



Whitepaper

THE DIGITAL BLUEPRINT: *How ERP Systems are Transforming Construction Project Management*

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EXECUTIVE SUMMARY

In today's fast-paced construction industry, the traditional methods of operation are proving inadequate for the challenges posed by large-scale, multi-faceted projects. As construction firms seek to stay competitive and deliver higher levels of customer satisfaction, the adoption of advanced technological solutions is not just beneficial—it is essential.

ERP (Enterprise Resource Planning) systems help a company run smoothly by keeping all its business processes connected and integrated. The system serves as a comprehensive digital blueprint for construction firms, offering a centralized platform where all project-related information—ranging from financials and scheduling to procurement and workforce management—can be accessed, updated, and analyzed in real time.

By leveraging the capabilities of ERP systems, construction companies of all sizes can reduce

inefficiencies, eliminate silos, and ensure that every team member is working with the most current information. The American Institute of Architects found in industry surveys of emerging technologies, that users of ERP systems are nearly twice as likely to have real-time visibility into project costs and understanding their pipeline for potential future projects.¹

As the construction industry continues to evolve, embracing ERP systems will be critical for firms aiming to clarify and enhance their project management practices. This paper serves as a guide for understanding the transformative potential of ERP systems and how they can be effectively implemented to drive success in construction projects.

¹ The American Institute of Architects. (n.d.). *“Technology, culture, & the future of the architectural firm”*

THE KEY BENEFITS HIGHLIGHTED IN THIS WHITEPAPER INCLUDE:



UNIFIED OPERATIONS

How ERP systems integrate various functions within a construction firm, leading to more cohesive and streamlined project workflows



ENHANCED CLARITY

The role of real-time data and analytics in providing a clear and up-to-date view of project status, helping managers to anticipate issues and make informed decisions



IMPROVED CUSTOMER SATISFACTION

The impact of ERP-driven efficiencies on meeting deadlines, budgets, and client expectations, leading to higher customer retention and reputation growth

INTRODUCTION

In the ever-evolving construction industry, managing projects has become increasingly complex. From coordinating vast teams across multiple sites to tracking budgets, materials, and timelines, construction firms are under constant pressure to deliver projects on time and within budget. Traditional management tools and methods are often inadequate for handling the scale and intricacies of modern construction projects, leading to inefficiencies, cost overruns, and missed deadlines.

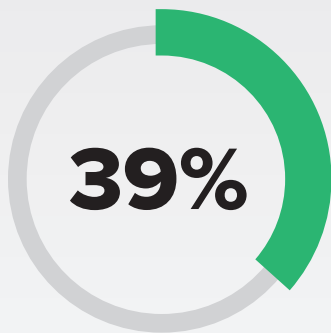
This is where cloud-based ERP systems come into play. These advanced software solutions offer a unified platform to streamline operations, provide real-time data, and integrate all aspects of a construction project. By centralizing critical functions—such as financial management, project

planning, procurement, and human resources—ERP systems not only simplify project management but also enhance decision-making processes. More construction firms are expected to double down on their technology investments with the U.S. Construction Software Market expected to increase 66% in total revenue from 2023 to 2029 according to a recent survey on the state of the U.S. construction software market.²

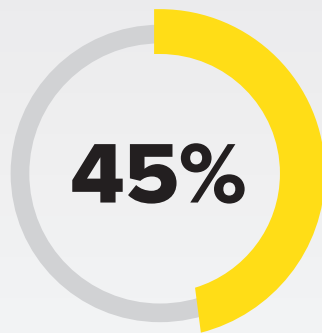
The digital transformation driven by ERP solutions is not just about improving operational efficiency; it is also about boosting the bottom line. Construction firms that adopt these systems report significant gains in productivity, cost savings, and customer satisfaction.

² [Research and Markets \(n.d.\). "United States Construction Software Market, by region, competition, forecast and opportunities, 2019-2029"](#)

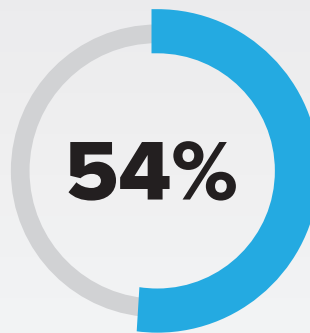
REAL-WORLD BENEFITS OF IMPLEMENTING ERP SOLUTIONS



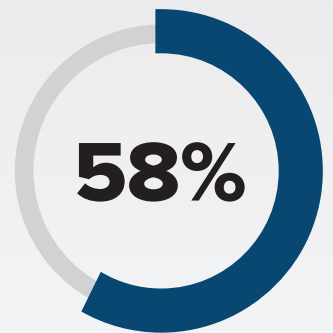
ERP users are **39%** more likely to understand their holistic pipeline of potential projects than accounting-only solution users.



