Replacing legacy ERP in Construction and Engineering

A CIO's guide to evaluating and implementing a digital ERP backbone

Outdated IT infrastructure, lack of digital skills among employees, and resistance to change all stifle growth, scalability, and competitiveness. How do executives and business leaders move the needle in terms of innovation?

The construction and engineering industry has been slow to embrace modern software and digital tools. But with increasing challenges such as skilled labor shortages, profitability, supply chain disruptions, sustainability, and the need for diversification, this lack of technological adoption and integration between software solutions and critical business processes presents significant roadblocks to success.

This whitepaper examines the increasingly strategic role that today's Chief Information Officers must play to embrace new revenue streams, ensure business agility and resilience, and establish robust project financial control. Modernizing processes by upgrading legacy technology increases your financial strength, making you an attractive choice to potential clients, partners, and investors.

With the right strategic vision for the organization and the right ERP vendor as their business partner, the CIO can position the company for significant competitive advantage and long-term success.

Accelerating digital transformation: a sector imperative in an evolving market

Over the next 2-3 years, the Construction and Engineering industry is poised for transformative changes driven by digital ERP platform adoption and the rapid development of Industrial AI solutions.

Based on insights from a global IFS industry study[1] and expert predictions, we can already start to see:

Digital Maturity is accelerating rapidly

- Companies are adopting digital solutions to address fragmentation in their operations.
- Our 2024 global survey shows **63% of companies say that they are planning to adopt a new enterprise resource planning (ERP) platform** in the next 1-2 years.

Business diversification is driving more sustainable growth

- Research reveals **32% of respondents ranked business diversification as a major near-term priority.**
- Firms are looking beyond uncertain, low volume, project-centric income to stable, repeatable revenue streams from facilities offers, service, maintenance management, modular and prefabricated construction, and rental models.
- Organizations need to be agile at scale in order to drive business agility. Future-proof ERP platforms with built-in construction and engineering industry use cases are essential to enabling this flexibility.

Standardization is boosting efficiency and control

- **Standardization of processes, data structures, and materials will become a priority for 80% of firms in 2025.**
- By adopting standardized, workflows and templates, such as found in industrialized construction methods, companies can achieve consistency – essential to improving project performance and profitability, especially across geographically diverse organizations.

Sustainability is shaping projects and construction methods

- By the end of 2025, **over 60% of companies will embed sustainability into their digital transformation strategies.**
- Modern, cloud-based systems allow firms to track and report metrics like carbon footprints, energy efficiency, and waste reduction in real-time.

Industrial AI adoption is at the forefront of digital transformation

- **55% of construction and engineering firms are looking to introduce intelligence into their operations** during 2025 and beyond.
- AI, machine learning and Digital Asset Lifecycle management are the top-ranking technology solutions on companies' wish lists.

Not only must construction and engineering companies **streamline and automate complex singular operations** of unique project after unique project, but they must also overcome compounding complexity resulting from new partnerships, joint ventures and service offerings.

> **"IFS Cloud provides a seamless, unified system. Following our merger/acquisition, both companies were already using IFS. The flexibility of IFS Cloud allows us to tailor it to our needs, driving business culture and facilitating organizational change."**
>
> IFS Cloud, Engineering Professional Services Customer

Read the Study>

The Construction and Engineering CIO: the critical catalyst for change

Historically, as a CIO, your focus has been on IT infrastructure and operational efficiency. The scope has often been internal, ensuring systems and processes run smoothly. Now, with the growing need for digital transformation within the construction industry, your role is changing. The recent emergence of new titles such as Chief Digital Officer and Chief Transformation Officer speaks volumes.

Modern, forward-looking CIOs are now expected to be strategic leaders, aligning IT initiatives with broader business goals and integrating digital technologies into all areas of the business. You are a champion of innovation, identifying emerging technologies that can create business value.

Increasingly, you are collaborating with other business units and executives **to promote cultural and organizational change**, ensuring seamless integration of new technologies to drive business outcomes. Your role is also central **to increasing data-driven decision making,** using data analytics and business intelligence to make informed decisions, enhance transparency and **increase control over projects** and the entire trajectory of the business.

