Start with Data

Bluemeteor
PRODUCT CONTENT CLOUD

Modernising Product Information Management: **Overcoming Legacy PIM Challenges**

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Introduction

Providing the right product information, at the right time, on the right channel has become indispensable to remain competitive. Businesses which were ahead of the pack when they invested in PIM technology years ago, now find themselves struggling to manage the nature and scope of modern-day product data management.

PIM systems first appeared on the market at the start of the century as a solution for the costly, time-consuming, and poorly monitored business of managing product data. Over the years, vendors have leveraged advances in technology to launch newer versions with more functionalities. But many have stuck with their legacy PIM systems, and with the emergence of omnichannel and large marketplaces, the challenges for them when collecting, storing, processing and distributing product information have become more acute.

Legacy PIMs are not equipped for fast onboarding of product data without compromising on the quality of product information. Neither can they launch a high volume of SKUs, without needing significant time, resources, and budget. Lastly, they don't have the functionalities needed for widespread task automation, leading to difficulties if the business wants to scale and expand.

This eBook offers information and solutions to the issues around onboarding product data, the role of middleware and the use of automated processes to scale the business easily. Whether it's launching new channels, expanding the range of categories or SKUs, or going international.

Understanding Legacy PIM Challenge

PIM systems are essential for improving sales operations. But older versions have their downsides: they're not as flexible or feature-rich. Additionally, relying too much on manual processes can be costly and isn't ideal for business growth. These are common legacy challenges in today's digital commerce world.

Scalability

As businesses grow, product catalogues expand and multiply, as do the dynamic demands of product information. The capability and capacity of the legacy system cannot manage the increasing volume and complexity of data requirements. Legacy PIMs won't handle large data sets efficiently, leading to performance lags.

Lack of flexibility

The rigid structure of some legacy systems can make customisation difficult.
Adapting to current and future needs, such as increases in volume and complexity of product data will need significant investments of time and money.

High Maintenance Costs

Keeping an old system running can be costly in terms of both money and time. Fixes and patches are harder to come by, especially if the original vendor no longer supports the software.

Data Inconsistencies

Potential problems occur with data quality, normalisation and governance. These emerge when onboarding from outside sources. A legacy PIM might not have the degree of stringency in the functionalities needed for data validation. This impacts further downstream if poorly-validated product data is used across the business.

Legacy systems also encounter difficulties mapping data from some sources (such as ETIM/GS1/ICECAT), and lack the range of automated processes now available.

Configuration, maintenance, and support costs.

Vendors usually dedicate fewer resources to support older versions. That means fewer updates, patches, and little expertise in the market to troubleshoot issues.

Legacy PIMs: Up to 70% of tasks require external scripts & tools

Limited supplier onboarding capability

Legacy systems lack functionalities which provide sufficient rigorousness in normalising and standardising data. Time is still needed to check correctness manually to reduced efficiency. These systems also encounter difficulties mapping data of specialist nature (such as ETIM/GS1/ICECAT). Legacy systems simply lack the range of automated processes now available.

Custom mappings or transformations

Modern data sources might require custom mapping. An older PIM is not very customisable, meaning higher operational costs due to time consumed on these tasks (commonly automated with modern PIM systems).

Inadequate integration

Legacy PIM systems lack integration connectors like APIs or standard data connectors, making it hard to seamlessly ingest data from sources like ETIM, GS1, or ICECAT. Additionally, the proliferation of emerging standards requires specific rules and validations and if these are not supported by the PIM, there is increased risk of data inconsistencies or errors.

Neither are these systems designed to integrate with systems like ERPs, CRMs or eCommerce applications and platforms, making it far more complex to sync data across multiple platforms or to access the latest version of product information.

Lack of functional versatility

If you're still operating with a legacy PIM, up to 70% of what it needs to be able to do has to be done outside of the PIM via scripts, other tools.

The New Age of Product Data Management

In the ever-evolving landscape of the digital era, managing product data is not just about storing and retrieving information. It's about harnessing the power of technology to ensure businesses remain agile, efficient, and ahead of the curve. This means not just gathering product data but doing so swiftly without cutting corners on its integrity. It's a delicate balance of speed and quality, underpinned by robust algorithms, advanced techniques, and the speed and efficiency offered by automation.

