Delivering Digital Project Controls Platform at Heathrow Airport

Turner & Townsend showcase their innovative Digital Controls product, the underlying methodology and subsequent implementation.

Presenters: Danny McCarthy and Chioma Ukah

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London, UK

Introductions

Chioma Ukah | Turner and Townsend Controls and Performance Project Director

Chioma has over 18 years' experience and proven track record in providing project controls, performance, change, cost, schedule, and commercial management across a broad portfolio of mega infrastructure projects. Chioma successfully led the data migration of ~1500 projects at Heathrow to the new programme controls toolset. She was also instrumental in defining the programme controls methodology and new ways of working at Heathrow. In addition to delivering effective solutions at Heathrow.

Danny McCarthy | Turner and Townsend Controls and Performance Director

Danny is a highly experienced and driven Project Controls Manager with over 20 years of experience working on some of the largest and most complex infrastructure projects in the UK. He has held leading roles on a number of programmes both defining and driving a forward-looking controls approach de-risking project delivery and by enabling early management decisions to be taken. Currently, Danny is leading the PMO Service, consisting of Project Controls, Risk Management, Scheduling & Management Information for £4.2bn of Capital Investment across Heathrow's H7 Programmes of works.

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The Problem

Our clients' portfolio and programmes of work are becoming increasingly complex and as a result, they need the business capability and controls platform to rise to the challenge.

1. As the scale of works increase, problems with **siloed** and **traditional** Project Controls Ways of Working become exacerbated.
2. Poorly defined ways of working that are **inconsistently** applied lead to irregularities and a **lack of confidence** in the data shown.
3. **Multiple systems** with no or limited interface results in inconsistent Management Information; report outputs are **labour intensive**, backward looking and fail to provide **insight into performance** or drive action.
4. The **development and deployment** of the desired integrated Project Controls solution can appear daunting, often proving a **costly** and **time-consuming** venture.

The Problem

Month end data timetable is too long

Systems are not integrated and require manual intervention

Multiple data manipulations, touch points and silos

Effort spent on reporting rather than value-adding activities

Complex process, not scalable in terms of throughput

Reporting cycle is resource intensive

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Heathrow H7 Capital Programme – Circa £1bn investment per year across 7 Strategic programmes

The Solution

An integrated programme controls toolset that incorporates industry best practice and tried and tested systems that **can be shaped to fit the needs of any business**

Multi-sector industry experience and intelligence

Developed into integrated best practice process, procedures and ways of working

Which have been used to configure industry leading cloud-based systems that are scalable and ready to deploy

What are the benefits ?

The systems have been robustly trialled and stress tested against established business rules and processes so they can be **seamlessly integrated into any organisation**

A **single entity managing the integrated PMO toolset** reducing the burden on your organisation to manage configuration, licence agreements, testing, and integration

Reduces programme setup and mobilisation periods as the tools, systems, and processes have been modelled on industry best practice and can be scaled and shaped to your organisations needs

A consistent data model and common language that drives improved **business insight and integrated management information** from the supply chain and internal functions, allowing your business to make more informed and timely management decisions

Drives efficiencies into your PMO organisation by reducing data manipulation, input, double handling, and validation. Allowing your finite resources to focus on analysis and value add activities

