Case Study

The Road to Project Success: Cost Certainty and Increased Accountability

In April 2015, the government of England took over the publicly-owned Highways Agency and Rebranded it National Highways. The takeover included changes mandated by the Department for Transport (DfT), including budget and schedule accountability. To adhere to these tasks, the government sought to establish modern cost control and project management processes.

National Highways

National Highways, formerly Highways England, is a government-owned company charged with operating, maintaining and improving motorways and major A roads of England. The government agency is in charge of completing commitments given from the DfT (Department for Transport).

To drive forward the transformation of England's highway infrastructure portfolio, the transformation program was launched. This initiative convened a team of delivery experts tasked with establishing clear project / cost milestones, all aimed at achieving significant improvements.

Known collectively as the cost management workstream, they were driven by various project management tasks, including creating cost management processes and user manuals; establishing the cost breakdown structure (CBS), mapping it to the work breakdown structure (WBS) and creating the coding structure

National Highways at a Glance

National Highways improved cost certainty, increased accountability and improved organizational project maturity with its capital construction projects.

Industry: Transportation

Location: England

Results:

- Cost Savings and Efficiency
- Increased Visibility and Control of Costs and Budgets
- Full Financial Audit Trail
- Accurate Reporting of Project Status

" Contruent is a total enterprise system that integrates with most systems, allowing us to have one source of truth in one system."

Contruent

for the cost management system to map across other systems.

The cost management workstream was responsible for developing the implementation strategy across the Major Projects Portfolio of Programs and Projects, and ensuring all organizational requirements were met with the full roll-out to all projects.

Challenges

Schedule and Cost Control

The Department for Transport enforced certain changes upon National Highways over several years, so that the organization would be fully accountable for the billions of pounds used to fund their Portfolio. They aimed to get to the P3M3 maturity level, which is a best practice maturity model in the industry.

Individual Spreadsheets

Spreadsheets are an inherent part of project management, but National Highways had well over 100 projects, each with their own Excel spreadsheet with multiple tabs. Processes relied heavily on spreadsheets to provide National Highways with current value, earned value, actual cost and forecast outturn. This process did not have the granularity to manage actual costs to the level required to provide meaningful metrics for dependable forecasts, cost control and performance measures. This had to change.

Decentralized and Inconsistent Data

With several different systems and software programs being used, National Highways struggled with

inconsistent approaches and decentralized data. They needed to be able to centralize data and report consistently from project to program to portfolio levels.

Lack of Accountability and Control

There was a lack of accountability and control with project managers not being given or taking ownership. They needed to make a cultural change to have project managers take ownership of figures and be responsible for explaining any variance or changes to baselines.

Objectives

National Highways was looking for a centralized enterprise system that provides:

- Standardized cost management approach across all projects and programs
- Consistent project level costs
- Integration with Oracle Fusion, CEMAR, Xactium, Primavera P6 and Power BI
- Better reporting and visibility into project performance

The Solution

National Highways needed a software solution to help them achieve a standardized approach and centralized data for better reporting. They chose Contruent and began a digital transformation to provide better project controls and get on the right path to delivering their projects on time and on budget.

Selection of Centralized Enterprise System

National Highways selected the software from a handful of

recommended solutions provided by the joint venture consultant agencies. Contruent was chosen over other cost systems for its proven track record with rail and infrastructure programs, as well as the following essential attributes and qualities. Contruent provided National Highways with an enterprise system that quickly integrated with other platforms, enabling a single source of truth.

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Contruent's consistent project management approach enabled National Highways to obtain impactful metrics for change, risk, and cost control. This streamlined method ensures seamless reporting across all projects, programs and portfolios.

Business Benefits

National Highways adopted Contruent Cost Management and Contruent Connect in a hosted environment and started on the path to project management betterment.

Contruent cost management support the planning, execution and completion of capital projects.

The software, alongside these processes, provides dependable forecasts, cost control and performance measurement. Furthermore, Contruent software is more than capable of standardizing the organization's cost management processes in alignment with estimating, risk, change and finance approaches.

Contruent is an essential element of the new project-level business processes for collecting actual costs, undertaking forecasts, measuring performance, managing budgets, managing risk allowance and controlling change. Contruent enables National Highways' project-level performance data to be rolled up, first to the program level and ultimately to the portfolio level.

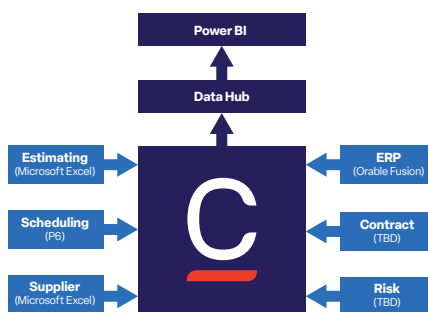### What Contruent Brings to National Highways

With Contruent, National Highways is introducing a standard approach to cost management across all projects and programs planned and delivered by Major Projects.

The new processes and software will allow a flexible approach for all types of procurement models in each program (including traditional, design and build, alliance, etc.)

Total Integration & Improved Workflow: National Highways is implementing an automated cost management system, replacing the manual work previously required. The changes will result in improved workflow and enable both suppliers and contractors to input data online directly into the cost management system integrating with their other systems including Oracle Fusion, CEMAR, Xactium, Primavera P6 and Power BI.

