

CAPITAL EQUIPMENT¹ NEWS

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OCTOBER 2022



SCREENING TECHNOLOGY: The road less travelled can offer greater screening productivity

HEAVY EQUIPMENT: Accelerating electromobility in heavy equipment

LOAD WEIGHING SYSTEMS: Transforming loadout processes

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CONTENTS

FEATURES

COMMENT

- 2** Diversity in capital equipment

SCREENING TECHNOLOGY

- 4** The road less travelled can offer greater screening productivity

HEAVY EQUIPMENT

- 8** Accelerating electromobility in heavy equipment

LOAD WEIGHING SYSTEMS

- 12** Transforming loadout processes

FLEET EXPANSION

- 18** Adding excavators to a fleet

SCREENING EQUIPMENT

- 22** Screen ownership can grow organically

TYRE MAINTENANCE

- 28** Keep fleets on the road with Dunlop

INSIGHT

- 33** Ctrack Crystal an instant hit with fleet managers

NEWS

TRANSPORT NEWS

- 34** Volvo Trucks starts series production of heavy electric trucks
35 60 FUSO Canter FE7-136 limited edition models for DTSA diamond anniversary

MINING NEWS

- 36** Epiroc introduces the Automatic Bit Changer
36 Leading the PDS and CPS evolution in coal mining
37 SA's largest crane used to relocate a gold mill

CONSTRUCTION NEWS

- 38** Liebherr Transform: unleash the full potential
38 Goscor moves Mbombela branch to a larger facility
39 New optional technology solutions for Cat 7495 and 7495 HF Electric Rope Shovels

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THE EXCITEMENT OF INDUSTRY EVENTS

It is the solid industry connections that Capital Equipment News has fostered over the years that made it possible to stay up to date during Bauma 2022. It was no surprise, therefore, that details about the event started flooding the **Capital Equipment News** email address long before it had started.

Because Bauma is the largest global

construction machinery fair, all manufacturers have a stake in making sure their latest equipment and products are covered extensively. Marketing managers and the teams behind Bauma captured the energy of the expo, the vastness of the event, the excitement of the launches and the people who were there, documenting all in detail. It has been a terrific way to be introduced to the world of capital equipment and the content of this title.

Speaking of introductions, this issue marks the first one since I've taken the reins of **Capital Equipment News** to work in the industry that Bauma exemplifies. It has been heartening to see how many of our advertisers and partners visited the expo and shared their news from the event.

Similarly, monthly magazines are meant to be an event, and this edition of **Capital Equipment News** captures novel aspects of the capital equipment industry, starting with ways to prolong the lives of screens through condition monitoring.

There's an informative feature on electromobility in heavy equipment and the decarbonisation efforts of the industry as well. More specifically there's an insight into battery technology suited for heavy vehicles – and that switch is an event in and of itself.

Technology is creating the next big event in load weighing systems thanks to Loadrite 360, a digital ordering system. The system can turn workflows around and significantly improve loadout operations.

Also covered is the process of purchasing a screen or excavator, with an interesting article from someone who first rented equipment before signing the dotted line to own capital equipment. For a buyer, that journey is unique, and it underlines why events like Bauma are important. They are a way for buyers to see what is available in the market, and what equipment is best suited to their individual needs.

As a further introduction, I cut my journalistic chops at a daily newspaper as a feature writer, have worked as a content producer for TV and most recently worked as a journalist for an engineering education provider.

These industries are diverse and instilled the value of solid information. That is what this issue of **Capital Equipment News** aims to provide – a variety of information on new equipment, technology, and an assortment of thought leadership. For that information to be relevant strong industry connections are needed. And Bauma served as a reminder that those connections are well in place.

Adriaan Roets - ACTING EDITOR



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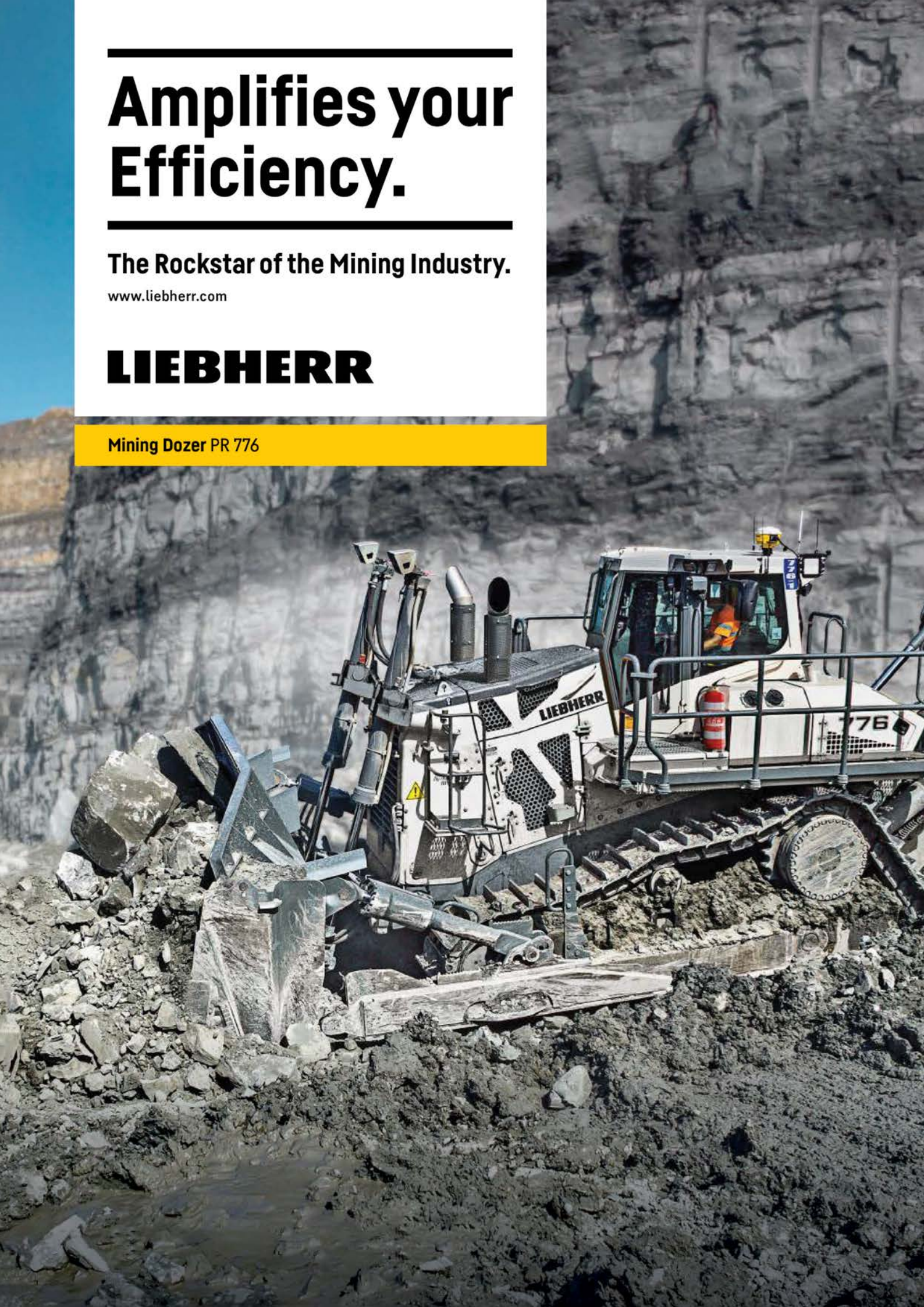
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Eccentric technology virtually eliminates vibration in the structure — or chassis when used with portable equipment — which protects the integrity of the machine

THE ROAD LESS TRAVELLED CAN OFFER GREATER SCREENING PRODUCTIVITY

Departing from traditional screening systems to advanced technologies improves productivity and profits. By Duncan High, Haver & Boecker Niagara Processing Equipment Technology Manager



“By using diagnostic programs to conduct regular analysis, and by engaging in predictive and preventative maintenance, operations will see minimized downtime through faster problem-solving, lower repair costs and increased peace of mind.”

Duncan High is the Processing Equipment Technology Manager at Haver & Boecker Niagara.

Global demand for aggregates and mining materials is on the rise with the industry facing an expected growth of nearly 4.2 billion tons over the next 15 years. That’s a lot of material, which means producers need efficient equipment to meet spec and turn a meaningful profit.

Every ton of material must go over at least one vibrating screen, so ensuring the equipment’s efficiency is critical to an operation’s success.

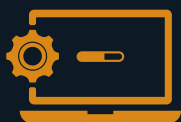
The good news is that there are technologies available today that can help increase or improve screening productivity.



Integrating eccentric screening technology, state-of-the-art screen media and diagnostic tools can prevent blinding, pegging, carry-over or contamination, improving screening performance, productivity and profits.



Globally the demand for aggregates and mining materials is on the rise with the industry facing an expected growth of nearly 4.2 billion tons over the next 15 years



Utilizing vibration analysis software allows mining and aggregates operations to monitor a vibrating screen's performance in real-time by detecting problems before they lead to diminished performance



A vibrating screen's operation can have a large impact on a machine's surroundings



With consistent use, condition monitoring software will accurately point out and predict critical issues and advise when to schedule maintenance

TAKE

QUICK

Vibrating screens that are engineered with a double eccentric shaft assembly create a constant stroke to maintain g-force during material surging.

Integrating cutting-edge systems like eccentric screening technology, state-of-the-art screen media and diagnostic tools can prevent blinding, pegging, carry-over or contamination, improving screening performance, productivity and profits.

Heighten Screening Action

Vibrating screens that are engineered with a double eccentric shaft assembly create a constant stroke to maintain g-force during material surging. The double eccentric shaft design forces the screen body to follow the movement of the shaft.

While the shaft travels up, the counterbalance weights move in the opposite direction and create a force equal to what is generated by the body. As a result, the forces cancel each other out and maintain a consistent positive stroke that handles material volume spikes without losing momentum.

One producer in western Canada quickly saw the benefits of switching to double eccentric screening technology when they replaced two horizontal vibrating screens with one double eccentrically-driven, four-bearing inclined vibrating screen. Changing their equipment helped to eliminate surging, blinding, pegging and material contamination challenges while increasing their production by 25%.

Reduce Damaging Vibrations

A vibrating screen's operation can have a large impact on a machine's surroundings. The metal springs on a traditional concentric vibrating screen, for example, can be noisy to operate.

This metal-to-metal, up-and-down or side-to-side movement can cause excessive noise and vibration. To resolve this problem, double eccentric technology makes use of shear rubber mounts that are strategically designed to minimize lateral movement. The rubber mounts reduce noise while maintaining smoother operation, even in extreme circumstances such as overloading, surging and starting or stopping under load.

The use of eccentric technology virtually eliminates vibration in the structure — or chassis when used with portable equipment — which protects the integrity of the machine. This means producers can potentially use multiple eccentric vibrating screens in one structure, boosting productivity. Attempting to operate multiple concentric machines in a structure, however, could create vibrations damaging enough to not only cause a negative effect on the quality of production but open the door to safety risks and possible downtime.

Improve Stratification

Combining the use of advanced eccentric screening technology with the best screen media for the application is a recipe for success. Specifically, polyurethane screen media can be a beneficial asset to any operation seeking to prevent blinding and pegging while improving material stratification and increasing wear life.

Polyurethane media offers the best combination of open area and wear life for both wet and dry applications. In particular, polyurethane screen media that is poured open cast can result in 1.5 to 2 times longer wear life than injection-moulded products.

