IDC Manufacturing Insights: Worldwide Product Innovation Strategies

The IDC *Manufacturing Insights: Worldwide Product Innovation Strategies* research advisory service examines key challenges facing manufacturers related to the product development process and the role of technology for delivering new and valuable products to market. Research explores the digital transformation of engineering and R&D applications related to innovation, product development, product performance, and customer experience throughout the life cycle. The service provides fact-based research for software, technology, strategies, processes, and best practices that improve product and digital design, simulation, product life-cycle management (PLM), and manufacturability to help manufacturers across all industries address challenges such as 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 and downstream supply chain, manufacturing, and service systems to enable closed-loop digital threads that improve profits. 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.

APPROACH

This advisory service delivers objective analysis based on comprehensive data from 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 product innovation platforms. To ensure relevance, our analysts work with discrete and process manufacturing executives representing lines of business and IT roles 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.

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 digital threads across an organization and its ecosystem
- Developments in software, 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 for making product innovation and development more agile, extending collaboration across industry ecosystems, and optimizing products for cost, time, quality, and sustainability
- 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 product development models including innovation management, enterprise quality management, model-based systems engineering and R&D, AI-driven product development including generative design and generative AI, supply-driven design, and closed-loop product life-cycle management
- Software budgets and spending trends for engineering applications in manufacturing companies, including PLM, CAD, CAM, CAE, and other engineering applications (BIM, EDA, and engineering support)

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 help manufacturers deploy intellectual property (IP) across the product portfolio?
3. What tools are available to help manufacturers address complex product development, especially with respect to managing the integration of mechanical, electrical/electronic, and software components?
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 improve innovation and collaboration through newer technologies such as big data/analytics, cloud, mobile, social business, AR/VR, IoT, AI and machine learning, generative AI, and advanced security as well as development strategies like systems engineering, digital twin, and digital thread?

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