
Challenge
Advisory
Efficiency from Digital Innovation
DIGITAL
TWINS
20th November 2019
London | United Kingdom

DIGITAL TWINS

Challenge Advisory is delighted to announce the launch of our Digital Twin Workshop taking place in London, November 2019.

This workshop is designed to support the growth and adoption of digital twin technology within: Healthcare, Manufacturing, Infrastructure and Energy, by discussing its benefits and latest innovations along with the industry's adopters and innovators.

Created for Healthcare, Manufacturing, Infrastructure and Energy sectors, Challenge Advisory is partnering with industry, government and academia to push the agenda.

They will gather to debate the latest trends and developments for digital twin technology along with the key challenges facing future innovation and investment.

So join the debate and network with key technology adopters, stakeholders, experimenters, market movers and everyone else involved in the value chain.

WORLD CLASS ORGANISATIONS |
Developing a Digital Supply Chain

DRIVING BUSINESS | With Digital Twins

Although companies are beginning to realise the significant value of digital twins within business, a concern that has been raised by those beginning to embrace digitisation is whether the benefits outweigh the investment in creation.

Businesses should consider the value that digital twins offer to issues of strategic performance and marketplace. Business value from the digital twin has been driven from speed of production, to the improved operations and reduced defects of the product itself. Digital twins are enabling companies to solve physical issues efficiently by early detection. This will ultimately lead to increased sales and satisfied customers.

Conclusively, digital twins will offer the opportunity to drive value and change how a company fundamentally does business. Digital twins could be crucial in addressing many other key performance and efficiency metrics for industries such as manufacturing.

How Can Digital Twins Benefit Your Enterprise?

Enable data-driven decisions | The construction of a digital representation provides an accurate perspective of how your devices operate in real time. The data gathered from this will enable companies to make better decisions. For example, if the equipment is lagging in manufacturing, it is possible to upgrade or repair the machinery before it impacts business efficiency.

Automated processes | Digital twins provide the connectivity needed to better the business process. By combining real-time data gathered with previous historical data and machine learning capabilities, the digital twin allows enterprise to predict problems and solve them automatically. Digital twins can anticipate issues and prevent them before they occur, avoiding service interruption or increased downtime.

Collaboration boost | Creating a network for digital twins makes sharing data with colleagues, supply chain partners and customers more accessible. With this insight, partners and customers can collaborate with your business to improve the processes and the products.

Areas such as R&D, finance, sales and marketing benefit from increased visibility, allowing everyone to be on the same page to ensure that the product is properly designed and commercially viable. By monitoring customer interaction with products, businesses can remove redundant features and develop higher quality products.

New business models | Digital twins will make adaption to industry-altering disruption easier, providing the opportunity to regenerate existing business models and generate increased revenue. Exploring innovative business models is a simple way to remain profitable during an age of digital transformation.

