Tamr
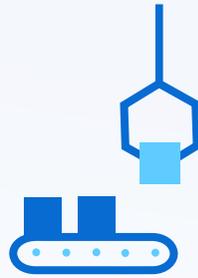
The CDO's Guide to Spend Analytics for Manufacturing

Introduction

Every Chief Data Officer (CDO) knows that accurate spend visibility makes the difference between a "business as usual" and a "best-in-class" procurement organization. Without the right spending insights, organizations can't make the smart decisions that lead to continuous improvements and economic advantages.

Although accurate spend visibility is crucial, enterprises have been managing their parts and spend data using an outdated approach—traditional Master Data Management (MDM). When MDM techniques were introduced, they worked well for the type, variety and scale of data-mastering challenges that existed 15 years ago. Today's data challenges require a different approach.

Tamr's spend analytics solution delivers breakthrough insights, enabling procurement teams to effectively manage suppliers, spend and materials. The solution uses a human-guided machine learning approach that is scalable to any level. It can cleanse and integrate various information sources, both historic and current, to ensure that your organization has the negotiation leverage in every supplier interaction.

Traditional Approaches Can Lead to Inaccurate Results

Recently, Tamr worked with a Fortune 100 high-tech OEM. The company thought it was negotiating based on accurate spend visibility across suppliers. One of their key suppliers pointed out, however, that the OEM was spending two times less than what they thought—and had analysis to back up the claim. The obvious question emerged: "Can we trust any of our spend analysis?"

The root cause of the inaccurate spend analysis was traced to a home-grown, rules-based system. Business users were creating records in an ERP system using item descriptions. Downstream users had to periodically verify these descriptions into a taxonomy. Due to the OEM's short product life cycles and large numbers of SKUs, mistakes in classifying parts multiplied quickly. Their issues with the traditional MDM approach multiplied with each attempt to scale, for several reasons.

1. Static rules to clean or improve data quality were producing diminishing returns.

2. The rules-based process was resource-intensive, slowing business velocity.

3. Data got more untrustworthy over time, compounding the issue.

Update your Technology Toolkit with Machine Learning

Traditional approaches to data mastering produce less-than-optimal results. The velocity and variety of data is outstripping MDM approaches that are dated, don't scale, and are highly resource-intensive. Most manufacturers still rely on application integrations to unify data. This may work for some applications, but it is not the solution to every problem. Others aggregate data into lakes and then employ data engineers to write business rules to compensate for data quality and variety. This method falls short as well. Research shows that **85% of projects with deterministic rules (traditional MDM) fail** to meet their stated goal.

Tamr recognizes that the problems created by **data variety** are precisely what machine learning (ML) can solve in an agile way, resulting in **data mastering at scale.** Tamr's probabilistic, model-based approach is expert-guided, scales quickly, is far less resource intensive, and delivers value quickly by feeding analytics engines and downstream applications with structured, unified data.
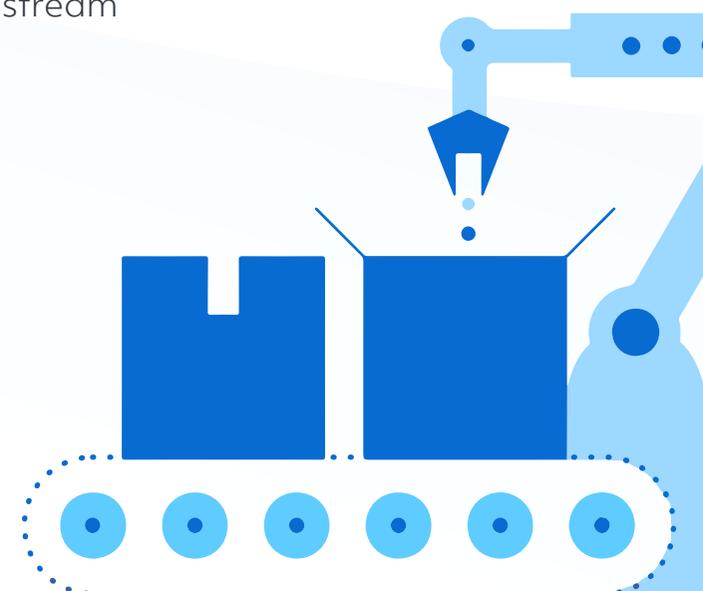
The Future of Data Management: Agile Data Mastering and Classification

The software development industry has been employing agile approaches for years, often referred to as DevOps. The same DevOps practices and principles apply to data management, or DataOps, using Agile Data Mastering (ADM).

