



Your Smart Construction challenges and solutions guide

Tackle the complex mix of job site challenges you have to manage every day. This guide to Smart Construction solutions can help you understand how to use the latest technologies to drive efficiency and productivity to optimize your job site.

The Smart Construction logo is located in the bottom right corner. It features the words "SMART" and "CONSTRUCTION" in a blue, sans-serif font, with "SMART" in all caps and "CONSTRUCTION" in title case. The logo is partially overlaid by a decorative blue line graphic that spans the bottom of the page.

SMARTCONSTRUCTION



Smart Construction solutions

Skilled labor

Productivity

Construction waste

Communications and information flow

Execution discrepancy

Dashboard	•	•	•	•	•
Design		•	•	•	
Drone		•	•	•	•
Field	•	•	•	•	
Fleet – coming soon	•	•	•	•	•
Office – coming soon	•	•	•	•	•
Remote	•	•		•	•
Retrofit	•	•	•	•	
intelligent Machine Control	•	•	•	•	
Production studies and coaching	•	•	•	•	
Training and support	•	•			





Know where you want to be tomorrow

Integrate data from multiple sources into one comprehensive picture so you can measure where you are today and make decisions about where you want to be tomorrow. By combining 3D design data with aerial mapping and intelligent machine data, you can confirm quantities and see progress each day.

How do you know how much material you will move prior to starting the job and how much you'll need to move during the project?

By using the cut/fill maps and stockpile application, you can check quantities to know how much material has been moved. And you can check volume for stockpiles regardless of material.

How do you confirm existing conditions prior to a takeoff, submitting a bid or starting construction?

Improve job site management by uploading drone-flight data to Smart Construction Dashboard so you can document the site before, during, and after construction.

How do you know how much material your machine moves? How do you know if you need to move more or export more material?

Smart Construction Dashboard lets you collect as-built data then measure machine activity and compare it with drone flights for material quantities.



**KOMATSU**

Are you ready to visualize your whole site in 3D?

Save time and eliminate the headache of converting paper plans. Now you can quickly move to a digital design file with Komatsu's 3D data generation service: accurate data that is easily shared, replicated and updated.

Are you still using paper plans? And are you having trouble sharing and updating the information?

3D model generation provides accurate data that is easily shared, replicated and updated as work progresses.

Are you looking for a trusted partner to help convert your 2D plans?

Experts knowledgeable about design and construction will provide accurate data that can be integrated easily into your systems and will share how models can be best adapted for machine control.

Are you confident in your ability to understand the dimensions of the job site and scope it accurately?

Our 3D generation service will bring you improved visualization. You'll be able to see the project in multidimensional form.



SMARTCONSTRUCTION **Design**

**KOMATSU**

Are you ready to fly?

Accurate job site topography could mean the difference between completing the project when you hope you can or completing it when you know you can. With drone survey technology, collecting accurate topography is safe, quick and easy. No matter where you are in your drone program, we have the expertise to help you get the most out of your equipment.

How do you confirm existing conditions prior to a takeoff, submitting a bid or starting construction?

With job site management you can document pre-construction, during, and post-construction by performing drone flights and uploading to Smart Construction Dashboard. It makes it easy to see your progress.

Are you frustrated with the time it takes to do a traditional walking survey?

Flying a drone can be 50% faster than a traditional survey.

Did you know that you don't have to stop job site activity with a drone?

Aerial mapping by flying a drone does not require stopping activity to measure topography.

**SMARTCONSTRUCTION Drone**



Work smarter, not harder by automating the collection of job site data

Inaccurate and delayed job site data is often incompletely tracked when using pen and paper. Smart Construction Field streamlines data collection and processing while helping ensure accuracy by leveraging a connected system.

Do you know how much money you spent yesterday?

You don't need to wait until the job is over to see how much money you made. Smart Construction Field allows you to track your job costs with a higher level of detail than ever before.

Does your foreman spend more than an hour each day entering timecards?

Streamline the task with digital timecards. Auto-clock-in and automated equipment-hour tracking with Bluetooth Low Energy (BLE) devices saves foremen time while improving time card accuracy.

Do you know where all your fuel is going?

Fuel logs can help. Improve equipment accuracy and reduce job costs by using Smart Construction Field to easily track fuel usage by machine and by job site. It can help identify fuel theft, too.



**KOMATSU**

Are you ready to track your fleet performance in real time?

Manage mixed-fleet load counts on your mobile device, no matter the make or model of your machines. Load the app, select the job site and machine, and you're off running.

