

Digital Twins Assurance and Testing

A KPMG Service for G-Cloud 15



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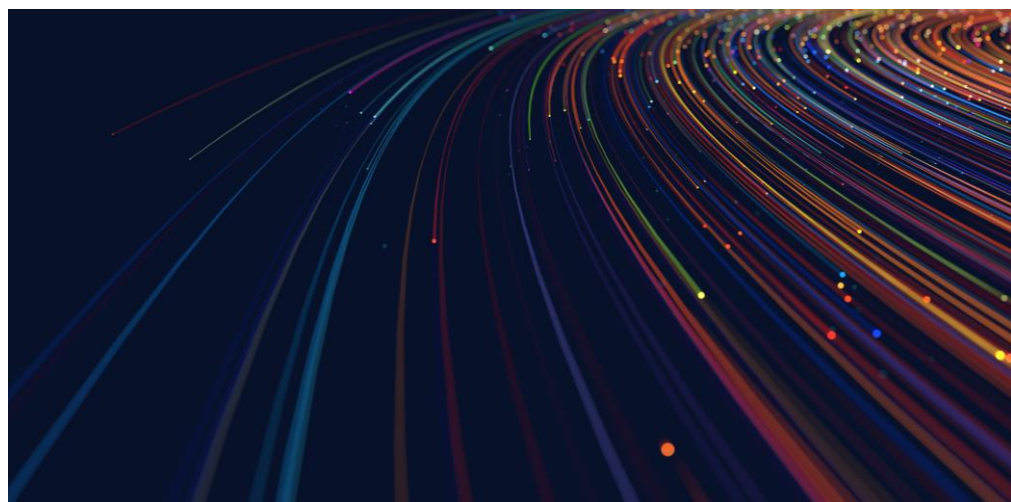


Service Description:

Digital Twins are changing the way we work and interact with our assets. As a virtual representation of a physical system or asset it is enabling opportunities in simulation, predictive analytics, monitoring, planning and energy management.

Digital twins can improve efficiency, productivity, and safety by providing timely insights into the performance of assets and processes.

KPMG's Digital Twin Assurance and Testing Service provides end-to-end consulting for asset-intensive organizations seeking to leverage the power of digital twin technologies to maintain compliant processes, future-proof their strategies, reduce risk, and ensure safe, optimized operations.



What are the benefits of KPMG Digital Twin Assurance and Testing service?

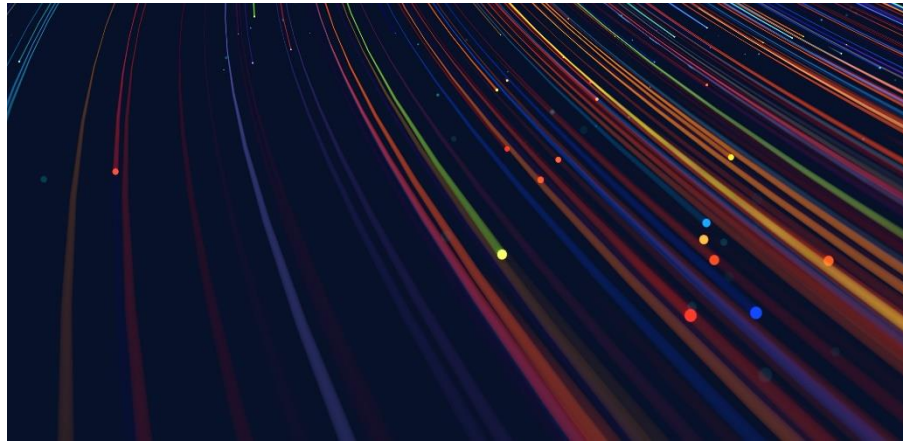
- **Deep organisation knowledge:** We provide enterprise-ready accelerators aligned with KPMG's best practices and insights to fulfil your organization's unique needs and objectives.
- **Cutting edge technology:** Leverage cutting-edge tools and methodologies to validate processes, simulate scenarios, identify risks, and ensure operations continuously meet required standard
- **Global reach:** Gain access to our global network of digital twin experts spearheading digital twin initiatives worldwide.
- **Alliance partners:** We bring a vast ecosystem of digital twin partners to quickly identify the right solution and mobilise resources efficiently.



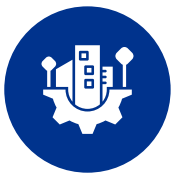
Our service features

- **Strategy Development:** Ability to test, identify and develop strategies that unlock value to customers and stakeholders through what if scenarios without causing operational risk
- **Performance and Compliance monitoring:** Processes to assess operational adherence, identify risks, and demonstrate regulatory conformity.
- **Data Assurance:** Validate the quality and reliability of incoming data. Services also support drift detection and identification of anomalous behaviours.
- **ESG Reporting:** Validate environmental and sustainability performance and produce reliable evidence for reporting obligations and certifications.
- **Infrastructure Readiness Testing:** Services to ensure teams, processes, and systems are ready for new operations as well as validate safety risks

KPMG Approach



Our approach takes a strategic perspective, combining the best of infrastructure advisory with knowledge of the technology landscape and a focus on outcomes to identify solutions that drive sustainable value



Infrastructure

Deep infrastructure expertise across multiple sectors...

