



# Digital Transformation in the Construction Industry: A Guide for Project Managers

E B O O K



# Table of Contents

03

Introduction

03

What is Digital Transformation in Construction?

05

Challenges Faced by Project Managers during Digital Transformation

- Overlooking customer needs
- Improper data utilization
- Unsatisfied Employees

07

How Project Managers can Overcome these Issues Smartly?

- Promote Agile Methodology
- Value Existing Legacy Processes
- Rethink Interaction with Team and Customers

09

What are the Benefits of Digital Transformation in Construction?

1. Improved Productivity
2. Higher Accuracy
3. Enhanced Communication and Collaboration
4. Better Risk Management
5. More Innovation

13

Conclusion

# 01 Introduction

Presently, digital transformation is initiated globally by executives and construction technologists, construction project managers have to play an integral role in implementing new processes and tools.

Since the pandemic, 85% of business leaders have expedited their digital transformation strategy, and 84% indicate that it has brought about new business opportunities. It is the responsibility of project managers to execute the transformation across departments and staff.

Digital transformation is at the heart of all areas of business. Sophisticated business applications need to meet the requirements of both consumers and employees. However, the tools that make digital transformation seamless for construction companies have similar underlying technologies, they have different features to fulfill diverse business needs.

For **construction project managers**, digital transformation involves guiding their organization through the process of digital transformation, integrating processes, and onboarding vendors and subcontractors.

While some workers may be prepared to use new tools, others may prefer to stick to their traditional processes. Project managers must demonstrate how digital transformation can be advantageous for everyone while respecting that each individual may approach this significant change differently.

## 02 What is Digital Transformation in Construction?

If you've been searching for project manager jobs in the past five years, you might have come across the role of a digital transformation PM.

Many construction companies have digital transformation strategies, and the term "digital transformation" is used in a variety of situations, sometimes even interchangeably with "digitization" or "cloudification."

Let's delve into this term to understand its various meanings.

## Digital Transformation with a Focus on "Digital"

20-30 years ago, digital transformation involved digitizing analog processes within construction companies. At that time, computers were becoming a mainstream tool for office work, which created opportunities to make efficiency gains in areas like internal communication, data storage, and **contract management**.

Today, this form of digital transformation is still relevant as technologies continue to improve, even in digitally advanced construction companies wish to shift their teams from email-based communication to project management tools that are collaborative.

However, this is a narrow understanding of digital transformation, where synonyms like "digitization" and "cloudification" make sense.

## Digital Transformation with a Focus on "Transformation"

For the remainder of this article, we will refer to digital transformation as described in this section.

A more complex form of digital transformation involves structuring products and services around digital capabilities. This can include:

- Redesigning sales channels based on online user behavior
- Introducing software development to improve existing products or services
- Capturing and using data to create internal or customer-facing analytics

Digital transformation presupposes the introduction of Agile practices. Becoming digital allows and requires construction project managers to be more proactive to customer needs in collecting client feedback, and adaptive to changing market conditions. Some construction companies provide excellent examples of how they have revamped their processes by using digital tools and are relevant in their markets.



# Challenges Faced by Project Managers during Digital Transformation



- **Overlooking customer needs**

Traditionally, construction companies work in siloed departments where each of them is responsible for a particular function within the company.

The risk in such companies is that the clients' interests are prioritized only at the highest levels of decision making. When it comes to actual work, employees start focusing more on the output rather than the outcome.

The work becomes about creating a leaflet and not about conveying information, about closing support tickets and not helping customers.

## • Improper data utilization

When you use tailored software, it's significantly simpler to gather and analyze data. While most construction project managers possess financial data, they don't have a lot of usage statistics.

This results in decisions being made based on intuition. To rely on data to support one's decisions, a different mindset and a fresh set of internal capabilities are required to make sure the data is readily available.

## • Unsatisfied Employees

Construction employees may feel unsatisfied due to lack of necessary training and skills to fully utilize new digital tools and technologies. This can lead to frustration and a sense of being left behind in the rapidly evolving industry.

Moreover, the implementation of digital tools and technologies may disrupt established workflows and processes, causing confusion and resistance among employees who are used to doing things a certain way. This can also lead to a fear of job displacement or reduced job security.

