

The Construction & Engineering CIO's Guide to AI Readiness

Construction and engineering organizations are steadily embedding Artificial Intelligence (AI) across their enterprises, with adoption today trailing other industries but with momentum growing rapidly. In fact, **91% of firms in the sector expect to increase AI investment in 2026**, reflecting a clear commitment to accelerating adoption. Within the next year, construction and engineering is expected to become one of the most AI-First industries, making it essential for IT Directors, CIOs and Digital Transformation Managers to set their organizations up for successful, scalable AI deployments.

This **AI Readiness Guide** outlines practical steps needed to integrate AI into your operations, answering critical questions such as:

- How can our organization benchmark its AI maturity?
- What are the most valuable AI use cases for our industry?
- Where are early adopters gaining the biggest business improvements?
- How can my company overcome the biggest change management hurdles?
- How do I upskill people to ensure that they can benefit in their own positions?
- What are best practices for integrating AI into existing systems and processes?
- How can we adopt AI without significant disruptions to the business?
- What foundational steps should we take to prepare for a trustworthy AI deployment?

Industry AI Maturity Benchmark

The construction sector is one of the slowest industries to adopt AI today, yet it is poised for one of the largest maturity leaps within the next year. Despite a measured start, business leaders are increasingly confident in AI's potential to transform profitability, quality, control, and sustainability.

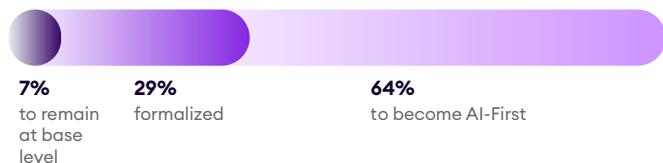
The shift from experimentation to enterprise-wide integration is now well underway. With 2026 guaranteed to mark a critical inflection point in AI adoption, it's essential for any business leader looking to leverage these technologies as essential components of larger digital transformation projects to understand the fundamental building blocks that must be in place before any type of scalable deployment is possible.

Construction and Engineering sits mid-range in maturity as compared to other industries

Current AI Adoption in Construction and Engineering Firms



Projected AI Adoption in the Next 12 Months



Harnessing AI to Improve Project Performance and Capitalize on Growth Opportunities

Why is AI the most coveted technology across the construction industry today and why is it critical to businesses looking to embrace growing opportunities in the market? For companies who are paving the way for sustainable growth, there is a clear correlation between effective usage of data and AI, and their ability to meet project schedules and budgets, ultimately making them more likely to win contracts for profitable capital projects.

- Global infrastructure and capital project spending is set to **surpass \$9 trillion by the end of 2025**—more than double the investment of a decade ago.¹
- Yet, **92% of projects fail to meet their original commitments**, with **71% overrunning budgets and schedules**.²
- Unsurprisingly, the **#2 challenge for construction and engineering firms** today is improving project and business margins to restore profitability.²
- IT leaders view **AI adoption as a strategic enabler**—offering greater project control, improved productivity, and a lasting competitive edge.

Early Adopter Success Drives Positive AI Sentiment

89% of the early adopters in the sector report profitability gains and firms outperform the cross-sector average in operational efficiency (**44%**), supply cost reduction (**42%**), client targeting (**37%**), pricing efficiency (**36%**), and lowering project expenditure (**36%**).

Where are Early Adopters applying AI for the greatest business benefits?

Construction and engineering firms are applying AI most to project delivery (**62%**) and business intelligence (**59%**), followed by business development (**55%**), computing capabilities (**53%**), and R&D (**52%**). Across nearly all functions, however, organizations in this sector report the lowest adoption rates of any industry, underscoring a slower start.

Construction and engineering firms anticipate AI's greatest benefits in:

- Project delivery (**41%**)
- Increased profitability (**36%**)
- Sustainability outcomes (**35%**)



Overcoming Roadblocks to AI Adoption: What is holding back AI in construction?

To transition from experimentation to enterprise-wide adoption, business leaders must address several foundational challenges:

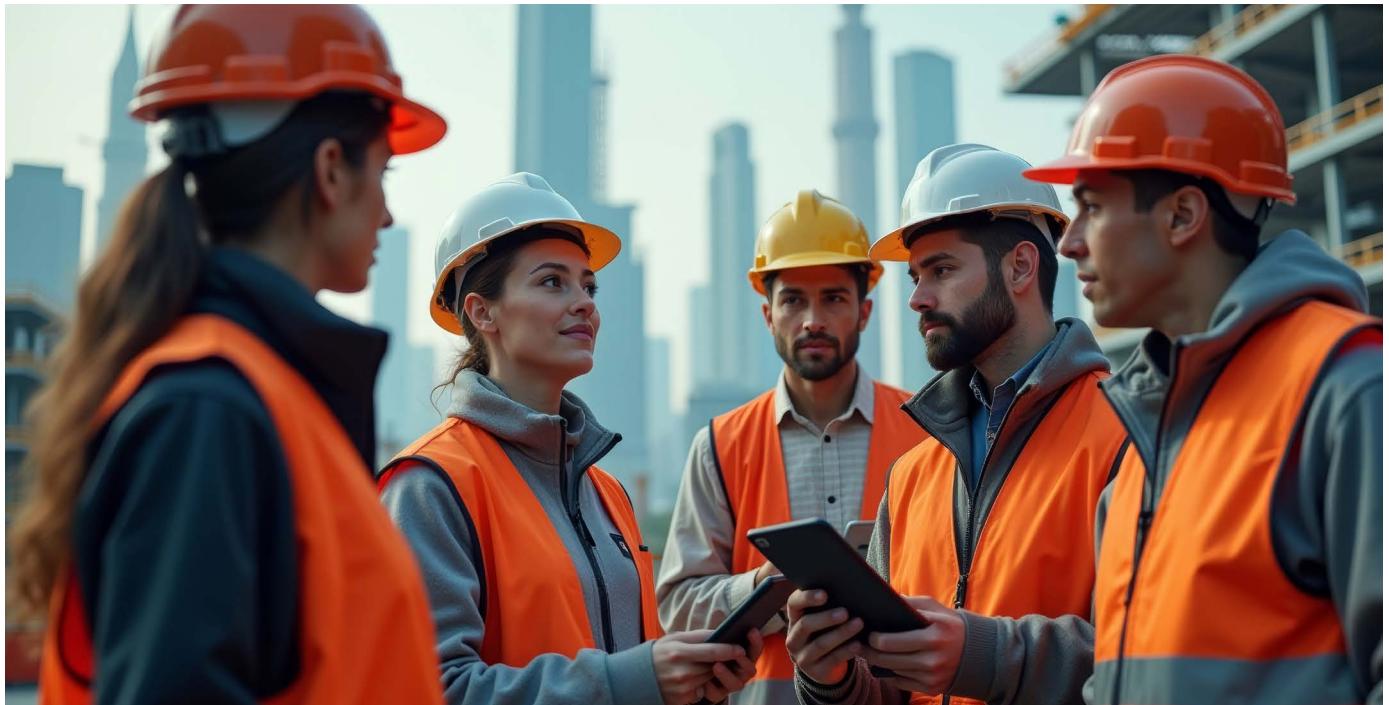
- **Cultural resistance to change** and limited digital maturity
- **Poor data quality and accessibility**
- **Integration constraints** across legacy systems
- **Insufficient top-down leadership and vision**
- **Skills and knowledge gaps** in emerging technologies
- **Uncertain ROI and cost justification**
- **Security, legal, and business risk concerns**

While these strategic concerns exist, construction and engineering firms express lower levels of concern across most barriers compared to peers, but key issues include:

- Losing market share to faster AI adopters (**52%**)
- Recruiting skilled employees (**29%**, the highest across sectors)
- Workforce disruption, with **81%** most worried about AI's impact on traditional jobs (highest across all sectors)

Interestingly, **35%** disagree that lack of employee knowledge will limit AI adoption, the highest response across sectors, suggesting a relatively confident workforce outlook despite reskilling needs. Still, **71%** expect at least half their workforce will require retraining or reskilling.

Trust in AI is also more reserved compared to peers in other industries: **75%** trust AI in strategic decisions, **78%** in automation/operations, **75%** in budget allocation, and **80%** in sales/marketing.



The Foundation for any AI Journey Starts with Accurate, Trusted Data

AI can improve decision making with the right data coming from your software solutions, and it can also drive efficiency in production and workflows. Yet the majority of companies have far too many disparate, non-integrated business systems and use an excessive number of Excel spreadsheets.

The average construction and engineering company today uses more than nine software systems daily. Only by consolidating and connecting tools can leaders enable more intelligent and agile decision-making. With the right information available in real time, and with AI driven solutions like predictive risk analysis, IT leaders can automate common processes and empower people to concentrate their efforts on more valuable tasks. This creates higher productivity and enables project teams to plan based on what they predict what might happen next based on historical data.

Best Practices for Deploying AI on a Larger Scale

There are similarities that can be replicated from successful AI deployments. Top performers are already using AI to identify opportunities and risks early, allowing them to act sooner.

