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MASTER DATA MANAGEMENT FOR MANUFACTURING

BECOMING AGILE AND
LEAN WITH QUALITY DATA

Digital Transformation for the Post-Covid World

WHITEPAPER



AT THE HEART OF DIGITAL TRANSFORMATION LIES DATA

With global supply chains and a complex landscape of suppliers and vendors, the coronavirus pandemic impacts manufacturers the hardest. But their biggest challenge isn't in balancing supply and demand. It lies in preparing for the period when there is a medicine or vaccine available. As digital becomes the lifeline for many organizations today, Covid-19 is fast-tracking digital transformation worldwide.

DIGITAL TRANSFORMATION NOW

Companies that successfully manage to use new technologies to improve processes and outcomes, will not only survive the current period but also flourish in the post-Covid, digital world. For manufacturers, digital transformation means improving supply chain excellence, faster time-to-market and creating better customer experiences. The common driver in the biggest digital trends is data, the most valuable asset for companies today.

DRIVING MANUFACTURING SUCCESS

The ability to master data from all the different domains a manufacturer has will greatly influence its success. Quality data forms the critical foundation for succeeding in the digital economy, whether it's for e-commerce, D2C, vendor management, supplier onboarding, faster production or innovation. The solution for creating a single source of truth is called Master Data Management (MDM). MDM helps manufacturers to integrate multiple systems to deliver accurate and timely data across the organization and beyond. It automatically syndicates the data per vendor or channel. From demand planning, supplier sourcing to supply chain, design, vendor management, e-commerce and customer experience. Quality master data makes operational excellence, increased revenues and stronger customer relationships possible.

This white paper will explain how managing your data will accelerate your digital transformation into a leaner and more agile organization. We'll dive into the business benefits of MDM and point you to the success factors and pitfalls of starting your MDM project.

Joeri Moors

MDM Market Development Manager at Osudio

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MANUFACTURING TODAY: DISRUPTION AND DIGITAL TRANSFORMATION

Today's markets are characterized by complexity, ambiguity and uncertainty. Consumers expect an exceptional experience, online research has become commonplace, prices for oil and raw materials are volatile. On top of it all, come global events with worldwide impact such as policy decisions, sudden tariff changes and the coronavirus pandemic.

With roughly half of the world's population in some form of lockdown, the global economy is taking serious damage. The corona outbreak affects supply chains and disrupts manufacturing operations. Especially companies that rely heavily or solely on factories in China for parts and materials have had a stormy period. Manufacturing will be among the industries to be most negatively affected, IDC warns¹. Global demand and supply started to decline in March 2020, but it is too soon to say what the full impact will be. The new situation will create new winners and new losers, depending on how they react and plan for a post-Covid world.

THE IMPACT ON MANUFACTURERS

Amidst the non-stop news shaking up global economies, from trade wars to Brexit, the arrival of 5G and the Internet of Things (IoT) to regulatory pressures such as the GDPR and digital disruption, the coronavirus is now piling even more pressure on to the manufacturers. In the short term, many manufacturers have to struggle for survival and business continuity. Initial reactions focus on new health regulations, the decentralizing and virtualizing of work processes and risk assessment.

From video conferencing to remote health diagnosis and treatment, any process that can be rapidly digitized has been virtualized. Reliance on e-commerce increased. Some manufacturers solve disruptions in the global supply chain with 3D printers². Essential for all companies now is not to waste energy on initiatives that are too big to execute or that are only focused on the first phase, since there will be several phases on the way.

PREPARING FOR THE POST-COVID WORLD

2020 will continue to be a bumpy ride. As governments work hard to minimize the economic impact, both the demand behavior as well as the supply and marketing capabilities of companies will be heavily disrupted. This calls for the reimagining of the workforce and the business process models to meet fluctuating demand. Companies may need to restructure financially to maintain work capital and secure cash management. With a population eager to get back to normal, measures and regulations are expected to be lifted when possible. However, new virus outbreaks with new lockdowns should be expected until there is a definite vaccine or medicine.

In a post-Covid³ world, we are hyper-aware of every touchable surface that can transmit diseases. Contactless payment and interfaces will, therefore, take the place of touchscreens and buttons. Working from home and videoconferencing will replace unnecessary travel, and the boost in online shopping is likely to accelerate further. The usage of robots may

drastically increase since robots aren't susceptible to viruses. From factory processes to health care and delivery, the realization is dawning on companies how robots and automation can keep businesses running during future pandemics. Manufacturers will want to rely more on local markets than global markets, shortening the value chain and making it more resilient. They will have to reconsider their whole supply chain and transform into an organization that's ready for the next disruption.

