

20 Years of Information Management at Heathrow Airport

John Williams & Nigel Stroud



Agenda

- Introductions
- Terminal 5 (2000 – 2008)
- Business as Usual (2009 – 2017)
- Recent (2018 – present)
- Future
- Questions

John Williams

Project Director, Excitech

John has fulfilled many roles within Excitech (UK Autodesk Platinum Partner) from supporting the digital design and delivery at Heathrow Terminal 5, Implementation of an enterprise wide EDMS at the Atomic Weapons Establishment, heading up the Data Management and Consultancy teams and currently a Project Director responsible for the implementation of an enterprise wide CDE for Heathrow.



Being able to confidently use data – gathering, storing, and sharing it in line with industry standards and compliance regulations – is rapidly becoming a critical component in effective collaboration across every stage of the construction process, from design to build and handover. John has built a reputation for a pragmatic approach to consultancy delivery with a focus on value and this presentation will demonstrate how an industry experienced team, with the right technology can meet and exceed customer expectations.

Nigel Stroud

Information Management Lead, Heathrow

Nigel has worked for 28 years in the construction industry, Implementing Digital Asset Information strategies and evangelising in efficient data workflows. His focus is always on a single source of data, providing decision making capabilities for a diverse customer base. As a practitioner, he has adopted a 'keep it real' approach enabling usable and sustainable solutions to be adopted.



He was privileged to have worked for the duration of Heathrow's Terminal 5 and Terminal 2 programmes, setting up and on-going management of the Common Data Environment. He is currently setting the company wide Asset Information Strategy and leading Information Management for the expansion programme.

Terminal 5 (2000 – 2008)



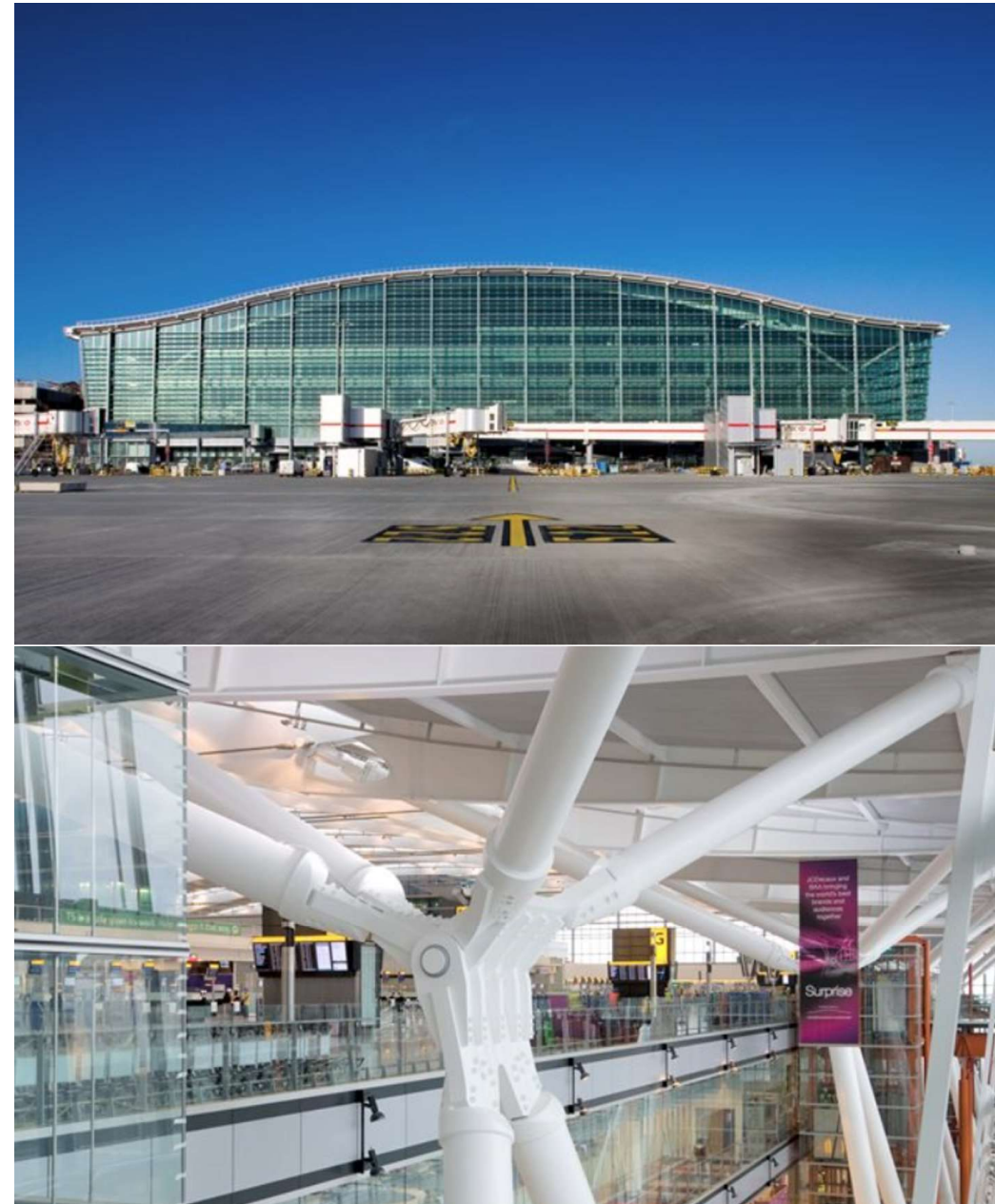
Programme Background

- 30 million passengers a year
- 18 projects
- Provide additional terminal and aircraft parking capacity
- £4.2bn investment
- Longest public enquiry
- T5 Agreement – contracting model / integrated teams



Challenges

- No unified classification of asset information across the enterprise
- Project by project strategies
- No centralised repository - Tunnel collapse due to poor information
- Workflows and information processes not contracted



What we wanted to achieve

- Define classification to deliver asset information and allow operational use
- Create concepts for a CDE
- Enterprise systems
- Use colocation to educate and control



Why Excitech

- Leading UK Autodesk partner
- Supporting key members of the supply chain
- Technical led role
- Autodesk / Microstation / Architectural Desktop / CAD Duct
- GDS to AutoCAD conversion



What we did

- Production enabling
- Processes and methodologies
- On boarding process
- Efficiencies
- Development
- System integration
- Support



What we achieved

- Production enabling
- Processes and methodologies
- On boarding process
- Efficiencies
- Development
- System integration
- Support
- Common language
- On-boarding process
- BS 1192:2007



