

PUSHING AHEAD

Komatsu PC360LCi-11 iMC 2.0 excavator

New technology helps
increase efficiency



A Message from the President



Ronald Zagami



Dear Valued Customer:

As technology in the construction industry continues to expand, the benefits are becoming increasingly obvious — improved efficiency and production, cost savings, and increased safety. Want to train new operators on how to move dirt before they ever actually sit in a machine? There are now advanced training tools such as simulators that allow new employees to gain experience in a safe environment. Want to track your projects digitally, and reduce paper consumption? With technology, you can.

Komatsu has a suite of Smart Construction customer support solutions designed to help companies digitally transform their operations throughout every phase of a project. You can read about Komatsu's new intelligent Machine Control (iMC) 2.0 technology, which introduces additional features such as auto tilt bucket control and bucket angle hold control on several mid- to large-sized construction excavators, including the PC290LCi-11, the PC360LCi-11 and the PC390LCi-11.

Most of the information needed to make important fleet management decisions is now available via Komtrax telematics, which can be accessed through a My Komatsu account. Komtrax data includes machine utilization, fuel consumption and idle time. Learn how to access this information and use it to your advantage.

While technology is relatively new in the construction industry, sustainability is not. Construction has been a leader in recycling and reusing materials, as well as diverting them away from landfills. That is great for the planet, but did you know those practices are potentially profitable, too? Discover how focusing on sustainable practices can benefit your bottom line.

Plus, after enduring the hottest summer on record last year, protecting workers from the heat should be a top priority. We offer some tips to help you get prepared for the hot summer days ahead.

As always, if there is anything we can do for you, please call one of our branch locations.

Sincerely,
Clairemont Equipment Company



Ronald Zagami,
President

**Technology is
transforming
the construction
industry**



PUSHING AHEAD

www.CECPushingAhead.com

In this issue

Customer Success Story pg. 4

See how Triangle Civil Services save time and money with a Komatsu D61PXi-24 intelligent Machine Control (iMC) 2.0 dozer.

Advanced Excavation pg. 7

Check out Komatsu's new iMC 2.0 excavators.

Connected Construction pg. 8

Examine the ways in which job site connectivity provides profit potential, such as reduced maintenance costs.

Summer Safety pg. 10

Prepare for the hot summer days ahead with these tips.

Safety Spotlight pg. 12

Read about how technology makes training safer for new employees.

Tech Talk pg. 14

Learn how to integrate technology to overcome job site challenges.

Go Green pg. 18

Discover how to increase profits with sustainable practices.

Telematics Talk pg. 20

Understand how to access Komtrax data through My Komatsu and use it for savings.

Insider Tips pg. 23

Take a look at Komatsu's new products and programs.



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Published for Clairemont Equipment Company.
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Triangle Civil Services sees significant savings on levee project with D61PXi-24 iMC 2.0 dozer



Toby Berwick,
owner



Jerrod Fussell,
project manager/
estimator



Watch the video

From land clearing to finish grading — such as soil remediation, mass earthwork and underground utility installation — Triangle Civil Services and their staff of about 100 employees are well acquainted with nearly everything earthwork-related.

“We generally do commercial and industrial work for general contractors, developers and governmental entities,” said Toby Berwick, owner. “Typically, we don’t do much highway work and very little residential unless a friend calls and asks for some help. It’s our preference to do a complete site package, but we will break out our services at customers’ requests. Whatever we can do to help.”

Currently, one of Triangle Civil Services’ crews is moving about 40,000 yards of dirt to build a 3-mile levee designed to hold dredged material from a channel improvement project. Silt will be pumped into the levee area, and when it settles, the area will be drained. To raise the existing elevation 3 to 4 feet, the crew is digging from the interior of the levee and placing material on top.

Reducing staking

Using its new Komatsu D61PXi-24 intelligent Machine Control (iMC) 2.0 dozer

to place the dirt has helped save the company a significant amount of time and money thanks to the built-in GPS machine control, noted Jerrod Fussell, project manager/estimator.

“Traditionally, there would be a lot of staking for a levee project of this size,” Fussell emphasized. “We did an initial staking for control points and have not had to do much else. We loaded the model into the machine. The dozer constantly knows where it is in relation to the final elevation, so we don’t have to focus on surveying or restaking.”

Bronson Barclay, a project manager who oversees the company’s civil division, runs the D61PXi-24 as well as a D51PXi-24.

“The iMC cuts down a lot of rework, which helps increase efficiency to further save time and costs,” Barclay pointed out.

“The plans are right there in front of the operator to guide the machine in the right direction. The dozer knows — based on where it is — whether to cut or fill, and it automatically does it. It’s also great that there aren’t masts or cables to put up or take down.” ■



Bronson Barclay, project manager, places dirt with a Komatsu D61PXi-24 intelligent Machine Control (iMC) 2.0 dozer on a levee project. “The iMC cuts down a lot of rework, which helps increase efficiency to further save time and costs,” Barclay pointed out. “The dozer knows — based on where it is — whether to cut or fill, and it automatically does it. It’s also great that there aren’t masts or cables to put up or take down.”

▶ VIDEO





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Proprietary iMC 2.0 promotes significant productivity gains for Komatsu's mid- to large-sized construction excavators

Productivity is the key to success on the job site, and the faster a crew can reach maximum productivity, the better. As part of Komatsu's suite of Smart Construction products, services and digital solutions, its intelligent Machine Control (iMC) 2.0 gives contractors the opportunity to take advantage of sophisticated, productivity-enhancing automation.

