



Deloitte Product Data X-ray (DPDx)

Enterprise product data goes digital

Entering the digital era

As we are entering the fourth Industrial Revolution, organizations are deploying a plethora of strategies aimed at increasing revenues and market share including a more customer-centric strategy, optimizing their supply chains to reduce costs, and others. One common denominator in virtually every strategy is the collection and insightful analysis of data. The world is now generating data at the fastest pace ever; in 2016, more than 44 billion gigabytes of data were generated per day, and the number is only going to increase multifold as the International Data Corporation (IDC) predicts that by 2025 the world will be producing 163 zettabytes of data annually.¹ In addition, Enterprise 4.0 is revolutionizing its value proposition by shifting from traditional products into digital solutions and services. To facilitate this new direction, companies should have a consistent product definition and a traceable digital thread to effectively transition from one product offering to the other. We are seeing an increased number of companies transforming the traditional, rigid product

structure into nimble product bundles as a response to constantly changing customer needs, which subsequently requires simple, readily available data across all enterprise systems.

Not all data, however, are in a readable and usable format. We are constantly generating data through social media posts, texts, calls, and emails, or even by talking to customer representatives. We have seen the power of unstructured data unravel even in global political campaigns; retailers, forced by increasing competition, aim at gathering customers' perceptions through data to improve the shopping experience as well as to generate insights into their product lines. Particularly within product life cycle, approximately 80 percent of data is unstructured and can be found in various formats, documents, scans, handwritten forms, and emails. Companies struggle to have full visibility, and real-time access to their product data, often resulting in suboptimal analyses and performance management.

Eighty percent of product data is in unstructured format.

The challenges

Billion-dollar enterprises with large product portfolios, complex supply chain networks, and extensive global footprints are making substantial IT investments in product data and business systems such as Product Lifecycle Management (PLM) and Enterprise Resource Planning (ERP) among others, to increase visibility and oversight into their processes as well as to generate insights to shift from reactionary to predictive analysis.

What usually results from large technology implementation programs is proliferation of product data and multiple options to manage similar processes and tasks with significant importance placed on "governance." Internal and external stakeholders end up spending more time in locating product prices, specifications, and geographic locations of suppliers,

¹ <https://www.idc.com/prodserv/custom-solutions/RESOURCES/ATTACHMENTS/thought-leadership-cs.pdf>

Lack of data oversight, compounded by complex supply chain networks and large product portfolios, further drives compliance challenges.

rather than developing new products. In some cases, the inability to effectively trace and manage data can potentially lead to compliance gaps and/or executives spending excessive ad hoc effort on product investigations. For instance, biopharmaceutical companies may receive warning letters from FDA regarding product quality in their manufacturing sites. These issues raise patient safety concerns, and usually result in cumbersome and months-long manual efforts for the companies to identify the root cause; delays can often lead to hefty fines by the regulatory agency.

The limited visibility to end-to-end product management combined with the proliferation of products and parts not only affects product profitability, but can further expose businesses to quality compliance risks, particularly when tasked with responding to changes (figure 1). Many companies spend millions of dollars in insights generation to further drive profitability and improve operations. Due to different data formats existing in current systems and data not properly captured in standardized templates, usually the vast majority of the data analysis effort is allocated to cleansing and preparing the data before they can be utilized for analysis. This drawback can have immense cost implications to organizations and slow down decision making and issue resolution.

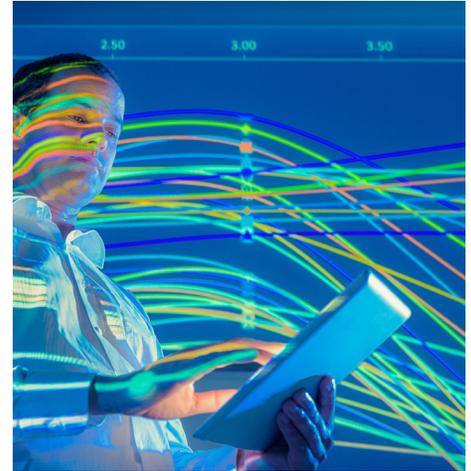
Deloitte Product Data X-ray (DPDx)

Based on our experience helping clients across industries, most organizations struggle with acquiring the digital capabilities to accelerate data digitization and harmonization, both of which are critical in reducing overall cost of insight generation, increasing end-to-end traceability across business systems and functions, and proactively addressing potential compliance gaps.

A focus on data variability assessment is key to prioritizing data rebuilding efforts and to driving scalable solutions. This assessment coupled with clearly defined, managed data governance allows organizations to effectively operate in a multiproduct solution environment, while maintaining data integrity and easily scaling up.

Deloitte's next-gen solution DPDx brings together digital technologies with Deloitte's unparalleled industry knowledge to help organizations better understand their data, define data strategy, and accelerate unstructured data digitization by:

- Aggregating and profiling unstructured and structured data from **multiple sources**
- Auto-classifying documents using **"intelligent tagging"**

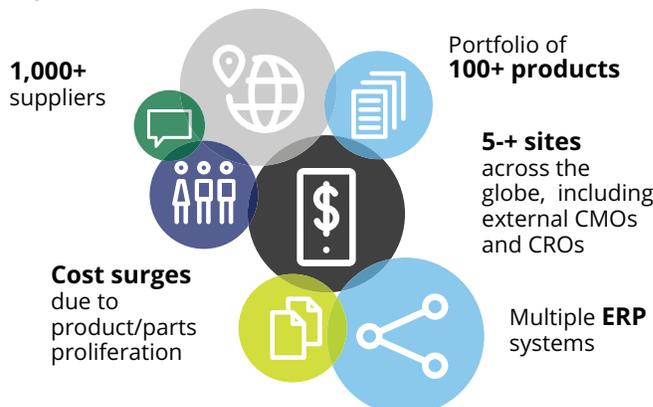


- Extracting data from various formats and multiple document formats using **pattern recognition methods**
- Enforcing standardization into industry-specific templates, leveraging **machine learning algorithms**
- Leveraging **open source** and **big data** technologies as underlying architecture for scalable solutions
- Incorporating **descriptive and predictive analytics** to monitor product data transformation from "meaningless" to "insightful"

DPDx has helped many of our clients address a range of business challenges including, but not limited to, SKU evaluation for rationalization effort, material equivalency analysis for direct material cost reduction programs, Bill of Material (BOM) creation, material code harmonization, and clinical documents transformation, with the following key elements:

- Reduces 50-80% "non-value add" work depending on system complexity
- Improves data quality and data profiling assessment with near-accurate scope definitions for data transformation activities
- Automates data classification and drives industry standardization
- Automates attribute conversion and creates target attributes by appropriately mapping thousands of specs/attributes
- Drives data migration strategies
- Provides a baseline for data governance

Figure 1. The perfect storm



Get in touch



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The authors of this paper would like to thank George Pilitsis, Annie Xu, Dinesh Dhoot and Ankur Kant, all members of Deloitte Consulting LLP, for extending their support and subject matter expertise to this paper.

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