Open cast polyurethane permanently hardens when cured to maintain its chemical properties and improve wear life. Alternatively, injection-molded screen media can soften when temperatures rise, resulting in shorter wear life. Polyurethane screen media also features tapered openings to reduce the risk of blinding and pegging.

The solution to improving material stratification lies in finding the ideal mix of screen media types to ensure all phases of screening work correctly. A screen media company that offers a variety of screen media types can help evaluate how material moves through the three phases of screening — from layered to basic to sharp — to give recommendations on the best screen media for an application. Producers can customize the screen deck by choosing screen media that maximizes productivity for each phase by blending the best combination of open area and wear life.

Prevent Equipment Damage

A vibrating screen needs regular check-ups to run optimally. Vibration analysis and diagnostic systems designed specifically for vibrating screens by OEMs are reliable tools for maintaining continued efficiency and longevity of screening machines. To ensure the best productivity, operations can partner with an OEM that specializes not only in manufacturing equipment, but also offers additional diagnostic tools, product-specific knowledge and years of engineering experience.

Utilizing vibration analysis software, for example, allows mining and aggregates operations to monitor a vibrating screen's performance in real-time by detecting problems before they lead to diminished performance, decreased efficiency and increased operating costs. The most robust systems incorporate eight wireless sensors that magnetically fasten to key areas of a vibrating screen and measure orbit, acceleration, deviations and other important data points that indicate the condition of the machine. The sensors send real-time information wirelessly to be analyzed, ideally by an OEM-certified service technician who can provide a detailed summary and recommendations.

Some manufacturers use vibration analysis technology to offer impact testing — or a bump test — which ensures proper machine calibration and promotes efficient operation. Impact testing involves striking the machine at key points with a dead blow hammer while the machine is off. Vibration analysis sensors are placed at key locations on the vibrating screen while a

A vibrating screen needs regular check-ups to run optimally. Vibration analysis and diagnostic systems designed specifically for vibrating screens by OEMs are reliable tools for maintaining continued efficiency and longevity of screening machines.

technician tests the natural frequency of a machine. Based on the results, engineers can adjust machine parameters to avoid operating in resonance, which can diminish productivity, incur damage to vibrating screens and pose safety risks. It is important to note that natural frequency can shift over time as components are repaired or replaced, so the impact test should be conducted regularly. By incorporating impact testing into an operation's regular maintenance routine, producers can ensure optimum screening performance and equipment reliability.

Another advanced diagnostic tool is condition monitoring, which is designed to monitor the health of vibrating screens using modern algorithms and artificial intelligence. The system utilizes permanent sensors that monitor the equipment 24/7 to capture real-time information and provide alerts via e-mail immediately upon the first sign of a potential problem. By constantly monitoring the accelerations of the vibrating screen, certain systems can even forecast the equipment's dynamic condition in regular intervals of 48 hours, 5 days and 4 weeks. With consistent use, condition monitoring software will accurately point out and predict critical issues and advise when to schedule maintenance, along with what to focus on during that planned downtime.

By using diagnostic programs to conduct regular analysis, and by engaging in predictive and preventative maintenance, operations will see minimized downtime through faster problem-solving, lower repair costs and increased peace of mind. 🌟



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Recent announcements by several industry players highlight the urgent need to electrify off-highway machinery to help the sector reduce greenhouse gas emissions and drive the sustainability agenda.

ACCELERATING ELECTROMOBILITY IN HEAVY EQUIPMENT

As the heavy industry's need to transition towards climate resilience remains urgent, one of the most economically viable options to decarbonise operations is to electrify heavy equipment, such as diesel trucks and excavators. Given the rapid pace at which battery technology is developing, electrification of heavy machinery is firmly upon us. By Munesu Shoko.

Although large capital investments are required for mines and quarries to fully decarbonise, certain measures such as adopting renewables and electrification of equipment, are gaining traction. While electromobility initially focused on compact type machinery such as mini loaders and excavators, recent developments in battery technology promise to accelerate the electrification of heavy equipment.

Announcements by several industry players highlight the urgent need to electrify off-highway machinery to help the industry reduce greenhouse gas emissions (GHG) and drive the sustainability agenda. The mining sector alone is

responsible for 4 - 7% of GHG emissions globally, yet industry figures show that only 0.5% of mining equipment is fully electric.

A McKinsey & Company research report, *Harnessing momentum for electrification in heavy machinery and equipment*, notes that battery-electric adoption could offer sizable potential in heavy machinery. There is already a strong business case for some applications and addressing barriers could unlock more opportunity.

The research shows that battery electric technologies can be economically viable in several heavy machinery and equipment and applications relative to conventional powertrains. Under certain assumptions and scenarios, total



Caterpillar is developing 48-, 300- and 600-volt batteries that support industrial-power customers during the energy transition to a lower-carbon future.

cost of ownership (TCO) for battery electric equipment could already be lower than it is for internal combustion engines in three of the four equipment and application types that McKinsey & Company investigated, with up to approximately 20 to 30% lower TCO compared with traditional ICE equipment.

Enter Cat

At bauma 2022, which will be held October 24 - 30 in Munich, Germany, Caterpillar will showcase prototypes of its battery technologies. As part of its enterprise strategy to support customers during the energy transition to a lower-carbon future, Caterpillar has announced the development of 48-, 300- and 600-volt batteries for the off-highway industry.

Leveraging expertise across Caterpillar's global network of technical centres in the United States, the UK, China and India, the programme focuses initially on battery solutions for equipment used predominantly in industrial applications.





The battery range uses lithium-ion technology and features a modular design to optimise performance and packaging. Furthermore, the batteries have been engineered with sustainability in mind throughout their lifecycle, with the potential to reuse and recycle at the end of life.

The development programme also encompasses inverters, motors, electronic controls, digital services and other critical technologies to deliver the performance, reliability, durability, maintainability and long-term value needed for equipment buyers working in harsh operating environments.

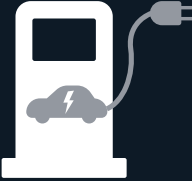
"Caterpillar has demonstrated a long-standing commitment to sustainability through improvements in our operations and by helping our customers achieve their climate-related goals," says Steve Ferguson, senior vice president Caterpillar Industrial Power Systems. "The announcement of our battery programme is our latest step in combining a wide-ranging inventory of innovations with extensive knowledge of the off-highway industry to offer solutions for a range of power needs, application types, duty cycles and operating environments."

Caterpillar has committed that 100% of its new products through 2030 will be more sustainable than the previous generation, which is reflected in its line-up of industrial-power solutions and integrated services finely tuned for owners of third-party equipment powered by Cat engines.

"Improved sustainability is a journey, not a destination, and one size doesn't fit all in determining the appropriate power solution for equipment owners," Ferguson says.

ZERO-CARBON EMISSIONS



While electromobility initially focused on compact type machinery such as mini loaders and excavators, recent developments in battery technology promise to accelerate the electrification of heavy equipment

As part of its enterprise strategy to support customers during the energy transition to a lower-carbon future, Caterpillar has announced the development of 48-, 300- and 600-volt batteries for the off-highway industry

Perkins engineers are currently developing and field testing 48-, 300- and 600-V battery configurations that can be leveraged by OEMs in the construction, industrial, materials handling and agricultural industries

In yet another development that is set to fast-track transition to all-electric mines, ABB last year unveiled its game-changing ABB Ability eMine, a portfolio of solutions that will help accelerate the move towards a zero-carbon mine

To accelerate the electrification of off-road mining vehicles, Shell has established a consortium to create a new pilot offering of electrification solutions for mining sites

QUICK TAKE



Perkins is developing and field testing 48-, 300- and 600-V lithium-ion batteries that can be leveraged by OEMs in the construction, electric power generation, industrial, materials handling and agricultural industries.

"Our offerings can help customers and end users start improving the sustainability of their operations today through high-efficiency engines, fuels and digital solutions now available for the jobsite, by extending value and reducing waste over the lifecycle of equipment they already own, and by powering the next-generation of equipment with innovations precisely configured for the jobsite."

Forging ahead

Perkins has announced a battery programme as part of its ongoing initiative to help the company's customer base of more than 800 original equipment manufacturers (OEMs) fast-track their energy transition ambitions. At bauma 2022, the company will present a wide range of technologies to help OEMs transform the sustainability of high-performing jobsites.

"As the industry enters the energy transition away from carbon, our range of innovations shows how we are helping customers improve jobsite performance, provide reliable electric power and achieve business outcomes – all while improving efficiency and powering human progress," says Jaz Gill, Perkins vice president of global sales, marketing, service and parts.

Perkins engineers are currently developing and field testing 48-, 300- and 600-V battery configurations that can be leveraged by OEMs in the construction, industrial, materials handling and agricultural industries.

The lithium-ion batteries are a robust, modular design and feature factory-installed telematics to optimise performance and packaging in off-highway applications. They are also being designed for recycling and reuse at the end of life to incorporate sustainability across their entire life cycle.

Driving energy transition

In yet another development that is set to fast-track transition to all-electric mines, in 2021 ABB unveiled its game-changing ABB Ability eMine, a portfolio of solutions that will help accelerate the move towards a zero-carbon mine. ABB also announced the piloting phase of its groundbreaking ABB Ability eMine FastCharge, said to be the world's fastest and most powerful charging system, designed to interface with all makes of electric mining haul trucks.

eMine comprises a portfolio of electrification technologies which make the all-electric mine possible from mine to port and is integrated with digital applications and services to monitor and optimise energy usage. It can electrify any mining equipment across hoisting, grinding, hauling and material handling. From 2022, it now includes the pilot ABB Ability eMine FastCharge, which provides high-power electric charging for haul trucks. It also incorporates the ABB Ability eMine Trolley System, which can reduce diesel consumption by up to 90%, significantly lowering energy costs and environmental impact.

"The global mining industry is undergoing one of the most significant and important transformations of our generation – and that is to become zero-carbon," says Max Luedtke,

global head of Mining at ABB. "ABB Ability eMine is an exciting milestone to help convert existing mining operations from fossil fuel energy to all-electric. Mines can become ever more energy efficient with vastly reduced levels of CO₂ emissions, while at the same time staying competitive and ensuring high productivity."

Downtime from charging is one of the major barriers to the adoption of electrified heavy equipment; however charging solutions are improving significantly. Battery-swapping solutions and high-power-charging solutions are developing at a rapid pace. A case in point is ABB's eMine FastCharge, which is tipped to serve as a cornerstone of the transition to fully electrified mines across the world.

This flexible and fully automated solution, which is being designed for the harshest environments, can be installed anywhere and can charge any electric truck without human intervention at up to 600 kW, the highest power available on today's market to minimise downtime of mobile assets. Charging time will depend on the battery capacity onboard the haul truck and the operational profile, however in many instances a suitable state of charge could be reached within 15 minutes.

Accelerating electrification

To help accelerate the electrification of off-road mining vehicles, Shell has established a consortium to create a new pilot offering of electrification solutions for mining sites. Nine companies – Skeleton, Microvast, Stäubli, Carnegie Robotics, Heliox, Spira, Alliance Automation, Worley and Shell – have come together to introduce Shell's Mining Electrification Solutions for Off-Road Vehicles, an end-to-end and interoperable electrification system that reduces emissions without compromising on efficiency or safety. The solution will also be cost competitive versus diesel-powered solutions.

The pilot offer combines an innovative, high-powered battery solution with ultrafast charging and a standardised micro-grid energy system, which can be complemented with renewable electricity generation on-site or through grid connection.