"Aimed to quickly lessen the skill gap between new and experienced operators — and improve the bottom line for contractors — our excavators with iMC 2.0 technology can help contractors transform their job sites into highly efficient, highly productive operations," said Andrew Earing, senior product manager, tracked products, Komatsu.

Developed with input from leading construction companies, Komatsu's iMC 2.0 offers additional new features such as auto tilt bucket control and bucket angle hold control on several mid- to large-sized construction excavators: the PC290LCi-11, the PC360LCi-11 and the PC390LCi-11.

"They are an excellent match for footing excavation, trenching and slope work, with factory-integrated systems to help minimize over-excavation and empower operators to dig straight to grade quickly and accurately," said Earing.

Exclusive iMC 2.0 productivity features

Auto tilt bucket control assists operators by aligning the bucket parallel with a slope, so finish grading can be accomplished

without needing to align the machine with the target surface.

Bucket angle hold control helps operators reach finish grade quickly and accurately. It automatically holds the bucket angle to the design surface during arm operation, enabling operators to perform finish grading using only arm input.

Both new features build upon the semi-automatic functions that were maintained from the first generation of iMC excavators, including the ability to switch from manual to semi-automatic modes.

"Existing and new technology in the iMC 2.0 excavators has proven to increase production and efficiency while reducing costs," said Earing. "We encourage anyone looking for those attributes to test one for themselves." ■



Andrew Earing,
senior product
manager, tracked
products, Komatsu



Watch the video

Quick Specs

Model	Horsepower	Operating Weight	Bucket Capacity
PC290LCi-11	196 hp	70,702-72,091 lbs.	0.76-2.13 cu yd
PC360LCi-11	257 hp	78,645-80,547 lbs.	0.89-2.56 cu yd
PC390LCi-11	257 hp	87,867-90,441 lbs.	0.89-2.91 cu yd

Auto tilt bucket control and bucket angle hold control are exclusive new features of Komatsu's iMC 2.0 excavators, including the recently introduced PC290LCi-11, PC360LCi-11 and PC390LCi-11. "Our excavators with iMC 2.0 technology can help contractors transform their job sites into highly efficient, highly productive operations," said Andrew Earing, senior product manager, tracked products, Komatsu.



From time, fuel and maintenance savings to less paper, job site connectivity provides profit potential



Jason Anetsberger,
director of
customer solutions,
Komatsu

Why is job site connectivity such an important consideration for your construction business? Because technologies that support connectivity facilitate better and faster communication between your field personnel and those in the office.

"The potential cost savings of connectivity are quite large," said Komatsu's Jason Anetsberger, director of customer solutions. "With connectivity comes the ability to digitally send files, pull data directly from machines without driving to the site and more. The old saying that 'time is money' really applies because connectivity saves both."

Here are six reasons job site connectivity could potentially pay off for you.

1. Faster responses and adjustments

Few things are worse for project managers than finding out their job site is behind schedule. In the past, they relied on field personnel to phone in daily or weekly load counts, amounts of material moved and other critical information. However, by the time they received such information, the project could be losing money.

Job site connectivity allows field personnel to send information such as load counts, amounts of dirt moved, hours worked and more directly to the office, which reduces paper costs. Project managers can save travel time and fuel by sending design changes directly to connected machines and on-site personnel.

2. Less paper

Historically, superintendents, foremen and other field personnel would take a set — or multiple sets — of plans to the job site, while another set would be in the office. Today, digital plans are more the norm. With a connected job site, plan changes can be sent directly to a tablet, smartphone or a machine.

Paper timecards can also be virtually eliminated. With a connected job site, field personnel electronically log and send hours via email or with several timecard apps available through smartphones and other devices. A bonus is that this is done in near-real or real time, so your office staff doesn't have to wait for timecards to be turned in and spend hours going through them.

3. Time and fuel savings

In the old days, if there was a change in plans, it meant a trip to the job site. Depending on how far away the job site was, that could mean hours in a vehicle and burning several gallons of gas or diesel. When you can transfer files electronically, there is no need to drive to the job site.

4. Reduced equipment service, maintenance and repair costs

A connected job site gives fleet managers the ability to track machine hours more closely than ever. Hours can be accessed directly from the machine, which lessens the potential for going past scheduled service intervals. Missing scheduled service can be potentially problematic and lead to costly catastrophic failures that take big bites out of the bottom line.

A clear, up-to-date picture of machinery's current hours and a better ability to track them lets fleet managers be proactive about scheduling service, maintenance and repairs, and ensures needed parts and fluids are on hand ahead of time. Fleet managers can take equipment out of service at times when it is not needed or after hours to limit downtime, stay productive and increase profitability.

5. Maximized manpower

Intelligent machines have a modem that connects to the cloud via cellular, according to Anetsberger. As they track around the job site, they are essentially functioning as a



Intelligent machines have a modem that connects to the cloud via cellular. As they track around the job site, they are essentially functioning as a high-precision GPS rover that allows you to record as-built data and show progress from afar, virtually eliminating the need for a grade checker who could be used for a more profitable task.

high-precision GPS rover that allows you to record as-built data and show progress from afar.

"It virtually eliminates the need for a grade checker, so that person can be utilized somewhere else in a more productive manner such as installing pipe," Anetsberger continued. "Project managers have almost immediate information about where a machine is in relation to target elevation, and they don't have to wait for someone to phone in or drop off that information. With no guesswork, they can send personnel to perform other tasks sooner."

