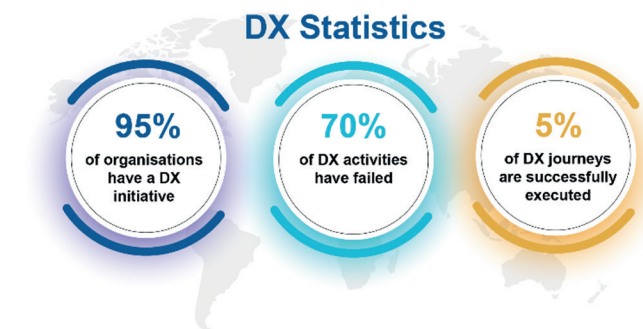


Digital transformation of process industries

While the concept of applying digital technologies to improve operational excellence isn't new, in 2019, a staggering US\$345 billion was earmarked for digital transformation initiatives in process and manufacturing industries. These investments are considered to be the largest of their kind by any industry worldwide, according to the International Data Corporation (IDC).

Digital Transformation (DX) Opportunities and Challenges

A growing number of industrial companies envisage a digital transformation (DX) in operations and manufacturing to support company-wide growth, innovation, and sustainability strategies. Gartner research suggests that enterprise digitalisation reached a tipping point in 2019, with over 95%



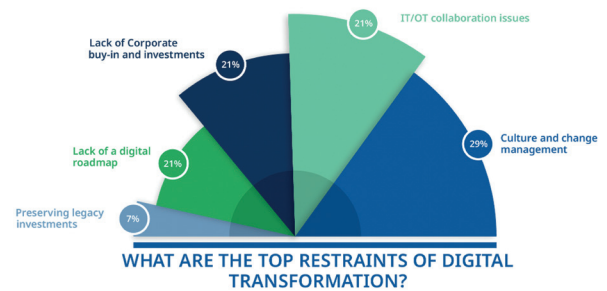
of organisations having initiated CIO-level digitalisation efforts. While according to research conducted by McKinsey & Co., the most potential benefits of digital transformation are increased profitability, reduced costs, and higher productivity, with estimated effects as follows:

Sized Applications	Annually Low Est.	Annually High Est.	Potential Value Gain
Operations Optimization	633	1766	5-12% cost reduction
Predictive Maintenance	240	627	10-40% cost savings
Health and Safety	65	226	10-25% savings
Human Productivity	69	160	10% productivity improvement 3-5% productivity gain

While DX has become a strategic imperative and presents, significant potential benefits, operations must consider risks and margins, especially since more than 70% of DX initiatives have failed. According to Yokogawa's research, the most common restraints associated with DX failures are culture and

change management issues, followed by OT/IT collaboration challenges.

Potential Economic Impact Per Year in 2025 Reference: McKinsey & Co.²



The Road to Futureproof DX results

While each organisation is different, some industry-wide best practices have proven to work for many and can be easily incorporated by those undertaking their manufacturing DX journey. A summary of industry-wide best practices is described in this article and further information can be obtained from Yokogawa's Digital Transformation in Process Industries eBook.

Align the digital strategy to corporate strategy

Many organisations approach digital transformation as a one-time strategy-development exercise. This often leads to an unclear vision of the organisation's digital element, followed by limited C-level support and IT involvement. To keep up with industry demands, a more strategic approach is needed to link DX objectives to an organisation's business goals and strategy.

Mapping current state capabilities

Organisational strategy, operational challenges, risk appetite and automation ambitions should be the drivers to decide a digital target state roadmap. Maturity models, operational assessments, your focus areas and desired outcomes should be used to guide you to determine an approach for creating value.

Break organisational silos and collaborate

DX, by its very nature, requires people to change their ways of working and break out of organisational silos and into collaboration on key projects. Identify the most influential people at key points across the organisation and invite them to participate in a digital transformation task force, creating buy-in and trust among employees, thus empowering employees to lead DX efforts.

Organise processes around customers

DX requires a mindset and culture that places the market,