Scaling Digital Commerce Requires Product Content Life Cycle Optimization

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Initiatives: Digital Commerce and CRM Sales Technologies

With an increasing number of channels to market, effective end-to-end management of product experiences has become a critical requirement for digital commerce businesses. Application leaders responsible for digital commerce should use this research to optimize product content life cycles.

Overview

Key Findings

- Within many organizations, product data and product-related marketing content (and the processes surrounding its creation and use) remain siloed and fragmented. This slows digital commerce initiatives and creates challenges, including unreliable reporting, improper recommendations, inability to drive personalization and compromised product search.

- Organizations have many options for dealing with product information, such as ERP, the Global Data Synchronisation Network (GDSN), product information management (PIM) and commerce platform product catalogues. They often struggle to choose between them or agree on a single approach across the business.

- The product information and syndication capabilities of a master data management (MDM) solution or digital commerce platform are often suboptimal for driving other channels. These products rarely include sophisticated channel management capabilities.

- Processes for identifying needed product content modifications, then making the changes, and resyndicating are challenging to implement due to lack of integration capabilities between vendor applications.

Recommendations

Application leaders in digital commerce and CRM sales technologies should:

- Implement an MDM strategy for core product data (such as SKU, product name, variant attributes and dimensions) to enable strong governance and data consistency.
Strategic Planning Assumption(s)

By 2024, organizations that develop "closed loop" processes for organizing product data will increase revenue from digital channels by 30% more than organizations that fail to do so.

Introduction

Traditionally, product data was meant to ensure products were accurately categorized, governed, tracked and displayed on the store shelf and in a printed product catalog. However, times have changed. Now, customers engage in a multichannel, multitouchpoint, multiexperience buying journey that often starts with digital marketing and ends in digital commerce. They can bypass the physical store shelf altogether.

Customers expect consistency of experience and accuracy of information. Retailers and distributors turn to brands and manufacturers for detailed, consistent product information to populate digital channels, but these organizations struggle to gather, disseminate and optimize the information customers need in a timely fashion. Increasingly, brands and manufacturers are also selling direct to customer (D2C) via their own digital properties, and third-party marketplaces. These channels have multiple different requirements in terms of product content, requiring compliance to channel standards and best practice guidelines or recommendations. These all need to be managed.

Once product data is delivered to the channel, the manufacturer needs to understand the effectiveness of the product experience in order to optimize product content. Finally, orders originating from multiple third-party channels often need routing to one or more order management systems (OMS) for ongoing fulfillment.

The complex product content life cycle (PCL) is increasingly being understood as an end-to-end process. This research provides best practices to optimize the end-to-end PCL for all digital channels.

- Use a 360-degree view of product information to create a single source of truth to drive optimized product experiences.
- Use a PIM or product experience management (PXm) solution to enable marketers and product experts to enhance content and data easily, and optimize it for different channels to improve consumption and data use.
- Prepare for new channels and touchpoints by anticipating syndication needs.
- Analyze effectiveness of product content data on target channels, and feedback into product content life cycle management to improve usage.
- Simplify order routing and orchestration from syndicated channels, to optimize fulfillment and supply chain management.
End-to-end PCL consists of a number of steps. Technologies to support these steps are available from specific vendors in each of the following areas:

1. Master data management
2. Product information management
3. Channel management (including syndication)
4. Digital shelf analytics (DSA)
5. Order data, orchestration and routing

Of course, not all of these steps are required for every use case or business environment. In particular, DSA and order orchestration are emerging features.

Figure 1 illustrates a simple product content life cycle.

**Figure 1: A Simple Product Content Life Cycle**

Also emerging are a set of vendors that package solutions to cover this life cycle end to end — combining some or all of these steps to provide a seamless process using fewer technology platforms.
This has shifted emphasis within the market from product information management to product experience management.

Analysis

Implement a Master Data Management Strategy for Core Product Data to Enable Strong Governance

Attempts to create an optimized product content life cycle remain incomplete and off-target without effective master data management. Product MDM is often part of a multidomain MDM strategy, including other data such as customer data, materials data and supplier data.

Gartner defines master data management as “a technology-enabled business discipline in which business and IT work together to ensure the uniformity, accuracy, stewardship, governance, semantic consistency and accountability of an enterprise’s official shared master data assets. Master data is the consistent and uniform set of identifiers and extended attributes that describe the core entities of the enterprise.”

Sources of master data typically include ERP solutions, PLM solutions, and master data management solutions. Whichever source (or sources) forms the system of record for product master data, governance is required. Governance helps to ensure that product master data is fit for purpose — meaning it is complete, accurate and available to optimize the product content life cycle.

