excavator used to play putt putt shows the versatility of these excavators in confined spaces.



Wacker Neuson has also introduced a 1.7-ton zero-emission EZ17e excavator to the South African market, featuring a modern lithium-ion battery suitable for any ambient temperature.

monitoring, providing live location information, total hours, and daily usage statistics.

"All our machines comply with European safety specifications and certification, ensuring the highest standards," notes Vietze.

In terms of service and maintenance, Wacker Neuson boasts a large network of service centres.

"Our dealer network includes 69 service points across South Africa and Sub-Saharan Africa, ensuring swift and effective after-sales support," adds Vietze.

Emphasising customer support, the company offers comprehensive training for both internal and dealer staff.

Going green

Wacker Neuson has also introduced a 1.7-ton zero-emission excavator to the South African market, featuring a modern lithium-ion battery suitable for any ambient temperature.

"This environmentally friendly option is ideal for use in sensitive areas like trenches and tunnels, boasting low maintenance requirements and zero direct exhaust emissions," says Le Roux.

As Wacker Neuson South Africa celebrates 175 years of excellence, their commitment to innovation, customer satisfaction, and sustainability remains strong. It's hard to imagine a construction site without a mini or compact excavator from Wacker Neuson. 🌱

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Our lineup includes specialised models and basic machines, all known for their reliability and solid performance under African conditions. They are equipped with sturdy aluminium combination coolers for optimal operation in hot and humid climates and have convenient service access.

SUPPLY CHAIN AND LOGISTICS CAN HELP THE SHIFT TOWARD EMOBILITY

While South Africa's electricity crisis is cited by many as the reason that the country is not ready for electric vehicles (EVs), loadshedding could be the catalyst for the decentralisation of the country's green energy roll out and may fuel the shift to eMobility.

By Greg Cress, Sustainable Energy and eMobility lead at Accenture.

Speaking at a conference for supply chain professionals co-hosted by SAPICS (The Professional Body for Supply Chain Management) and SAAFF (South African Association of Freight Forwarders), I said that it was critical to put the gas on – without the gas – in the race to net zero carbon emissions. I stressed that South Africa needed to focus its EV transition not just on private cars, but also on trucks, light delivery vehicles and buses. According to the International Energy Agency (IEA), road transport (cars, trucks and buses) account for 28% of global CO₂ emissions.

There's two possible eMobility scenarios in South Africa's future. In the 'Beetle' scenario, the country will have continued on the *status quo* path, only investing in manufacturing and exporting ICE vehicles, and not transforming facilities to make and assemble EVs.

If this plays out, South Africa will become irrelevant on the global stage. Demand for our exports will decline, unemployment will rise, and large original equipment manufacturers (OEMs) may exit South Africa's automotive manufacturing sector.

South Africa needs to pursue the 'Charged-Up' scenario, in which the country's assembly plants have been transformed for electric vehicles, 60% of which are exported. Expanding on this scenario and the benefits, consumers will have transitioned towards green and sustainable technologies and adopted EVs.

Cities, OEMs and independent power producers will have created an 'energy

alliance' to offset the dependence on Eskom for EV charging infrastructure. Understanding the benefits of an EV future, Government will have made tremendous progress in removing all the red tape that hampers EV adoption. South Africa's economy will have recovered, the GDP will be growing and unemployment dropping in this scenario.

The retail logistics and supply chain sectors have a critical role to play in the move to sustainable mobility and achieving a 'Charged-Up' future for South Africa.

Globally, many logistics companies are transitioning to electric vehicles. These include FedEx, UPS and DHL. Heavy commercial OEMs like Volvo are focusing on EVs, and Coca-Cola, which is switching to electric trucks, aims to have transformed its fleet to 100% electric vehicles by 2030.

In California, Volvo and Shell Recharge have partnered to build an 'Electrified Charging Corridor Project' for medium and heavy duty EVs.

Volvo's first electric truck sold in South Africa was delivered to KDG Logistics earlier this year, while Woolworths is the first South African retailer to embark on an extensive rollout of electric panel vans in partnership with DSV and Everlectric.

The diversification and decentralisation of energy generation are national imperatives for South Africa right now, and that both small-scale and large-scale generation projects have roles to play. More EVs will lead to more decentralised (and mobile) energy storage. It is also critical to establish a viable EV battery recycling value chain in



Sustainable Energy and eMobility lead at Accenture, Greg Cress.

South Africa.

The Global Battery Alliance, which has leading mining companies among its members, is leading the way on this front.

Sustainability and the shift towards eMobility are among the important topics that will be explored at the 46th annual SAPICS Conference, which takes place in Cape Town from 9 to 12 June 2024.

This important conference is the leading education, knowledge sharing and networking gathering for the African supply chain community. 🌱



WEARCHECK OFFERS A WINNING CONDITION MONITORING FORMULA

WearCheck is recognised as the pre-eminent condition monitoring services provider, with 16 world-class laboratories in nine countries across the African continent and beyond. Neil Robinson, WearCheck's managing director, chats to *Capital Equipment News* about the company.

WearCheck serves as a reliability solutions hub, promoting asset health through various analysis techniques. These include the scientific testing of used oil and other fluids from mechanical and electrical systems, transformer care, asset reli-

ability care (ARC), water analysis, advanced field services, lubricant-enabled reliability (LER) and more..

1) What are the key benefits of implementing condition monitoring in industrial processes?

A good condition monitoring programme produces highly accurate, scientific data about the wear patterns of oil-wetted rotating industrial machinery. This enables maintenance teams to make informed decisions about when to schedule repairs on components which indicate potential failure. Planning ahead on maintenance tasks has many benefits, including the fact that there is no disruption to an operation when a machine fails unexpectedly, and spare parts can be ordered timeously, instead of in an emergency. In short, condition monitoring helps to avoid catastrophic breakdowns, thereby boosting efficiency

"WearCheck has robustly embraced the era of IIoT (Industrial Internet of Things), wireless technology and machine learning, and is already in the process of incorporating artificial intelligence."

WearCheck managing director,
Neil Robinson,



by ensuring components are optimally available, and minimising downtime. It also helps to prolong the life of expensive assets. Condition monitoring is a sure way for an industrial operation to boost its bottom line by saving time and money – it provides tangible return on investment into a good programme.

2) In what industries or sectors is condition monitoring most crucial?

Condition monitoring is crucial in a wide variety of industries. WearCheck serves clients in many sectors, including mining and earth moving, engineering, construction, renewable energy and power generation, aviation, maritime, agriculture and more.

Depending on the industry and, in particular, on the component or asset being monitored, WearCheck uses different monitoring techniques. For example, engines or machines with rotating parts, such as a winder, could be assessed using one or more services offered by our Asset Reliability Care (ARC) division, such as vibration monitoring, thermography, on-line remote monitoring diagnostics, alignment and balancing, or even other specialised techniques such as motion amplification, ODS (operational deflection shape) and resonance tests using transient and impact analysis.

Alternatively, oil-wetted components, such as the inner workings of a gearbox, are best monitored using used oil analysis, which can reveal trace elements in the oil. This provides important clues about wear patterns. For example, trace elements of chrome or nickel may indicate imminent bearing failure, or tiny amounts of silicon with aluminium could be a sign that dirt is somehow entering the machine.

Yet another aspect is that of water analysis – for example, large-scale agricultural operations must ascertain whether a particular water source for crop irrigation is fit for human consumption. Alternatively, mines and other manufacturing operations which need to dispose of large quantities of wastewater, must determine whether it complies with legislation before releasing the water into the environment. WearCheck's SANAS-accredited water analysis division conducts a range of tests to determine water quality for different industries.

3) What role do data analytics and predictive maintenance play in your approach to condition monitoring?

Thanks to meticulous record-keeping, WearCheck has amassed a sample diagnosis database of over 16 million samples, which grows by around 800,000

samples each year. Obviously, the confidentiality of this data is paramount to our business.