Scaling Operations Through Automation of Key Tasks

Automation offers scalability as well as consistency. It drastically reduces the instances of human error so prevalent in legacy PIMs, where manual processing has become the a default way to deal with data quality issues which the existing PIM is ill-equipped to handle.

Nowadays, the capabilities of automation are advancing in leaps and bounds, and it is being applied to key tasks like:

- attribute generation and extraction
- data matching
- product classification
- amendment of language and content errors
- summarisation
- paraphrasing
- localisation

Moreover, the widespread deployment of cloud-based SaaS solutions (adding value with their inherent flexibility and scalability), enables merchants to handle increased product data volumes without needing any fundamental changes to the data infrastructure.

The New Age of Product Data Management

Faster Onboarding of Product Data without Compromising on Quality

Speed-to-market is a key differentiator in the current fast-paced digital environment. The faster a business can get a product to market, the better the chances of capturing market share and meeting customer demands.

When onboarding product data from suppliers and other sources, businesses need to be certain that what comes to reside in their PIM system is high-quality product data which can speedily be enriched and syndicated to every kind of sales channel.

The strategies to ensure this:

- Establish clear and agreed governance metrics and procedures to determine a minimum threshold for data quality and configure the AI tools which can alert or change
- Introduce advanced ingestion techniques to automate the data onboarding process.
- Implement rigorous data validation and cleaning algorithms to ensure that the data entering the system is of the highest possible quality. Here, make full use of machine learning and AI tools which can be configured to predict potential discrepancies in data and rectify them in real-time.

Standardisation ensuring that all product descriptions, categories, or date formats are consistent, regardless of which source they come from.

Normalisation used when analysing or comparing numerical attributes from different suppliers on a common scale, like prices, weights, or dimensions.

Both standardisation and normalisation transform data, but the original relationship between individual data points remains intact. These transformations simply make product data easier to model, analyse and integrate into your systems.

The New Age of Product Data Management

Reducing the Time, Effort, and Cost Required for Product Launches

Digital commerce is about the race to stay relevant, competitive, and viable. Businesses must ensure that their product launches are both timely and cost-effective – in fact, a recent study found that 63% of manufacturers said product information problems cause
delays or product withdrawals, indicating the ubiquity of this issue and its consequences. Given that there's a 56% increase in data volume required to sell a product

Twenty years on from the launch of the first PIM, 50% of manufacturers are still using spreadsheets to manage their product information, when the evidence is compelling that a streamlined Time to Market process leads to increased ROI, revenue, and efficiency in resource allocation.

Improved data integrity

Reduced human error through automated validation procedures in real time

Increased workflow efficiency

Even for complex and large SKU data sets (there's been a 56% increase in data volume required to sell a product over a year), this optimises the journey through all the required validation, approvals, and quality checks

Automated suggestions

For relevant product data, documentation, digital assets and keywords by applying learnt information about similar products in the system. Translation tools to quickly adapt product descriptions and details for various markets, reducing the time and cost of manual translations