- Our global infrastructure network keeps us at the forefront of Infrastructure Advisory good practice
- We work with large, complex asset-intensive organisations across multiple sectors and asset classes
- We understand what it takes to go beyond the ISO standards, and where there is value in doing so

Technology

...plus data, analytics and digital capabilities...

- Helping you navigate the complex technology and systems landscape
- Market leading digital and data analytics approaches
- Partnerships and accelerators for all key systems and vendors

People

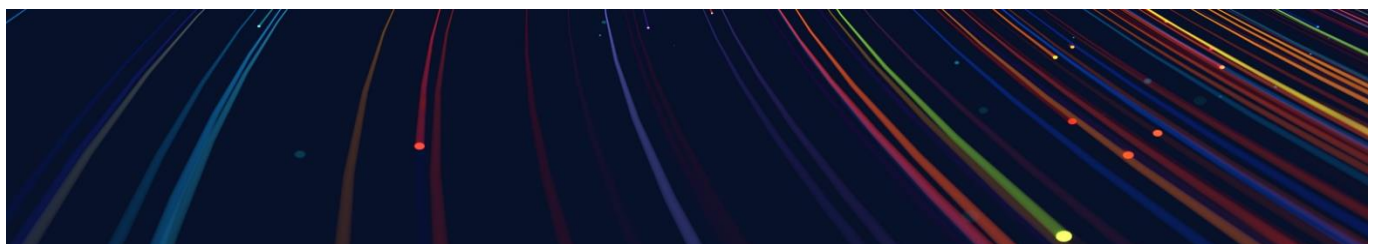
...with a focus on people...

- Delivering sustainable change by focusing on your people and embedding a digitally-driven approach to infrastructure management
- Bringing experience through certified asset management, operations and digital specialists, who have made this happen in highly regulated industries.
- A global presence across 150 countries, with resources and expertise to serve clients around the world.

Value

... to deliver better outcomes and organisational impact

- Building the case for change and securing stakeholder sponsorship
- Improving productivity, organisational effectiveness and efficiency and the channels to 'cash out' and unlock value
- Managing and delivering change to deliver long-term organisational transformation



Our work to date

KPMG's powerful combination of leading business transformation expertise and End to End Digital Twin deployment enabling clients to drive increasingly valuable outcomes.



We partnered with the **Centre for Digital Built Britain** to create a **Digital Twin (DT) Toolkit** to support organisation on their digital journey. The Toolkit comprises of a use case framework, case studies, business case template and roadmap; providing the reader with a basis for defining their use cases, and whether a DT can (and should) help achieve their business drivers. Working alongside a consortium of solution providers and consultants, our role in developing the Toolkit has enabled us to **leverage existing and new relationships to gain a broad and deep understanding of DTs, and shape the industry's digital transformation.**



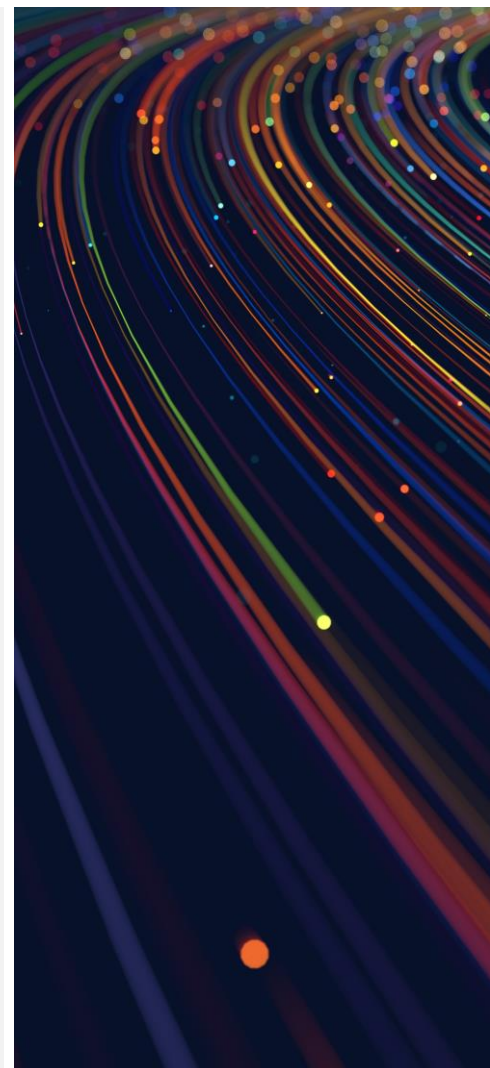
We supported a **defence client** in the creation of their synthetics business case by identifying and quantifying the opportunities that digital twins, modelling and simulations provides to existing revenue streams, new revenue streams and cost efficiencies. We applied KPMG knowledge and public information to their baseline to identify the benefits and costs of expanding their existing capabilities.



KPMG supported a **defence client** on their Engineering Support Transformation programme. We led one accelerator project focussed on a '**Digital Twin Methodology**' for their aviation fleet, using an older, non-digitized aircrafts as a test bed to explore the implications of exploiting developed digital twins to improve maintainability, reduce downtime and increase availability.



For a rail organisation, we developed a **Proof-of-Concept Digital Twin** that demonstrated how users can **improve the efficiency of maintenance scheduling** by providing insights into the optimal number of tasks that can be **completed under different scenarios, along with the ability to quickly update schedules.**





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