December 2022 | Issue 77

Komatsu Magazine

Downtoearth

Komatsu's *electric* offering expanded

Komatsu Australia acquires Mine Site Technologies

Komatsu named Large Employer of the Year in NSW Training Awards

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KOMATSU
Creating value together

Authenticity

To earn and maintain trust, we always act with sincerity, integrity and honesty, and we communicate transparently

Perseverance

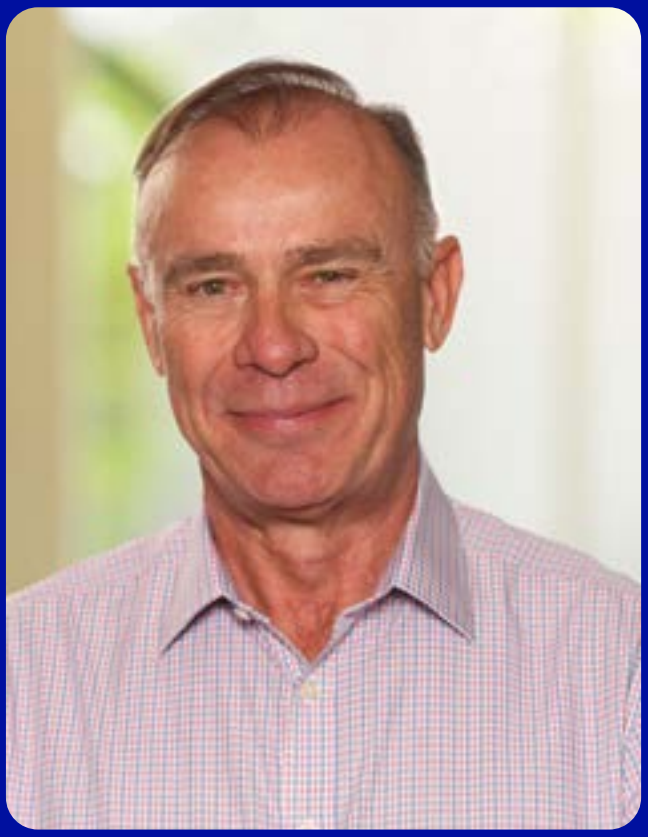
Even when the work is difficult, we remain committed to our promises and reliably carry them through to completion

Collaboration

Creating value comes from teamwork, inclusion, respect, diversity and a win-win approach to all relationships

Ambition

With a 'challenging spirit' and without fear of failure, we innovate and always aspire to do more



Comments

Something I am really proud of as the leader of Komatsu in this region is our investment in people, both inside and outside the business. Equipping people with skills, knowledge, support and opportunity is not only what drives our business forward, it's what drives our industry forward.

Komatsu has won a couple of major training and recruitment awards this year and while it's always great to bring home a trophy, what I am most focussed on is the programs, and the outcomes, that sit behind them.

We recognise that we have a responsibility to train people in and for this industry. That means training for our customers to get the most out of our equipment, and training for our own people to be able to offer the greatest level of support, and to thrive in a sector that is opening up a huge range of career opportunities.

Importantly, we know that a broad and diverse workforce is good for the future of our industry. We are supporting people at every career stage, including those in their mid and senior-career phases as well as newcomers to the sector, and creating space for people who have traditionally been underrepresented in businesses like ours.

On that front, we have a very active apprenticeship program that has on-boarded 133 apprentices in the past two years - 41% of them women.

Looking even further forward, our new innovation centre at Wacol outside Brisbane is showcasing the sector to a whole new cohort of potential entrants. Since opening earlier this year, we've hosted many school groups and they've been very impressed by how 'cool' our industry is, with smart construction technology, autonomous equipment and digitisation creating a new future.

I'm excited to say that our newest training facility in the West is due to launch in the coming months and I will look forward to sharing more about that investment soon.

Enjoy this edition of Down to Earth

Sean Taylor

CEO & Managing Director

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Komatsu Kids

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"The advantage of having Komtrax on a machine is we can monitor the machine, we can monitor its production, we can monitor its fuel consumption – and we can lock the machine out any point. At night time for instance, for tests and stuff like that"

Pictured: Sydney-based plant hirer Cono Services accepting delivery of the Komtrax milestone Komatsu machine.

20,000th Komtrax enabled machine delivered to Cono Services

Remote monitoring of earthmoving, mining and quarrying equipment plays an essential part in helping machine owners monitor the location, health and performance of their valuable assets.

For owners of Komatsu machines, that vital service is provided through the Komtrax remote monitoring system – which has been provided free of charge on every Komatsu machine sold since 2008.

In early 2022, Komatsu delivered the 20,000th machine across its Australian, New Zealand and New Caledonian region fitted with Komtrax remote-monitoring system.

The 20,000th Komtrax-enabled machine for this region is a PC490LC-11 excavator, delivered to Sydney-based plant hirer Cono Services in February. Cono operates one of Sydney's largest plant hire divisions, and is now in the process of growing its civil construction operations.

Australia's first Komtrax-enabled machine was a PC130-7 excavator, which is still working today in Tasmania, and now has just over 7000 hours on its clock.

Interestingly, the 10,000th Komtrax-enabled machine for this region was delivered only five years ago, in early 2017 – so Komatsu has doubled the region's fleet of remote-monitored machines in half the time it took for the first 10,000.

Mary Jo O'Donovan, Komatsu's Komtrax Systems Co-ordinator, said the system provided customers ¬– and Komatsu – with vital information from each enabled machine, including abnormalities, cautions, periodic replacement notifications and a machine's working information.

And the version of Komtrax on the PC490LC-11 delivered to Cono Services features the latest generation of the system, allowing it to provide additional information for the benefit of customers, including seatbelt alerts and time-of-day idle information.

Colm Phibbs, owner, co-founder and managing director of Cono Services, described Komtrax as a "great system".

"The advantage of having Komtrax on a machine is we can monitor the machine, we can monitor its production, we can monitor its fuel consumption – and we can lock the machine out any point. At night time for instance, for tests and stuff like that," he said.

"It allows us to record a lot of information that we can use moving on to our next jobs."

He said Cono had opted for a larger machine because it helped get jobs done quicker, and achieve close to twice that of one of its smaller machines.

"We'll use this for getting large amounts of rock out of the ground. We'll put a hammer on this machine and we'll use it to dig really deep holes," he said.

The combination of Komtrax, Cono's relationship with Komatsu, and its commitment to service was very important, said Colm.

"If a machine breaks down, Komatsu service can be onsite within a couple of hours.

"In fact they're on a lot of our jobsites, they're stationed there so that's massive advantage to us. If a machine breaks down or something happens, we can ring Komatsu, and they can come and fix the machine straight away," he said.

Of the 20,000 Komtrax-enabled machines in the region, about 16,500 are located in Australia, just under 3500 in New Zealand, and nearly 300 in New Caledonia.

Nearly 13,000 are construction machines, over 1,500 are mining machines, and more than 5,000 are utility machines.

Komtrax is compatible with the latest smartphones, tablets and computers, giving machine owners access to information on any device at any time.

It constantly checks operational conditions and status to maximise machine safety, productivity, uptime and availability.

Users can also customise their interface to meet their own fleet and project management requirements, making it easy to track and assess the performance of each

Scan to watch machine handover ▶

"Komatsu's values of integrity, respect, diversity, teamwork, reliability and performance are all very closely aligned with those of Lions players, staff and supporters. "

Pictured: Lions Football club Grounds Manager with Rob Scanlon, General Manager, onsite at the home ground.

Komatsu announces three-year sponsorship with leading Queensland football club

Komatsu Brisbane has announced a sponsorship partnership with Queensland Lions Football Club, one of the leading football clubs in the state – and an example of its ongoing engagement with communities and local organisations.

Komatsu has committed to a three-year sponsorship of Lions FC, which in turn gives it branding on players' and coaches' apparel, signage at its main playing fields and clubhouse, along with regular acknowledgements in announcements, social media and other communications with members and the community.

According to David Brischetto, Komatsu's National Remarketing Services Manager, and who is based out of the company's Wacol facility – which is "just around the corner" from Lions FC's home grounds – the partnership reflects its commitment to engaging with local communities.

"Lions FC, like Komatsu, has a strong commitment to the local community, and also to diversity – fielding girls' and boys', men's and women's teams at all levels," he said.

"There's also a strong personal relationship with the club. My boys play for Lions FC, as do other members of the Komatsu family at Wacol, plus we have been making use of their meeting and presentation room facilities for a number of years.

"As a result, we've built up a good relationship with the club, including assisting them with machinery for some grounds remediation and repair work they recently had to carry out.

"So this partnership is a natural extension of a relationship that's been growing in recent years," Dave said.

Rob Scanlon, Lions FC's General Manager – Football, said the sponsorship agreement with Komatsu was a chance to take the relationship between the two organisations to the next level.

"We pride ourselves on having sponsors who are with us for the long term as they join the ups and downs that each season of football brings.

"The team at Komatsu has been active, not only in the Football club but also at our licensed club, The Lion Richlands. And constantly seeing Komatsu around the club is a great endorsement for both brands.

Rob said that both Komatsu and Lions have very similar core values, including being very much team-focused.

"Komatsu's values of integrity, respect, diversity, teamwork, reliability and performance are all very closely aligned with those of Lions players, staff and supporters.

"We pride ourselves on being at the forefront of player and coach development in the state and country. To do that we rely heavily on these similar values to achieve our goals of producing not only better players and coaches – but also better people," he said.

"We are also proud to say that we have a number of Komatsu staff with children who play at the club.

"And with the new State office being around the corner, Komatsu has become a regular corporate partner, often bringing interstate or other guests to the club for lunch or dinner.

"This partnership has been informal for a number of years, including us helping out with staff parking while the construction of Komatsu's new Wacol facility took place – and we have grown as stronger partners since.

Rob said that sponsorships from companies such as Komatsu were crucial to the survival of community sports organisations.

"Costs are constantly escalating and the only way for clubs to continue to operate and keep fees at a reasonable rate for players is through the support of our sponsors," he said.

Komatsu's sponsorship of Lions FC in Brisbane is one of a significant number of community organisations that the company is involved with throughout the region.

In addition, Komatsu's annual Live Your Dream initiative provides opportunities for Komatsu people in every Australian state and territory, as well as in New Zealand and New Caledonia, to raise funds, support and awareness of community organisations and initiatives that individuals feel passionate about.

Pictured: Home ground remediation and repairs.

"We highlighted our technical solutions that contribute to environmental best practice and sustainability in construction products, as well as our commitment to diversity and inclusion in our workforce, and it was well received"

Pictured: Komatsu staff demonstrating Komatsu's PC30 Electric Prototype Excavator.

Komatsu goes for Gold at DD&T

Komatsu was again the Gold Sponsor of this year's Diesel Dirt and Turf Expo, held during April at the Sydney Dragway, Eastern Creek

As Gold Sponsor, Komatsu was the primary earthmoving and construction equipment supplier supporting the Expo.

Komatsu had one of the largest displays at the Expo, showcasing its Smart Construction project management offering, a new protype cabless electric-powered excavator and its low emission technologies, said Chris Moroz, Komatsu's Sales Manager - Central Region.

"We highlighted our technical solutions that contribute to environmental best practice and sustainability in construction products, as well as our commitment to diversity and inclusion in our workforce, and it was well received.

"DD&T is a great opportunity for us to showcase our latest technology and innovations, in addition to our general products and support capabilities, to a National audience for the broader civil construction industry.

"We were able to really listen to our customers and people in the industry about their needs and challenges. It's such a personal way to connect," he said.

Unique concept electric mini excavator

A highlight of the Komatsu stand was its prototype all-electric mini excavator. This unique excavator has no cab and is fully remote-controlled, and introduces a completely new concept in how earthmoving operations are carried out.

"Designed to lay the foundations for the next generation of fully electric construction equipment, this 3-tonne mini-excavator harnesses Komatsu's technological expertise in electric forklifts and mini excavators," Chris said.

"It incorporates never-before-seen technologies on mini excavators, including lithium-ion batteries and electric – not hydraulic – cylinders.

"This unique excavator drew lots of interest."

Low emissions technology

Komatsu has been a leading provider of ultra-low emission Tier 4 Final powered machines in the past few years.

With this technology increasingly widely accepted, the company is looking at ways to lower costs for customers.

One recent initiative has been the opening of a Diesel Particulate Filter (DPF) reman facility at its Fairfield head office.

This provides customers with the opportunity to further reduce their costs of operation by purchasing completely reconditioned, fully warranted replacement DPF units.

"Komatsu Reman DPFs are available through our service and parts departments and cost approximately one-quarter to one-third the price of a new unit," said Chris.

"Changing over a DPF is a very straightforward process for our customers.

"We offer a fixed price, depending on the machine model, and it's simply a matter of giving us the old DPF when we swap it out."