The database contains invaluable information about component condition trends over time. The power of the database lies in the in-depth insight it provides into the inner workings of machines across all makes and models, operating conditions and lubricants. In some cases, we have access to more data than the OEMs simply due to the large number of samples we diagnose.

4) What are the common challenges faced by businesses when implementing condition monitoring?

Some businesses may not have technicians available to take oil samples, in which case we send our own technicians on site to take the samples. In addition, we offer many different training modules (online training included) aimed at different staff members in a maintenance department, for example on how to manage a condition monitoring programme, getting a better understanding of how to interpret what WearCheck is advising diagnostically, then how to close the loop, returning any maintenance feedback in order for future samples to be diagnosed more accurately. based on action taken. All this helps clients maximise on their return on investment into condition monitoring. WearCheck also produces an automated monthly report on all the samples processed in that month, their criticality and diagnostic recommendations and there is the availability of a specifically requested and designed KPI report outlining any number of parameters and an overview of the health of an oil analysis programme, and includes recommendations for improvement which are used by many customers for their own KPIs our customers and final decision-makers confidence in their maintenance decisions.

5) What are some of the recent advancements in condition monitoring technology?

WearCheck has robustly embraced the era of IIoT (Industrial Internet of Things), wireless technology and machine learning, and is already in the process of incorporating artificial intelligence (AI) into some of our suitable laboratory processes. To increase quality and control of results as well as instrumentation and consumables, and finally even the ability to predict and / or confirm analytical results and certain diagnoses, giving us greater comfort in our analyses and resultant diagnostic output.

On the ARC (Asset Reliability Care) side, we have recently implemented a remote data analysis centre at our new facilities in Johannesburg, where remote data analysis, with results presentation using the power of PowerBi, is available. This means now that the most technically qualified and experienced staff can spend more time on results interpretation, recommendation and customer feedback rather than physically taking the readings.

7) Could you share insights into the cost-effectiveness of condition monitoring compared to traditional reactive maintenance approaches, and the potential return on investment for clients?

In a reactive maintenance approach, an industrial operation would come to a complete standstill for hours, or days, or even weeks, while spare parts are sourced, and repair work is conducted. This downtime can end up being horrifically costly in terms of loss of productivity and therefore income, and expensive emergency repair work and parts. Often in cases like these the breakdowns are severe, impacting on associated components that themselves were operating perfectly fine, increasing the overall cost of repair.

In a proactive scenario, where condition monitoring helps to pre-empt a breakdown, allowing for repairing on condition, rather on failure, allowing for planned downtime and provision of staff and materials to be in place before the maintenance event occurs, disruption to productivity is minimised, and repairs are cheaper and quicker to implement. In most scenarios, the return on investment into a good condition monitoring programme can be calculated to have paid for itself many, many times over, in comparison to the alternative, the industry accepted norm is in excess of a 10x ROI.

8) What advice would you offer to businesses looking to enhance their maintenance practices through condition monitoring?

WearCheck's well-trained, experienced sales agents travel all around South Africa as well as to other African countries, where they are able to advise new customers on which analysis techniques for certain components would yield the best ROI, as well as advising existing customers on new techniques as they become available. Many of these agents have a strong background in industry, making them well placed to advise customers on the right course of action. I would suggest reaching out to our sales team. 🌟



THE QUON GW 6X4'S MOMENT IN THE SPOTLIGHT

The UD Trucks flagship model, the Quon GW 6X4, is redefining the standard for hauling heavy loads.

The heavy-duty Quon GW 6x4 is powerful yet fuel-efficient. Its superior braking power provided by disc brakes, is unique among Japanese truck manufacturers and at the 2023 Japan Mobility Show the Quon GW 6X4 was the centre of attention at the UD Trucks exhibition.

At the Japan Mobility Show, which took place in Tokyo, Japan, this month, the Quon GW 6X4 was central to the UD Trucks exhibition.

The Quon GW 6x4 is noted for its power and fuel efficiency, with superior drivability, braking, and comfort – making it easy to see why it has been positioned as the flagship model for UD Trucks.

Achieving overwhelming power and torque delivered from the 13-litre engine, the truck is fuel efficient and easy to drive thanks to ESCOT and UD

Active Steering technology. It also boasts a smooth combination of disc brakes and industry-leading auxiliary brakes.

At a launch event for the new 6x4 tractor earlier this year, UD Trucks President Kouji Maruyama said, “As a truck manufacturer, we always put drivers first and try to stay one step ahead in addressing challenges faced by the industry today. We hope that all drivers will find that the new 6x4 Quon is easier to drive and helps reduce fatigue associated with long-haul driving, giving them energy for tomorrow.”

At the Japan Mobility show, Maruyama reiterated the model's strength.


“It is essential to address the challenges facing our industry such as the long working hours of truck drivers, and the increase in deliveries due to the rapid expansion of e-commerce. To encourage people to enter the logistics industry and thrive, the




“It is essential to address the challenges facing our industry such as the long working hours of truck drivers, and the increase in deliveries due to the rapid expansion of e-commerce. To encourage people to enter the logistics industry and thrive, the Isuzu Group is promoting various initiatives so that drivers will find it a rewarding profession.”

Kouji Maruyama, UD Trucks President


QUICK TAKE




The Quon GW 6x4 is known for its power, fuel efficiency, and superior braking system.



The truck boasts a 13-litre engine delivering significant power and torque while maintaining fuel efficiency



This is facilitated by the next-generation ESCOT-VII transmission and UD Active Steering technology.



UD Trucks President Kouji Maruyama emphasised the truck's ease of driving and reduced driver fatigue.



Isuzu Group (which includes UD Trucks) is promoting various initiatives so that drivers will find it a rewarding profession.”

The new Quon 6x4 addresses many challenges, and he directed the audience to the fact that the model is easy to drive, and that it puts people and cargo first.

On the road

The new Quon GW 6x4 runs smoothly on the road, with the next-generation ESCOT-VII transmission and raw power delivered by the GH13 engine. In order to realise a gross vehicle weight (GCW) of 60 tons or

more, the engine outputs 530 horsepower. In addition, the 12-speed electronically controlled automatic transmission has evolved beyond ESCOT-VI, with the new ESCOT-VII enabling quicker and smoother shifting.

Turning

UD Active Steering reduces driver fatigue and contributes to safety. Since its launch in 2021, UD Active Steering has been highly praised by drivers and has now been added to the new Quon GW 6x4. The heaviness of the steering wheel can

differ greatly between driving with a fully loaded trailer and an empty one. However, with UD Active Steering, the ease of steering greatly reduces driver fatigue and contributes to safety.

Stopping

The combination of industry-leading auxiliary brakes, engine brakes, and disc brakes provides reliable, smooth and powerful braking. The large-capacity hydraulic retarder used in the new 6x4 Quon achieves superior braking force even when transporting heavy loads downhill. By combining the engine brake with the disc brakes, which are only employed by UD Trucks among the Japan commercial vehicle manufacturers, reliable and excellent braking is ensured. Even on longer descents, the vehicle speed can be maintained and controlled with a minimal amount of foot brake.

Connecting

The Quon GW 6x4 air suspension is ideal for both the cargo and the driver, whether the vehicle is fully loaded or empty. The 16-ton and 18-ton class 5th wheel is the first among Japanese manufacturers to be equipped with rear air suspension. The trucks are also ideal for transporting precision equipment and even with heavy load items such as steel, the lashing wire fits tightly. In addition, the comfortable ride when the vehicle is not towing a load greatly reduces driver fatigue.

Interior and exterior

In its positioning as a flagship model, the Quon GW 6x4 features an exclusive interior and exterior. The exterior features a special dark chrome-plated grill, silver-plated hexagon grille and three bars, and a special emblem. The interior features black seats and a black leather steering wheel.

Addressing new challenges

Goods moving by truck account for 90% of freight transported in Japan and the industry is facing serious issues such as driver shortages and soaring fuel prices. In particular, the upper limit on overtime hours for drivers in Japan will be capped to 960 hours a year from bad break, 1 April, 2024. The development of this flagship model emphasizes a safer and more comfortable ride for drivers, aiming to improve transportation efficiency and driver productivity.

