

Digital Twins will reach \$16 Billion Market by 2025 with two Open-Source Innovations Driving Adoption

New White Paper by Harbor Research Presents Overview of Market Trends, Innovations and Use Cases Driving Digital Twin Adoption

DENVER, CO, USA, February 6, 2023 /EINPresswire.com/ -- [Harbor Research](#) has released a new white paper on the

key innovations and use cases driving digital twin adoption. According to Harbor Research, there are two key innovations helping address digital twin connectivity: common metamodels and Connection Profiles. Both innovations are open source, publicly available and help address the critical connectivity issues that have been holding adoption rates back.



With the open-source and publicly available Digital Twin System Interoperability Framework and the Connection Profile mechanism, we have taken an important step towards making digital twins a reality.”

Glen Allmendinger, founder and president of Harbor Research

Digital twins are virtual representations of real-world entities and processes, helping people explore, diagnose, troubleshoot and even repair physical systems. For example, a repair person might use a digital twin of a piece of machinery to make sure it is running efficiently. If something goes wrong, rather than take the machine apart, they can explore the digital twin, which shows the innards of the machine and real-time machine health data collected via connected sensors in the machine.

Harbor Research estimates that the market for digital twins and related virtualization technologies is forecast to exceed \$16 billion by 2025, growing between 25 to 30

percent.

Digital twins can offer extraordinary business advantages to both the companies that manufacture and support machines as well as the users of machines. The ability to detect patterns from aggregating data is the “holy grail” of Smart Systems. New machine data and

smart
systems
design

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learning technologies enable not only data patterns, but a much higher order of intelligence to emerge from large collections of ordinary sensor and machine data.

There have been significant technical and development hurdles that have held the adoption of digital twins back, largely around network integration and interoperability. The Digital Twin Consortium has published a Digital Twin System Interoperability Framework to help product designers adopt common metamodels that allow for composable and interoperable digital twins.

Another key innovation was developed by the founders of the Padi Platform. Their Connection Profile innovation allows any Internet endpoint with a Connection Profile to be connected to any other.

“With the open-source and publicly available Digital Twin System Interoperability Framework and the Connection Profile mechanism, we have taken an important step towards making digital twins a reality,” says

Glen Allmendinger, founder and president of Harbor Research. “As the complexity of these systems increases, the number and diversity of stakeholders expands, and the volume and nature of their interactions grows. The systems technology and architecture will need to become open and interoperable to foster collaboration. This openness will, in turn, inform radically new modes of collaboration, including increased sharing of system data and services.”

The white paper is publicly available and free to download here:

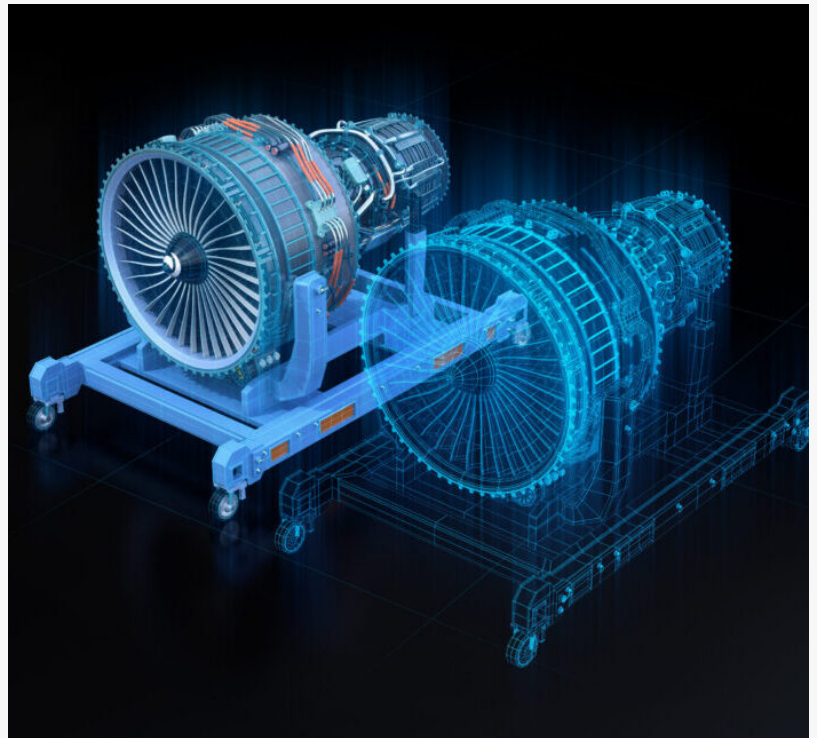
<https://harborresearch.com/system-of-systems/>

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About Harbor Research: Harbor Research has over thirty-five years of experience working with



Digital Twin of Building



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clients on growth strategy and new business creation. At the core of Harbor's approach is a deep understanding of the core technologies, markets and business characteristics as well as the management and organizational challenges companies face adopting and developing digital and smart systems technologies. Harbor strives to generate deep insight into how emergent technologies drive value creation and competitive advantage in their clients' businesses and the economy as a whole. Learn more at [HarborResearch.com](https://www.harborresearch.com).

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