ESG and sustainability

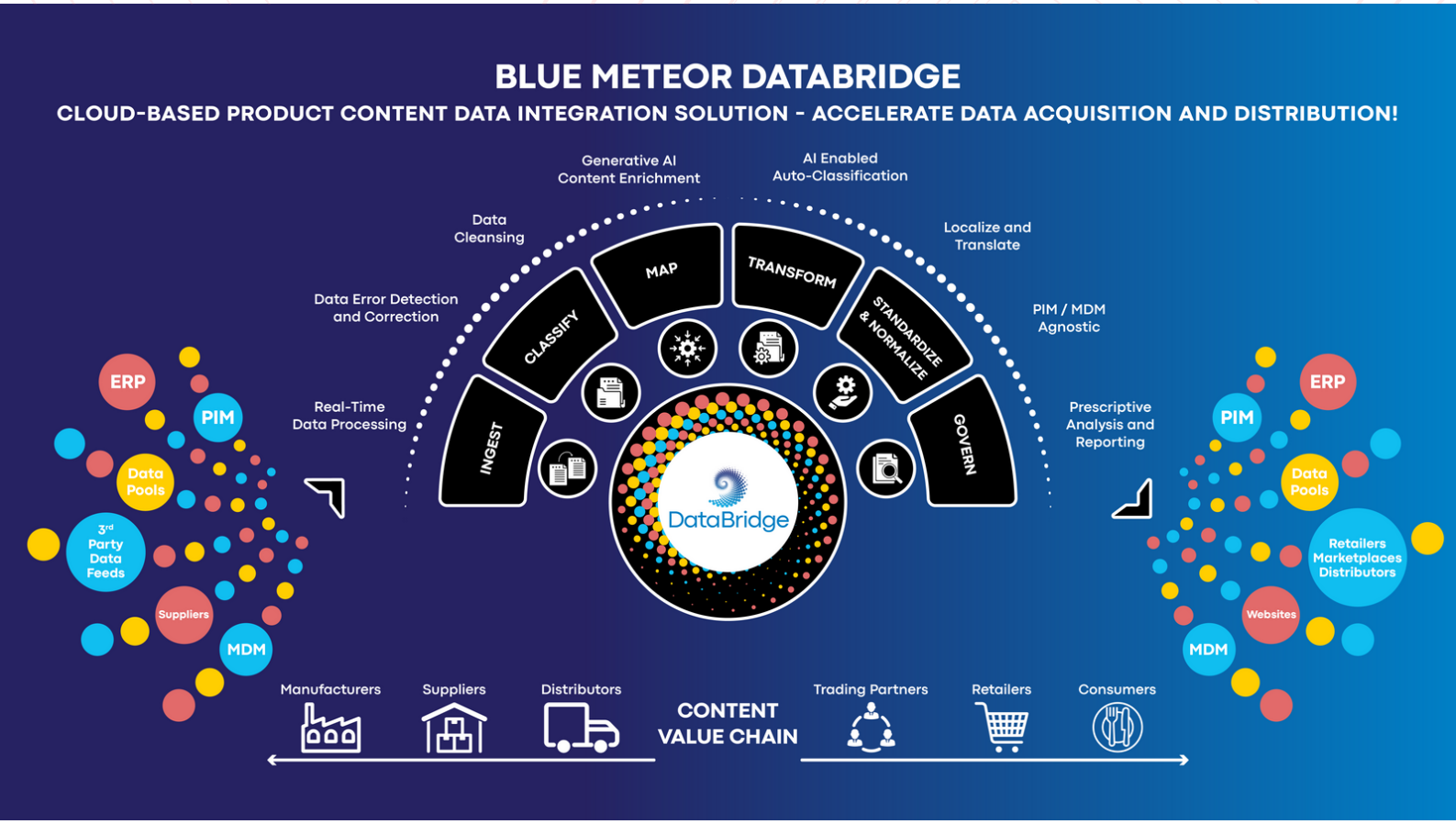
ESG and sustainability: for products requiring regulatory approval, AI can automate, streamline, and validate creation of compliance documentation

Efficient Product Data Onboarding

Automating classification, attribute gathering, standardisation, and normalisation treats data from disparate sources into a consistent format that aligns with your pre-established PIM Validation standards. The goal is to transform data from supplier data sources, spreadsheets, legacy systems, and external APIs into a unified structure.

Streamlining content loading and product onboarding

Here's how a modern PIM onboarder uses automated classification, attribute gathering, standardisation, and normalisation.



Efficient Product Data Onboarding

Product Data Governance

A framework that ensures data onboarding processes are consistent, efficient, and produce high-quality results. Data needs and standards can evolve over time. A robust governance model can provide mechanisms for regular reviews and updates to the data standards and processes

As businesses grow, the number of suppliers and data sources can increase exponentially. A solid governance model allows businesses to scale their data onboarding processes. A good governance model also ensures that all product data adheres to these regulations, reducing the risk of penalties or legal challenges.

Attribute Gathering

Automated crawlers and scrapers can gather product data from manufacturers' sites or other sources to guarantee the most up-to-date enriched content. AI can also extract attributes from product descriptions or images, such as recognising material type or colour from a product image or extracting specific product features from a description. This is essential for businesses needing to deal with an extensive range of products from various suppliers with several different data formats.

Normalisation

Normalisation ensures that all product data is presented consistently, reducing redundancy and enhancing quality. For instance, colour names like 'navy blue', 'dark blue', or 'marine' will all be normalised to the term 'navy'. AI-powered automation identifies and merges duplicate entries, ensuring that there is no redundancy and a single and unique source of truth for each product. Additionally, catalogues stay up to date using live feeds from data sources,

Automated Classification

Machine learning models can be trained to automatically classify products into the right categories based on the product data, images, or descriptions. Natural Language Processing (NLP) techniques are used to understand product descriptions and classify them correctly from context. As more data is processed over time, these models can be refined to increase accuracy.

