

Small and midsize businesses (SMBs) in construction are discovering that fast, reliable connectivity can be a competitive advantage. With strong networks in place, SMBs can fully leverage modern technologies to streamline operations, improve efficiency, and compete with larger players.

# Building a competitive edge: How fast, reliable connectivity fuels SMB construction providers

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## Introduction

The construction industry continues to move rapidly from analog to digital and automated processes. Leading construction SMBs are increasing their investments in cloud platforms and applications, AR/VR, drones, robotics, and AI to support their growth and better compete with larger construction companies.

However, this shift to advanced technology isn't easy. Many SMBs with leaner staff and resources face technical, knowledge, and resource challenges as they modernize their operations. For example, many construction SMBs, without strong technology and digital transformation champions in-house, are still following outdated, inefficient processes, such as starting each project from scratch rather than learning from historical project performance. Add to that supply chain uncertainty; disparate, disconnected project data; and increasingly complex building information modeling (BIM) that now includes cost and project data, and the change management required to adopt new technologies can seem overwhelming.

To compete for business and thrive among bigger general contractors (GCs) and engineering, procurement, and construction (EPC) service providers, leading SMBs must first focus on wireless connectivity. This investment will help improve their safety and security, automation and visualization, IoT-connected asset data, fleet management, and adoption of AI tools.

## AT A GLANCE

It is critical that SMB construction companies investigate how they can become digital and AI-fueled organizations to remain competitive.

### KEY FOCUS AREAS

- Improved connectivity is a key IT investment for SMB construction companies: 33% of U.S. construction SMBs list enabling remote workers to securely connect to business systems as one of their top 3 technology challenges.
- There is also increasing investment in AI: 46% plan to leverage AI to improve business operations and the owner experience.
- Flexible connectivity through network slicing and quality of service (QoS) is essential to SMB construction success.

## How can high-speed connectivity transform the day-to-day operations of construction SMBs?

Construction SMBs consist of a wide range of businesses, including:

- General contractors
- Subcontractors
- Specialty trades (such as cost estimators and quality assurance businesses)
- Remodeling, repair, maintenance, and finish workers

SMB contractors can manage smaller industrial or residential jobs or comprise part of a larger construction team on major job sites. Whatever their role, all SMB construction companies require rapid connectivity for project collaboration to:

- Enable data sharing that informs project, cost, and compliance.
- Gain reliable access to large digital models of buildings and related assets remotely to support consistent, high levels of safety and quality.

Let's dive into some specific day-to-day scenarios.

### Better, faster collaboration

Every player on a construction team can benefit from better connectivity — from virtual design and construction managers; project managers; mechanical, electrical, and plumbing engineers; and cost estimators to contractors, subcontractors, and owners. Examples include:

- Architects and EPC service providers who are not on site can still stay engaged, quickly updating BIM models or project plans with rich 3D visuals and live data.
- SMB construction organizations at smaller job sites, such as residential locations, need reliable connectivity for speedy project bidding, sourcing, and communication with owners.
- At larger job sites, such as institutional, commercial, and infrastructure sites, construction businesses often work with a wide range of providers that they must connect with remotely.

### Mitigating risks

Reliable wireless connectivity also helps businesses increase safety, security, and compliance. SMB construction companies have to mitigate risks on a job site as they work in concert with many other providers. However, today's systems, data, and workflows across construction projects at SMBs are often disconnected.

According to IDC's *2024 Future of Industry Ecosystems Global Survey*, top challenges across the construction ecosystem include securing platforms and data, maintaining environmental compliance, and ensuring project quality and safety.

SMBs must contend with changing building codes, environmental mandates for pollution reduction and waste mitigation, and OSHA regulations to ensure worker safety — all while staying on schedule and on budget.

Reliable and fast connectivity helps construction teams reduce risk by providing immediate access to accurate, up-to-date information. With better visibility into project data, teams can improve budget forecasting, process change orders more quickly, track materials and inventory in real time, maintain consistent health and safety standards, and efficiently allocate appropriate resources.

### Supporting modern technology

Reliable mobile connectivity also lays the foundation for technology strategies such as digital twins that enable optimized project delivery and fleet management, as well as AI and predictive analytics. Part of the AI toolbox, foundational large language models need immediate access to a range of data types for generative, agentic, and predictive tools or an ML algorithm to function optimally, and that also requires reliable, fast connectivity.

IDC recently spoke with a U.S.-based GC company that illustrated how connectivity is at the core of its digital processes. During construction, the building owner and all project team members access a BIM to manage all project information. The model provides visibility into project details, deadlines, and designs, so team members can provide input and monitor requirements and regulations. The contractor also extracts packaging, operational, and asset information from the BIM and places it in a digital twin (a digital replica of assets or processes) once each project is completed, replacing inefficient, dated paper manuals. This digital process, which improves operations, services, and maintenance, relies on speedy and robust connectivity.

## Taking a use-case approach to digital transformation investments

How can SMBs begin implementing these evolving technologies and modern processes? IDC advises organizations to start small and take a use-case approach to investments.

It is helpful to think about these across four strategic initiatives that are applicable in construction:

- **Efficient communication:** Most organizations start with investments in cloud infrastructure and applications, improving mobility and big data analytics. Connectivity is key on job sites to support timely and quality communication, collaboration, and decision-making among construction project participants. This can include network slicing for customized virtual networks, priority networks for flexible QoS and bandwidth allocation, and satellite network communications for remote or disconnected project sites.
- **Safety and security:** Safety is a top concern for construction SMBs; thus, real-time visibility of project execution and progress is critical. Crews on job sites must take clearly outlined precautions to protect themselves and all players in a project from liabilities. Security is also essential for protecting digital assets (blueprints, plans, and project data), equipment, materials, building structures, and people.
- **Automation and virtualization:** Advanced digital technology can enable speed and quality. For example, remote stakeholders around the globe involved in a construction project could leverage AR/VR to walk through a virtual

model of a proposed finished construction project before signing a contract. Stakeholders could also use 5G connectivity to access live video of a building under construction to monitor progress.