6. Increased safety = lower premiums

Connectivity goes much further than linking the office and the job site. Connectivity is also available through wearable technology. Smart helmets and safety vests that have enabled tracking and remote communication capabilities can help keep your workers safer. Smart work boots with sensors can automatically alert others if workers enter an area that has been designated as unsafe.

Safety is always a top priority for any job site, and prioritizing safety may also have side benefits including the reduction of potential costs associated with accidents. A better

safety record can also lead to more work, as many entities — including governmental projects — take safety records into account when awarding contracts.

An additional advantage is that a positive safety record could also lower your insurance premiums.

"When determining your premiums, insurance companies consider the likelihood that they'll have to pay out a claim on your behalf. If the risk is lower than normal, you'll pay a lower premium and vice versa," according to Safety Management Group, a privately held safety management company.

"If you have a smartphone, you may have already made the most significant investment in hardware that you need to become connected," added Anetsberger, who also noted that if you have an intelligent machine, you already have the hardware you need to be digitally connected on the job site. "You don't have to invest in huge infrastructure. You just have to be willing to take the first step and identify a solution that will begin to transform your operations."

Anetsberger concluded, "The first step can be tough, but more than likely, it will pay off." ■

Learn more about the connected job site by contacting your Clairmont Equipment Company representative or nearest branch location and by exploring Komatsu's Smart Construction suite of solutions at <https://www.komatsu.com/en/site-optimization/smart-construction/>.



The heat is on. Here are some tips to prepare for the hot summer days ahead

Hot weather is particularly challenging to the construction industry because workers are often exposed to the elements, including high temperatures and humidity. After enduring the hottest summer on record last year, protecting workers from the heat should be a top priority.

Ounces of prevention

Hydration plays a significant role in reducing heat illnesses and keeping your body properly conditioned for the job. Fluid intake is essential before, during and after work. Recommendations call for drinking water or electrolyte drinks such as Gatorade every 15 minutes, even if you are not thirsty — at least 6 to 8 ounces every hour. In extreme heat, it's even more important to replenish fluids lost to perspiration.

Choose the right clothes

Appropriate clothing makes a big difference in hot environments. Choose lightweight clothing made of synthetic fabrics that wick sweat from the skin. For outdoor work, light-colored clothing is often recommended because it reflects the sun's rays. Looser-fitting clothes will also allow air to circulate and cool the body. However, job sites present hazards with

equipment and machinery that can catch baggy clothing, so be mindful.

Sunscreen is very important

Clothing is a great help in warding off the sun's rays, but it's essential to put sunscreen on any exposed skin. Pay attention to the sun protection factor (SPF) in your sunscreen. The Skin Cancer Foundation recommends using a broad-spectrum sunscreen with an SPF of 15 or higher every day. An important fact to remember: UV rays pass through glass, so even if you are operating a machine or sitting in a pickup, use sunscreen.

Working times

All job sites get hot during the summer months, especially those in urban areas where concrete and asphalt trap heat, and can send temperatures soaring. Since the sun is directly overhead at noon, the hottest part of the day is typically between 10 a.m. and 4 p.m.

Try to avoid scheduling work during those times if you can. If that's not possible, plan for more frequent breaks, and seek shade where the temperatures are cooler, such as under an awning, an umbrella or a tree. ■

Working with Komatsu means being part of a culture of zero harm where everyone is responsible for each other's safety. Learn more about Komatsu's drive to zero harm by visiting <https://www.komatsu.com/en/our-commitment/driving-to-zero-harm/>.



Keeping workers safe in the summer heat is essential, so try to avoid scheduling work during the hottest hours of the day. Employees should have access to water, sunscreen and frequent breaks.





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Technology tools make training safer and can potentially have profitability benefits

Hands-on training can be a great way to learn a new skill. However, it can also pose a safety risk for workers learning new tasks when they have little or no experience.

To limit these risks — and still allow trainees to gain experience — more people are turning to technology. Online training, simulators, mixed and virtual reality, and other innovative methods allow new employees to get the training they need in a safe environment.

“Komatsu — and our partners — focus on zero-harm initiatives. Workplace injuries are costly, and putting unskilled people in situations they are unfamiliar with increases risk,” said Bill Chimley, Komatsu’s senior director of training and publications for North America and the company’s global mining solutions. “Using today’s technology to build a knowledge base and skills through e-learning and simulated job site environments makes a great deal of sense.”

Online, computer learning

Universities began developing online learning courses and degrees several years ago, allowing students to take classes at their own pace, from any geographical location or without the need for a professor to directly share the content.

Simulators provide workers with real-world scenarios and let them build skills in a safe environment that doesn’t involve the risk of injury.

This decreased the costs associated with travel and being on campus, while reducing the overhead of the university. Over the past two years, the COVID-19 pandemic significantly increased the number of people turning to technology-based education. From colleges to technical schools to businesses to high schools, millions of learners accepted this as part of their blended curriculum.

“A real advantage of online and computer-based modules is that they can be done practically anytime, from anywhere,” said Chimley. “The value of ‘in-the-flow-of-work’ has grown tremendously as manufacturers struggle to attract, upskill and retain employees. Candidates for many job roles in our industry are building and advancing their skills before they ever see a machine or job site. This can be beneficial for work areas that have inherent safety concerns such as working on electrical systems. Understanding how they work can help reduce or eliminate the risk of shock.”

Chimley added, “Our contractors want their workers to get similar training when it comes to their operations, whether it’s a mechanic, an operator, a fleet manager or anyone else in their organization who has a desire to learn.”