Machine learning algorithms can be used to automatically assign products to relevant categories and subcategories by training the machine learning model on a large dataset of products and their associated categories.

Standardisation

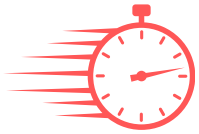
Automation ensures that ingested product data conforms with a consistent format, essential for multi-channel retail where the same product information may be displayed on different platforms. It can alter the values of fields in a given dataset to a standard format. For example, date formats for weight or dimension units, or size measurements, can automatically be converted into the standard format.

Machine Learning models can be used to detect discrepancies and inconsistencies in data and then auto-correct them or flag data points for manual review.

Scaling Operations through Automation

How automation of key tasks helps to scale operations

The potential market is global for those digital merchants capable of scaling their businesses and the following are good reasons for how and why automation enables this agility.



Real-time Data Processing: AI-driven PIMs can process vast amounts of data in real-time, enabling faster onboarding and updating of product information.

Automated Data Mapping and Cleansing: Ensuring consistency of onboarded external data with internal schema is extremely time-consuming but AI can automatically map, cleanse, and standardise data from various external sources, drastically reducing the need for manual processing.

Semantic Understanding: Advanced AI modules understand context and semantics, which is extremely useful when integrating specialist content where nuances in product descriptions or specifications are crucial.

Data Validation and Quality Checks: AI algorithms can perform rigorous validation checks, guaranteeing that all imported data meets quality standards. This reduces the risk of incorrect or inconsistent product information being stored, accessed, or distributed.

Expansion – new markets: To exploit the potential for entering global markets, translating and localising product information is crucial and an automated PIM can support multilingual content and ensure accurate translations for various markets.

Scaling Operations through Automation

Where do you go from here? Strategies for implementing automation in your business operations.

Integrating automated elements into a legacy Product Information Management (PIM) system is do-able, although it will probably pose challenges related to the architecture, modularity, and capabilities of the legacy system. How to prepare for this process? The following approach is necessarily generic, but its broad principles should apply to most cases:

01

Assessment

Before starting the integration, carry out a thorough assessment of the legacy PIM system:

- What kind of interfaces or APIs does it expose, if any?
- What is the underlying database system?
- What functionalities does it have (or lack)?

02

Define Automation Goals

Clarify and confirm what you want to achieve with automation. For example, it could include:

- Automated product data imports/exports
- Integration with other enterprise systems
- Automated data quality checks
- Notifications and reporting

03

Interface Development

- Direct API: If the legacy system exposes APIs, you can directly communicate with these to implement automation. The more likely scenario is that you will need to be prepared to create your own middleware layer.
- Middleware: This acts as an 'intermediary' between the legacy system and the new automation tools. It can handle data transformation, communication protocols, and any necessary business logic.

04

Database Integration

If direct application-level integration is problematic, it is worth considering direct interaction with the PIM system's database. This is risky and a deep understanding of the database schema and integrity rules is an absolute must. Nevertheless, it is sometimes the only feasible option for achieving automation where systems lack API interfaces.

Scaling Operations through Automation

05

Cloud Integration

Depending on the legacy system's capabilities, it might be possible to site some of the automation tasks on cloud platforms. This involves having a robust data syncing mechanism, especially if real-time data consistency is key to operations.

06

Continuous Testing

Naturally, there are risks associated with modifying or interfacing with a legacy system. Make sure you set up a comprehensive testing environment to stress-test automations before deploying them live..

07

Documentation

Legacy systems are often plagued by inadequate or outdated documentation. For any additions and changes caused by automation or integrations, ensure these changes and new interfaces are properly documented. This saves a lot of time if problems arise down the road as well as being invaluable for future maintenance or upgrades

08

Backup and Recovery

Always have a robust backup and recovery mechanism in place - being able to quickly recover from any misstep is essential.

09

Plan for Future Upgrades

Legacy systems are often on the roadmap to be replaced or upgraded. To avoid hindering this future possibility, design the automation in a modular way, so components can be reused or adapted for a newer system when the legacy system is phased out.

Clearly, integrating automated elements into legacy PIM systems can be complex, but do careful planning, get a clear understanding of the existing system, and use modern tools and technologies mindfully.