Smart Construction

Komatsu also used DD&T to showcase its Smart Construction suite of offerings that improve productivity and safety in the construction, quarrying and mining industries, through the application of unique technology and integrated products.

Pictured: Komatsu's remote monitoring system, Komtrax on display at the event.

Developed to work across mixed-brand equipment fleets, Smart Construction provides a single "one-stop-shop" service and support solution across all phases of a project's lifecycle.

It captures information that can be used to solve problems or enhance operations and safety of a construction jobsite for customers and stakeholders.

A series of Smart Construction webinars for Komatsu customers across Australia and New Zealand are proving popular and will continue running through to early 2023.

These webinars give users and potential users insights into what this technology can do for their operations and projects, and how to get the best from it.

"Representatives of our Smart Construction team were onsite at DD&T and spoke with customers about how its application can deliver significant benefits to project and site safety, productivity, efficiency and the bottom line," Chris said.

Komtrax updates

Early in 2022, Komatsu's remote monitoring system Komtrax, underwent a significant upgrade, which is being included in new machines.

Key features and updates include a new Single Sign On capability for added convenience and security, increased machine status visibility, additional safety features, operator ID and machine idling statistics.

Komatsu's specialist Komtrax team were also on hand at DD&T to discuss these latest features, and how this technology helps customers improve machine management, safety and operational efficiency.

Technology innovations for tomorrow – today

Dean Gaedtke, Komatsu's Executive Manager for Construction, looks at some of the company's technology innovations, and the part they are playing in moving towards a net-zero future.

As the world moves towards net zero emissions, the construction and resources industries will be expected– and are looking– to play their part in using equipment and technology that delivers carbon-neutral operations.

Contractors, project managers, client organisations, quarries and miners – and the broader community – are all seeking technological innovations and solutions that can help achieve what is essential for the future of the planet.

Komatsu is at the forefront of many of these innovations which are driving the construction, operation and management of infrastructure and resources projects today – and into the future.

These innovations include our Smart Construction suite of integrated project management solutions, our intelligent Machine Control (iMC) technology, our Komtrax remote monitoring offerings, and our autonomous haulage solutions.

And in moving towards a more sustainable future, Komatsu is leading the way in low emissions engine technology, as well as towards zero emissions technology in an all-electric future.

Smart Construction

Smart Construction is a major step forward in improving productivity and safety in the construction, quarrying and mining industries through the application of unique technology and integrated products.

It covers critical steps in a project's development, from initial site survey and design, through to machine control, machine and project management, machine interconnectivity, review of project progress throughout the construction phase, and finally development of detailed as-built information for future construction and infrastructure maintenance.

It's designed to work across mixed-brand equipment fleets, offering a single "one-stop-shop" service and support solution across all phases of a project's lifecycle.

With Smart Construction, the technology around fleet productivity management is exciting, with its ability to save customers a lot of time, money and cost per tonne, while helping monitor safety on every machine in a fleet.

Site and fleet management teams can watch every piece of machinery in near real time and see where any hazards may be.

At a detail level, they can monitor critical factors such as truck payloads for over and under-loads, as well issues such as site inefficiencies, over-revving, overspeeds, excess idle times and more.

"Komatsu is at the forefront of many of these innovations which are driving the construction, operation and management of infrastructure and resources projects today – and into the future."

Pictured: Intelligent Machine Control – Making it easy for even the most inexperienced operators.

intelligent Machine Control (iMC)

Komatsu's iMC technology delivers major productivity, efficiency and cost saving advantages to its "intelligent" range of dozers and excavators.

On bulldozers, our fully integrated machine control systems automatically control blade elevation and tilt according to target design data, allowing our iMC dozers to be used at all stages of a project, from initial bulk dozing, to precision final finish work.

On excavators, iMC lets operators focus on moving material efficiently, without having to worry about digging too deep or damaging the target surface.

This technology can result in more than a 60% improvement in work efficiency compared with conventional construction processes.

Our latest iteration, iMC 2.0, significantly enhances iMC dozer operations on slopes, while new-generation iMC excavator hydraulics include an automated tilt function making them ideal for precise and complex batter and slope works.

Autonomous and semi-autonomous operations

Technology such as iMC is just one step on the way towards automating the construction sites of the future – and also driving safer, more efficient site operations.

We will soon see automated technology that's now proven in the mining industry making its way into smaller-scale operations such as construction and quarrying.

In the mining sector, Komatsu now has 400 semi-autonomous dump trucks globally driving without operators.

Production is higher and maintenance costs are lower because autonomous trucks are driven exactly as they were designed to be operated. Even tyre costs are up to 40% less due to reduced wear and tear.

In the near future, we will see semi-autonomous and autonomous machines expand into our construction and quarry equipment products as the technology becomes more affordable and scalable.

Pictured: Smart Construction support available when you need it.

Komtrax

Our Komtrax remote machine monitoring system gives us and our customers the ability to identify potential issues with a machine, well in advance of them causing a breakdown, so they can be rectified and repaired in a timely manner.

It has evolved into an efficient, easy-to-use system, that is invaluable for Komatsu in assisting our customers, as well as helping our customers better manage their investments.

We can see how a machine performs, how operators use it, and even benchmark it against other machines. That's valuable for customers, allowing them to better understand how they can operate the machine more efficiently.

Customers and their operators are using Komtrax to not only identify and fix potential issues before they become problems, but also to improve machine and site performance and productivity, and even operator skills.

The latest versions of Komtrax identifies individual operators on a given machine, allowing site or project management and operators to work together even more closely to improve and develop skills and production levels.

Ultra-low emissions diesel technology

To help reduce Green House Gas Emissions Komatsu now offers a full range of Tier 4 Final-compliant machines across our construction equipment range.

Our new technology engines deliver fuel savings of between 5% and 15% while complying with Tier 4 Final emissions standards.

These slash diesel emissions and a machine's carbon footprint, while at the same time giving outstanding performance, efficiency and reliability.

Compared with previous generation Tier 3 engines, Komatsu's new technology engines reduce both particulate matter (PM) and nitrous oxide (NOx) levels by 90%.

And our Tier 4 Final engine technology is proving its benefits on major underground tunnelling projects, where the company's products have been outstandingly successful.

Komatsu machines equipped with Tier 4 engines are delivering significantly lower emissions in confined underground work sites, resulting in far cleaner working conditions.

Emissions levels from these Tier 4 Final machines are much lower than a previous generation Tier 3 machine, by utilising Komatsu's advanced engine controllers, new turbo design, exhaust aftertreatment and diesel particulate filter (DPF).

Pictured: Komatsu PC360LCi-11.

Hybrid excavator technology

As a step on the road to net zero, Komatsu has lead the industry in developing highly fuel-efficient Hybrid excavators that combine diesel and electric power.

Fuel consumption on a Hybrid excavator is as much as 40% lower than a same-sized conventional Komatsu excavator, saving owners fuel, carbon emissions and operating costs – while still maintaining reliability and production standards.

Komatsu Hybrid excavators are based around an "Ultra-Capacitor" linked to the swing circuit to generate power during operation. This has shown itself to be safe and reliable across millions of hours of operations around the world.

Going fully electric

Fully electric is not a commercially viable solution for a construction site or quarry at the moment – especially in higher horsepower machines.

The technology is being developed, then will be extensively tested initially for smaller horse-powered machines before moving into larger models.

An example of this is our all-electric prototype 3 tonne mini excavator, which is powered by a lithium-ion battery, and uses electrics instead of hydraulics for the arm, boom, bucket, swing and travel functions.

We were lucky to recently have this unit on display at our new Innovation Hub in Wacol, Brisbane, and is a pointer to how this technology will develop.

What we will see as we transition away from fossil fuels towards 2050, are a variety of power sources– low emission diesel engines, bio-diesel, hybrids, hydrogen power systems, and even kinetic energy systems.

The major challenge for many equipment operators will be how they phase out existing machines, while adapting to net zero and running sustainable businesses – and at the same time remaining profitable.

Take the case of an operator with 200 machines in a fleet across the country.

If they want to reduce their greenhouse gas emissions by a significant amount, they would have to replace a large percentage of their fleet. How do they do that?

One way to do this is through a new concept that Komatsu has been active in, known as "agnostic technology".

It's an option currently being developed for large mining haul trucks and may be able to be applied across other machines in the future as well.

This is based around the principle of designing trucks that can be powered by diesel, hybrid, electricity (trolley or battery) or hydrogen.

And throughout a truck's operating life – which typically extends through multiple engine rebuilds/repowers – it may be powered by a mix of these alternatives as technology changes.

A key part of meeting greenhouse gas reduction targets will be staged replacement of fleet with lower emitting machines, while operating current machines to achieve optimum efficiency.

This is where Komatsu can really add value for our customers through our integrated offerings of technology solutions.

There's also competition between all OEMs to devise solutions, and this competitive tension is another strong driver of major technology improvements.

Certainly our customers are driving us hard to devise zero carbon power systems in our products as fast as we can. This is something in which we all – manufacturers, end users, clients, governments and communities – need to play our part as we develop a scalable and sustainable roadmap to net zero emissions.

Komatsu
Smart Construction
Webinar series

Get a full understanding of the next generation of construction project management solutions.

Watch now ▶

Pictured above: The Komatsu demo area at Bauma.

Pictured above: The new Prototype PC210 Electric Excavator.

Komatsu's electric offering expanded

Komastu offered a preview into the future of the construction and mining industry, with a huge presence at bauma focused on smart construction and electric machines.

The brand's extensive presence at the event spotlighted nearly 40 pieces of equipment while highlighting Komatsu's deep capabilities and experience around smart construction, digitisation, and electrification.

Dean Gaedtke, Executive General Manager Construction at Komatsu Australia, says that while electrification is a big forward focus for the industry, Komatsu's track record in the space stretches back decades.

"We were excited to showcase our latest innovations at bauma, but many people were surprised to be reminded that we've had electric machines in market for over 20 years," Dean says. "It's truly exciting to see industry really picking up the pace now on adoption of electric equipment, and to be able to continue to expand the range of machines we offer with electric power, without compromising on productivity.

"We've sold over 1,300 electric drive trucks in Australia, and over 380 electric mining excavators globally, and demand for these game-changing machines is only growing."

The PC210E all-electric hydraulic excavator was one of the key attractions on the stand, along with an exciting fully electric Wheel Loader prototype. This new connected and automation-ready construction machine is battery-powered and zero-emissions and is in advanced stages of testing.

Attendees were also able to get a look in at the PC4000-11 electric drive excavator, with zero emissions, KomVision 360° bird's eye view and Argus PLM payload meter to identify the bucket payload.

"Our strong focus on smart construction was definitely a drawcard to our stand, and also signals Komatsu's commitment to reaching zero carbon emissions by 2050, and halving our CO2 emissions from product operations from our 2010 levels," Dean says.

He adds that the atmosphere at bauma was like nothing else.

"It was invigorating to be showcasing ground-breaking technologies and new ways of working that will help our industry move towards a cleaner, safer, more productive jobsite and a sustainable future. It was also great to be able to connect our global product and solutions engineers with our Australian customers, and give them the opportunity to hear the differing needs of the Australian market."

Pictured above: Komatsu PC88MR-11 Excavator on display at Bauma

Just a few of the other key attractions at the Komatsu display:

• The new PC950-11 Hydraulic Excavator was on show for the first time at bauma, with the machine scheduled to be introduced to the Japanese and European markets in the 2023 financial year.

• D71PXi-24 dozer - an all-new model in Komatsu's dozer line-up. Designed to meet customer demand with the ability to push like a D65 and the precision, balance and reflexes of a D61.

• PC88MR-11 midi excavator. Compared to its renowned predecessor model, the PC88MR delivers higher productivity, reduced fuel consumption and faster work equipment speed.

• HD785-8 rigid dump truck. Productivity meets comfort with an ergonomically designed cab and in-cab noise levels kept to 72 dBA.

• K100 boom change system. Reconfigure the machine within minutes, without leaving the operator cab.

Komatsu opens new Canberra depot

Komatsu has opened a new depot facility servicing the ACT and surrounding areas of NSW, offering customers higher levels of service and support – including faster response times.

Canberra has previously been serviced by a team of three resident service technicians, a new, used and rental equipment sales representative, and a customer service sales representative.

Now this team will be based out of the new Canberra depot, which is located at 9/8 Beaconsfield St, Fyshwick, ACT 2609.

The 200 sq m depot stocks a range of parts, components and consumables tailored to the profile of machines operating in the region, as well as additional tooling for specialist service jobs.

According to Michael Broadwood, Komatsu's Wollongong Branch Manager, who also has responsibility for the Canberra depot, it will significantly reduce turnaround and delivery times for parts and service for Canberra and ACT customers.

"Previously parts or additional tooling had to be shipped from other branches, or our main warehouse facilities in Sydney. Now we can hold parts locally for Canberra customers," he said.

