Build the foundations for success in a disrupted market

Contents

Ready to make a leap forward?

“2021 will see a digital leap forward as many construction companies explore how to use integrated business software in projects for the very first time. Tighter margins, global skills shortages and new industry entrants are all ramping up the pressure on traditional construction businesses to increase productivity and to improve project delivery performance–on time, every time.”

Kenny Ingram
Global Industry Director, Engineering, Construction & Infrastructure, IFS

Modernize to succeed in a disrupted market

The engineering, construction and infrastructure industry (ECI) is at a turning point. Faced with challenges from increased competition and tighter budgets, agility is more important than ever. To achieve the necessary agility, IFS believes there are three major changes companies will have to make:

01. Start −

02. Transition +

03. Integrate +

Read our predictions

01. Start using integrated business processes and software

The urgent need to improve the control and governance of complex construction projects, amid global competition and growing pressure on margins, will force companies to use integrated business systems, such as Enterprise Resource Planning (ERP), turning nice-to-haves into need-to-haves.

Learn more

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02. Transition to an offsite construction delivery model

Offsite and modular construction delivery methods will improve project performance and profitability. Project delivery will be more predictable, and projects will be delivered faster–at lower cost and to a higher quality.
With a wave of new players entering the industry, traditional construction companies will have to adapt and open offsite and modular facilities to stay competitive and overcome the global skills shortage.

Learn more

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03. Integrate BIM and other digital technologies with ERP

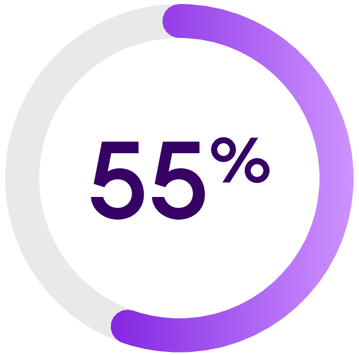
Today very few companies have attempted to integrate Building Information Modelling (BIM) with ERP. This is no longer good enough. To realize the true benefits of moving to an integrated digital project and asset lifecycle model the BIM data needs to be used to feed all the project processes that are available in a construction centric ERP solution. ERP is an enterprise system that should be used by all functions of the business–not just a finance system as it is in most construction companies today.

Learn more

Challenges you face today

2bn

The United Nations estimates that 2 billion new homes will need to be built over the next 80 years. Affordable houses can be built faster, more easily and at greater volume using modular manufacturing.[1]



Global competition intensifies in 2018. **Asia has now 55% of the top 100 contractors.** Europe has fallen from 44% in 2010 to 24% in 2018.[3]

4.6bn

UK Top 100 firms borrowing level was £4.6bn in 2019.[2]

10

10 biggest contractors in UK have a negative average margin of -0.5%. In 2014 it was 3% and has declined every year.[4]

[1] The world needs to build 2 billion new homes by 2100
[2] CN100 2019
[3] Engineering, construction & infrastructure software to manage what's next, IFS, ebook
[4] CN100 2017: The biggest UK contractors

2021 predictions for the ECI Industry

Prediction #1

As a result of the disruptions in 2020, the construction industry is intensifying its focus on securing stable and robust revenue streams. Servitisation is a growing movement that continues to gain momentum as more constructors embrace total asset lifecycle provide through-life service, facilities management, and maintenance to their clients.

2021 predictions for the ECI Industry

Prediction #2

As the skills gap and labor constraints in the industry continue to widen, the utilization of modern methods of construction such as offsite and modular construction is expected to increase in 2021 which is leading to a growing need to standardize materials and processes.

2021 predictions for the ECI Industry

Prediction #3

In 2021 more construction companies will embrace modern technologies and migrate to a single integrated business software platform that provides the agility, transparency and scalability needed to succeed.

Disrupt or be disrupted

The days of ‘getting by’–relying on inefficient practices based on project spreadsheets, documents and allowing information to reside in silos or disparate point solutions–are over. As the UK’s Farmer Review concluded, it’s ‘modernize or die’ for construction.

Now’s the time to adapt and be disruptive in a disrupted market.

Transformative digital technologies

Fortunately, transformative digital technologies such as BIM, robotics, drones, laser scanning, artificial intelligence (AI), modular construction and 3D printing are reshaping the industry. BIM is starting to free companies from a traditional document-driven process to integrated data-driven processes and systems.

Increasingly, foreign entrants are poised to bid for modular and offsite manufacturing contracts. Domestic players will require new hybrid business capabilities spanning construction, manufacturing and service.