Grischa Sauerberg, vice president, Sectoral Decarbonisation and Innovation at Shell, says electrification offers off-road industries the immediate potential to shift away from a long-standing reliance on diesel. For hard-to-abate sectors such as mining, he says, this is critical, especially given that mobile equipment comprises between 40 and 50% of mining's carbon emissions.



Improvements in sensor technology, data analytics and wireless communication have made it possible to retrofit smart safety solutions.

By 2030, adds Sauerberg, it is estimated that a battery-electric haulage truck will lower total cost of ownership by offering 20% lower maintenance costs and 40% lower fuel costs than existing diesel trucks.

"It is increasingly clear that no single organisation can solve decarbonisation alone," says Sauerberg. "The need for a collaborative effort is particularly evident within carbon-intensive industries such as mining and construction, where the challenges are great but the opportunities are even greater. To overcome these challenges and unlock the opportunities, Shell is helping to bring together some of the sector's most innovative companies – with electrification proving an important first step towards the shaping of a

clear decarbonisation pathway."

Shell's Mining Electrification Solutions for Off-Road Vehicles comprise power provisioning and microgrids, ultra-fast charging and in-vehicle energy storage. As a result, says Sauerberg, mining operators are set to benefit from an integrated electrification solution that is end-to-end, covering the full journey of the electron, from generation to delivery in the drivetrain. One of the key benefits is that it is interoperable between different original equipment manufacturer (OEM) makes and models, giving mining operators greater flexibility. It is also modular in design to allow mining customers the opportunity to tailor solutions to their specific needs.

"The challenge of decarbonisation is immense, but not impossible. Our winning solutions are proof of how, together, the industry progresses by realising the full potential of the technologies available to us – whether that is through electrification, digital tools or low-carbon fuels. As Shell works with customers and partners towards a new, cleaner era for mining, it is important to attract leading companies from other sectors of the economy who also want to make a positive contribution to reducing emissions," concludes Sauerberg. 🌱

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The Loadrite 360 comprises a wheel loader onboard scale, an automated communications connection and a performance reporting tool.

TRANSFORMING LOADOUT PROCESSES

To help local mines and quarries improve the efficiency, accuracy and speed of their loadout processes, Loadtech is introducing the Loadrite 360, a digital job order system that provides a 360-degree view of loadout operations between the onboard loader scale, the weighbridge and the quarry manager.

By *Munesu Shoko.*

As part of the industry's response to the innovation imperative, mines and quarries are turning to digital systems to optimise every part of their operations. To get the best out of their loadout processes, mining and quarrying companies are increasingly seeing value in payload management systems.

In a world where data has become the 'new currency', says Loadtech sales director Glen Webster, payload management technology is a must-have on site. The systems help operators accurately and effectively load haul trucks to capacity, within production, path to zero harm and

loading unit parameters.

To meet the growing appetite for payload management technology, Loadtech, the authorised Loadrite distributor in sub-Saharan Africa, is introducing Loadrite 360 – a loadout automation and reporting system for mine and quarry loadout activities. The technology comprises a wheel loader onboard scale, an automated communications connection and a performance reporting tool. Jobs are entered in the office and selected in the loader, reducing data entry, eliminating mistakes and improving customer satisfaction.

The technology, explains Sören Schramm – channel development manager EMEA at Loadrite, is designed to transform the way in which mines and quarries have always conducted their loadout processes. Traditionally, operations have relied on weighbridges alone. These are known to be prone to product errors and weight challenges.

Key benefits

With the Loadrite 360, quarries, for example, can turn their workflows around – literally. Instead of having a weighbridge at the exit, it could be moved to the entrance area, where information about the truck

"The Loadrite 360 can holistically improve loadout operation through performance metric tracking, job data automation and real-time 360° job visibility. It connects the loader and the weighbridge to provide data sharing of loadout jobs, resulting in greater efficiency, improved visibility and higher product sales."

Glen Webster, sales director at Loadtech





It connects the loader and the weighbridge so as to provide data sharing of loadout jobs, resulting in greater efficiency, improved visibility and higher product sales.

QUICK TAKE

Loadtech is introducing the Loadrite 360 data management system in sub-Saharan Africa



In a world where data has become the 'new currency', payload management technology is a must-have on site



The Loadrite 360 can holistically improve loadout operation through performance metric tracking, job data automation and real-time 360° job visibility



With the InsightHQ reporting option, managers can monitor site production and performance anywhere, at any time, on any mobile device or web browser



Although the Loadrite 360 is primarily a tool to improve the accuracy and speed of loadout operations, it can also reveal hidden improvement opportunities

— including the registration, tonnage and product required — is captured and relayed to the loader. As soon as the truck drives in, the loader operator already knows the quantity and type of material to be loaded. This reduces loading-, waiting- and idle-times.

"The Loadrite 360 can holistically improve loadout operation through performance metric tracking, job data automation and real-time 360° job visibility. It connects the loader and the weighbridge so as to provide data sharing of loadout jobs, resulting in greater efficiency, improved visibility and higher product sales," says Webster.

The two-way automated communication shows jobs requested at the weighbridge



There is an increased take-up of payload management systems in Africa, as local mines and quarries start to understand the value of digital systems.



Launched locally some three years ago, the Loadrite L3180 Smartscale is Loadtech's best-selling solution in sub-Saharan Africa.

as a job list on the scale inside the loader cab and completed loadout data is fed directly into the weighbridge ticketing system. This reduces double entry work and data entry errors for both the operator and the weighbridge attendant. Accurate on-screen job data reduces error-prone verbal communications and allows more time for loading.

The Loadrite 360 in-cab indicator clearly presents a list of loadout jobs in order of priority by truck registration. By providing simple, relevant and prioritised job data to the operators, they are empowered to complete jobs more quickly across the site with no loss in loading accuracy. The

list of loadout jobs also provides richer loadout job queue data and thus reduces verbal communication errors and truck waiting time.

The system uses shared visibility of payload data, job data automation and performance metric tracking to highlight opportunities for improvement. The performance reports track loader metrics, including tons per hour (tph), across multiple or individual loaders, actual time spent on truck loading activities and loader operator efficiency which highlights staff training needs.

With the InsightHQ reporting option, managers can monitor site production and

Loadtech has been a Loadrite dealer for the past 24 years, and today the company is one of our most trusted and experienced dealers in the world.

performance anywhere, at any time, on any mobile device or web browser. InsightHQ also allows centralisation of data from excavator and belt scales.

"Although the Loadrite 360 is primarily a tool to improve the accuracy and speed of loadout operations, it can also reveal hidden improvement opportunities," says Schramm. "The system enables users to drill into production data to see individual trucks, loaders or even bucket-by-bucket data and identify opportunities to improve."

"With the Loadrite 360, quarry operators can reduce fuel and maintenance costs by avoiding unnecessary idling of loaders and trucks in loadout. It also provides quarries with increased truck visibility to ensure that trucks are loaded to capacity in the shortest time possible," adds Webster.

Accelerated take-up

According to Schramm, there is an increased take-up of payload management systems in Africa, as local mines and quarries start to understand the value of digital systems. Loadtech's growth in the past two to three years, he says, is a clear indication that the market is fast maturing.

"Loadtech has been a Loadrite dealer for the past 24 years, and today the company is one of our most trusted and experienced dealers in the world. In the past few years, they have done very well for us. We believe it is largely to do with the maturity of the local market, which is now ready for digitalisation of processes. Some, however, still operate in the 'stone age,' but the majority of customers now understand what they have to do to survive in such a cut-throat business environment," explains Schramm.

Loadtech has recorded a substantial 15% business growth in the past three

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years, confirms Webster. "Covid-19 has taken some of the competitors out of business and this has contributed to about 5% of our growth in the past two years. The remaining 10% is purely new business driven by the increased uptake of these solutions in the local market," he says.

The sound support structures have also been key to Loadtech's success. For example, the company has a dedicated data specialist who works closely with customers to help them interpret and make sense of the data generated by the Loadrite systems. This, says Schramm, makes a significant difference in customer operations.

"Data is one thing and making sense of it is quite another. Having a dedicated data specialist is therefore a big benefit for customers who need to translate data into workable solutions for their businesses," says Schramm.

The company has also grown its technical team, which is key to its support capabilities, by almost 100% in the past two years. Consequently, Loadtech can now guarantee its customers a 24 – 48-hour turnaround for any technical issues.

Accurate payload

Apart from the Loadrite 360, Loadtech recently launched the Loadrite L3180 SmartScale, which provides much more than accurate payload weight. The load weighing system adds value with features that improve site safety, track stockpile inventory, empower operators with performance feedback and integrate with truck scales.

Launched locally some three years ago, the Loadrite L3180 SmartScale is Loadtech's best-selling solution in sub-Saharan Africa at the moment, with several big mining and quarrying groups among the early adopters, says Webster.

"We sold about 90 units in the first year and about 200 in the second year. There is an apparent mindset shift in the industry. Quarry and mine

owners are now aware that they can actively reduce their total cost of ownership by using load weighing systems' monitoring and alert features to set benchmarks and measure productivity," he says.

By tracking the amount of material moved per hour to measure productivity and set benchmarks using load weighing systems, operators can identify underperforming machines and make appropriate adjustments to ensure all assets on site are working at their optimum efficiency.

An on-board weighing system such as the Loadrite L3180 SmartScale can be used to calculate the weight of material in an excavator's or loader's bucket, relay this information to the operator and record the weight for later use. Being able to track the amount of material moved per hour can then be used internally as part of an overall business analysis to measure productivity and set benchmarks.

"Once you know your benchmark productivity rates, it's also easy to identify equipment that is underperforming, which sets off a trigger for an investigation into the underlying causes. These causes can vary widely, from operator error to equipment failure."

Once productivity benchmarks are set, fleet managers can customise their systems to capture a wide range of other data such as cycle times, which can then be used to identify process bottlenecks and inefficiencies. By resolving these issues, quarry managers can improve productivity and reduce operating costs.

"This Loadrite system can also measure the cycle times between each loading event, which can show how efficiently material is being moved. Shorter cycle times generally point to a more efficient and therefore more profitable operation," says Webster.

The system also actively helps reduce fuel usage. By using an accurate on-board weighing system, operators can ensure trucks are filled correctly the first time, with no productivity lost due to under loading or overloading.

"By loading trucks correctly from the outset, unnecessary truck movement is reduced as there is no need to turn around for either a refill or a removal of material once the trucks get to the weighbridge," he says.

A major talking point on the Loadrite L3180 is the use of angle sensors instead of traditional rotary triggers. This maximises weighing accuracy, even in tough conditions. For example, the solution is able to adjust for rough terrain, technique and movement so new and skilled operators can load with greater accuracy, precision and speed.

The Loadrite L3180 SmartScale uses weighing intelligence and solid-state sensors for more accurate, precise and faster loading. It also connects machines and devices for the collection and syncing of data via the built-in WiFi to the InsightHQ reporting portal. When using Trimble's cloud-based InsightHQ quarry reporting portal, personnel can gain access to site production and operator key performance indicators (KPIs) on desktop or mobile devices.

"The L3180 now offers in-cab KPIs, including tonne/hour, tonnes and truck count to enable operators to monitor performance and achieve daily targets. Data is presented in dashboard or graphical formats, including a new loadout performance heatmap, powered by built-in GPS. The system caches data locally and then syncs it with InsightHQ," concludes Webster. 🌟

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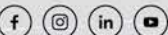
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Kobelco SK220-10 excavators can work comfortably in areas with houses and powerlines nearby and that is one of the reasons it is well suited for fleets like Martmol Trading.