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Industrial Components Distributor Accelerates Product Content Onboarding by 50% with **BLUE METEOR DATABRIDGE**

The Client

In an era where wholesale industrial component distributors face relentless pressure to expand their market share, one multinational trading conglomerate realized they needed a better way of handling complex product data to improve their sales turnover.

Operating across the UK, EU, and Asia Pacific, their portfolio of 500,000+ products - spanning categories such as automation and engineering tools, electronic components, industrial control systems, and consumable goods - demanded meticulous attention to detail.

They required a scalable solution to transform their management of rich product data, which would accelerate time to market, fulfill customer expectations, and drive omnichannel sales.

The Challenge

- **Gathering precise product information** from numerous manufacturing partners with diverse portfolios is a daunting task without the right tools and systems in place. They have hundreds of manufacturing partners, each with large and complex product portfolios, and extensive variations of each product.

- **Routine product content updates** from manufacturers and suppliers, coupled with regional variations in units of measurement, further complicated their product information management. Ensuring that accurate product information is made available to end customers at all times proved to be tedious and effort-intensive.

- **Crucially, ingesting and integrating product content** from disparate systems was their most formidable challenge and pain point. Onboarding data from new supply chain partners was extremely complicated and marred by constant delays.

The factors stated above hindered our client's ability to maintain consistent, accurate, and engaging product content to their millions of customers worldwide.

The Blue Meteor Solution

Enter Blue Meteor DataBridge, our AI-enabled cloud-native content syndication platform. By implementing DataBridge, our client discovered a seamless, business-user-friendly solution that targeted their specific product content requirements.

DataBridge automated the sharing, onboarding, and syndication of rich product information throughout the entire product content lifecycle, offering the following benefits in the process:

- **Seamless Onboarding:**
  The systems used by manufacturers and other supply chain partners were seamlessly integrated with DataBridge, which automated and sped up the onboarding of rich product content from multiple sources.

- **Accelerated Time-to-Market:**
  DataBridge's automation capabilities also identified and plugged gaps in their legacy product information management, so the client could bring their diverse range of products to market faster than ever before.

- **Efficient Product Data Updates:**
  DataBridge automated and improved the process of updating product information across the client's omnichannel presence, ensuring accuracy and consistency in line with existing regulations.

- **Enhanced Customer Experiences:**
  All of this means that their customers now have access to comprehensive, compelling, and accurate product content across all channels, all the time. This helps foster trust and satisfaction.

The Business Impact

By adopting DataBridge, the client witnessed transformative outcomes. Rapid onboarding of omnichannel product content has become the norm – A 50% boost in onboarding speed, without compromising the quality of complex product information. The automation of critical tasks, including classification, attribute gathering, standardization, normalization, content loading, and product onboarding, has paved the way for operational scalability.

Moreover, by launching an extensive array of products from a growing number of manufacturing partners, the client achieved significant time and cost savings. Reduced time to market and heightened customer engagement are the true cornerstones of this success story.

Conclusion

This case study is a testament to how innovative solutions can help overcome immensely complex challenges. The client's strategic integration of Blue Meteor's DataBridge not only resolved their immediate hurdles, but also positioned them as industry leaders in efficient product content management. As the industrial components sector continues to evolve, this example serves as an inspiration for other brands seeking transformative solutions in ever-changing and emerging marketplaces.

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Legacy PIMs – challenges and solutions

Lack of flexibility and scalability

Many legacy PIMs were built with a specific data structure in mind. This can cause problems when onboarding data from various suppliers, each with its own unique format or structure

Solution

Middleware like the Blue Meteor Data Bridge has AI capabilities which Automate the process of importing, consolidating, and standardising product data. It can recognise and adapt to varied data formats and structures as well as dynamically scaling resources based on data volume, ensuring seamless integration regardless of the source.

Manual Data Entry

Older systems will not have sophisticated import/export tools, causing an increased reliance on manual data entry.

Solution

Use automated data ingestion processes from middleware to pull data from diverse sources, minimising the need for manual entries. Algorithms can identify patterns and inconsistencies, to make suggestions or auto-correct common errors in data entry.

Integration Issues

Legacy PIM systems tend not to facilitate easy integration with other enterprise business systems like ERP, CRM, or e-commerce platforms. This leads to a fragmented, 'siloed' approach to product data management.

Solution

Middleware platforms provide connectors or adapters for a wide range of systems, enabling smooth integration between legacy PIMs and modern platforms like ERP, CRM, or e-commerce systems. Additionally, these platforms can enable organisations to offer their suppliers and customers the capacity to onboard and access product content via API connectors.