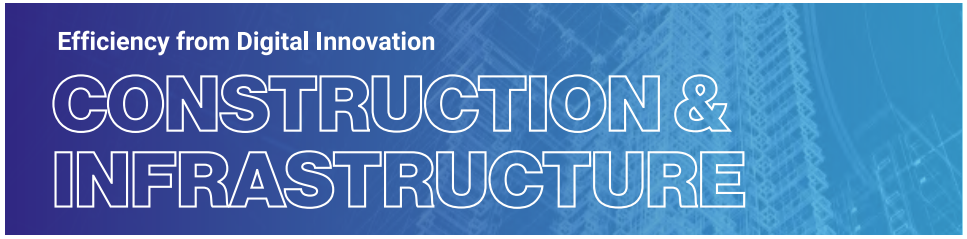
DIGITAL TWIN | The 7 Aspects

STREAMS | Objectives

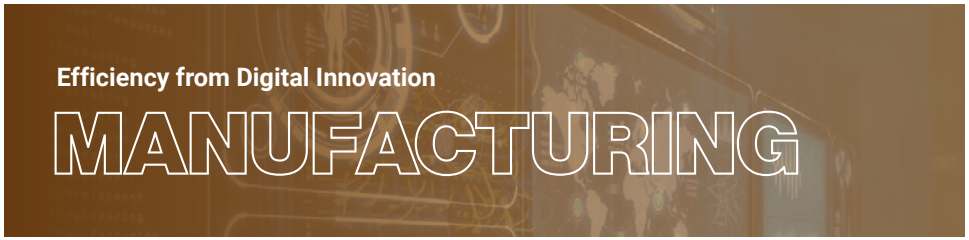
- **What does creating the foundation for predictive maintenance look like?**
- **What can be done to remain competitive in a dynamic industry landscape, and through increasing environmental regulations?**
- **How can a Digital Twin provide the lowest total cost of ownership? What is needed to analyse complex parts and large assemblies?**
- **How necessary is Augmented Reality for the Oil and Gas industry?**
- **What measures need to be adopted to help facilitate collaboration throughout the enterprise and the supply chain?**
- **What can be done to leverage Digital Twins across the process life-cycle?**
- **How can Digital Twins maximise employee productivity and efficiency through operational insight and automation, whilst ensuring safety and compliance?**

- **What will personalized healthcare as a transformation journey look like?**
- **A digital twin will be a health record of a future patient what legislation needs to be discussed and adopted for this to happen?**
- **Patient is the data-donor, what security needs to be in place?**
- **Identify what we can expect from advanced analytics**
- **What steps are missing to enable a digital twin of a patient**
- **When ordering new technologies how will digital twin impact on the decision?**
- **What can be done to push the digital twin when commissioning a new build and what does it need to achieve to be relevant?**

*Subject to change as the agenda evolves



- **Automated Progress Monitoring**
- **Is it BIM vs Digital Twin or will DT compliment and enhance BIM?**
- **As-Built vs As-Designed Models**
- **Resource Planning and Logistics Safety Monitoring**
- **Quality Assessment**
- **Optimisation of Equipment Usage Monitoring and Tracking of Workers**
- **Challenges in Established Cities**
- **Technology vs Roi**
- **What can be done to push the digital twin when commissioning a new build and what does it need to achieve to be relevant?**



- **How can Digital Twin enhance current PLM?**
- **Embedded digital twin**
- **A manufacturing process example: Case Study**
- **Designing the DT processes and information required in the PLC**
- **Real-time bidirectional integration/connectivity**
- **Digital Twin Value to the organisation**
- **Development of a full-life-cycle digital twin**
- **3D modeling and Simulation**