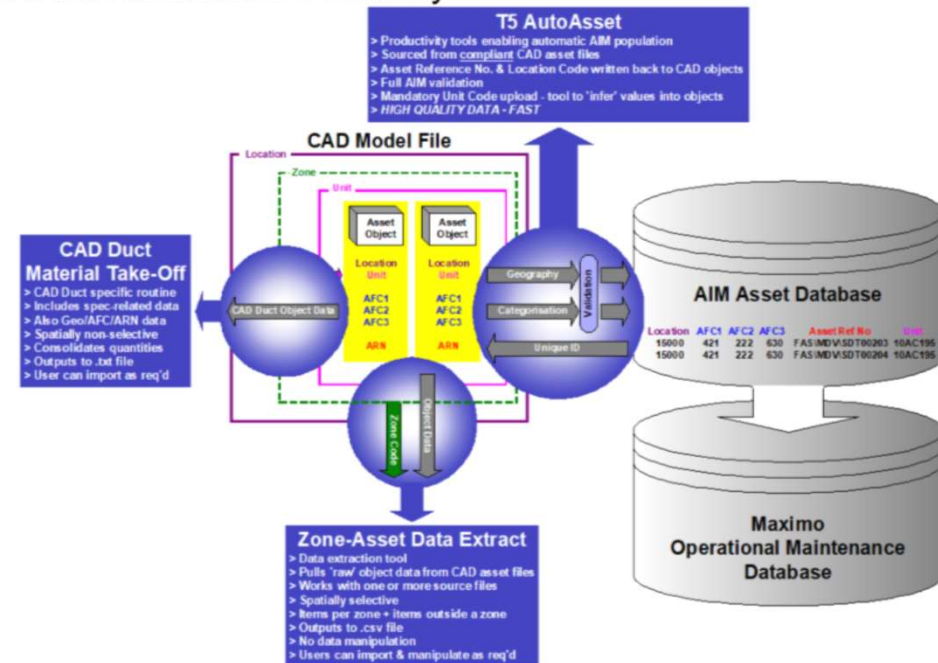
Asset Function Group: 100 Series Airfield Services									
BAA Enterprise Common Codes		Independent Function (AFC1)	Dependent Next Level (AFC2)	Dependent Next Level (AFC3)	AFC Shell Required	Level to which records populated		AFC2/3 Level Guidance Comments	Asset Reference Number - Drawing notation for assets
Minor Type	AFC	AFC	AFC	System					
	1	2	3						

What we achieved

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T5 IT Services

T5 Asset Data Automation Summary



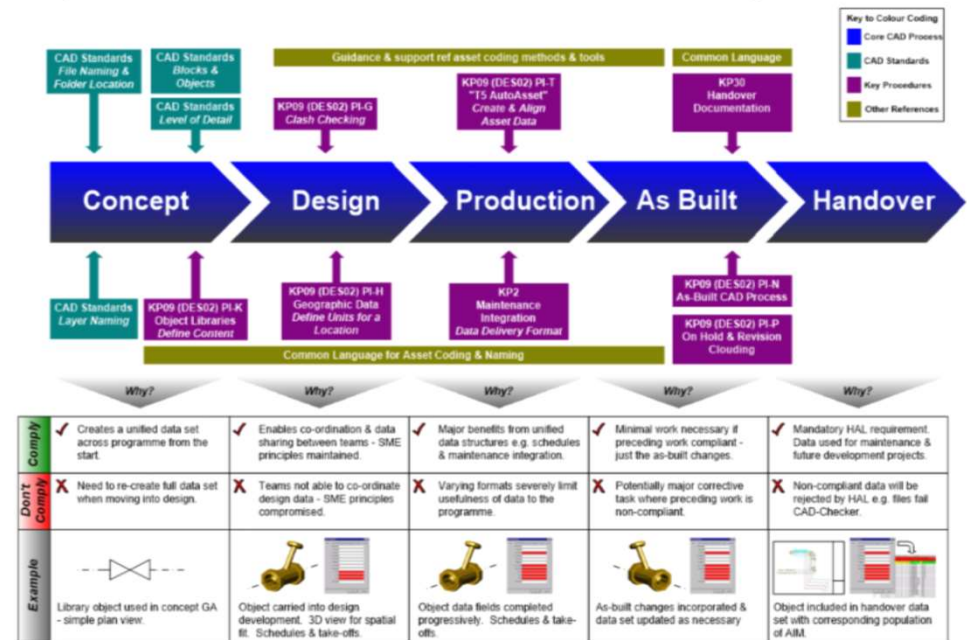
it supports the Programme

What we achieved

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CAD Compliance: Process Flow & References for Graphic File Production



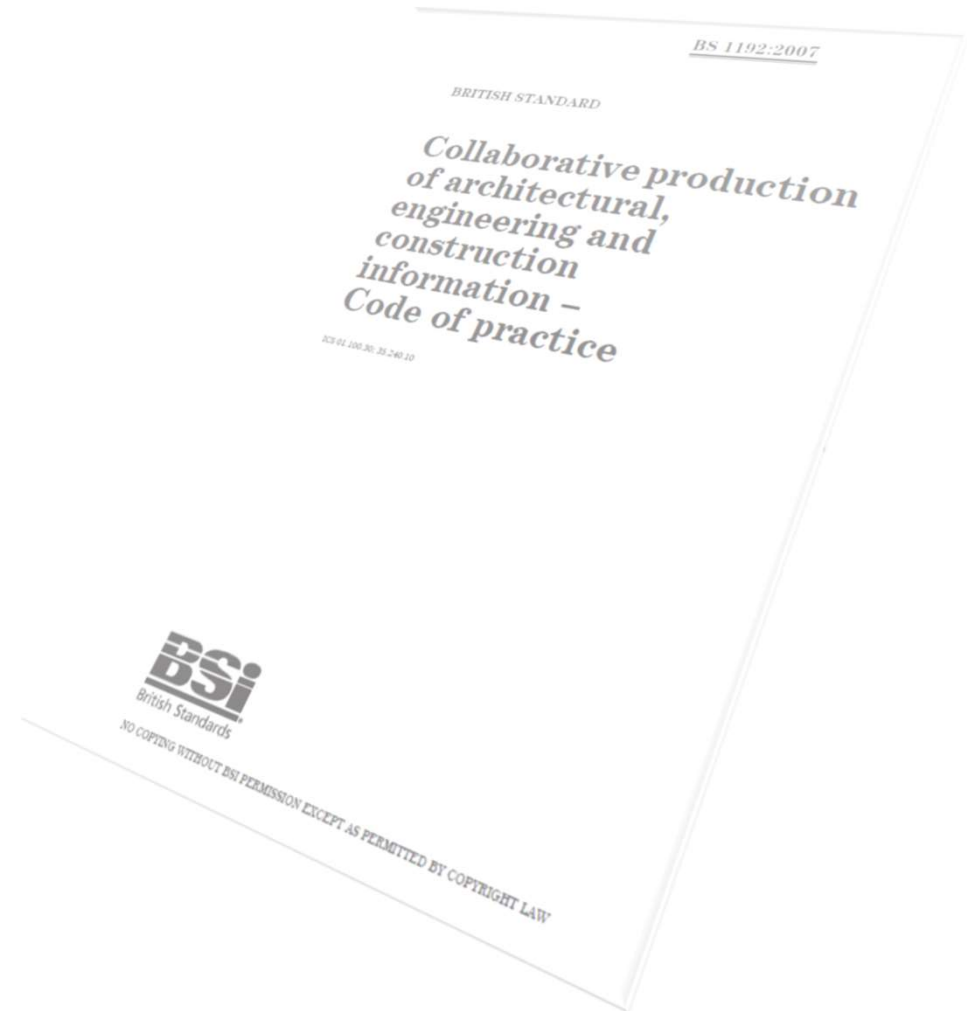
T5-PG-PS-IS-XXX-SE-00049 Version 4.0 R2 27/07/2005

