

# AI-enhanced Supply Chain Management in Construction & Engineering

Turning challenges into  
competitive advantage with  
smarter supply chains



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# Mastering supply chain excellence

In the Construction & Engineering industry, **every project creates its own demand** for materials and services. Unlike mass manufacturing or retail – which rely on broad market forecasts – construction companies derive material needs directly from project plans (designs, BOMs, and schedules).

This project-specific demand means supply chain planning must be tightly aligned with each project's timeline and scope. Yet even with clear project requirements, firms face serious supply chain challenges: a **lack of guaranteed raw materials, longer lead times, rising supply costs, and evolving project scopes** that can change material needs mid-stream.

Many contractors and engineering firms still use fragmented systems (spreadsheets, standalone tools) to manage procurement

and inventory, which leads to delays, data silos, and costly mistakes. In an uncertain environment, these issues can threaten project schedules and profit margins.

Leading firms are turning to IFS Cloud to overcome these hurdles. **IFS Cloud provides end-to-end supply chain management as part of its single integrated ERP platform**, designed to work across the entire project and asset lifecycle. All core functions – inventory, procurement, demand planning, forecasting, warehousing, logistics, and returns – operate within one system.

**Mastering the supply chain isn't just an operational goal – it's a market differentiator.** The ability to deliver projects on time and within budget, especially in today's climate of disruptions, can set a company apart when bidding for new work.



# Unique supply chain challenges for the Construction & Engineering industry



In today's **volatile environment**, supply chains face relentless challenges:

-  Unreliable raw material availability and extended lead times
-  Rising materials costs as well as energy and transport costs
-  Dramatic fluctuations due to global supply and demand imbalances, speculative positioning, and geopolitical disruptions
-  Tariff policies and trade regulation shifts in the U.S. for Metals (Steel / Aluminum / Copper, and Timber / Lumber / Wood Derivatives)
  -  These regulations add further layers of uncertainty, affecting both cost baselines and supply chain decisions
-  Growing customer demands for sustainable, "greener", more low-carbon materials

# IFS Cloud's unified approach to supply chain and project management

**Gain agility, visibility, and control across your entire supply chain.**

## Integrated Platform for Supply Chain

IFS Cloud unifies procurement, inventory, logistics, and project operations on a single ERP platform for seamless management.

## Complete Visibility and Traceability

Provides real-time, enterprise-wide visibility of materials, inventory, orders, and costs linked directly to project needs.

## Project-Centric Inventory Management

Supports project-specific stock reservations and warehouse management with efficient project picking and cost tracking.

## Elimination of Silos and Data Duplication

Eliminates manual data transfers, ensuring all teams work from the same accurate data for better collaboration.

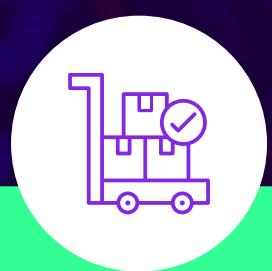


# Core supply chain capabilities for project-based companies

IFS Cloud provides **end-to-end supply chain management in one enterprise solution**, tailored for project-based industries. Companies can standardize best practices across all projects, ensure consistent data flow, and significantly reduce the administrative overhead that comes with reconciling multiple systems.



**Single source of truth across the entire enterprise:**  
Delivering 100% visibility of your entire supply chain—from sourcing to delivery—including materials, inventory, orders, and costs, all in real time.



**Tightly Coupled Procurement & Project Control:**  
This ensures that procurement activity is always visible to project managers and financial controllers.