Also, the cost and time investment required for digital transformation can be significant, and employees may feel that the benefits are not immediately clear or tangible. Additionally, if the implementation is not properly managed, it can lead to further frustration and a feeling of disengagement among employees.

# How Project Managers can Overcome these Issues Smartly?



Digital transformations present a distinct chance for construction project managers. Although no PM can solely determine the success or failure of a digital transformation, they can still make a significant impact within their sphere of responsibilities, thereby increasing the likelihood of success.

Additionally, this can lead to improved career prospects within the construction industry since those who excel during the transformation process will be well-positioned to thrive in the company's new digital landscape.

So how can construction project managers help construction companies thrive in the digitally grown environment:

- **Promote agile methodology**

The primary responsibility of project managers in a company-wide digital transformation is to promote agile values. However, once a progressive organizational culture is established and employees witness the benefits of utilizing new tools, project managers can shift their attention back to strategy, execution, and outcomes.

Competent project managers involve leadership and stakeholders in identifying ways to enhance internal processes, allowing them to address outdated procedures and prepare for more effective ones in the future.

## • Appreciate existing legacy processes

The previous section discussed the ability to challenge the status quo. However, it's crucial to acknowledge and appreciate the current legacy processes. This advice is given for two primary reasons:

Firstly, from a practical standpoint, habits are difficult to change, and people generally prefer to work in the way they are used to.

Even if senior leadership endorses a move towards greater agility for the entire company, it would be unwise to force anyone to change. Doing so is likely to result in resistance and conflicts with colleagues.

Secondly, not all teams should adopt Agile principles entirely or at all. Agile is not a one-size-fits-all solution, and this is especially evident in non-IT organizations.

Different departments bear varying levels of responsibility and risk, and not all of them can operate in the same way as software teams.

## • Rethink Interaction with Team and Clients

Digital technology offers **construction contractors** new ways to engage with clients. The most significant advantage is that clients can access your product or service anytime and accomplish their goals almost instantly.

Many conventional interactions require clients to wait, such as waiting for an email response from customer support or waiting for an account manager to set up their account.

Construction companies have to deal with high volumes of repetitive client support inquiries, it may be worthwhile to consider creating separate community-driven forums.



Another option to explore is chatbots. Regarding account management, developing self-service systems can not only provide more immediate assistance to users but also save time for your colleagues as some tasks can be delegated to users.

## What are the Benefits of Digital Transformation in Construction?



Digitalization can have a significant impact on a company's productivity and profitability by streamlining processes, increasing efficiency, and reducing costs.

Moreover, as more and more companies adopt digital tools, it becomes increasingly important for businesses to keep up with the competition.

However, many companies are hesitant to implement digitization due to concerns about integration and implementation.

It's important for companies to understand that digitalization doesn't have to be an all-or-nothing approach. It can be implemented gradually and in a way that integrates with existing systems.

In the construction industry specifically, digitalization can bring significant benefits such as better project management, improved collaboration among team members, and increased safety on job sites.

By embracing technology, construction companies can stay ahead of the curve and remain competitive in a rapidly evolving industry.

The benefits of digitalization are clear, and the majority of companies agree that it's the future of the industry. While implementation may come with some challenges, the rewards are well worth the effort.

Now is the best time to start exploring digital tools and finding ways to incorporate them into your business processes. Let's dive into the benefits of digital transformation in the construction industry:

## 1. Improved Productivity

Boosting productivity is a primary concern for every contractor and their project managers. The industry has been struggling for decades, leading to more significant challenges in completing projects efficiently. The pandemic has only worsened the situation.

Nearly 60% of contractors reported facing project delays in the past year, with only 50% of all projects being completed within the allocated time and budget. This news is particularly problematic for construction firms, as delays may result in contract violations, leading to legal disputes.

Moreover, missing deadlines results in higher expenses for labor, equipment, and permits, reducing profit margins are also one of the concerns for project managers.

Therefore, contractors must prioritize increasing productivity to ensure timely and budget-friendly project delivery. One effective way to achieve this is by utilizing digital tools to manage both small and large tasks throughout the project lifecycle.