In addition to storage for parts and tooling, the new depot includes office facilities, providing a central location for Komatsu's local team.

Parts, consumables and components for local customers will be delivered direct to their premises or job sites, by Komatsu's Canberra and ACT team members.

Komatsu customers in the region who will be serviced from the depot include small to mid-size civil and earthmoving customers, owner-operators and tradies, local government and quarries, operating all sizes of equipment across the Komatsu range.

The 200 sq m depot stocks a range of parts, components and consumables tailored to the profile of machines operating in the region, as well as additional tooling for specialist service jobs.

" Facilities at our new Melbourne West branch will include a 1400 sq m workshop, storage and warehouse facilities, a paint shop and wash bay, a machinery display area, plus additional concrete hard stand area."

Pictured: Breaking new ground, at the site of the new Truganina branch.

Komatsu to open new branch in southwest Melbourne

Komatsu has started construction of a new branch at Truganina in Melbourne's south-west so it can better service and support new, rental and used equipment customers in the greater Melbourne region.

The new Truganina branch will be located 30 km south-west of Komatsu's Victorian head office in Campbellfield and 80km north-west of its newly opened Pakenham branch.

The new branch – at 3 Niton Drive, Truganina – will expand Komatsu's footprint in the west of metropolitan Melbourne, says John Looker, Komatsu's Rental Manager for Southern Region.

"This will allow us to better manage the growth in our rental and remarketing operations, and also to alleviate capacity pressures at Campbellfield," he says.

According to John the new branch will create new opportunities including;

• Providing facilities for the expansion of Komatsu's rental/remarketing operations in Melbourne

• Providing significantly better market coverage for customers in the region

• Improving sales, support and service opportunities for the significant infrastructure development projects planned for Western Melbourne over the next five years

• Relieving overcrowding and heavy vehicle congestion issues at Campbellfield.

• Increasing field service efficiencies, with field service technicians based at the new branch, and able to get to customer and job sites faster.

"Facilities at our new Melbourne West branch will include a 1400 sq m workshop, storage and warehouse facilities, a paint shop and wash bay, a machinery display area, plus additional concrete hard stand area," says John.

"And in line with Komatsu's environmental and sustainability principles, it will be a five-star Green rated building, with solar panels and LED lighting."

The new facility also aligns better with Komatsu's Inclusion, Diversity and Equality (IDE) strategy, with equal washroom and toilet facilities for male and female employees.

"In addition, our expansion to this Melbourne West facility will provide new jobs, will help us relieve staff overcrowding issues at Campbellfield, and ensure we continue to offer a modern, safe workplace for our employees," John says.

Komatsu opens state-of-the-art Wacol Distribution Centre

Komatsu has officially opened its new Wacol Distribution Centre, built to service over 3,000 customers across Queensland, the Northern Territory, NSW, New Zealand and New Caledonia.

The $48 million facility, located in Wacol, Brisbane, represents an expansion of 70% in warehousing capacity, improving parts and components availability, further reducing turnaround times, and streamlining ordering efficiency.

Covering an area of 17,500 sq m, it has resulted in the creation of more than 50 new jobs within the business, and is the single largest building Komatsu has ever constructed in Australia.

The new Wacol Distribution Centre opening was a key event to mark Komatsu's Centenary year.

According to Sean Taylor, Komatsu's CEO, the key driver of its new Distribution Centre is to improve customer satisfaction across the regions it serves.

"By using the latest in warehousing technologies, we have been able to drastically increase the efficiency of this operation, with pick rates of fast-moving parts increasing by 300% – which will contribute to faster delivery times for customers," says Sean.

"In addition, order consolidation innovations have driven a 22% reduction in individual packages, which contributes to a lower carbon footprint – an important driver in our commitment to lower emissions.

"At the same time, we have achieved a six-star energy rating for the building through the use of solar power and an energy-efficient design, while 89% of our waste from the site is diverted away from landfill."

Sean says a critical element of the facility has been to set the highest standards in workplace health and safety.

"Our Wacol Distribution Centre incorporates the latest in safety innovations, including wire guidance systems to control forklift movements, dock safety controls that ensure people are kept out of harm's way, and zero gravity cranes to minimise manual lifting."

Komatsu's own technology innovations also played an important part when constructing the new facility.

"In preparing this site for the new building, our earthworks contractor was able to make use of our own SmartConstruction technology," says Sean.

"A cornerstone of Smart Construction is our intelligent Machine Control, or iMC.

"Smart Construction links machine operation directly to site design. The semi-autonomous capabilities of Komatsu dozers and excavators ensured highly accurate compliance with the design, driving productivity and safety," he says.

"Furthermore, Komatsu's drone technology worked in concert with our contractor's iMC machines to volumetrically scan the site to determine progress, in turn feeding data into Komatsu's Edge technology, which has the ability to process millions of data points in real time.

"Our project management team, along with our contractors, designers and surveyors were all able to take advantage of Smart Construction's ability to combine 3D design data with aerial mapping and intelligent machine data, so they could visualise the project at every stage of construction.

"This was a perfect example of Komatsu being able to take real advantage of our own technology, and realise its benefits first hand," says Sean.

Wacol Distribution Centre Key Facts:

- Single largest building Komatsu has built in Australia, covering 17,500 sq m under roof.
- It features the latest technologies in warehousing to drive efficiencies and safety and will service the East Coast of Australia, as well as New Zealand and New Caledonia
- Total capital investment is $A48million
- Employees 50 fulltime staff to operate the facility

Pictured: The new state-of-the-art facility in Wacol.

Komatsu Innovation Hub showcases technology leadership

As part of its new Wacol Distribution Centre, Komatsu officially opened its Innovation Hub – which showcases the company's focus on innovation and technology leadership across all aspects of its business.

The Innovation Hub sits within the Wacol DC and aims to demonstrate Komatsu's vision to empower a sustainable future where people, businesses and our planet can thrive together, says Todd Connolly, Komatsu's General Manager, Business Transformation.

"It's been designed to inspire the next generation of Komatsu employees and management, along with our customers and other stakeholders, to continue our innovation journey along with us," he says.

The Innovation Hub provides a range of interactive exhibits that demonstrates the latest technologies in mining, quarrying and construction equipment and solutions.

Exhibits cover mining automation, Komatsu Smart Construction, digital services, sustainability, supply chain and a "history lane".

"Visitors to our Innovation Hub can go from displays of classic items of Komatsu equipment, to a vision of the future with a prototype all-electric remote control excavator," says Todd.

"We have live displays of our Komatsu machine population throughout Australia, New Zealand and New Caledonia – including location, operating status and machine condition – along with a countdown to our 150th anniversary in 2051.

"There are also opportunities to try out a Komatsu excavator simulator, or see how our SmartConstruction offerings are having a direct influence today on the management of our instructure and resources projects of tomorrow.

The Innovation Hub provides a range of interactive exhibits that demonstrates the latest technologies in mining, quarrying and construction equipment and solutions.

The Innovation Hub is also a celebration of Komatsu's century of innovation, dating back to when the company founded in May 1921.

"Since the company's founding, innovation has been at the centre of Komatsu's DNA, and our new Innovation Hub brings together all our technology innovations under a single roof," Todd says.

Pictured: On display is a mix of history and exciting innovation at the purpose built space.

Komatsu encourages its employees to propose worthy community projects for grants of up to $10,000

Live Your Dream - Dolly's Dream

A small team from Cairns dedicated to stopping bullying amongst young people took to the road on a 750-kilometre road trip to the Gulf of Carpentaria to visit five of the state's most isolated schools.

Under the initiative called "Live Your Dream", Komatsu encourages its employees to propose worthy community projects for grants of up to $10,000.

Kate Pemberton, Cairns Branch Manager, put forward support for Dolly's Dream, an anti-bullying campaign which honours the memory of teenager Amy 'Dolly' Everett.

Kate accompained Ryan Fede, a Connect Facilitator with the national charity Alannah and Madeline Foundation, and spoke to school children in Mt. Surprise, Georgetown, Croydon,Normanton and Karumba, along the Gulf Development Road.

Fourteen-year-old Dolly took her own life in 2018 as a result of systemic bullying and her parents Kate and Tick, from Katherine in the Northern Territory, started Dolly's Dream as a way to help other youngsters.

Dolly's Dream has become part of the Alannah and Madeline Foundation, an anti-violence charity formed in 1996 to honour sisters Alannah, 6, and Madeline, 3 who died with their mother in the Port Arthur massacre which took 35 lives.

Some of the schools Ryan and Kate visited have just one principal and one shared teacher and total enrolments of less than 40.

"Teaching kids and parents about online safety is so important. Bullying, depression, anxiety, and youth suicide know no boundaries so I wanted the opportunity for these more remote communities to have access to the support and education that Dolly's Dream can offer. It just might help start a conversation that could save a life", Kate Pemberton said.

Pictured below: Cairns Branch Manager, Kate Pemberton and Ryan Fede, a Connect Facilitator with Dolly's Dream, on the road to some of the Queensland's most isolated schools.

Pictured: By the end of the road trip, the team delivered the program to 1,000 parents, teachers and students

"I'm so pleased we're able to do something in our own far north Queensland community to offer direct support and education to young people and their families. A lot of the students at these schools will attend boarding school for their senior schooling, similar to Dolly Everett. Helping them learn about and be conscious of their online safety in preparation for that time can only be a good thing".

As one initiative, Dolly's Dream has introduced an e-Smart framework for schools which teaches young people good internet behaviour, and importantly helps them deal with bad behaviour. More than 270,000 students nationally have signed up to the e-Smart digital license program, including 1500 since it was rolled out recently in Queensland.

Kate Pemberton and Ryan Fede started their road trip on Monday May 2, concluding in Georgetown on Thursday May 5.

By the end, they had presented their Connect program to around 1000 parents, teachers, and students.

Pictured above: Vivienne Healy presenting the Est Perth Branch of OzHarvest with their $10,000 cheque.

Live Your Dream - OzHarvest

For Vivienne Healy, a measured and orderly person, the amount of food produced in Australia compared to the amount consumed seemed totally illogical.

"Australia produces enough food to feed 60million people – in a population of less than half that", the Perth mining machinery executive said.

"About one third of all food we produce is wasted.

"And yet each day, also, 600,000 people live beneath the bread line and need help to obtain basic sustenance."

The imbalance and the inequity grated on Vivienne, and she decided to do something about it.

As part of the "Live Your Dream" initiative Vivienne put forward a "food rescue organisation" called OzHarvest, formed in 2004 to rescue quality surplus food from going to landfill, and delivering it to charities that support vulnerable communities.

Ronni Kahn, OzHarvest's Founder and CEO, started with just one truck, collecting surplus food stocks which otherwise would have gone to waste, and delivering them to people in need.

It wasn't easy: food security laws got in her way.

Ronni gathered powerful allies and forced through changes to legislation in four states to enable OzHarvest to give away the surplus stock in a responsible and sustainable manner.

Eighteen years on OzHarvest supports 1670 charities, works with more than 3,000 food donor businesses and has delivered more than 200 million meals to people in need.

The Federal Government has recognized Ronni by making her an officer of the Order of Australia- the nation's second highest honour.

"My contribution is a lot less", Vivienne who arrived in Australia as a backpacker from Ireland 16 years ago, said. "But it means a lot to me that I'm able to help."

In early May, Vivienne presented a cheque for $10,000 to the East Perth branch of OzHarvest and spent volunteer time with the organization collecting and delivering food.

Most importantly she's introduced OzHarvest to her 800 work colleagues and food collection bins have been set up at Komatsu's Western Australian facilities.

"The whole experience has been really humbling", Vivienne said.

Most importantly she's introduced OzHarvest to her 800 work colleagues and food collection bins have been set up at Komatsu's Western Australian facilities.

"I've spent time now meeting people in nursing homes and homes for the disadvantaged and the look of gratitude on their faces is overwhelming.

"Yet I look at my own home with the cupboard stacked with food that I bought on a whim, and which honestly may never be eaten."

OzHarvest opened its Perth branch seven years ago and supports 128 local charities through the willing help of 443 food donor businesses.

It estimates it has 21million meals to people in Perth, many through schools.

"We went to schools as part of my volunteer program, delivering care packages to children to take home to their parents", Vivienne said.

The raw statistics drive her to tears of frustration: "Its estimated one in five children go to school without having a proper breakfast", she said.

Vivienne fulfilled her Live Your Dream project when she presented her company's cheque to OzHarvest, the money to be used largely to purchase packaging for the care parcels.

But Vivienne's personal quest has only just begun.

"Its early days yet, but I know the whole culture of food rescue is going to grow inside Komatsu, and everyone who has been influenced is going to tell their friends as well", she said.

Komatsu Australia acquires Mine Site Technologies

Komatsu Australia, recently acquired Mine Site Technologies Pty Ltd (MST Global), an Australia-based connectivity solution provider for underground mining, developing safe, highly productive, smart and clean workplaces of the future.