How do you keep track of job site progress? Are you getting accurate load counts from your drivers?

Automatically track load counts without driver input using geofencing and GPS technology. Customized reports give you access to data you can use to manage operations efficiently.

How do you track cycle times — or do you?

Having accurate cycle times allows you to right-size your fleet and avoid wasting money. Smart Construction Fleet automatically calculates cycle times on all your trucks.

Do you have drivers that go missing or take longer than others?

With real-time monitoring you can see live locations for all your slow trucks and identify slow drivers. Wondering why a driver took so long on that last round? Look at their location history to find out.

**SMARTCONSTRUCTION Fleet**



KOMATSU

Stay connected to your machines

Work shouldn't stop just because you're not on site. Remotely send files from your office to select machines, easily search all connected assets, or log in to a machine and see exactly what your operator is seeing with Komatsu Smart Construction Remote.

How can you save time when installing the design in each machine?

Quickly pinpoint the location of your machines through an online map and send data remotely to the machine. No need to drive to the job site!

How can you work at the office but still get your updated designs on-site?

Send new design files remotely to one or many via file transfer — data can be sent two ways.

Are they using the wrong radio setting again?

Log in to see what the operator sees to train and to troubleshoot through a remote view and remote control.



SMARTCONSTRUCTION Remote



KOMATSU

Transform conventional machines with 3D technology

Make your conventional excavators intelligent with an easy and affordable kit that will increase grading performance. Retrofit's 3D indicator guidance system provides horizontal and vertical positioning capabilities.

How do you cut to grade if all the grade stakes have been wiped out?

Retrofit provides not just 2D/vertical location but 3D/horizontal and vertical positioning. Using Global Navigation Satellite System technology (GNSS) technology, the machine can determine where it is anywhere on the job site and what the desired/target grade is supposed to be at that location.

Do you still track load counts manually and have concerns about accuracy?

Retrofit has optional payload functionality to create a digital record of your load counts and accurately measure each load.

Are they using the wrong radio setting again?

Log in to see what the operator sees to train and to troubleshoot through a remote view and remote control.



SMARTCONSTRUCTION **Retrofit**



KOMATSU

Easily apply advanced automation technology to your job sites

You can be confident you're getting the most from your machines, your crew and your carefully designed plan by using Komatsu's innovative intelligent Machine Control (iMC) to program 3D design data directly into your machines. Your operators — even those with less experience — can work with utmost efficiency, guided by sophisticated automation.

Do you have trouble recruiting and retaining good help?

Skill up quickly. Automatic functions give the dozer the ability to learn from the operator's blade input, resulting in more adaptability, easier operation and less reliance on operator input.

Are you fed up with the climbing and the cables involved in connecting and disconnecting after-market kits?

Because functionality is fully integrated within the machine, set-up is easy.

Do you want to speed up job preparation?

Drive efficiency and accuracy by using fully integrated 3D design data with your machines, designed to help you get to grade faster and avoid overcutting.



SMARTCONSTRUCTION intelligent Machine Control



Improve job site efficiency and production

You'll receive support before, during and after purchase to help ensure operators are making a positive impact on the job site. Komatsu-trained Smart Construction and Technology Solution Experts will put their experience to work for you.

Do you have questions but aren't sure who to ask?

Get expert advice on the best approach to address production issues. Learn and test out new technologies that can help you improve job site operations.

Do you want to right-size your fleet, identify the best routes and keep track of job site production?

Let our experts collect the data and identify gaps and opportunities for improvement.

Need help adopting and deploying new technology throughout your operations?

You'll be guided through the integration process with the help of experts who are vested in your success.



**KOMATSU**

Technology and support: A powerful combination.

Whether it's operator training for intelligent machines or support for your digital transformation, we care about your success. Komatsu-certified solution experts supply the expertise you need to start digitizing your job site, get the most out of your technology investment, or both. On the phone, online or on your job site, they'll help you navigate and thrive along your technology journey.

Have you bought technology but haven't implemented it yet?

Komatsu's trained and certified technology experts are committed to making sure you get the most out of your technology whatever the solution — digital, hardware or other.

Looking for a one-stop solution for all your training needs?

From machine operation training to technology application and use-case consulting, our experts are on hand to help you develop and extend your team's capabilities.

Want access to an expert when you need one?

We can help. Our OEM-certified Smart Construction and Technology Solution Experts are strategically located near you in the field and can provide dedicated job site technology support.



SMARTCONSTRUCTION **Training and support**