Building resilience with new construction technology

Discover the solutions that can help prepare your firm for the future.



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Overview

As the construction industry evolves, the goal for any forward-thinking business is clear: Find ways to leverage technology not just for greater efficiency but also to remain competitive in the war for talent and bids to win work.

Leveraging technology not only helps streamline operations but also provides robust data analytics capabilities, empowering your firm to make data-driven decisions. And in an industry where margins can be thin and competition fierce, these transformations aren't just advantageous — they're essential for long-term success.

This e-book explores the foundational methodologies and technology that can help you become a modern, tech-enabled construction firm, including:

- The future of construction technology.
- The IT architecture that can help you build a strong technology foundation.
- The five key systems that can drive your success.

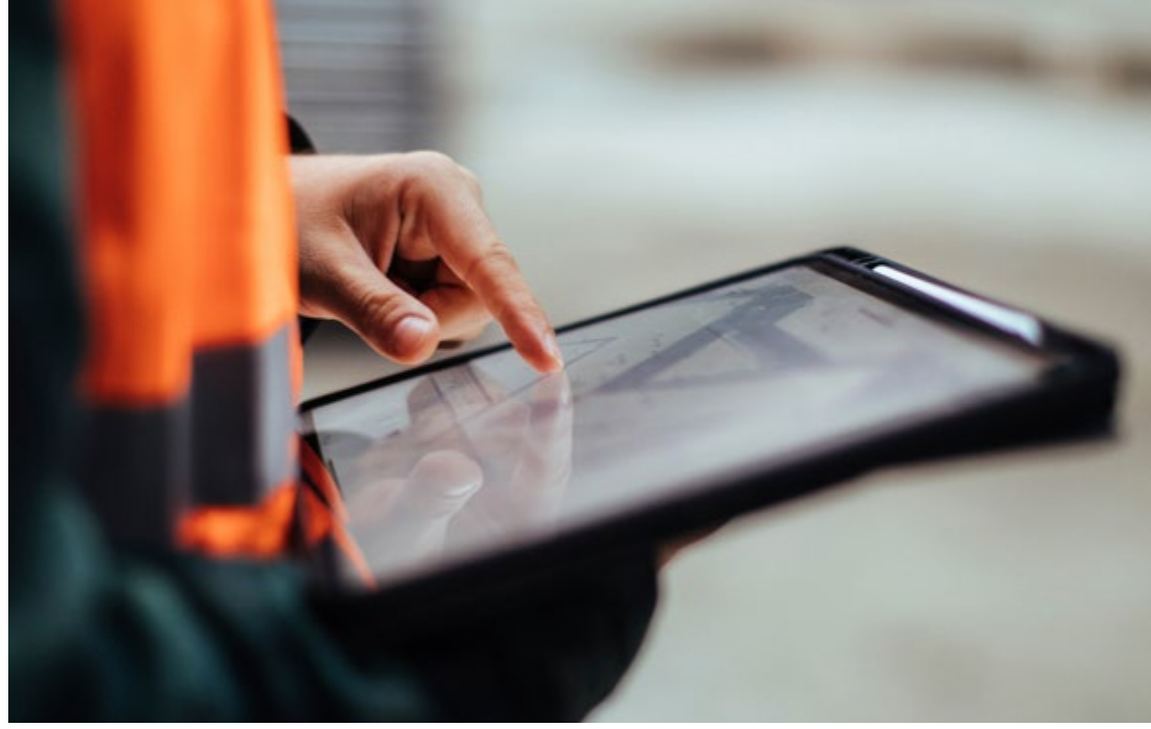
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The future of construction technology

For modern construction firms, the future of innovation has moved from on-premises servers to cloud solutions.

Cloud technology allows construction firms to:

- **Leverage data:** The cloud gives staff instant access to critical data, platforms and dashboards on multiple devices.
- **Increase security:** Many cloud solutions are certified for use by healthcare organizations, government entities and other heavily regulated industries. They give you greater protection since security is continuously tested and hardened.
- **Decrease the maintenance burden:** The cloud isn't subject to the same level of rigorous ongoing measurement and management that applies to on-premises servers, freeing up IT staff to focus on more value-added work.



- **Integrate systems:** Unify data and unlock seamless communication between the field and the back office.
- **Scale easily:** Without the need to update or replace servers, the cloud makes it easier to adopt new tools or scale solutions to match growth.

By migrating your systems to the cloud, you're giving your construction firm the ability to stay competitive now while supporting the growth you'll need to remain competitive in the future.