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TECHNOLOGY | Demonstrations

Cyber Security

Data

Simulation

Software

Augmented Reality

Platform

Cloud

WHAT TO EXPECT | What is Happening

Round Tables

Technology Demos

Breakfast Meetings

Industry Workshops

Keynote Speeches

Networking Sessions

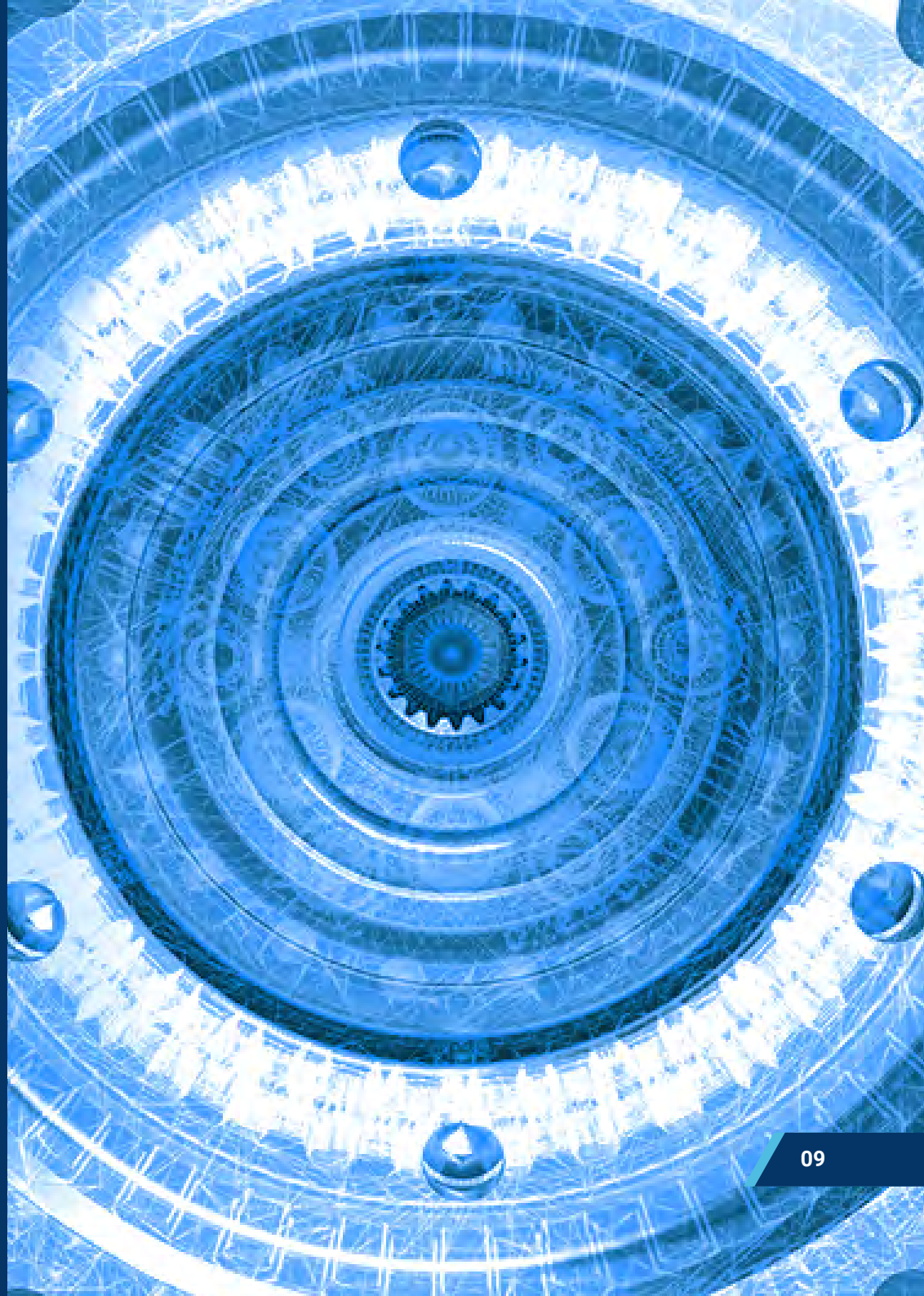
1 on 1 Meetings

Conference

AUDIENCE

Who will be There?

- CEO’s
- CIO’s
- Head of Digital
- COO’s
- Head of Transformation
- Heads of Engineering
- Heads of Supply Chain



KEYNOTE SPEAKERS

Stephen Jeffery
Chief Technical Officer

Nicola Rosa
Lead at Accenture Digital

Dr. Ashwani Dev
Digital Lead

Anton Ruddenklau
Head of Digital & Innovation

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DIGITAL TWINS | Life Cycle

Digital Twins

Product

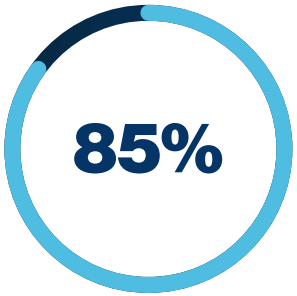
Digital Twins

Production

Digital Twins

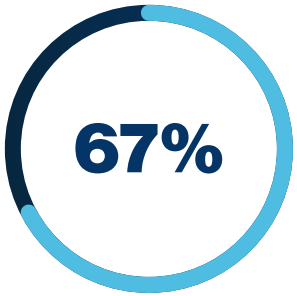
Performance

Which business systems could you see a digital twin either replacing or complimenting?

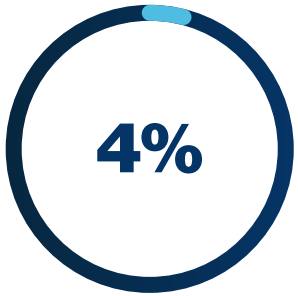


Monitoring
(real time display & reporting of information)

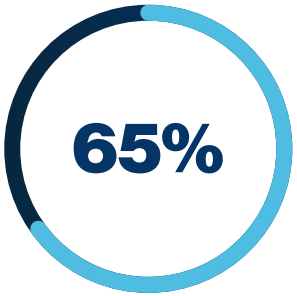
Trend Analysis from Historical Data



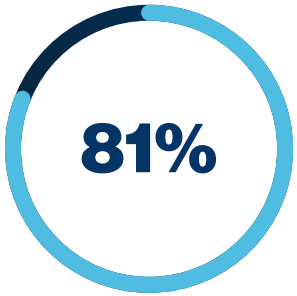
Prescriptive Maintenance



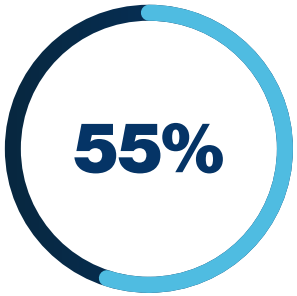
Other
(please specify)



