Transforming infrastructure performance through effective Project Controls

NOVEMBER 2022
About Costain

Costain helps to improve people’s lives by creating connected, sustainable infrastructure that enables people and the planet to thrive. We shape, create and deliver pioneering solutions that transform the performance of the infrastructure ecosystem across the UK’s energy, water, transportation and defence markets.

We are organised around our customers anticipating and solving their challenges and helping to improve performance. By bringing together our unique mix of construction, consulting and digital experts we engineer and deliver sustainable, efficient and practical solutions.

Our 3,500 people manage a workforce of around 16,000 people and collaborate with customers, partners, communities and wider industry to make infrastructure fit for a better future.

Our ambition is to become a net zero business by 2035, while enhancing biodiversity and natural capital, and we have plans in place to deliver this.

How we work

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The building blocks for effective digital Project Controls

We understand the building blocks to successful digital project controls and the importance of fully integrated project controls solutions. Costain offers structure, ensured data flow, the capturing of learning through real time feedback and ultimately the breaking down of data silos, enabling better quality decision making for all parties. Our approach is also eliminating unnecessary work, such as double or triple handling of data.

We promote an integrated approach by embedding a collaborative culture in which all parties hold frequent and honest conversations to mitigate project risk and maintain a brisk ‘drumbeat’.

Costain’s approach to Project Controls is based on leading edge processes and tools with an irreplaceable human combination of leadership, integration of specialists, and collaborative behaviour.

Transparency in reporting is possible through a ‘single source of truth’ by bringing together highly skilled project controls resources with digital mindsets, optimised processes and systems which delivers clear benefits:

- Effective balancing of risk and reward - right information at the right time
- Reduced ambiguity and bias in decision making due to data insight
- Faster issue resolution with trusted, real-time controls
- Improved likelihood of project success - project objectives are achieved on or ahead of time
- Consistency and predictability in delivery
- Acceleration of performance
- Single source of the truth

Figure 1: Single source of the truth with optimised processes and systems
**Project Control strategy**

Through evolving advanced data analytics and AI capability, we can increase certainty and empower decision makers to positively influence time, cost and quality outcomes.

We provide a full suite of project controls expertise including project and functional controls, cost engineering, risk and estimating, change management, information and knowledge management as well as planning and analysis.

Our forward-looking PMO and Project Controls enable strategic decision making. They act as the conscience of the organisation by continuously challenging if ‘the right things are being done in the right way’ whilst ensuring that benefits are being realised through our clients’ programmes and projects.

Costain’s digital delivery solution helps to connect sources of data and provide live data insights. Our experts work together using digital project delivery tools within four maturity levels:

- **INTEGRATED DIGITAL PROJECT CONTROLS SOLUTION**
  - Common Data Set
  - Dynamic reporting visualisation

- **IOT DEVICES DEPLOYED IN THE FIELD TO PROVIDE REAL-TIME DATA**
  - Active and passive devices
  - Asset and performance information

- **A MISSION CONTROL ENVIRONMENT IN THE PROJECT/PROGRAMME OFFICE**
  - Full visibility of operations
  - Entire portfolio management

- **FULL BIM INTEGRATION**
  - Digital twin

We have integrated client, contractor and designer project control systems on our projects and programmes, analysing leading indicators to reduce risk, capitalise on opportunities and improve productivity.

Use of digital project controls is a key component of our digital project delivery, with dashboards and integrated reporting being standard ways to manage performance. Key elements of our approach to support the ambition are shown in Figure 2 below:

- Optimising leading edge Technology & Tooling
- Tailored Digital Methodology to suit Business Requirements
- Process Automation enhancing accuracy and increased efficiencies
- The Business Intelligence ‘Mission Control’ room will provide an Enterprise level overview for business intelligence

Operational Excellence Model (OEM) - Costain’s business-wide improvement programme

OEM is part of a wider drive at Costain to work more effectively to meet government, industry and client challenges: building safer, faster, better and at less cost while maintaining high levels of quality and reducing carbon.

On the A14, our supply chain partners input their data directly, avoiding duplication of work. The data was still analysed as a team. Collaborative planning techniques on the project enhanced collective ability to achieve the plan, on-time and on budget. This saved £430k in non-value adding time.

Overall the A14 was hailed as an exemplar, being handed over eight months early and securing more than £100m of assured efficiencies - a testament to the integrated, digitally-driven way in which the team worked.
Meet the Team

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