Related programmes and teams
Data-centric engineering

Quaisr: harnessing the power of digital twins

As the digitisation of industrial sectors accelerates, the creation of digital twins of physical assets, processes or services is rapidly increasing. The potential of digital twins has seen the Turing's data-centric engineering programme and Imperial College London create their first-ever joint spin-out, Quaisr.

This year, the digital-twin market has doubled in value, rising to $3 billion. It is expected to reach $48 billion in 2026. The power of digital twins is their ability to combine data and use computational models and physical systems capable of monitoring, control, automation, and performance improvements. This ability is brought about by the digital twins 'learning' to adapt via feedback from their environment through real and simulated digital information.

The Quaisr team, which includes Turing Data-Centric Engineering Strategic and Group Leaders, and works directly with the programme, enables the creation of digital twins. Quaisr builds simulations and visualisations and seeks to answer 'what if?' questions: what if an asset is 'pushed' into a new operating space? Would it remain safe, secure and resilient, and if not, what interventions would be necessary?

By providing timely insights for design and prototyping, Quaisr is enhancing decision-making by bridging the gap between data and actionable intelligence.

The team is looking ahead to tackling diverse challenges for the built environment such as environmental contamination detection, production-line decision automation, and optimisation of offshore wind farm locations.

"At Quaisr, our cloud integration service powers the creation of digital twins to accelerate our customers on their journey to digitalisation."

Omar Matar
CEO Quaisr