**Agile Response:**  
React swiftly to market changes and disruptions with real-time insights and flexible workflows.



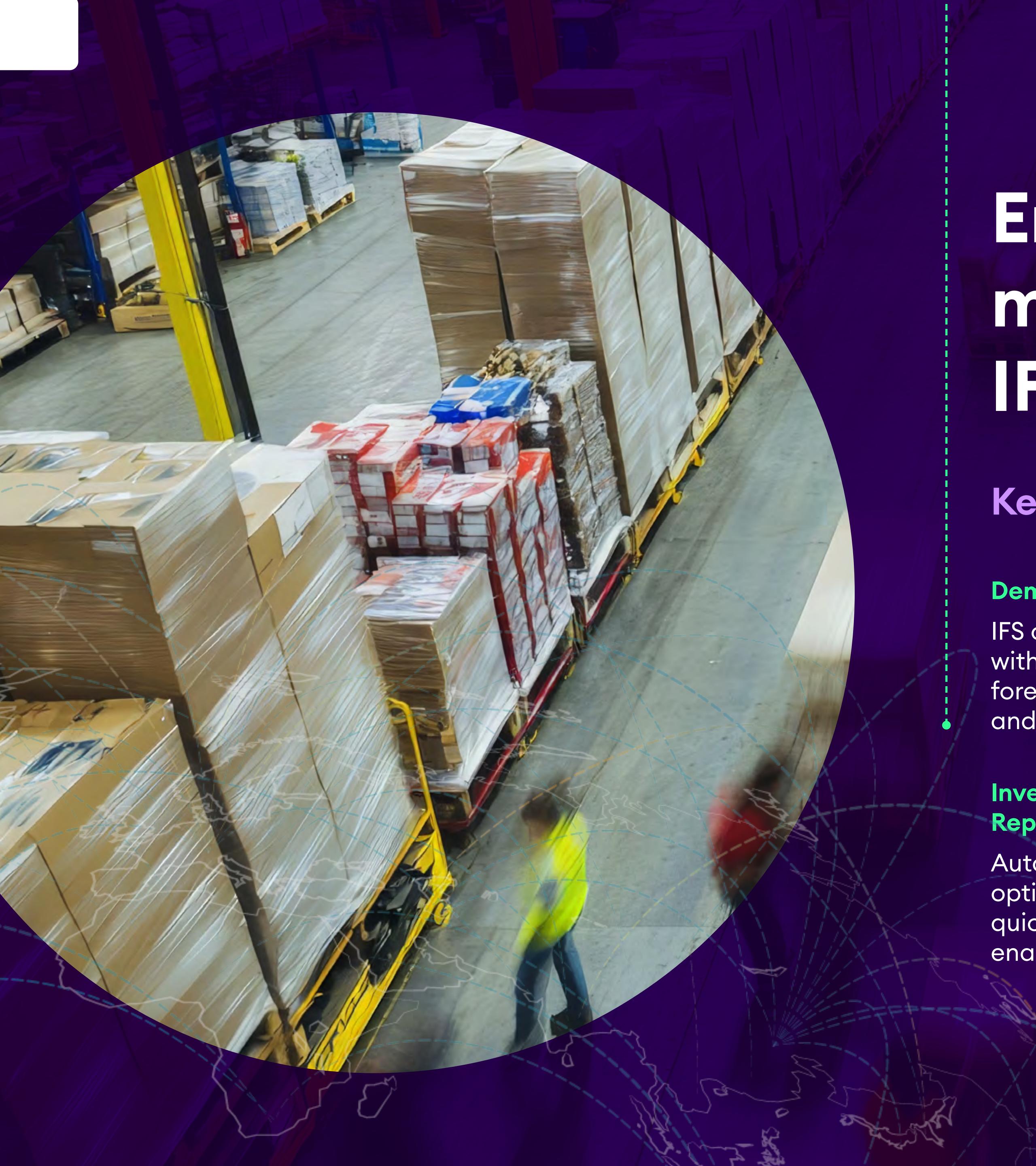
**Global-Ready Design:**  
“Multi-everything” functionality supports multi-language, multi-currency, multi-site, and multi-country operations.



**Seamless Collaboration:**  
Break down silos and connect teams, partners, and suppliers across your value chain.



**Smart Supply Chains:**  
Artificial intelligence is the new force multiplier making IFS’s capabilities even more powerful. From AI agents such as the Materials Planner for Projects and Inventory Optimization to AI-Optimized logistics, you’re ready with the latest AI has to offer.



# End-to-end supply chain management features in IFS Cloud

## Key functional modules

### Demand Planning & Forecasting

IFS offers AI-driven demand planning with collaborative tools to build forecasts using advanced models and seasonal profiles.

### Inventory Management & Replenishment

Automated stock replenishment optimizes inventory by responding quickly to demand changes and enabling multi-site visibility.

### Procurement & Requisitioning

Streamlined procure-to-pay process integrates purchase requisitions, orders, and supplier invoicing with automated approvals.

### Logistics, Rental & Warehouse Management

Efficient shipment tracking, equipment rental lifecycle, and comprehensive warehouse operations including barcode and RFID integration.

# Full lifecycle management and real-time financial control

## Comprehensive Lifecycle Coverage

IFS offers one platform that covers the full project and asset lifecycle including project management and maintenance modules.

## Simplified IT Landscape

Combining project and maintenance in one system reduces IT complexity and lowers total cost of ownership.

## Real-time Financial Control

Instant updates on procurement transactions provide accurate live cost versus budget insights for projects.

## Proactive Cost Management

Management can immediately react to cost spikes, enabling better negotiation and savings opportunities.

## Enhanced Procurement Flexibility

Features like linking requisitions to project activities and easy stock transfers provide enhanced procurement flexibility.



# AI-powered enhancements in IFS' supply chain management

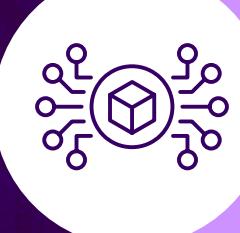
IFS is transforming how construction and engineering companies run their supply chains. Powered by strategic AI innovation—from Agentic AI and predictive logistics to built-in Industrial AI within IFS Cloud—**we deliver the intelligence, automation, and agility** businesses need to stay ahead now and in the future.



## AI agents for Smarter Supply Chain Operations

**Gain ‘Digital Workers’ that automate complex supply chain tasks and decision-making.**

- Intelligent agents connect data and make autonomous decisions in operations.
- AI agents monitor inventory and schedules to suggest order expediting and optimize stock levels efficiently for intelligent material planning.
- AI agents operate securely within company rules, ensuring governance and compliance in all actions.



