



Digital Twins for Advanced Integration, Analysis, & Visualization

Booz Allen's digital twin solutions are technically exact replicas of objects, processes, or systems that are directly connected (twinned) to their physical counterparts through data and information feeds across their lifecycle. Our clients use digital twins to solve their toughest challenges, from mission-focused issues to enterprise-wide needs.

BUILDING DATA INTO INSIGHTS

Booz Allen builds secure, human-centered digital twin solutions powered by analytics, artificial intelligence, and machine learning that enable organizations to confidently pursue more agile and innovative ways of achieving mission success. Core elements distinguish our digital twin solutions:

- **Human-Centered Design.** Prioritizing real-world user requirements in integration, standardization, and data orchestration to enhance human-machine teaming, while designing with end users of all technical abilities in mind to boost engagement and adoption.
- **3D Visualization and Interaction.** Transforming complex data into meaningful, intuitive visualizations that accelerate comprehension.
- **Data Democratization.** Integrating platforms, digital threads, and data into a unified hub, bringing clarity to decision-making contexts.
- **Open and Flexible Architecture.** Connecting to other platforms and databases, linking to trusted models and toolsets, and scaling from prototype to production and enterprise deployment.
- **Full Lifecycle Coverage.** Increasing insight and productivity across all system phases, from design and planning to operations, modernization, and sustainment.





BENEFITS OF DIGITAL TWINS

Digital twins provide sophisticated insights that drive business value through improved business performance, decreased risk, and more informed decision making. Built on comprehensive, trusted data, our solutions empower organizations to accelerate design processes, optimize operations, detect and predict anomalies, and strategically test innovative approaches and solutions far beyond the physical world's limits.

Specific benefits include:

- **Enterprise Collaboration.** When built on an intuitive platform for all technical levels across all lifecycle stages, digital twins advance organizations beyond siloed processes by providing a universally accessible, constantly refined common operating picture.
- **Comprehensive Simulation.** Digital twins combine countless interrelated components and their environmental context to monitor and simulate a whole machine, a system of systems, or an entire planet under various scenarios across time.
- **Continuous Improvement and Enduring Value.** As nothing remains static today, digital twins dynamically adjust designs and strategies with every new piece of data they collect or every new test they run, maximizing long-term return on investment.

COMMON USE CASES

Infrastructure

Generate design layouts and test spaces in 3D and virtual reality before purchasing equipment. Internet of Things sensors collect data to drive future cost-effective decisions for space planning and use.

Digital Engineering

Create new iterations that reduce manufacturing costs and enable scaling. Model-based system engineering cuts system complexity and improves quality.

Supply Chain

Plan, test, and manage end-to-end supply chains to understand delivery conditions, limitations, and emergencies on live or historical data.

Climate

Analyze environmental issues like air quality and pollution. Digital twins integrate into any data platform or source, speeding climate action and analyses.

ABOUT BOOZ ALLEN

Trusted to transform missions with the power of tomorrow's technologies, Booz Allen Hamilton advances the nation's most critical civil, defense, and national security priorities. We lead, invest, and invent where it's needed most—at the forefront of complex missions, using innovation to define the future. We combine our in-depth expertise in AI and cybersecurity with leading-edge technology and engineering practices to deliver impactful solutions. Combining 110 years of strategic consulting expertise with the perspectives of diverse talent, we ensure results by integrating technology with an enduring focus on our clients. We're first to the future—moving missions forward to realize our purpose: **Empower People to Change the World®**.

FOR MORE INFORMATION

digital_twin@bah.com

BoozAllen.com/digitaltwin