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Rogers Group Inc.

Indiana crushed
stone facility provides
mined resources



Spencer DePoy,
general manager



Patterson Contracting Inc.

Family business mines
and distributes sandstone



Clarence Patterson,
president

Brent Patterson,
vice president

A Message from Brandeis Machinery & Supply Company



David Coultas

**2022 looks
bright for
construction**



Dear Valued Customer:

We hope your 2022 is off to a wonderful start!

This year looks like another good one for construction. Industry economists and experts seem to agree that there will be growth overall, and the supply chain issues plaguing material acquisitions and driving up costs will ease in the latter half of 2022. They also believe that's when the impacts of the new infrastructure bill, which Congress passed in late 2021, will begin to take effect. We've highlighted some of the benefits of the bill, aka the Infrastructure Investment and Jobs Act, inside.

To gain efficiency and increase productivity, companies across the world are adopting technology as they look to lower owning and operating costs. Learn about how technology trends such as lidar are changing the landscape in today's — and especially tomorrow's — construction industry.

Komatsu is already at the forefront of this change with solutions such as Smart Construction Remote and Smart Construction Dashboard. Inside, you will find more information about these products and how they help save time and reduce costs. Our Smart Construction experts can show you the advantages and help you implement these solutions into your operations.

There are several other interesting and informative articles to help your business, including tips on preparing your staff and equipment for the upcoming busy season.

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

Sincerely,
Brandeis Machinery & Supply Company



David Coultas,
President

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Rogers Group Inc.'s Bloomington, Ind., crushed stone facility provides mined resources for the construction industry



Spencer DePoy,
general manager

In 1908, Ralph Rogers began crushing stone on the side of the road in then-rural Bloomington, Ind. While the company has expanded considerably over the last century, it is still owned by Rogers' descendants, and three fourth-generation family members serve on the company's board of directors. With over 2,000 employees across 12 states, Rogers Group Inc. prioritizes safety.

"As a company, our number one goal is to send our workers home safely at the end of the day," stated Spencer DePoy, general manager. "Because of the scale of our operation, it's also important that we put the right people in the right seats. We need versatile people that can adapt to daily changes in routine, and I believe we've built a team and culture that can handle anything that comes our way.

"The Bloomington crushed stone facility has transformed to meet local demand over the years," explained DePoy. "For the last 20 years, this facility has provided concrete and construction aggregates to Monroe and surrounding counties. Additionally, we have a fine grind plant where we manufacture animal feed supplements,

asphalt, roofing and glass materials. Our operation also has an underground mine that supplies scrubber stone to power stations around Southern Indiana.

"This facility is unique in its capability to provide INDOT (Indiana Department of Transportation) quality material for roads and highways," added DePoy. "The high calcium limestone in our underground mine is used for specialty products and scrubber stone."

Rogers Group provides limestone to a 10-county radius in Southern Indiana from its Bloomington and Mitchell operations. The company also provides sand and gravel resources from its facilities in Knox, Morgan and Newton counties.

Equipment productivity essential

The Rogers Group's Bloomington operation is vital to one of Indiana's major highway projects.

"We have supplied a majority of the product for a 40-mile stretch of the I-69 expansion project over the last decade," stated DePoy. "Servicing projects like I-69 means thousands of trucks could come through our facility at any given time. When trucks are lined up from morning through afternoon,



Rogers Group's original mining machines were used to provide material to rural Bloomington, Ind., in the early 1900s.





An operator at Rogers Group's Bloomington crushed stone facility uses a Komatsu WA900 wheel loader to place material from the face of the mine into a Komatsu HD605 haul truck. "We've found Komatsu machines to be very fuel-efficient," noted Spencer DePoy, general manager. "The extensive operating hours on each machine means that any fuel savings we realize will positively affect our bottom line."

we want to maximize our efficiency. One way we're able to do that is by loading each truck in two passes instead of three."

To accomplish this, the mine utilizes multiple Komatsu WA500 wheel loaders. Its fleet of Komatsu equipment also includes a WA900 wheel loader, a WA600 wheel loader and multiple HD605 haul trucks.

"At the face of our surface mine, we primarily use a WA900 loader to place material into our HD605 trucks," explained DePoy. "The trucks haul the material to our crusher, where it goes through our plant and eventually comes out as a finished product that our WA500s load into our customers' trucks. The WA600 primarily loads material into rail cars, but it can also fill in at the face of the mine if necessary."

DePoy notes that fuel economy plays an important role in the mine's commitment to Komatsu equipment.

