Category

Digital Transformation

Digital Twin & Simulation-Driven Operations Transformation Playbook

Testing changes on a virtual model first, so the real operation doesn't have to absorb the learning curve

- Practitioner
- Advanced
- Template Included

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- 4 minute(s)

Overview

A framework for digital twin and simulation-driven operations transformation — building virtual models of physical operations or systems that enable testing changes and predicting outcomes before real-world implementation, rather than learning through direct trial-and-error on live operations.

Isn't building a digital twin a significant upfront investment

relative to just testing changes directly in operations? It is a real investment, but for operations where live testing is costly, risky, or slow (production line changes, complex logistics networks), the digital twin's ability to test many scenarios quickly and safely before committing to real-world changes typically pays back the investment well beyond the initial build.

How accurate does a digital twin need to be to be useful?

Accurate enough to reliably predict the relative direction and rough magnitude of an operational change's impact — a digital twin doesn't need perfect fidelity to be valuable for comparing scenarios and catching clearly bad decisions before real-world implementation.

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