Produced by T5 IT Production Support Team

it supports the Programme

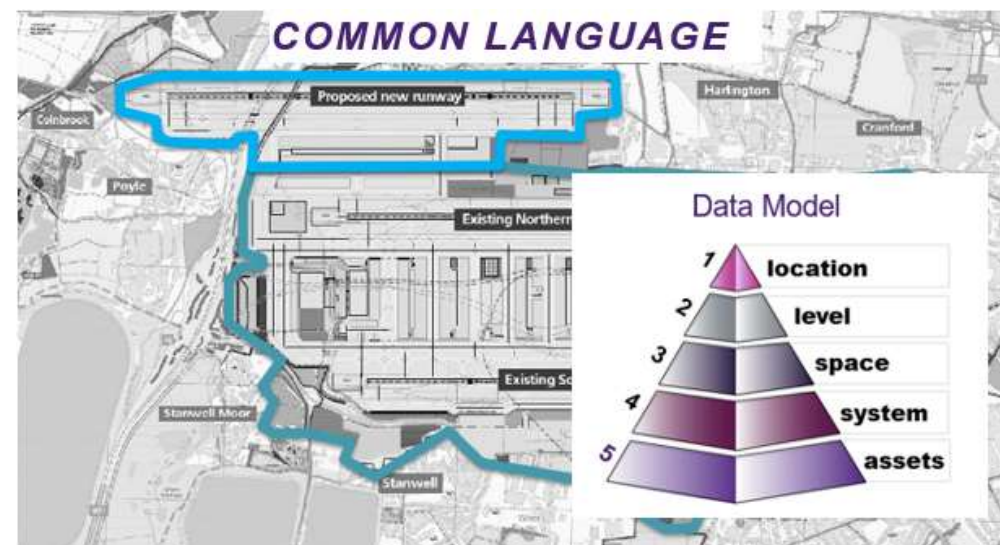
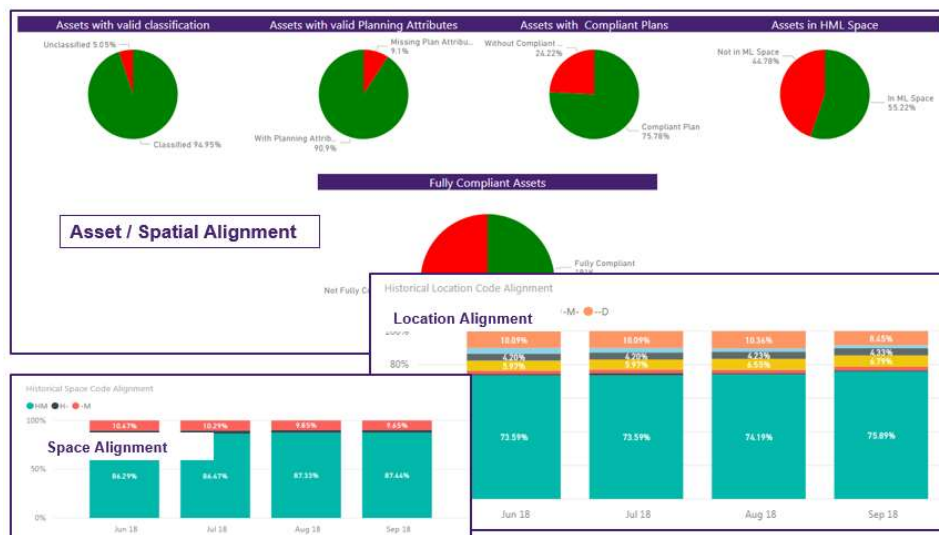
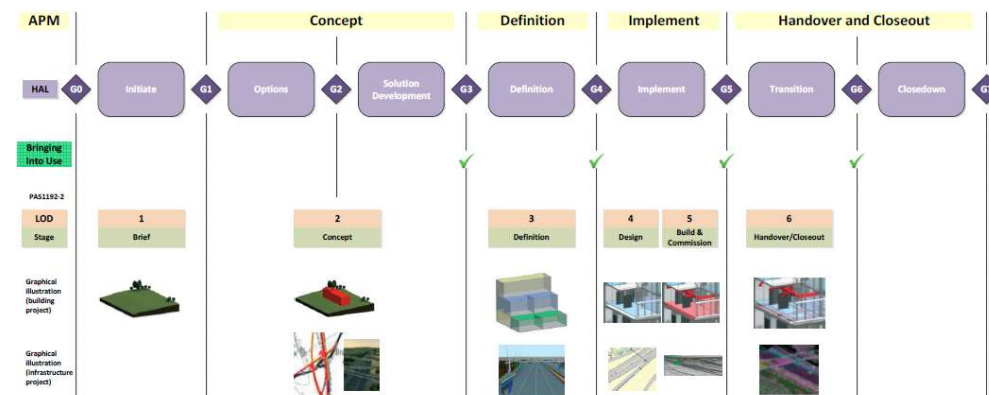
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Business as Usual (2009 – 2017)





Connected Data

Work Order Tracking - Microsoft Internet Explorer provided by The Hub

Work Order Tracking

Find: Select Action

List Work Order Plans Assignments Related Records Actuals Safety Plan Log Failure Reporting Specifications Service Address Map

Work Order: WO-1160286 T4 - GRD FLR -AIRSD-17TH ED ROUTINE INSP -DB0610 Click for Heathrow Map Live Attachments

Location: 14401-00-0743 T4 Main Building - Level 00 - 1004 Site: HAL Status: CLOSE

Asset: 88061861 T4-DB0610-(2C-N-B)-GRD FL-GRD FL STAND 404 -12 TPN Class: WORKORDER Status Date: 22/10/14 18:16

Parent WO: Report Downtime Inherit Status Changes? Accepts Charges? Is Task? Method Statement Read? Risk Assessment Read? Field Risk Assessment Done?