Wearable devices play an important role in training

Two-way headsets have been around for many years, and Komatsu trainers have used them in conjunction with on-the-job and in-the-cab training. The ability to connect a technician on the job site with an expert back at the main office — while sharing relevant information and first-person point of view — has grown in functionality and usage during the pandemic. Tools like these provide another way to upskill while on the job and can help bridge the gap to the next generation of workers.

“I’m not sure we will ever see the same amount of on-site training as before the pandemic, but there are certain situations where it’s necessary to have someone physically there,” said Chimley. “Fortunately, our trainers are very skilled at the systems, function and operation of our products. They know the capabilities of the machines and have years of experience in many applications.”



Online learning has been available in the construction industry for many years, but the global pandemic increased its usage. It's a way for workers to safely build their knowledge while working at their own pace or within a certain timeframe.

"In real time, by using wearable devices, they can tell trainees what they need to do to be more effective, like spotting a truck differently for an operator, or troubleshooting a hydraulic system," Chimley added. "Wearable devices will no doubt grow in functionality, but today they still have a great deal of value in situations where expert advice is needed in real time."

Simulators with AR, VR

If wearable devices like headsets are at the beginning of the training technology spectrum, then augmented reality (AR), virtual reality (VR) and mixed reality (MR) are at the end. AR uses a real-world setting, while VR is completely virtual. MR works by creating experiences that fuse the virtual world with the real one through enhanced holographic visuals. All three can be used to help employees learn skills within a safe environment.

"With relatively few components, today's simulators are very portable and can be set up practically anywhere," said Chimley. "Time on

actual production machines is very difficult to obtain, so simulators offer a real advantage. When training is done on a machine, you can only have one person in the cab at a time, and the rest of the operators are likely standing around watching."

The payoff is worth it

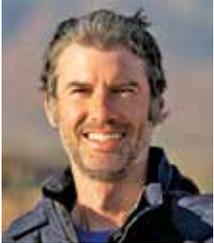
Safety is always the number one priority for workers and trainees, and there can be significant costs associated with workplace injuries. With direct and indirect costs, a single incident could cost thousands or even hundreds of thousands of dollars.

"Incidents have financial impacts both in the short term with fines, and in the long term with higher EMRs (Experience Modification Rates) that lead to increased insurance premiums," said Chimley. "Reducing the likelihood of injury is essential, and today's training tools are a good way of doing that. While there is a cost to online training with simulators and other methods, the payoff is well worth it." ■

Editor's Note: This article is excerpted from a longer piece that includes information about Komatsu Academy. To read it in its entirety and learn more about Komatsu's goal of building a learning community, please visit <https://www.komatsu.com/en/blog/2022/technology-tools-make-training-safer/>.



How to integrate tech to overcome job site challenges



Jason Anetsberger,
director of
customer solutions,
Komatsu

Job site challenges are nothing new, but today's technology lets you overcome them more quickly. Whether by providing real-time data, tracking productivity, or helping you remotely visualize a job site, implementing some of the latest equipment and management technology can help you advance solutions like never before.

Start Smart

Construction has increasingly become more digital. Building information modeling (BIM) allows various stakeholders to collaborate throughout the course of a project using a 3D model of a site or structure. All parties involved — engineers, architects, contractors and their personnel, and project owners — have access to the digital plans. Everyone can see and track progress, and make updates much more quickly than in the old days with paper plans, job site visits and phone calls.

That's a definite advantage for project managers who may be overseeing multiple jobs and can't always get to those sites but still need reliable, accurate data and the ability to communicate design changes quickly.

Komatsu already has a suite of Smart Construction customer support solutions designed to help companies digitally

transform their operations throughout every phase of a project. Among them is **Smart Construction Drone**, which provides survey technology that builds an accurate topography of a site safely, quickly and easily.

"High-precision drone mapping is faster than traditional surveys, so you save time and costs," said Jason Anetsberger, director of customer solutions, Komatsu. "Preconstruction flyovers let you see things you can't with paper plans. Consistent drone flights throughout a project give you information about progress across the entire site and assist with progress tracking."

Anetsberger added that Komatsu's Smart Construction experts can work with you to get a 3D model built and help with drone flight.

"Using **Smart Construction Dashboard**, you can calculate takeoff quantities for bids, move from 2D to 3D for optimized machine data, and eliminate the need for paper plans," said Anetsberger. "The 3D design plans can be uploaded directly into Komatsu's Smart Construction intelligent Machine Control (iMC) excavators and dozers with the use of Smart Construction Remote, including new iMC 2.0 models that have technology upgrades to further automate earthmoving operations."

A lack of skilled operators is a huge challenge for earthmoving companies right now, but with automation, new operators can become productive faster. Komatsu intelligent Machine Control (iMC) dozers with automated features enable operators to cut/strip from existing terrain, regardless of skill level. The ability to use automatics from first pass to last, instead of just during finish grading, significantly reduces the time it takes to reach target elevation.





Accurate slope digs and changes in elevation present challenges for excavators. Komatsu iMC 2.0 excavators let you dig straight to grade using one machine with integrated GPS and uploaded 3D data models. The latest generation (PC210LCi-11, PC290LCi-11, PC360LCi-11 and PC390LCi-11) can help improve production by up to 33% and efficiency as much as 63% compared to conventional excavation and grading methods.

Automate dozing

A lack of skilled operators is a huge challenge for earthmoving companies right now, but with automation, new operators can become productive faster. The ability to use automatics from first pass to last, instead of just during finish grading, significantly reduces the time it takes to reach target elevation.