As global demand for essential resources requires Komatsu's customers to go underground for mineral deposits, the company is rapidly developing new technologies, equipment and solutions to support the industry's future needs.

Empowering its customers growing use of digitalisation and automation to improve safety and productivity, Komatsu plans to work with MST Global to help customers build digital ecosystems with real-time insights and alerts, voice and communication technologies, software solutions, robust network infrastructure and wireless and geospatial technologies.

Sean Taylor, CEO of Komatsu Australia said "Over the past 100 years, Komatsu has earned a reputation for using technological innovation to help our customers achieve their goals, and so we are pleased to continue this journey with the acquisition of MST Global".

Together the companies will work to increase availability of high-speed, low latency digital communication, which is necessary to: provide mission-critical communication, integrate IoT sensors, increase the volume of information communicated and enable real-time tracking, monitoring and automation of mine operations.

MST Global specialises in developing and delivering rugged, fit for purpose solutions and services partnering with mining and tunneling customers on their digital strategy to unearth safety and productivity improvements.

"MST Global has been delivering innovative solutions to the mining industry for 30 years, and is yet another example of Australia leading the world in mining innovation", says Sean.

With a global customer base, MST Global offers a platform to visualise and monitor the underground mining environment and enable control from a remote operations center, thus optimising mine operations to increase safety and productivity whilst safeguarding the environment. The solutions contribute to the digitisation and automation of underground mining operations.

"MST' Global's expertise in leveraging optical fibre broadband communication systems to build real-time geospatial digital twins of underground mining operations compliments Komatsu's existing solution offerings, and will help our customers achieve their goals of safety and productivity whilst safeguarding the environment", says Sean.

By adding MST Global's experience and expertise in the introduction of communication devices and optimisation platforms, Komatsu aims to enhance the speed at which it offers advanced technology solutions, including the automation and teleoperation of mining equipment underground.

Komatsu is working to expand offerings for underground hard rock mining, creating new value for customers with the development of new equipment, processes and technologies that will help operations step forward to the next stage for the workplace of the future and provide a more sustainable environment for the next generation.

By adding MST Global's experience and expertise in the introduction of communication devices and optimisation platforms, Komatsu aims to enhance the speed at which it offers advanced technology solutions, including the automation and teleoperation of mining equipment underground.

Pictured above: Komatsu Australia's National Technical Capability Manager, Matthew Tosolini pictured holding the Large Employer of the Year 2022 Award at the recent 2022 NSW Training Awards.

Komatsu named Large Employer of the Year in NSW Training Awards

Recognised for award-winning focus on innovative apprentice training and employee recruitment.

Komatsu's dedication to recruiting and training the best employees and apprentices has seen it win both national and global recognition.

The industry leader in mining, construction and earthmoving was named 2022's NSW Large Employer of the Year, for their unrivalled companywide Learning and Development programs, and in the same week for the second consecutive year, they were also named a global leader in employee recruitment, placing in the top three of the Global Talent Board's 2022 APAC Candidate Experience (CandE) Awards.

"Being recognised as the Large Employer of the Year for 2022 is a proud achievement. It highlights the great efforts we go to as an organisation to develop our people to be industry leaders, equipped to tackle the future challenges facing our industry," said Komatsu Australia Managing Director & CEO, Sean Taylor.

Komatsu's National Technical Capability Manager, Matthew Tosolini was on hand to receive the award and commented, "We view our training programs as more than just education programs. We invest in our people as long-term team members for the success of our business and industry."

Komatsu's innovative Apprentice Development System (ADS) program is at the centre of the successful submission. It has seen more than 600 apprentices and trainees participate in a holistic program that extends beyond the 'traditional' vocational education training framework.

"In 2009 we ran our first pilot of our ADS program designed around our commitment to train, develop and engage apprentices nationally, despite the fluctuations brought on by industry peaks and troughs. The first intake of the new program completed their qualifications in 2013 and many of them continue with the business today," Matthew explained.

As part of this new approach, Komatsu wanted to equip apprentices and trainees with important life skills. These included mental health awareness, public speaking, road safety and fatigue management, drug and alcohol awareness and a variety of business skillsets.

Through partnerships with leading expert providers such as Toastmasters, STEMPunks, NextWorld and local police agencies, Komatsu's ADS has set a new national standard for the way the industry trains its apprentices and trainees.

"We have received feedback that this program has become a benchmark for training nationwide. It has produced measurable results and a higher standard of learning outcomes.

After the apprentices have finished their qualifications and are employed as skilled technicians, their training continues to remain a focus of the Komatsu Training Academy and Technical Capability Team.

"Our Technical Capability Team track their training against courses they attend with ongoing workplace-based assessments to make sure that they have retained the knowledge and are competent.

"We have designed a professional development program that is adult-learning centric. It comprises 70 per cent job experience, 20 per cent practical assessment and 10 per cent classroom-based learning," Matthew said.

Another point of difference is the way Komatsu incorporates technology into their training. Engaging third-party virtual reality specialists, NextWorld, helps them educate apprentices and trainees on potential workplace risks and the implications if workplace safety practices aren't followed.

"Additions like this to our program allows us to create simulated events that cannot be reproduced safely in a real-life environment. Giving trainees these virtual experiences allow us to reinforce our safety principles whilst creating valuable and memorable reinforcement of safety principles."

Adding to the success are the rigorous recruitment methods to enable better hiring decisions, including targeting various age groups and life experience diversity.

In recognition Komatsu has again been awarded as a global leader in employee recruitment in the Global Talent Board's 2022 APAC Candidate Experience (CandE) Awards.

"It has never been a more competitive landscape for trying to attract the best employees, and we take pride in making sure that each and every candidate, across the diverse roles we have on offer, are given a really great Komatsu brand and candidate experience," says Sean.

The US-based Talent Board, which has been running its Candidate Experience Awards (CandE Awards) for the past 10 years, is a non-profit research organisation focused on the elevation and promotion of a quality candidate experience against industry benchmarks that highlight accountability, fairness and business impact. The Talent Board and its CandE Awards are widely recognised globally as the pre-eminent organisation for candidate experience.

"Ultimately, sitting behind these great achievements are the wonderful staff who live our culture and make up our brand DNA," says Taylor. "These awards are a great testament to the hard work and dedication of our passionate employees who deliver on the Komatsu brand promise of creating value together."

Pictured above: Komatsu Australia's team accepting the Large Employer of the Year award at the 2022 NSW Training Awards. Picture L to R: Matthew Tosolini, National Technical Capability Manager, Kirstyn Clarke, Training Administrator and Mary Huxtable, National People Development Manager.

Pictured: Sean Taylor, CEO speaking with some WSW players

Komatsu continues to kick goals with Western Sydney Wanderers

Komatsu Australia, has confirmed it will continue its sponsorship of the A-League Women's football team Western Sydney Wanderers as part of its organisational focus on diversity and inclusion.

Western Sydney Wanderers are geographically placed in Sydney's major construction corridor, making them an ideal match for Komatsu, which has its Australian head office located in Fairfield in Sydney's west.

Sean Taylor, Managing Director and CEO of Komatsu Australia, says the company is excited to enter the second year of its partnership with the team.

"We love what they stand for and see great synergies between our organisations," he says

"Last year at our launch event, Komatsu staff were inspired by the Wanderers players and coaches at the club. There were some great stories that resonated about overcoming adversity as women in a male-dominated arena.

"There are strong links to some of the challenges women face in the workforce – specifically in our sector – and we really want to bring these discussions to the forefront of our organisation."

Komatsu has led the industry by putting diversity and inclusion on the agenda. The brand has won a range of awards in relation for its Say Again? Program and industry leading training programs.

"Diversity presents a tremendous opportunity for our business. We are always looking for opportunities to highlight the benefits diversity can bring to our organisation and address the barriers that may hold us back.

"Unfortunately, Covid disrupted some of our plans last year so we are looking to leverage those opportunities to inspire our team," Sean says.

Like Komatsu, the Western Sydney Wanderers have been firmly focused on diversity and raising the profile of women in their sport.

Earlier this year, the club appointed Tom Sermanni as their first Head of Women's Football. This leads the way in the Women's A-League as the first football club to make such an appointment. The role forms part of The Wanderers Women's Football Program, which hopes to lay the foundations for future generations of women participating in the sport.

Additionally, this year's newly appointed Head Coach, Kat Smith became one of 20 female coaches globally to be accepted into the FIFA Coach Mentorship Program.

"The strategies that the Wanderers are implementing echo our business strategies here at Komatsu. We are both focused on creating an environment that offers equality and opportunities for women because we understand and know the unique value they can bring our workforce and teams."

"Last year at our launch event, Komatsu staff were inspired by the Wanderers players and coaches at the club. There were some great stories that resonated about overcoming adversity as women in a male-dominated arena."

Pictured above: Komatsu Perth CSSR Andrew Renshaw (left) with Joe Piotroski, Brooks Hire's Service Manager WA/NT, discussing how taking advantage of online management of KOWA oil analysis sampling helps keep the company's fleet of equipment running reliably, productively and safely.

Online access to oil analysis services streamlines fleet management for Brooks Hire

Plant hire companies supplying earthmoving and excavating equipment to customers need to know that the machines they provide are in top working order and are not likely to break down or have a key component fail at a critical time.

That's why major equipment rental companies such as Brooks Hire carry out regular oil analysis of the machines in its fleet of over 700 pieces of earthmoving and construction equipment.

Brooks Hire has been renting earthmoving and construction equipment since 1979, and today has branches not only throughout Western Australia where it started, but also in all state and territory mainland capitals, along with key regional centres.

To stay on top of its mobile equipment fleet maintenance needs, Brooks Hire uses Komatsu's KOWA (Komatsu Oil Wear Analysis) service – part of its Condition Monitoring Services (CMS) suite of sampling, analysis and diagnostics tools – to carry out regular oil analysis tests on its Komatsu and other branded equipment.

According to Joe Piotrowski, Brooks Hire's Service Manager WA/NT, the company – which has been using KOWA analysis for the past 16 years – averages more than 220 samples a month nationally.

Pictured above:Komatsu KOWA kits

"The level of detail now in our KOWA reports has improved even further since we moved to managing them through myKomatsu"

Pictured above:Brookes Hire's HB215LC Hybrid Excavator at work.

In fact, the actual number of samples for the Brooks fleet is significantly higher, with many of its customers carrying out their own servicing and sampling on the Brooks machines they have on hire.

Brooks Hire was also an early adopter of the ability to order and manage KOWA samples when Komatsu's CMS range of offerings became available through the myKomatsu online customer portal in mid 2021.

"In terms of convenience and ease of use, it's been great to move over to the myKomatsu portal. It's a very handy tool which our service team uses daily," he says.

Komatsu set out to make the process of accessing KOWA oil analysis services through myKomatsu faster, more efficient, easier to use and less prone to human error.

"That's certainly been the case," says Joe. "We just have to enter the asset number or serial number, and the system shows all sample reports for that asset.

"And the turnaround times for reports once we've sent in a KOWA sample for evaluation has been good."

An important feature of having KOWA samples carried out through myKomatsu is also the ability to have full records of sample histories held in one place for easy access.

"KOWA has always been an important tool in helping us monitor, repair and replace major components. It helps us reduce major failures onsite also down time for our customers," says Joe.

"But with our results now within myKomatsu, we can very easily research our sample histories, so we can check trends and better identify where problem areas may be."

Andrew Renshaw, Komatsu's Perth CSSR (Customer Support Sales Representative) provided assistance to get Brooks staff their own individual logins, linked to the Brooks Hire account.

This allows each user to access reports and historical data on their own computer, laptop and mobile devices.

"Our team regularly uses the portal as a tool to access sample histories when required," says Joe. "In the past, we would call Andrew for details of our CMS histories, but now we can search for just about all the information we need ourselves via the portal.

"It's all user-friendly and well laid out. In particular, the Advanced Search function is extremely useful," he says.

The level of detail now in our KOWA reports has improved even further since we moved to managing them through myKomatsu,

"All the reports are very detailed, filled with good, useful information," Joe says.

"It was a much faster job with this technology. What was previously a 10-week job on constructing the cell, we completed in around six weeks. That's a 40 percent productivity improvement."

Victorian shire uses iMC to boost efficiency by 50 percent – and empower its local workforce

A Victorian regional council is successfully using the latest positioning and machine control technology to carry out landfill cell construction and waste management more efficiently and with lower costs for ratepayers.

At the same time, it is also taking the opportunity to introduce new technology to its own workers and operators, giving them added skills and expertise they can use in their careers.

In September 2019, the Shire of Corangamite, located west of Melbourne on the southern coast of Victoria, took delivery of a Komatsu D85EXi-18 dozer fitted with intelligent Machine Control (iMC) to work on its landfill operation at Naroghid, the Corangamite Regional Landfill.

