

# IDC Manufacturing Insights: Worldwide Product Innovation Strategies

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The *IDC Manufacturing Insights: Worldwide Product Innovation Strategies* research advisory service examines key challenges facing manufacturers related to the digital transformation of product design, innovation, R&D, engineering, and the optimization of product performance across the life cycle. The service provides fact-based research on tools, strategies, and best practices in product and digital design, simulation, product life-cycle management (PLM), R&D, and engineering to meet the challenges that manufacturers across all industries face today including product and service complexity, extended ecosystems, and customer expectations for unique product and service experiences. Research also addresses the need for integration with upstream sales and marketing, downstream supply chain, manufacturing, and service systems to enable a closed-loop digital thread. We examine how manufacturers can make better and faster product-related decisions through a digital innovation platform that takes advantage of new technology capabilities, including analytics and mobility, and serves changing business relationships and conditions.

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## Approach

This advisory service develops a unique analysis based on comprehensive data through IDC Manufacturing Insights' proprietary research projects, along with ongoing communications with industry experts, manufacturing executives, PLM professionals, and PLM software and service providers that support a product innovation platform. To ensure relevance, our analysts work with our discrete and process manufacturing clients from line of business and IT and across domains to identify and prioritize specific topics to be covered in research reports. Our analysts are also available to provide individualized advice for manufacturing executives.

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## Topics Addressed

Throughout the year, this service will address the following topics:

- Business pressures and trends in global product and digital development, as well as establishment and optimization of a digital thread across an organization and its ecosystem
  - Developments in tools, technologies, and best practices for discrete and process manufacturers, as well as in the retail and life sciences market working in concert with IDC industry experts in these areas
  - The impact and planned usage of digital technology and platforms to enable faster time to market and innovation that meets customer needs, extended industry ecosystems, and resilient organizations
  - In-depth coverage of current and emerging product innovation topics such as product life-cycle analytics, IoT and software-defined products, digital twins and digital threads, industrial metaverse, manufacturability and quality, environmental sustainability, and closed-loop digital innovation platforms
  - Exploration of new innovation models including innovation management, enterprise quality management, model-based engineering and R&D, AI-driven product development (i.e., generative design and generative AI), supply chain collaboration, and closed-loop product and service life-cycle management
  - Software budgets and spending trends for engineering applications in manufacturing companies, including PLM, CAD, CAM, CAE, and other engineering applications
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## Key Questions Answered

Our research addresses the following issues that are critical to your success:

1. What are the product life-cycle challenges and opportunities for manufacturers in the current global economy?
  2. What strategies can manufacturers deploy to maximize intellectual property (IP) across the product portfolio?
  3. What tools are available for manufacturers to address complex product development, especially with respect to managing the integration of mechanical, electrical/electronic, and software components in model-based systems engineering?
  4. How can manufacturers capitalize on capabilities such as visualization, simulation, and intelligent search to support their product development efforts, and how can manufacturers realize more value from their existing PLM and innovation platform investments?
  5. How do manufacturers take advantage of newer technologies such as big data/analytics, cloud, mobile, social business, AR/VR, IoT, AI and machine learning, and advanced security as well as new technology strategies like digital twin and digital thread to improve their innovation processes and collaboration?
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## Who Should Subscribe

- Senior managers, business-line executives and managers responsible for product life-cycle strategies, methodologies, R&D, and engineering processes and systems, as well as the IT executives who support these activities
  - IT, marketing, design engineering, R&D, manufacturing, service, supply chain, and quality management executives
  - CXOs and senior business-line executives responsible for corporate, as well as product and digital innovation, strategy, and success
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