Reducing waiting times is a crucial area for improvement, leading to positive results in the long run. Digital solutions, such as ProjectPro, can improve asset management by enabling timely scheduling and delivery of materials, automating [material management](#), and ensuring accurate data analysis.

Research indicates that companies that have adopted digital solutions for data collection have seen a 46% increase in productivity. Streamlining your systems will help the entire team better understand project goals, leading to fewer miscommunications, design issues, and rework.

Smooth communication and defined roles and responsibilities will lead to improved productivity. With digital tools to manage your projects more efficiently, you can develop a comprehensive plan to increase your chances of success.

## 2. Higher accuracy

When utilizing digital technologies, professionals in the construction industry can capture information with greater precision and apply that knowledge to project plans and construction.

For instance, a laser scanner's point cloud captures infinitely more detail than a 2D paper blueprint for as-built checks. Likewise, robotic total stations equipped with BIM data allow a single person to carry out construction work with greater accuracy than using a tape measure and a crew of multiple people

### 3. Real-time Communication and Collaboration

Collaboration in real-time, gathering data promptly and making timely updates contribute to the success of projects, which is made possible by using the appropriate technology.

For instance, the widespread use of cloud-based software dismantles data barriers, streamlines data management, accelerates project timelines, and lowers expenses.

Modern tools such as cloud-based modeling, project planning, and accounting applications also aid in enabling stakeholders to collaborate effectively.

### 4. Better Risk Management

Forecasting has a pivotal role in the construction industry nowadays. By using digital tools along with significant data analysis, it becomes possible to recognize financial risks in construction projects.

The employment of digital tools enables small-scale construction companies to handle risks and gauge their performance. This, in turn, allows these firms to monitor cash flow, margins, billing, and procurement, and make precise cost estimations.

By harnessing the power of integration, construction managers can integrate their business intelligence (BI) tools with their tech stack to get a comprehensive view of their company's performance and direction. This integration results in less effort and improved decision-making for each project.

### 5. More Innovation

Until very recently, construction firms did not consider innovation as a key skill. In fact, spending on innovation was often considered unnecessary and was targeted for cuts.



However, with the fast adoption of digital technologies in construction sites, a positive cycle has started, where innovation is now becoming a primary distinguishing factor, driving further adoption and investment.

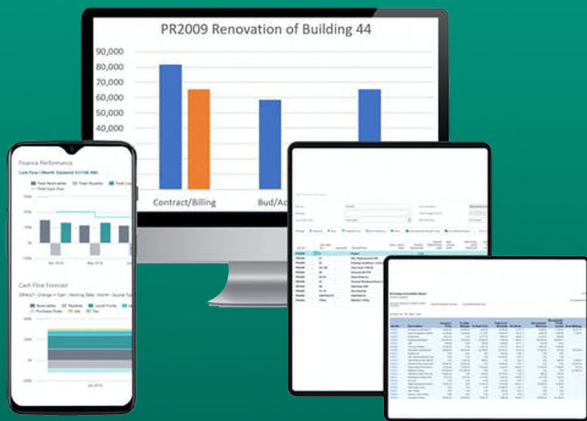
## Conclusion

Digital transformation has created many opportunities for all participants in the construction industry to enhance their productivity and overcome significant difficulties.

By analyzing other industries and the digital solutions presented in this ebook, we can see that innovative methods and digital tools have a substantial effect on every stage of the value chain.

Digital transformation is not just a prediction or a distant concept for the construction industry; it is presently underway. While there may be some learning involved, it is time for the construction industry to take advantage of this new era.

If you're looking for a reliable, integrated and cloud-based construction software, [ProjectPro](#) is all that you need.



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## About ProjectPro

ProjectPro is a division of Netsmartz LLC global group of companies. ProjectPro is specifically designed for construction firms and powered by Microsoft Dynamics 365 Business Central to make sure you get the most out of your business software.

Stand out of the league by streamlining your business processes, controlling costs, and offering timely and accurate information. ProjectPro holds the potential to integrate your crucial job quoting, project accounting, resource management for labor and equipment, and much more all in a single database.

With integrated data, intelligent transaction processing, and robust analytical and reporting capabilities, you can reduce the time and effort it takes to access meaningful information necessary to make good business decisions.

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