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# HOW TECHNOLOGY TRANSFORMS THE EXECUTION OF COMPLEX PROJECTS

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**In a sector that is defined by complexity, scale, and tight schedules, McDermott's differentiators in project execution are rooted in the synergy between technology and process excellence.**
Our evolution from digital adoption to digital mastery reflects a commitment to responsible innovation. Our foundation rests on an integrated delivery strategy, one that brings together people, processes, and systems to deliver certainty in execution and superior value for our customers.

### McDermott's digital journey

McDermott's journey has evolved from tactical digitisation initiatives to a fully integrated, enterprise-wide digital ecosystem. At the core of this maturity lies a robust AI governance framework to guide responsible and ethical use of data for AI-driven solutions.
With every digital asset and data stream, confidentiality and cyber resilience are embedded by design. Our digital roadmap now extends into predictive analytics, adaptive AI models, and knowledge-driven automation thereby enabling a smarter approach to complex and mundane activities.

### Aligning people, processes, and systems for success

At McDermott, digital transformation is powered by strategic alignment across our workforce, business processes, and enabling systems. Through cross-functional collaboration, standardised digital work processes, and the adoption of a unified data architecture, we have established a strong foundation for consistent project delivery across regions and disciplines.
This alignment has enabled the seamless flow of

information—from concept and engineering through procurement, construction, and commissioning—driving informed decision-making and early risk mitigation.
We are also embarking on setting up a global digital academy to upskill project teams in AI, data science, and digital engineering, creating a future-ready workforce embedded in every project.

### Data analytics for actionable insights and visibility

Our investment in data and analytics is contributing to tangible business outcomes.
By leveraging data from our proprietary engineering models and project delivery systems, we are advancing real-time visibility into project performance, productivity, and cost drivers.
These insights empower project teams to optimise resource allocation, forecast challenges proactively, and accelerate project milestones—ensuring predictable outcomes.

### Integrating technologies to enable autonomous operations

We are also continuing to invest in digital tools that enhance integration across the EPC data landscape—linking design, fabrication, construction, and operations in a continuous digital thread.
By simulating real-world conditions and automating change management, we create a strong foundation for autonomous operations, where systems can self-adjust, optimize, and learn across the project lifecycle. The result is a step-change in predictability, efficiency, safety and sustainability.
In upstream, midstream, and downstream operations alike, operations & maintenance (O&M) digital twins continue to be a valuable asset for the energy industry. O&M twins extend their utility throughout an asset's lifecycle, integrating real-time data, advanced analytics, and AI-driven insights to optimize performance, safety, and reliability.
McDermott is not only building the engineering twin but also the O&M twin for asset application. In this platform, the operator can simulate scenarios, predict equipment failures, and make informed decisions in a connected ecosystem at the engineering phase. This capability transforms operations from reactive to predictive — reducing unplanned downtime, minimizing maintenance costs, and improving energy efficiency - creating a world of sustainable and affordable energy.
McDermott's sustainability twin integrates real-time environmental data and predictive analytics to optimize energy use, emissions, and resource efficiency across an asset lifecycle. It enables proactive decision-making aligned with sustainability goals, helping operators reduce their carbon footprint, improve reliability, and embed sustainability from design through operations.
We believe the future lies in data convergence—integrating cloud computing, and machine learning within a single digital ecosystem for a project. As these technologies mature, operational twins will evolve into autonomous systems capable of self-diagnosis and optimization, driving a new era of intelligent operations.

### Driving leaner execution

Our design one, build many approach embodies McDermott's philosophy of leveraging standardized, modular designs to achieve leaner execution timelines and reduced costs. By digitizing design templates and integrating advanced analytics, we accelerate project readiness and increase engineering efficiency.
This methodology enhances repeatability and scalability across markets, allowing us to deliver faster while maintaining quality and consistency.
McDermott's competitive position is further secured through our use of digital resources, innovative accelerators, and use of proprietary digital & AI technology.

### Strategic partnership to accelerate innovation

McDermott's journey is amplified through strategic partnerships with leading technology providers in digital engineering, cloud computing, and AI. These collaborations ensure access to emerging innovations and strengthen our ability to co-develop tailored solutions that benefit our clients.
From digital collaboration platforms to next-generation visualization and simulation tools, these alliances accelerate McDermott's mission to redefine the way complex projects are executed.