"We've found Komatsu machines to be very fuel-efficient," said DePoy. "That's essential because the extra hours we run for projects

like I-69, where we're loading out late or on the weekends, can add up quickly. The extensive operating hours on each machine means that any fuel savings we realize will positively affect our bottom line.

"The quality of machine from year to year and model tends to be similar," added DePoy. "That allows us to reliably forecast service intervals and maintenance on each machine. It also means less stress worrying if something will go down, because we know the Komatsu machines hold up in this environment."

Superior service

The naturally harsh environment of a mine wears heavily on machines. That's why Rogers Group works closely with Brandeis Machinery & Supply Company and sales representative Brian Cook to service its Komatsu fleet and maximize uptime.

"We find superior service with the Komatsu brand and Brandeis Machinery," said DePoy. "Their service department works closely with our team to make sure that we have the



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Continued...

'Brandeis and Komatsu have been good partners'

... continued



General Manager Spencer DePoy (left) partners with Brandeis Machinery and sales representative Brian Cook for its Komatsu equipment needs. "We find superior service with the Komatsu brand and Brandeis Machinery," said DePoy. "Their service department works closely with our team to make sure that we have the appropriate parts available. They also make sure our machines are serviced at appropriate intervals without disrupting our operation."

appropriate parts available. They also make sure our machines are serviced at appropriate intervals without disrupting our operation.

"We have a wide range of hours on our machines, and some of our older equipment is approaching 20,000 hours," continued DePoy. "Brandeis monitors all of our machines and watches components closely to make sure that as they near the end of their usable life, we schedule downtime and replace the part rather than waiting for it to fail. Brandeis and Komatsu have been good partners to Rogers Group, and we look forward to continuing that relationship."

Mine longevity

With large quantities of reserves, the mine has a long lifetime ahead of it. As Bloomington and the surrounding area expands, DePoy believes the mine will play an integral part in the region's growth.

"We have years of reserves here," stated DePoy. "We're well positioned to continue providing Southern Indiana with all of the material it needs now and well down the road!" ■

Rogers Group's Bloomington fleet includes a Komatsu WA600 wheel loader. "The WA600 primarily loads material into rail cars, but it can also fill in at the face of the mine if necessary," noted Spencer DePoy, general manager.





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Family business Patterson Contracting Inc. provides sandstone to customers throughout West Virginia



Clarence Patterson,
president



Brent Patterson,
vice president

In the hills of West Virginia, Patterson Contracting Inc. mines and distributes large quantities of sandstone. Throughout the company's 77-year history, it has provided a host of services to the Logan, W.Va., area. Currently, Clarence Patterson is president and runs the mining operation along with his son, Brent, who is vice president.

"My grandfather, Hoyt, moved to Logan from Georgia and bought some land and a dozer," recalled Clarence. "He put my dad to work building ponds and fishing lakes. Eventually, my father got a business partner and started his own crane-operating company for one of the largest coal producers in the area.

"In 1945, my dad bought out his partner and founded Patterson Excavating, which does business today as Patterson Contracting," continued Clarence. "He started out building sludge ponds for the coal mines. Eventually, he was able to buy a dozer and crusher, which allowed him to build roads out of red dog and take on a wider range of projects for the mines."

For roughly a decade in the late '80s and early '90s, Patterson Contracting added landfill services to its crushed red stone

operation. In 1994, the firm refocused solely on sandstone production.

"Sandstone is used for everything except asphalt and cement production," noted Clarence. "About half our production is used by coal mines as ballast stone for their underground rail tracks. The other half goes to state and utility contracts. There's a good amount of demand for it in this region."

Komatsu 'the only way to go'

From blasting to trucking, Patterson Contracting's 12 employees take care of the entire process.

"Everybody here is versatile," stated Clarence. "We're mechanics, truck drivers and equipment operators. I don't have one man that does just one job. There's a commitment from our entire team to doing what needs to get done so that we can continue to provide a valuable resource to the area.

"We start out removing all of the overburden ourselves," continued Clarence. "Then we drill and blast the rock before transporting it to our crushers. We have a fleet of highway trucks that delivers the crushed material to state jobs,

An operator gathers rock from a recent blast at Patterson Contracting's sandstone quarry near Logan, W.Va. "The machine operates in three different modes depending on what you're doing," said Clarence Patterson, president. "Economy mode is fuel efficient when we're moving large rocks and need to take our time. Power mode has great breakout power that speeds up the cycle time when I'm loading trucks quickly. When I need to lift rocks that are bound together, lifting mode offers extreme hydraulic power to handle the problem."