> **“IFS supports all areas of our business, providing complete transparency across all entities and top consolidation. Using the same processes everywhere saves resources and internal efforts. As a modern solution, we stay up to date with the latest releases and functionalities like AI, enhancing efficiency and information availability for all users.”**
>
> IFS Cloud, ERP Customer

Read the Study>

Why a digital construction ERP solution?

For most companies, the main reason for implementing a digital strategy is ultimately to achieve better control, because **control is the foundation upon which successful businesses are built.**

Enabling **greater control** has a profound effect on the overall performance of your business.

At an **operational** level, it is about managing projects more efficiently by adopting standardized, repeatable best practice processes. These in turn result in **better control of time, cost and quality across the business:**

- **Time:** Integrating project planning and change management can improve on-time project delivery performance
- **Cost:** An ERP can help to manage project resources, be that labor, materials, subcontracting, and equipment, ensuring projects stay within budget and resources are used efficiently and productively
- **Quality:** Embedding robust Quality, Health, Safety, and Environment (QHSE) practices and risk management processes drives high standards and safe operations

At the same time, a digital backbone also allows your business to **gain control of strategic aspects of the business**. These include factors such as:

- **Compliance:** Enabling ESG and sustainability initiatives, ensuring adherence to audit and governance requirements, and driving ethical operations
- **Technology:** Seamlessly incorporating BIM, AI and other innovations into the business whilst ensuring data is safe and the platform is secure
- **Business Transformation:** Supporting initiatives like acquisitions, diversification and industrialized construction, allowing companies to operate beyond traditional construction and expand into new markets, building market value

By gaining **greater control over projects, profitability and productivity**, both operationally and strategically, a digital ERP solution designed by construction and engineering industry experts supports the achievement of key business outcomes, whether that is improving margins, reducing risk or driving sustainable growth.

How do you ensure the ROI of digital transformation?

Another key performance metric that **CIOs must track is Return on Investment (ROI)** from new software adoption. How can your organization achieve a strong ROI of **new technology investment** in a timely fashion and gain tangible business value outcomes?

In "The Business Value of IFS Cloud"[2], IDC analysts share that **organizations leveraging IFS Cloud have reported significant benefits**, including enhanced operational efficiency, improved production planning, and streamlined reporting processes. Whether you're upgrading legacy systems or building a foundation for future growth, this paper is a must-read for CIOs.

The study also highlights value improvements such as:

414%
three-year return on investment

11-months
payback on investment period

$2.5M
average annual staff efficiency benefits

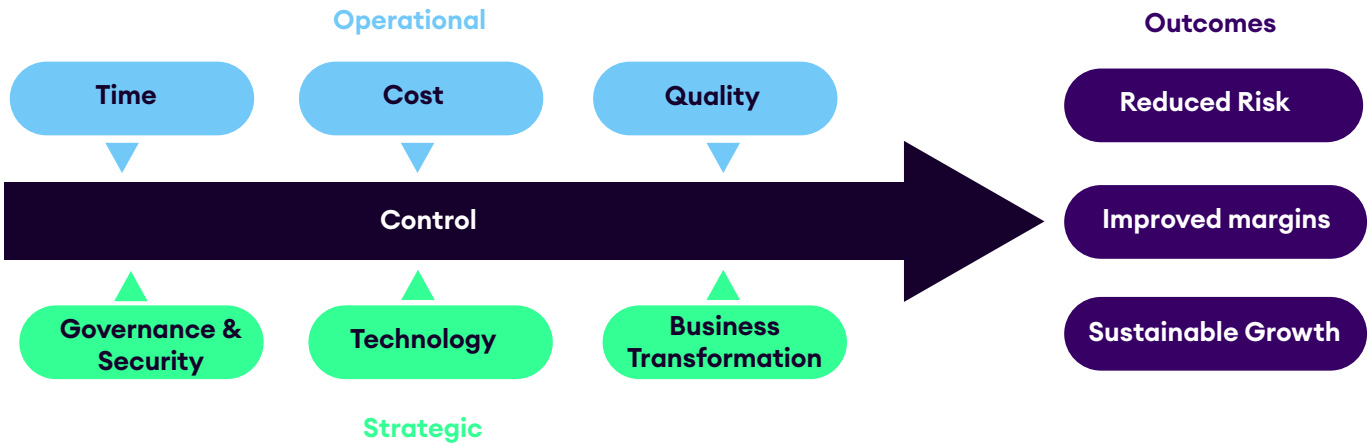
27%
less time spent per budgetary cycle

18%
reduction in the time required to close period-end accounting

> **"IFS Cloud has demonstrated substantial business value across various industries by enhancing operational efficiency, improving production planning, and streamlining reporting processes."**

Read the Study>

IFS Cloud Digital Maturity Goals



Digital Transformation Enabled: evaluating technology solutions

Any journey to digital maturity should start by truly understanding, from both a strategic and operational strategic standpoint, what the business needs are. The digital transformation journey needs to be built on a solid foundation which is why the industry has recognized that a construction centric ERP solution provides an essential starting point.

When comparing ERP vendors and solutions, any CIO must be clear on their business objectives, the current and future landscape, and the challenges and work involved. This is about defining your vision for the business and its long-term aims and goals. It requires a strategic, enterprise-wide decision with leaders from all departments that elevates the conversation from upgrading legacy software to transforming the business and enabling that transformation with technology.

Leading **vendors should apply robust methodologies** to help define the ambitions and scope of any scope of any transformation project. IFS combines a rigorous **Business Value Assessment engagement** with a proprietary six-box methodology to explore and clarify any financial case for change:

Business initiatives: What are the broader outcomes the business wants to achieve?

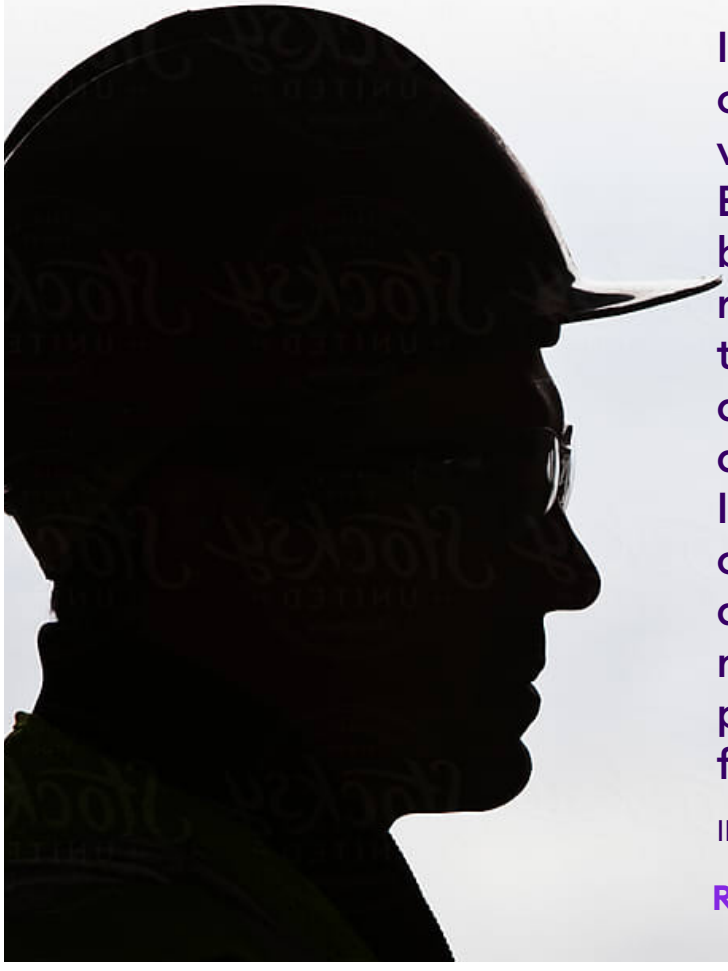
'As-Is' landscape: What are the existing systems, platforms and processes, configurations and modifications?

Future Landscape: What is the desired environment post-implementation including how the new system will work for (and with) the business?

Enablers: What do you need to do?