Classification: Maximo OL Account: 01-14-T0406-6 Failure Class: LV Problem Code: Capitalised? Method Statement Read? Risk Assessment Read? Field Risk Assessment Done?

X Co-Ordinates: Y Co-Ordinates: Customer Reported Out of Service? Estimated Total Cost: 0.00

Changed By: INDERPAL_KANG@BAA.COM Changed Date: 22/10/14 18:31

Responsibility

Reported By: EMMA-LHR_RUSSELL@BAA.COM Emma-LHR Russell Supervisor: Lead: Work Group: C-MIT Lead (Person):

Reported Date: 28/09/14 07:15 On Behalf Of: Phone:

Job Details

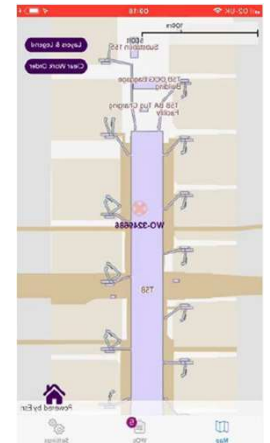
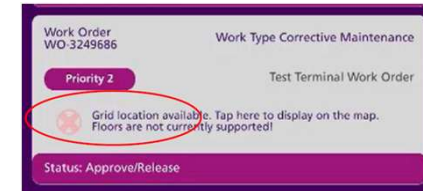
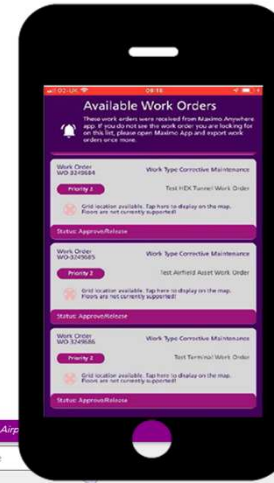
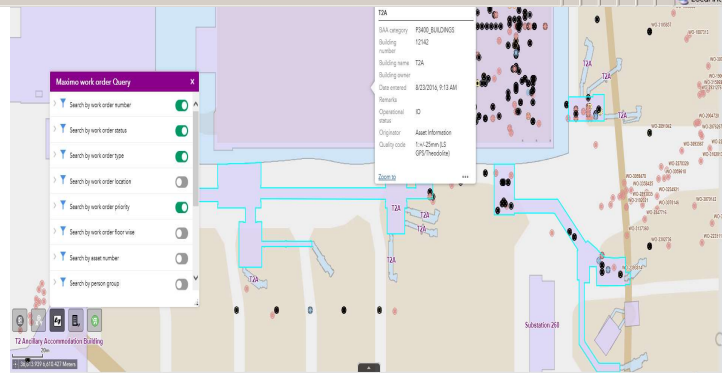
Job Plan: Job Plan Revision #: PM:

Asset Details

In Service? Warranties Exist? SLA Applied?

Priority

AssetLocation Priority: 3 Priority: 3 Priority Justification:



Heathrow Map Live



5 year strategy

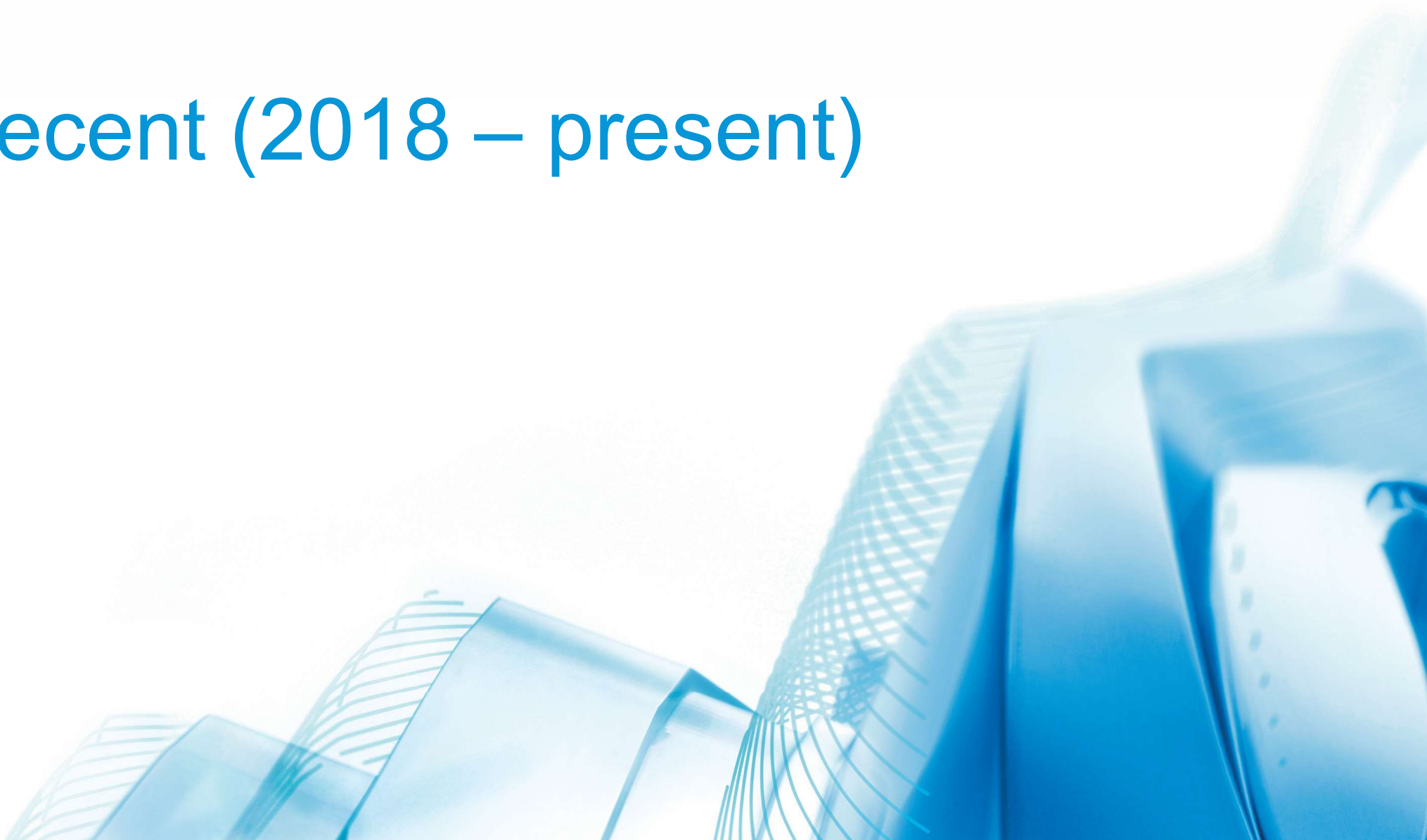


BETTER STARTS HERE



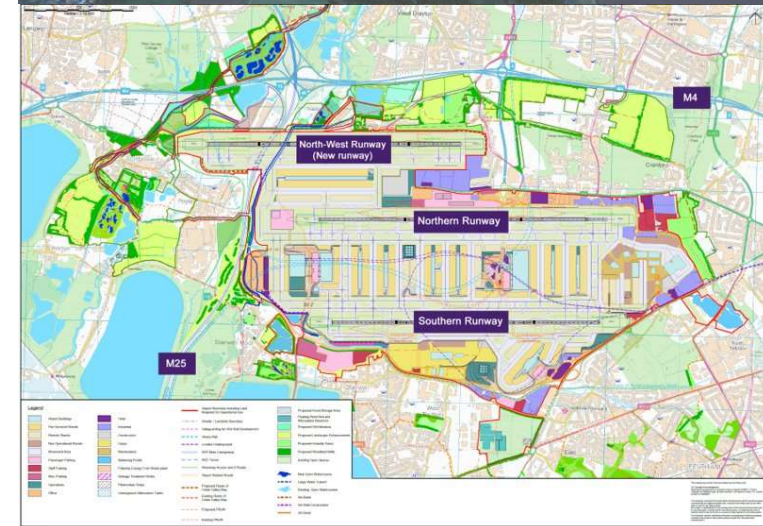
John

Recent (2018 – present)



Heathrow Expansion

- From 80 million to over 130 million Passengers
- From 473,00 to 740,000 flights a year
- Rail capacity will treble
- 1.70 million metric tonnes of freight will double
- New runway



Timely Challenge

Current processes and Systems

Gateway driven
Manual, Disconnected data
Transactional file based
Unresponsive to change

End of life systems



Documentum
Heathrow Map Live

Re-survey & rework



Supply Chain



Knowledge and Capability

Labour Intensive



Change Control



Complex infrastructure



Information Silos

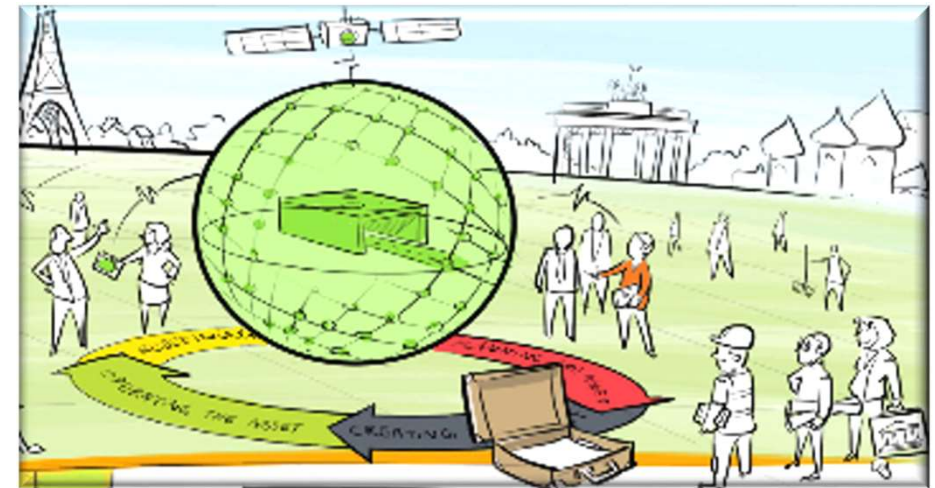


Risks

Scalability (expansion)
Data quality
Delayed information delivery
Lack of trust in information
Buying information that we already have

What we wanted to achieve

- An “Office 365” type environment for managing our asset information
- Lead not Lag in a world that is fast moving in this direction
- Next generation ready, interacting with information as we do socially
- Be in control of information security
- Eliminate file based transactional exchange
- Provide a collaborate environment where a single source of asset information can be developed through out its entire lifecycle
- Create a foundation for future innovation
- Automated information delivery allowing us to focus on assuring completeness and quality

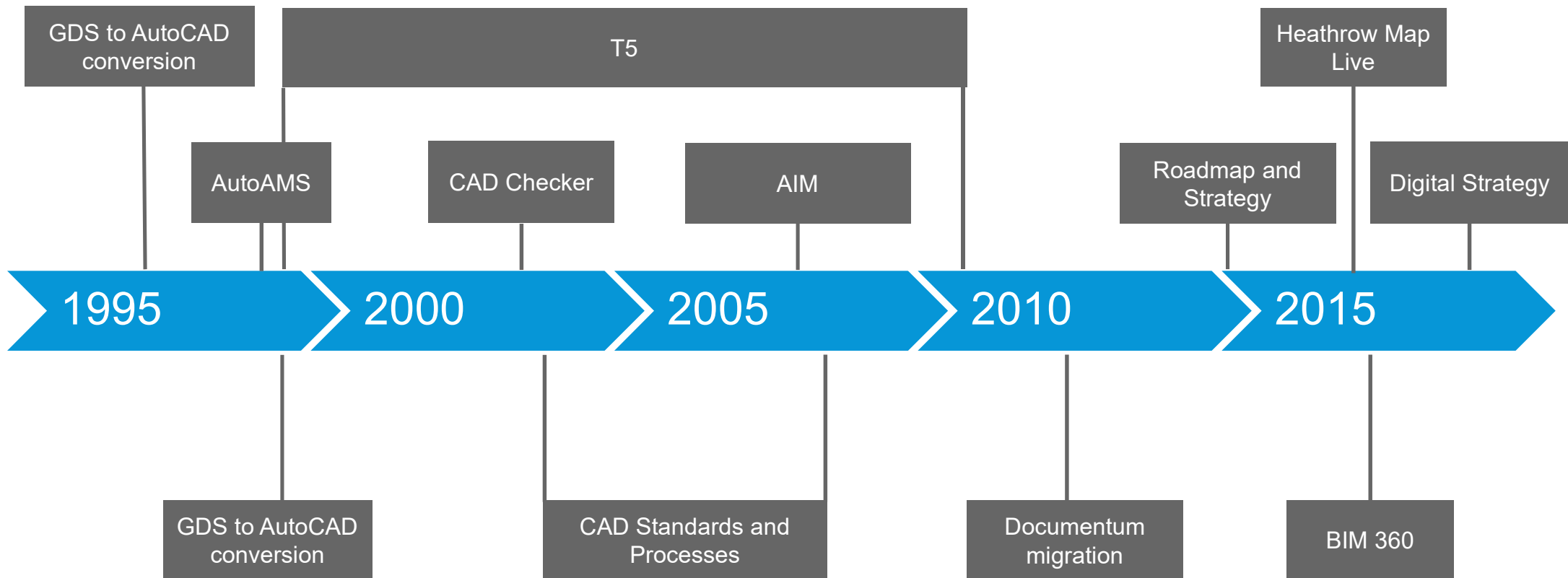


RFP

- Capability
- Know suppliers
- Not a single solution
- Define digital asset information backbone



