



**HONEYWELL
FORGE**

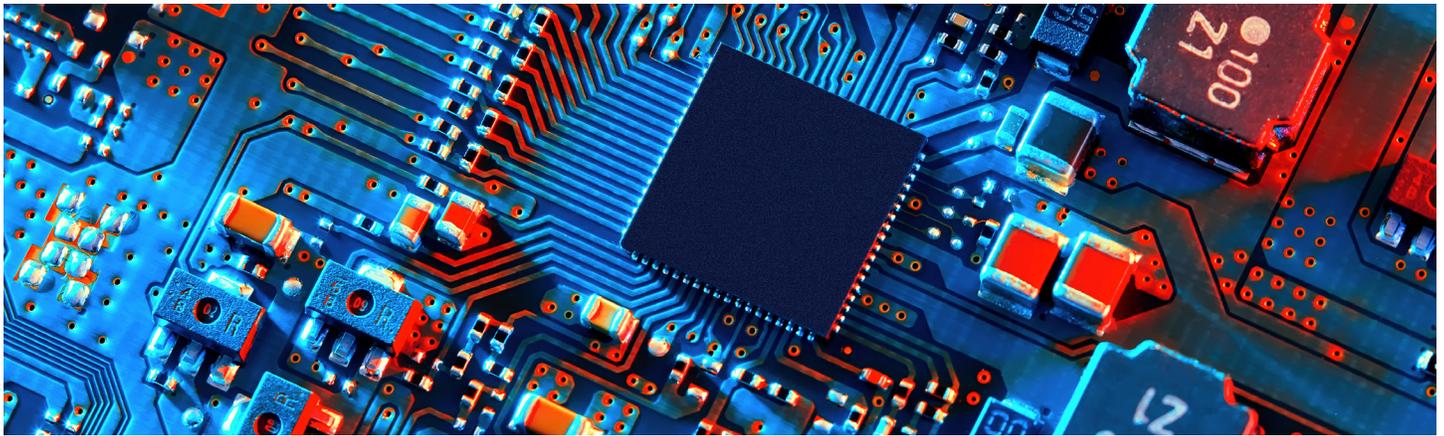
MASTERING DATA MANAGEMENT SOLUTIONS



Having a 360° view of your customers, suppliers and products is critical to the success of any enterprise. Getting a clear sense of who your suppliers are enables your business to optimize payment terms or consolidate into fewer vendors. Thoroughly understanding who your customers are can assist your organization in providing them an extraordinary customer focused experience.

Understanding these key facts can benefit your organization by reducing sales cycles, improving customer satisfaction, increasing market share, increasing cross-sell and upsell opportunities, and improving supplier productivity through the reclassification of products.

This is why many enterprises buy Customer 360, Supplier 360 or Master Data Management (MDM) capabilities from vendors or build them out themselves. Getting a true picture of your suppliers, customers, and products is especially difficult when you are dealing with geographically-dispersed thousands of suppliers across multiple, independent procurement systems and an even larger number of customers spanning multiple enterprise resource planning (ERP) and customer relationship management (CRM) systems. One solution is having a consolidated and scalable data set of customers, suppliers, and products. There are, however, several challenges in achieving this 360-degree view of your customers, suppliers and products.



CHALLENGES

Channel expansion, data silos and increasing data volume

When you're a small business that has few suppliers, you only deal with a handful of products, and sell to a small number of customers, answering questions like "How many customers do I have?" "Are these two suppliers the same?" and "How much do we purchase from a given supplier?" is relatively easy.

However, over the years, when businesses expand into multiple countries, acquire other businesses, have subsidiaries, store data in multiple systems of engagement that could be hosted in the cloud or on-premises, and interact with customers and suppliers through several channels, answering these questions becomes a bit more complex.

In many organizations, data is spread across systems that are in the cloud and in different locations. Data also comes in multiple forms from a wide array of sources and getting it all organized

can be a huge challenge. Furthermore, data can exist in source systems as purchase and sales records, form entries, support tickets, and shipping records and can come from in-store interactions, social media conversations and call center records. The systems where these data records exist often do not talk to each other, complicating the ETL pipeline and hiding valuable.

To exacerbate the situation in this data-driven world, one must contend with data growth. IDC is predicting that the Global Datasphere will grow from 33 ZB to 175 ZB by 2025¹. What was a simple problem has now become a much more complex problem. How we manage this explosive data growth and empower the business users to have proactive dimension management for reporting and insights is now of paramount importance. Your MDM solution needs to be source-agnostic, flexible, scalable, and accurate with a 360-degree view of data, so it can easily support your business use cases of today and in the future.