ERP users are **45%** more likely to understand digital marketing efforts and what drives new business vs. accounting-only solution users.



Adopting ERP technologies is proving successful in project management, and **54%** say a top priority for their firm over the next 3 years will be increasing the profitability of their projects.



ERP users are **58%** more likely than those accounting-only solution users with bolted-on project tools to understand Real-time visibility into costs, budgets, and profitability of projects.

Source: [The American Institute of Architects. \(n.d.\). "Technology, culture, & the future of the architectural firm"](#)

THE CURRENT STRUGGLES OF MANY CONSTRUCTION TEAMS

Labor Challenges in Hiring and Retention

Construction firms face significant labor challenges, including a skilled labor shortage, high turnover rates, an aging workforce, and difficulty attracting young talent. These issues lead to increased workload and burnout for field employees, disrupt team dynamics, and result in higher costs and operational inefficiencies for management. Additionally, firms struggle to maintain quality, meet project deadlines, and innovate without adequate staffing and skilled labor. The AGC found in their 2024 outlook survey, that over half of construction firms felt hiring would continue to be difficult or become even harder in the coming year.³

Siloed Departments

Siloed departments refer to the organizational issue where different departments within a construction company—such as finance, operations, HR, and procurement—operate independently, often using their own processes and software tools. Unlike software technology integration issues, siloed departments are about people and processes. For instance, the finance department might be focused on cost control, while the operations team prioritizes on-time project delivery. If these departments

don't communicate or collaborate effectively, their goals can conflict. A siloed approach can lead to fragmented data—each department has a piece of the puzzle, but no one has the complete picture.