ADDING EXCAVATORS TO A FLEET

When acquiring three Kobelco SK220XD-10 and two Kobelco SK260LC-10 Excavators, one JCB CT260-100 and two JCB CT160-100 Smooth Drum Rollers, Martmol Trading saw the convenience of having a dealership nearby when out-of-warranty machines needed replacement parts in its expanding capital equipment fleet.

Martin Molewa used to be a borehole contractor, and while laying water pipes with his bare hands he learned about the value of money and what it could buy in terms of machines to make the job easier and faster.

"My parents, through their entrepreneurial ventures, laid the foundation within me to be similarly self-employed, which is what encouraged me to start my own business," Molewa says.

"This was back in 2007 and I did sub-contract work for borehole contractors, acting as the middle-man between the contractor and the client while also learning about

the drilling business."

During that period, Martin threw himself into the world of borehole drilling, working relentlessly. He soon owned drill rigs and regularly installed pumps and laid water pipes once underground aquifers had been breached.

"I now felt I owned the whole value chain around drilling for water and, by 2010, started looking around for other opportunities related to civil construction," he says.


Owning a yellow machine fleet

"This I found in road construction for which there was a big demand in our Limpopo Province, as the government and local municipalities started making good on their




Bell Sales Representative, David Papi, chats to Martmol Trading owner, Martin Molewa, alongside a new JCB 3DX Backhoe Loader.


QUICK TAKE




New machines are bought with standard warranties during which time Bell Equipment does the servicing



When a machine is out of warranty Martmor Trading does the maintenance and buys spare parts from Bell Equipment branches nearby



Attachments further diversify new equipment



Kobelco SK220-10 excavators can work comfortably in areas with houses and powerlines nearby and that is one of the reasons it is well suited to fleets like those of Martmol Trading

promises of service delivery.”

As his business grew, Molewa learned about road construction and also learned that hiring earthmoving and road construction equipment, such as loaders, graders, trucks and pavers, cost a pretty penny and had a real impact on bottom-line profits.

The answer to a more profitable business lay in owning his yellow machine fleet, and this challenge he addressed head-on.

“One of the first pieces of equipment I bought in 2012 was a Bell 315SJ Tractor Loader Backhoe (TLB), which to my mind was a versatile tool best suited to our needs,” he says.

“The other consideration was that the TLB should last a long time as durability was more important to us than efficiency.”

At the same time, the entrepreneur was buying tipper trucks, rollers, graders and pavers, all the types of equipment essential to road construction.

Martmol Trading was by then able to offer road construction services from base course to blacktop.

Access to spares and services

“It was reassuring to know that while buying earthmoving equipment from Bell Equipment, one was assured of



Kobelco SK220XD-10 Excavators working on the site of a new road in the rural village of Skororo near Tzaneen.

technical support and the availability of spares as the company had a fully-fledged branch right here in Tzaneen," Molewa adds.

"More Bell TLBs followed the first machine, and we own several Bell TLBs in both the 315 SJ and SK ranges.

When it came to larger digging and loading tools such as excavators, we again turned to Bell Equipment whose sales representative at the time assured us that the Kobelco range of machines had no equal in the market and the three Kobelco SK210LC-10 Excavators we bought have certainly proved that. They're powerful machines and we've used them extensively to dig and load material out of borrow pits, dig trenches for foundations and water lines and to load trucks."

Molewa has grown Martmol Trading over the years and now employs 110 permanent staff across many disciplines and employs even more manual and casual labour in areas where his company undertakes projects.

New Excavators

"Bell Equipment recently transferred a new sales representative to our area, and I can tell my staff about the results that persistence brings," Molewa says about his latest purchases.

"David Papi has been relentless in calling on us and it has certainly paid off

for both parties as we've bought several new machines from Bell Equipment as a result."

These machines include three Kobelco SK220XD-10 and two Kobelco SK260LC-10 Excavators, one JCB CT260-100 and two JCB CT160-100 Smooth Drum Rollers.

Martin and his staff have been impressed with the efficiency the new equipment has shown and this was plain to see when watching one of the Kobelco SK220XD-10 Excavators working on the site of a new road in the rural village of Skororo near Tzaneen.

One Kobelco Excavator operator, Victor Mukwevho, has been operating a variety of excavator brands for 15 years in an operator role. He is full of praise for the Kobelco SK220-10's responsive controls and well-designed cab.

"This is the best machine I have ever worked in, and you can see that I load a 12-cubic metre truck in under five minutes because the hydraulic flows are so true, while the Kobelco's engine sounds as though it's merely idling," he says.

"I also enjoy the machine's compact design which means that with no real tail swing, the Kobelco Excavator can work comfortably in areas with houses and powerlines nearby."

Replacing old equipment

Martmol Trading's policy on machine replacement is based on when a piece

of equipment starts costing too much to maintain; that equipment is then sold on auction. This was the case recently when the company sold some older TLBs and again turned to David Papi of Bell Equipment for replacement equipment.

The company now owns an impressive list of machines with the latest acquisitions comprising four JCB 3DX Plus Backhoe Loaders, three Kobelco SK220XD Excavators, two Kobelco SK260LC Excavators, two JCB116D Rollers and one JCB 260-120 Tandem Roller.

"We have been pleased with the four new JCB 3DX Backhoe Loaders we've bought and have added front forks to further increase their versatility," Molewa says. "All our machines are bought with standard warranties during which time we have the assurance that Bell Equipment does the servicing. Having the Bell Equipment branch on our doorstep in Tzaneen is a confidence booster as we know that even once a machine is out of warranty and we do the maintenance ourselves, spare parts can be obtained quickly, even if they need to be specially brought in."

Molewa is now looking north of South Africa's borders to use his company's expertise on water supply projects in Zambia. He is also confident that earthmoving machines supplied by Bell Equipment will bring success to this new venture. 🌟



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SCREEN OWNERSHIP CAN GROW ORGANICALLY

Knowing mining sand and gravels will lead to the need for a screen, and hiring one at the start of their business, soon led the owners of Virtigo Sand & Stone to purchase a pre-owned Finlay 683 Screen before purchasing a brand-new piece of equipment from Bell Equipment. Hiring, buying pre-owned and later purchasing new equipment shows how different businesses can be accommodated to ensure quality building materials. *By Adriaan Roets*

South Africans working in the construction industry will remember 2010 as the year South Africa hosted a successful Soccer World Cup, and the year quality materials were put under the microscope.

Two people who were aware of the scarcity of quality

construction materials are the father and daughter team of Jannie and Lejandi Burger.

They own Virtigo Sand & Stone outside Malmesbury in the Western Cape, and the construction material quality for cement bricks circa 2010 was on their minds when they started operations.

During that time engineers were more prescriptive about the material, and this led to a scarcity of cement bricks that ticked all the quality boxes.

Virtigo Sand & Stone was founded in 2013 and the company mines sand and stone, which is sold and distributed across the Western Cape. It was a way of meeting the demand for quality, and it also meant buying equipment to deliver the materials needed post 2010.

SA's best sand and stone

Jannie learned about construction materials and the transport thereof at his father's knee.

"My late father, Slabbert Burger, was a bit of a legend in the supply of construc-



"We always strive to ensure that the cost of ownership is explained to our customers. This includes explaining the service plan intervals and other maintenance-related costs, which are very important for crushing and screening products."

Duncan Zwane, Sales Product Manager
(Finlay & Kobelco products) at Bell
Equipment




tion material and especially its transport as he ran a business to this effect for 57 years," Jannie says.

This means that Jannie not only knows the industry, but also what materials are deemed best.

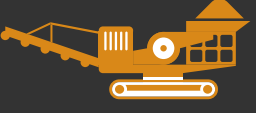
This knowledge was transferred, and now Virtigo Sand & Stone is providing quality construction material.

"Malmesbury is known for the quality of its sand and stone and especially the colour of the sand which is held in high


QUICK TAKE




Virtigo Sand & Stone's Finlay 683 Screen was bought, with a standard 12-month 2 500 hour and mechanics from Bell Equipment in Cape Town, to do all the servicing during the warranty period



On-board hydraulic folding conveyors make transport and storage of the Finlay 683 Screen easier



The average fuel burn of 8,5 litres an hour makes the Finlay 683 Screen frugal



The Finlay 683 combines scalping, screening, and stockpiling into one self-contained unit.

Its rugged design enables the Finlay 683 with its top deck and bottom deck screen to handle material such as sand and gravel, limestone, crushed stone, coal, topsoil and demolition waste.

regard these days," says Lejandi Burger.

"Our sand's cube-shaped crystals adhere better to cement which means that less sand is necessary when mixing concrete." She adds that the Winelands District Municipality sees laterite gravel from Malmesbury as being the benchmark of quality and that deeper red tones emerge as older gravels are extracted, which makes it a more sought-after commodity.

Screening is essential

"Mining sand and gravels would tell you that we'd need a screen to do that



We found an older Finlay 683 Screen on the pre-owned equipment market, and that we kept going, replacing parts when we needed to. It worked well for us, helping us to establish owning the whole value chain in our business from mining the product to delivery to our clients.

successfully and we hired in screens until we could buy our equipment in 2015,” says Jannie.

“We found an older Finlay 683 Screen on the pre-owned equipment market and that we kept going, replacing parts when we needed to. It worked well for us, helping us to establish owning the whole value chain in our business from mining the product to delivery to our clients.”

According to Jannie, Bell Equipment’s sales representative, Fiona Johnson, had been in regular contact with them and, when they decided to go the Finlay Screen route, once they were able to afford new equipment, she was the first person he called.

“Because of our experience with the Finlay Screens we had hired, and owning the older machine, we knew how to fine-tune the equipment for it to perform optimally for our needs,” Jannie adds.

“These are the reasons we bought the new Finlay 683 Screen. We knew what it could do and our faith in the brand along with the fact that Fiona Johnson had stayed in touch with us, made the choice of machine and supplier easy.”

Their Finlay 683 Screen was delivered in April 2021, three short weeks after ordering.

“We operate on two sites and are in production for five-and-a-half days a week with the Finlay 683 Screen in operation for up to nine hours a day,” Lejandi explains.

“When screening out the sand, we also take out two gravel sizes equal to G5 and G7, and this material is sold for road construction.”

“However, we have also built a name for ourselves in being very client-centred which sees us blending certain types and coloured sands for specific clients and those blends are distinguished by carrying that clients’ name. We believe that going the distance for our clients breeds loyalty and brings repeat business, a precious commodity these days.”

At Virtigo Sand & Stone the screen is fed using a 21-ton excavator or a wheel loader.

The Burgers are impressed with the frugal average fuel burn of 8,5 litres an hour they are achieving with their Finlay 683 Screen.

“We’ve also been impressed by how well the Finlay 683 Screen can be set up to meet our expectations and those of our clients,” says Lejandi.

“These days it’s all about colour and the Finlay 683 Screen allows us to deliver on

what our clients demand.”

The Finlay 683 Mobile Inclined Screen

According to Duncan Zwane, Sales Product Manager (Finlay & Kobelco products) at Bell Equipment, the Finlay 683 inclined screen has been distributed in South Africa since 2013.

“It combines scalping, screening, and stockpiling into one self-contained unit. Its rugged design enables the Finlay 683 with its top deck and bottom deck screen to handle material such as sand and gravel, limestone, crushed stone, coal, topsoil and demolition waste,” says Zwane.

He adds that the model features a tipping reject grid, hydraulic screen tensioning of the bottom deck mesh and three on-board hydraulic folding conveyors which make transporting and storage easier.