► VIDEO

At Patterson Contracting's sandstone quarry, an operator uses a Komatsu PC490LC-11 excavator to load blasted rock into the bed of a Komatsu HM400-5 articulated truck. "The 490 is our main loading machine," explained Clarence Patterson, president. "It's the first new machine we've purchased, and we've been very impressed with how operator-friendly it is and the breakout power it possesses. It immediately improved our loading times and has saved us time and money."

mines and individuals anywhere in the state. Our ability to handle everything in-house makes us an efficient operation."

The firm's fleet of Komatsu equipment — which includes two WA500 wheel loaders, a PC220 excavator, an HM400-5 articulated truck, and several older excavators approaching 20,000 hours — is integral to moving the material around the mine and staying on schedule. For nearly three decades, Clarence has been impressed by the Komatsu machines.

"In the early '90s, we needed to add a new machine for a three-year, mine-opening job," recounted Clarence. "At that point, we had never operated a Komatsu machine. By chance, I had a Komatsu sales rep set up an opportunity for me to test out a WA600 wheel loader on a stripping job. I loaded one haul truck and knew Komatsu was the only way to go."

Today, Clarence and Brent work closely with Brandeis Machinery & Supply Company and



sales representative Jeremy Murry for all their equipment needs. Patterson Contracting recently added a Komatsu PC490LC-11 excavator to replace one of its aging machines.

"The 490 is our main loading machine," explained Clarence. "It's the first new machine we've purchased, and we've been very impressed with how operator-friendly it is and the breakout power it possesses. It immediately improved our loading times and has saved us time and money."

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Continued...

'A good team'

... continued

that speeds up the cycle time when I'm loading trucks quickly. When I need to lift rocks that are bound together, lifting mode offers extreme hydraulic power to handle the problem."

Machine service key

Clarence notes that the high hours on many of Patterson Contracting's machines means that regular service and dealer support is key.



(L-R) Patterson Contracting Vice President Brent Patterson and President Clarence Patterson work closely with Brandeis Machinery and sales representative Jeremy Murry for their Komatsu equipment needs. "Our previous dealer's support was great, and we haven't noticed any drop-off since the switch to Brandeis," said Clarence. "Jeremy has been a consistent figure for us through the transition. We're a smaller company, but Jeremy has made us feel like a priority. He's the best salesman I've ever had."

Although Brandeis Machinery recently transitioned into the dealer for his territory, Clarence feels confident in the support he's received from Murry.

"Our previous dealer's support was great, and we haven't noticed any drop-off since the switch to Brandeis," said Clarence. "Jeremy has been a consistent figure for us through the transition. We're a smaller company, but Jeremy has made us feel like a priority. He's the best salesman I've ever had."

Patterson Contracting also receives Komatsu Care — a three-year or 2,000-hour, factory-scheduled maintenance program provided through Brandeis Machinery — for its PC490LC-11 excavator.

"The Brandeis technician scheduled the service around our schedule, so the excavator wouldn't be down while we needed it," explained Clarence. "They made it an easy process for us. We look forward to working together with their parts and service departments and building those relationships."

Moving forward

Clarence plans to keep Patterson Contracting on its current path.

"I've thought about retiring, but I'm healthy and love what I do," stated Clarence. "Brent and I make a good team. There's plenty of demand for what we offer, and I don't see us dropping off anytime soon." ■

One of Patterson Contracting's oldest Komatsu excavators is fondly referred to as "The Terminator."





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Infrastructure Investment and Jobs Act brings historic investments

The recently passed \$1.2 trillion Infrastructure Investment and Jobs Act (IIJA), aka the Bipartisan Infrastructure Deal, will reauthorize surface transportation programs for five years and invest \$110 billion in additional funding to repair America's aging roads and bridges. With nearly \$40 billion dedicated to the latter, that is the single, biggest investment in bridges since the construction of the interstate highway system in the 1950s, according to the Biden administration.

Transportation safety programs will see \$11 billion in funding, including \$5 billion for the new Safe Streets and Roads for All program, established to help states and localities reduce crashes and fatalities in their communities. Another new program provides grants to community-owned utilities to replace leaky and obsolete cast iron and bare steel natural gas pipelines. In total, the infrastructure bill is projected to more than double funding directed to programs that improve the safety of people and vehicles.