Many of Japan's challenges are faced in South Africa, which is why it is heartening to see the model's availability locally. In the country, the Quon GW 6x4 has the following application options: Reefer, semi-trailer, tanker and tautliner. 🌟

The EVision Cycle Concept, a battery-swapping solution, revealed at the Japan Mobility Show.



ISUZU AND UD TRUCKS UNVEIL THEIR FUTURE OF TRANSPORT

Isuzu Motors Limited and UD Trucks Corporation joined forces to present their first collaborative exhibition at the Japan Mobility Show 2023. Held at Tokyo Big Sight from 28 October to 5 November, the showcase invited visitors into a world where innovation propels the future of transport.

encompassing advanced manufacturing and collaborations in vehicle performance verification.

ERGA EV

At the show, Isuzu impressed with the unveiling of the world's first ERGA EV, a fully flat-floor Battery Electric Vehicle (BEV) route bus.

The ERGA EV, developed by Isuzu, aims to realise zero carbon emissions. Its flexible layout removes the need for steps at the rear, enabling a fully flat-floor interior.

This design allows passengers easy access, akin to that of a conventional non-step diesel-engine bus. With all seats readily accessible, the bus's interior is completely barrier-free. Enhanced by smoother acceleration and deceleration and reduced vibration and noise, the bus maximises passenger safety and comfort, aiming to eliminate onboard accidents, such as falls, entirely.

"Isuzu has a distinguished history in bus manufacturing and sales, amassing extensive knowledge and customer trust. We are proud to introduce the ERGA EV, a battery-electric bus that centres on people and sustainability," stated Shinsuke Minami, President and Representative Director and COO of Isuzu Motors Limited.

"EV technology enables a design with a step-free rear, a first for Japanese manufacturers, achieving a fully-flat floor. Coupled with the low vibration and noise unique to EVs, it ensures comfortable and



"Isuzu has a distinguished history in bus manufacturing and sales, amassing extensive knowledge and customer trust. We are proud to introduce the ERGA EV, a battery-electric bus that centres on people and sustainability."

Shinsuke Minami, President and Representative Director and COO of Isuzu Motors Limited

The Isuzu Group, which includes the UD Trucks Corporation, is boldly progressing towards a more sustainable future, with the goal of eliminating greenhouse gas emissions by 2050. The focus is on harmonising transport solutions with environmental stewardship, catering to the varied needs of a society gradually embracing electrification.

The joint exhibition at the Japan Mobility Show highlighted the Isuzu Environmental Vision 2050 and a suite of carbon-neutral initiatives,



towards carbon neutrality (CN), utilising expertise gained from a commissioned project by Japan's Ministry of the Environment for battery-swappable EV trucks. In BEVs, where charging downtime is a significant drawback, this solution enables the swift replacement of depleted batteries with charged ones, thus reducing wait times and enhancing operational efficiency.

Moreover, it allows for cost and electric power grid load reductions by charging batteries during off-peak periods. By decoupling the battery from the vehicle, batteries can be managed independently, facilitating sharing among trucks and potential uses like renewable energy storage. The Isuzu Group is dedicated to forging transport solutions through battery-swapping.

Logistics

Recognising logistics as society's lifeline, Isuzu is dedicated to addressing industry challenges, including driver shortages and the surge in e-commerce. With upcoming legislative changes in Japan, the group is actively innovating to improve driver conditions and bolster logistics operations.

The ELFMio is testament to such innovation, a light-duty truck operable with a standard licence, boasting a spacious cabin and excellent manoeuvrability, thus widening the pool of potential drivers.

Quester GWE 6x4


UD Trucks also exhibited the heavy-duty Quester GWE 6x4 at the show. This truck, tailored for emerging markets, meets Euro 5 emission standards set by the European Union (EU).

Equipped with the UD Selective Catalytic Reduction (SCR) system, the truck minimises pollutants produced during combustion, addressing pollution issues in growing economies. A decade after its launch, the Quester now aids transport in around 50 countries.


"It has established a robust track record in these countries, underpinning projects that bolster economic growth globally," remarked Kouji Maruyama, President and Representative Director of UD Trucks Corporation, on the opening day of the Japan Mobility Show.

The joint exhibition clearly conveyed that the Isuzu Group is developing and offering products and solutions that contribute comprehensively to a carbon-neutral (CN) world empowering fleet managers and drivers to select the best vehicle to meet a spectrum of societal, economic, and environmental demands as electrification and other environmental technologies advance. 🌱


QUICK TAKE




Isuzu Motors Limited and UD Trucks Corporation presented their first joint exhibition at the Japan Mobility Show 2023.



Isuzu unveiled the ERGA EV, the world's first fully flat-floor Battery Electric Vehicle (BEV) route bus, designed to offer zero carbon emission.



The EVision Cycle Concept was introduced, a battery-swapping solution that reduces BEV charging downtime and operational inefficiencies.



UD Trucks showcased the Quester GWE 6x4, a heavy-duty truck designed for emerging markets, which complies with Euro 5 emission standards.

free movement within the bus. The launch of the ERGA EV is slated for the next fiscal year," he added.

Isuzu also showcased the GIGA Fuel Cell, a heavy-duty truck developed with Honda, set for public road testing this fiscal year and targeting a market debut in 2027.

Another pioneering development is the ELF EV, Isuzu's inaugural mass-produced battery electric vehicle. This vehicle heralds a new era for the brand, promising diesel-

like versatility without the environmental toll. Accompanying the ELF EV is EVision, a programme designed to facilitate customers' transition to electric vehicles and optimise operations for a carbon-neutral future.

Swap batteries with ease:

The EVision Cycle Concept, a battery-swapping solution, was also revealed at the Japan Mobility Show. This solution from Isuzu represents an alternative route

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The Extension Kit can be configured in several ways with an elbow and beams, allowing the operator to perform Hydrodemolition in hard-to-reach areas.

NEW AQUAJET ATTACHMENTS STREAMLINE CONCRETE REPAIRS

Aquajet Systems AB is a pre-eminent name in the realm of hydrodemolition in South Africa. Locally the Aqua Cutter 710V hydrodemolition robot, distributed through Total Blasting, offers something unique. But the 710V's big brother, the Aquajet 750V has been introduced to the market this year, and it's time to see how this machine's range of attachments allows it to be top of the class.

While South Africa most often must wait for the latest equipment to become available after its launch, the Aquajet Systems ABs available locally aren't by any means dated. Since launching in 2017 the 710V is thoughtfully equipped with Aquajet's signature ceramic nozzles which offer an extended lifespan—up to 79 percent more durable than the typical steel alternatives.

Weighing in at 2,300 kilograms, the Aqua Cutter 710V harnesses the power of water jets ranging from 1,000 to 2,750 bar to remove up to 1 cubic metre of concrete per hour.

Contractors have the flexibility to adjust the robot's stroke for precise depth control of cuts and can vary the water pressure to suit the task at hand—be it clearing away weakened concrete or reducing robust concrete to a predetermined depth.

Under the hood, the 710V houses a robust 18-kW diesel engine. For environments where diesel engines are not permissible,

contractors can augment the robot with the Aquajet Hybrid Kit. This attachment enables electric operation and intelligently disengages the onboard diesel engine when necessary.

The 710V robot is also compatible with Aquajet Systems' 7-metre Power Packs, which house a high-pressure Hammelmann pump, a hefty diesel engine, and a control system, complete with a convenient storage section for the robot.

The 710V is also fully compatible with the comprehensive range of accessories from Aquajet Systems, including rotolances, circular power heads, spines, and frames.

