



Digital Twin Development

G-Cloud Service Offering Document

Why choose Amey?

Amey Consulting is one of the UK's leading engineering consultancies, inspiring change and driving improvement across the nations critical infrastructure to create a positive impact on society. We make a genuine difference to people's lives, whether we are using data to reduce delays across transportation networks, designing carbon neutral schemes or delivering critical infrastructure projects.

Our ambition is to leave a legacy of sustainable infrastructure for future generations. Our team of designers, engineers and digital consultants – from our offices across the UK – is transforming the way we design, build, maintain and analyse strategic assets. We provide creative solutions to our customers to keep the country moving and support economic growth.

We are trusted partners of both central and local government, managing assets and complex projects vital to sustainable growth. We develop ground-breaking approaches to the way work can be delivered – and then put this into action. We pride ourselves on our ability to embed change into client organisations and deliver benefit assurance through digital strategies and practical delivery to business-as-usual activities.

Our team is inclusive, open-minded and a place where professional development can thrive. We bring together a diverse range of skills and experiences, fostering a collaborative environment that unlocks the best solutions for our clients.

Amey Advisory & Analytics: Data-driven decisions for an enhanced future

Empower your business by maximising the potential of your data. Amey Advisory & Analytics unlocks hidden insights through cutting-edge analytics and technology. Our team of digital consultants acts as your partner in transformation, crafting data-driven solutions that:

- **Boost performance:** We translate data into actionable insights that optimise your operations
- **Improve decision-making:** We enable clarity and confidence with data-backed recommendations
- **Provide long-term value:** We develop solutions that support your business goals and objectives

Our experienced professionals guide you every step of the way. We collaborate closely to:

- **Embed meaningful change:** We ensure technology adoption and empower your teams with the skills and knowledge to thrive.
- **Drive your digital strategy:** We craft a roadmap that aligns technology and data with your vision, future-proofing your business.
- **Navigate the data landscape:** We help you harness the power of data to make highquality decisions.

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Digital Twin Development

Transform physical asset performance through digital enablement. Amey's Digital Twin Development services leverage extensive experience in solving physical engineering challenges. We create computational models of real-world systems, integrating relevant data for simulation and scenario testing. This enables enhancements across all stages of physical asset lifecycles.

Features and benefits

Features

- **Physical system modelling:** Replicate your assets for virtual analysis.
- **Interoperability development:** Connect disparate systems for seamless data flow.
- **Proof-of-concept simulations:** Test concepts before real-world implementation.
- **Physics-focused model tuning:** Optimise simulations for accurate insights.
- **Scalable cloud resources:** Handle complex simulations with ease.
- **Predictive behaviour simulation:** Validate plans and designs digitally.
- **Real-world sensor integration:** Optimise operations based on live asset data.
- **Cloud architecture expertise:** Ensure robust and scalable digital twin foundation.

Benefits

- **Informed asset decisions:** Make data-driven choices throughout the asset lifecycle.
- **Virtual testing and validation:** Test plans and designs before deployment
- **Continuous lifecycle optimisation:** Identify opportunities for improvement at every stage.
- **Accelerated network enhancements:** Build confidence in upgrades using digital twins.
- **What-if scenario planning:** Explore future outcomes and make strategic decisions.
- **Reduced operational costs:** Optimise maintenance and resource allocation.
- **Improved asset performance:** Maximise asset efficiency and lifespan.
- **Proactive risk mitigation:** Identify and address potential problems in advance.
- **Enhanced collaboration:** Break down silos and improve communication across teams.
- **Future-proofed operations:** Prepare your assets for evolving technologies and demands.

Levels of data backup & restore, business continuity and disaster recovery planning

Business continuity plans ensure that critical functions continue during disruptions. Amey's approach combines data-driven insights with practical strategies to maintain operations.

Amey collaborates closely with clients to understand their specific recovery needs to ensure continuity and minimise downtime.

Onboarding and offboarding support

Amey provides seamless onboarding for clients, ensuring a smooth transition to their services. Ongoing support is offered throughout the client's journey, including offboarding assistance when needed. This commitment extends beyond the initial implementation phase.

Service levels

Amey identifies and agrees upon service levels with each client engagement. Deliverables, resources, budget caps, timescales, and reporting methods are established before service commencement. Regular monitoring and reviews ensure that agreed-upon service levels are consistently met.

After sales support

Amey's commitment extends beyond implementation. Exceptional after-sales support ensures clients maximise the benefits of their contracts.

Technical requirements

Amey's experts assess clients' technical infrastructure and provide guidance on necessary adjustments to optimise their experience. This personalised approach ensures that technical requirements align with the client's goals.

Outage and maintenance management

Amey proactively manages outages and maintenance to minimise disruptions. Clients are kept informed throughout the process, and the company strives for maximum platform uptime for relevant systems.

Hosting options and locations

Amey offers hosting options tailored to clients' data security and regulatory requirements. We leverage Microsoft Azure for Amey's proprietary cloud platforms. By using Azure, our clients can benefit from a wide range of services, including AI and machine learning capabilities, analytics, and more. We also work with other cloud providers, including AWS and GCP2, subject to client requirement.

Our approach extends to embrace hybrid-cloud and multi-cloud environments, allowing seamless integration with more complex hosting needs. This flexibility ensures that Amey can choose the best-fit solutions for its diverse workloads while maintaining agility and scalability across different cloud ecosystems.

Amey will ensure a clear and controlled process upon exiting any service. As users or employees transition out of a project or leave the organisation, Amey follows strict protocols to manage data access.

Access to data (upon exit)

Amey places great emphasis on data ownership and access, even after a client exits their services. Clients retain ownership of their data, and Amey ensures that clear procedures are in place for data retrieval upon request. Whether transitioning to another service provider or concluding the engagement, clients can confidently access their data as needed.

Amey's commitment to data protection extends beyond the service lifecycle, ensuring that only authorised individuals have access to relevant data.

Security

Amey prioritises security across its operations, especially when handling sensitive data. The company adheres to the Baseline Personnel Security Standard (BPSS) established by the Cabinet Office. For employees working on sensitive projects, Amey will work with you to support employees through Security Check (SC) clearance and Developed Vetting (DV) vetting processes, ensuring you have the skills and clearances for delivery. These clearances are processed through UK-SV (United Kingdom Security Vetting) and other relevant agencies. Amey maintains a pool of individuals who hold the necessary security clearances, ensuring compliance with project requirements.