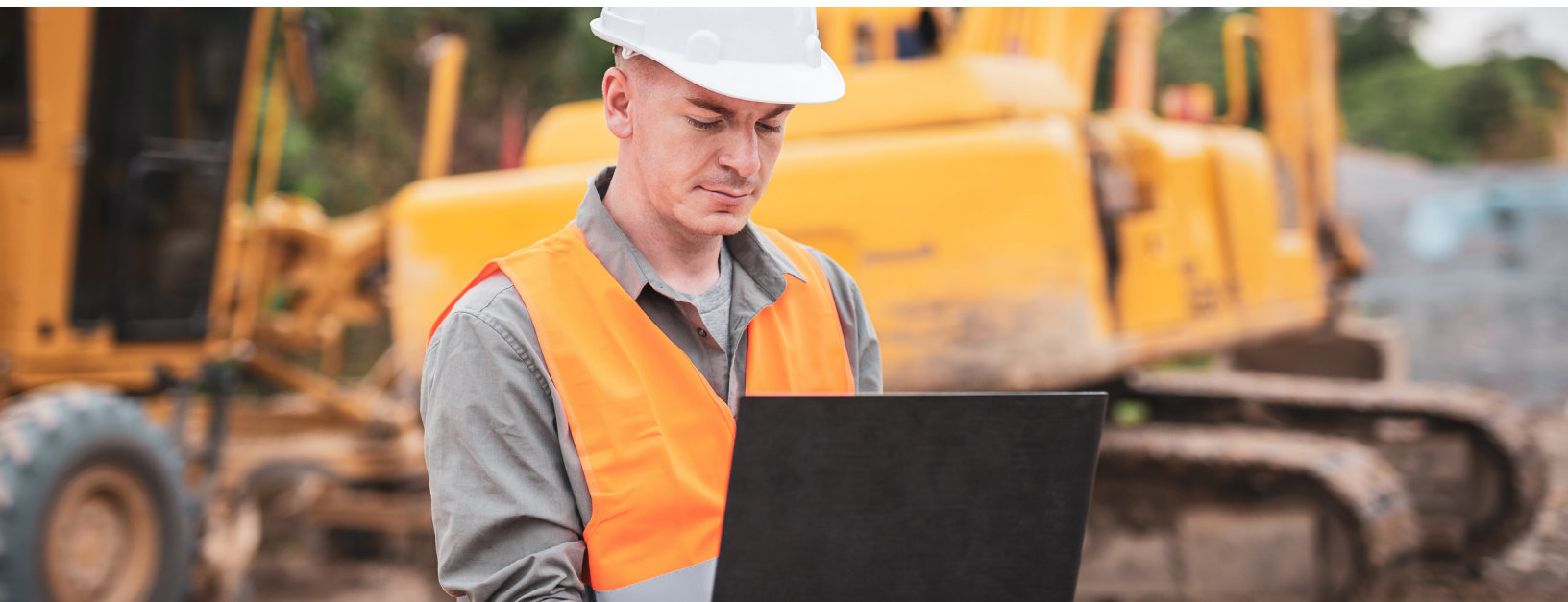
Poor Data Management

Managing vast amounts of data across multiple projects is a significant challenge for construction companies. Poor data management practices, such as inconsistent data entry, lack of real-time updates, and difficulty in accessing historical data, can lead to errors, inefficiencies, and missed deadlines. Without reliable data, construction companies struggle to make informed decisions, impacting project outcomes and profitability.

Outdated Technology That Doesn't Scale

Many construction companies still rely on outdated technology that cannot scale to meet the demands of growing projects and modern business needs. As projects increase in size and complexity, these old systems become bottlenecks, limiting the company's ability to adapt and grow. Outdated tech also lacks the flexibility to integrate with newer solutions, forcing companies to work around their limitations, which increases costs and reduces efficiency.

³ [AGC of America and Sage. \(n.d.\). "2024 Construction Outlook National Survey Results."](#)



WHAT CAN A MODERN ERP SYSTEM DO FOR MY BUSINESS?

A modern ERP system can revolutionize construction businesses by offering a unified platform that consolidates all aspects of operations into one seamless system. This integration fosters improved collaboration among departments, ensuring that everyone from project managers to accountants are working with the same real-time data.

Build Your Business on One Unified Platform

A modern ERP system allows construction businesses to build their operations on a unified platform that integrates all essential functions—such as project management, finance, procurement, and human resources—into one cohesive system. This centralization eliminates data silos, ensuring that every department has access to the same accurate, real-time information, which improves efficiency and decision-making across the organization.

Improved Collaboration Amongst All Departments

By providing a single source of truth, a modern ERP system enhances collaboration among all departments within a construction business. Teams can seamlessly share information, coordinate projects, and align their efforts towards the company's business goals. This improved communication reduces misunderstandings, accelerates workflows, and leads to more successful project outcomes. A secondary benefit of this collaboration is ERP

technology helps optimize workforce planning, streamlining recruitment and training, improving employee retention, and managing labor costs more effectively.

Increase Margins, Reduce Rework, Increase Staff Capacity

A modern ERP system is a powerful tool for boosting cost efficiency in construction businesses. By automating processes and optimizing resource management, it helps increase profit margins by reducing costly rework and improving staff productivity. With better visibility into operations, companies can allocate resources more effectively, maximize staff capacity, and drive higher profitability.

Flexible, Low Code/No Code Development

The flexible nature of modern ERP systems, including low code/no code development options, allows construction businesses to tailor the software to their specific needs without extensive programming knowledge. This flexibility enables companies to quickly adapt the system as their needs evolve, integrate new functionalities, and scale their operations efficiently, all while maintaining control over their technological infrastructure.



The US construction software market is expected to grow 60% over 6 years.

WHAT ARE THE BENEFITS FOR YOUR TEAM WITH A NEW ERP?

Project Management

An ERP system streamlines project management by integrating all aspects of a project, from planning and scheduling to resource allocation and progress tracking, into a single platform. This ensures that project managers have real-time visibility into every detail, enabling them to keep projects on track, within budget, and aligned with client expectations.

Accounting and Finance

ERP systems automate tasks like budgeting, payroll, and financial reporting, improving cash flow control, accuracy in statements, and tracking expenses across projects. 38% of firms surveyed by the AGC are looking to improve their accounting software in 2024, while only 1% are looking to decrease their investment.³

Real-time Dashboards and Reporting

With real-time dashboards and reporting, an ERP system provides instant access to critical data. This allows managers to make informed decisions quickly, monitor key performance indicators, and identify potential issues before they escalate, leading to more efficient and proactive project management.