The Aqua Cutter 750V

While the 710V remains a solid workhorse, last month Aquajet unveiled an Extension Kit, Rotolance and Hybrid Kit optimised for its latest machine, the Aqua Cutter 750V. The Extension Kit increases the 750V's reach for applications, such as bridges, berths, piers and wastewater plants, while the Rotolance excels at surface preparation

on steel bridges, roadways, pipes, tunnels and more.

The Hybrid Kit 3.0 converts the diesel-powered 750V to electric when diesel cannot be used due to noise or emission requirements.

"After a successful 750V launch, we wanted to fine-tune accessories that give our customers even more ways to use the robot," said Roger Simonsson, Aquajet CEO.

"There is a lot of concrete around the world that needs repair. The 750V provides a way to efficiently remove it, and these accessories increase where the robot can go and the types of removal that are achievable."

New configurations

The Extension Kit can be configured several ways with an elbow and beams, allowing the operator to perform Hydrodemolition in awkward, hard-to-reach areas. During a bridge repair, for example, the Extension Kit allows the 750V to work from the bridge deck and reach over the barrier without



"There is a lot of concrete around the world that needs repair. The 750V provides a way to efficiently remove it, and these accessories increase where the robot can go and the types of removal that are achievable."

Roger Simonsson, AquaJet CEO

QUICK TAKE

The AquaJet Hybrid Kit 3.0 can be attached to the 750V to automatically switch from diesel to electric power.



AquaJet's Aqua Cutter 750V can be equipped with an Extension Kit and Rotolance, enhancing its reach for bridge and pier applications.



The Rotolance attachment comes in two versions, capable of reaching maximum water pressures of 14,500 psi and 36,300 psi.



The 710V model, distributed through Total Blasting in South Africa, uses ceramic nozzles for longevity.



having to remove it, saving contractors time and hassle.

To reach the underside of the bridge deck, the beams extend to the side over the railing and downward at a 90-degree angle. Then, the elbow reaches underneath the bridge at a 90-degree angle and points the cutting head upward underneath the deck. The accessory expands the 750V's reach by 1 metre to the sides and up to 2 metres vertically.

In addition to the versatility and efficiency gains, the Extension Kit improves operator safety by eliminating labour-intensive alternatives, such as using hand tools to remove concrete from difficult-to-reach spots.

Stress-free removal

The Rotolance attachment is a powerful surface preparation tool. Contractors can utilise the Rotolance to remove concrete, rubber coatings, paint, rust, plastic and other materials.

The accessory brings this versatility to several different applications, including steel bridge coating removal, roadway surface preparation, deck epoxy removal, pipe coating removal and more. While the 750V is often used for deeper sections of concrete, the Rotolance serves as a light-removal alternative. This method avoids sandblasting, eliminating dust pollution.

The Rotolance for the 750V comes in two versions — the 1000 and 2500, each with a working diameter of 350 millimetres. The 1000 achieves a maximum water pressure of 14,500 psi (1,000 bar) that leaves a good bonding surface when cleaning or removing hard paint, rust and rubber coatings. The 2500's maximum water pressure is 36,300 psi (2,500 bar), which quickly and precisely removes a shallow layer of concrete.

Make it hybrid

The Hybrid Kit 3.0 easily attaches to the 750V and uses an intelligent system to automatically disengage the onboard diesel engine and convert it to electric power. This brings the 750V's capabilities to applications where diesel engines may not be allowed, such as parking garages or inside buildings.

The Hybrid Kit 3.0 can be installed without any tools as operators simply snap it onto the back of the robot, connect the hoses and it's ready to go.

The Hybrid Kit 3.0 also features a built-in charger that powers the battery while the robot is working. Once connected, the 750V can run on either diesel or electric, making it a versatile, environmentally friendly machine.

While the latest attachments and technology the 750V delivers are unrivalled, back home the 710V is still a considerable robot. 🌟

The railway network, as seen from the Nelson Mandela Bridge in Braamfontein, Johannesburg.

DRIVING DIGITALISATION FOR FUTURE RAILWAY INNOVATION

Huawei and the Southern African Railways Association (SARA) have signed a Memorandum of Understanding (MOU) with the purpose of creating a non-exclusive framework of cooperation for the transformation of the SADC region's railway transport and corridor logistics to enable seamless, efficient, smooth, cost-effective and quality railway corridor services on all SARA Corridors.

The signing took place during SARA's annual exhibition and conference in a ceremony witnessed by Eng. Agostinho Francisco Langa Júnior, President of SARA and Guo Guoqing, President of Huawei Sub-Saharan Africa Enterprise Business and all SARA members.

The MOU is designed to help address an urgent need in the railway space to make railways smarter, safer, more visualised, more efficient, and more reliable.

As Guo Guoqing, President of Huawei Sub-

Saharan Africa Enterprise Business explained, "Success in the railway industry depends on safety, reliability, and affordability, with both operators and its customers expecting flawless service – but this requires future-proofed communications networks based on single technology among all the rail operators."

Optimising communication

Ensuring that optimal performance means delivering next-generation communication standards. As part of the agreement,

Huawei will therefore assist in identifying and recommending minimum regional ICT railway standards, enhancing the train control technology and providing the various parties with access to a shared database, which will enable the reduction of inefficiencies and disruptions in the rail corridor supply chain.

That includes moving away from the current GSM-R standard. With its narrow 4 MHz bandwidth, GSM-R capacity is not large enough to meet requirements to a better railway of SADC, and another unavoidable critical challenge is: GSM-R's eco system is falling down quickly globally, it has no future: that is why SARA is seeking to officially replace it.

"FRMCS (Future Railway Mobile Communication) is pivotal for the genuine digital transformation of railways. To achieve a truly integrated regional railway system, it's crucial for our region to standardise based FRMCS on a single technology," SARA President Agostinho Francisco Langa Júnior said in his opening speech.

With the standard reaching the end of its life cycle, Huawei is supporting the move



"Success in the railway industry depends on safety, reliability, and affordability, with both operators and its customers expecting flawless service – but this requires future-proofed communications networks based on single technology among all the rail operators."

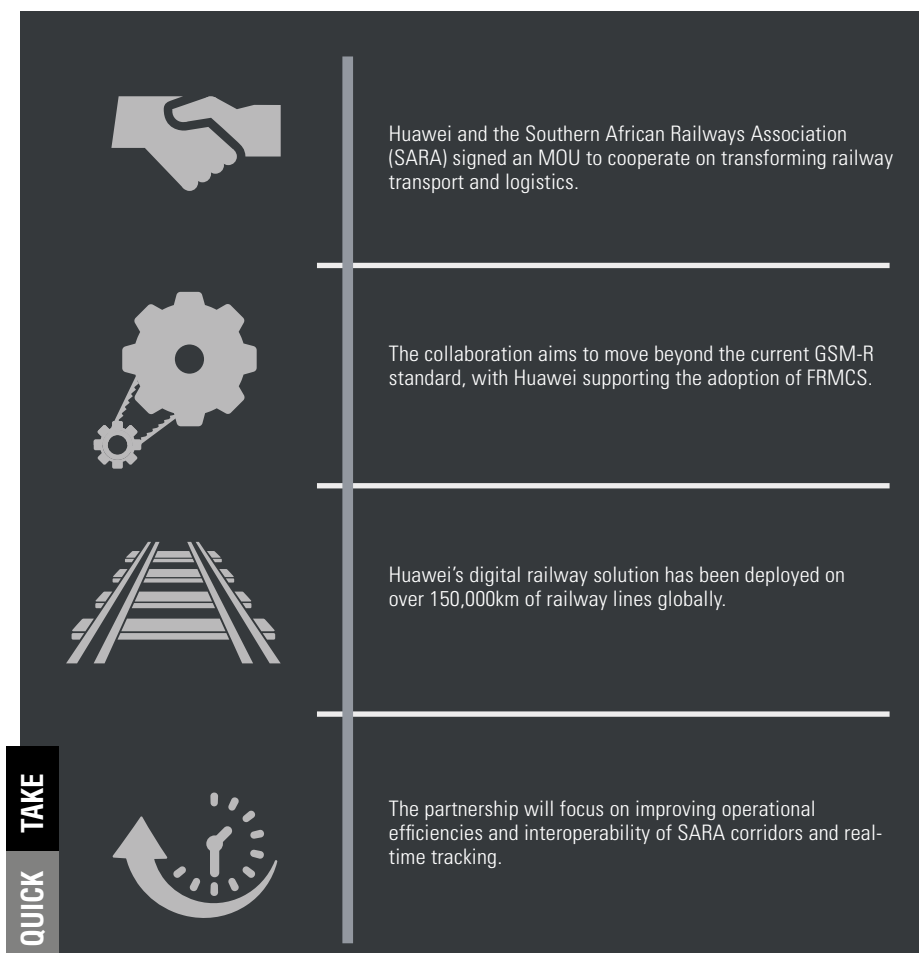
Guo Guoqing, President of Huawei Sub-Saharan Africa Enterprise Business



Guo Guoqing, Li Mingqun, Babe Botana and Agostinho Francisco Langa Júnior.