What have we delivered at Heathrow?
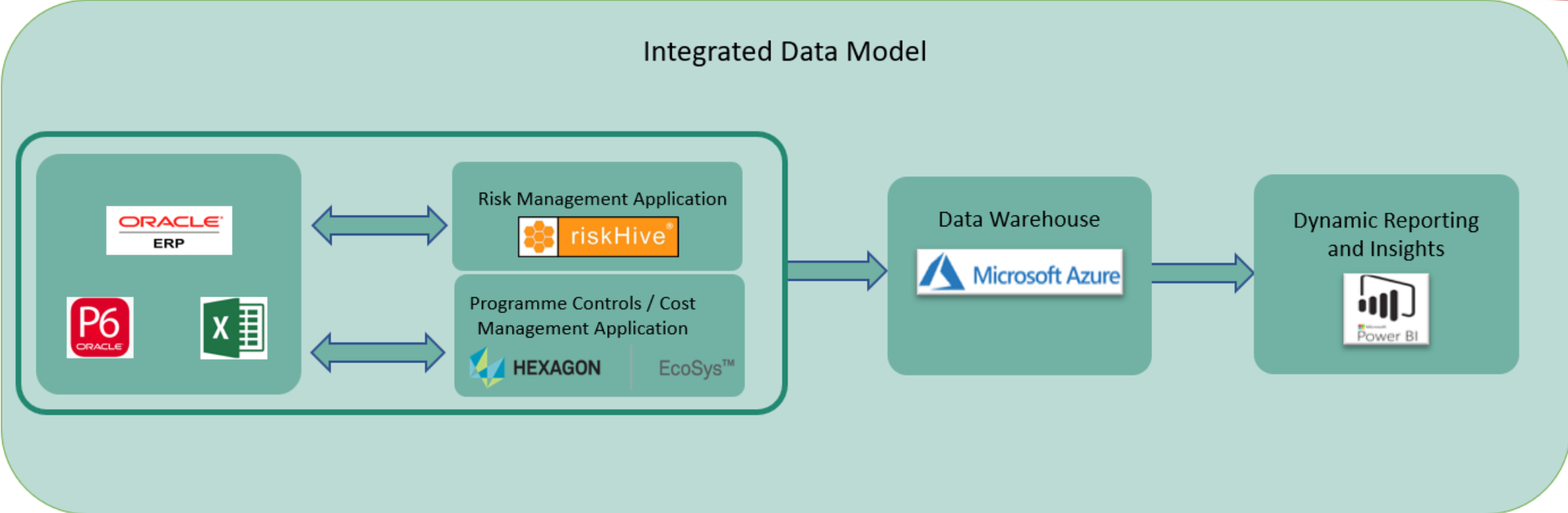
Functional Setup is key

The key to deploying integrated PMO systems is to ensure you have clearly defined and documented your ways of working and have an integrated common language and data model that align to your strategic objectives

**Step 1**: Define your ways of working and data model

Step 2: Detailed systems requirements aligned to cross functional ways of working

Step 3: Procure, configure, test, and deploy integrated systems

A common mistake we see happening across the industry is where clients buy the software and have missed out steps 1 and 2. This leads to a lengthy and expensive implementation period, and systems that aren't integrated and don't meet the needs of the business

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The Cube methodology
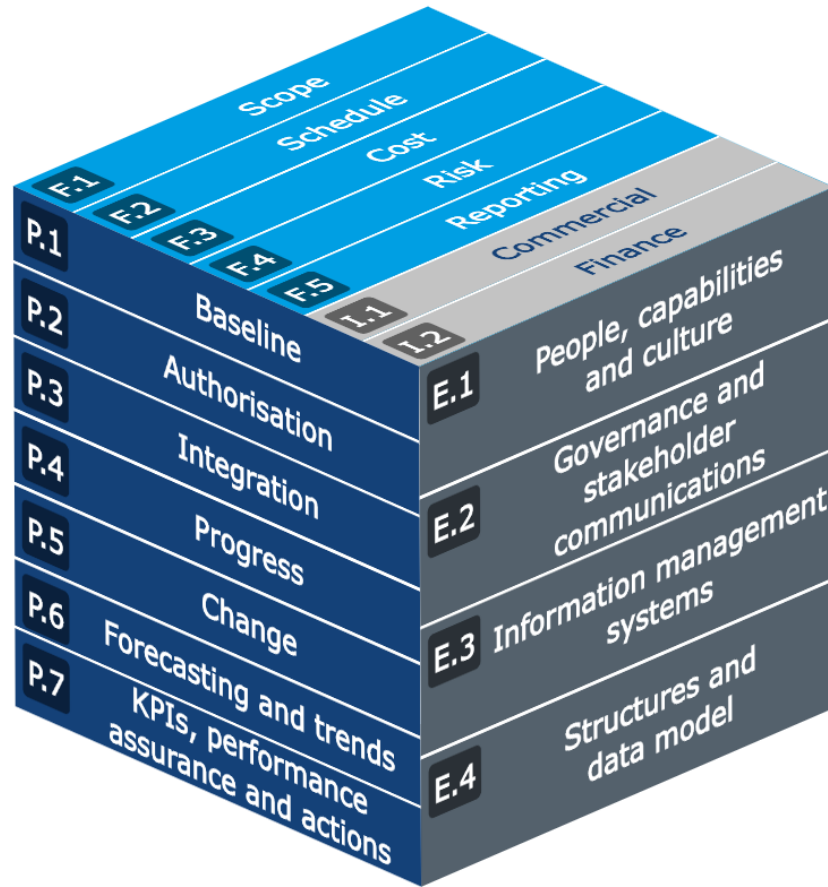
Have we captured everything? The Cube is a framework used to describe the components of the Programme Services (PMO) function.