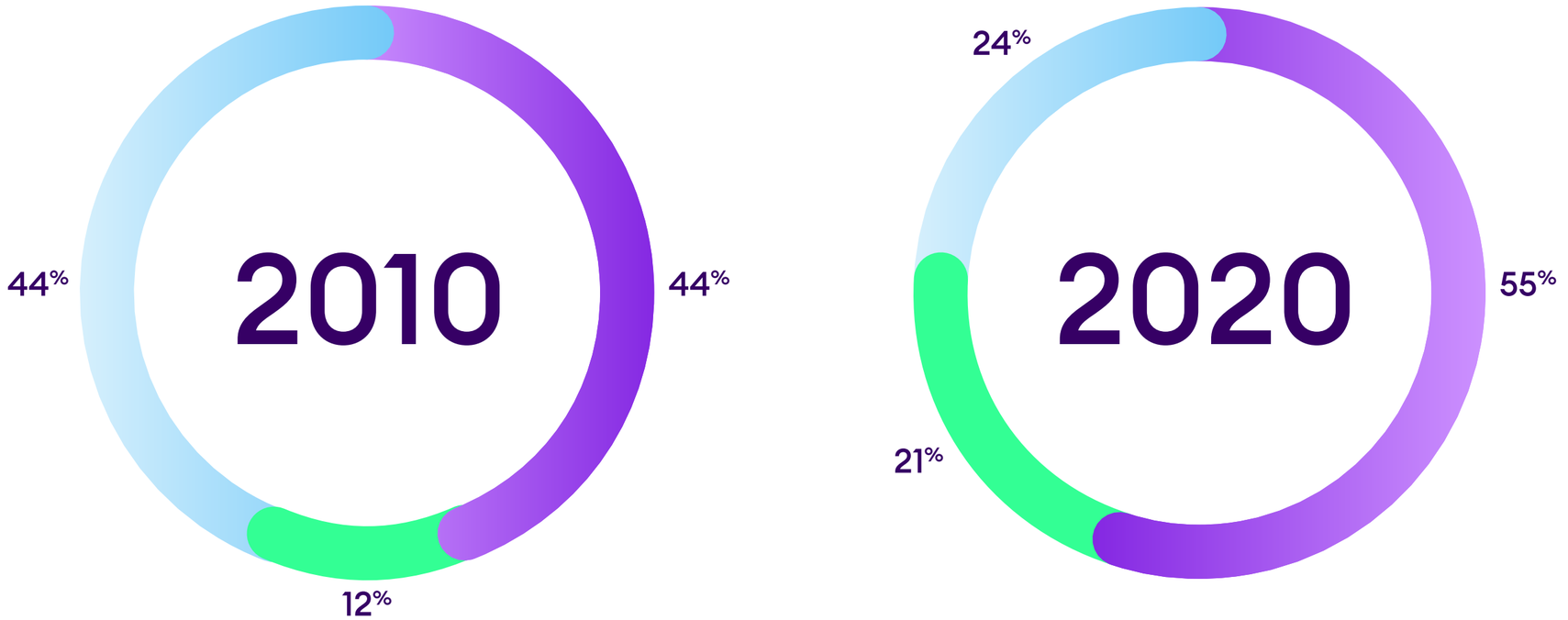
These changes will drive project delivery efficiency, predictability and quality as well as improve health and safety and reduce project risk.

Find out more

Greater disruption from increased competition

The take-up by new players of emerging business opportunities, such as offsite and modular construction, is increasing local and international competition.

Top 100 global contractors by region



Source: Engineering News Record

Construction goes offsite and modular

The pressure on traditional construction firms to adapt is huge. As tighter control and more adaptability is needed over every aspect of a project there is increasing interest in construction-integrated construction.

Whether this is offsite or modular construction, it relies on factory-made modules and components that are shipped and assembled on site. Integrating the latest design tools, such as BIM, can mean zero changes are needed to modules arriving on site. As a result, construction is faster, more efficient and less dependent on specialist skills.

View the infographic

Learn more

Changing the construction business model

Commercial, infrastructure and residential construction projects increasingly involve some off-site fabrication. This has clear benefits as it helps address the shortage of skilled workers, lowers total cost, reduces on-site risks of theft and waste and shortens project timelines.

It also introduces new manufacturing processes and is likely to drive another, crucial change in construction–the standardization of parts and materials.

This construction-integrated manufacturing (offsite or modular manufacturing) will lower project costs, increase asset quality, improve project delivery predictability and increase margins, while reducing risk.