Xiang Xi, Vice President of the Aviation & Rail BU, Huawei.



to its successor, Future Railway Mobile Communications System (FRMCS), allowing for a faster transformation to a more digital, intelligent, and green rail network in the SADC region.

Improving operations

The agreement also aims to improve overall operational efficiencies and interoperations of SARA corridors through unifying telecommand ICT integration, where Huawei's expertise lies. For SARA member railway networks, this will result in better security, smarter contracts, improved corridor management and real time asset tracking of freight and cargo, and ultimately the enhanced competitiveness of railway services.

"One tech makes one rail, one rail makes one Africa, Huawei has been in Africa for 25 years and its ongoing contribution to ICT technology for Africa underpins the pivotal role of ICT infrastructure to the regional, and indeed, global, railway industry," said Li Mingqun, the Managing Director of Huawei Sub-Saharan Africa Transportation Business.

Railway transformation

A long-time player in the transport sector, Huawei has been an active supplier of ICT solutions to railway and metro customers since 1996, with the company's digital railway solution deployed on more than 150,000km of railway lines around the world.

Huawei's solutions address the requirements of railway communications, which improve the reliability and efficiency of railway operations. Huawei supports the transformation of railway networks by introducing new technologies with their cloud-based solutions and providing a digital platform for railway operators.

"Combining digitisation and intelligent technology is an opportunity to boost the development of the African transportation industry," said Vice President of the Aviation & Rail BU, Huawei, Xiang Xi.

"As new technologies are introduced to replace the old, the railway industry requires innovative mobile communication systems. Huawei is leveraging ICT technology to better serve the railway sector in the region."

"Our mission is to promote regional trade by ensuring a seamless, predictable, and cost-effective railway system across the region," Júnior added.

"To realise this vision, it is crucial that our railway operators standardise and align in terms of specification to achieve the required interoperability. Safe railway operations hinge upon the robustness of train control technology."

Making movement possible

Xiang Xi spoke about the movement of data across platforms to ensure the safe and efficient movement of both passengers and freight.

"Huawei brings a deep understanding of rail systems – the company has made more than 3000 contributions to industry standards – and is able to help improve time and efficiency as well as operational and maintenance programmes of the rail networks," he said.

"We can build ecosystem solutions that make financial and technical sense, to support seamless regional integration and trade in the African region."

Through this agreement, Huawei is helping railways build smart systems for secure and efficient rail transport that enables the growth and development of trade across the region. 🌐



The range of AGVs available from CFAO Equipment.

TELEMATICS AND AUTOMATION IMPROVES WAREHOUSE MANAGEMENT

In an era where efficiency and technological maturity are vital for businesses, South Africa is witnessing a paradigm shift in warehouse management and logistics, powered by vehicle telematics and Automated Guided Vehicles (AGVs). These innovative technologies are not merely adjuncts to the industry but fundamental components reshaping the operational landscape of mega warehouses.

The deployment of vehicle telematics in the material handling sector has revolutionized the oversight of machinery utilisation and operator performance. This technology amalgamates GPS systems with onboard diagnostics, capturing data that drives productivity and catapults businesses into a future-proof

state. Such systems have revealed crucial insights into machine handling, helping to prevent abuse and accidents, common challenges in warehouse environments where the direct oversight of operators was traditionally minimal.

Stephen Mostert, National Technical Manager for CFAO Equipment SA, has seen the impact of telematics first-hand with the

company's Toyota Material Handling's I_Site fleet management system, introduced to the South African market in 2008.

"Forklifts are fitted with data handling units (DHUs), which allow for 24/7 live communication about each machine. This allows managers to see and manage all machines from their desks or cell phones, with automated daily, weekly or monthly reports and warnings that allow them to troubleshoot issues immediately," says Mostert.

This system harnesses data handling units (DHUs) for 24/7 live communication, allowing managers comprehensive visibility and control over their machines from the comfort of their desks or even via mobile. The telematics technology has matured to encompass on-screen safety checklists, ensuring pre-start checks and enforcing operator lockouts when critical issues arise—fundamentally changing the approach to safety and efficiency.

"Essentially, AGVs help separate repetitive workflows from unique ones. And by removing those time-consuming activities that take away energy and resources, they add to greater efficiency and productivity."

Fritz Barnard, National Technical Specialist at CFAO Equipment SA





An AGV autonomously moving through a warehouse.

TALKING POINT



"Forklifts are fitted with data handling units (DHUs), which allow for 24/7 live communication about each machine. This allows managers to see and manage all machines from their desks or cell phones, with automated daily, weekly or monthly reports."

Stephen Mostert, National Technical Manager for CFAO Equipment SA

QUICK TAKE

Vehicle telematics in the material handling industry enable real-time monitoring and control of machinery utilisation and operator performance.



The I_Site fleet management system allows warehouse managers to conduct automated machine checks and receive instant notifications of any operational issues.



AGVs in mega warehouses transport goods autonomously without drivers, following pre-designed circuits and reducing the time spent on moving loads.



CFAO Equipment South Africa leads in warehouse automation by customising AGV software for each warehouse.



Always-on monitoring

"The system monitors where, when and how the machine is being used. With the resultant data and analytics, warehouse managers are better prepared to enhance their operations, identify safety issues, make sure machines are operationally checked, compare sites, establish the running costs of their machines, deal with breakdowns or accidents faster, introduce driver training where necessary and prevent theft," adds Mostert.

The I_Site system empowers warehouse managers to proactively manage service intervals, reducing maintenance issues and machine downtime. Instant notifications of impacts and GPS tracking of forklifts allow for swift action in response to incidents, dramatically decreasing the costs associated with unreported impacts. Telematics administrators provide dedicated customer support, while field service technicians respond to issues in real-time.

Mostert hints at a future where telematics will continue to evolve, with new features like health checks enhancing operational transparency further.

Automated Guided Vehicle

Parallel to the rise of telematics is the increasing utilisation of AGVs in mega warehouses—a response to the ever-growing demand to store and distribute imported goods efficiently. The sheer size of these facilities often means traditional forklift operations are no longer viable. AGVs offer a solution by autonomously transporting goods without human drivers, following pre-designed circuits to streamline the flow of heavy materials.

Fritz Barnard, National Technical Specialist at CFAO Equipment SA, emphasises that the incorporation of AGVs into the workforce is not a replacement for skilled labour but an opportunity to reallocate human resources to more complex tasks, enhancing job security and overall productivity. AGVs are equipped with state-of-the-art navigation and safety features such as reflector navigation, safety scanners, obstacle detection units, and vision cameras, ensuring safe and accurate load handling. The integration of AGVs significantly reduces the time spent moving loads, which translates into the need for fewer machines on the warehouse floor.

"Essentially, AGVs help separate repetitive workflows from unique ones. And by removing those time-consuming activities that take away energy and resources, they add to greater efficiency and productivity," says Barnard.

