

Business Innovation through Digital Transformation

Currently making great strides, digital transformation (DX) is expected to shake up many areas of industry and society in the future. DX is actively promoted by the JGC Group, both to introduce innovation in existing businesses such as Total Engineering and to expand business models.

JGC Group's DX

Innovation in Executing Projects

Enhancing Productivity,
Creating added Value

Total Engineering

Engineering
Procurement
Construction
Project Management

Providing Digital
Solution Services

Exploring New Business Areas



Pioneering New Fields
with DX

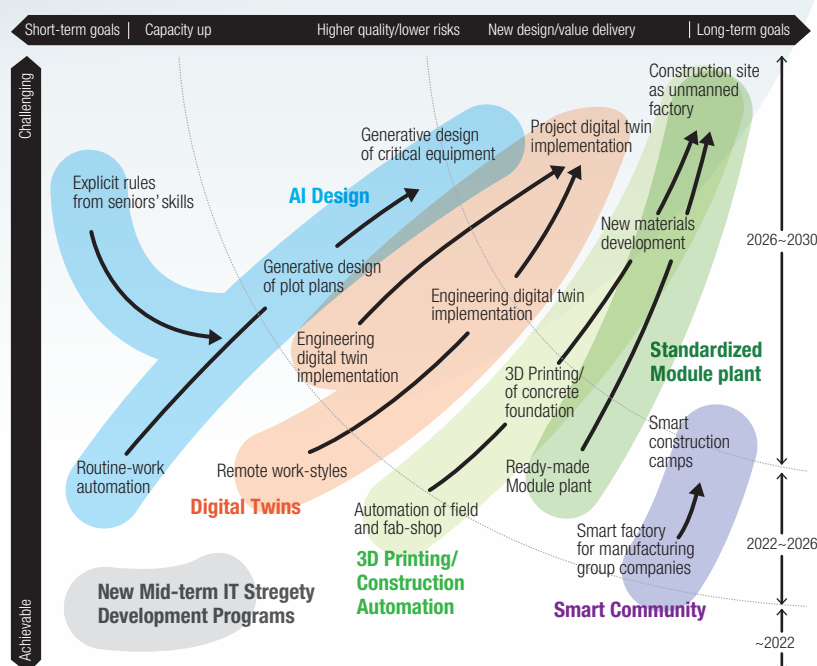
Innovation in executing projects

IT Grand Plan 2030: Future Vision and Roadmap for Total Engineering Business

The JGC Group established the IT-based project management technologies for Total Engineering Business in the 1970s, and continuously refined it over time. Currently, the JGC Group is taking on technical innovation for project execution and project management in line with IT Grand Plan 2030. The plan describes our future vision for this business, as enhanced by DX that is expected to evolve rapidly, and serves as a roadmap for attaining this vision. By 2030, we aim to complete projects twice as fast with one-third the current manpower.

2030 Targets (relative to 2020)

Man-hours  Construction time 
1/3 **1/2**



New Mid-term IT Strategy Development Programs

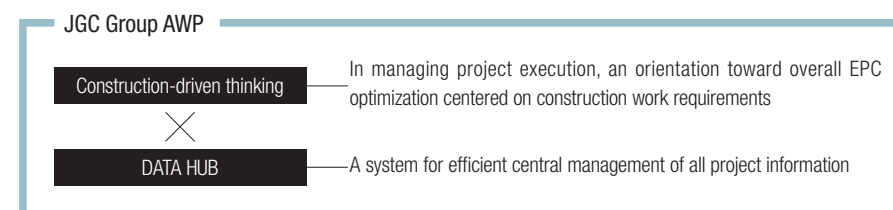
Innovation in executing projects

Enhancing Productivity, Creating added Value

A focus for the JGC Group is building our own DX-based advanced work packaging (AWP) system for further innovation in project execution in Total Engineering Business.

AWP (Advanced Work Packaging)

An approach employed for efficient, just-in-time construction that eliminates waiting time by breaking down the tasks to complete in a project and managing them according to relevant construction work.



- Overall optimization in project execution
- Making construction status visible
- Providing highly transparent plant hand-over data to clients

Based on overall optimization that the JGC Group has pursued for some time under a construction-driven approach to project execution, we have moved ahead in developing a Data Hub system for central management of related information and are now building our own AWP system applying these approaches. Expressing project progress visually and forecasting progress more accurately will be possible, and in addition to higher productivity from lower costs and earlier delivery, building the Digital Twins which replicate and visually express projects as a whole will enable us to create added value.

Exploring new business areas

Providing Digital Solution Services

The JGC Group is also engaged with digital solutions addressing technical challenges faced by our clients. Innovative, DX-based technical services provided by the JGC Group in Total Engineering Business include development of Airlike LNG technology package service for stable operation and higher productivity of air-cooled LNG plants, as well as integrated maintenance service (INTEGNANCE) for domestic oil refineries and petrochemical and chemical plants.

Smart maintenance service INTEGNANCE

Integrated maintenance and safety services

Support for aging facilities, corrosion/damage monitoring, risk assessment and support in international safety compliance, human resource development, skill shortage strategies, digitalization and automation, catalyst/chemical remaining life estimation, renovation project support

Four values

One-stop service

Providing complete support for all services from routine maintenance to regular planned maintenance and managing projects in line with client needs.



Connecting data

Linking data between various applications and services. Frees clients from routine work.



Data-driven

Accelerating work and enhancing quality through forecasts, decision-making, and planning based on data analysis.



Benchmarking

Enables comparative analysis with external data, drawing on extensive records.



- Advantage 1** Cut costs through selectivity and focus in maintenance work
- Advantage 2** Improve profitability through maintenance planning and project management

Exploring new business areas

Pioneering New Fields with DX

Applying DX in the JGC Group's Total Engineering Business and Functional Materials Manufacturing Business will enable us to provide services that are more value-added than ever before. By linking the Group's core and digital technologies, we are actively pioneering new business fields as well as working more efficiently in existing businesses.