“The two deck screens allow the screen to separate the products into three different sized products. Compared to the other screens, the Finlay 683 inclined screens costs less to purchase, run and maintain. They are less likely to plug as gravity helps them to move the material,” says Zwane.

There’s also the awareness that the market is becoming more sophisticated, and that end-users understand the importance of looking beyond the sticker price of their screens.

Factors like fuel consumption are a driver in deciding on a screen. Others include maintenance, part replacements and all the other factors that extend the life of a screen.

“We strive to ensure that the cost of ownership is explained to our customers. This includes explaining the service plan intervals and other maintenance-related costs, which are very important for crushing and screening products,” explains Zwane.

The Finlay 683 Screen is suited for different uses, and smaller and medium operations can also benefit from it.

The machine has a remote tipping reject grid function to filter out all over-size feeds and trapped materials on the inlet hopper to ensure small or medium operations.

It means the operation is streamlined for use, regardless of its application.

Finlay, as an original equipment manufacturer (OEM), offers distinct benefits. For the Burgers it was the possibility of purchasing a pre-owned screen before being able to add a new screen to their operations.

There is something that Zwane also makes clear about the benefits of Finlay as an OEM.

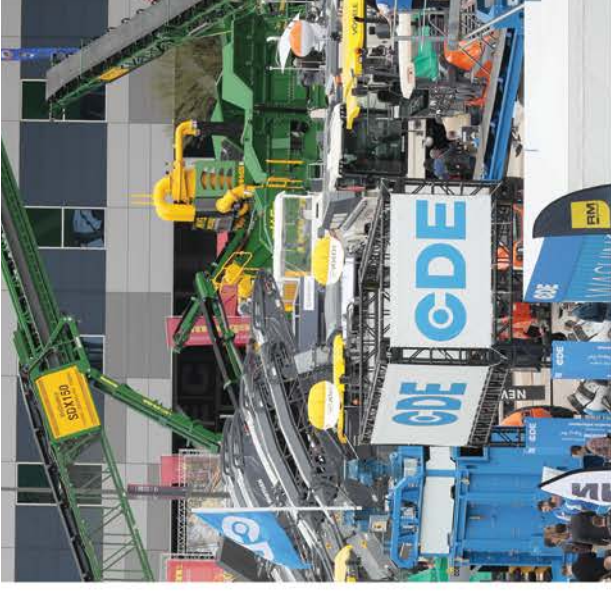
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Lejandi Burger (Director of Virtigo Sand & Stone), Alistiar Bobbejee (Virtigo Sand & Stone's Marketing and Sales Manager), Fiona Johnson (Bell Equipment Sales Representative) and Jannie Burger (Director of Virtigo Sand & Stone).

According to him, the dealer strives to keep stock of screening media replacement items and they educate sales representatives on types of screening media, emphasising correct screening

media, use for the correct application to prevent premature wear and incorrect use of equipment.

If you want to stick to the basics, however, an operator's manual is supplied with

the machine to ensure correct and safe use of equipment – which will ensure it lasts even when you are replacing parts on a pre-owned machine before purchasing a new screen. 🌟


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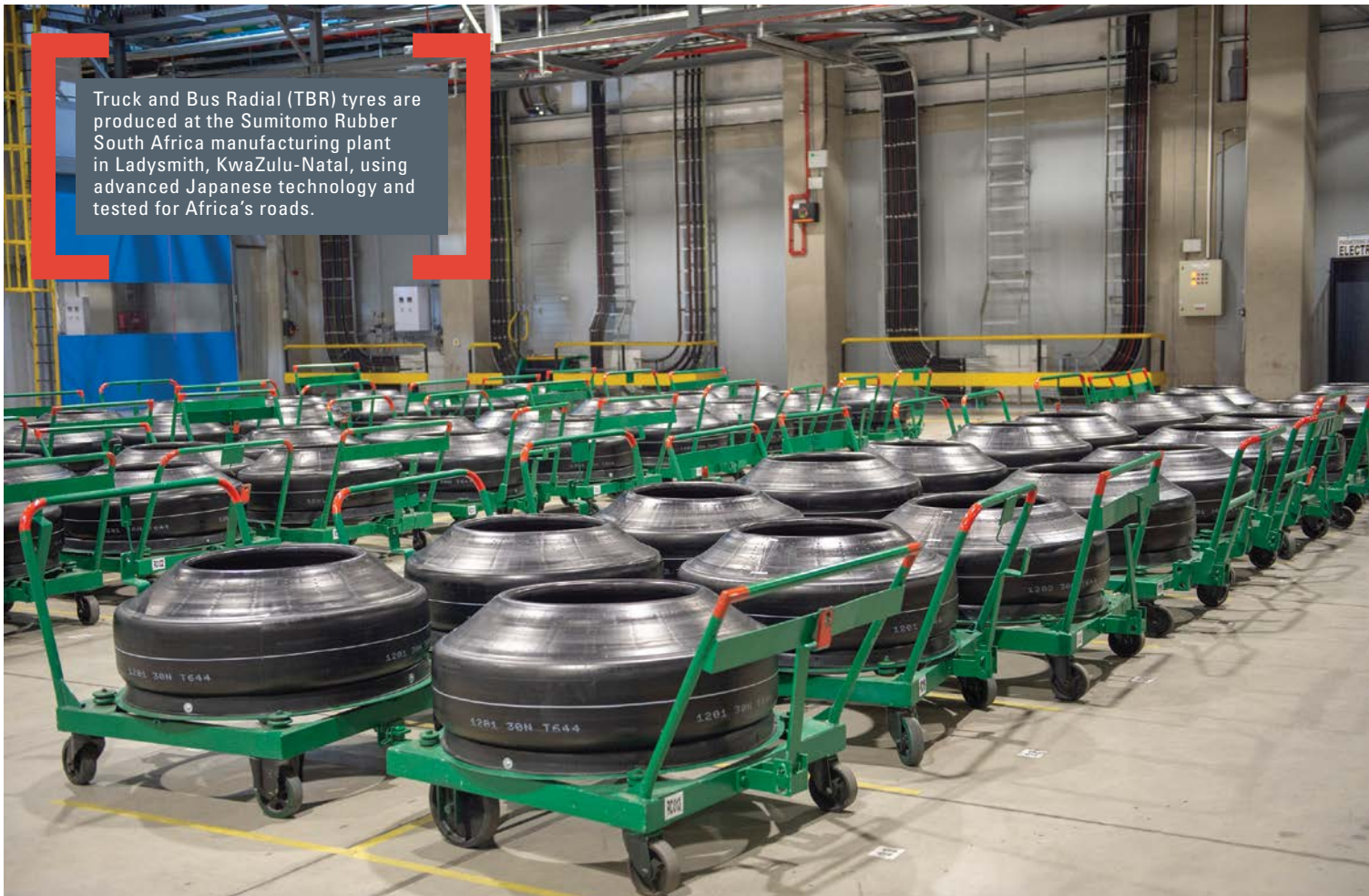
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KEEP FLEETS ON THE ROAD WITH DUNLOP

Tyres are an essential aspect of keeping commercial fleets moving and getting drivers and goods safely to their destinations. With the high mileage requirements of vehicles in this sector, there is enormous pressure to maximise cost per kilometre (CPK), reduce breakdown costs and overcome challenging traffic congestion and road conditions, all while ensuring on-the-road safety.

Navigating potholes, roadworks, dirt roads and more, are part and parcel of life for commercial vehicles. Eighty per cent of South Africa's road network is now older than its 20-year design life and 30% of our

roads are considered to be in poor to very poor condition, presenting serious challenges for trucks and buses.

To meet the needs of heavy-duty vehicles, while giving fleet owners and operators added peace of mind, Sumitomo Rubber South Africa (Pty) Ltd (SRSA), manufacturer of the Dunlop, Sumitomo and Falken Tyre brands, has several tyre ranges on offer.

The new generation Dunlop Truck and Bus Radial (TBR) range has been researched, designed and precision engineered in Japan, and exhaustively tested to extremes in all road conditions. Tyres are manufactured to provide optimal performance for a specific wheel position, with Steer, Drive and all-wheel position tyres offering varying tread patterns, rubber compounds and construction to meet a range of heavy-duty and industrial applications – from



"Buying new tyres is a big investment for fleet owners and operators. Dunlop's range of durable and superior Truck and Bus Radial tyres are designed to support the safety of its drivers, vehicles and goods."

Lubin Ozoux, CEO of Sumitomo Rubber SA



Sumitomo Rubber South Africa's Ladysmith manufacturing plant includes a state-of-the-art dedicated 180 000 m² truck and bus radial (TBR) tyre factory.

QUICK TAKE

80% per cent of South Africa's road network is older than its 20-year design life and 30% of our roads are considered poor to be in poor condition

80%
Road network is older than its 20-year design life

All tyres are covered by the Dunlop Sure Product Life Warranty of eight years that protects customers

WARRANTY
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Dunlop Energy Control Technologies (DECTES) delivers next-generation innovation and compounding technologies that result in reduced tyre maintenance and rotation requirements, increased re-treadability and an up to 30% reduction in tyre rolling

30%
Reduction in tyre rolling

The SP581 is an all-wheel position tyre with a tread pattern designed to enhance wet grip in both on- and off-road operations



The new generation Dunlop Truck and Bus Radial (TBR) range has been researched, designed and precision engineered in Japan, and exhaustively tested to extremes in all road conditions.

long-haul highway to regional-haul, on-road, off-road and more.

Some of these tyres are manufactured locally at the company's state-of-the-art dedicated truck and bus radial (TBR) tyre factory in Ladysmith, KwaZulu-Natal. All are covered by the Dunlop Sure Product Life Warranty of eight years that protects

TYRE MAINTENANCE



The Dunlop SP 925A Drive tyre is suitable for off-road use such as in the construction sector, and boasts a special tread compound that provides long life and outstanding cut/chipping resistance.



The SP581 is an all-wheel position tyre with a tread pattern designed to enhance wet grip in both on- and off-road operations.



The Dunlop SP835A tyre produced by Sumitomo Rubber SA is a premium Drive tyre, developed for high mileage in long-haul highway applications.

customers against defects in material and/or workmanship on all Dunlop, Sumitomo and Falken branded tyres.

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Buying new tyres is a big investment for fleet owners and operators.

Dunlop's range of durable and superior Truck and Bus Radial tyres are designed to support the safety of their drivers, vehicles and goods.

the long-haul, highway trucking fleet. It is produced locally in Ladysmith and offers exceptional mileage to improve customer cost per kilometre. Its cut-resistant compound improves re-treadability and the square contact technology in the tyre improves the distribution of ground contact pressure resulting in even tread wear. The unique carbon properties in the rubber compound also reduce rolling resistance and fuel consumption.

The SP835A is exclusively covered by the new and unique Dunlop Sure truck tyre insurance, which is available at no additional cost and valid for 18 months from the date of purchase and activation of the benefit, only at Dunlop Branded retail outlets in South Africa, Botswana, Namibia, Lesotho and Swaziland.

Full tyre replacement is offered in the first six months for irreparable truck tyre damage sustained in all road

hazards, without any costs for tread already used, and only fitment costs for the customer's account. Road hazards covered include potholes, weighbridge damage, and penetrations from road debris such as nails, glass and other sharp objects. On approval of the claim, the Insurer will order a replacement tyre on the customer's behalf and have it delivered to their Dunlop store.

If the tyre claim falls under the next 12 months, the remaining tread will be calculated, and a credit paid directly by the Insurer to the dealer.