Job Costing

Job costing is crucial for construction companies, and an ERP system excels at tracking costs associated with labor, materials, and overhead on a per-project basis. This enables accurate forecasting, helps maintain profitability, and ensures that all projects are completed within budget.

Bid Management

ERP systems enhance bid management by providing tools to create, track, and analyze bids with precision. Construction companies can use historical data and real-time insights to craft more competitive bids, improve win rates, and better manage the bidding process from start to finish.

Contract Lifecycles

Managing contract lifecycles is simplified with an ERP system, which tracks every stage from negotiation to

execution and renewal. This ensures that companies stay compliant, meet all contractual obligations, and maintain strong relationships with clients and partners.

Subcontractor and Employee Management

An ERP system provides comprehensive tools for managing subcontractors and employees, including tracking performance, schedules, and compliance. This helps ensure that all team members are aligned, work is completed on time, and all legal requirements are met, leading to smoother operations.

Inventory Management

ERP systems improve inventory management by providing real-time tracking of materials and equipment across multiple sites. This helps companies optimize stock levels, reduce waste, and ensure that the right resources are available when needed, avoiding delays and unnecessary costs.

Communication and Collaboration

An ERP system facilitates collaboration by connecting all stakeholders—whether on-site or in the office—through a single platform. This ensures that everyone has access to the latest information, reducing misunderstandings and improving project outcomes.

Industry-specific Functionality

ERP systems for construction companies come with industry-specific functionalities such as compliance tracking, safety management, and equipment tracking. These features are tailored to meet the unique needs of the construction industry, ensuring that companies can operate efficiently while adhering to industry standards.

User-friendly Licensing

Modern ERP systems often feature user-friendly licensing models that allow companies to scale the software as needed, making it cost-effective and accessible. Whether a small firm or a large enterprise, companies can easily manage licenses according to their current needs without overspending on unnecessary features.

CONSTRUCTION COMPANY CASE STUDIES

Acumatica's ERP system has proven to be a meaningful change for construction companies like American Asphalt Repair, Safety Management Group, Boulder Creek Stone, and Carlson-LaVine Inc., driving success through enhanced efficiency, cost savings, and streamlined operations.

These case studies collectively highlight how Acumatica's ERP system empowers construction companies to overcome industry challenges, drive growth, and achieve operational excellence.



Acumatica helped them grow 7 to 10 percent a year.



For American Asphalt Repair, Acumatica enabled seamless integration of business processes, reducing manual work, and eliminating errors, resulting in better project management and customer satisfaction.



SAFETY | ENVIRONMENTAL | QUALITY

40 hours down to 10 hours a week in weekly payroll processes.



Safety Management Group benefited from Acumatica's real-time data access, which provided critical insights into their projects, helping them optimize resources and improve decision-making.



Saved thousands with the user-license model and Acumatica CRM



Boulder Creek Stone saw a significant improvement in their operations by utilizing Acumatica's customizable and scalable platform, which allowed them to better manage inventory, track orders, and enhance customer service.



Cut payroll time commitments from 1.5 days to just 10 minutes.



Carlson-LaVine Inc. leveraged Acumatica to replace their outdated systems with a modern, cloud-based solution that could scale with their growing business, leading to more efficient project tracking and financial management.

WHAT THIS MEANS FOR YOUR CONSTRUCTION BUSINESS

Investing in a modern ERP system can significantly enhance efficiency by automating routine tasks and centralizing information. This, in turn, provides time savings, which boosts overall productivity and allows teams to manage more projects simultaneously. A modern ERP can also help improve the accuracy and competitiveness of bids, leading to more contract wins and a stronger market presence. Despite the substantial initial investment, the long-term benefits, including reduced errors and higher profit margins, provide a sustained return on investment and reinforce the company's financial health.

REACH OUT TO OUR SPECIALISTS TO LEARN MORE:

Our team of construction ERP software specialists are versed in both legacy and modern, cloud-based systems – so we know your existing technology environment as well as where you're headed. That's the power of Net at Work.

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About Net at Work

Founded in 1996, Net at Work is a leading technology advisor to thousands of small-to-medium sized businesses throughout North America. The award-winning consultancy offers a rich portfolio of technology, expertise, and services to help organizations derive value from the transformative effects of technology. To start unleashing the power of your business, visit www.NetatWork.com.

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