Largest outlay for water systems

The spending package also includes the largest investments in other infrastructure

systems. To expand access to clean drinking water for households, businesses, schools and child care centers all across the country, \$55 billion will be dedicated to address water contamination and the replacement of lead pipes.

IIJA sets aside \$50 billion to protect against droughts, floods and wildfires, as well as weatherization, in an effort to increase the resilience of physical and natural systems from extreme weather events.

Modernizing for the 21st century

With major investments to connect rural areas, low-income families and tribal areas, \$65 billion will be dedicated to expanding broadband internet access. The bill includes provisions to make internet service more affordable and easier to compare prices.

An additional \$65 billion will modernize the nation's power grid and build thousands of miles of new, resilient transmission lines to facilitate the expansion of renewable energy.

Updates to the nation's power grid should allow more electric vehicles to be charged, and IIJA provides \$7.5 billion to build the

Airports are to receive \$25 billion to address repairs and maintenance backlogs, reduce congestion, and drive electrification and other low-carbon technologies. Ports, rail and buses are among the other public transportation sectors seeing significant funding for modernization.





Roads and bridges receive the largest amount of funding in the Infrastructure Investment and Jobs Act at \$110 billion; nearly \$40 billion of which is dedicated to bridges. Transportation safety is to receive \$11 billion.

first-ever national network of electric vehicle (EV) chargers in the United States. This funding includes the deployment of EV chargers along highway corridors to facilitate long-distance travel, and within communities to provide convenient charging where people live, work and shop.

Updating public transit

In total, the new investments and reauthorization in IIJA guarantee \$89.9 billion in funding for public transit over the next five years — the largest Federal investment in public transit in history. The legislation will improve accessibility to all users, bring transit services to new communities, and replace thousands of deficient transit vehicles with clean, zero-emission vehicles.

The legislation also invests \$66 billion in rail funding to eliminate the Amtrak

maintenance backlog, modernize the Northeast Corridor, and bring service to areas outside of the northeast and mid-Atlantic. Airports will get \$25 billion to address repairs, reduce congestion, and drive electrification and other low-carbon technologies.

Job openings

Additionally, the infrastructure bill will drive the creation of good-paying union jobs and grow the economy sustainably and equitably. Combined with the President's Build Back Framework, it is estimated that on average, 1.5 million jobs per year will be added for the next 10 years.

Opportunities for construction workers, truck drivers, architects, mechanical engineers and cybersecurity analysts, among others, are likely to increase. ■



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Your busiest time of the year is near. Make sure equipment and personnel are ready for maximum production

During the winter months, your machinery may have sat for a long period of time, or you may have kept working and just had routine services done during that time. Either way, it is vital to take steps to ensure your equipment is ready for the busy summer days that lie ahead.

Don't wait

If you have any outstanding work orders or operator repair tickets, finish them as soon as possible. Thoroughly inspect machines a few weeks before the schedule really heats up, and if you find any issues, address them right away. Remember, larger items such as undercarriages take more time to repair, so inspecting them well ahead of time is vital.

Buckets, blades, cutting edges and ground engaging tools such as teeth require attention, too. Make sure there are no cracks, chips or excessive wear that could affect safety and performance; replace if needed. Check that your attachment hoses and connectors are in good working order and ready for hydraulic fluids. Hook them up briefly, and run them to see if they are working properly.

Prepare staff members

Make sure employees are aware of schedules, procedures, emergency protocols, and the dangers and signs of heat-related illnesses. Employees should also know how to report maintenance items, the functions of new machines, and how to use them to maximize production and efficiency. Plus, make sure they have all the necessary personal protective equipment and that it is in good condition.

Stock up on parts

You should have an easily accessible store of basic maintenance items on hand such as grease, fluids, filters and belts. Having these on hand will save you from making frequent trips to the store, and decrease your overall downtime.

Clean the machine

Have you heard the adage that a clean machine runs better? True or not, you should wash your equipment to remove any dust and/or dirt buildup from storage or from use during the winter months. Cleaning can help you spot potential issues. Remove any debris,

Continued...

Thoroughly inspect your machinery before the busy construction season starts to ensure it is ready for maximum performance. Make sure everything is in working order and fluids are at their proper levels. Don't forget to check technology.



Replace damaged parts

... continued

including from the engine compartment. Look out for rodent and/or bird nests.

Don't overlook the inside of the cabs — clean the glass, and dust the consoles and dashes. Replace missing or damaged safety decals.