Why Excitech



RFP response

Request for Proposal Common Data Environment (CDE)

(Heathrow eSourcing Ref: RFP [REDACTED])

Date: 8 June 2018

Summary	
Description	Heathrow is seeking to procure a common data environment (CDE). Whilst the preference is for a single contracting entity, Heathrow reserves the right to award contracts to multiple participant bidders in order to achieve the level of functional capability required from the CDE. Participants can find detailed information on the requirement within Section 2 herein.
Contract Duration	3x2x2
Responses Submission Date	2 July 11am
Minimum participation criteria (Y/N)	No. However, participants should note the requirement to reach an agreement with Heathrow regarding contract terms, meeting obligations regarding sustainability and satisfying evolving requirements for IT security.
Heathrow Contact	[REDACTED]

Prepared by: [REDACTED]
Status: [REDACTED]
Version: Commercial in Confidence
v1.0

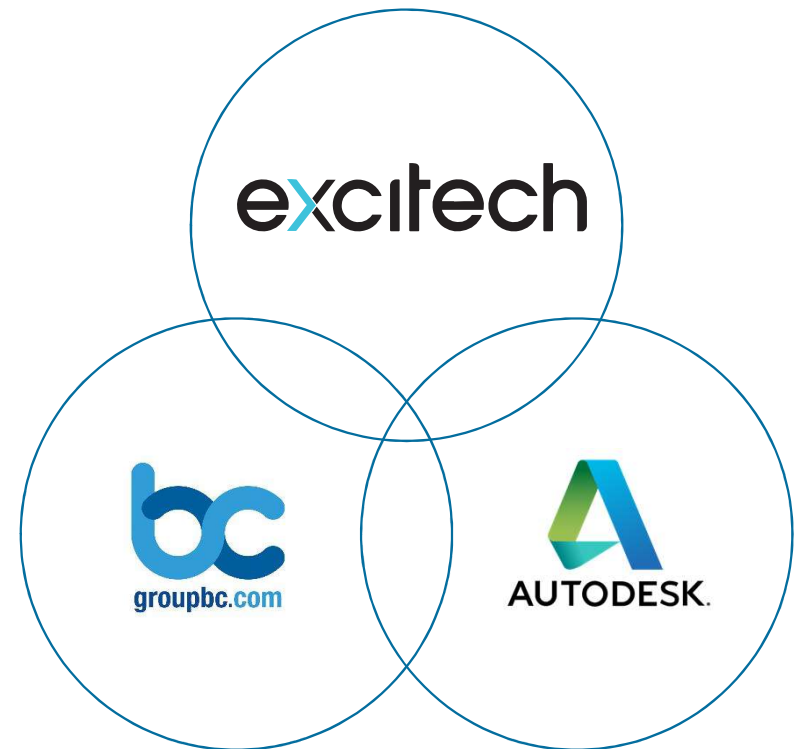
Heathrow
Making every journey better

RFP response



RFP response

- No silver bullet to solve owner operator challenges
- Outcome driven assessment
- Challenging
- Multi-stage process
- Partnerships