Product master data is essential for engaging customer experiences. Master data is a “hygiene” factor — meaning it must be available and trust worthy, but on its own, it isn’t sufficient for a customer to complete their purchase journey. Core ERP data may be deliberately sparse, with primary information being fragmented internally, held by third-party suppliers, or synced to a global product database such as the GDSN. Additionally, core MDM rarely contains media describing the product, such as images and video, or marketing material. Thus, product master data needs further enhancement. This is the role of a product information management solution. For more information, see Which Data Is Master Data?

Use a Single 360-Degree View of Product Information to Drive Optimized Product Experiences

A common approach when starting with direct-to-customer digital commerce is to use the digital commerce platform’s product catalog as the PIM, taking core product data from an MDM or ERP. Indeed many platforms come with some PIM-like capabilities and may be described by vendors as a “light PIM.” Subsequently, the digital commerce platform is used to provide product feeds for other channels. Capabilities in this area are often weak, and “feeds” are syndicated to managed service channel management vendors.

If your digital commerce strategy does not include a direct-to-consumer channel, then your product catalog may instead be created in a web content management (WCM) tool or DXP. These are not PIMs
and are therefore unable to govern, manage and reuse product information efficiently, leading to weakened channel management.

Instead, quite simply, the management of product information needs to happen before it is used in the digital commerce or experience platform, or elsewhere. These should be channels exclusively for the PIM/PXM platform.

The PIM/PXM provides a single source of truth about the product, or a “product 360 view,” consolidating all required sources of content regarding a product (see Figure 2):

- Core attribute data from MDM or synched via third-party master data datasets such as GDSN.
- Rich product content from product owners, and marketing material.
- Digital assets from digital asset management (DAM) solutions or third-party media repositories.

These solutions do not always replace core MDM systems. They often layer over — focusing on the “outward” view required for the business and its customers.

Figure 2: Key Data From Across the MDM, PIM and DAM Should Be Brought Together for Optimized PXM

Key Data Across MDM, PIM and DAM Should Be Brought Together for Optimized Product Experience Management

Source: Gartner
DAM = digital asset management; MDM = master data management; PIM = product information management
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Source (optional) — use data from Fig 1, https://www.gartner.com/document/3991625 but retain this visual look. Add ‘social signals’ to RPC.
Once complete, different variants of the product data can be created for use by different channels, including first-party channels such as digital commerce platforms. Product information contextualization is the ability of a PIM to create and maintain multiple versions of product information and digital assets optimized for channel, market, languages, brand, customer segment and seasonality. This should be achieved without the duplication of the products within the PIM.

For more information on PIM solutions, see Market Guide for Product Information Management Solutions.

Enable Marketers and Product Experts to Enhance Content and Data Easily, and Optimize It for Different Channels

One of the challenges with a traditional PIM tool from a MDM heritage, can be its flexibility regarding the wide range of product content required operationally by the business. These platforms have tended to be inward-facing, and agnostic to the various use cases for the data. More recently, PIMs include more capabilities for content aggregation, content marketing and media management (see Figure 3). Some platforms may have a built-in DAM, or integration into a separate DAM. In addition, PIMs have more recently, focused on marketers as a persona, and built better capabilities for them to add rich content around products. An alternative approach is for marketing teams to use content management systems (CMSs) or “content marketing” tools to author such content, and have content from those sources integrated into the PIM. Either approach is viable so long as the PIM becomes the single source of truth for the product information.

In this scenario, for channel management, the business would often need to engage with channel integration service providers. These service providers would take multiple content feeds from various sources and provide the feed management and content optimization. This can become expensive and ungainly. In reality, implementations were often a ‘black box’. There has been a shift toward self-service in this space, as the need for business agility and business ownership has increased. This shift enables the business to better prepare product content for its destination.
Today, few PIM/PXM solutions include this capability and most integrate to channel integration vendors. However, PIMs are evolving toward PXM, managing the formats required for syndication of the content to multiple channels. In other words, these platforms seek to enable channel management inside the platform.

**Prepare for New Channels and Touchpoints by Anticipating Channel Management Needs**

With the advent of PXM, channel management should embrace all channels for the content, whether these channels are first-party (channels owned by the brand, such as a digital commerce site) or third-party (channels not owned by the brand, such as marketplaces, distribution networks or social channels). Further distinction can be made between direct and indirect syndication, regarding where price and inventory (that is, stock levels) are managed:

- **Direct syndication** — for example, from a brand or manufacturer to a retailer, or to a third-party marketplace. In this case, inventory and price are controlled by the originator.

- **Indirect syndication** via an aggregator (for example, a distributor) or broker (see Figure 4). These channels will manage their own inventory and control pricing.