Entity resolution is non-trivial

Do you have duplicates in your supply chain? Every enterprise has this problem. Before you drive business insights, you must blend the data from a variety of sources such as CRM to ERP to data warehouse into a data model and then you must curate the data.

During the curation phase, there may be six different data records for a single customer or a vendor, which resulted from various touchpoints between the customer and sales teams and the channels they use to communicate. To fully use the data it needs to be consolidated from a marketing campaign to selling a product to shipping an order.

It may be dubious when these multiple records point to the same account. Typing errors by sales reps and variations in data from different branches of the same company or to subsidiaries of the parent company may cause key errors in the

supply chain process. Contacts for customer accounts could have changes in emails and even changes in names. These different account names for the same customer account need to be consolidated into one to provide a true picture.

Traditionally this data housekeeping is done using rules and combining other attributes of a customer account. Coming up with these rules is a daunting task. On the other hand, artificial intelligence (AI) algorithms and business domain intelligent matching techniques make it easier to address missing data and data quality issues to create a referenceable entity, resulting in accurate and consolidated data.

Changing landscape

Traditional MDM solutions for matching and entity consolidation have relied on rules that have been hand-coded by people in the organization. Typically, there is a lot of variation in customer/supplier names resulting in a large number of rules. As the number of rules increase, they become very difficult to keep track of, given that new rules are often created to cover new problems. As the needs of the organization change and scale, these rule-based MDM systems can hamstring the organization and won't scale to provide the best results for your business.

You need an MDM solution that is future-facing. Make sure your solution can assimilate the addition of the new and different source systems to support use cases for mergers and acquisitions and the growing needs of the organization. Your data is also bound to change, so you want to ensure the MDM solution is flexible enough to accommodate these data changes and support new use cases that come up with time.

You're going to have new suppliers and customers, and some existing customers will leave for alternative solutions. The other complexity large enterprises face is that they have several independent businesses that have their own procurement and CRM systems. You want to run use cases where you can understand suppliers across the enterprise as an example.

Innovative, AI based MDM solution

For Honeywell AI teams that develop automated decisions and continuous process optimization solutions, data quality is of utmost importance. So, Honeywell decided to use AI in the development of Honeywell Forge Data Unity to help our customer address the MDM use case. Honeywell has extensive experience with incorporating adoption of artificial intelligence technology to improve operations from marketing campaigns to selling into enterprises to fulfilling orders through its supply chain for its independent businesses. AI models accelerate digital transformation by providing the ability to automate data preparation and create contextualized domain specific, master data for suppliers, customers, and products. This is designed to help the productivity of internal data science teams' efforts to generate insights to reduce sales cycle, improve customer retention, increase market share, or improve vendor terms. Honeywell's unique ability of combining supply chain specific semantics and AI models enables businesses to automatically map all the processes of blending data from silos to creating contextualizing data mapping to clean rationalized, analytics-ready data sets –all designed to limit the need for IT help or specialized technical or data skills.

Honeywell Forge Data Unity is a data liquidity software for the enterprise, turning data across the enterprise into actionable knowledge. It offers in-built intelligent templates for Sales, CRM, Procurement, and more business domains to help our customers unlock value across functional domains and to accelerate business value creation. The solution is designed to help our customers eliminate duplicates, resolve data integrity issues and automatically fill missing data values to create an authoritative view of your business-critical disparate data sources. It also identifies relationships within your data to highlight connections between customers, suppliers, products and more to drive cross-domain analytics.

Honeywell Forge Data Unity is designed to be a scalable, source-agnostic solution for MDM. It can onboard data from 200+ different, large sized, structured, and semi-structured data sources. In parallel, it analyzes groups of reference data for suppliers, customers, or product as an example to rationalize and respectively create golden records for data sets. It does this with a high degree of confidence and empowers subject matter experts to validate the results to override the entity consolidation as needed. Honeywell Forge Data Unity is future proofed for enterprises that undergo M&A changes. The pre-trained machine learning models will map, contextualize, and update the golden data records based on new source systems.

Conclusion

Honeywell Forge Data Unity is designed to create an accurate 360-degree view of customers, supplier and products data, enabling a wide variety of use cases for reducing sales cycles, improving customer satisfaction, increasing market shares, increasing cross-sell and upsell opportunities, and improving supplier productivity. It's flexible enough to adapt to changes in the environment, support different source formats, and it leverages advances in AI technology to scale with data growth to help our customers empower their businesses to drive insights.

¹<https://www.co.kenney.com/procurement/article/?/a/realizing-the-power-of-procurement>

²Unifying Honeywell's Procurement Data: An Internal Case Study for the Honeywell Forge Data Unity Solution

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