- **Early Planning:** Early planning helps in identifying potential opportunities and risks at an initial stage.
- **Data-Driven Approaches:** Using data effectively allows organizations to predict and mitigate risks more accurately.
- **AI Technology:** AI helps in analyzing large datasets quickly, providing actionable insights. Using AI and data-driven approaches, organizations can take proactive actions based on the insights gained. Higher leads to better project outcomes and efficiency.

Strategic Imperative for CIOs and IT Directors

AI is shifting from experiment to enterprise strategy. Construction and engineering businesses may have started cautiously, but 2026 will see AI adoption accelerate faster than any other industry imperative. Firms that align **data, governance, and investment strategies** today will define the next generation of **intelligent, high-performing construction enterprises** and set the new competitive benchmark.

Leaders in the sector are aligning AI closely with competitiveness: **82%** expect AI to deliver a significant competitive advantage, alongside **77%** for product/service expansion, and **77%** for reinvestment of cost savings.

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When bidding for work, we can now leverage historical performance for risk analysis and competitive pricing. The tools we've developed [with IFS Cloud ERP] significantly enhance our ability to secure new business."

IFS Cloud Engineering customer

Positioning your company to be AI-ready requires strategic alignment between IT and wider corporate transformation goals as well as top-down leadership commitment that provides a clear vision for value creation within the business.

For technology leaders, the mandate is clear:

- **Build a unified data foundation** that supports cross-project learning.
- **Establish responsible AI governance** to maintain trust and transparency.
- **Empower domain experts** with AI tools to improve decision quality and reduce risk.
- Use **measurable, high-impact use cases** to demonstrate quick wins and scale adoption
- **Invest now in digital Enterprise Resource Planning (ERP) systems** that accelerate AI adoption to secure a first-mover advantage in this “AI-first” era.

IFS Cloud ERP: Embedded AI Designed for Construction and Engineering

IFS designs solutions that help companies gain a competitive advantage. Our software enables people to focus minimal effort on common tasks and concentrate more effort on bigger decisions that enhance productivity and operational efficiency. We prioritize high impact use cases to focus AI investments on areas that drive measurable outcomes, ensure faster adoption, and create greater business impact.

IFS Cloud embeds artificial intelligence and machine learning (IFS.ai) at the core of its platform—not as an add-on, but as a built-in advantage. IFS.ai is the embedded AI layer within IFS Cloud. It continuously learns from your project, finance, and asset data to deliver

predictive insights, automate repetitive tasks, and power intelligent decision-making across the entire project lifecycle. Unlike bolt-on AI tools, it's part of the core platform – no integrations or separate tools required.

These AI capabilities deliver **predictive insights, intelligent automation, and real-time optimization** across critical business processes. With **industrial IoT integration**, organizations can seamlessly track equipment performance, asset health, and jobsite progress through sensor data. Unlike legacy systems where AI is often an afterthought, **IFS Cloud is engineered with AI at its foundation** without the need for costly custom development or AI pilots.

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IFS Cloud enhances transparency across our organization, applicable to all processes and companies without the need for customizations. Its user-friendly, up-to-date interface allows easy access to new functionalities, such as AI."

IFS Cloud ERP customer

Within the **IFS Cloud ERP platform**, there are numerous **Industrial AI applications** that **enhance Design and Construct workflows for Project-centric businesses**, including:

- Project Management
- Bidding & Estimating
- Project Forecasting
- Contract Management
- Financial Accounting
- Procurement and Supply Chain Management
- Time Recording



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Artificial intelligence is not an add-on; it is foundational to transformation, intelligence, and insight. The embedded capabilities in the [IFS Cloud] offering provide ease of use for the user and accelerate adoption.”

"The Business Value of IFS Cloud"

IDC Research, May 2025

Prepare Your Business for AI Readiness with IFS

There's never been a more opportune moment in the engineering and construction industry. The revolutionary power of Industrial AI offers immense opportunity for transformation, innovation, and growth.

Start your AI journey today by visiting [ifs.com](https://www.ifs.com).

Sources:

1. “Blueprint for Success: how top performers consistently deliver on their commitments for infrastructure and capital projects.” Accenture Research, 2025.
2. “Construction and Engineering Global Research Study”. Commissioned by IFS, conducted by Censuswide Research, 2024.
3. “The Invisible Revolution: Executive Summary for Construction & Engineering (C&E)-IFS, 2025.

IFS is the world's leading provider of Industrial AI and enterprise software for hardcore businesses that make, service, and power our planet. Our technology enables businesses which manufacture goods, maintain complex assets, and manage service-focused operations to unlock the transformative power of Industrial AI™ to enhance productivity, efficiency, and sustainability.

Learn more about how our enterprise software solutions can help your business today at [ifs.com](https://www.ifs.com).