The landfill operation is on a 39 hectare site, and handles around 32,000 tonnes of waste to landfill material a year, not only for Corangamite residents, but also for the adjacent shires of Warrnambool and Colac Otway and Southern Grampians.

During the drier summer months, the dozer is being used for construction of the waste cells and leachate ponds – which must be constructed to strict Victorian Environment Protection Authority (EPA) requirements.

In addition, year-round, it is used for pushing and spreading waste material, covering it each day with 300 mm of daily cover material, then capping the waste with materials, including clay and topsoil once each cell is filled.

According to Glenn Busuttil, Corangamite's Team Leader Waste at the Corangamite Regional Landfill, the Komatsu iMC dozer has proved to be very successful in both applications.

"When we construct new cells, we work to strict design requirements for their shape, things like 3:1 batters, batter heights, and how high the rubbish can go."

Over the past eight years, Corangamite has brought in contractors and surveyors to carry out this cell construction work, but it's now able to do it by transferring the designs to the iMC dozer's onboard system, with the dozer then working in with the scrapers and excavators that are also used for the cell construction.

The iMC dozer was also used to place a capping layer – consisting of 1.5 m of clay, overlaid with around 800 mm of soil and topsoil – to top off a filled waste cell.

"Doing these jobs this time, once we had the design, we had a surveyor working with us, helping to calibrate the machine, and checking all the as-builts it was generating as we went," said Glenn.

"It was a much faster job with this technology. What was previously a 10-week job on constructing the cell, we completed in around six weeks." That's a 40 percent productivity improvement.

The dozer's iMC technology is also making the day-to-day landfill operations faster and more efficient.

"Each day, we spread out the waste we've received that day, then cover it with 300 mm of soil. The technology's able to help with that, make sure that's all a bit more accurate," he said.

"One issue with waste is that, due to its nature, you can't put in pegs and stringlines, so typically we've had to put in a windrow of clay each day to give us a rough level to work off.

Having the iMC machine do this makes it all much faster and more accurate.

"In addition, during this process, the dozer can also take the levels of waste that we're putting down, using the RLs to give us the as-builts. Each month, we give these to the surveyors, and because we know the volumes of waste we're receiving, we can work out our compaction rates over the site, how much waste we can get into a certain area."

The iMC dozer also offers potential safety advantages, said Glenn. At present, EPA and auditing requirements mean that a surveyor has to walk over the waste, and work around the machines doing cell construction.

Glenn said that while the primary goal has been to work more efficiently, save money and carry out this work faster. The council's ambition has also been for its own operators and workers be able to do the job themselves, rather than have it contracted out.

"Now they are learning how to use GPS technology themselves," he said. "All our operators are local people, and they've not had the opportunity to work with this technology before, we've never had it on our machines at the landfill previously."

"This opportunity to train our own local people, our own council employees is really exciting. And they absolutely love it; now they feel they can operate equipment on a range of sites and to a high level in the future" he said.

Corangamite's D85EXi-18 iMC dozer replaces another Komatsu D85 it had for 13 years, which had worked around 15,000 hours.

"We decided on another Komatsu because we'd always had good service and performance with the other one, plus we wanted the inbuilt GPS."

"The technology is absolutely proving itself for this application. And once we bring in our own base station, which we're planning to do, that will take us to a whole new level," Glenn said.

"Applying this technology lets us deliver more efficient waste management for our ratepayers and adjacent councils, it is a better use of resources, and it's saving money."

"We don't want to have to do things twice because it wasn't right the first time; that's wasting money."

"Now our operators know how far to go with waste spreading and compaction, with the earthworks design, because they can get it right the first time, every time. That's a big saving for us," he said.

"Our main goal in purchasing this equipment has been to decrease downtime, increase productivity and decrease emissions."

Pictured above: At the delivery of NZ's first Komatsu HB365LC-3 hybrid excavator were (from left) Ventia's Neil Cates, Komatsu NZ's Garth Dixon, and Ventia's Shane King.

Ventia NZ HB365LC-2 hybrid excavator delivery

As the world moves towards a zero-carbon future to help offset the impacts of global warming, companies in industries that have traditionally generated significant emissions as part of their day-to-day operations are looking for sustainable alternatives.

The infrastructure and resources sectors – with their dependence on large-scale, energy intensive excavation, haulage and construction equipment – are now focusing their efforts on ways to reduce their CO2 emissions.

One solution on the road to a zero-carbon future is the use of hybrid earthmoving and excavation technology, with its ability to slash fuel consumption – and hence CO2 emissions by up to 20%.

One company that has committed to a moving quickly to more sustainable low emissions technology is Ventia, a leading essential infrastructure services provider across New Zealand and Australia.

Recently it has commissioned the first Komatsu Hybrid HB365LC-3 excavator in New Zealand at its transport sector quarry at Puketona, in the Bay of Islands.

Ventia has over 5,500 employees and subcontracting partners in New Zealand. With a history spanning more than 25 years across the region, Ventia is proud to support its New Zealand clients

Pictured below: Ventia's HB365LC Excavavtor, at work.

across transport, power, local government, water and telecommunications - supporting projects that connect communities in urban, regional and rural communities.

Ventia's new HB365LC-3 excavator combines Komatsu's industry-leading Hybrid technology with ultra-low emissions Tier 4 diesel technology and support's Ventia's strategy of redefining service excellence through its client focus, innovation and commitment to sustainability.

According to Neil Cates, Ventia's Regional Manager, Northland for its Transport NZ operations, sustainability at Ventia is more than just about reducing the company's environmental footprint.

"It's quite simply the right thing to do," says Neil.

"We strive to deliver our services in a sustainable and innovative way, and we plan to have 100% of our fleet either EV or hybrid by 2030."

Neil says that Ventia began speaking about this technology with Garth Dixon, Komatsu NZ's National Sales Manager, at last year's Quarry Conference.

"We looked at the Hybrid option and quickly saw that it has productivity benefits: much more powerful slew, faster cycle times and great fuel savings.

"Our main goal in purchasing this equipment has been to decrease downtime, increase productivity and decrease emissions.

"The Hybrid option resonated well with our capex approvers, and of course it was well aligned with Ventia's sustainability strategy," says Neil.

Shane King, Ventia's SHEQ (Safety, Health, Environment and Quality) Manager for the company's Transport NZ operations, says the new machine's safety and ergonomic features were also important elements in introducing the company's latest waka.

"I'm glad to see this new machine and all the new safety features that help our team, including really good ergonomics inside for operators," he says.

"As a past operator, and where we are as an industry at the moment, the mana this brings to our operators with the new piece of plant.

"That's the office they work in ten hours a day, so if we can keep our staff, we keep our retention and we keep our good people.

"That's a great advantage that Komatsu brings to us."

Shane says specific safety features, along with Komatsu's commitment to operator training and assessment helped Ventia's team understand the new equipment, its safety and quality features, and how to get the best from them.

"The other massive feature has been Komatsu's training and assessment, having their plant assessor come and talk to our guys. That gives them the key skills and understanding of the plant.

"That keeps them safe and ensures that they are looking after the plant and also looking after themselves at work.

"That way they are productive, they can get the material out, and they can go home safe for their families and spend the weekend with their whanau," says Shane.

Garth Dixon, Komatsu NZ's National Sales Manager, says the delivery of the HD365LC-3 Hybrid was an excellent example of how Ventia and Komatsu shared common goals around sustainability, the environment and safety.

"The HB365 is very efficient in the way it combines hybrid technology and Tier 4 diesel efficiency, giving fuel savings of up to 20% better than comparable machines," he says.

"It's also very productive.

"The electric slew combined the hydraulic power to the bucket, arm and boom produces a very efficient machine, especially in a quarry application as we have with Ventia's Puketona quarry.

"This type of work, slewing back and forth, loading crushers, loading trucks – that's where it is particularly productive," says Garth.

The introduction of autonomous haulage at South Flank is expected to deliver far-reaching safety, production and equipment utilisation and reliability benefits, and offers new skills and opportunities for BHP's mining and maintenance teams.

Komatsu provides autonomous-ready haul trucks for Pilbara South Flank iron ore mine

In early June, the first four of a fleet of 41 Komatsu 930E haul trucks began autonomous operations at BHP's South Flank iron ore mine, situated 156 km north-west of Newman and 9 km south of BHP's Mining Area C facility in the Pilbara region of Western Australia.

South Flank is Australia's largest new iron ore mine in more than 50 years. When it merges with the neighbouring Mining Area C operation, it will form the largest operating iron ore hub in the world, producing 145 million tonnes of iron ore each year.

The transition to autonomous haulage is expected to be completed at South Flank by September 2023, with the trucks controlled from a purpose-built control facility at the site.

Since July 2020, a fleet of Komatsu 930E autonomous-ready haul trucks, configured as conventionally driven trucks, has been moving iron ore and materials.

In January 2022, BHP approved moving the US$3.6 billion mine to autonomous haulage, to be phased in across five Autonomous Operation Zones (AOZs), from June 2022.

"All 41 of the 930E's on site are now in the process of being upgraded to fully autonomous operation, at the rate of four a month," said Garry Povah, Komatsu's General Manager Mining Automation.

According to Garry, Komatsu is on track to have over 430 autonomous trucks operating in Australia by the end of 2022, in mines across Western Australia and Queensland.

"Komatsu's autonomous technology helps drive job creation, with a focus on safety, diversity, upskilling and an innovative flexible work force that meets the needs of people and communities with business goals says Sean Taylor, CEO & Managing Director, Komatsu Australia.

"Not only does Komatsu's autonomous haulage technology have a proven record in safety, productivity and lower haulage costs, but we pride ourselves on our ground-breaking contributions to autonomous technology solutions in the industry," Sean says.

BHP has stated the introduction of autonomous haulage at South Flank is expected to deliver far-reaching safety, production and equipment utilisation and reliability benefits, and offers new skills and opportunities for BHP's mining and maintenance teams.

Covid start-up is a dry hire success

Jessi Martin, a 35-year-old mother of two, can truly claim to be a Covid-19 start-up success.

When Jessi was stood down from her job at Flight Centre for 5 months as a result of Covid-retraction, she bought a single long reach excavator and started a dry hire business from the backyard of her one- acre home in Brisbane's south-west.

"I had no customers and no prospects, but I registered a business name, South Side Digger Hire, and fired up a Facebook page to cold canvas, "Jessi said.

Jessi studied Business and Marketing and it's those skills which helped her launch a thoroughly modern business on-line and attract attention. Her husband, Chris, is a diesel mechanic for Komatsu, so Jessi also had some insight into the industry to build into her business plans.

Her first machine and her first customer arrived simultaneously – and two years later she has eleven pieces of hire equipment worth just on $1million.

"I hire each of the machines on their own trailer – to tradies during the week and to DIY builders and home improvers on the weekend, "she said.

"Now I've reached critical mass and I'm looking for business premises and may even have to employ someone."

"Being an outfit specialising in Dry Hire, we rely on our customers satisfaction in the machine to gain repeat business or secure new opportunity through positive word of mouth.

Repeatedly our customers comment on the PC18's reach, balance, power, comfort, economy and resembled feel of a much larger machine.

Such positive experiences has placed us with a large loyal customer base whom refuse to use anything else other than Komatsu"

"Dry Hire is a risky business - every day I wait to see the condition in which the machines will be returned, "Jessi said.

"Some days they all come home safe while on others you might get two or three with damage.

"But there's never been mechanical problems – and it's that reliability which has given us a good reputation with our customers and kept us in the black financially."

Jessi's first machine was a Komatsu PC18 MR-3 long-arm excavator, the company's smallest excavator and the staple for rental fleets and owner operators.

"Initially we purchased our first PC 18 based on its competitive price point in the market. Soon we realised we were getting much more for our money with unmatched reliability compared to other brands we have in our fleet".

She's added another six, plus recently a Komatsu PC35MR-5 ,3.5tonne machine which she only wet hires with a trusted operator.

Her other four pieces of equipment, including a two-tonne tip truck, are all intended to supplement South Side's excavator fleet to meet the needs of local trades in the fast-developing New Bieth rural residential area of the City of Logan where she lives.

"The tip-truck came because our DIY customers particularly were looking for a way of moving soil – and it was a market opportunity we could fulfil," she said.

Jessi took a gamble when she purchased her first machine, but her hard work and determination has turned this gamble into a successful business that is on track to go from strength to strength.

Repeatedly our customers comment on the PC18's reach, balance, power, comfort, economy and resembled feel of a much larger machine.

Pictured above: Holcim's morning prestart toolbox meeting with the team

How Holcim is using Komatsu's iSite fleet management system to drive production and safety breakthroughs – and reduce CO_2 emissions

As a global leader in sustainable and innovative building and construction solutions, Holcim is committed to driving its operations towards net zero. Over the past two years the company has been implementing a ground-breaking fleet management system set to play a key role in achieving its aims.