Dunlop also offers the Premium Steer tyre, the SP320A, which is for long-haul highway steer and trailer use and can additionally be used for bus and coach applications. It gives exceptional mileage performance and a reduction in uneven wear, and the low rolling resistant compound offers better fuel economy.

Fit for the construction industry

Suitable for the construction industry is a range of Drive and on/off-road tyres available from Dunlop.

The Dunlop SP 925A Drive tyre is suitable for off-road use and boasts a special tread compound that provides long life and outstanding cut / chipping resistance.

The SP581 is an all-wheel position tyre with a tread pattern designed to enhance wet grip in both on- and off-road operations. Sidewall protector ribs help resist cuts and punctures, enhancing sidewall and casing protection, and providing a longer casing life. The tyre's special on/off-road tread compound enhances cut and chip resistance and re-treadability, while tapered tread grooves and ejector ramps help resist stone drilling during heavy-duty application.

Sumitomo Rubber SA CEO Lubin Ozoux says, "Buying new tyres is a big investment for fleet owners and operators. Dunlop's range of durable and superior Truck and Bus Radial tyres are designed to support the safety of their drivers, vehicles and goods."

He adds, "We test our tyres rigorously in all applications and highly rate the valuable feedback we get from fleet owners, to enable us to produce the best and most capable tyres for our road conditions."

As a result, we can develop the most innovative and custom-designed commercial tyre ranges and establish best practices in the industry."

Sumitomo Rubber SA's stringent processes during manufacturing, together with accredited sales channels and in-field technical services personnel, ensure that safety starts on the factory floor and continues throughout the sales process and life span of its products.

An example of the company's innovation-driven focus is Dunlop Energy Control Technologies (DECTES), which is the result of extensive research and development into the needs of the truck and bus industries. This unique technology delivers next-generation innovation and compounding technologies that result in reduced tyre maintenance and rotation requirements, increased re-treadability and an up to 30% reduction in tyre rolling resistance delivering significant CPK and bottom-line savings to truck and bus fleet owners.

Research, development and proactive testing remain priorities

"Our innovative and advanced products show that we fully understand the dynamics of specific applications in the commercial tyre sector. This enables us to continue making performance-enhancing design changes throughout the product development process, resulting in significant advances in safety, durability and reduction of cost per kilometre to fleet owners," says Ozoux. 🌱



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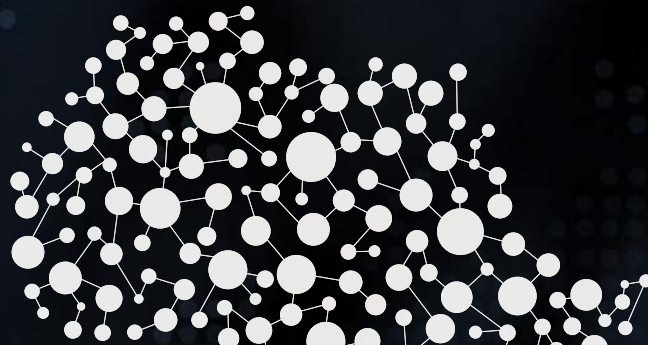
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LONG TERM GROWTH TRAJECTORY REMAINS POSITIVE FOR FORKLIFT MARKET

By Maya Xiao, senior analyst, Interact Analysis

This insight is the second in a series looking at how the current geopolitical and economic climate is impacting the forklift market. In this insight we see how the forklift market is responding to these problems.

Forklift shipment growth plateaued to some extent as fears of a recession in 2019 led companies to tighten their purse strings.

The growth curve of sales and orders reached a meeting point. Had there been no Covid-19 pandemic, the global forklift market would have entered an upward cycle from 2019 Q4, as the order-intake volume in 2019 Q4 had started rising. Then, in 2020 Q1, Covid-19 hit, and orders declined rapidly, after which China experienced a strong rebound in the second quarter. Although order intake rose at that point, shipment growth stalled due to delays in project completions and supply chain constraints. Since the pandemic, this gap between shipments and orders has widened as companies struggle to catch up with the backlog.

Economic woes

Since then, the market has had to cope with many other problems, as well as the after-effects of the pandemic. The Ukraine conflict, inflationary pressures and supply chain woes have all had a particularly strong impact. As a result, projected growth in the forklift market is now 4.6% for 2022 (compared to our original 8.1% forecast). Perhaps the most prominent impact the Ukraine war has had is on raw materials, with exponential rises in the prices of metals such as nickel, as well as oil, gas and coal. Nickel is one of the main materials used in the production of EV batteries, so this is having a major knock-on effect on the price of forklifts. Furthermore, supply chain disruption has rocked the European leading to prolonged delivery times, and companies are generally cutting spending in preparation for what seems likely to be a generally challenging economic environment in the



Maya Xiao

near future.

The recent Chinese Covid-19 lockdowns, which began in March, have been another big issue. These saw huge numbers of factories close their doors, and a plunge in the consumer market. The impacts of these recent lockdowns were arguably worse than the impacts of the original 2020 lockdowns, largely because Shenzhen and Shanghai, the two main port cities and also massive manufacturing centres, were completely shut down, causing chaos in the supply chain. To illustrate the scale of what this meant, we can look at GDP: these two cities alone were worth 6.4% of Chinese GDP in 2021. In the long run, though, and despite the devastating impact this lockdown period has had on China's manufacturing industry, the outlook does remain positive. And the booming e-commerce market, along with rising demand for automation equip-

ment, will boost the growth of forklift sales considerably.

Looking to the future

Looking to 2030, the outlook for the forklift sector remains stable. Whilst the market gets back on its feet, 2022 and 2023 will be a slow couple of years where growth projections will decline slightly. But demand from the logistics sector and promotion of autonomous driving technology will boost demand for forklifts and also help to alleviate labour shortages. Although the Chinese market, which makes up a considerable portion of the forklifts sector, has had a grim 2022, the outlook remains positive, and the forecast has not changed dramatically. The global forklift market will maintain a 5.9% CAGR out to 2027, and the e-commerce and logistics sectors will continue to be the most important drivers for the forklift market, playing a critical role in boosting shipment growth. 🌟

Volvo Trucks starts series production of heavy electric trucks

As the first global truck manufacturer to do so, Volvo Trucks is now starting production of the electric versions of the company's most important product range, its heavy-duty trucks: Volvo FH, Volvo FM, and Volvo FMX. These trucks can operate at a total weight of 44 tonnes gross combination weight and the three models represent around two thirds of the company's sales.

With these additions, Volvo Trucks has six electric truck models in series production globally – the broadest electric truck line up in the industry.

"This is a milestone and proves that we are leading the transformation of the industry. It's less than two years since we showcased our heavy electric trucks for the first time. Now we are ramping up volumes and will deliver these great trucks to customers all over Europe, and later on also to customers in Asia, Australia and Latin America," says Roger Alm, president of Volvo Trucks.

Series production of Volvo's heaviest electric trucks will start in the Tuve factory in Gothenburg, Sweden and next year the factory in Ghent, Belgium will follow. Volvo produces the electric trucks on the same line as its conventional trucks, which gives high production flexibility and efficiency gains. The batteries are supplied by Volvo Trucks' new battery assembly plant in Ghent.



The demand for electric trucks is rapidly increasing in many markets, with one driving force being the need for transport buyers to shift to fossil-free transports in order to meet their sustainability goals. Volvo Trucks' electric portfolio could cover around 45% of all goods transported in Europe today.

"We have sold around 1 000 units of our heavy electric trucks and more than

2 600 of our electric trucks in total. We expect volumes to increase significantly in the next few years. By 2030, at least 50% of the trucks we sell globally should be electric," says Alm.

Volvo Trucks' electric line-up of six truck models covers a wide range of applications such as city distribution and refuse handling, regional transport, and construction work. 🌱

Africa has an untapped export potential of \$31-billion

United Nations Conference on Trade and Development says Africa's untapped export of \$31 billion can be achieved if Africa implements partial tariff liberalisation under the African Continental Free Trade Area (AfCFTA) Agreement over the next five years.

Currently, trade between African countries comprises 61% of processed and semi-processed goods.

Infrastructure and the harmonisation of logistics will assist the AfCFTA, including simplicity of moving goods, automation, services across countries and cross-border clearance processes, among other challenges hampering trade.

According to Jürgen Maier, owner of Mobility Advisors in Switzerland and Partner and Adviser at the Transport Evolution Africa Forum and Expo 2022, automation is one of the key areas to increasing Africa's transport efficiency and customer orientation. However, in order to achieve the full benefit of automation, the industry must ensure that it incorporates the following

trends into a comprehensive and collaborative growth strategy.

Some solutions include using digital solutions such as sensors and communication channels with receivers (for example 4G, 5G, 6G, Ethernet, SAT-KOM etc.); customer information can be used and integrated into a data eco-system to improve automation and connectivity.

All players within a transport value chain – be they customers, drivers, dispatchers or administrative staff – should be able to receive all relevant company information and documentation in real time.

The rise of 24-hour delivery has fundamentally changed end-users' expectations. As a result, carriers must meet these new demands, without passing on all the additional costs associated with this increased speed.

Transport-related greenhouse gases account for a significant proportion of harmful emissions worldwide. Amid rising resource consumption, transport businesses need to ensure that they adhere to new

sustainability requirements, while exploring 'green logistics' solutions to reduce CO₂ emissions.

In order to cover the famous last mile without increasing costs, the CO₂ balance or additional noise emissions, urban logistics is another very critical solution approach. Maier says this often-forgotten logistical link will be an indispensable factor to meet future demand from end-users and e-commerce providers.

"What's still missing, is a clear, legal master plan that defines benchmarks and framework conditions, and serves as a starting point for sustainable, cost-effective, coordinated and successful development," says Maier. "This plan should cover automation, processes, digitalisation as well as legal and technical harmonisation. Most importantly, for automation to fulfill its full potential, the overall system needs to be co-developed on common principles, not just at a national level, but in partnership with AfCFTA." 🌱

60 FUSO Canter FE7-136 limited edition models for DTSA diamond anniversary

2022 has been a monumental year for the Daimler Truck Southern Africa (DTSA) assembly plant in East London as it celebrates 60 years of manufacturing excellence in South Africa – a milestone that will stay forever etched in the company's history. In its continuance to mark the occasion the company pulled out all the stops as it unveiled 60 FUSO Canter FE7-136 special edition models for the local market.

Commenting on the diamond anniversary year Michael Dietz, President and CEO Daimler Truck Southern Africa said, "I am proud to say that this year has been nothing short of amazing for us as DTSA. We kick-started our diamond anniversary celebrations on a high note and now what better way to culminate it than to introduce the FUSO Canter FE7-136 60th edition range, a product we proudly deem kingpin within our FUSO brand. The future of our acclaimed plant lies in our continuous endeavour to produce ground-breaking trucks and buses, our highly skilled people, and being motivated by a single vision – to fulfil the evolving business needs of our customers".

The FUSO Canter FE7-136 is one of the most popular and top performers in the

FUSO stable, and it is for this reason that it is the first-line flagship model to celebrate the milestone. The 60th edition range has been adorned with eye-catching accessories that are reminiscent of the style and essence that is 'Simply Better Trucks'.

On the exterior, the new exclusive trucks feature sporty red stripes that represent the FUSO brand's striking colours, further reinforcing the dominance and strength the product stands for. Furthermore, the spacious and functional interior has also been kitted up; the seatbelt pads are branded with a red FUSO logo, giving them a clean and sleek finish. In addition, the open plan floor for easy cabin movement has been enhanced with floor-branded mats on both ends.