Interacting
(remotely interacting with a system)



Prediction
(Simple model or Discrete Event Simulation - DES)



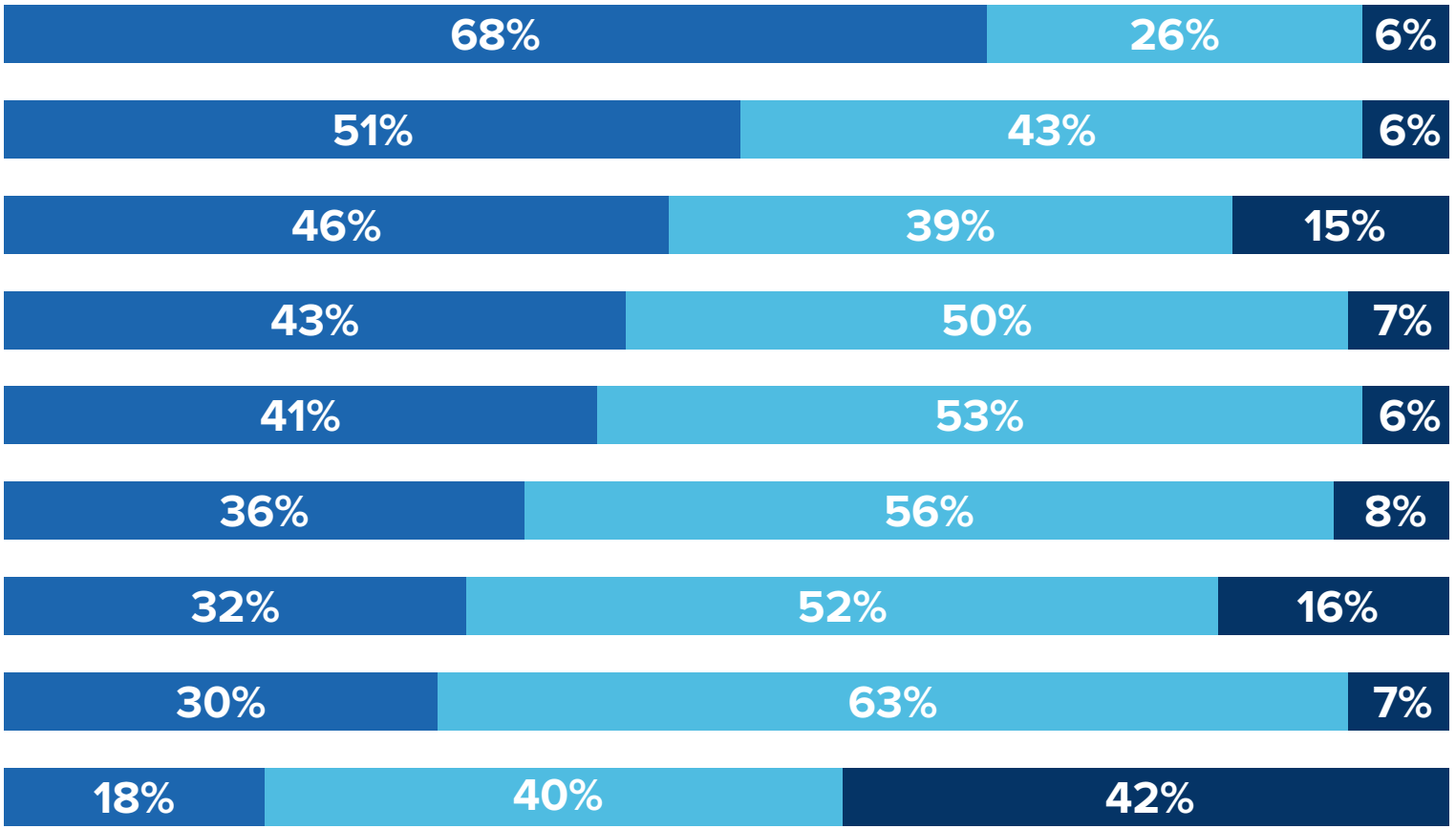
Next Generation Product Design

Answers to 'Other':