Komatsu's iMC 2.0 dozers with integrated GPS feature proactive dozing control that enables operators to cut/strip from existing terrain, regardless of their experience level. This is because the machine's GPS technology decides on the action of the blade, such as whether to cut and carry, spread, fill or finish grade. The dozer measures the terrain as operators track over it and then uses the data to plan the next pass — which can improve productivity by up to 60% compared to the previous generation.

The iMC 2.0 dozers have additional technology features:

- Lift layer control helps eliminate excess fill as the automatic blade control follows the finished surface once lifts have reached target elevation. A simple press of a button optimizes earthwork productivity.

- Tilt steering control automatically tilts the blade to maintain straight travel during rough dozing and reduces operator steering input by up to 80%.
- Quick surface creation lets operators create a temporary design surface with the press of a button. Combined with iMC 2.0 functions, crews can begin stripping or spreading using automated input while waiting for the finish grade model.

Virtually eliminate over-excavation

For construction companies, over-excavation on trench, footing and basement digs have long been an issue. This leads to extra work and more costly materials to replace what didn't need to be removed in the first place.

Accurate slope digs and changes in elevation also present challenges. Those are costly in terms of time, surveying, staking, grade checking, and the need for multiple machines such as an excavator to get close to grade and a dozer to finish.

Contractors can significantly reduce such costs using Komatsu iMC 2.0 excavators, because they can dig straight to grade using one machine with integrated GPS and uploaded

For more information about Smart Construction solutions, My Komatsu, Komtrax and iMC 2.0 dozers and excavators, contact your local Clairemont Equipment Company representative and visit www.komatsu.com.



Continued...

Reduce costs with Komatsu iMC 2.0 excavators

... continued

3D data models. The latest generation (PC210LCi-11, PC290LCi-11, PC360LCi-11 and PC390LCi-11) can help improve production by up to 33% and efficiency as much as 63% compared to conventional excavation and grading methods.

Komatsu iMC 2.0 excavators have unique features such as auto tilt bucket control that automatically aligns the bucket parallel with a slope, so finish grading can be accomplished without needing to align the machine with the target surface.

Another feature is bucket angle hold control, which helps operators reach finish grade quickly and accurately because it automatically holds the bucket angle to the design surface during arm operation, enabling operators to perform finish grading using only arm input.

Remotely exchange information

Because job sites often evolve and rarely end up finishing exactly as planned, smart businesses are increasingly performing the task of updating plans digitally and remotely with technology such as **Smart Construction Remote**.

Now, you no longer have to travel to the job site with a USB drive. You can send updates directly to connected iMC machines and field personnel from practically anywhere.

"You can also remotely support operators," said Anetsberger. "If they have

an issue with their machine or a question on the digital plans, Smart Construction Remote lets GPS managers and project managers connect with the machine and see exactly what the operator does on their monitor. That eliminates a trip, saving time and money."

Getting updates from the job site is also more convenient with **Smart Construction Field**, which can eliminate the wait for phone calls or field personnel to drop off information. It allows you to digitally track job site activities as well as aggregate personnel, machine and material costs to compare progress status in terms of schedule and costs.

See your fleet data anytime, anywhere

Fleet managers know the challenges of getting the information they need to maintain machinery and make important decisions related to service. What if all the utilization data, parts ordering capabilities, service manuals and more were available in one platform?

"My Komatsu enables users to access and evaluate their assets," said Komatsu's Gabe Saenz, digital experience manager. "It can save countless hours of trying to track down machine information and help you be more proactive about service and repairs, when to order parts, and other critical factors related to fleet management." ■

Editor's Note: This article is excerpted from a longer piece that appears on Komatsu's blog. To read the full article, visit <https://www.komatsu.com/blog/2022/how-to-integrate-tech-to-overcome-job-site-challenges/>.



Job sites evolve, and plans change. Instead of driving to the site to deliver updates, you can send design changes directly to connected iMC machines with Smart Construction Remote. Fleet managers can also remotely support operators and see exactly what they see on the monitor in their machine.





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Increase profits with sustainable practices

C“Green” is a trending adjective for a practice construction companies have been following for years. Before it became the norm to recycle, construction companies were recycling construction and demolition (C&D) debris, including steel, asphalt and concrete. As an industry that works directly with the land, many have understood the importance of protecting it through sustainable practices.

While these are important practices for protecting the earth, are you aware of the increasingly wide variety of ways sustainability efforts can boost your company’s value overall? Green practices can help reduce material costs, increase employee retention and ultimately boost profitability as supply chain partners and customers see you as a company worth working with for reasons beyond the traditional requirements.

Here are three ways thinking more sustainably could help boost your bottom line.

Lower costs

According to the United States Environmental Protection Agency (EPA), sustainability is based on a simple principle: Everything that we need for our survival and wellbeing depends,

either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature exist in productive harmony to support present and future generations.

Many new construction projects are done on sites where removing old materials like pavement, foundations, brick and concrete are part of the job. Recycling and reusing these materials on-site can provide significant savings.

Using recycled materials reduces the need to purchase virgin aggregates and the trucking costs associated with bringing them to the job site. It also reduces the need to transport C&D debris off-site, as well as the potential fees to put it in a landfill. Less fuel use as well as reduced wear and tear on trucks lowers repair and replacement costs for consumable items such as brakes and tires.

In some cases, old materials can’t be reused on-site and must be hauled off. These can still have significant value. That’s why numerous companies have set up recycling yards that accept C&D waste and turn it into new products.