Charge batteries

If you stored batteries, be sure to check them. Before using them, ensure proper water acid levels and fill, if necessary. Batteries that were not charged during storage should be. Coating battery connections with an anti-corrosion spray can prolong system life. Replace batteries if you believe there is any doubt about their safety or reliability.

Check fluid levels

It is essential to keep fluids at proper levels. Make sure there is an operating and maintenance manual available in your machine year-round, and refer to it for guidance. Be sure to grease any points that require it.

As temperatures rise, you should switch to fluids that properly match the ambient temperatures. If the machine requires diesel exhaust fluid, draining it and refilling it with new fluids to maintain purity and concentration is highly recommended, regardless of if you used the machine during the cold winter months or not. Switch fuel to a summer blend such as No. 2 diesel, and drain the lines of any condensation.

Pay attention to hoses and filters

If fluids are the lifeblood, hoses are the arteries that carry it. Check them for abrasions and leaks; replace immediately if any are found.

Cold can affect filters, so consider replacing them with new ones, including air filtration and air conditioner filters, so operators have a cleaner, more comfortable environment. Dust and contaminants affect filter performance, so keep a close eye on them, and change them as often as necessary.

Don't overlook technology

Check the connections on your aftermarket GPS systems, as well as those that go with removable monitors. Turn the machine on, and test telematics systems to make sure you can monitor machines through your computer or smart devices. ■



During the busy season, your machinery and personnel work hard, so make sure both are ready ahead of time. Check your equipment's undercarriage, ground engaging tools, fluids, components and other critical items. Make sure staff members have all necessary personal protective equipment and that it is in good condition.




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Contractor reaches target elevation faster with new auto tilt bucket control that can follow unique design surfaces

Bobby and Allen Tripp spent countless hours running drag lines and operating dozers for their uncle while growing up on their family's farm. In 1997, the brothers transitioned from farm work when they established their own company, Tripp Bros Inc., which has steadily grown into a turnkey site development operation.

The firm's projects range from installing new construction infrastructure to resurfacing city and town streets. For maximum efficiency, the firm completes all aspects of a project in-house. To meet tightened grade tolerances and compensate for the declining number of experienced operators, the company has turned to GPS-equipped machines.

"The knowledge and skill lost from older operators leaving the industry — and with younger operators replacing them — GPS technology has become essential to our business," stated Bobby. "We rely on the technology to help our operators reach grade. Without our GPS-equipped machines, it would take us three times as long to complete the work."

At its residential jobs, which comprise 75% of the firm's current workload, creating as-built storm retention ponds is a challenge.

"The ponds are an environmentally conscious way to treat water before it's released from the site," noted Bobby. "Because each pond is unique, you can hardly dig them without diverting extra labor and equipment to keep it within tolerances."

Bobby continued, "We've found that with our Komatsu PC210LCi excavator with the new auto tilt bucket control, our operators can build the pond to grade more accurately than they could with a person shooting grade or checking them with a rover."

Maximum efficiency with iMC 2.0 with auto tilt bucket control

Bobby said that the new intelligent Machine Control (iMC) 2.0 technology on the PC210LCi-11, with the optional auto tilt IMU sensor, makes grading the ponds more efficient. By using Komatsu intelligent excavator auxiliary hydraulics, the auto tilt IMU sensor enables automatic control of the bucket/attachment angle to match the cutting edge of the surface.

Like all iMC excavators, the full bucket profile protects against over-excavation — even when the machine is not facing directly toward the target surface. With iMC 2.0 and the IMU sensor, the full bucket edge stays on the surface and automatically returns the bucket to a horizontal position for unloading.

"The machine is set up to tilt the bucket on its own and match a swale based on the design," explained Bobby. "We call it a 'one and done motion' because you don't have to go back and regrade the surface. The tilt bucket slopes, shapes and takes the pond to grade as you go."

"The auto tilt bucket control increases the machine's versatility and removes the need for an iMC dozer to check grade," added Alan Yoder, superintendent. "You're able to tilt the bucket instead of moving the machine to get the correct angle. Even our inexperienced operators find it easier to understand and control."

Bobby notes that the iMC 2.0 PC210LCi excavator improves Tripp Bros' efficiency contouring and crowning roads as well. "When we're undercutting a section of road, we can undercut the surface at a 2% fall and shape a crown in the road. The precision means we don't have to touch material twice. I haven't seen anything on another machine that compares to what this excavator can do." ■



Bobby Tripp,
president



Alan Yoder,
superintendent



Watch the video

Superintendent Alan Yoder excavates a storm retention pond using a Komatsu intelligent Machine Control (iMC) 2.0 PC210LCi-11 excavator with auto tilt bucket control.

