

Intelligent Asphalt Paving and Milling Solutions

Five proven reasons for every contractor



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Introduction

Precision in asphalt paving is essential for constructing roads, parking lots, and runways. The dynamic field of asphalt paving requires professional-grade systems that enhance efficiency while ensuring a quality finish. Topcon's intelligent asphalt paving and milling solutions address these needs, equipping contractors with tools that improve speed, smoothness, and project success.

Five proven reasons for every contractor

Paving professionals that rely on Topcon intelligent solutions distinguish themselves by utilizing a wide range of proven positioning technologies and systems for every phase of the asphalt paving process. From planning to execution, Topcon's asphalt portfolio helps contractors achieve optimal results, reduce costs, and prioritize safety.

- 1. **SmoothRide**, a better way to pave and mill
- 2. **Customized control** for your machines
- 3. **Asphalt plant to project** connectivity
- 4. **Asphalt temperature tracking** for longer lasting results
- 5. **Profitability improved** and reputation built



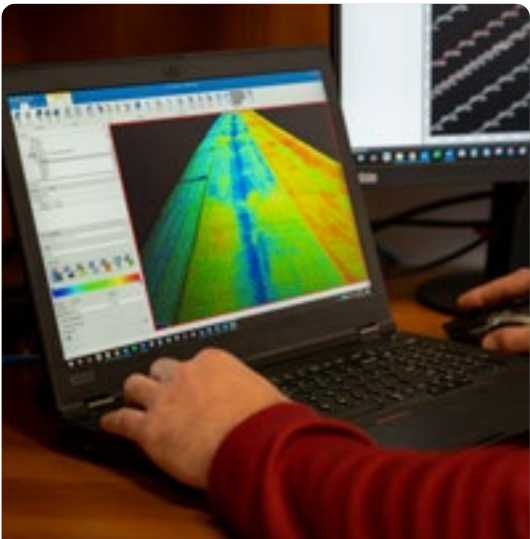
SmoothRide, a better way to pave and mill

The Topcon SmoothRide™ workflow starts your project with precision in mind and better material management on the horizon.



Scan the road surface

The need for traffic lane closures is gone. Quick 3D scanning has replaced hours of point-to-point surveying and with intuitive software, smoother and more durable results are delivered.



Convert the scan to DTM

Intuitive data quality and design software provides all the tools needed to create and manage large 3D point cloud information to best represent existing surface conditions and desired results.



Design the new road surface

Purpose-built software for simplex to complex road designs. Unique algorithms allow you to create anything from a running average to a sophisticated state-of-the-art design with full control of material usage where constant updates on tonnage are calculated on the fly.



Automated with machine control

At the project site, automatically control paving or milling machines through user-friendly software that optimizes smoothness and rideability.



Customized control for your machines

Work with multiple control options to provide positional guidance on your paving and milling machines. Laser guided positioning that is ideal for tunnels and areas where they sky may be obstructed. GNSS positioning for speed and project sites with clear sky views.

Or the common combination of both GNSS and laser technologies for Millimeter GPS control that offers unmatched accuracy in paving projects.

Asphalt plant to project connectivity

Establish seamless coordination between asphalt plants and active project sites using Pavelink software service. This open and visual communication ensures that your materials arrive at the perfect temperature and quantity. Improved communication for the smooth coordination with an immediate impact on your project's success.

Asphalt temperature tracking for longer lasting results

Thermal mapping solution to identify and address potential issues before they become problems. A quality control method to identify and prevent segregation and ensure a uniform finish.

Profitability improved and reputation built

Efficiency is crucial for your project successes. Topcon's intelligent asphalt paving and milling solutions streamline your operations, product smoother results, reduce downtime, and in turn directly impacts profitability. Over time, your reputation is known for delivering in challenging conditions on time each time.



AJAX Paving Company

More than 150,000 square feet of apron, deemed to be sorely in need of both restoration and resurfacing, was rehabbed at MacDill. The project was critical to ensuring support for the mammoth tanker aircraft, each of which, when fully loaded, can weigh as much as 322,500 pounds. According to Harlan, while the accuracies demanded in the project were tight at $\pm .02'$ for finished grade, the decision to bypass traditional milling and paving methods was in the works long before they came on site.