- Training
- Condition-based maintenance
- Predictive maintenance
- Inspection

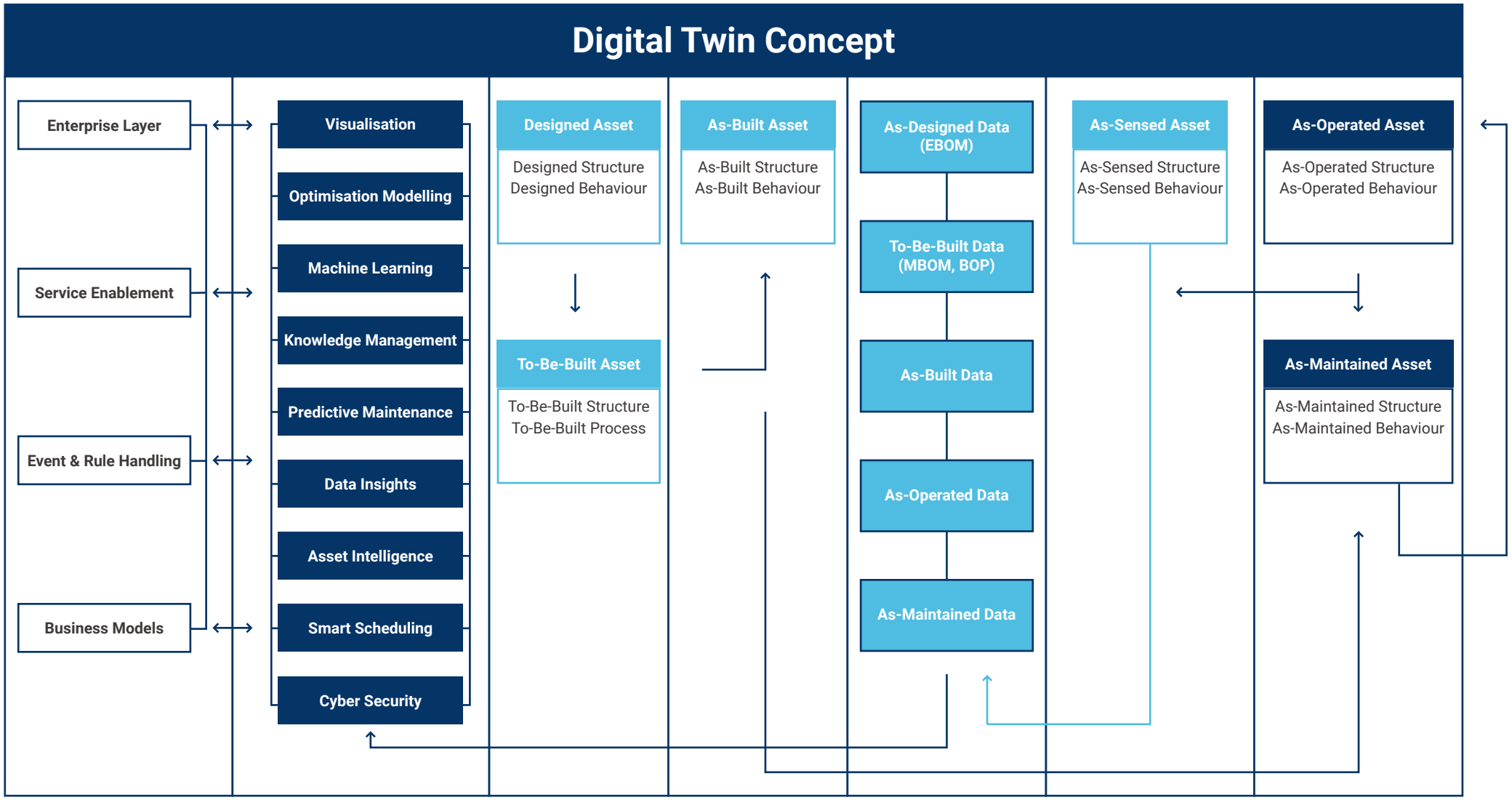
Source: Catapult

What components do you think are necessary for a digital twin?



Source: Catapult

WHAT TO EXPECT | Topics at the Workshop



GET IN TOUCH

We'd Love to Hear From You

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