Attract and retain top talent

Employee turnover is costly and is estimated to equate to 1.5 to 2 times an employee’s salary when you factor in advertising, training and lost productivity, according to the article “The True Costs of Employee Turnover” published by *Built In*. While you may not have considered it, reducing your environmental impact could be key to lowering those workforce costs, retaining existing talent and attracting new employees, especially younger workers.

“There are numerous surveys that show that younger employees want to work for companies that demonstrate they are committed to sustainability,” said Komatsu’s Caley Clinton, senior manager – PR, CSR and content. “That includes on the job site, as well as in the office through practices such as reducing paper, water and electricity use. Prospective employees also want to know about your community involvement and how you’re giving back in ways that contribute to environmental improvements such as donating equipment, time and labor to projects like tree planting.”

Studies show today’s workforce takes corporate responsibility and sustainable business practices into account when choosing an employer. In this photo, Komatsu executives help plant trees for a corporate reforestation project in West Virginia. “Prospective employees want to know about your community involvement and how you’re giving back...” said Komatsu’s Caley Clinton, senior manager – PR, CSR and content.





Recycling and reusing materials such as old pavement on-site reduces transportation costs, potentially increases profits and lowers emissions, which benefits the environment.

Clinton added that it's important for companies to highlight their sustainable practices in prominent ways so that they stand out to prospective employees.

"Having a section of your website dedicated to what you are doing to reduce your carbon footprint and water usage should seriously be considered," Clinton indicated. "Pictures showing your efforts are helpful. Icons such as the recycling symbol that show your commitment to green practices should be prominent on all your materials, including recruiting items, company brochures and other marketing items. It's an essential part of your brand's value, as long as it is actually a part of your company's culture."

Land more jobs

Just like employees want to work for businesses committed to sustainability, other companies want to work with those who emphasize greener business practices. In many cases, companies or governments are making it a requirement to work on their projects.

"Companies that advance their approach to sustainability now can get the benefit of doing it for the right reasons, being on the forefront of the curve, and helping lead the way in their industries," Clinton emphasized. "If you wait until it's required and have to submit a report to a customer or another contractor you want to work with — and only then realize you don't have all the requirements — you may be at a disadvantage in the near future."

Tips to get started

Clinton said measuring your sustainability is going to be increasingly more essential, and it's never been easier to do.

"There are many companies with software that help track practically everything you do related to sustainable practices," Clinton noted. "Right now, that's mostly at a nice-to-have level, but as more and more requirements are built into regulatory aspects of how companies have to do business, it's going to be essential. Those who don't have those metrics are probably going to miss most, if not all, opportunities. Those that do will likely land more jobs." ■

Editor's Note: This article is excerpted from a longer piece that appears on Komatsu's blog. For more information about how focusing on sustainable practices can benefit your business, visit <https://www.komatsu.com/blog/2022/increase-profits-with-sustainable-practices/>



Here's how to access Komtrax data on your registered machines through My Komatsu and use it for savings

Fleet managers know the challenges of getting the information they need to maintain machinery and make important decisions related to service. What if all the utilization data, parts-ordering capabilities, service manuals and more were available on one platform?

"My Komatsu enables users to access and evaluate their assets," said Gabe Saenz, digital experience manager, Komatsu. "It can save many hours of trying to track down machine information and help you be more proactive about service and repairs, when to order parts, and other critical factors related to fleet management."

Most of the information needed to make those fleet management decisions is available via Komtrax telematics, which can be accessed

through a My Komatsu account. Komtrax data includes machine utilization, fuel consumption and idle time.

"Downloading the My Komatsu mobile app and then registering through it is easy," said Matt Beinlich, director of digital support solutions, Komatsu. "We believe, for convenience, the app is the best platform to use, because once you're registered, you can access telematics data from practically anywhere with the app."

To access Komtrax, follow these steps:

- Go to the "My Komatsu" website (mykomatsu.komatsu) and sign up for an account
- Click the "Register Now" tab; a distributor representative will contact you to complete the registration process
- Once you have an account, log in and locate the "My Fleet" tab on the homepage
- Select the model or serial number(s) of the piece(s) of equipment you want information for

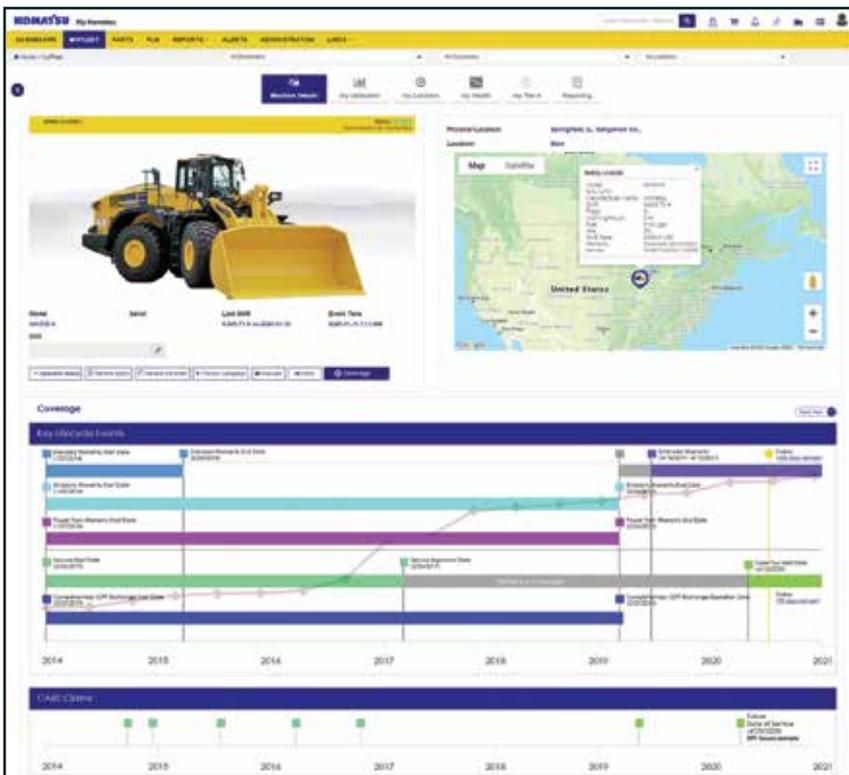
"If you click the 'My Utilization' tab at this point, you can get a breakdown of the machine's working status," said Elliott Hwang, Komtrax system administrator. "Easy-to-read graphs break down and simplify the information. With just a few clicks, you can get monthly reports that will show statistics of critical data. If you notice concerning trends, you can address them."

