**Article**

**Topcon showcases the Nomadic Construction Site as Part of CampusOS Flagship Project**

After three years of intensive research, the German CampusOS flagship project is concluding its mission to foster open 5G campus networks for industrial use. A key milestone was the "Final Demonstrator — Nomadic Construction Site" event, kicking off a series of closing roadshows events at [STILL](http://www.still.de/en-DE/) (a member of the [KION Group](http://www.kiongroup.com/en/)) and [BOSCH](http://www.bosch.com). *(For reference,* [*Topcon Press release about CampusOS kick-off*](https://www.topconpositioning.com/articles/topcon-represents-construction-industry-in--campusos--5g-research-project?utm_source=tdah&utm_medium=article&utm_term=NomadicCampusOS&utm_content=link&utm_language=enUS)*)*

**Introducing the Nomadic Construction Site Use Case**

The "Nomadic Construction Site" explores 5G networks' potential in challenging industries like construction and agriculture by enabling flexible connectivity in remote locations and ensuring continuous and high-speed data transfer despite the lack of fixed infrastructure. It enables the use of autonomous machines and drones that rely on real-time communication for precision and efficiency. Safety measures are improved through the use of IoT sensors and devices that monitor conditions and provide immediate alerts. Operations are streamlined by seamlessly integrating digital tools to improve team coordination and productivity.

**Challenges and 5G Construction Needs**

The sector faces significant hurdles, including rising costs, labor shortages, outdated workflows, and complex regulations. Innovative solutions such as 5G campus networks are critical to overcoming these challenges.

To benefit the construction industry, 5G must meet specific criteria to function effectively in challenging environments. It requires comprehensive coverage to ensure reliable connectivity across large and dynamic construction sites. Stable connection reliability is crucial for uninterrupted workflows, while secure protocols are needed to protect sensitive data from cyber threats. Additionally, 5G should support emerging technologies like real-time analytics, predictive maintenance, and AI-driven decision-making.

**Unlocking Benefits of Digital Transformation**

5G networks bring significant benefits to digital transformation in construction, enabling real-time operational insights that enhance decision-making. They streamline management through connected platforms, improving collaboration and precision. Advanced machinery automation becomes possible, boosting productivity and accuracy on construction sites. 5G also ensures stable connectivity in remote regions, addressing long-standing challenges in areas lacking public networks. Overall, robust 5G connectivity fosters efficiency, technological innovation, and economic sustainability in the construction industry.

**Testing Grounds**

Topcon tested technologies at [AP Deutschland](http://www.ap-deutschland.com), a long-standing Topcon partner, facilities in Herne, Germany, conducting trials in field-relevant conditions with advanced technical infrastructure. The final event united experts and featured live demonstrations, interactive discussions, and insights into 5G’s impact on construction and agriculture.

**Acknowledgment and Outlook**

Topcon thanks the [Federal Ministry of Economics and Climate Action](https://www.bundesregierung.de/breg-en/federal-government/ministries/ministry-for-economic-affairs-and-climate-action) for funding CampusOS. This initiative highlights the growing role of modular 5G in improving efficiency and fostering innovation, reaffirming Topcon’s dedication to shaping the future of industrial processes for growth and sustainability.

[Watch the full video here](https://vimeo.com/topcon/campusos-presentation-2024).

**Link for embedded video:**

<div style="padding:100% 0 0 0;position:relative;"><iframe src=<https://player.vimeo.com/video/1052374711?h=8a038c1df7&amp;badge=0&amp;autopause=0&amp;player_id=0&amp;app_id=58479> frameborder="0" allow="autoplay; fullscreen; picture-in-picture; clipboard-write; encrypted-media" style="position:absolute;top:0;left:0;width:100%;height:100%;" title="CampusOS | Connected Construction Site (Social)"></iframe></div><script src=<https://player.vimeo.com/api/player.js>></script>

**Article on the Topcon website:**[topconpositioning.com/articles/topcon-showcases-the-nomadic-construction-site-as-part-of-campusos-flagship-project](https://www.topconpositioning.com/articles/topcon-showcases-the-nomadic-construction-site-as-part-of-campusos-flagship-project)

**Photos:**

A group of people standing in front of a sign

AI-generated content may be incorrect.

A robot with legs and legs on dirt

AI-generated content may be incorrect.A collage of several people at a convention

AI-generated content may be incorrect.