"The auto tilt bucket control increases the machine's versatility and removes the need for an iMC dozer to check grade," said Yoder. "You're able to tilt the bucket instead of moving the machine to get the correct angle."

► VIDEO



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Technology is changing the construction landscape

Have you ever been pulled over for speeding because a law enforcement officer “clocked” you over the limit? Did you know that the same technology used in the officer’s scanner helps build today’s construction sites?

“We use lidar (light detection and ranging) scanners on tripods or drones to shoot out about 1 million points of light per second. Whenever a laser touches something, its light bounces off the surface and back into the scanner,” explained Ken Smerz, CEO of Zelus, a firm that specializes in building information modeling (BIM) and virtual design and construction (VDC). In the article “Here’s how advances in technology are transforming construction industry,” Smerz continues, “It’s the same technology that police officers use to see if you’re driving too fast, but it’s just recently been used in the construction field.”

Drones equipped with lidar can fly over a site and collect data that can be used to build 3D models. This fast and accurate way of surveying a site provides several benefits, according to Dustin Price, a licensed land surveyor and operations

manager at Landpoint LLC. In his blog post “Lidar Inspections Improve Construction Safety,” Price points out lidar is beneficial because it:

- Delivers accurate surveys quickly at the beginning of a project
- Provides information for simulation and analysis when developing a project
- Identifies maintenance and repair requirements on the project as needed

Tech strategy adoption

Lidar is just one of many technologies trending today in construction. To gain efficiency and increase productivity, companies across the world are adopting technology as they look to lower owning and operating costs.

An analysis and outlook by construction software company InEight Inc. found that 96% of respondents believe technology

Editor’s Note: This article is excerpted from a longer piece. To read it in its entirety for additional information about technology trends and how they are playing a role in today’s and tomorrow’s construction industry, visit <https://www.komatsu.com/blog/2022/technologies-changing-the-construction-landscape/>



Continued...

To gain efficiencies and increase productivity, while lowering owning and operating costs, construction companies across the world are adopting technology. Drones equipped with lidar (light detection and ranging) can fly over a site and collect data that can be used to build 3D models. Lidar is just one of many technologies trending in today’s construction industry.



Technology improves productivity

... continued

can improve productivity, and 71% believe it's already improving the industry. Nearly 100% of contractors said they had a strategy that considered the adoption of technologies for data analytics, project management software, artificial intelligence and machine learning, among others.

According to a recent article, "Construction technology funding skyrockets to record levels" in ConstructionDive, U.S. construction technology investor funding reached a record \$2.1 billion in early October 2021 — more than a 100% increase from 2020.

While those are common to most in today's construction industry, there are other technologies gaining prominence that you might not currently be aware of, but will probably know in the future.

BIM for collaboration

Owners, architects and contractors use BIM to collaborate on design and construction at each phase of the project. According to Whole Building Design Guide (WBDG), which is managed by the National Institute of Building Sciences, BIM is a digital representation of physical and functional characteristics of a facility. It serves as a shared knowledge resource for information and provides a reliable basis for decisions during a project's life cycle.

Commonly listed advantages from experts who use BIM include improved communication and coordination, cost and resource savings, higher quality results, early identification of potential problems, and increased safety.

Don't be intimidated

Adopting technology may seem intimidating, but it doesn't have to be with the right approach, according to Damon Haber, co-founder and chief revenue officer at Record360, which helps businesses add the latest products to their operations.

"I was an operator before I became a tech guy, so I understand how it is affecting companies and individuals," Haber said. "Like equipment, devices and apps don't create outcomes; however, they can be valuable tools that help achieve them. Failures often happen when companies try to do too much or have no clear objectives as to why they want to implement certain solutions."

Haber said there are some best practices for introducing technology: start small, set measurable goals and outcomes, and secure commitments from end-users.

"You can always get bigger," Haber emphasized. "Before full implementation, it's wise to do a pilot study, and do it well. You should also look at today's modern solutions, and see how they can flex to match desired goals." ■

Virtual reality (VR) and augmented reality (AR) headsets are being used throughout the construction industry for operator training. Until they gain some proficiency, these high-tech devices allow a wearer to mimic the movement of construction equipment without having to be on an actual job site.