Affectionately known as a 'light gallop', a term that associates the vehicle's character with the agility and endurance of a horse, the Canter has a long and illustrious history worldwide.

It made its first market entrance in 1963 under Mitsubishi Nippon Heavy Industries Ltd as a compact front-wheel-drive two-tonner in a variety of body styles, with both 90 hp petrol and 68 hp diesel engines. Since then, it has deservedly earned its respect as a re-



liable workhorse in the light-duty distribution segment and carved itself an important place in the FUSO brand as it continues to enjoy its growing popularity worldwide.

This highly regarded light truck comes with a bumper-to-bumper 4 years/240 000 km warranty and can be configured for almost any light-duty application. It was designed to maximise efficiency and protect the bottom line by allowing you to focus on the most important task at hand - running your business. 🌟

Record turnout at Transport Evolution Africa Forum & Expo

Bridging the gap between transport and energy sectors by reducing reliance on fossil fuels and investing in cleaner modes of transport is critical for the creation of safer and more sustainable cities in Africa. This is according to private and public stakeholders from the continent, and beyond, who gathered at the recent Transport Evolution Africa Forum & Expo in Durban to explore opportunities to connect Africa's transport system through sustainable infrastructure.

Celebrating its 10th year, the trade show has established itself as Africa's largest transport event, hosting the region's port, rail and road authorities under one roof.

Transport Evolution Africa Forum & Expo 2022 was opened Fikile Sithole, Deputy Director General: Transportation Services, KZN Provincial Government, and attracted big industry game changers, like Transnet, Export Credit Insurance Corporation of South Africa (ECIC), Briggeman International, Afreximbank and Dube Tradeport. The event welcomed over 2 350 people over the two-day period and included over 100 exhibitors who showcased innovative solutions across the transport industry.

Co-located with The Big 5 Construct KZN, as well as several other events including

the Women in Transport Awards and The Transport CEO forum, it successfully gave visitors access to the entire African Transport Infrastructure value chain. In addition, the strategic transport forum tackled African Continental Free Trade Area implementation, infrastructure, investments and cross border policies head on, while the B2B networking platform and exhibition gave solution providers the opportunity to showcase their global innovations and products.

Highlighting the transport sector's contribution of almost one quarter to total global greenhouse gas emissions, Yaa Agyare-Dwomoh, Consultant at Frost & Sullivan Africa said that over 60% of South Africa's 1.2 million vehicles on the road were diesel-powered, with the remaining powered by petrol. To achieve the energy transformation required for decarbonisation, she suggested the sector would need to rely increasingly on renewable energy sources, such as biofuels, natural gas, ethanol, propane, hydrogen and electricity.

Continuing the conversation of coordinating the transformation of the energy and transport sectors was Dr Marcelo Blumenfeld, an Assistant Professor in Future Transport Systems from the University of Birmingham in the UK, and an industrial fellow



for Introducing Innovation at the Birmingham Centre for Railroad Research and Education (BCRRE).

While Blumenfeld admitted that many low-income countries may struggle to justify the economic implementation of electric powered railways, he said alternative options such as battery and hydrogen were readily available and provided viable and cost-effective ways to decarbonise railways, by upscaling existing assets without the need for fossil fuels. Using a case study carried out by BCRRE in Tanzania as an example, he illustrated how hydrogen-powered trains could reduce carbon emissions by as much as 10 000 tonnes a year.

Le-Ann Hare, Portfolio Director at leading global events company dmg events and host of Transport Evolution African Forum & Expo, said that overall, the trade show was a categorical success. 🌟

Epiroc introduces the Automatic Bit Changer

Epiroc, a leading productivity partner for the mining and infrastructure industries, has introduced the Automatic Bit Changer (ABC) for hands-free bit changes on Pit Viper 270 and Pit Viper 290 series drill rigs used in rotary drilling. The Automatic Bit Changer option is designed to change rotary tricone bits significantly faster than manual exchanges and eliminates human interaction with the drill string for a safer, more efficient way to operate a drill fleet.

The Automatic Bit Changer makes it possible for operators to complete hands-free drill bit changes with the single touch of a button and to stay informed on their screen. Operators can make or break joints, select drill bits, and add or remove them. This can be done from either a remotely based control room or from the comfort of the cab. The Automatic Bit Changer optimises productivity and efficiency of the drilling operation and improves safety by eliminating exposure to live work environments.

"Early collaboration with customers and cross-functional teams resulted in an auto bit changer that is repeatable, keeps the operator out of the line of fire, and improves machine uptime," said Matthew Fosler,

senior design engineer, Surface division.

Epiroc's Automatic Bit Changer decreases downtime and eases operator workloads. The carousel design allows up to four bits to be easily changed significantly faster and safer than a single manual exchange. The removable bit carousel can store rotary tricone bits in varying sizes and cutting structure, for a total of four on-board bits, for flexibility and versatility on a drill site. Featured in the unique carousel design, the Automatic Bit Changer gives users the ability to safely replace the worn drill bits with a range of bit types and sizes from a safe distance without exposure to live work.

Available for new drills and retrofit of drills already in the field, the Automatic Bit Changer is easy to maintain, and its compact, above deck design takes up less space in comparison to competitors' designs. The above deck design ensures maintenance procedures are simpler and safer to perform, operator viewing angles are optimised and retrofits for the working Pit Viper fleet are available.

Customising a Pit Viper 270 or Pit Viper 290 drill rig with the Automatic Bit Changer



option offers many benefits for the operator. In addition to easing workload, it reduces the possibility of human error, injuries related to heavy lifting, lost time on manual adjustments, accidents and exposure to dust and noise. Eliminating these live work tasks is crucial in the mining industry.

By eliminating manual drill changes, increasing machine uptime and decreasing worker injuries, Epiroc's Automatic Bit Changer supports a more productive and profitable operation. 🌟

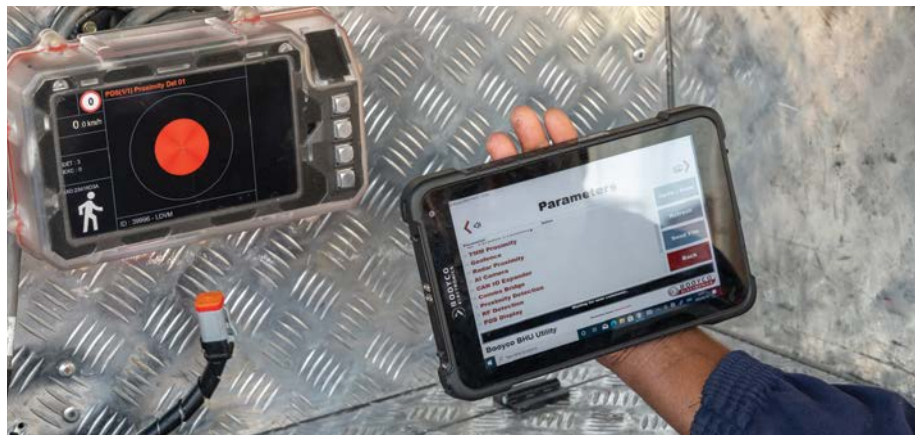
Leading the PDS and CPS evolution in coal mining

With a strong understanding of the coal mining industry, proximity detection system (PDS) and collision prevention system (CPS) specialist Booyco Electronics continues to steer the evolution of PDS and CPS solutions that meet specific requirements for both surface and underground collieries.

In line with the mining industry's quest for zero harm, a stringent safety culture has held a much more prominent role in safety management in coal mines. One of the enabling factors has been the advent and increased take-up of PDS and CPS solutions, an industry in which Booyco Electronics has taken a leading role since its inception in 2006, says chief sales officer Graeme Jardine.

From the onset, explains Jardine, Booyco Electronics had a good grasp of the safety challenges faced by the coal mining industry, which informed the development of its PDS and CPS solutions. "With a solid background in coal mining, Anton Lourens, founder and CEO of the company, had a first-hand understanding of the requirements of both surface and underground coal operations," says Jardine. "Consequently, right from the start we were able to develop fitting solutions from an informed position."

Some 16 years later, coal mining remains a critical commodity area for Booyco



Electronics, constituting about 25% of the company's PDS and CPS installed base, with a formidable client base ranging from large coal mining groups to junior miners.

Informed by changing industry requirements, Booyco Electronics has evolved its offering from its first-generation technology, the Collision Warning System (CWS), to the new generation Booyco CXS system.

Based on the technology available at the time, the Booyco CWS found favour within the coal mining sector due to its reliability. Leveraging Very Low Frequency (VLF) technology, the Booyco CWS set the benchmark in the early days, especially in the under-

ground mining environment. Use of VLF technology enabled sensors on pedestrians and on trackless mining machines (TMMs) to communicate through rock walls for optimal safety.

Fast forward to 2022, the latest generation Booyco CXS consolidates the learnings of the past 16 years, leveraging technology to achieve new levels of safety in both underground and surface mining environments. It is a best-of-breed system providing a comprehensive and integrated response to Level 7, Level 8 and Level 9 requirements, as stipulated by Earth Moving Equipment Safety Round Table (EMESRT). 🌟

SA's largest crane used to relocate a gold mill

A 750-ton crane, one of South Africa's largest lowbed cranes and powered by Transcor, recently traversed 40 km from Carletonville to Middelvlei Mine as Zambesi Gold established new operations.

Zambesi Gold, an African mining company that specialises in the acquisition and development of mining assets announced the purchase of a 120 ktpm gold mill from one of South Africa's largest gold producers in Carletonville.

The 750-ton crane was used to transport the mill from Carletonville to Middelvlei Mine (which Zambesi has 20-year mining rights) 40 km away.

The event kickstarted Zambesi's largest relocation, and the Executive Mayor of Rand West Municipality, Gladys Khoza, accompanied by the local community, came out in support.

The new mill should see a boost in productivity at Middelvlei Mine; job creation in the surrounding area; and development in the community.

Zambesi Gold aims to increase gold



mining efficiency – but the move is expected to result in job creation and community improvement in the nearby towns of Randfontein and Carletonville.

The move is also unique in that 25% of the profit gold from all mining acquisitions by Zambesi Gold will be vaulted, benefiting

all Zambesi Gold Token holders.

While Zambesi Gold is backed by gold mining operations, it aims to lead the transition from mining assets to fully backed digital assets. Therefore, it is imperative to show how the relocation strengthens the digital assets of Zambesi Gold. 🌐

Upgrades bring new life to crushers

In today's market customers have to maximise their return on investment to stay competitive, and companies like Pilot Crushtec partner closely with customers to ensure equipment will continue to produce at the lowest cost per ton. This is according to company sales manager Charl Marais who says Pilot Crushtec, together with Metso Outotec, recently delivered and installed a world first upgrade to older Metso Outotec mobile crushing equipment.

"In doing this we created an opportunity to breathe new life into older machines in a way never done before in the industry," he says. "In this particular case the upgrade, which was done on site, was to a Lokotrack® LT300HP™ cone crusher with a belt feeder, which has now been upgraded to include a vibrating grizzly feeder. This upgrade significantly increases production capacity and decreases wear on the cone crusher."

Migrating to the TK feeder option on Metso Outotec Lokotrack® LT300HP™ cone crushers assists in maximising productivity, increasing throughput and reducing cost per tonne for several of Pilot Crushtec's mining and aggregate producing customers.

Marais says these upgrades are particularly exciting for Pilot Crushtec as it is the first time this type of upgrade has been conducted within the international Metso Outotec community.

