Industry Case Study

How E-Commerce Businesses Capitalize on Double-Digit Growth With Semantic Technologies

Semantic knowledge graphs and graph-based data are addressing various information management challenges in knowledge-driven industries. This case study highlights how E-Commerce, a $4 trillion market by 2020[1], tackles its data complexity with a semantic layer, unlocking the power of master data management. Customers and stakeholders are now able to access hyper-targeted information and profit from a dynamic content delivery system that supports an omnichannel strategy.

* Nielsen Insights (2017): "A Look at the Evolving E-Commerce Landscape"

Industry

✓ E-Commerce

Business Users

✓ Partners & Distributors
✓ Marketing & Communication
✓ Product Managers

Challenges

✓ Complexity to keep a 360-degree view throughout the data lifecycle.
✓ Difficulties in offering smart product matching capabilities.
✓ Need to deliver a more consistent and holistic personalized customer experience.

Key Benefits

✓ Data integration
✓ Data Quality
✓ Dynamic content creation
✓ Easy query of complex and changing data types, such as unstructured information

Situation: Scaling the Delivery of Hyper-Targeted Information in E-Commerce

With a prediction of 20% growth by 2020, E-Commerce will need to capitalize on this growth to build a competitive advantage. Omnichannel retailing promises to provide shoppers with a unified experience across online and offline channels. Data management is critical to provide an omnichannel customer experience. One of the biggest challenges is that e-commerce businesses cannot always address the complexity of data to deliver accurate and personalized information to all kinds of stakeholders at scale. Data sets grow as rapidly as the amount of daily active users. Information distributed in PIM, DAM, CRM, DMS, CMS, social media, etc. makes it difficult to keep a 360-degree view of business and customer data. There is no single point of reference to access dispersed and heterogeneous data. The risk of delivering irrelevant and misleading information is high. The need to provide hyper-targeted content is rising as well as the ability to have customer analytics across channels.

Approach: Building a Knowledge Graph as the Cornerstone of Smart Master Data Management

A knowledge graph is the backbone of a sophisticated master data management (MDM) framework. Harmonizing master data with controlled vocabularies makes it easy to annotate content from any system consistently. Siloed data can then be linked and fetched to identify customers across their journey and deliver a consistent experience through online and offline channels. A semantic knowledge graph puts your data into context for personalized and dynamic content creation. Additionally, you get a comprehensive and trusted 360-degree view of critical entities across the enterprise. You will obtain answers to questions about business objects and their relationships in real time. PoolParty helps to provide smart user interfaces while interpreting natural language queries that are automatically linked to the corresponding product information, text fragments, or answers in your help desk. Semantic applications such as smart product matching, semantic search, semantic chatbots, and faceted browsing provide personalized and accurate information not only for customers, but also to dozens of partners, multiple warehouses, and numerous sales channels.

Solution: Integrating Data for an Omnichannel Retailing Strategy

Implementing a master data management approach based on semantic technologies provides e-commerce businesses with connected data silos. Useful information is accessible in a comprehensive way within a single access point. Sharing the knowledge model with partners smooths communication efforts and assures seamless connectivity and consistency in building up the customer experience. Throughout the customer lifecycle, PoolParty assists in integrating and managing your data, in order to help translate business jargon for your customers' needs. Hyper-targeted information and dynamic content creation become true. You will access real-time data flows for better actionable insights, such as data flows from social networks and online forums.

Possible Next Steps: Think Big, Start Small, Learn Fast!

Profit from market intelligence solutions such as analytics and sentiment analysis. Better customer insights can positively influence your product assortment or product development efforts to better comply with your customers' expectations. PoolParty also supports automation solutions based on knowledge graphs, machine learning, and natural language processing. You will be able to develop smart assistants for customer support services even with little data inputs within a specific knowledge domain.

Implementation Insights

A semantic layer links metadata across silos, connecting data from PIM to CRM systems as well as other content management systems. This facilitates a personalized user experience and dynamic content publishing.
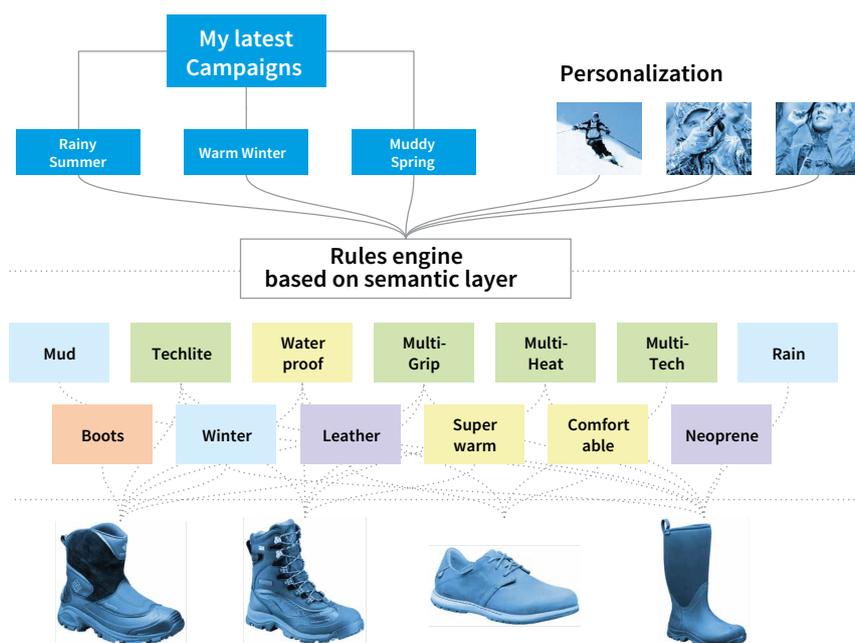
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