# CIMdata 2024 PLM Market & Industry Forum
*Digital Twins: Enhancing Lifecycle Performance*

## About

Building models to understand "product" performance dates back millennia. Long before the advent of computers, wind tunnels with streamers helped us understand and improve aerodynamics, while ship model basins allowed the testing of hull designs.

The digital twin is not a new concept. NASA began experimenting with "paring technology" during the early days of space exploration. What is new is the ability to cost-effectively sustain digital twins from idea through the entire lifecycle of a product or group of physical assets.

Today, the phrase "digital twin" is ubiquitous in the Product Lifecycle Management (PLM) market, with nearly all of the top 25 global market leaders covered in CIMdata's PLM market research offering solutions. But if you dig deeper, you find that different solution providers attribute varied meanings to the phrase.

In 2021, a leading global market research firm released a study on the market potential for digital twins, with US$110 billion growth by 2028! Their definition included buzzwords like AI, machine learning, the Internet of Things (IoT), blockchain, augmented reality, big data analytics, and 5G—some extending the possibilities of digital twins. However, their market definition included nothing to help define or manage the intellectual property (IP) used in digital twins or the ability to simulate them.

This prompts a series of questions: How should we think about digital twins? What enables them? What use cases are important? What kind of benefits can we expect?

For over four decades, CIMdata has been helping to moderate discussions for the betterment of the industry and has been actively working on this topic for several years.

The theme for 2024, "Digital Twins: Enhancing Lifecycle Performance," complements 2023's focus on the digital thread. We gathered insights for this Forum through two web-based surveys—one targeting industrial practitioners and the other focusing on software and service providers who help industrial companies reach their digital twin objectives.

Over a series of thematic presentations, we will provide background on the work to date, defining the digital twin and related topics while offering a framework for subsequent sessions. Our exploration of digital twins will consider the industrial perspective followed by the "PLM Economy" perspective, focusing on the software and service providers.

The Forum will close with a discussion on analytics and artificial intelligence (AI), recognized as essential enablers for digital twins. Additionally, attendees will gain insights from CIMdata's industrial consulting work, with highlights and learnings since the 2023 Forum showcased in a "News from the Field" segment.