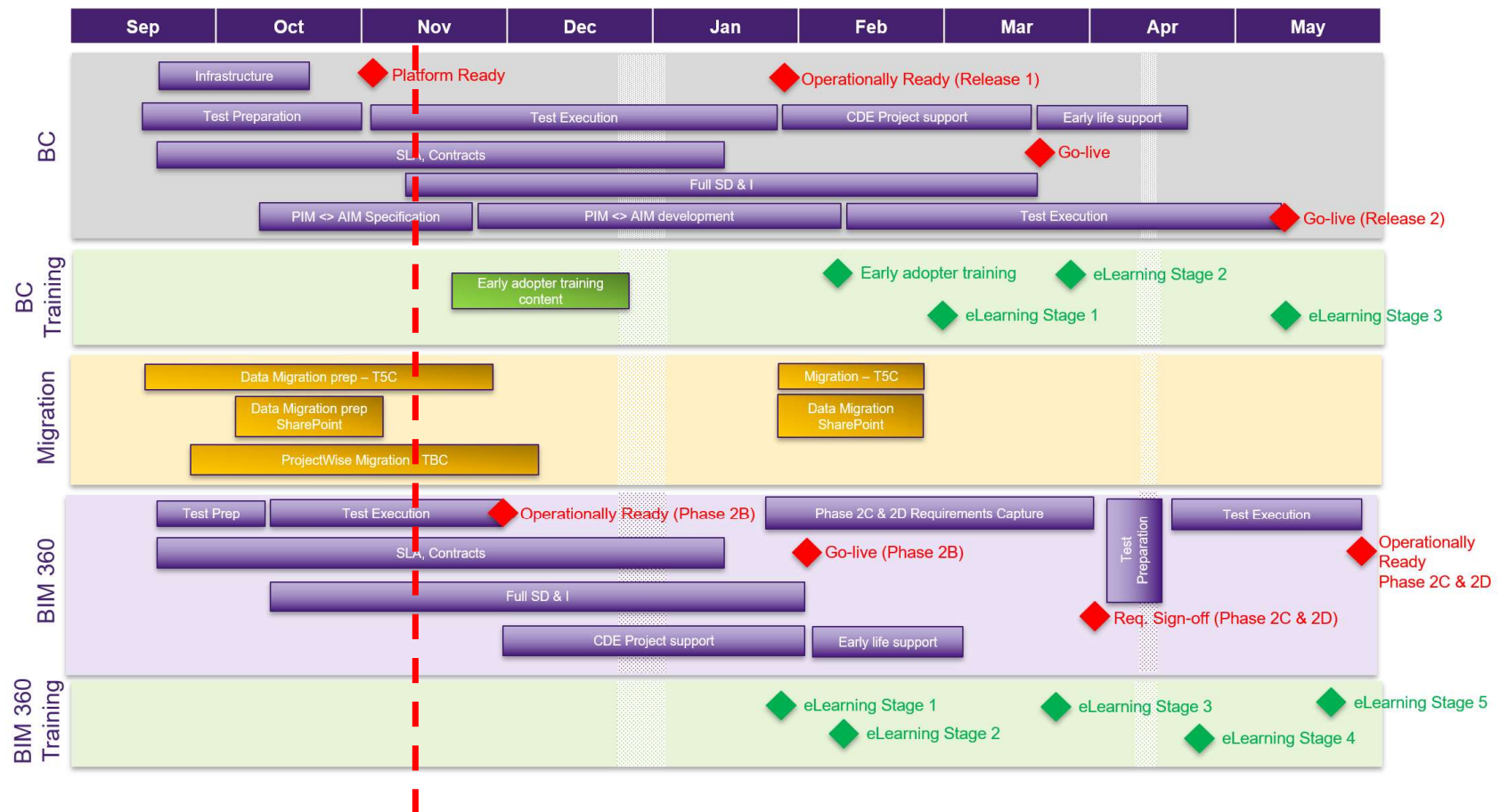


RFP response

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What we're doing

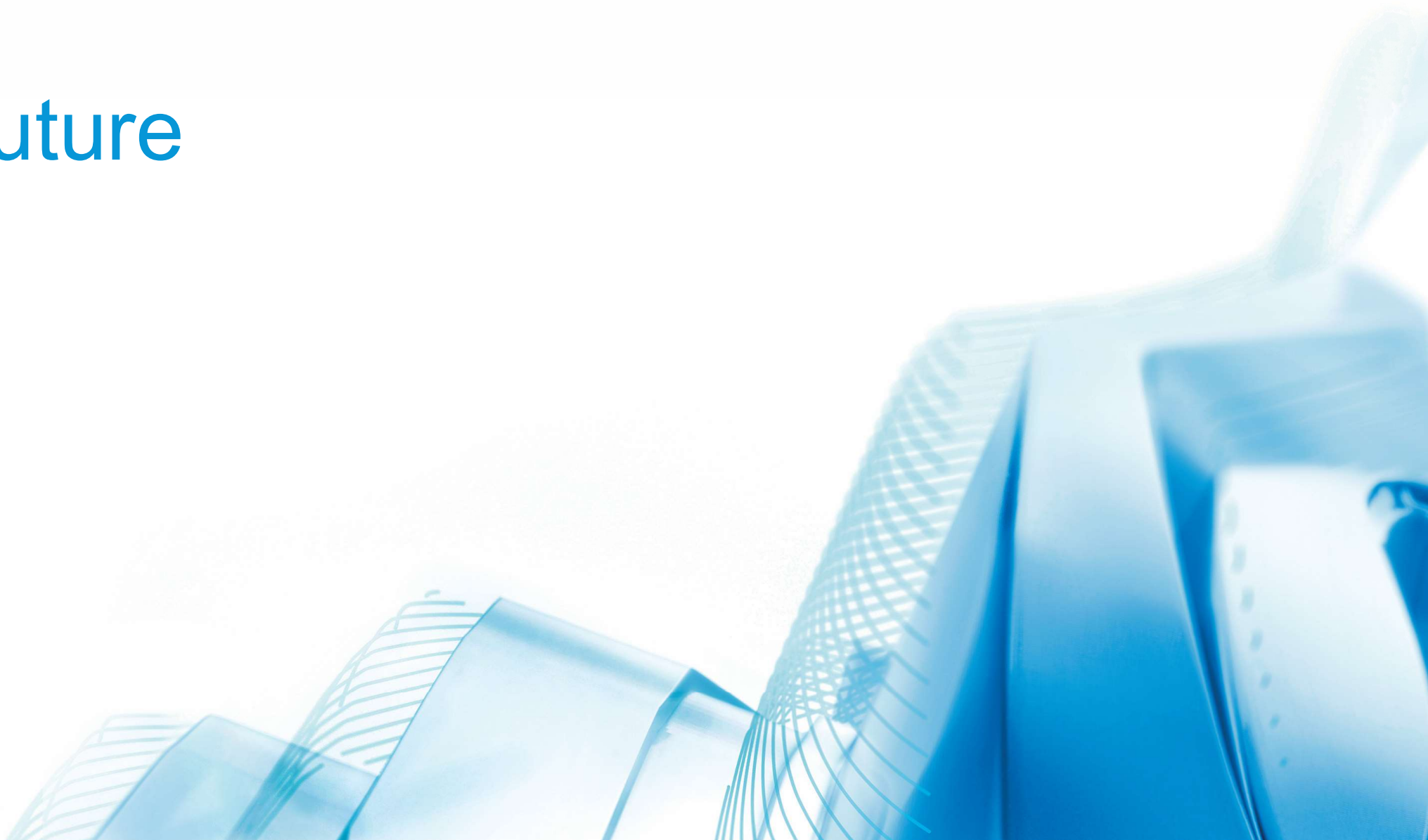


What we've learned

- Cloud
- Scope
- Requirements
- Governance

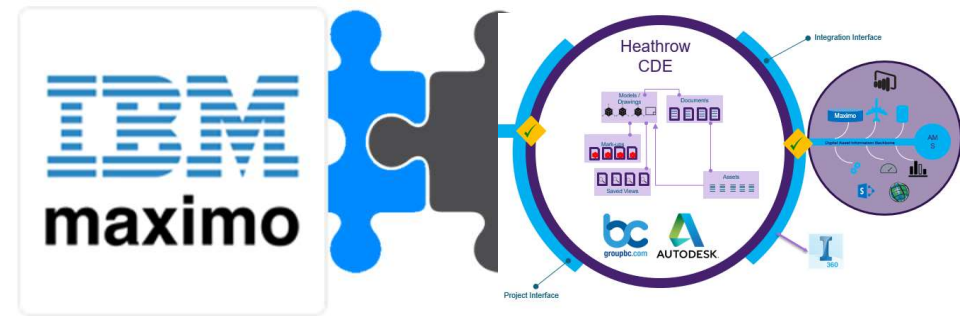


Future



Digital Ecosystem

- Business Processes
- Automate processes
- Build integrations with other business systems