Hwang continued, "Komtrax lets you set alerts, so you are notified if those continue. Because the parameters of what you want for each machine are different, you can customize the alerts."

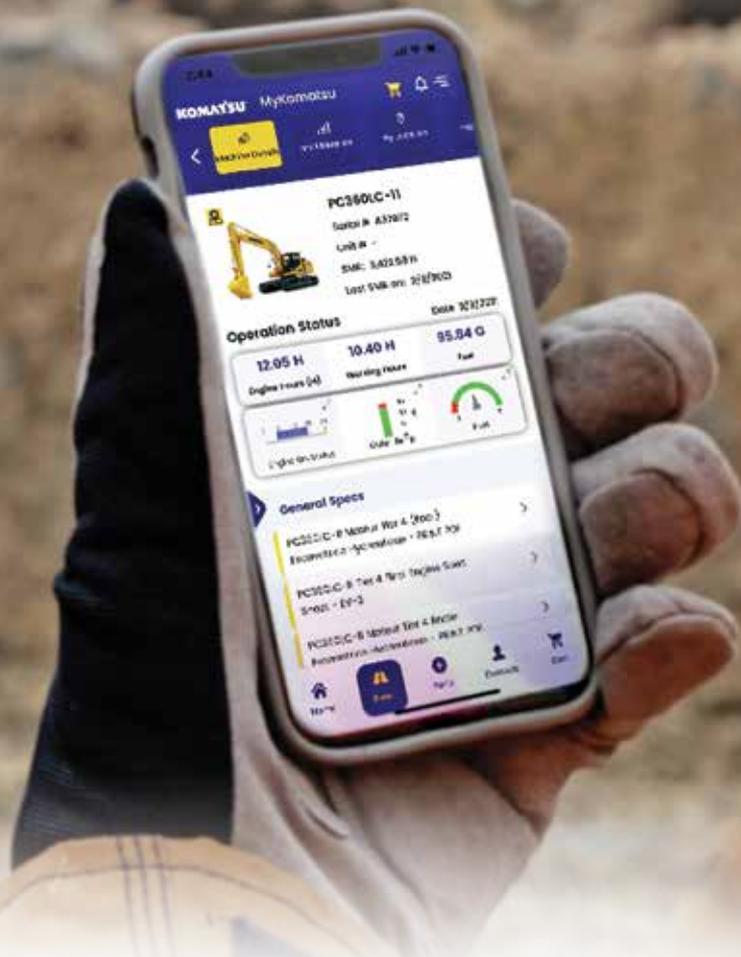
How to decrease fuel consumption

A real benefit of Komtrax is using telematics data to make critical decisions, improve operations and see savings, according to Hwang. He used fuel usage as an example.

"One of a fleet manager's biggest challenges is knowing how many equipment hours are due to idle time versus production when they are not on-site," added Salvador Davalos, Komtrax system administrator. "Excessive idle time is a huge waste of fuel, and with the high cost of diesel, it's critical to conserve as much as possible."



Having current telematics data from your machines lets you make more proactive decisions regarding fleet management and address potential issues such as excessive idle time. "You could set (Komtrax) up to alert you when all machines exceeded the goal percentage or stated fuel usage consumption, but a better approach would be to customize the settings because the goals typically vary by type of machine and the situations they are working in," said Elliott Hwang, Komtrax system administrator.



The My Komatsu mobile app gives you on-the-go fleet management capabilities. “We believe, for convenience, the app is the best platform to use,” said Matt Beinlich, director of digital support solutions, Komatsu. “Once registered, you can access telematics data from practically anywhere with the app.”

Fleet managers have instant access to Komtrax telematics data through My Komatsu. If they see that a machine’s idle percentage is beyond the stated goals they have set, they can then address the issue with the operator and field personnel.

“Fleet managers can show operators ways to reduce idle time such as shutting a machine down during lunch or when there is a long stretch between production times,” said Davalos. “Any cut in fuel costs increases profitability. Setting an alert that notifies you when a machine has exceeded its idle percentage goal provides the information right away without needing to log in to My Komatsu.”

To set an alert:

- Click the “Alerts” tab at the top of the machine’s report page
- Create a condition you want to see, such as percentage of idle time
- Select the machine(s)
- Enter the emails of the users that you want to be notified

“You can set up Komtrax to alert you when all machines exceed the goal percentage or stated fuel usage consumption, but a better approach

would be to customize the settings because the goals typically vary by type of machine and the situations they are working in,” said Hwang. “For instance, you may have one percentage for all dozers and another for excavators. You can even set alerts for individual machines. No matter what you do, the idea is to proactively track idle time and fuel usage, and decrease both as much as possible.”