Obstacles: What are the challenges that may impact outcomes?

Business case: What is the financial business case for change?



"IFS Cloud provided comprehensive benefits across various business solutions. The ERP system offered complete business transparency, resource savings, and up-to-date functionalities such as AI, enhancing efficiency and information availability. It provided a unified view of capacity and resource availability, eliminating the need for Excel-based tools and preparing organizations for future workloads."

IFS Cloud Customer

Read the IDC Business Value Study>

What does a journey to digital maturity look like?

A typical journey to digital maturity in Construction and Engineering will take place in six stages – the first three cover adoption and the second focus on optimization:

Stage 1: Basic Digital Adoption introduces digital tools for specific tasks (e.g., project management software, digital blueprints). The focus here is on training staff on new tools, improving data accuracy and accessibility.

Stage 2: Integrated Systems sees the implementation of an integrated project-centric ERP solution such as IFS Cloud, with a focus on streamlining operations, centralizing data, and improving project visibility and control.

Stage 3: Advanced Digital Integration introduces advanced ERP capabilities with modules for accounting, payroll, project management, and more. This phase looks at optimizing workflows and improving data flow and collaborations across departments.

With these first three adoption phases complete, optimization can begin:

Stage 4: Data-Driven Decision Making sees the business using data analytics to inform decisions, predictive maintenance and quality control. The focus here is leveraging data insights to improve efficiency, reduce costs, and enhance project outcomes.

Stage 5: AI Integration implements AI technologies for automation, safety, and efficiency, using AI for predictive analytics, automated inspections, and resource allocation.

Stage 6: Continuous Improvement and Innovation sees the ongoing adoption of emerging technologies and continuous process optimization, fueling a culture of innovation and continuous improvement.

IFS Cloud ERP: a holistic, fully integrated Project Financial Control solution

There are many considerations when upgrading legacy ERP and/or finance systems, but the **number one priority is effective Project Financial Control**. Every established business has an accounting system, but managing project financial control is far more complex. These four key areas are not standalone requirements; they need to interact with each other:

- **Financial Accounting**
- **Cost and Revenue Transactions**
- **Project and Contract Management**
- **Project Cost Control**

IFS Cloud is a **fully integrated ERP solution** combining **all four capabilities, as well as accounting**, to deliver seamless control and visibility. Unlike traditional ERP software which is rooted in managing past performance and reactive corrections to preserve margins, **IFS Cloud is future-focused**, providing tools that allow faster decision-making based on real-time data and predictive outcomes.

IFS Cloud also provides a single core data repository – a single source of truth across the enterprise, in real-time. Comprising a composable, evergreen ERP business suite, operational workflows deliver accurate and real-time transactional information designed to help you make timely strategic decisions. In addition, IFS supports the need to perform periodic project processes including period end snapshots and periodic project forecasts to be managed.

> **CIOs and CFOs must work closely to control and improve profit margins as well as resource optimization. Discover all the financial benefits from IFS Cloud in the CFO's Guide to Project Financial Control.**

Learn more>

Diversification drives the need to support more than traditional construction

Companies are moving **beyond the realms of a traditional project-centric business**. By diversifying into areas such as facilities and service management, revenue is recurring and predictable. This increases the market value and financial viability of the business while also reducing risks associated with economic uncertainty.

Driven by **customers wanting total asset lifecycle support,** it is forcing companies to become partners that offer more long-term value. Other examples of business diversification include offsite and prefab manufacturing and operating a rental model for constructed assets.

It is important that your ERP platform can support wider business requirements. The functionality available in the IFS Cloud solution supports the entire lifecycle of an asset including design, procure, construct, install and commission, handover, operate and maintain, modify and refurbish, decommission and dispose. For example, IFS Cloud delivers a dedicated environment to service, maintenance and facilities management specialists.