Limits on the Job

During the course of the milling operation, nearly 4,000 tons of asphalt was removed and hauled to one of Ajax's area asphalt plants for use as recycled asphalt product (RAP). Although it was assumed that the mill would be making a minimum 4" cut, such was not always the case, said Harlan.

Mid-Night Calling

"The Topcon millimeter solution was a great fit at MacDill and checked all the boxes for what we need to continue improving both our milling and paving operations — we definitely see it continuing to play a role in future work for us."

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AJAX Paving Company



"Once we switched the machine around from Millimeter GPS to the slope sensor, things change."

Ben Harlan, field technology manager

"There's a huge saving in survey costs, we eliminated the risk of being out of spec because a stringline sagged or got moved, and it makes the job site so much easier and safer to navigate, both for us and the trucks — we had anywhere from 10 to 20 trucks working at a time — coming into and out of the milling area. Ajax is all about efficiency and this made that happen, big time."

Ben Harlan, field technology manager

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Granite Construction

With the 3D model for the project loaded into their Cat AP-1055F paver, Granite proceeded to lay down 9" of asphalt in four separate lifts measuring 2", 3" and a pair of additional 2" lifts. According to Cantrell, the initial lift was actually slightly variable in depth to allow for any necessary correction.

Gaining Converts

The combination of SmoothRide and Intelligent Compaction at the I-5 Woodland site accomplished Granite's goals which were to gain familiarity with the solution and, at the same time, better position them for the possibility of capturing future project incentives.

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Granite Construction

"That is the real beauty of this process, its ability to correct for high and low spots."

Logan Cantrell,
Material and Construction Quality Manager

"After completion, that IRI value of 117 had been reduced to 40 — an almost 300% improvement in smoothness. As a result, we should get about an 80% bonus for IRI on this job. While we really like the SmoothRide system, we would need to see changes in WSDOT's specifications to allow for variable depth milling/paving and IRI bonus on more jobs. But this was a great opportunity for both organizations to see the changes SmoothRide can bring."

Logan Cantrell,
Material and Construction Quality Manager



Benefits

Your ultimate workflows for Asphalt Resurfacing.



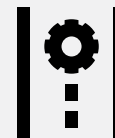
Time saved

Detail existing surface without the need for traffic closures and capture conditions by scanning millions of points while driving - and immediate safety improvement.



Smoothness achieved

Variable milling and paving can easily be obtained through designs based on actual conditions. Set a compaction percentage factor when paving to ensure a smooth finish after final compaction.