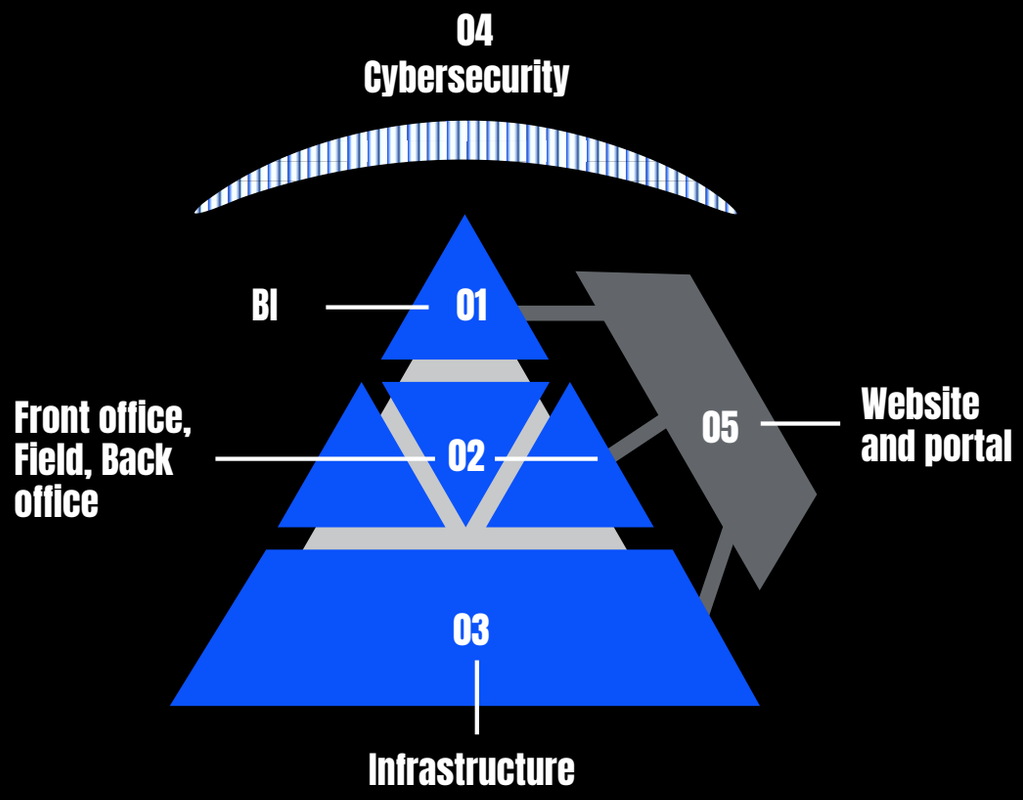
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IT architecture for construction firms

Having the right architecture is critical to modernizing your tech stack and migrating to the cloud.

Using an architecture that has the right data, tools, infrastructure, security and external outlets helps you leverage your data while keeping it secure. It also gives you a solid foundation for adopting more sophisticated technologies as the digital landscape evolves.

For your firm, consider implementing this 5-part architecture:



01 Software to pull data and provide analytics

02 Tools for managers' and associates' daily duties

03 Hardware, servers, data structure, cloud setup

04 System protection

05 External outlets integrated with internal tools

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5 key systems for your success

As you plan your IT architecture, there are five key systems that can help give you the insights, efficiency and communication you need to drive success:

1. Construction management system

Disconnect between your field and office operations can significantly contribute to miscommunication and inefficiencies. Implementing a capable construction management system (CMS) can help bridge the gap by providing a unified platform for field and office staff to have easy access to critical project information such as scheduling and real-time site updates.

A CMS serves as a firm's central nervous system, helping staff manage crucial aspects such as task scheduling, real-time site updates and monitoring. These features enable smooth project execution by helping minimize delays and cost overruns.

However, the true strength of a CMS lies in its ability to integrate with your other solutions — from financial and HR tools to relationship management systems. By connecting data from across your business and projects, it creates the foundation for a seamless tech ecosystem capable of elevating operational efficiency and improving project execution.

Tailored construction solutions

As construction technology continues to evolve, systems are growing more and more specialized. Firms no longer have to worry about one-size-fits-all solutions or capabilities designed for other industries. Now, your firm can find hyper-specific solutions, such as Procore for vertical construction, HeavyBid and HeavyJob for horizontal construction, and ServiceTitan for trades.

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2. Modern financial systems

Having easy, real-time access to accurate financial data is crucial for successful project execution.

Legacy financial systems are prone to errors and inefficiencies that can severely impact your bottom line. Updating to modern, cloud-based ERPs provides dimensional accounting capability, greater accuracy and the ability to integrate with other solutions in your tech stack. ERPs also offer tools for budget allocation, cash flow tracking and revenue forecasting, which can help leadership fully optimize financial resource allocation.

ERP selection

When selecting an ERP, focus on options that include these critical capabilities:

01 **Job costing:** Accurate job costing is paramount in construction. Modern ERP systems allow real-time tracking of labor, materials and overhead costs, which are allocated directly to specific jobs.

02 **Dimensional accounting:** Dimensional accounting enables for a more nuanced financial analysis by providing the capability to tag transactions with additional data fields, such as project codes or geographic locations.

