Future-proofing Air Navigation Service Providers (ANSP) Asset Operations

A paradigm shift in Air Traffic Management (ATM) asset management (AM) and facilities management (FM) through digitalisation
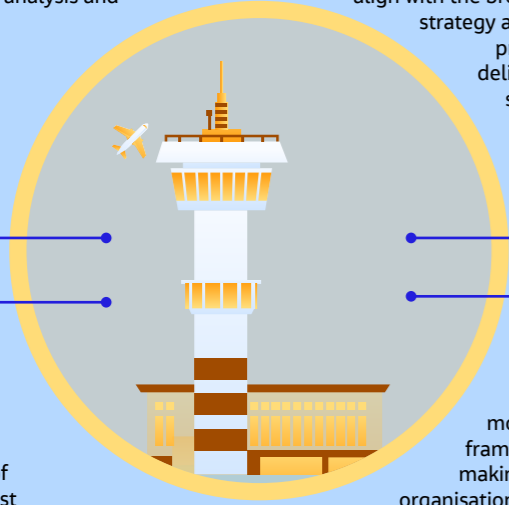
Jacobs — Challenging today. Reinventing tomorrow.

Foundational Capabilities

01 Establishment of an organisation's maturity level relative to industry best practices using Jacobs proprietary strategic asset management maturity assessment methodologies and data collection for gap analysis and benchmarking.

02 Development of a comprehensive Asset and Facilities Management capability uplift roadmap. The roadmap looks at capability development over three horizons that align with the broader organisation strategy and transformation program, ultimately delivering a paradigm shift in the way the ANSP manages its assets and facilities.

03 Development of a framework for streamlining the aggregation of organisation's most relevant asset data. This enables structured analysis and delivery of actionable insights, which in turn supports risk-based tactical and strategic decision making.

04 Business capabilities are abstracted from the organisational model and provide a framework for decision making, whilst ensuring organisational alignment. The business capability model enables strong governance and ownership of real business execution through the alignment of assets, people, places, and technology to the overarching corporate strategy.
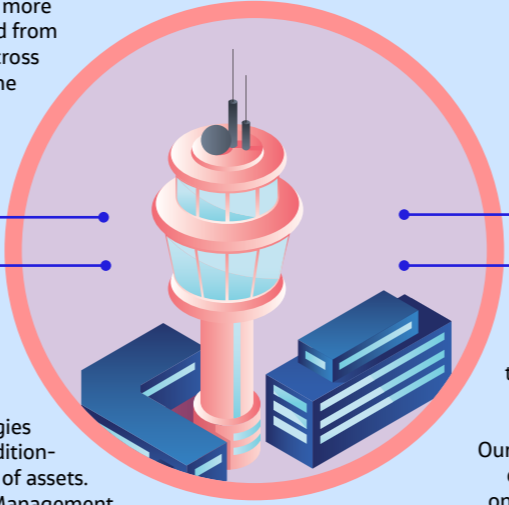
Optimisation Capabilities

01 Development of a comprehensive asset information strategy to uplift the organisation's ability to integrate data from disparate enterprise asset information systems. The integration allows more value to be derived from the information across each element of the value stream, and introduces more agility in the operating model.

02 Business intelligence visualisations from data trending and analysis that support performance monitoring and decision making.

03 Implementation of IOT, data integration and analysis technologies for real-time, condition-based monitoring of assets. Intelligent Asset Management (IAM) enables transition from planned preventative to predictive maintenance methodology by trending the performance of asset of assets over time, leading to significant efficiency gains.
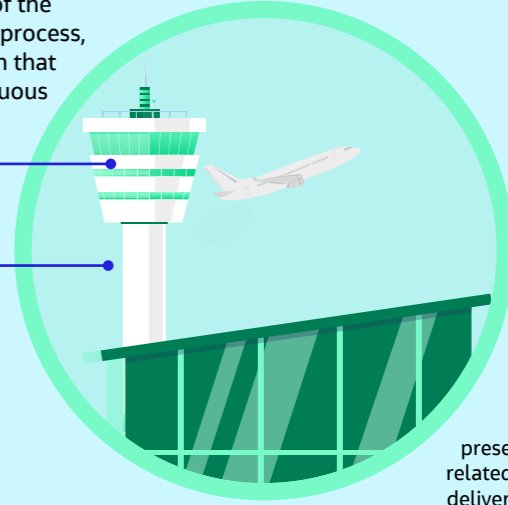
04 Jacobs forms a trusted partnership with the ANSP (as illustrated below). Our IAM methodology de-risks the impact on ATC operations by undertaking a robust safety assessment process, consulting key stakeholders at each step and leveraging technologies that are minimally intrusive.