What's in the box? Best Practice principles and 'Ways of Working'; lessons learnt from T&T's institutional experience.

How does it apply to a major programme /portfolio? The Cube is only the top level of a Quality Management System (QMS), it provides the principles, policy and strategies that have been developed to produce low-level operating instructions and system designs.

How is it rolled out? Structured consultation and governance process with client and partner stakeholders to understand and incorporate the programme context. T&T reach-back, peer review and assurance.

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Collaborative Model
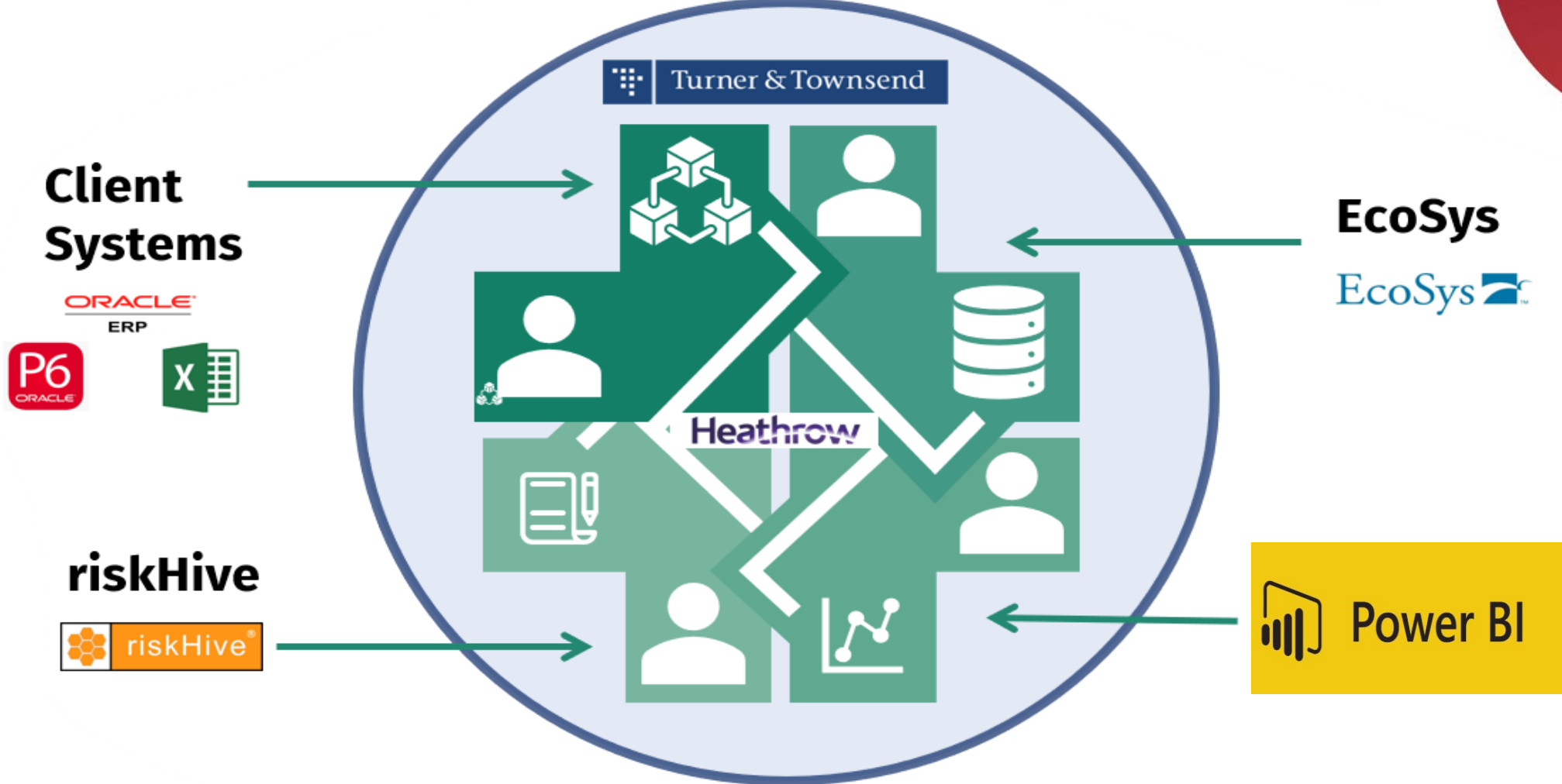
Dynamic PowerBi Outputs
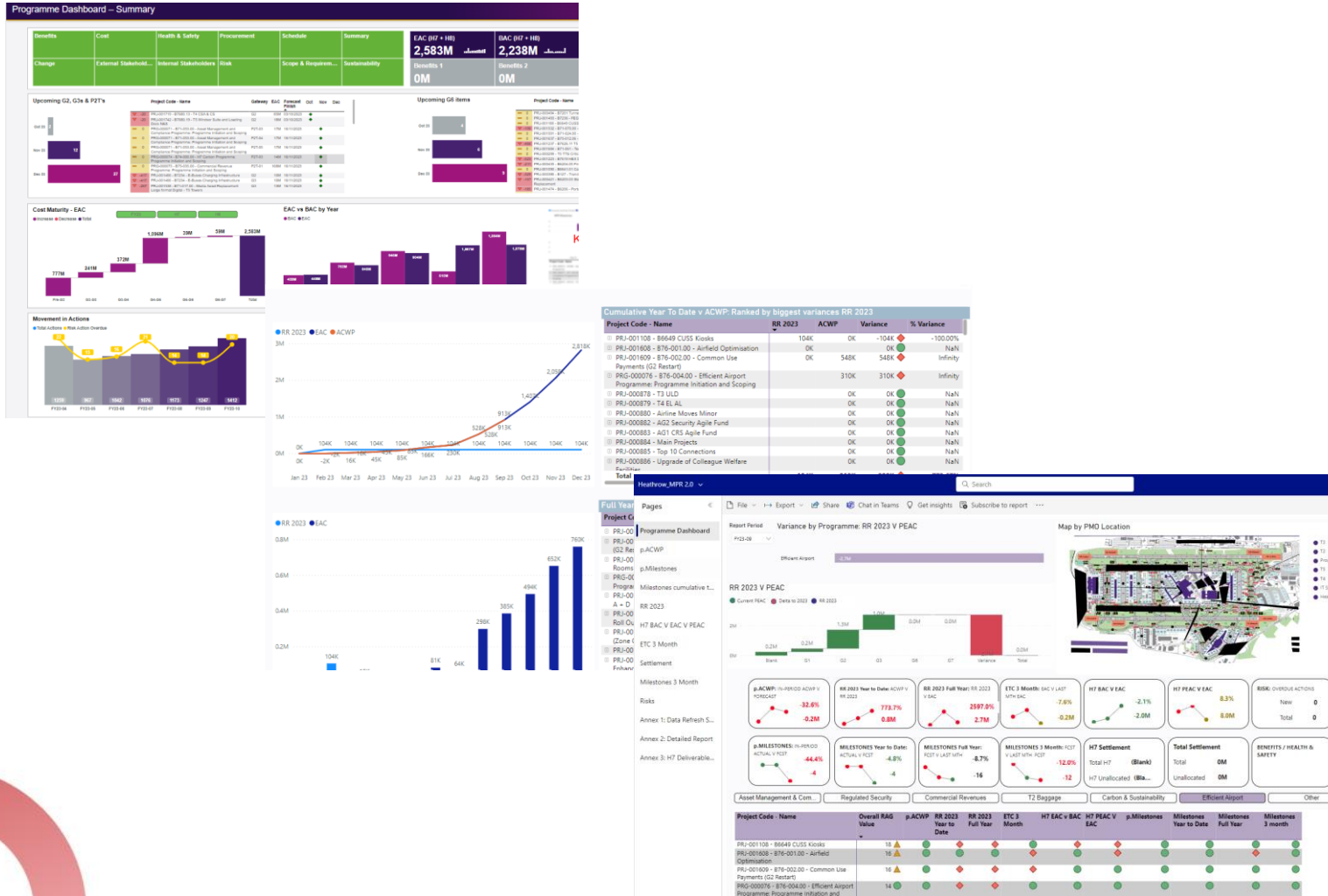
Key management and intervention meetings driven by robust relevant data

Faster reporting

Focus on leading indicators now at the forefront of reports

Rich, reusable end to end dataset

Continuous Improvement

Adapt: Assume and plan for changes to reporting and ways of working

Engage: Have regular dialogue with your users to make sure that processes and procedures are understood and followed

Improve: Undertake lessons learned and solicit regular feedback from end-users

Enhance: Undertake periodic roll-out of enhancement features to toolsets

Implement: Attack and prioritise quick wins but drive a culture of continuous improvement

Review: Periodic audit of end-users and system admin to ensure processes and procedures are adhered to

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THANK YOU

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