
Marc Halpern
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Key Issues

1. Why do you need Product Innovation Platforms to enable products and "things" for digital business?

2. What is a Product Innovation Platform and how will it impact you, your company, and your value chain?

3. How should you strategize adoption of Product Innovation Platforms?
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Product and "Thing" Design Must Combine OT With IT to Enable Digital Business
Product Needs Evolve With Digital Business: A Case Study in Climate Control

Disruptive Digital Business

Legacy Leader in Climate Control

"Fast Follower"

Paradigm Shift
Digital Business Demands Systems and Systems-of-systems Thinking to Design Products

- Complex Machines
- Processes
- Factories
- Services
- Even Retail Stores
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Product Innovation Platforms Continuously Enhance PLM Discipline

Governance

Product Portfolios

Design  Source
Innovate  Plan
Strategize  Execute
Define  Produce
Retire  Service

Demand Insights

Supply Network
"Nexus of Forces" Underpins the Promise of Product Innovation Platforms

Extreme Behavior
- Sharing Engineering and Manufacturing Knowledge

Pervasive Access
- Collaborate and Communicate Any Time and Anywhere

Global-class Delivery
- Continuous Learning from Patterns in Systems Data

NEXUS
- Perform Computations Any Time and Anywhere

"Big" Context
- Compute Any Time and Anywhere

Social

Mobile

Cloud

Information
Designing for Digital Business Requires IT Capability Beyond Current PLM Software

Community

Discovery

Insight

Product Innovation Platforms

Accessibility

Reuse

Adaptability
# Product Innovation Platforms: More Than Today's Design and PLM Software

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Product Innovation Platform — Some Key IT Requirements

- Visualization, Collaboration, Social Networking
- Modeling, Simulation, Analytics
- Discovery
- Insight
- Adaptability
- Reuse
- Community
- Accessibility
- Cloud, Mobile, Open Architecture, Web Application Services
- Content Management, Open Architecture, Search Standards
- Open Architecture, Flexible Workflow, Easy Data Accessibility

Search, Collaboration, Simulation, Analytics

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Product Innovation Platforms: Functional Layering for Continuous Product Innovation

- **Big Ideas**
  - Quality Data
  - Cost Data
  - IoT
  - ... And So on

- **Big Data**

- **Voice of Customer**
  - E.g., Digital Marketing

- **Simulation and Test Data**

**Requirements Management**

**Portfolio Planning and Management**

**Product Life Cycle Management**
(Strategy, Planning, PDM, and Governance)

**Systems-centric Design**
(Software, Electronics, Hardware, Recipes, and So on)

**Simulation and Test**

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The Major Design, PLM, and Business Suite Vendors Will All Offer Product Innovation Platforms by 2017

By 2020, 25% of large discrete manufacturers and formulated goods producers will use Product Innovation Platforms for design and PLM

Reasons SPA will be true:

• Emergence of digital business
• Increasing acceptance of cloud-based advantages
• Changing product requirements

Reasons SPA could be false:

• Concerns about IP protection in the cloud
• The systems-based learning curve is too steep
• Needed standards for data sharing will evolve too slowly
Potential Product Innovation Platforms
Vendors Will Evolve Differently

Product Innovation Platforms

- Autodesk, Aras, Dassault Systemes, PTC, Siemens
- IFS, Infor, Oracle, SAP
- Big Lever, Gensight, Jama Software, Planisware, Sopheon, Mathworks
- Niche Contributors

Product Design and PLM
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Perceived Risks

- Steep Learning Curve
- Inadequate Standards
- Uncertain Cloud Performance
- Inadequate Openness
- Cyber-terrorism

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Key Messages

• You need the next generation of design and PLM IT to support the emerging digital business world.
• Product Innovation Platforms, the next generation of IT for design and PLM, improves today's PLM and more.
• Enabling Product Innovation Platforms starts with the business case and addressing risks with the road map.
Recommended Gartner Research

- **Product Innovation Platforms: The Foundation of Product Design and PLM in the Digital Business Era**
  Marc Halpern (G00264008)

- **Hype Cycle for Discrete Manufacturing and PLM, 2014**
  Marc Halpern and others (G00263257)

- **Hype Cycle for Process Manufacturing and PLM, 2014**
  Janet Suleski and others (G00263399)

- **Lessons Learned From Cloud in Manufacturing Industries**
  Dale Hagemeyer, Thilo Koslowski and others (G00259827)

- **Survey Analysis: Why Manufacturers Still Struggle to Modernize Collaboration**
  Michael Shanler and Marc Halpern (G00238925)

- **Innovation Insight: Exploiting Cloud Services to Improve and Transform Your Supply Chain Innovation**
  Michael Dominy (G00261032)

For more information, stop by Gartner Research Zone.

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