Limited data validation tools

Older systems often do not possess the comprehensive validation tools required for increasingly complex and voluminous product data. Making them open to inaccurate, incomplete, and uncorrected product data from suppliers.

Solution

Leverage data services to transform messy, inconsistent product data into clean data and ensure that any inconsistent product attributes have been altered to fit with the business's specific data model and taxonomy.

Accelerating Product Launches

The following are strategies to launch a large number of products quickly, at scale, with less effort, and at as low as possible a cost per SKU

Seizing Market opportunities: Timing is key, because market opportunities are often fleeting, and any delay in launching can mean missing out on a lucrative niche or spike in demand.

Competitive advantage: Being first (or at least, among the first) to market gives your business a crucial competitive edge because it enables you to set the standard and capture market share before competitors get up to speed.

Optimised resource use: Speeding up TTM often requires companies to optimise their resource allocation. This can result in more efficient deployment of resources -personnel, technology, time, and capital – so their use is the most effective possible.

Risk reduction: Markets are dynamic and change rapidly nowadays. By reducing TTM and monitoring market trends through real-time analytics, companies can respond faster to changing circumstances, thereby reducing the risk of launching a product or service that's no longer in demand or relevant.

Strategies for cost-effective product launches

Mapping the Product Data Lifecycle

This can help you uncover ways to work smarter and faster in terms of process optimisation and workflow management, where multiple departments have a stake in a successful launch.

Automation tools

1. Use automation for the movement of product data from any source to any target

2. Use the Blue Meteors Data Bridge to automate the import, consolidation, and standardisation of product data. This includes the transforming product data into industry standards - including ACES/PIES, ETIM/BMECat, and several others

3. Optimise workflows to speed up the collection and distribution of product data across multiple touchpoints and accelerate new product introductions

4. Offer suppliers and customers the ability to onboard and access product content via API

Leveraging teamwork

Cross-functional teamwork and data governance play crucial roles in reducing the time taken from onboarding product data to getting the product information to market:

1. *Efficient Collaboration*: When teams like marketing, eCommerce, sales, and product categories collaborate effectively, processes are streamlined, making it easier to identify bottlenecks, and share responsibilities. quicker decision-making and problem-solving accelerates the product launch timeline.

2. *Data Quality Assurance*: By defining data standards, responsibilities, and processes, data governance prevents errors and inconsistencies which delay product launches.

3. *Streamlined Workflows*: Cross-functional teams can design and implement streamlined workflows for handling product data. With clear processes, product data moves seamlessly from the point of onboarding through various stages of preparation, validation, and enrichment. This minimises the risks of data being 'ghettoised' in silos or undergoing unnecessary iterations.

4. *Real-time Collaboration*: When your central data repository is accessible in real-time for all relevant teams, it makes simultaneous tasks easier. So, for example, marketing can start to craft enriched product stories while the supply chain team ensures that inventory levels and logistics are prepared. Real-time access to reliable data expedites informed and rapid decision-making.

5. *Compliance and Risk* Mitigation: By sticking closely to regulatory requirements and identifying potential data risks early in the process, cross-functional teams avoid costly delays caused by non-compliance or unexpected issues arising later in the product launch process.

6. *Continuous Improvement*: Both data governance and cross-functional teamwork create a culture of continuous improvement. Regularly review and refine processes to optimise efficiency and reduce time to market with each product launch

Interested in **accelerating the collection and distribution** of your product information at scale **withough compromising on quality**?

Get in touch to find out how

Start with Data

Start with Data is the UK's leading product content services business 100% focused on enabling retailers, manufacturers, and distributors to get their product data and processes into shape and keep them there—so they can compete and thrive in today's competitive digital economy.

Explore our comprehensive range of services and discover how we can help you transform your product information challenges into business benefits. So, you can fuel revenue growth, free up your team, and reduce costs and risk.

startwithdata.co.uk

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Blue Meteor Product Content Cloud brings together three core components — Blue Meteor Amaze Product Experience Management (AmazePXM), Blue Meteor DataBridge, and Blue Meteor DataXchange — enabling organizations to streamline data flow and maximize value at every step.

Blue Meteor DataBridge automates the flow of product content between suppliers and retailers, giving you the freedom to sell more, grow more, and profit more.

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