Transformational Capabilities

01 Based on the strong foundation laid through implementation of Intelligent Asset Management, develop a Digital Twin of the network of ATM assets. The Digital Twin will utilise real-time asset data from multiple sources, leverage AI/ ML tools to create an accurate virtual model of the physical asset, process, or other system that enables continuous innovation.
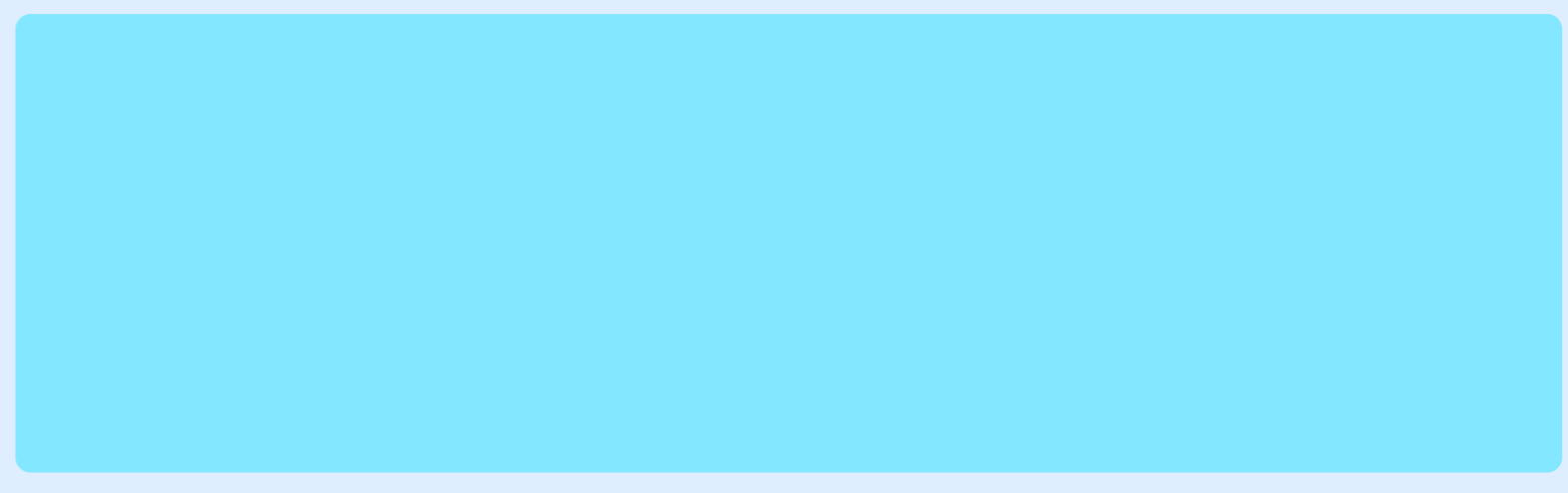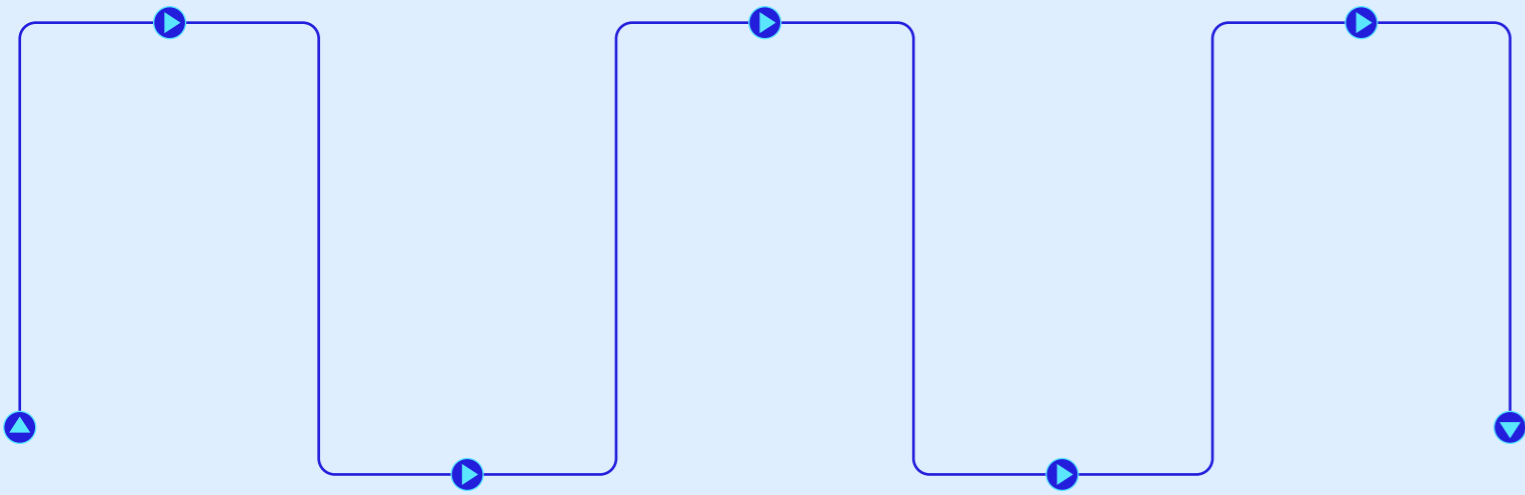
02 Our Digital Twin delivery methodology minimizes impact on current ANSP operations as emerging technologies are introduced for improved asset monitoring and performance. The digital twin implementation will gradually build capability to simulate scenarios with increasing complexity and present options to mitigate risks related to ATM assets required for delivery of safety-critical services.

DIGITAL TWIN DELIVERY METHODOLOGY

Jacobs a trusted Intelligent Asset Management Partner of ANSPs

Jacobs Proven Methodology

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