Further savings ahead

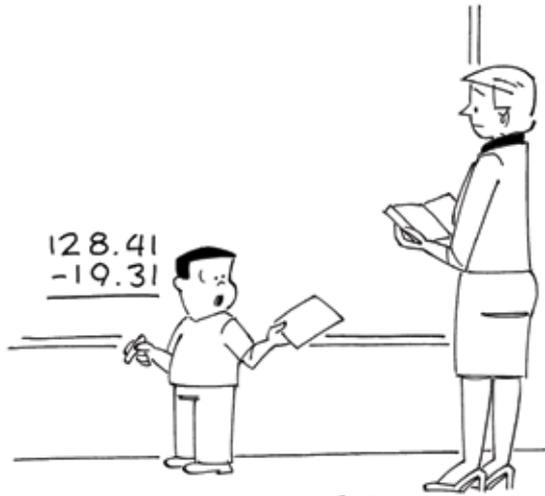
Currently, only Komtrax telematics data for registered Komatsu machines is available through My Komatsu. But soon, you will have the ability to access telematics data for other manufacturers’ equipment as well, giving fleet managers even more information they can use to drive savings.

“Some of our data will be available on other OEM (original equipment manufacturer) systems as well; it’s good for those managers with mixed fleets,” said Saenz. “The key differentiator is that, as has always been the case, Komtrax remains complimentary. We want users to see and use the data to increase their efficiencies and production, as well as lower their owning and operating costs.” ■

For more helpful information, including videos about My Komatsu and Komtrax, visit <https://www.komatsu.com/en/services-and-support/equipment-monitoring-and-analysis/my-komatsu/> and <https://mykomatsu.komatsu/>.



On the light side



"MY DAD'S A CONTRACTOR, SO HERE'S A WRITTEN ESTIMATE."



"I ASKED MY HUSBAND TO DIG A GARDEN, BUT HE ALWAYS GOES OVERBOARD."



"DID YOU GET THE PROPER PERMITS?"

Did you know?

- The Newby–McMahon Building, commonly referred to as the World's Littlest Skyscraper, is in Wichita Falls, Texas. It is only 40 feet tall.
- Hummingbirds are the only birds that can fly backwards.
- A single day on Venus is approximately 243 Earth days long.
- Dolly Parton wrote the legendary songs "Jolene" and "I Will Always Love You" on the same day.
- The U.S. National Highway System contains 6 billion tons of steel.
- Lemons float, but limes sink.
- The period from June through August in 2021 was the hottest on record in the United States, exceeding even the Dust Bowl summer of 1936.
- The Japanese word *kuchisabishii* is the act of eating when you're not hungry because your mouth is lonely.
- The Ancient Romans used to drop a piece of toast into their wine for good health, which is why we "raise a toast."
- The actors who voiced Mickey and Minnie Mouse got married in real life.

Brain Teasers

Unscramble the letters to reveal some common construction-related words. Answers can be found in the online edition of the magazine at www.CECPushingAhead.com

1. NLPA _____
2. TACS _____
3. UTC _____
4. PELSO _____
5. TOMEER _____



Discover more at
CECPushingAhead.com

Insider Tips

Get to target grade faster

Reach maximum productivity faster. With automated features such as auto tilt bucket control and bucket angle hold control, Komatsu's 70,000-pound-plus PC290LCi-11 intelligent Machine Control (iMC) 2.0 excavator can empower operators of all skill levels to dig straight to grade quickly and accurately.

Andrew Earing, Komatsu senior product manager, said the PC290LCi-11 is well suited for nonresidential applications such as commercial developments and infrastructures. It delivers large production

volumes with a relatively small footprint and low transportation weight.

Insider Tip: "Consider adding the auto-tilt bucket IMU (inertial measurement unit) field install kit for even greater levels of productivity and efficiency. This allows for expanded grading capabilities as well as auto return to horizontal," said Earing. ■

Learn more about iMC 2.0



Doing more with less

Looking for high production, efficiency and energy savings? The D71-24 dozer delivers with features such as variable displacement for the charge pump and variable matching to reduce horsepower loss and fuel consumption, respectively.

Compared to the D65-18, the D71-24 has 9% more horsepower and better fuel efficiency. It also has 13% more blade capacity, plus a 6% increase in cubic-yards-per-gallon production efficiency.

Insider Tip: "A hydraulically driven fan with electronic control also helps decrease fuel consumption," said Rafal Bukowski, Komatsu product specialist. ■



Learn more about the D71-24



Better determine your large equipment's operating costs

Consumables such as pins, bushings, brakes, starters, alternators and serpentine belts can significantly affect your operating expenses, but it can be hard to factor them into your budget because replacement of these wear items depends largely on machine operation, according to Komatsu's Felipe Cueva, manager, Genuine Care.

With the new Komatsu Care Plus III program — in addition to periodic maintenance, scheduled services and total machine repair coverage — consumables are covered through the first life of the machine.* In most cases, that's 20,000 hours.

Insider Tip: "Plus III is the most comprehensive Komatsu Care Plus program for total machine coverage, with the added benefit of cost-per-hour billing, so customers will have a much easier time determining

their costs and budgets. They should check with their distributor for specific rates," said Cueva. ■

**Based on model. Exclusions apply. Please see your Komatsu dealer for full terms and conditions.*



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