Simple data, like a base price, may be included in product feeds, but is often required to be separate when price itself is highly dynamic. Real-time or near-real-time price and inventory data must be
consumed by direct channels. Ensure that, alongside core product content, the needs of pricing (for example, via a pricing engine or ERP) and inventory management (for example, via supply chain integration) are included in a PCL strategy.

Figure 4: Direct and Indirect Syndication

Product Data Syndication Methods and Example Subscribers

For both direct and indirect syndication, each channel requires a specific format for the content. Channels will often have standards, compliance rules and best practice guides. They will test data before acceptance. It also makes sense to follow best practice guidelines, as these usually result in better exposure of the content and ultimately better conversion. Most of this can be automated, and emerging PXM vendors are focused on this aspect of the PCL, ensuring that the end user’s digital experience of the product is as effective as possible. For more on syndication, see Failure to Address Product Data Syndication Properly Leads to Penalties.

The end-to-end product content life cycle therefore consists of a number of steps and technologies:

- Taking product data from (and synching to) multiple sources.
- Aggregating product data and providing a single source of truth — the 360-degree view of the product.
- Preparing the data for use by first- or third-party channels.
- Enabling delivery to those channels directly via APIs, feeds or third-party intermediaries (see Figure 5).
This set of technology processes provides an efficient end-to-end “push” of content data out to where it is consumed by the end customer. However, businesses desire an understanding of what is happening to that content on the channel (that is, the digital shelf) to close the loop and continue the life cycle.

**Analyze Product Content Effectiveness and Feedback Into Product Content Life Cycle Management**

Effectively syndicating product data to channels such as marketplaces, retailers and social networks is not the end of the process for brands and manufacturers. In fact, just because product content was syndicated to a channel doesn't mean it actually appears correctly to the end customer. Brands and manufacturers need to analyze the quality of product content, ensure it matches the content they maintain internally, and continually optimize the content over time to effectively sell products online and increase revenue. This process is achieved through digital shelf analytics.

DSA enables the manufacturer or brand to monitor product content, advise channel owners on better use (or warn them of problems), and generate insights for optimizing product content in the PIM or PXM.
This process is valuable for both the brand and the owner of the channel where the product is being sold. For more on DSA, see *Innovation Insight for Digital Shelf Analytics*.

However, insight generated from digital shelf analytics is of limited value if processes do not exist for acting on the insights. This can be achieved to different standards depending on the organization’s level of maturity (see Table 1).

### Table 1: Levels of Maturity in Digital Shelf Analytics Adoption

<table>
<thead>
<tr>
<th>Level 1 (Good)</th>
<th>Level 2 (Better)</th>
<th>Level 3 (Best)</th>
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<tr>
<td>Develop manual processes for:</td>
<td>Integrate separate applications for DSA, channel integration, and PIM/PXM, such that actions in one tool can be “pushed” to another tool. This will require either prebuilt integrations from vendors or integration work to be done by development teams within the organizations.</td>
<td>Organizations can either:</td>
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<td>■ Identifying needed changes through DSA.</td>
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<td>■ Choose a vendor that provides a “closed loop” process</td>
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<td>■ Making changes directly in the PIM/PXM.</td>
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<td>■ Integrate the separate applications used in Level 1 or 2 in such a way that a product owner would only need to log in to one application — a unified UI for easy viewing. In order to make changes, the owner would only need to resyndicate, and recheck the insights.</td>
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<td>■ Resyndicating, and then rechecking the DSA to ensure changes are made.</td>
<td>This can be augmented through internal collaboration tools and assigning tasks (which is useful if the owners of the DSA, channel integration application, and PIM/PXM are in separate teams).</td>
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Source: Gartner (May 2021)

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Consider the Needs of Order Routing and Orchestration in Order to Optimize Fulfillment

The final component of an end-to-end product content life cycle is the orchestration and routing of orders coming from various remote channels. Data on orders is required for the supply chain. Digitally mature commerce organizations may have an established order management system (OMS) with flexible inputs. However, orchestrating and routing from third-party channels may require considerable
customization — especially if there are multiple OMSs depending on product lines or a distributed order management system (DOMS) for fulfillment localization. PXM vendors have also begun to address this complexity. They already understand the APIs of common channels and can ease integration into the originator’s supply chain. A logical next step is to accept the order feeds from these channels, transform them as needed for the originator and route them to the correct OMS. This is a nascent and emerging function, so check vendor capabilities in this area if it is required.

Evidence

This research is informed by Gartner inquiries, vendor discussions and market analysis.

Recommended by the Authors

Balance Marketplaces and Direct Channels for Digital Commerce Growth and Customer Engagement
Evolve From Product Information Management to Product Experience Management With a 360-Degree Analytics Strategy
Market Guide for Product Information Management Solutions
Innovation Insight for Digital Shelf Analytics
Failure to Address Product Data Syndication Properly Leads to Penalties

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