ADM connects people, processes and tools together to treat data unification as an iterative process that combines ML with subject-matter expertise. As subject matter experts train and validate the ML models, the models' accuracy improves. The smarter the model becomes the less human interaction is required. Here are some of the main benefits of ADM:

1. It's scalable: With human expertise combined with ML, companies can integrate datasets from a variety of sources and file formats, allowing scale without sacrificing accuracy.

2. It's faster: ADM tools can deliver results in days that traditional methods might have needed months or even years to obtain. Yes, ERP consolidation projects, for example, should take only a few months and not years.

3. It allows for team innovation: When technical teams and analysts aren't spending endless days on data prep, they can focus more on unlocking actionable business insights from unified, accurate data.

4. It opens new opportunities: With reduced costs, projects shelved or stalled due to high cost and high risk can finally get the attention they deserve.

5. It promotes flexibility: ADM allows teams to respond to the unexpected, faster and more effectively than ever before, such as switching suppliers due to quality issues, finding alternate/substitute parts or proactively adjusting to rising or falling raw material costs.

Companies like Tamr use ADM to drive analytic outcomes and solve data problems every day. This human-guided, machine learning modern data management model is crucial for enterprises because it unifies data up to 10 times faster than traditional methods at up to 90 percent lower cost.

Building a modern data mastering, machine-learning model

While ADM offers significant advantages over traditional MDM, there are some important keys to implementing it successfully:

Machine learning: Traditional MDM required manual analysis of systems, coding of data and definition of rules. Agile data mastering uses ML models that do these things in a fraction of both the time and cost.

Expert input: Humans train the machine learning models to ensure accuracy. Instead of juggling thousands of rules, human experts can simply define a handful of rules that make the machine learning models smarter.

Transparency: Visibility is key in ML management. This helps the models ensure accuracy and compliance with internal, external and reserve auditors.

Low-latency matching: DataOps teams can integrate MDM systems back into operational systems as a system of record, like ERP solutions. These operational systems can then get sub-second access to the MDM to suggest mastered data to users or update data at the source. This ensures that data remains better synchronized across the enterprise.

Continuous innovation: Future data mastering opportunities include data error detection and correction and model management. By remaining open to these options, enterprises can ensure they are on the forefront of data mastering.

These requirements will help ensure that you achieve the full promise of modern master data management at scale for your organization.

Start Building Your Model for Data Mastering at Scale

If you are a new CDO, your success is based on your ability to achieve quick wins. Here are our top four recommendations for your first few months on the job:

1. **Communicate with peers and stakeholders:** Implementing new data processes is as much about people and processes as it is about technology, and it often requires cultural change. Creating a cultural shift is one of your biggest challenges to bridging the gap between operational agility and corporate control. Opening the lines of communication between business stakeholders and their enterprise data architecture teams is essential.

2. **Establish benchmarks:** Map out a plan prior to starting your work, so you can measure the company's progress. It pays to analyze the outcomes your team is driving. You should be able to answer questions such as:

   – Errors: How accurate is your data?

   – Deployment speed: How quickly is your team able to get results or reports into your customers' hands?

   – Productivity: Is your team able to effectively work together?

3. **Leverage the data from traditional MDM to show the results of your ADM efforts:** Unleashing value and increasing revenue are important goals. Comparing past to current results will help you reach your goals faster and know when to pivot if something isn't working.

4. **Seek out your CDO networks and agile data mastering experts:** The old adage of not reinventing the wheel exists for a reason—other people have been in your shoes with this monumental task. Find your network and related associations and ask for insights from other professionals and peer forums. Don't be afraid to talk to data mastering experts.

Next Steps

Tamr's human-guided machine learning platform masters and classifies data at scale, quickly, and drives continuous improvement of data quality so you can focus on actionable analytics rather than fixing data in an endless loop. Tamr's solution is scalable to any level, and has proven to produce transformational economic outcomes. Staying focused on what you know will bring your enterprise the results it needs to transition to a modern data management model: human-guided machine learning within a data ecosystem that drives value and increases revenue.

To learn more about how Tamr can help you create an analytics-driven organization using Spend Analytics, schedule a demo today.

Schedule a Demo

About Tamr

Tamr is the leading data mastering company to accelerate data-driven business outcomes. Industry leaders like: Toyota, Societe Generale, GE, and Thomson Reuters trust Tamr to manage their enterprise data as an asset. Tamr's unique approach of using human-guided machine learning algorithms to accelerate data mastering projects lets the world's largest organizations enhance their data operations, rapidly activate latent data, and increase the velocity of business outcomes through data-driven insights. With a co-founding team led by Andy Palmer (founding CEO of Vertica) and Mike Stonebraker (Turing Award winner) and backed by investors including NEA and Google Ventures, Tamr is transforming how companies get value from their data.

To find out more, visit tamr.com