In 2020, Holcim began working with Komatsu to pilot Komatsu iSite, a quarry-specific "brand agnostic" fleet management solution harnessing the power of the latest ICT (intelligent communications technology) developments, to drive production efficiencies at its Lynwood Quarry about 160 km southwest of Sydney.

As a result of implementing the Komatsu iSite solution at Lynwood, Holcim has seen major improvements in production efficiencies.

These have included faster cycle times, more accurate truck loading, higher daily production rates, fuel savings of around 10%, and significantly safer operation of mobile plant.

Dave Manning, Lynwood's Pit Manager, who played a key role in implementing the system, described what has been achieved using Komatsu iSite at Lynwood as a career highlight.

"Working on this project, especially to get the benefits out of it that we have, has definitely been the highlight, seeing how it's improved the site and benefitted the team," he said.

The catalyst for seeking a solution like Komatsu iSite followed a review of the Lynwood operation by a team from Holcim's head office in Europe.

"That highlighted some inefficiencies – which we were working through – but we weren't getting there as quickly as we'd have liked to," Manning said.

"We'd been using another system, but it wasn't giving us what we wanted, so I sat down with Komatsu, told them what we needed to track, and how we'd like to get the data. They came back with a mining system that they were looking to pilot in the quarry industry.

"We jumped at the opportunity."

Early implementation

The first stage of implementing Komatsu iSite at Lynwood involved fitting monitoring systems and in-cab screens to the face loading and haulage units.

This allowed site management to see where trucks were throughout the load, haul and dump cycles, and for operators to see critical information about volumes and tonnages they were loading and hauling.

One area where Komatsu iSite quickly paid off for Holcim has been its contribution to reduced fuel burn across the Lynwood operation.

Pictured above: Operator using the in-cabin screen XD8 conducting electronic prestart.

"The initial data we got was just a screen pinpointing where the trucks were, and we could draw some information out of that just by recreating reports," said Manning.

"From that, we started to identify what were the main things we needed to get out of this system.

"And that's where the creation of the dashboard comes into it," he said. "Now I can log onto the dashboard and go into the utilisation, the production, the fuel burn and all those things that I wanted to know.

"I can log on and grab those things and look at any point in time."

Rapid efficiency improvements

The global Holcim team's review showed the biggest inefficiencies were in Lynwood's load and haul operation.

"To get the best out of the plant, out of the load and haul team, we needed to do something different. And with Komatsu iSite, we've achieved what we wanted in a fairly short time," said Manning.

"Our consent for load-and-haul out of the pit at Lynwood is only 15 hours, between seven o'clock in the morning to 10 o'clock at night.

"We need to get as much rock out of the pit up to either the boot, the entrance chute to the feeder before the material reaches the crusher, or ROM to stockpile for the night, so we can feed the boot for 24 hours a day.

"Using Komatsu iSite, we were able to see where there were lagging factors," he said.

"Now we've got data we can see where they are lagging, and what we need to do to fix them.

"The supervisors get emails every morning on how much production trucks are doing out of the pit; with this information and they can see where the bottlenecks are.

"They can analyse that extra data, to see if idle times are increasing or decreasing, or other trends.

"Then they'll get together with me, and we go through anything cropping up that's glaringly apparent, that we can deal with there and then."

Before Komatsu iSite was implemented at Lynwood, a typical 15-hour shift would see 13,000 to 14,000 tonnes coming out of the pit.

"Since having Komatsu iSite here, we've seen some 18,000 tonne days out of the pit now, which has been fantastic. And that's where we're gunning for consistently," Manning said.

"Being able to track and easily go and see what we're hauling out of the pit to the boot or ROM and make sure we're hitting those targets every day; that's the single biggest benefit.

"Within three months of installing the system, we were seeing benefits. Within six months we were achieving our truck loading KPIs. And within a year, the system had paid for itself," he said.

Reducing fuel burn

One area where Komatsu iSite quickly paid off for Holcim has been its contribution to reduced fuel burn across the Lynwood operation.

This is a critical consideration for a company that is globally committed to sustainable operations and achieving net zero CO_2 emissions as soon as possible.

One way to quickly reduce fuel burn is by eliminating unnecessary truck idling. Komatsu iSite has made a quick and effective difference here.

"When we were analysing the data coming off the trucks, one of the elements we could log was the idle time for the trucks waiting in and around the pit," said Manning.

"Being able to track idle time and utilisation allows us to manage fuel burn in particular.

"In terms of machine utilisation, you're going to use the amount of fuel you use going up and down the haul road," he said. "There's not much we can change to that, other than road conditions, gradients and the like, which we'd put in place already.

"But now using Komatsu iSite, we've been able to get the operators on board so, if the truck's just going to sit there with the engine running, they will turn it off.

"The truck fleet's idle times have seen a 6 percent improvement and similarly, wheel loaders have reduced from 14 percent to 7 percent.

"We do have a fairly large footprint here at Lynwood, which means we make a fairly substantial contribution to CO_2 emissions.

"Now with Komatsu iSite we have been able to significantly reduce these emissions through running our operations far more efficiently, and by reducing idle times," said Manning.

"I know in our discussions with Ampol, we've seen around a 10% reduction in our fuel burn for our trucks out of the pit."

Pictured above: WA900-3E0 Wheel loader Loading the HD785-7E0 Rigid Truck.

Bringing the operators along

Manning described the initial response from operators about having Komatsu iSite in their machines as being "somewhat sceptical".

"There was a bit of Big Brother watching them, but we made it clear it's not about that.

"It's around getting the best out of the trucks, so we can help the crew work smarter, not harder," he said.

"Once we started showing what we were getting out of it, the operators got on board. It became a bit of a competition between the day and afternoon shifts to see who could get the best production.

"The key to it was about being transparent with them," said Manning.

"We're now at the point where I had a guy on one of the new excavators who asked if it was getting Komatsu iSite. 'It'd be good,' he said. 'We can see what I'm putting on the trucks and make sure they're not ripping me off'.

Komatsu iSite has also meant the days of walking around machines doing paper-based manual pre-start checks are over.

"Digital pre-start is built into it. When the operator gets in the machine, they'll log on and go through the normal pre-start for the truck, loader, digger, whatever it might be.

"If there's any action items that need to be addressed, critical items that need to be addressed straight away, it goes to our maintenance leading hand straight away, and he can get them addressed immediately."

This ensures that critical items can be rectified urgently, while action items can be dealt with at the next service.

Driving a better safety culture

Since being introduced, a major benefit of Komatsu iSite at Lynwood has been to help drive a better safety culture.

In one instance, a supervisor doing their morning run had noticed evidence of a potential near-miss event, and asked Manning to play back the previous night's video footage.

"I was able to rewind back and see evidence of a near-miss event. While we have a strong reporting culture, we can use this type of footage to reinforce the importance of reporting near-misses which gives us additional opportunities to learn and improve further," he said.

Manning's team has also used Komatsu iSite to virtually eliminate truck speeding.

"When we first implemented the system, we could see we were getting a number of speeding violations every day," he said.

"Pretty soon the team realised this, because we started presenting them with anonymised reports, showing them where we were having the alerts.

"Within six weeks, we were down to a handful. And now we don't see any; at most it's around two or three KPHs over, which is something we can manage."

In the less than two years Komatsu iSite has been operational at Lynwood, Manning said the biggest benefit has been the production efficiency improvements it's driven.

Further opportunities

Manning said Holcim is now considering how it may roll out Komatsu iSite to its other Australian quarry operations.

He's had discussions with Holcim management in other states, and the company's procurement team has been talking with Komatsu about purchasing Komatsu iSite-enabled machines for other quarry sites.

"We have an operations improvement team here in Australia now and one of their aims is to try and get more visibility across our sites.

"So, instead of having to ring me directly, they will be able to tap into the Komatsu iSite system from wherever they are, so they can look at the metrics and where we're at – and then talk to me about some other improvements that they might identify that I may have missed.

An important reason why Holcim went with Komatsu iSite was because it was "brand agnostic", so it can be used across all makes of equipment.

"Often at a quarry level, we don't really get the choice in what machines we buy; that's all handled by procurement. So, if we did have a Cat, or a Hitachi, or a Volvo machine, we could put Komatsu iSite on any of those machines."

Biggest benefits

In the less than two years Komatsu iSite has been operational at Lynwood, Manning said the biggest benefit has been the production efficiency improvements it's driven.

"However, I'm not going to discount the safety side as well," he said. "To be able to reduce the speeding events by as much as we did, as quickly as we did, that's a major achievement in helping to prevent potential serious incidents.

"But to get the production efficiencies and payback as quickly as we have … well, we didn't think we'd get it that quick. To get a less than 12-month payback for the system, that has been fantastic," he said.

Pictured above: HD785-7E0 Rigid Truck with a full load hauling a productive load up the man haul road to the primary crusher.

Pictured above: PC850SE-8 Excavator Loading the HD785-7E0 Rigid Truck.

Pictured above: Operator touching the in-cabin screen from the seated operator position.

myKomatsu introduces quick and easy ordering of scheduled service parts online

In order to ensure earthmoving, quarrying and mining equipment remains productive, reliable, safe and efficient, customers need to follow the regular servicing requirements specified for a manufacturer's Service Meter Reading (SMR) hours.

The parts and consumables needed to carry out a scheduled service can vary considerably depending on the machine and the relevant SMR service, so it can be a time-consuming process to ensure all the parts required have been ordered.

To make this process easier, faster and more efficient, Komatsu's online parts portal, myKomatsu allows customers to order their scheduled service parts through pre-populated lists, using an easy-to-use, intuitive process.

In response to customer demand and requests, Komatsu customers can order their scheduled service parts through its myKomatsu online customer portal, at https://my.komatsu.com.au/scheduled-service-parts. Customers must be logged in to gain access to this new functionality.

According to David Small, Komatsu's General Manager – Aftermarket, ordering through myKomatsu's pre-populated list feature ensures their order contains all the parts and consumables required for a machine's SMR service, so that it fully aligns with the company's National Service Standards.

"Komatsu's National Service Standards specify which parts are required for each SMR service interval; these standards have been developed to build on and expand Komatsu's factory standards," says David.

"By using scheduled service parts based around the National Standard, customers are assured they are maintaining their machines using the right OEM parts – backed by full Komatsu warranty.

"Customers' ability to order these scheduled service parts using pre-populated lists through myKomatsu greatly streamlines and speeds up the ordering process, so that the correct parts are supplied for the right machine every single time.

"This helps ensure that a machine's productivity and uptime is maintained, with unscheduled downtime far less likely to occur," he says.

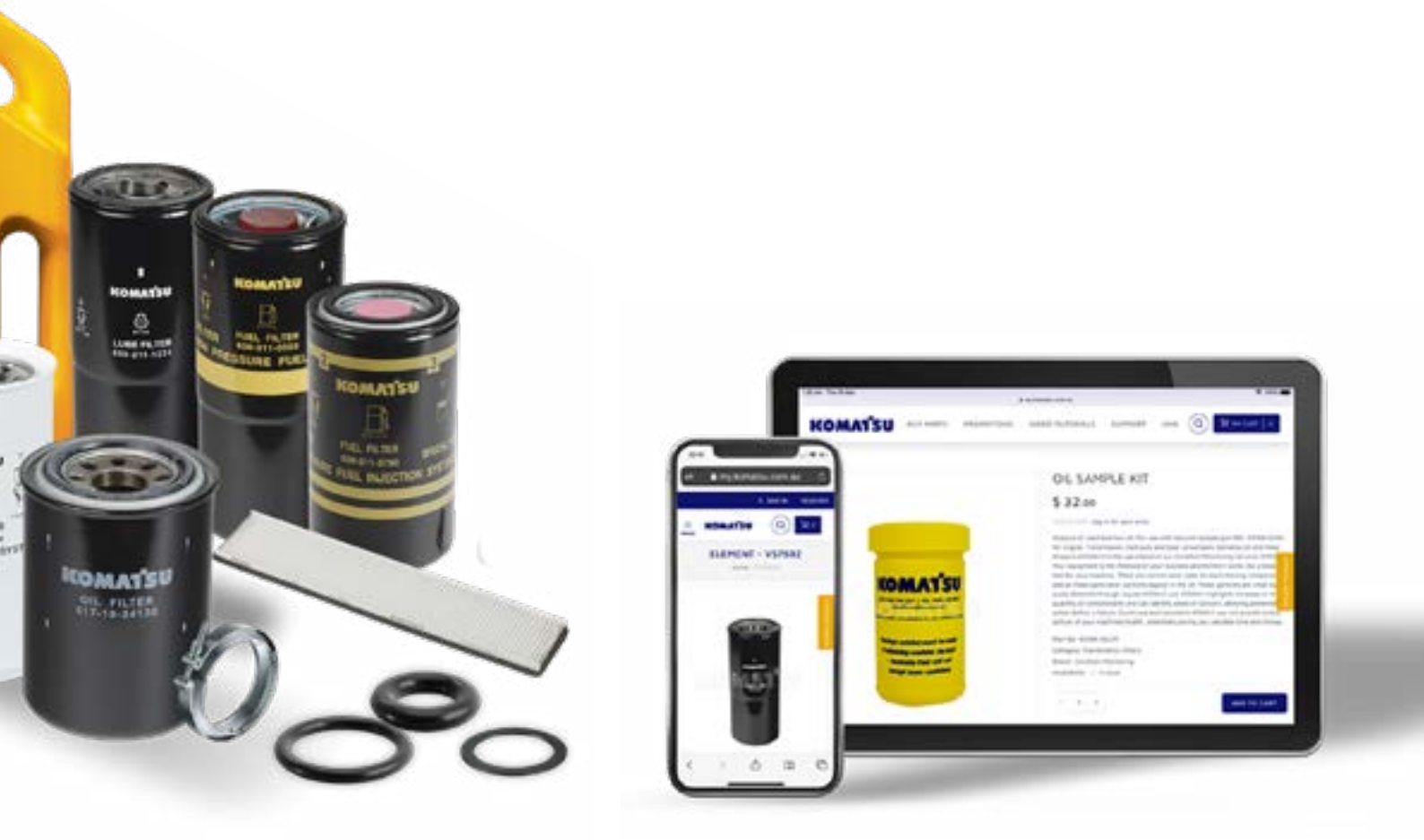
Scheduled service parts included within Komatsu's National Standard include:

- Filters, including fuel, oil, hydraulic, air, coolant and brake fluid
- Fluids, including coolant, oils and greases
- KOWA oil sample kits
- Hoses
- Nuts, bolts, washers, seals and other small items

"myKomatsu automatically creates a pre-populated list of scheduled-service parts – matched by serial number to the customer's actual machine – that contains the full range of parts required for the next SMR service interval.

"That means they are not taking any shortcuts or finding out that they don't have all the parts and consumables they need for a scheduled service," says David.

Within myKomatsu, customers can search for scheduled service parts based on their machine model, as well as by serial number, to ensure they have everything they need. Premium online account customers can also search according to their fleet records.



David says it's a simple three-step process to identify – and then order – the correct pre-populated parts list for a machine's next scheduled service, giving customers' a fast and efficient online shopping experience:

Step 1: Enter machine's details (either model number or serial number), or select a machine from a fleet list (Premium Online Account customers only).

Step 2: Select the machine's engine serial number range.

Step 3: Select the upcoming SMR service interval, between 250 and 6000 hours.

"Once identified, each pre-populated parts list shows the individual items within it, so a customer understands what's required, including the individual parts, and the quantities of each," he says.

"Customers can add extra items, or even delete some if they don't wish to purchase. At all times, the flexibility in the ordering process is within the customer's control."

Scheduled service parts can be added to a shopping cart with a single click. They can also be saved as a "Wishlist" for a future checkout without having to repeat the process.

Scheduled service parts orders can also be shared with others within an organisation, including identification of the model and service interval.

"Another great enhancement on myKomatsu is stock availability of parts," says David. "This includes stock within its local distribution centre and local branch.

"Service parts ordered through myKomatsu are shipped from our region-wide network of distribution centres and branches, directly to the nominated location for that machine, whether it's the customer's workshop, jobsite or office.

"This latest upgrade is the latest in Komatsu's suite of offerings through our myKomatsu online customer portal.

"We're excited to be able to continually grow our digital offering to make it easier for customers to do business with us online," says David.

"From the rollout of our online portal in 2019, to the integration of our Condition Monitoring Services website in 2020, and now the quick and easy online ordering of scheduled service parts, this is the latest example of how we are constantly responding to customers," he says.

The myKomatsu online customer portal is available at https://my.komatsu.com.au and can be accessed by any web-enabled device: desktop, laptop, tablet or smartphone, 24/7 from any location.

To make this process easier, faster and more efficient, Komatsu's online parts portal, myKomatsu allows customers to order their scheduled service parts through pre-populated lists, using an easy-to-use, intuitive process.

Pictured above: Ben Gallagher and Caitlyn Knox completing the restoration.

A Helping Hand!

Back in 2020 a couple of Komatsu Plant Mechanical apprentices (Caitlyn Knox, 3rd year now completed; & Ben Gallagher, 2nd year now 3rd year) lent a hand to the Australian Army Museum of Military Engineering (AAMME). This is not the first time Komatsu apprentices have undertaken a restoration task as such; this time it was a little different, it was fabrication!

(You might be asking yourself, is there any Komatsu equipment in the AAMME today? Well, there is! It's a D155A-1 dozer fitted with a Root Rake & Tree spear)

Firstly, where did this military connection all start?

For those that are not aware, Komatsu's first liaison with the Australian Defence Force (ADF) dates to the early eighties when a fleet of D155A-1 Dozers and WS16S Scrapers were supplied. At the same time Komatsu were proud to sponsor and provide respective gifts to the Trainee and Trainer of Merit on the Engineer Basic Plant Course (now evolved to the Civil Construction Plant Course). This sponsorship still occurs to this day!

(As time has rolled on, the ADF has also procured other engineer kit through the years i.e. several PC130-7's and a fleet of PC50MR-5's with a range of attachments!)

Anyhow, back this story...

Due to maintaining strong industry and philanthropic links with our military engineers, the opportunity arose to lend a helping hand which involved our own apprentices. Many years back, the AAMME volunteers rebuilt an "Aveling-Barford Calf-dozer" from some remnants that were kindly donated. Unfortunately, the actual dozer blade and support structure could not be saved (rust had taken over!).

Our own Shine Summerfield (through volunteering at the AAMME) asked the question of could some apprentices assist? The AAMME staff were very interested and were happy to get involved as it would show off the Calf-dozer in all its glory!

Once approval was obtained from respective stakeholders (including Craig Fitzsimons & Eric De Gois from Komatsu), the project team leader (Matt Buttigieg) set about locking in a fabrication build supervisor. If you want steel & fabrication, the 'go to' man is Mario Andrade... Right!.

During this project an additional enlistee and guiding light for the "hands on" component was that all round-nice guy, Marco Dos Santos!

Whilst scoping out the project for the Calf Dozer the opportunity was also grabbed for assisting with constructing a tyre stand! The AAMME also now has an engineer PMV (Protected Military Vehicle) that ran over an IED (Improvised Explosive Device). The blast ripped through the tyre and rim area; hence the tyre will be displayed off the vehicle so the resulting damage can be viewed.

Being a community orientated project, our two supervised fabricating youngsters were also assisted by the following groups:

DCL (Mr Peter Cameron) - supplying blade material & pipe.

Southern Steel (Mr Brian Bradman) - supplying metal plate, &

Bendco (Mr Sonny Hoang) – who happily rolled the steel to shape the blade!

In addition to above, industrial painting was also sprayed by Paul Rapp & Co (Mr Justin Rapp); The "Rapp's" have assisted with many tasks and events over the years at the Fairfield site. The blade was undercoated and will be finished in British "Bronze Green" by some dedicated ex-military volunteers. The tyre stand has a fully-fledged black finish.

The respective items, along with many other military engineer pieces of kit is open to the public at the Royal Australian Engineer (RAE) museum with Holsworthy Barracks.

A long-awaited morning tea (delayed due to COVID) was held at the museum to see the resting place of the little dozer and tyre stand, while Shine gave a tour of the facility and all its historical treasures on display giving a very detailed and quite interesting look into the past and present of this wonderful place.

Many thanks have been offered from the Army History Unit (AHU); this was directed at all staff, the generous steel suppliers and manipulators, Komatsu management and sundry.

Special thanks to Caitlyn, Ben & Marco for your effort; additionally, thanks to Mario for the leadership!

Pictured above: Mario Andrade, Ben Gallagher and Caitlyn Knox , with the fully restored Aveling-Barford Calf-Dozer.

Pictured: The Komatsu team with the restored Aveling-Barford Calf-Dozer on display at the AAMME.

Pictured above: Komatsu's Every Day Drone (EDD) Technology being used in the field.

Smart Construction spotlight: Komatsu's Every Day Drone (EDD) Technology paired with Smart Construction Edge

Drone technology has revolutionised site surveying, mapping and management for the construction, quarrying, mining, utility and agriculture, sectors, with its ability to offer outstanding improvement in accuracy, efficiency, productivity, data availability and safety.

Komatsu's Every Day Drone (EDD) technology part of its Smart Construction suite of site management and productivity offerings – has been developed to integrate seamlessly with project delivery systems.

It is fully integrated with other Smart Construction applications and solutions to improve ease of use, productivity and efficiency by seamlessly sharing data between each other through on premises and cloud technology.

"A high precision aerial survey using our EDD technology can be 50 percent faster than a ground walking survey – and its boots never get muddy," says James Mackenzie, Komatsu's Smart Construction Technology Consultant.

"And it's much safer, because survey crews and other personnel do not need to be on the ground around heavy equipment, or on high benches or unstable stockpiles to carry out precision surveying and mapping."

A key element of Komatsu's EDD technology is its use of Smart Construction Edge processing, so that drone survey data is immediately processed on site.

"This ability to process the data on site quickly and efficiently means that its available to a jobsite the same day – which is when they need it," says James.

"This is where the value is realised, through these improved response times and eliminating the need for an internet connection to upload the survey data for processing.

"Komatsu's EDD mapping solution is a major advance in site planning, mapping and progress management through our use of Smart Construction Edge processing to provide this fast data availability.

"This rapid processing of the data collected allows an EDD mapping user to create a 3D terrain map before leaving the jobsite, so that drone data can be validated, checked and adjusted in the field," says James.

Other benefits of Komatsu's EDD technology include:

Easier and faster surveys: EDD can capture accurate quantities for production tracking and billing from the air and process the data in as little as 30 minutes (including around 200 aerial photos) without the need for ground control points. Quantities and progress can be visualised seamlessly into Smart Construction Dashboard, as well as other survey software, when required.

Unlimited tracking potential: Drone flights can be as often as needed to track production. EDD and Smart Construction Edge enables users to gather and analyse data throughout each phase of a project: daily, weekly or whenever required for an operation.

Limit downtime: Production can continue uninterrupted when a drone flight is taking place. Unlike the downtime that comes with a walking survey, production disruptions are limited, since flights are high above on-ground activities.

"Komatsu EDD surveys can be completed at a fraction of the price of traditional survey, plus they significantly speed up topographic surveys and reduce processing times," says James.

"This technology also has the potential to elevate survey teams to new levels of clarity by integrating frequent aerial mappings into workflows.

"Drone surveys incorporate hundreds of thousands of points – instead of hundreds of points with traditional surveys – so accuracy is greatly enhanced," he says.

Another advantage of EDD is the ability to view job site progress from the sky.

"EDD technology can capture 4K video and still photos for a wide variety of uses, including project progress tracking, time lapse media, asset inspection and marketing applications."

Komatsu's Smart Construction team now has many thousands of hours of experience with EDD technology and Edge process in the field, and team members throughout Australia, New Zealand and New Caledonia are available to assist project and site managers, along with senior company management, in implementing this technology in their operations.

"Komatsu EDD technology with Smart Construction Edge processing has been proven to be faster than any other processing method, it's fully integrated into other Smart Construction processes, and allows for an automated workflow," says James.

"In addition, it's a very cost-effective solution. The more you fly, the cheaper each flight becomes."

Smart Construction spotlight: RetroFit Kits (RFK) and pilot app enabling remote access and management

Komatsu construction excavator owners looking to add machine guidance and payload capabilities to their machines now have the option of a Komatsu Smart Construction Retro Fit Kit (RFK) – at nearly half the price of third party "bolt on" 3D machine guidance systems.

Part of the Komatsu Smart Construction suite of site management and productivity offerings, Komatsu RFK includes 3D machine guidance capabilities, an integrated payload meter, and the Pilot Web and Device application which enables remote access and management of RFK-equipped machines.

The retrofit kit is available for all current-model Komatsu excavators from the 13 tonne PC130-8 to the PC360LC-11, with exclusion of the Ultra Urban UU class machines.

According to Marc Brook, Komatsu's Smart Construction Technology Consultant – Smart Construction Division, RFK's 3D machine guidance capabilities allow an operator to accurately excavate, fill, level and trim using a project's design construction data.

"It does this using location information provided via multi-constellation GNSS and an in-cab screen that indicates levels, slopes and gradients relative to the bucket edge," he said.

"It's augmented by our Komatsu-designed integrated payload meter, which enables operators to accurately load trucks, including overload alerts, and maximising payload optimisation.

"Payloads are displayed on the in-cabin monitor, while payload reporting and history will be available on our forthcoming Smart Construction Fleet application," said Marc.