Construction becomes more of a repeatable process. Working with a manufacturer's mindset can also lead to new service business models, with businesses reselling standardized building systems or components as well as manufacturing them for their own use.

To maximize the advantage of this new approach means blending lean manufacturing business processes with construction-centric systems that can handle the constraints of site-based work.

IFS functionality can help construction-integrated manufacturing with:

- Engineering & design
- Project-driven manufacturing
- Logistics and shipping
- Site management
- Equipment rental and maintenance
- Project management and control
- Asset and facilities management
- Financial governance

Build a digitally-transformed way of working

Digital transformation (defined by MIT Sloan Management Review[5] as the use of technology to radically change the performance or reach of enterprises) is disrupting construction in ways never imagined before.

The pressure is on to embrace technologies, ranging from BIM and 4D construction scheduling to mobile technology and more, that enable you to build and maintain assets in a smarter way. Ultimately, this means reducing the total cost of an asset (TOTEX=CAPEX+OPEX) throughout its life. In other words, assets must be designed to be easily maintained, with minimal disruption.

This means using new technologies like virtual reality (VR) to validate the impact of designs, drones for remote monitoring and IoT sensors to relay real-time asset information. To make sure you don't miss out you need to prepare your digital transformation strategy by reviewing internal processes and external opportunities:

How agile is your business? –

How do you get the edge over the competition? +

[5] The Nine Elements of Digital Transformation

Decide if it's to be paper-driven (run on Excel) or data-driven to improve efficiency, using plug-in technologies like BIM for all project processes from tendering to handover and all the way through to asset disposal.

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Select the technologies you need to invest in to help you develop new services for clients, throughout the entire lifecycle of your assets.

Technologies to disrupt your market

Economic conditions and disruptions in trade make this a time of choice for the construction sector. To survive and thrive means building operations on transformational technologies. Above all, it means blending business and construction software, with Enterprise Resource Planning (ERP) going beyond finance and HR to connect with construction data from BIM models. This provides a single view of operations, so projects can be delivered at lower cost, on time and to a higher quality.

This construction-centric approach is the foundation for integrated Digital Asset Lifecycle Management. Going further, we believe the most profitable construction firms will expand, from 2021 and beyond, into maintenance and service.

This servitization adds as-maintained data to as-designed and as-built information. With this single view of data in your integrated business system, you can make intelligent use of all the information you have on your projects and assets.

This puts you in a stronger position to sell maintenance and service contracts at the best value–increasing revenues and improving margins, which can be as high as 14 percent compared to 3 percent on new construction.

Source: LEADING THE FUTURE OF BUILDING - Connecting Teams SmartMarket Brief, Cloud-based BIM collaboration for faster project delivery

Project teams surveyed about using BIM processes report:

- Reduced project error (61%)
- Reduced time required for communication (55%)
- Increased client satisfaction with greater project visibility and input (52%)
- Higher quality projects (52%)

Is your business ready for the challenge?

Faced with disruptive technologies in disrupted markets, all businesses must adapt.

For the construction sector that means taking a different approach. The best returns come with a new mindset that doesn't just look at asset delivery but a complete through-life service for clients and asset owners.

To take full advantage of this new opportunity to increase revenues and margins you need software that supports asset management as well as construction. It needs to embrace the latest emerging technologies–from BIM to robotics, IoT and automation–and cover every stage of the asset lifecycle from design, to build, to end-of-life. You will also need to adapt quickly to the accelerating construction integrated manufacturing model.

Ultimately, success in the new digital era for construction will come by harnessing the power of technologies to integrate processes across the business and develop the fast-changing, disruptive services that clients and asset owners demand.

Check the IFS Industry Page for Engineering, Construction & Infrastructure to find out how IFS can help being ready for the challenge.

"Lack of integration is inextricably linked with incompatible legacy systems which do not allow for cross-departmental consistency and visibility–companies need to develop a more collaborative workplace that positions digital transformation as a critical enabler."

Jörgen Rogde, Asset Lifecycle
Product Director, IFS

Read the key questions to ask when selecting software

Find out more

About IFS

IFS develops and delivers enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations.

Within our single platform, our industry specific products are innately connected to a single data model and use embedded digital innovation so that our customers can be their best when it really matters to their customers–at the Moment of Service.

The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector.

Our team of 4,000 employees every day live our values of agility, trustworthiness and collaboration in how we support our 10,000+ customers. Learn more about how our enterprise software solutions can help your business today at **ifs.com**.

#MomentOfService

ifs.com

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