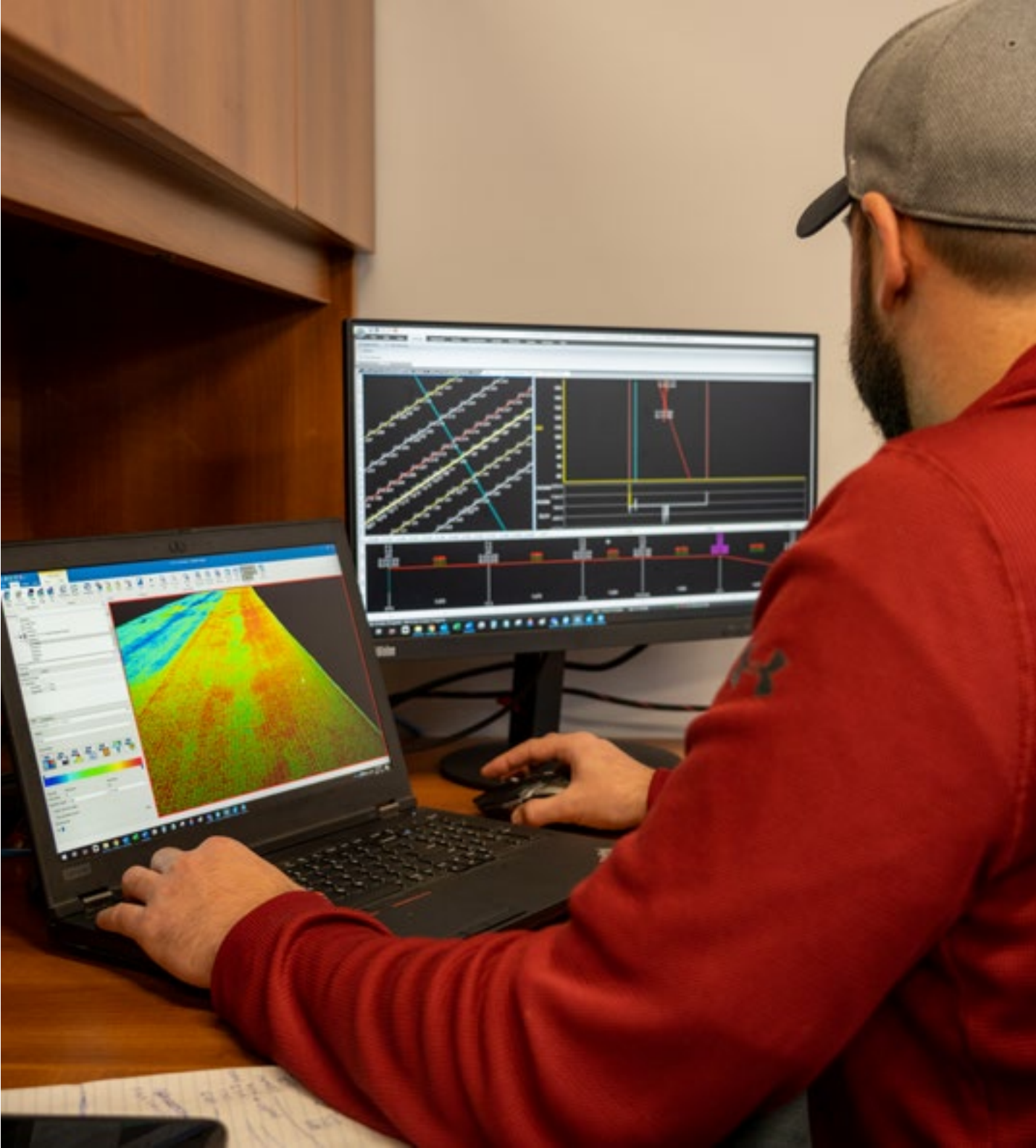


Material managed

Eliminate guesswork and plan smart. Understand of existing surface details pre-construction allows for accurate material calculation.

Topcon's SmoothRide asphalt paving workflow is your customizable solution to mastering your work calendar and improving your road resurfacing results. Adding positioning technology to your milling and paving machines allows you to take control of your time from start to finish.

Say goodbye to manual processes and embrace the future with custom reporting, material management and flow directly from the plant to your project, and often required thermal segregation mapping.





Support

We offer a variety of support options, allowing you to access to a wide range of training and support materials directly through our myTopcon NOW! mobile app and website. With a single sign-on, you can easily navigate our product-specific quick guides and training videos. Stay updated with the latest webinars and eLearning content to increase your professional knowledge and keep current on digital workflows that can help your business grow.

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Empowering Your Work

As a worldwide leading developer and manufacturer of precision positioning workflow solutions, we help the people who build and feed the world work smarter and faster.

The technology we provide brings increased accuracy, saves time, boosts productivity and efficiency, and lowers expenses, all resulting in greater profitability for you.

Seemingly impossible jobs can be possible because we empower you to do more with less. Projects can be completed with fewer skilled workers with less re-work.