"This integrated payload meter also assists with chain-of-responsibility management by accurately measuring loads on and off site, as well as tracking tonnes of material moved and load counts."

Brent said the Komatsu Pilot Web and Device app, available for Android devices, can register multiple machines and attachments, and allows remote acquisition of as-constructed machine data in real-time, this as-constructed data can be visualised every 24 hours in the Smart Construction Dashboard.

"In addition, it allows 3D design data – in multiple industry-standard formats – to be transferred to RFK-fitted machines, as well as managing and monitoring these machines."

He said a major advantage of Komatsu's RFK offering was its integration of a payload metering system, both 3DMG and Payload can be displayed at the same time to enhance the value opportunity to the operator and project.

"Komatsu RFK performs 3D guidance functions similar to third party aftermarket guidance systems, at a significantly lower price.

"And by integrating payload into the same system, at no additional cost, we have ensured everything works together seamlessly."

Komatsu RFK also offers full digital connectivity to other Komatsu Smart Construction applications, including Smart Construction Fleet and Smart Construction Dashboard.

"Smart Construction Fleet's tracking capabilities allow users to get detailed reporting on every connected machine in the fleet, whether RFK-equipped, iMC (intelligent Machine Control) excavators and dozers, or other machines," said Marc. Smart Construction Fleet solution is likely to be released later this year in Australia and New Zealand.

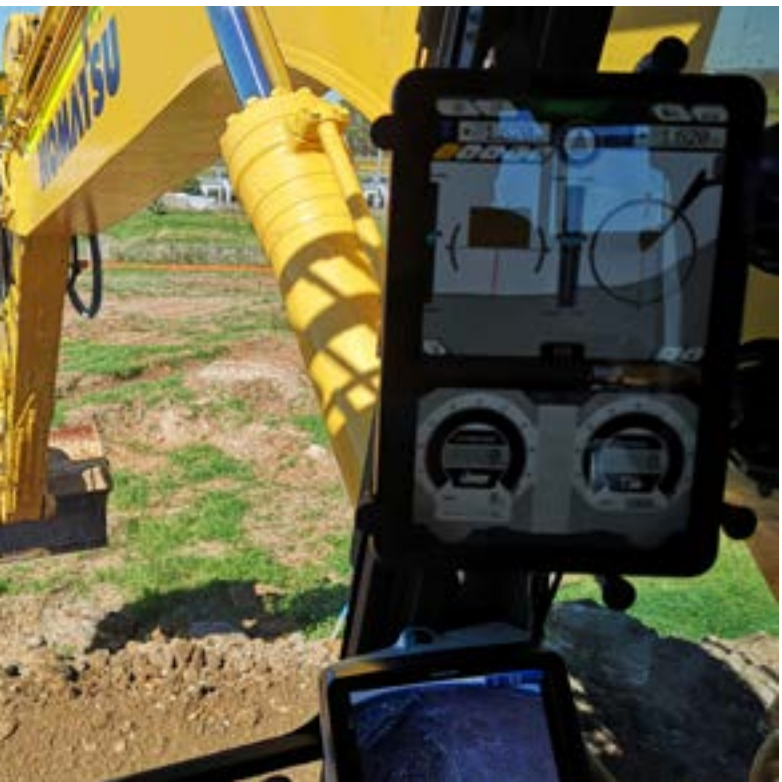
"These also include alerts and safety reports, traffic management and more."

Smart Construction Dashboard allows an RFK-fitted machine to be connected to site visualisation software, and to provide management with site progress updates direct from a machine's bucket edge or dozer blade including the dozer tracks.

"Komatsu RFK provides owners of Komatsu construction excavators with a technically advanced, cost-effective solution when they need to upgrade their machines' capabilities to achieve precise, accurate machine guidance – and integrate their operations into Smart Construction's site and project management capabilities," said Marc.

"In addition, the option of RFK on Komatsu excavators complements our premium iMC 2.0 excavator offerings – which now include automatic features, such as Auto Grade Assist, and Auto Tilt Control – RFK makes an ideal entry point into machine guidance and payload for our customers."

"Komatsu RFK performs 3D guidance functions similar to third party aftermarket guidance systems, at a significantly lower price."



"Being able to visualise exactly how a project is progressing, and which areas may need additional attention is a huge step forward in successful project management and on-time delivery of a project."

Smart Construction spotlight: Dashboard makes visualising and analysing your jobsites easy

Infrastructure and resource-extraction projects can be complex undertakings that have many levels of detail – along with the big picture – that site managers at all levels need to be across at all times.

Whether it's measuring progress on a daily, weekly, monthly or longer basis, deciding where best to focus production assets, or planning future works, being able to visualise all elements of a project can play a vital role in successful management and implementation.

Komatsu's Smart Construction Dashboard – part of its Smart Construction (SC) suite of management and productivity offerings – allows users to visualise site-related data on a single screen, so they know where they are with progress to date, and where they want to be in the future.

"SC Dashboard lets users visualise and analyse any jobsite in 3D, integrating design data, drone-based aerial mapping data and machine as-built data in a single application," says James Mackenzie, Komatsu's Smart Construction Technology Consultant.

"Dashboard integrates 3D design data with aerial mapping along with machine data from Komatsu intelligent Machine Control (iMC) machines, SC RetroFit Kit (RFK) equipped machines or compatible aftermarket grade control systems to confirm quantities and progress each day."

SC Dashboard allows users to choose what elements of a project they want to measure – whether it's the entire jobsite, or just certain areas.

"Users can easily quantify volumetric production measurements for a whole site or narrow them down to defined areas of interest," he says.

"They can compare the initial survey versus the project design, current progress against the design, or how productivity is trending over the project's life."

For resource extraction projects like quarries, SC Dashboard, in conjunction with Komatsu's SC Every Day Drone (EDD) technology, provides an invaluable tool for measuring stockpile quantities.

"Users can make stockpile measurements in a snap for material quantities, reporting in terms of volumes or tonnages. They can even assign pricings or costs to different materials," says James.

SC Dashboard has been designed for easy and efficient collaboration between all levels of management and other parties involved in a project in an online cloud-based environment.

"Users can easily generate industry-standard cut/fill colour mappings so they can visualise material movements, creating standardised reports for download, emailing or printing."

And through SC Dashboard's seamless integration with Komatsu intelligent Machine Control (iMC) machines and SC RetroFit Kit (RFK) equipped machines, machine as-built data and merged topography data can easily be downloaded for use.

"SC Dashboard allows users to visualise every aspect of a project's progress, from initial siteworks to final trim and placement," says James.

"Stakeholders can watch a site's progress using Dashboard's timeline functions, including playback, for the duration of a project.

"And it has the ability to allow management to investigate more deeply into any issues or potential problem areas through its ability to show cross section measurements from machines as-built data or drone surveys.

"Accurate, reliable, up-to-date information is critical to successfully managing any project, and Komatsu's SC Dashboard offering gives management the perfect suite of tools to make sense of that information, presenting it in a clear, easy-to-understand format," says James.

"Being able to visualise exactly how a project is progressing, and which areas may need additional attention is a huge step forward in successful project management and on-time delivery of a project."

"This means a new design can be implemented on-site within minutes of its release."

Smart construction spotlight: Komatsu's Smart Construction Remote enables remote log-in access and design file transfer from anywhere

Over the past fifteen years, 3D machine control technology has revolutionised the earthmoving and civil construction sectors, enabling excavation and final grade machines to work precisely and accurately off detailed design and survey data.

Typically, that has required site and project management resource to physically deliver design files to each machine on a site.

Komatsu's Smart Construction Remote, part of its Smart Construction (SC) suite of management and productivity offerings – allows the remote sending of design files directly to machines.

In addition, it allows management to see exactly what an operator is seeing on their in-cab monitor, and easily view and locate all connected Komatsu machines, says Brent Parker, Komatsu's National Operations Manager – Smart Construction Division.

"SC Remote software connects Komatsu intelligent Machine Control (iMC) dozers and excavators, SC RetroFit Kit (RFK) fitted machines, as well as compatible manufacturers aftermarket grade control systems and devices.

"Instead of having to drive to a site to deliver updated or new design files, SC Remote saves time and effort, allowing users to locate machines according to job site, and upload or download files at any time, from anywhere," says Brent.

"This means a new design can be implemented on-site within minutes of its release.

"Users can transfer design files to multiple machines or devices on site with a single click. And any machines or devices that are offline at the time can still receive file transfers up to 96 hours later."

Brent says SC Remote also gives users significantly greater control over jobsites and machines.

"Because users can view the in-cab machine monitor, they can troubleshoot or add new files to any machine without the time requirements of traditional methods.

"They can log in to a machine at any time and see exactly what the operator is seeing and how the job is progressing.

Site supervisors can also use the remote view function to ensure the operator is using the correct design file with the correct settings.

"This allows them to remotely help both new or experienced operators with the training and the support they need," he says.

SC Remote can be used on selected, but not limited to, Android tablets and Windows devices like, Topcon GX60, GX55, GX75, FC5000 and FC6000 devices, and Trimble Earthworks/CAT Next-Gen TD520 devices.

"SC Remote gives project managers and supervisors unrivalled access to machines carrying out precision earthmoving and finishing work, so they have far greater control, insights and visibility of a project," says Brent.

As a way of ensuring quality and supply reliability for customers, Komatsu has recently set up a remanufacturing facility for DPFs at its Fairfield head office in Sydney.

Komatsu now offers remanufacturing option for Diesel Particulate Filter's

Ultra-low emission diesel engines that power earthmoving equipment are fast becoming industry standard.

Despite not being mandated under environmental standards in Australia, government departments, major contractors and project managers keen to reduce their impact on the environment are increasingly giving preference to earthmoving equipment suppliers who can offer machines that comply with Tier 4 Final emission requirements.

Tier 4 Final engines reduce both Diesel Particulate Matter (PM) and nitrous oxide (NOx) levels by 90% when compared with previous generation Tier 3 engines.

Komatsu engines achieve this through a combination of Closed Crankcase Ventilation (CCV), optimised combustion systems, advanced electronic controls and heavy duty exhaust gas after-treatment.

These include cooled Exhaust Gas Recirculation (EGR) systems, Variable Geometry Turbochargers (VGTs) and Diesel Particulate Filters (DPFs).

A critical element of ensuring Tier 4 engines achieve such significant reductions in PM and NOx level, is the Diesel Particulate Filter (DPF), a regenerating filter that captures soot and ash.

Typically, it has a life expectancy of 4500 hours or more (depending on application, operating conditions and operator practices) before requiring replacement or a major overhaul, says Steve Bowling, Komatsu's National Operations Manager - Manufacturing Support.

As a way of ensuring quality and supply reliability for customers, Komatsu has recently set up a remanufacturing facility for DPFs at its Fairfield head office in Sydney.

Komatsu's DPF Reman process involves a series of quality assurance inspections and tests at all stages of the process to ensure they continue to meet emission and reliability standards, says Steve.

This includes high-pressure air cleaning and/or baking of the Diesel Oxidation Catalyst (DOC) and the Catalysed Soot Filter (CSF), the primary elements that make up the DPF core.

In addition, the DPF Reman process covers 100% replacement of all gaskets, hardware -essential due to the high operating temperatures in these units - along with pressure and temperature sensors to ensure reliability.

Komatsu's DPF Reman facility caters for the 9 inch, 10.5 inch, 12 inch and 14 inch diameter core sizes currently used on Komatsu T4 engines.

"Changing over a DPF is a very straightforward process for our customers," says Steve.

"We offer a fixed price, depending on the machine model, and it's simply a matter of giving us the old DPF when we swap it out.

"Komatsu Reman DPFs are available through our service and parts departments throughout Australia, New Zealand and New Caledonia, and cost approximately one-quarter to one-third the price of a new unit.

"And as with all our Reman products, Komatsu Reman DPFs are backed by our full factory warranty," says Steve.

Join in on the fun and get your creations posted on our social media platforms!

Create a green Christmas this year!

As adults, we are beginning to understand now more than ever the importance of creating a more sustainable future for generations to come. Recycling is one of the easiest ways we can do our part to ensure we are helping shape a greener planet – and it doesn't have to be boring!

These holidays, get creative with your kids and ***'create a green Christmas'***, by building a Christmas tree and decorations using only recycled materials

It's a great way to inspire our children to adopt more sustainable habits, so they can enjoy a cleaner Earth.

Rules for entry:

1. **Kids build a Christmas tree** and make decorations using only recycled materials.
2. **Submit photos and or/videos** of creations to **marketing@komatsu.com.au** along with your name, age, address (for prize) and a short description of what materials were used and how they were created.
3. **The first 50 entrants will receive a $20 Coles Group & Myer gift card** for their participation. Gift cards will be sent to the nominated address provided upon submission.
4. **Entry closes 12pm January 20th 2023.**

Terms and conditions: https://komatsuweb.link/create-a-green-christmas-2022

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