## AI Logistics & Supply Chain Optimization

**Harness AI and machine learning to optimize logistics networks to analyze diverse data sources in real-time.**

- The IFS platform performs advanced scenario planning, simulating uncertainties like delays and alternative transport.
- Seamless planning to optimized, real-time execution is made possible by directly booking freight and managing shipments.
- The IFS system boosts supply chain agility and resilience, reducing costs and automating data entry.



# Tailored solutions for all Construction and Engineering sectors

**IFS Cloud delivers end-to-end supply chain management on a unified ERP platform, seamlessly integrating inventory, procurement, planning, warehousing, logistics, and returns.**

All procurement and material supply processes are directly linked to project management and finance, ensuring real-time visibility into project costs and material status.

Its architecture inherently handles multiple sites, companies, currencies, and languages in one instance, so a general contractor operating across countries or an

EPC managing joint ventures sees all supply chain data in one place – configured for local needs but consolidated for corporate visibility. This unified approach **enhances coordination, agility, and cost control**, making the supply chain a true competitive advantage.

Discover why an enterprise platform designed by industry experts – with 25 years of collaboration with the world's leading construction and engineering firms, shipbuilders, and marine contractors – will help your company **gain a stronger ROI from its ERP software investment**.

# General Contractors: Project-driven materials management

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## Material Coordination Challenges

Coordinating materials and equipment across multiple projects under tight schedules is a major challenge for contractors.

## Project-Centric Supply Chain Control

IFS enables linking material demands to specific projects, phases, and work breakdowns for precise inventory management.

## Project Picking and Just-In-Time Delivery

New warehouse module allows picking items grouped by project, reducing on-site storage and ensuring timely delivery.

## Equipment Rental Management

Rental module tracks equipment like cranes by project, capturing costs and automating off-rent after project phases.





# Specialty Contractors: Efficient procurement of niche items

## Challenge of Specialty Procurement

Specialty trades handle thousands of critical small components needing precise timing and cash flow management.

## Batch Purchasing and Inventory Use

IFS consolidates needs from multiple tasks into batch purchases, using existing stock before buying new items.

## Supplier Catalogs and Just-In-Time Delivery

Supplier catalogs and blanket agreements simplify ordering; just-in-time delivery schedules reduce clutter and preserve cash.

## Handling Delays and Custom Items

IFS helps find alternate suppliers for delayed parts and links supplier milestones to project plans for custom items.



# EPC Contractors: Integrated solutions across complex operations

## Challenges in EPC Projects

EPC firms face costly change orders and idle crews due to misalignment in engineering, procurement, and construction.

## Integrated Procurement Packages

IFS enables managing procurement packages linking multiple items and suppliers tied to project budgets and schedules.

## Contract Change Management

The system manages design change approvals, adjusts budgets, and generates variation purchase orders efficiently.

## Supplier Performance and ESG Tracking

IFS tracks supplier delivery metrics and integrates ESG ratings to ensure reliability and sustainability compliance.

# Shipbuilders: Managing complex BOMs and long-lead items

## Complex BOM Management

Shipbuilding involves managing thousands of components with complex BOMs and frequent design changes.

## Long-Lead Item Procurement

Critical long-lead items like engines have extensive lead times requiring precise procurement timing.

## Integrated Planning & Simulation

Integrated tools support project planning with what-if simulations to manage delays and costs effectively.

## Traceability and Inventory Control

Traceability of components and just-in-time inventory ensures quality and reduces storage needs.





# Marine Contractors: Logistics and asset support in remote environments

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## Complex Offshore Logistics

Marine contractors face complex logistics challenges in remote environments with tight schedules and weather risks.

## Unified Asset Management

IFS Cloud enables fleet-wide inventory visibility and integrated maintenance to ensure timely resupply and reduce downtime.

## AI-Optimized Supply Planning

AI-driven logistics optimize shipment consolidation, routing, and scheduling based on weather and project demands.

## Equipment Rental Tracking

IFS Rental tracks delivery, usage, and movement of rented equipment like ROVs and heavy machinery across projects.

# IFS Cloud: A Project-Driven, AI-Enhanced Supply Chain Solution

Key benefits that our construction and engineering customers gain include:



## Integrated Platform

Connects inventory, procurement, and projects for real-time visibility and updates.



## Speed & Cost Efficiency

Ensures timely materials, on-schedule projects, and optimized inventory costs.



## Quality Traceability

Tracks materials end-to-end to quickly identify and resolve defects.



## Data-Driven Improvement

Uses real-time analytics to enhance supply chain and vendor performance.

The supply chain enhancements in IFS Cloud – from robust project integration to cutting-edge AI – are enabling construction and engineering companies to achieve a level of control and efficiency that was not possible before. IFS's comprehensive supply chain solution doesn't just solve internal challenges – **it actively empowers companies to win more business and execute it more profitably.**

By delivering projects more reliably, responding faster to change, and leveraging the latest technology, our customers **turn their supply chain management into a selling point.**

Start your ERP transformation journey today by visiting [IFS.com](https://www.IFS.com)

## About IFS

IFS is the world's leading provider of Industrial AI for hardcore businesses that service, power and protect 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](http://ifs.com) to learn why.