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Smart Construction Remote helps you support your machines from anywhere, saving you time and expense

Do you need to get data to your machines? Want to help your operators troubleshoot? If you have connectivity and Komatsu's Smart Construction Remote solution, you can do both from anywhere, optimizing your time and making workflows more efficient.

With Smart Construction Remote, construction site managers can help operators troubleshoot issues in real time by viewing the same data they do. Managers can add new files without the time commitment of traditional methods, and transfer design files to multiple machines on-site with one click.

"In today's world, we live by emails, text messages and live chats to get things done quickly, and visualize what needs to be accomplished," said Mike Salyers, senior product manager, Komatsu Smart Construction solutions. "Smart Construction Remote gives you similar capabilities. It's like a live support system for the machine and its operator, allowing you and the operator to make necessary adjustments while making sure the machine has the current information needed to complete a job — without allocating valuable resources and hours to get the machine up and running."

Salyers added that Smart Construction Remote has the capabilities to connect to all types of machines, including Komatsu intelligent Machine Control (iMC) equipment, machines equipped with select Topcon aftermarket systems, and select Topcon data collectors utilizing Pocket 3D field software.

Easy to get started

To get started using Smart Construction Remote:

- Visit Komatsu's My Komatsu webpage and login, or set up an account
- Navigate to the Smart Construction Marketplace (<https://smartconstruction.mykomatsu.com/products>)
- Click on 'Smart Construction Remote' and add it to your shopping cart

- Input payment information when you're ready to check out

Once activated, click 'My Subscription.' When you open the application, the Smart Construction Remote screen will appear after logging in. Begin the activation process to add the machines you want connected to Smart Construction Remote. A red bell will appear on screen, and you can simply follow the prompts from there.

Once a machine has been activated, it can receive files and information remotely. Multiple files can be sent at one time and downloaded from the machine. If necessary, files can be deleted from the machine's control box.

If the operator needs assistance understanding if they are in the correct file or on the correct surface, or if there are issues that prevent them from working properly, Smart Construction Remote can be deployed, and managers can access the monitor and remotely correct machine settings or resolve issues.

"Smart Construction Remote's remote-control function is just like sitting in the cab of the machine, but in the comfort of your office, home or location," said Salyers. "A remote user can navigate the on-screen menus and make the necessary adjustment to the blade control's point of emphasis, surface offsets, dozing modes and many more. Smart Construction Remote can also be used as a training tool to show operators how they can perform desired operation by executing functions in front of them, so they can actually see what they need to do." ■



Mike Salyers,
senior product
manager, Komatsu
Smart Construction
solutions

With Smart Construction Remote, construction site managers can help operators troubleshoot issues in real time by viewing the same data they do. New files can be added and design files can be transferred to multiple machines on-site with one click — without allocating valuable resources and hours to get the machine up and running, according to Mike Salyers, senior product manager for Smart Construction solutions.



Visualize what's happening on your job sites in near real time



Yoetzin Diaz,
Komatsu Smart
Construction
solutions manager

Smart Construction Dashboard lets you visualize a job site's progress at any time, from anywhere. With Smart Construction Dashboard, contractors get a 3D graphic visualization of all design, drone and machine data to measure cut/fill, quantities and productivity.

Gaining insight into your job site's progress at any time and from anywhere reduces guesswork and enables faster decision making. Designed for daily use, Komatsu's Smart Construction Dashboard combines data from multiple sources to give you one comprehensive picture.

With Smart Construction Dashboard, contractors have a 3D graphic visualization of all design, drone and machine data to measure cut/fill, quantities and productivity. Site progress can be viewed with the timeline function (including playback) in terms of whole-site visual, cross-sections and individual measurements. You can confirm if a pre-bid topographical map is correct, track job site progress in near real time, document site conditions as evidence for change orders, and quickly and easily measure stockpile quantities.

"The 'data layers' option allows you to upload any design and drone files," said Yoetzin

Diaz, Komatsu Smart Construction solutions manager. "The measurement tab lets you create different measurements such as cut/fill, stockpile measurement and line measurements, including 2D cross sections to investigate specific areas of the site.

"There is so much more you can do with Smart Construction Dashboard to manage job sites," she added. "We highly suggest setting up an account and contacting your distributor's sales or Smart Construction representative to help guide you so that you get the most from this solution."