"It must be stressed that the addition of AGVs will not make skilled workers redundant. In many instances AGVs perform



The I_site system expands telematics in warehouse management even further.



tasks that humans are not well equipped to handle. For example, an AGV can work in extreme temperatures and is well suited to excessively repetitive tasks like retrieving empty pallets in continuous 24/7 operations, disregarding breaks and skipping any kind of absence,” says Barnard.

The autonomous warehouse, driven by the needs of e-commerce giants and the fast-paced distribution environment, is becoming a widespread reality.

Identifying a new need

CFAO Equipment South Africa, through its Toyota Material Handling division, is at the forefront of this movement, championing the automation of warehouse machinery. Each AGV project is customised to the warehouse’s needs, requiring substantial investment in terms of man-hours for software development, but the payoff in operational efficiency is profound.

Both telematics and AGVs play pivotal roles in creating a more dynamic, responsive, and efficient warehouse environment. Telematics provides the data and insights to optimise machinery usage and enhance safety protocols, while AGVs deliver the physical automation required to keep pace with the high demands of modern storage and distribution. This dual approach allows companies to become more digitally mature, not only in managing their current operations but in setting the stage for the continued advancement of warehouse automation technologies.

Together, these technologies present a holistic solution to the challenges faced by mega warehouses. They allow companies to scale operations while maintaining the integrity of their processes and the wellbeing of their employees. By embracing these technological solutions, South Africa’s material handling industry is poised to achieve unprecedented levels of operational efficiency, setting a standard for the rest of the globe in warehouse management and logistics optimisation. 🌐



It must be stressed that the addition of AGVs will not make skilled workers redundant. In many instances AGVs perform tasks that humans are not well equipped to handle. For example, an AGV can work in extreme temperatures and is well suited to excessively repetitive tasks like retrieving empty pallets in continuous 24/7 operations, disregarding breaks and skipping any kind of absence.

EVS HAVE THE POTENTIAL TO ADDRESS POWER SUPPLY PROBLEMS

Electric Vehicles (EVs) have become somewhat commonplace in numerous countries. With its own, bona fide racing events such as Formula E and Extreme E, it's safe to say the green technology has cemented its role in the automotive industry.

By Dwibin Thomas, Cluster Automation Leader at Schneider Electric

In South Africa, the EV market is enjoying some encouraging awareness, however, lack of supporting infrastructure such as charging stations and ongoing power outages remain dealbreakers for some.

Interestingly, EVs have the potential to address some of our country's power supply problems. These vehicles have the ability to store a significant amount of power in its batteries, typically ranging from 40 to 100 kilowatt-hours, depending on the vehicle's size and make.

This is significant, particularly when you consider that cars are parked for hours on end, with their batteries fully charged and simply standing still. It is during this time when these batteries can give back to the grid. Just imagine thousands of parked cars providing much-needed power to grid.

Furthermore, many of these vehicles are parked close to buildings and homes, where a significant portion of power is needed. This proximity reduces energy losses during transmission, which is often the case when power is transported over long distances.

EV power in action

So how would this work? For one, your EV will have to be connected to smart charger – these units are not standalone but integrated into buildings and homes and connected to the power outlet to assist with charging.

These smart chargers can communicate with a utility which then allows for remote monitoring of these devices. Through this remote monitoring, a utility can then draw additional power from these parked vehicles

and feed it back into the grid.

Smart charging stations also provide layers of intelligence such distributed energy resource management systems (DERs) which provide grid with the ability to monitor various energy resources such as EVs.

EV's and other sources of DERs can then be processed by Virtual Power Plants (VPPs) which will then aggregate and dispatch energy as well as support demand response requirements. A VPP platform can treat multiple EVs as a single energy source, dynamically managing their discharging and power supply into the grid.

With the right technology and infrastructure, EVs can become an intelligent part of the grid, dynamically adjusting and balancing the energy supply. Importantly, it can feed excess power back into the grid, when needed. This level of integration and intelligence can significantly contribute to the stability and efficiency of an energy system.

There's no doubt that EVs have the potential to be much more than just standalone vehicles; it can become smart grid assets, actively participating in demand management whilst helping to address energy supply challenges.

Schneider Electric's AutoGrid Flex is a powerful solution that can greatly assist with the integration of EVs. By leveraging advanced analytics and machine learning algorithms, AutoGrid Flex enables efficient management of EV charging, optimising energy usage, and minimizing costs.

With its intelligent demand response



Dwibin Thomas, Cluster Automation Leader at Schneider Electric

capabilities, it can coordinate EV charging schedules to avoid peak demand periods, ensuring grid stability. AutoGrid Flex also empowers utilities to offer innovative pricing programs, incentivising EV owners to charge during off-peak hours, thereby reducing strain on the grid and maximizing renewable energy utilisation. ☀

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University of Pretoria launches mobile testing facility

A state-of-the-art mobile soils laboratory was launched at the Engineering 4.0 complex on the Hillcrest campus of the University of Pretoria in collaboration with Anglo American.

This mobile laboratory will enable sensitive soil samples such as mine tailings to be subjected to a range of sophisticated soil tests where they are recovered.

Sample disturbance associated with long-distance transport to laboratories is avoided by the use of this mobile laboratory and is relevant in particular to tailings samples that are often soft and fragile. This improves our capability to assess the influence of the in-situ state and fabric of the material and apply this to our analyses of the facility's performance. The soil testing capability brought about by the new mobile laboratory is especially important to the mining industry which is committed to prioritising the stability of their tailings dams striving to achieve the ultimate goal of zero harm to people and the environment with zero tolerance for human fatality.

The laboratory, housed in an eight-ton



The mobile laboratory, housed in an eight-ton truck, at the University of Pretoria Hatfield Campus.

truck, is equipped with four advanced tri-axial test systems capable of local strain measurements, two dynamic cyclic simple shear systems, an automated oedometer system and ancillary equipment. In addition to allowing the state of tailings dams to be assessed from the highest quality samples, the availability of state-of-the-art equipment will significantly advance research into tailings behaviour at the University of Pretoria.

Tailings engineering is currently a rapidly advancing field of research around the world. In addition to existing research facilities such as the only active geotechnical centrifuge on the African continent, this mobile laboratory places the University of Pretoria in collaboration with Anglo American in a unique position to contribute significantly to advance the state-of-the-art in the important field of Tailings Engineering. 🌐

Total belt solutions for absolute reliability

Becker Mining South Africa has developed a total belt management system package, that ensures absolute reliability and optimum safety of conveyor belts used in surface and underground mining.

Becker Mining's new belt management solutions encompass a range of advanced Becker systems, that are known for dependable performance and extended service life in demanding mining conditions.

"This comprehensive belt package includes motor protection, multiple communication platforms, gas and fieldbus monitoring, surveillance, belt monitoring and rip detection systems. Other options include Pull Key, flameproof and non-flameproof motor drives, as well as dust suppression and distributed sensing systems," explains Rick Jacobs, Senior General Manager (SGM) for Consumables, Becker Mining South Africa. "An important advantage of our modular design is customers can select which systems are necessary for each installation and as requirements change, systems can be easily modified and upgraded.



The total belt solution offered by Becker Mining South Africa.

"The highly experienced Becker Mining design and production team is committed to ensuring the efficient performance of every conveyor belt system and providing optimum safety for every worker. This is achieved by using the latest technologies and advanced materials when designing and manufacturing its products and systems. Each component in the belt solutions system is manufactured to stringent quality and safety standards."

The company's Smartcom leaky feeder

system ensures clear and reliable communications underground, at all times. A radiating cable is installed underground along areas or sections where communication is required, with a range of frequency choices, such as VHF, UHF and various advanced LTE frequency spectrum options. This system has advanced technological features for reliability, flexibility and low maintenance requirements, offering multiple simultaneous voice and data radio channels, with low intermodulation noise levels. 🌐

Private 5G exceeds expectations in ground-breaking Comsol mining POC

Comsol, working with Ericsson and multiple other original equipment manufacturers (OEMs), has completed a first-of-its-kind proof of concept (PoC) for a leading international mining group, in which it demonstrated that an Ericsson Private 5G network delivered by Comsol exceeds the hype around 5G.