SPEED TO MARKET | GLOBAL NETWORK | EXPERIENCED OEM TEAM

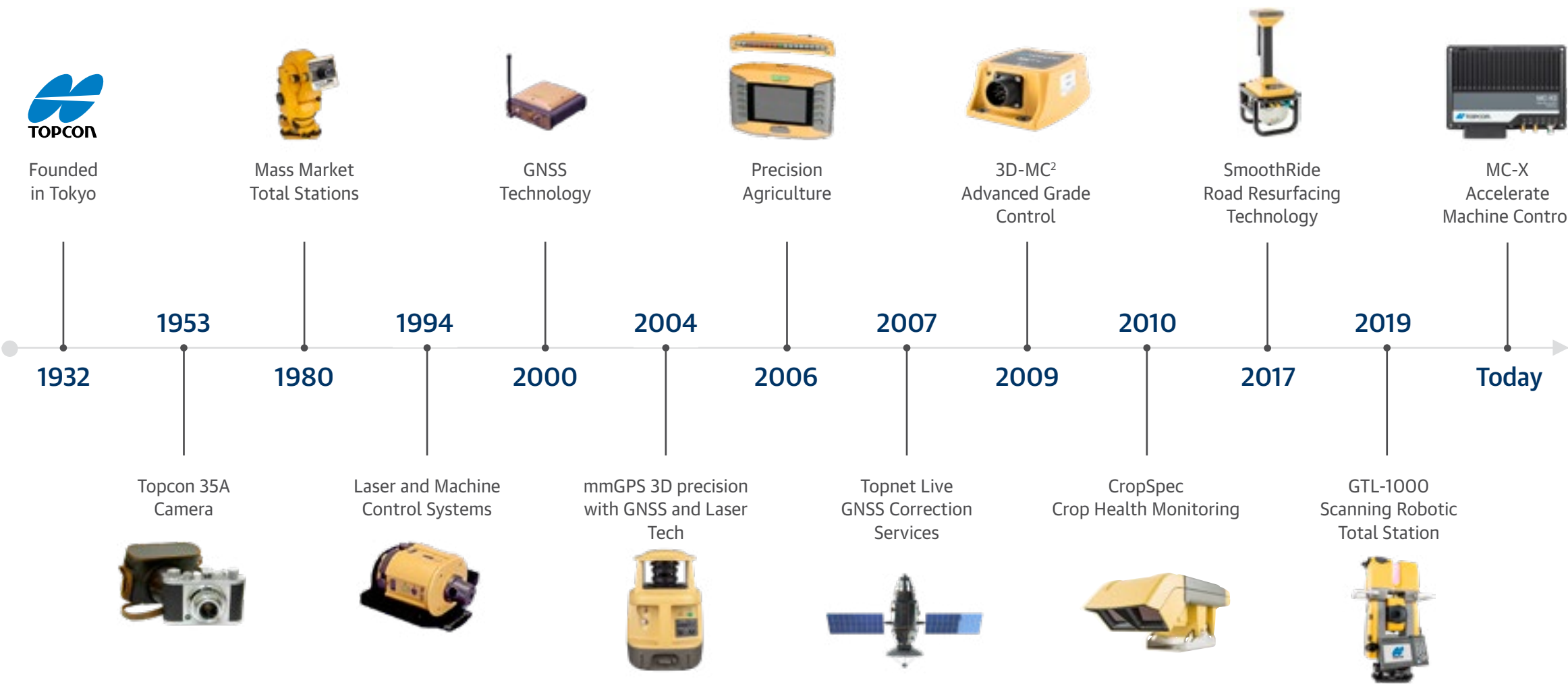
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A History of Topcon Corporation



Unleash Your Potential

We provide innovative yet intuitive solutions that integrate high-precision measurement technology, software, and data for the construction, surveying, and agriculture industries. By embracing our solutions, our customers can:

- Accelerate infrastructure creation and repairs, ensuring safety and cost-effectiveness
- Efficiently gather and handle vast amounts of data, reducing field time
- Maximize crop yields and returns, all while minimizing environmental impact and preserving natural resources.

We're here to make complex tasks easier – so you can work smarter, not harder.



Topcon Training Center,
Livermore, CA

Topcon Technology
Roadshow Truck

Topcon Positioning Systems
Headquarters, *Livermore, CA*

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4900+ Employees | nearly 3500 Patents

Global Network

With an extensive worldwide network of corporate offices, R&D centers and technical groups, we have an unmatched capability to assist any manufacturer, no matter where they are located, with fully integrated machine automation solutions. This also positions us to create programs to assist and support dealer networks, directly or through extensive training programs.

Experienced OEM Team

Our experienced OEM team knows what questions need to be answered first and the potential pitfalls to be avoided along the way. Their first objective is to make sure our technology is the right fit for your application and be your partner every step of the way.



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