- **IoT-connected asset data and fleet management:** Connected asset data can provide construction teams with a unified view of assets, equipment, and people across job sites. Digital twins can enable remote operation of autonomous or manned vehicle fleets, and visibility of supply chain logistics helps expedite deliveries and enables businesses to make supply chain adjustments if necessary.

IDC's data shows that U.S. construction SMBs are investing or planning to invest in several of these technologies:

- According to an early-2025 IDC survey, 28.6% list IoT as a forward-looking technology area that will be an investment priority in the next 12 months, and 30% say the same for connecting sensors and/or devices (e.g., smartphones and tablets) to analyze data.
- There is also increasing investment in AI; 45.5% plan to leverage AI to improve business operations and customer experience. However, many still note challenges with connectivity.
- 32.5% of respondents list enabling remote workers to securely connect to business systems as one of their top 3 technology challenges to achieving their business priorities.

Table 1 contains some of the key current technology focus areas emerging in construction, related to the aforementioned strategic initiatives, that SMBs need to be able to support.

**Table 1: Key tech investments in construction that require robust connectivity**

Strategic initiative(s)	Technology investment	SMB impact
Efficient Communication, Safety, & Security, Automation & Virtualization, IoT-connected Asset Data & Fleet Management	<b>5D or 6D BIM:</b> These are 3D models that include cost and time information; 6D adds environmental data.	Project and cost information from SMBs contribute to the model that they use for cross-team collaboration.
Efficient Communication, Automation & Virtualization, IoT-connected Asset Data & Fleet Management	<b>Supply chain business networks:</b> These networks incorporate pre-construction cost estimates, quantity takeoffs, and bidding processes and assure ongoing material accessibility and delivery.	These offer visibility into the logistics process and timelines and could include suppliers for the projects. They provide a timely view of GC or owner requests to support quick responses.
Safety & Security, Automation & Virtualization, IoT-connected Asset Data & Fleet Management	<b>Autonomous robotics and drones:</b> These technologies can be used for job execution; for example, rebar tying or material distribution, as well as inspection and quality assurance.	SMB construction organizations should be aware of how robotics offerings can work together on large job sites. Automation is a growing trend in construction, and SMBs need to be up to speed to compete.
Efficient Communication, Safety & Security, Automation & Virtualization, IoT-connected Asset Data & Fleet Management	<b>Digital twins:</b> A digital twin is a BIM that contains facility/infrastructure detail and maintenance data. Digital twins are increasingly used to provide information to an	For a residential or small industrial site, this could be how the SMB hands off information (i.e., a digital package of project info). For larger sites, where the SMB is a

	owner/operator after construction. This process is still largely paper-based, and construction companies of all sizes should invest in transitioning this to digital capability.	contributor, the digital twin will need to include information relevant to the SMB's job.
<b>Efficient Communication, Safety &amp; Security, Automation &amp; Virtualization, IoT Connected Asset Data &amp; Fleet Management</b>	<b>AI:</b> Many construction companies are still moving to cloud-based platforms. Thus, many are in the early stages of AI experimentation and usage, including generative, agentic, and predictive AI.	SMBs should prioritize adopting all forms of AI, whether generative, agentic, predictive, physical (e.g., for robotics or autonomous vehicles), or ML.

Source: IDC, 2025

IDC's research consistently shows that SMBs want to invest in digital technology to "level the playing field" so that they can compete and collaborate with larger organizations. This is particularly important in the construction industry, which includes players of all sizes and with different levels of expertise, knowledge, and capacity.

Construction SMBs need to align use cases, whether today or in the future, to existing connectivity investments (cellular, Wi-Fi, LMR, and wired) and 5G to maximize value and realize ROI — determining when existing connectivity is enough and when 5G, or even satellite-augmented mobile connectivity, is necessary and can add value. Potential deals with larger construction organizations are also spurring construction SMBs to invest in connectivity.

**Conclusion**

Rapid, reliable connectivity is essential to building a secure and safe construction business. Flexible deployment of 5G supports advanced capabilities, such as robotics, AR/VR, drones, digital twins, predictive analytics, as well as generative and agentic AI.

Small and mid-sized construction organizations that invest in robust connectivity across data, processes, and resources will be better positioned to deliver high-quality, safe, and timely work across their construction ecosystems, both now and in the future.

SMBs want to invest in digital technology to "level the playing field" so that they can compete and collaborate with larger organizations.

## About the Analysts



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Katie's core research coverage includes identifying and supporting the unique, evolving needs of the very small, small, and medium business technology buyer. Katie has a strong SMB-focused research and writing background, having covered SMBs in the retail and ecommerce space for over 12 years before joining IDC in October 2021.



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Jeff Hojlo leads IDC's Industry Ecosystems & Business Networks research. This global practice focuses on four areas that help create and optimize trusted industry ecosystems and next-generation value chains in discrete and process manufacturing, construction, healthcare, retail, and other industries: shared data and insight, shared applications, shared operations and expertise, and the blend of physical and digital connectivity and collaboration.

### MESSAGE FROM THE SPONSOR

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