The initial deployment exceeded expectations around latency, quality of service and innovative smart mining applications, even in the challenging conditions.

Comsol engineers worked on-site testing multiple 5G applications connected to a private network over a 2km² test area.

Gary Woolley, Executive: Private Networks at Comsol, says: "We wanted to mimic worst-case scenarios, so we tested the network over the non-line of sight, near non-line of sight, and pure line-of-sight conditions." The PoC trialled a variety of 5G devices against business-critical use cases, including video calls between three mining vehicles, a remotely connected worker, and a supervisor at the central command station at the same time – in conditions where a traditional mobile phone call would be challenging.

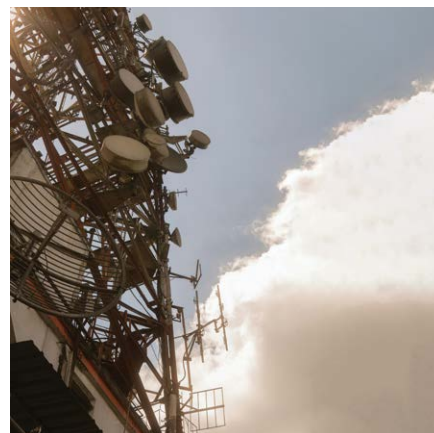
Woolley says: "We were spot on with our RF propagation planning, which proved

that high-quality voice and video communication was supported even in worst-case scenarios. The non-line of sight connection at around 1km exceeded our expectations, where we had a connected worker using augmented reality, voice and video with a consistent, high-quality connection despite the presence of a lot of trees and minerals in the environment."

"The voice and data quality was exceptional, showing that multiple use cases can coexist in a dynamic environment. We were getting close to 80Mbps of uplink capacity, which is important for industrial productivity, data analysis and health and safety use cases," he says.

Todd Ashton, Vice President and Head of Ericsson South and East Africa at Ericsson Middle East and Africa, says: "The collaboration with Comsol has yielded excellent outcomes, solidifying the belief that a private cellular network holds the greatest potential for revolutionizing mining operations. Ericsson's 5G-ready private cellular network delivers the required level of connectivity to empower smart mining."

According to him, these networks have the power to address the persistent challenges faced by the mining industry,



Private signals can boost mining operations.

fostering safety, reducing environmental impact, and boosting overall productivity while unlocking intelligence for OEMs across South Africa. "This proof of concept demonstrates that technology, when harnessed expertly, can reshape industries, and pave the way for a more efficient and connected future. These results would not have been possible without our very capable partner Comsol. They have a strong track record across many industry verticals and we are looking forward to more success together with Comsol," he concludes. 🌟

Fluke's 831 laser shaft alignment tool simplifies precision shaft alignment

Fluke, represented in the UK by COMTEST, a global technology leader in the production of compact, professional electronic test and measurement tools, has introduced the Fluke 831 Laser Shaft Alignment Tool. This innovative tool streamlines shaft alignment, making it accessible for a broader range of machines within a facility, saving significant costs related to downtime and energy wastage.

Fluke's 831 Laser Shaft Alignment Tool comes equipped with an intuitive guided user interface, simplifying and expediting the process of shaft alignment. This tool eliminates the need for advanced training or intricate software, making precision shaft alignment more manageable.

Despite its user-friendly design, the Fluke 831 offers robust capabilities for skilled technicians, allowing them to address a wide array of machines on the plant floor. It covers everything from thermal growth calculations to user-defined tolerances, making it a versatile asset for maintenance and reliability teams.

Key features of the Fluke 831 Laser Shaft Alignment Tool include:

- High Performance and Precision

Results: The tool leverages advanced features, such as an extended mode for handling significant misalignment and an integrated thermal growth calculator that automatically factors in dynamic machine changes, ensuring accurate results.

- Quick Setup and Intuitive User Interface: The Fluke 831 offers a swift setup process and a guided user interface that resembles a tablet, making it more user-friendly compared to traditional measurement methods. Shaft alignment is achieved through a series of quick and simple steps.
- Adaptive Alignment: This feature enables maintenance and reliability teams to tackle various alignment challenges, including horizontal, angular, and vertical alignment.
- Cloud Data Sharing: The Fluke 831 integrates WiFi cloud functionality, allowing seamless data transfer from the laser alignment tool to the ARC 4.0 PC software.



Fluke's 831 laser shaft alignment tool.

By incorporating the Fluke 831 into their maintenance routines, organisations can reap multiple benefits. These include reduced energy consumption by eliminating reaction forces inside rotating machinery, increased reliability, cost reduction through decreased spare parts usage and extended part life, and longer machine life leading to extended maintenance intervals. The Fluke 831 Laser Shaft Alignment Tool is a game-changer in simplifying precision shaft alignment, making it a cost-effective and efficient solution for maintenance professionals. 🌟

Scania announces the launch of the Scania V8 770S

Southern Africa urgently needs to break the link between increasing demand for transport and increasing carbon emissions, noise, congestion and road accidents. To support this transition, Scania Southern Africa is launching the Scania V8 770S in South Africa. With improved energy efficiencies, low fuel consumption and decreased carbon emissions, legendary power no longer comes at the expense of the environment.

Powered by a 16-litre Euro 6 compliant, 770hp engine, the Scania V8 770S can haul up to 90 tons. With this output, it will be one of the most powerful trucks on South Africa's roads. With 3 700 Nm torque and a power take-off (PTO) of 800 Nm, the V8 770S delivers a new benchmark in pulling power. "Tested on a reference slope with a constant 15-kilometre uphill stretch, the V8 770S was so powerful, it had to be reined in," says Erik Bergvall, Managing Director, Scania Southern Africa.

The Scania V8 770's real power comes from its sustainability credentials.

"The V8 770S is the product of decades of Scania's world-leading technological breakthroughs," explains Bergvall.

Every single component in the V8

engine started as a model on a computer. Software development means there is no limit to how many prototypes can be tried before the final one is built and tested. This has allowed for multiple technological updates that have delivered substantial sustainable performance benefits.

The Euro 6-compliant V8 engine significantly improves fuel efficiency. By using less fuel, the V8 770S emits fewer emissions. A lighter engine translates into a weight saving of 75 kilograms. This allows for an optimised payload.

"Hauling more cargo in one trip boosts fuel cost efficiencies and productiv-

ity while consolidating trips remove emissions from the environment," says Bergvall. Emissions are further decreased through the Scania SCR (selective catalytic reduction) system. This proven after-treatment system ensures exhaust gases are released with minimum nitrogen oxide (NOx) content. By injecting AdBlue, a urea-based additive into the exhaust system, a chemical reaction takes place that converts the toxic nitrogen oxides into harmless water and nitrogen gases. "It is an easy-to-handle system, is proven reliable and does not affect torque or power," explains Bergvall. 🌱

The Scania V8 770S.



Hino Motors is eyeing diverse powertrain strategies

Hino Motors is set to mirror its parent company Toyota Motor Corporation by adopting a diverse powertrain strategy on its path to achieving carbon neutrality by the year 2050. This comprehensive plan covers the full life cycle of its vehicles, including their production, operation, and eventual disposal.

Koji Toyoshima, the Chief Product and Project Officer at Hino, stressed the importance of reducing carbon emissions by enhancing fuel efficiency and incorporating a mix of electric, fuel cell, and hybrid technologies, alongside a transition to low-carbon fuels. Hino is intent on optimising its logistics system by using vehicles that are specifically suited to their operational roles.

Hino's strategy includes the standardisation of vehicle platforms across its model ranges, each fitted with the optimal powertrain for its specific application, be it battery electric, hydrogen fuel cell, or plug-in hybrid. In a bid for cost-effective innovation, the company is considering a universal internal combustion engine that can be adapted to various fuels, including diesel, liquid and gaseous compressed natural gas, and hydrogen.