Better Reporting & Visibility in Project Performance: Contruent allows National Highways to standardize how they measure project performance across projects and to facilitate program/portfolio roll-ups and analysis. They now have greater visibility into project execution and performance through dashboards. Additionally, they are able to track expenditure and calculate forecasts without having to rely on a series of spreadsheets. This promotes a greater understanding of individual project performance and allows National Highways to monitor progress for cost and schedule against delivery plan commitments. Additionally, they are able to measure performance at the enterprise level.

Consistent Project Level Costs: Contruent and the joint venture's processes will bring consistency and improve standards for their project manager community; driving better planning and cost management behaviors, both internally and within their supply chain.

> "Contruent's consistent approach to managing multiple projects, reporting through from project to program to portfolio was a major factor leading to its implementation."

Contruent

National Highways now has a common WBS and CBS, enabling alignment to schedule, risk, changes in contract and finance, including driving earned value management (EVM) for performance measures and forecasting.

Implementation and Training

National Highways ran user-acceptance testing of Contruent on pilot projects prior to implementing Contruent on major projects. Once the pilot projects were successful, the agency was assured that the Contruent system would work across their major projects and began rolling out in a series of tranches over several months. National Highways' Contruent training was centered around employees' roles and how they would be utilizing new processes and the software.

They broke users into three categories: admins, super users, and users.

Integration

The integration and diligent cost management capabilities offered by Contruent willl support National Highways in delivering projects on time and on budget.

The Contruent system is able to support National Highways and its processes by providing a project controls mechanism (Contruent's integration capabilities) that links its finance and commercial systems and processes.

This integration across functional areas is supported through Contruent via a common WBS/CBS alignment, including a structured set of codes aligned to the CBS and integrated systems, giving them the means to automate data input from the agency's planning and scheduling (Primavera P6), contract management (CEMAR), finance (Oracle Fusion) and risk management (Xactium) systems. This, in turn, enables National Highways to calculate and report on earned value in the cost management system and align data between its cost and finance systems.

Expected Results and Benefits

Efficiency & Cost Savings due to Reduction in Manual Intervention: By implementing Contruent, National Highways has all the

> " With Contruent Enterprise, month-end closing, reporting and data validation are seamless and fast, especially for enterprise teams. "

performance data, risk data and change register information in one system, rather than several spreadsheets or systems. This reduces manual processes and duplication efforts.

It also benefits the project manager and program lead in running reports from one system as well as having the "one source of truth."

The agency has already seen a reduction in number of hours booked to the projects in the 'commercial manager' function against the previous ways of working.

Improvement in P3M3 Maturity Model: In keeping with industry best practices, Contruent will form part of National Highways' P3M3 maturity level. They were at level 2 with the target of getting to level 3 by 2019 and potentially higher in 2020 with continuous improvement processes. P3M3 is an organizational management maturity model whose scope focuses on how the organization delivers its projects, programs and portfolio. The P3M3 maturity model is unique in that it considers the entire system, not merely its processes.

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Increased Visibility & Control of Costs & Budgets: "Through Contruent, we will have a cost management system and processes that provides project controls mechanism that links with finance and commercial to provide a "single source of truth" for the project managers to control project costs."

Accountability & Financial Audit Trail: Already, the agency has seen an increase in the percentage of project reports that have a full financial audit trail. Additionally, project managers are being held accountable for their project data and are taking ownership. "Part of the Contruent training includes making sure that there is ownership and that project managers are accountable for not just issuing the reports, but actually analyzing the reports and putting a narrative to them to say where they are,

what's changed, and why there's a variance, etc."

Accurate Reporting & Better Informed Decision-Making: Previously, there was no standardized approach to reporting. The agency has already seen a reduction in the number of variation reports produced.

By having a more consistent approach to gathering cost data and reporting data, National Highways will see improved data analysis, forecasting and better-informed decision making at all levels.

Future

Initially introduced within National Highways major projects, Contruent is now being implemented with a uniform approach across all projects. Upon achieving consistency in the reporting cycle spanning from program to portfolio, the agency intends to extend Contruent and its cost management solution to encompass National Highways operations and the entirety of its business. The phased rollout of this new cost management approach is currently underway.

Contruent's cost management system will provide the following benefits across the project management and commercial communities at project, program and portfolio level:

- Better informed decision-making
- Increased visibility and control of costs and budgets
- Greater visibility of risk allowance
- Improved efficiencies
- Accurate reporting of project status across a variety of metrics, including earned value
- Essential enabler to support the achievement of P3M3 level 3 capability

" Contruent is not just a cost management system, it is a total enterprise project controls software solution that manages the entire project lifecycle. "

ARES PRISM Becomes Contruent

In 2023, ARES PRISM was reborn as Contruent, launching a new name with an industry-leading new product, Contruent Enterprise.

Contruent Enterprise is a culmination of our award-winning project controls software, full of industry best-practices built in, with the innovation and world-class capabilities of a capital project management software.

Building on its 25-year history, Contruent is the premier capital project management software that is faster to deliver across the entire project lifecycle for complex, mega-construction projects.

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