03 **Open APIs:** Open APIs enhance operational efficiency by enabling seamless connectivity with other vital software.

04 **AP automation:** Automated accounts payable (AP) reduces manual errors and speeds up invoice processing, helping improve cash flow and vendor relationships.

05 **Vendor and subcontractor management**: Managing relationships with vendors and subcontractors is crucial for project success. An advanced ERP system can help you better manage relationships and reduce administrative overhead by supporting streamlined supplier selection, efficient procurement processes and even automated payments.

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3. Human resource information system

Managing the complex construction workforce can be challenging. A human resource information system (HRIS) can help simplify critical tasks and allow you to focus on strategic objectives by:

- Automating payroll.
- Handling benefits.
- Facilitating performance appraisals.

When integrated with other systems such as an ERP, your HRIS can even help facilitate real-time tracking of labor costs, integration of fully burdened labor allocated to job cost subledgers and better resource allocation across projects.

Additionally, an HRIS can be a powerful tool for talent management.

With a shrinking workforce and changing employee expectations, companies need to find new ways to be competitive employers. An HRIS can help you with talent acquisition, retention strategies and succession planning — all essential to making your company an attractive workplace.

4. Customer relationship management system

Customer relationship management (CRM) systems are often seen primarily as a sales tool. However, CRM can do more than manage customer interactions for construction firms.

Here's how a CRM can help drive success at your firm:

- **Trade partner management:** A well-implemented CRM system fosters both customer and trade partner relationships by providing comprehensive profiles, project histories and engagement metrics.
- **Bid package and estimate management:** The bidding process in construction is often complex and multifaceted. CRM systems can help manage the complexity by streamlining bid submission and automating estimate calculations, ultimately reducing the chance of costly errors.
- **Pipeline forecasting:** The long-term nature of most construction projects requires sophisticated pipeline forecasting. Integrating CRM with a modern financial systems allow firms to forecast revenue over multiple future periods, including monthly, quarterly and annually.

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- **Integration with resource planning:** A CRM's forecasting capabilities are significantly enhanced when integrated with a CMS. This cross-system connectivity allows for real-time resource planning, making it easier to consistently meet project timelines and budgets.
- **Rich reporting and analytics:** While CRM systems provide their own analytics, true depth of insights comes from integration with an ERP's robust reporting layer. Integration between these systems amplifies the value of your data and helps you access actionable insights for better decision-making.

5. Reporting stack

In today's fast-paced construction environment, real-time analytics are critical for making decisions that can further your growth.

A well-designed reporting stack should seamlessly integrate with and aggregate data from all your systems, especially ERP. Integration gives you greater accuracy and adds context to your raw data so that you can turn it into actionable insights.

Adding customizable dashboards with instant access to reports and data visualization offers all levels of staff the ability to track metrics that bring the most value to your business. From monitoring project timelines to scrutinizing budget variances, dashboards give staff an accessible view of all their analytics needs. Immediate data visualization capabilities also provide live insights into operations so that project managers and executives can make better, more informed decisions.



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Looking ahead

The construction industry isn't immune to the transformative impact of technology. As technology continues to evolve, your firm can expect greater changes in areas including:

- **People:** The construction industry, traditionally rooted in hands-on labor and manual processes, is rapidly evolving in the face of technological advancements. Preparing for this change requires not just the adoption of new tools but also the cultivation of a tech-ready workforce. Skills assessments, continuous training and development programs are paramount to help ensure teams are equipped to leverage new technologies effectively.
- **Processes:** Digital transformation continues to shape the construction landscape, and your business processes must adapt. Insights gained from data analytics can be a powerful tool for process optimization, ensuring that workflows are streamlined and resources are allocated efficiently.
- **Technology:** Integration platform as a service (iPaaS) and data lakehouses are the next steps in helping ensure your firm has access to the data you need to leverage AI and future innovations. iPaaS seamlessly connects systems across your tech stack, while a data lakehouse guarantees that data from your systems is organized and accessible, including unstructured data such as drawings, PDFs, photos and emails.

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Building a modern construction firm

Wipfli is ready to bring digital clarity to your firm, cutting through the complexity to deliver solutions designed specifically for construction.

Our team combines extensive industry experience and a wide range of digital services to help you adopt a more agile, data-driven way of working. We focus on enhancing project management, improving overall efficiency and creating a unified interface across your business so that you can access accurate, up-to-date data.

We can help you adopt the latest solutions, including:

- Construction-specific tech.
- Relationship management systems or CRMs.
- Project management solutions.
- Bid estimating and tracking tools.
- Cloud-based financial systems.

We also offer cybersecurity and IT support to help you optimize underperforming technology and keep your firm's data secure.

Let's get started.

Contact us today to discuss how we can help you evolve into a modern construction firm. Visit **wipfli.com/construction.**

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