To reduce running costs, Hino has intro-

Future concepts of trucks and buses, as envisioned by Hino.



duced a novel system whereby customers can purchase vehicles and batteries separately. This model allows for the use of standardised batteries across a range of vehicles, moving away from the traditional approach of integrating the cost of the battery into the vehicle's price. Customers thus pay solely for the battery usage and the electricity required to charge it, with the option to exchange batteries that are low on charge for those that are fully charged.

Beyond environmental aims, Hino recognises several societal challenges impacting the transport sector, such as the welfare of drivers, the surge in logistics demand due

to e-commerce growth, and safety issues including road accidents and the threat of crime against drivers. The industry also faces challenges related to the ageing workforce and the perception of truck driving as a viable long-term career.

Toyoshima advocates for a unified effort across the international trucking industry to forge solutions that will improve employment conditions, promote workforce diversity, and boost safety with advanced safety equipment. Hino's all-encompassing approach seeks to address not just environmental targets but also the crucial human and operational elements that currently shape the transport sector. 🌱

JCA Pioneers RTMS Certification in Namibia and Botswana

JCA Auditors (JCA), a renowned leader in road safety and compliance, is proud to announce its pioneering efforts in extending Road Transport Management System (RTMS) certification to organisations in Namibia and Botswana. This expansion marks a significant milestone in promoting safer and more responsible road practices throughout the Southern African region.

As a founding member of the RTMS initiative in South Africa since 2006, JCA has consistently demonstrated its commitment to elevating road safety standards within the transport industry. This commitment has now extended beyond the borders of South Africa to benefit Namibian and Botswanan organisations seeking to enhance their road safety protocols.

RTMS is a rigorous certification programme designed to encourage responsible road usage among transport operators. It focuses on optimising vehicle loads, promoting driver wellness, and fostering an organisational culture of road safety. With its proven track record of delivering exceptional results, RTMS has become a benchmark for industry best practices.

"JCA's expansion into Namibia and Botswana reflects a growing recognition of the importance of RTMS in enhancing road safety across borders," explains JCA's Managing Director, Oliver Naidoo. "By



The JCA team at a recent audit in Botswana.

partnering with organisations in these countries, JCA aims to facilitate the adoption of RTMS practices and certification, ultimately contributing to safer roads and improved transport operations."

Key highlights of JCA's RTMS expansion efforts include:

- **Regional collaboration:** JCA has formed collaborative partnerships with key organisations and stakeholders in Namibia and Botswana to promote the adoption of RTMS. These partnerships underscore a shared commitment to road safety in the region.
- **Certification support:** JCA offers comprehensive support to organisations in Namibia and Botswana throughout the RTMS certification process. This includes guidance on optimising vehicle loads, implementing driver wellness

programmes, and establishing a culture of road safety.

- **Knowledge Transfer:** Leveraging its extensive experience in South Africa, JCA provides valuable knowledge transfer to organisations in Namibia and Botswana. This includes training, auditing, and compliance services tailored to meet the unique needs of each region.

"JCA's expansion into Namibia and Botswana aligns with the company's mission to promote safer roads and responsible road practices across the Southern African region," concludes Naidoo. "By extending the benefits of RTMS certification to organisations in these countries, we aim to contribute to reduced accidents, improved road infrastructure, and enhanced overall road safety." 🌟

Traffic officers trained to spot faulty tyres

Sumitomo Rubber South Africa (SRSA) is supporting a joint programme by the Road Accident Fund (RAF) and the South African Tyre Manufacturers Conference (SATMC), aiming to ramp up tyre safety education and enforcement across South Africa.

Keith Phelps, Group Training Manager: Truck & Bus at SRSA, has been providing technical training support to upskill Traffic and Road Safety Officers about how to spot risky or illegal tyres that pose a threat to road safety.

This is part of an ongoing partnership between the RAF and the SATMC, where the focus is on empowering officers to better enforce tyre-related laws and regulations correctly and to educate commuters on various aspects of tyre safety.

By the end of the year, more than 1000 traffic officers are expected to have been trained.

Last month, a Gauteng roadshow saw more than 200 traffic officers trained and close to 2000 traffic fines issued for unsafe and illegal tyres during a two-hour education roadblock. In Jozini earlier this month,

more than 180 officers were upskilled to spot dangerous tyres. The initiative also included an educational roadblock set up at the Jozini N2 intersection, to educate commuters about tyre safety and ensure that they get proper technical information on their tyres.

A Gqeberha roadshow was held from 12 to 13 October, where around 300 traffic officers participated. Another will take place in Cape Town from 26 to 27 October involving the metro's entire traffic department.

Phelps takes the law enforcement officers through what to look out for in terms of tyre wear patterns, sidewall damage, retreaded tyres, and more, that could affect the roadworthiness and legality of a tyre.

The training covers topics such as the importance of tyre safety, how to identify safe tyres (including tyre construction, markings, fitment, tread depth standards, and more), how to maintain tyres properly, and the dangers of illegal and unsafe second-hand tyres.

Says Phelps, "Road users need to know

the dangers of operating vehicles with worn or poorly inflated tyres, and traffic officers need to be able to identify and weed out unroadworthy tyres and vehicles."

The ongoing programme will include educational roadshows and on-road educational roadblocks in all nine provinces of South Africa, with special emphasis on major transport hubs like KwaZulu-Natal, the Western Cape, and Gauteng. A total of 12 sessions will be conducted until March 2024. 🌟



Traffic officers during the Transport Month safety activations.

DRIVING SOUTH AFRICA FORWARD BY LAYING A SOLID FOUNDATION FOR THE MANUFACTURING SECTOR

Developing South Africa into a manufacturing dream performer is an ideal worth pursuing. This is particularly clear after an illuminating week at South African Auto Week. Auto Week, the country's premier automobile event for quality networking and thought leadership, took place from 11 to 13 October as part of SA's Transport Month.

By Amith Singh, Nedbank Commercial Banking's National Manager for the manufacturing sector.

Driven by naamsa, the Automotive Business Council, which represents 42 passenger vehicle brands, 22 light commercial and 20 medium and heavy commercial vehicle brands, Auto Week is a heavyweight gathering of people committed to growing the economy and creating jobs.

Understandably, optimism is tempered by pressure on the new-vehicle market, which is expected to remain flat, as well as macroeconomic factors such as load-shedding, commodity price fluctuations, backlogs at ports, as well as deterioration of road and rail networks.

The automotive industry, however, is the largest player in SA's manufacturing industry. In 2021 it contributed close to 5% of the country's annual gross domestic product. It directly employs nearly 500 000 people formally and informally, which is 2,9% of SA's 16,2 million employed. The auto industry also exports products to 152 markets and generated R227,3 billion in export revenue last year.

While Nedbank is aware of the economic constraints and challenges that SA faces, the impact of the automobile manufacturing sector on the economy cannot be underestimated. The sector is propelled by naamsa's vision, which is to lead a globally competitive, transformed automobile industry that actively contributes to SA's sustainable development.

The deliberations at Auto Week were critical in understanding the impact of the sector, ways of boosting local investment, how the country is moving towards electric vehicles and handling energy challenges, and more.

Deputy President Paul Mashatile addressed the conference and engaged in roundtable talks with key industry



Amith Singh, Nedbank Commercial Banking's National Manager for the manufacturing sector.

stakeholders. He acknowledged the pivotal role of the manufacturing industry. However, more work is needed to build on a solid foundation. We must collectively roll up our sleeves and work together for the good of the South African economy and job creation.

The manufacturing sector remains a positive window of opportunity to unlock new opportunities, notably the emergence of the energy efficient electric car. Nedbank Commercial Banking is premised on its understanding of the manufacturing sector's pain points and offers solutions with adequate support so that clients can better navigate the current difficulties facing South Africa. As such, Nedbank aligns with the industry optimism that while challenges

remain, the upswing of the hold on rates can lift the sector.

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