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Viewpoints on Innovation

Nine Trends Impacting Technology Strategy for Retail Product Development in a Digital World

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The retail industry is in a period of rapid evolution, and many companies are looking to succeed by developing differentiated products and [investing in differentiated product development capabilities](#). From an IT perspective, the technologies that support product development – along with the strategies and frameworks for deploying them – are also changing rapidly.

Historically, product design, development and sourcing processes have been primarily supported by enterprise-class product lifecycle management (PLM) solutions. These solutions have met most of the functional requirements of the business by serving as both a repository for documents and a tool to support workflows to create, approve and share these documents. These same solutions have also traditionally served as hubs for connecting to point solutions, including design tools like Adobe Illustrator and supply chain and financial software like enterprise resource planning (ERP) systems.

Going forward, the technology landscape for market leaders will be a complex mosaic of traditional and emerging digital solutions, rather than the hub and spoke model outlined above.

In addition to PLM, this mosaic may include digital design tools (3D design software, design crowdsourcing, digital avatar libraries, digital simulation and testing, body scanning equipment, etc.), analytics tools (AI/machine learning, fit analytics, voice of the customer analytics, etc.), product connectivity (RFID, NFC, blockchain, smart connected operations, etc.) and additional foundational technologies like digital asset management and product information management.

Now is the time for product leaders to assess and rethink legacy technology strategies. Rather than continue to make incremental improvements, additions and upgrades to their current installed base, IT leaders should step

back and reset their technology agenda, business case and roadmap.

Nine Things to Consider When Building your Future Technology Strategy

1. The Explosion of Innovative Digital Point Solutions

There is a plethora of design-focused technology in the market today, leap frogging traditional data-centric PLM systems as the primary product development tool. These (and other best-of-breed technologies across many categories) have emerged rapidly, leaving both customers and providers in unfamiliar territory.

2. The Emergence of Integrated Platforms as a Service

Key solution and corporate players in the industry are attempting to aggregate technologies into integrated platforms to sell as a platform-as-a-service (PaaS) solution. The PaaS model frees developers from having to install in-house hardware and software to develop or a run a new application. And, companies purchasing integrated platforms are likely to get better tech prices versus purchasing directly.

3. The Transposition of Roles Between Design Tools and PLM

The front end of the product development process is focused on design, and 3D tools can potentially play the role of *both* design and development with PLM only used at the end of the process as a data repository. Leaping forward, 3D solutions could be the primary interface throughout the design process, feeding PLM behind the scenes.

4. The Critical Importance of User Experience

The product development process is driven by creatives who prefer a design-centric user experience and struggle to adapt PLM systems that traditionally rely on data entry. Leading product creation solution providers are now reconstituting their technology suites with a more intuitive user interface that is conducive to the creative process.

5. The Heightened Role of Artificial Intelligence (AI) and Advanced Analytics

The role of analytics across the discover-create-make-sell development cycle continues to expand. Tactically, AI can be used to automate repetitive processes. More strategically, it can be applied as a predictive analytics weapon, providing [meaningful insights to specific pain points and use cases](). AI can also be integrated into design tools and processes to generate designs, specs and BOMs for interpretation and approval by designers and developers, radically changing the retail business model.

6. The Race to Acquire Emerging Tech Companies

Most technology innovation is fueled by small, agile companies. There is competition among large technology providers - as well as retailers and brands - to acquire these emerging innovators.

7. The Gravitational Pull into Downstream and Upstream Functional Domains

Product development executives require a broad set of technologies to support the expanding footprint of their business activities. As the advantages of collaborating more closely with vendors becomes apparent, they are pulled deeper into their supply chains. At the same time, they need to use customer data and product insights to accurately portray products to end users via any channel, pulling them forward into e-commerce, retail and digital marketing.

8. The Use of Technology and Data Insights as a Competitive Weapon

Companies that track data and enrich it through attributes are gaining incredible proprietary insights about products. These insights are valuable assets that can be monetized with trading partners, vendors and other third parties.

9. The Accelerated Need to Address Sustainability

The retail industry faces increased pressure around sustainability, which will fundamentally change the way retailers discover, create, make and sell products. This pressure is driving new requirements for existing applications to capture and share incremental product sustainability data between internal systems and consumer-facing applications. Sustainability is also driving the need for entirely new solution categories not currently deployed in house, such as KPIs and scorecards.

Bottom Line

By taking the time to reset technology strategies and roadmaps, IT and product executives will avoid falling behind the market leaders who recognize the opportunity to leverage technology as a competitive weapon. In addition, they are likely to avoid unnecessary capital and operating expenditures based on outdated strategies and frameworks, giving them an edge in an increasingly competitive landscape.

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