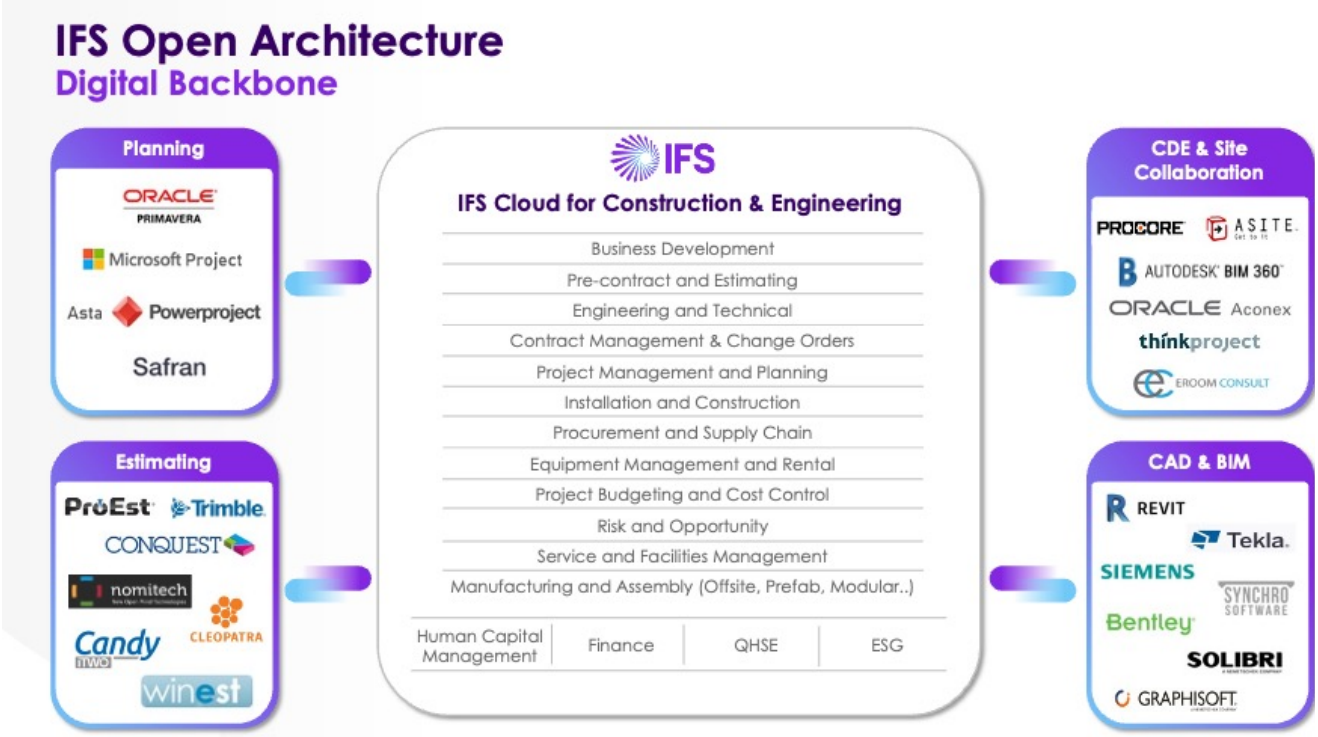
Regardless of how simple or complex your business processes are, **IFS Cloud enables your organization to successfully complete projects on time and on budget** while giving total visibility to best manage and then service your assets.

Learn more›

Adopt a new Digital Business System Backbone. Or integrate best-of-breed functionality into IFS Cloud. The choice is yours, as is the deployment model.

The **IFS architecture is open, composable, and readily integrates** with any pre-existing or new best of breed software tools that you want to keep. Your business can implement as much, or as little, IFS functionality as you need at any one time, to rapidly achieve Common Operational Solutions for one or more construction trading entities.

You can adopt IFS as **a new, business-wide ERP solution and backbone;** or retain an existing Finance and Human Resources back-office solution, implementing and integrating IFS as an ERP solution to manage operational business processes.



Open architecture equals seamless integration

In addition to powerful native capabilities, IFS Cloud supports seamless integration to leading third-party specialist solutions. These include:

Planning
Powerful native planning capabilities in the IFS Cloud platform can be augmented or substituted with seamless integrations to project planning tools like Microsoft Project or Primavera.

Estimating
IFS offers powerful cost estimation tools built-in and integrates with third-party specialist solutions.