"The majority of Lokotrack® LT300HP™



cone crushers we have in the field use a belt feeder," he explains. "However, applications changes due to market demands and customer expectations resulted in our working with customers to take their equipment to the next level."

The Lokotrack® LT300HP™ – an efficient and flexible mobile cone crusher for secondary and tertiary stage crushing – has always been available with either of the two feeder options. The TK feeder includes the advantage of a vibrating pan feeder with

a grizzly. Local customers have historically opted for the belt feeder, largely due to the lower upfront capital cost of this option.

With a belt feeder, the cone crusher is fed with a high proportion of fine material. This adds to the load in the crushing chamber but does not contribute to the high value output that the crusher produces. In contrast, the vibrating feeder and grizzly bars in the TK feeder allow the fine material in the feed to bypass the crusher and go straight to the stockpile or further in the process. 🌐

Liebherr Transform: unleash the full potential

Liebherr Transform is the new upgrade, modification and overhaul service that has a tailor-made solution for customer needs. It is available for ship to shore container cranes, rubber tyre gantry cranes, rail mounted gantry cranes, mobile harbour cranes, offshore and ship cranes.

The new Liebherr Transform provides tailored solutions that respond to the continuously growing demands on today's businesses. A range of ingenious upgrades, clever retrofits, machine overhauls and service modifications breathe new life into customers' existing machines. Using the latest technology and years of experience, Liebherr brings a combination of sustainability, smart technologies, maximum productivity and cost-effectiveness in one complete solution. This allows existing equipment to reach its full potential.

It is inevitable that equipment becomes outdated over time but that does not mean it has to be replaced. As the name suggests, existing machines are transformed using affordable complete or partial machine overhauls, retrofits and upgrades. This not only saves the increased capital expenditure of investing in new machines, but also reduces the carbon footprint by avoiding the need for new equipment through the extension of the service life. A number of retrofits and upgrades are available which increase versatility and performance, or ensure compliance with more stringent regula-



tions, and so open up a wider spectrum of opportunities. At the same time, operators do not have to get used to new machines and can continue to benefit from their vast experience with existing equipment. The Liebherr team of expert engineers takes care of the entire planning and implementation of Transform projects – from consultation, through to installation and technical support and service.

Companies are under pressure to increase

volume and performance, widen scopes, or reduce emissions and costs, the list is endless. Liebherr Transform helps to lighten the load through a comprehensive range of structural, electrical, mechanical, ergonomic or digital modifications. Through the application of new technologies and expertise, Liebherr machines are transformed for the workplace of the future. They are stronger, faster, smarter, greener, and ultimately, better. 🌱

Goscor moves Mbombela branch to a larger facility

Given the current growth of its operations and the prospects of further business growth in the coming years in Mbombela, Goscor Industrial and Construction Equipment (GICE) quickly realised the need to move its branch to a larger facility, explains Ben Churr, General Manager: GICE.

"Given that our premises at the time had very little yard space, we realised the need for more outdoor yard space to accommodate our growing business activities in the area," he says. "We now have ample yard space at our new facility, as well as four dedicated workshop areas compared to the one at the old premises."

According to Churr, the Mbombela branch is well positioned to service the growing number of small and medium-sized enterprises (SMEs) operating in the area, mainly in the infrastructure value chain.

"The Mbombela area and surrounding regions are a hub for SME companies, largely focusing on government infrastructure and low-cost housing developments,"



says Churr. "However, the Covid-19 pandemic resulted in negative growth in the region in 2020 and 2021."

As with all other Goscor businesses, says Churr, the focus on aftermarket service is what determines long-term growth in these regions. Over the years, the company's products have become more competitive, and service has become the leading long-term growth factor.

"We are excited about the prospects of growth in 2022 for the Mbombela branch, and hopefully Covid-19 will no longer be detrimental to so many businesses in the area. We have recently lost some customers due to financial constraints brought about by the pandemic. However, we are hopeful that they will recover this year, and this bodes well for our own growth in the area," concludes Churr. 🌱

New optional technology solutions for Cat 7495 and 7495 HF Electric Rope Shovels

Caterpillar has announced two new optional technology solutions – Integrated Technology Package and Operator Assist Technology Package – for the Cat 7495 and 7495 HF Electric Rope Shovels.

The new packages eliminate the need for one-off technology customisation, offer faster technology installation and provide seamless integration of future technologies into machine operation.

They offer improved health and productivity data tracking that help to reduce the number of unplanned machine outages, creating a more predictable maintenance schedule while extending component life.

The Integrated Technology Package fully integrates Cat Electronics into the machine's design and provides the foundation to support future technology expansion. The new package features six standard technologies – ranging from health monitoring to cycle segmentation – to support improved uptime reliability, improved operator efficiency and enhanced cyber security.

This upgrade also provides seamless integration of Cat MineStar Solutions' comprehensive suite of operational technologies that help track, monitor and manage the shovel.

Building on the Integrated Technology Package, the Operator Assist Technology Package provides machine self-protection and control enhancements that simplify 7495 and 7495 HF operation. Without sacrificing productivity, this upgrade minimises machine self-collisions and safeguards against operator practices that cause damage.

It allows less experienced operators to efficiently load trucks, while reducing the effort required to avoid poor digging practices that can impact machine availability and overall productivity.

The Operator Assist Technology Package upgrade simplifies how the shovel is operated through machine self-protection. It automatically detects and avoids collisions between the dipper, crawler, boom bumper and cable management systems.

The technology's LiDAR vision system scans the front of the shovel and algorithms integrate with operator commands to provide the least intrusive avoidance path. If a collision is unavoidable, the system will arrest machine motion to prevent or mitigate the collision. It reduces unplanned downtime, extends component life and improves total cost of ownership.

The package features the second



generation of Enhanced Motion Control, encompassing all the improvements of the first generation. It also offers a new feature to protect the rotating undercarriage by alerting the operator when the turning angle exceeds 20 degrees, so corrective action can be taken.

New Cat 7495 and 7495 HF shovel purchases can be optionally equipped with the Integrated Technology Package and Operator Assist Technology Package starting in 2023. Availability of these technology packages as field retrofit kits is scheduled for mid-2023. 🌟

Hiab launches HIAB iX.162 HiPro loader crane at IAA

Hiab, part of Cargotec, launched the new medium range loader crane HIAB iX.162 HiPro which is lighter and stronger, in Hannover, Germany.

HIAB iX.162 HiPro is up to 370 kg lighter, depending on configurations, than its predecessor HIAB X-HiPro 162, while the maximum lifting capacity has been increased by more than 10%. Pipes and hoses have been integrated into the crane body to make it less vulnerable to the elements and wear during transport and use, maximising uptime and productivity.

"The new HIAB iX-162 HiPro takes load handling to new heights. These are the next generation loader cranes — lighter and stronger than their predecessors. This allows the truck to increase its payload and lower its fuel consumption when the vehicle is not fully loaded," says Leif Törnblom, product manager Medium Range, Loader Cranes, Light and Medium, Hiab.

The HIAB iX-series is equipped with the new control system SPACEvo which offers smart functionalities to boost productivity with smooth and rapid crane movements for more lifting operations per day.

Crane operation safety is enhanced by the state-of-the-art SPACEvo sensor safety



system paired with new smart technology, which works together to prevent accidents. Spacevo supports many new stabiliser leg configurations, options and accessories. It is based on an open platform, so upgrades and new features can be added over time.

A HIAB iX-162 HiPro version with an integrated ePTO (electric power take off) will be made available for order in early 2023. As the first-ever loader crane, it will have an integrated ePTO on the base, with the battery pack and electric power unit placed directly on the crane base itself. This will make the installation process faster and leave more room on the truck chassis for

other equipment.

"As the first-ever loader crane in our industry with an integrated ePTO on the base, it's easy to install, light and adaptive to our customers' needs. As a matter of fact, the HIAB iX.162 HiPro BSS-2 with an integrated ePTO and hydraulic tank, all in one unit, weighs the same as its conventional diesel-powered predecessor. No additional weight is added when you go electric with Hiab — this makes it a real sustainable option," says Mattias Berglund, director, Global Product Management, Special Applications and Digital Products, Loader Cranes, Light & Medium at Hiab. 🌟

CTRACK CRYSTAL AN INSTANT HIT WITH FLEET MANAGERS

With the launch of Ctrack Crystal earlier this year, fleet managers were presented with an all encompassing, customisable platform from which to run and manage their fleet and operations. This new cloud-based offering places ease of use at its core while combining existing functionality with a host of new features.

"Our aim with the launch of Crystal was to ease the burden on fleet managers by giving them the information they need to make decisions in a tangible format," says Hein Jordt, Chief Executive Officer of Ctrack Africa.

Ctrack believes that data must always be available, and it must be presented in such a way that users can easily identify any trends or issues that allow them to put a solution in place in an efficient manner. Ctrack Crystal combines advanced fleet telematics with a sophisticated data analysis solution.

Ctrack Crystal is always on, offers live updates, and is cloud-based, allowing access to high-level overviews or detailed reports from any device located anywhere in the world. These reports are presented in a user-friendly format that helps fleet managers identify trends and make informed decisions.

Fully customisable functionality combines all the existing features that consumers trust and rely on, along with a variety of new features into a one-stop, do-it-all fleet management platform.

Fleet managers have praised the high level manner in which data is presented on Crystal via the Snapshots function, comprising six files that highlight critical information, offering fleet managers a quick view of the overall fleet performance in real time. These Snapshots are fully customisable to the users' needs and assist in getting them the information they need to effectively manage their personnel and fleet operations.

Managers can easily drill down into vehicle specifics and perform tasks such as the assigning of jobs or utilise functions



such as the Integrated Camera Solutions, Driver ID, Operator IDs and Immobilisation of vehicles. These functions can all be viewed via the live map and monitored and controlled from the one-stop Crystal portal.

The way vehicles are used by drivers has the biggest influence on a fleet's cost per kilometre and productivity. Drivers can utilise the Crystal app on their phones, available on Android and Apple devices. The new driver app gives drivers enhanced control of their daily activities with features such as two-way messaging, job listings and navigation. Benefits include that the app gives drivers and managers the tools they need to improve their skills, make better decisions, reduce risk, and save on fuel and insurance costs.

Driver scorecards give a high level overview of a variety of parameters, making it easier to take action when necessary and keep an eye on costs before they spiral out of control.

Ctrack Crystal is already proving to be invaluable in fostering a culture of good driving while allowing optimal utilisation of vehicles in the fleet. Drivers are also able to monitor their own performance, with live scoring across a variety of parameters.

As part of the Crystal app drivers can

complete pre-vehicle inspections, where they can upload photos of any issues directly to the cloud for managers to view. The inspection feature provides a valuable data stream and assists in identifying any issues and staying, on top of services, maintenance and license renewals, which are critical areas in terms of the overall health and management of a fleet.

"Driver behaviour, pre-vehicle inspection and route optimisation are critical contributors to better fleet management, fuel usage and ultimately cost saving and Crystal is already proving invaluable in these areas," says Jordt.

Over its 35 year history Ctrack has developed a number of tracking and fleet management systems based on a variety of principles in order to ensure complete coverage in harsh African conditions.

Ctrack's software and fleet management solutions, like Crystal, are naturally designed to work with Ctrack's variety of own hardware devices but also have the ability to pull data from proprietary systems, such as those fitted by OEMs, as a single or additional data stream. This gives operators of those vehicles the option of easily making use of Ctrack Crystal as an all encompassing fleet management platform. 🌟



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