To get started, you'll need a My Komatsu account; set it up online (<https://smartconstruction.mykomatsu.komatsu/products>) or through your distributor. Once you have a verified account, sign in, find Smart Construction Dashboard, purchase it and click 'My Subscriptions' to begin. ■





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You can:

- Get more accurate job site data
- Easily track and analyze daily spending
- Track job site daily activity
- Make better business decisions

Insider Tip: "With Smart Construction Field you can quickly see if you are ahead, on schedule or behind to give you the ability to make faster decisions that affect production," said Bryce Satterly, Komatsu Smart Construction solutions manager. ■

Learn more about this and other Smart Construction solutions at <https://www.komatsu.com/en/site-optimization/smart-construction/#tab3>



A smooth approach for better productivity

A new modulation clutch in the WA900-8 surface mining wheel loader enables the operator to perform smooth approaches when loading trucks. This feature can also help reduce shock when shuttling between forward and reverse, which is particularly beneficial in v-cycle applications.

Automatic dig, semi-automatic approach and dump systems can reduce fatigue and allow operators to focus more on the path of machine travel.

Throttle lock allows operators to set engine speed. When enabled, auto-deceleration automatically decreases the engine speed to low idle when no operator inputs are applied to the controls and the transmission is in neutral.

All of those features can help improve your production and lower fuel consumption.

Insider Tip: "A high-lift configuration to pair with 150-ton trucks is available, as well as optional add-ons that include KomVision with radar object detection for a bird's-eye view of the machine and its surroundings," said Sebastian Witkowski, Komatsu product marketing manager. ■

See more productivity features of the WA900-8 at <https://www.komatsu.com/en/products/wheel-loaders/surface-mining-wheel-loaders/wa900-8/>



New feature reduces operator fatigue

Want to reduce operator steering input by 80%? Tilt steering control on Komatsu intelligent Machine Control (iMC) 2.0 dozers maintains power to the tracks and automatically tilts the blade for straight travel during rough dozing.

Additional benefits include:

- Reduced operator fatigue
- Greater reduction in track slip
- No surface undercuts

Insider Tip: "Use tilt steering control during heavy cutting applications and when simple grading is off," said Ron Schwieters, Komatsu senior product manager, iMC and hardware. ■



Learn more about tilt steering control and other technological advances in iMC 2.0 dozers and Smart Construction solutions at <https://www.komatsu.com/en/site-optimization/smart-construction/#tab5>





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2018 Komatsu PC238USLC-11, S/N 5188, 1,762 hrs.



2019 Komatsu PC490LC-11, S/N A42286, 3,156 hrs.

Year/Make/Model	S/N	Equipment Number	Location	Hours
Compaction				
2015 Hamm H11iX	H2100496	J00633	Nashville, TN	1,787
Dozers				
2016 Komatsu D39EX-24	95277	J00638	Louisville, KY	3,763
2018 Komatsu D39EX-24	95804	J00654	Corbin, KY	1,247
2017 Komatsu D39PX-24	95170	J00643	Paducah, KY	1,396
2016 Komatsu D39PXi-24	95052	J00641	Louisville, KY	3,821
2020 Komatsu D61PX-24	41167	J00634	Knoxville, TN	588
2019 Komatsu D155AX-8	100308	J00637	Stanville, KY	1,525
2019 Komatsu D155AX-8	100320	J00582	Louisville, KY	2,758
Excavators				
2020 Komatsu PC138USLC-11	56096	J00658	Louisville, KY	1,510
2020 Komatsu PC138USLC-11	56497	J00640	Paducah, KY	1,117
2019 Komatsu PC210LC-11	A12816	J00624	Paducah, KY	4,857
2018 Komatsu PC238USLC-11	5188	J00644	Little Rock, AR	1,762
2018 Komatsu PC238USLC-11	5327	J00646	Little Rock, AR	2,741
2018 Komatsu PC238USLC-11	5501	J00645	Little Rock, AR	2,131
2017 Komatsu PC360LC-11	A35922	J00636	Nashville, TN	2,743
2019 Komatsu PC360LC-11	A37408	J00659	Stanville, KY	2,995
2016 Komatsu PC390LC-11	A30453	J00601	Nashville, TN	6,760
2017 Komatsu PC490LC-11	A41569	J00649	Little Rock, AR	3,356
2019 Komatsu PC490LC-11	A42286	J00655	Memphis, TN	3,156
2021 Komatsu PC290LC-11	K73283	J00657	Little Rock, AR	1,729
Hammers				
2018 Montabert V46SHD	V045H50649	J00599Z	Nashville, TN	2,392
Wheel Loaders				
2020 Komatsu WA320-8	A39266	J00656	Memphis, TN	1,250



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