CDE (Common Data Environment) & Site Collaboration
IFS integrates with collaboration tools like Procore, Autodesk BIM 360, Oracle Aconex, and Asite, ensuring efficient communication and document sharing across stakeholders.

CAD & BIM & PLM
Advanced design tools like Revit, Tekla, Bentley, and Siemens Synchro play a key role in modern construction.

Looking ahead. Strategic planning for CIOs

As a CIO, the findings around the industry's top 5 strategic long-term initiatives provide a revealing picture of the longer-term ambitions and future focus across your sector. They are:

#1 Growing the business and/or increasing its market value (39% vote count)

#2 Attracting and training the next generation of skilled construction & engineering workers (38% vote count)

#3 Leveraging AI and automation to improve efficiency (36% vote count)

#4 Driving innovation, improving your digital maturity (36% vote count)

#5 Prioritizing sustainability and ESG goals (35% vote count)

The need for a strategic mindset, with long term goals enabled through increasing digital maturity, is clear. **As a forward-thinking CIO, the need to provide visionary leadership to plan and deliver business transformation has never been clearer.**

To build for the future, your business must be agile. It must be able to anticipate market demands and adapt using new business processes and solution capabilities. This is only possible by embracing transformative digital technologies such as Industrial AI and automation, BIM and IoT.

IFS Cloud provides **a future-proof platform that can readily integrate with existing systems** thanks to its open architecture design. Evergreen updates let you choose when to deploy new functionality, giving your business total control. Interfaces are easy to configure and use, ensuring employees rapidly adopt the solution.

IFS Cloud will allow your business to embrace new opportunities, revenue streams and business models, backed by accurate real-time information and project-based financial control.

Built for construction, designed for control….

IFS Cloud delivers an integrated, single-sourced construction centric ERP solution that includes world class project financial control that goes beyond accounting and helps you manage the future, not the past.

One platform for an agile diverse business…

The IFS Cloud platform supports a changing business model that goes beyond delivering construction projects.

- Industrialized Construction & Manufacturing
- Equipment Maintenance and Rental
- Service, Maintenance & Facilities Management
- Supply Chain and Logistics Services

- ✓ Infuse intelligence
- ✓ Data-driven project control
- ✓ Close the digital gap
- ✓ Adopt best practice repeatable processes
- ✓ Support standardization
- ✓ Reduce IT system complexity
- ✓ Gain evergreen updates
- ✓ Support business diversification
- ✓ Composable and Configurable
- ✓ Supports business change & diversification

Choose a digital ERP backbone with IFS Cloud and...

Start construction faster

Deliver projects on budget, on time and at high quality

Realize innovations

Work with greater control, autonomy, and efficiency

Decrease costs and increase revenue streams

Increase agility and adaptability

Deliver world-class customer and end-user experiences

Proactively manage risks

Who we are

A provider of software solutions for the construction industry. Trusted by some of the world's largest organizations.

90+
Countries

€ 1+B
Revenue 2024

3X
Growth vs Market Average

Sources:
1.2024 Global Construction and Engineering Study, conducted by Censuswide Research, commissioned by IFS
2.IDC Business Value White Paper, Aly Pinder and Ladislav Kinda, IDC Research, Inc. April 2025, sponsored by IFS

About IFS

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.

IFS Cloud is a fully composable AI-powered platform, designed for ultimate flexibility and adaptability to our customers' specific requirements and business evolution. It spans the needs of Enterprise Resource Planning (ERP), Enterprise Asset Management (EAM), Supply Chain Management (SCM), and Field Service Management (FSM). IFS technology leverages AI, machine learning, real-time data and analytics to empower our customers to make informed strategic decisions and excel at their Moment of Service™.

IFS was founded in 1983 by five university friends who pitched a tent outside our first customer's site to ensure they would be available 24/7 and the needs of the customer would come first. Since then, IFS has grown into a global leader with over 7,000 employees in 80 countries. Driven by those foundational values of agility, customer-centricity, and trust, IFS is recognized worldwide for delivering value and supporting strategic transformations. We are the most recommended supplier in our sector. Visit ifs.com to learn why.

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