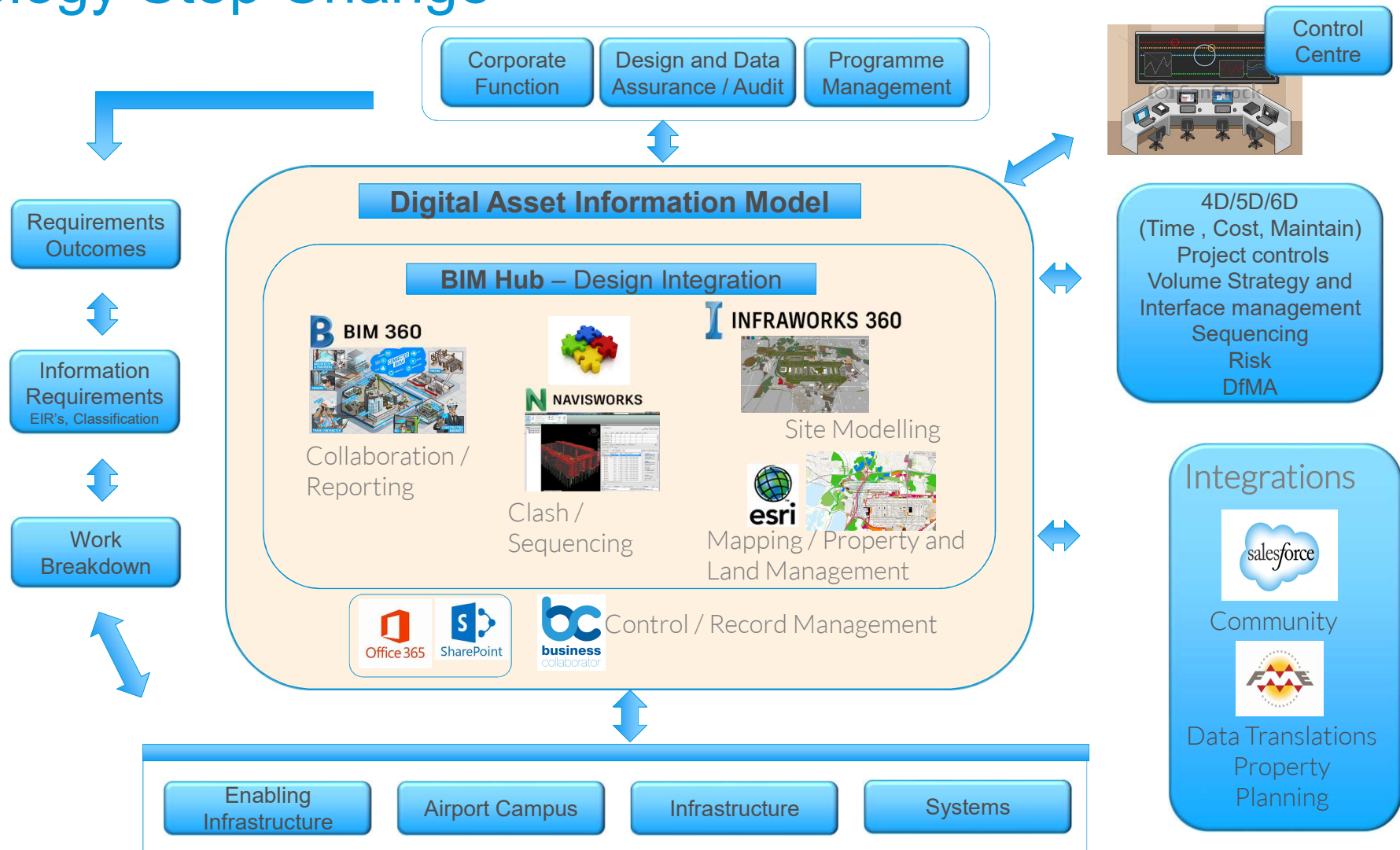
AUTODESK®
FORGE





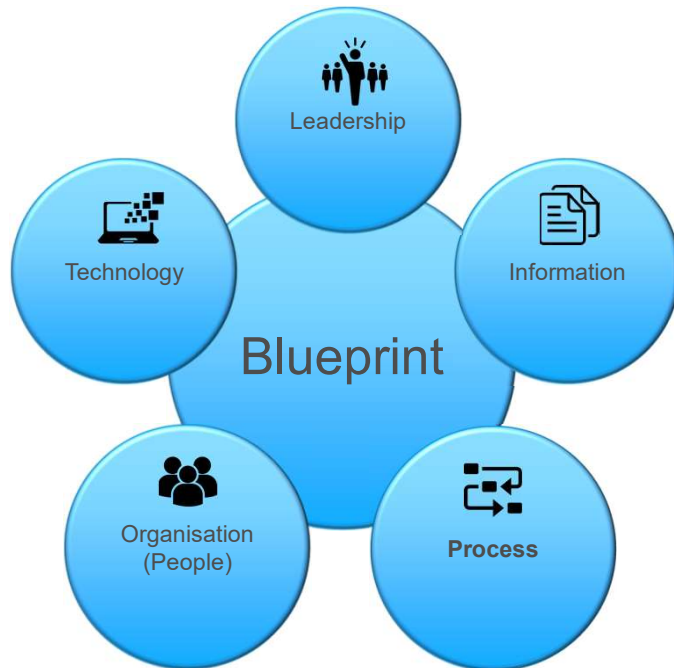
CONNECTED

Technology Step Change



Integrators, Main Contractors, Technical Contractors, Utilities, Suppliers, DFMA Platform, Manufacturers, Assemblers, Sub-con's, 3rd Parties, Statutory Undertakers, Operators, etc

Digital Vision and Blueprint



Vision

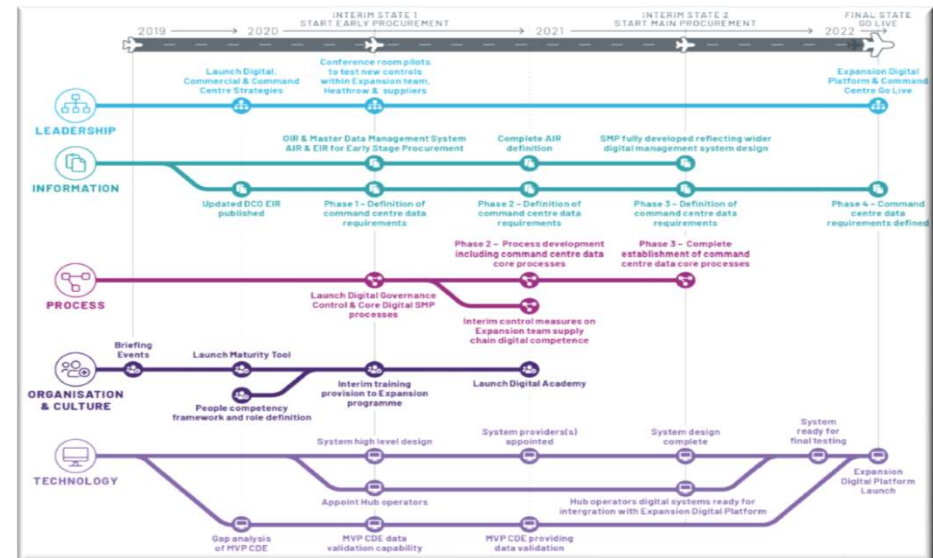
A digital ecosystem which liberates value, unlocks potential and enables exceptional delivery

Mission

To leverage maximum value throughout the life of the Heathrow Expansion programme and beyond through a bold, ambitious, inclusive and innovative Digital Strategy

Digital Road Map

- CDE connection to our manufacturing hubs
- Digital plan of works
- Command centre
- Digital academy
- Governance and control



Questions



Thank You....



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Information Management Lead, Heathrow

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