DRIVING DIGITAL TRANSFORMATION

In the long term, the corona crisis is contributing to technical progress, says the majority of respondents in the DMEXCO⁴ Trend Survey.

They expect the digital economy to emerge stronger than ever before from the current situation. The pandemic will accelerate the pace of the digital transformation. But that doesn't mean manufacturers should blindly adopt new innovations or launch new initiatives without considering their purpose or added value. More than ever, manufacturers should focus on their business and transform from within. Digital transformation should always be about business first, tackling commercial issues at hand and then considering how technology can help. The following five trends point towards the biggest areas where digital transformation is adding the most value in manufacturing today.

THE CORONA OUTBREAK AFFECTS SUPPLY CHAINS AND DISRUPTS MANUFACTURING OPERATIONS.

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THE FIVE MANUFACTURING TRENDS OF TODAY

The future of the manufacturing industry is shaped by a number of trends and emerging technologies that are continuously evolving. These all point towards the same process that's taking place in other markets today: digital transformation.

Organizations that started the road to digital transformation early, now reap the benefits during the corona outbreak. E-commerce keeps revenue coming in and video-conferencing ensures offices continue to function. But digitization doesn't work for every sector. Even digital companies like Lyft and Uber currently experience great difficulties as the core of their business is physical. For manufacturers, the puzzle is even more complex, with many domains to consider. The takeaway here is to focus on those areas that bring direct tangible value. The following five manufacturing trends are riding the digital transformation wave in manufacturing with quick ROI:

1. IMPROVE SUPPLY CHAIN EXCELLENCE

With suppliers on one end and wholesalers, distributors and retailers on the other end, manufacturing sits in the middle of the supply chain. The manufacturer has different relationships with these two opposites that may result in disparate systems and processes⁵. This is where manufacturers find a lot of ground to cover for improvement: lower operational costs, minimize waste and increase efficiency. While the joint goal is to create value and progress a product through the chain, it's typically the manufacturers who push for a leaner supply chain. At the start of the chain, manufacturers aim to onboard suppliers following product data standards. This literally sets the standard for the quality in which product data is then centralized, enriched and shared further down the chain as a single version of truth.

On the other end lies the vendor landscape, which is often incredibly complex. Large retailers have multiple lines of business, locations, regions, divisions, operating companies and sales channels. Depending on the vendor and how it's organized, manufacturers find themselves engaging in different systems and business processes. This complexity generates a massive amount of vendor master data that needs to be managed. High data quality and accessibility enable the manufacturer to streamline vendor-related processes and distribute more efficiently. By integrating processes across the entire organization, from product development to manufacturing, logistics and service, the value chain from suppliers to customers becomes lean and efficient.

2. FASTER TIME TO MARKET

With 25% of total revenue and profits⁶ across industries coming from successful new product launches, time to market matters. But in today's product development environment, the underlying technologies and products are changing rapidly. From planning, design, production, sourcing and selling, every phase of the product lifecycle produces data. Managing that data brings the agility to exchange information throughout the product's lifecycle quickly and efficiently. Manufacturers can set product deadlines, establish milestones, and handle change orders in seconds. Across the supply chain, everyone, from shipping to end-customers, receives accurate updates on product detail changes and has real-time access to product specifications. Manufacturers aiming to increase their time to market will find two solutions that work closely together. According to Gartner, faster time to market is one of the most desired benefits that manufacturers expect from a Product Lifecycle Management (PLM). Integrating PLM with MDM

will further accelerate the time to market. A customer survey by **Stibo Systems** reported that 58% of organizations using their MDM solution reduced their time to market from months-to-weeks and 36% went from weeks-to-days.

3. SHIFTING THE CUSTOMER FOCUS

Traditionally, many manufacturers had a B2B business model that focused on their vendors. But with current consumer trends such as product customization, products becoming experiences and social responsibility, manufacturers are shifting their focus to B2B2C. Meeting these new consumer needs calls for product data enrichment and traceability of parts and ingredients to the suppliers. Some manufacturers decide to take things further and start with D2C⁷: selling directly to consumers. This gives manufacturers better control over their brand and price, resulting in increased profits and better corporate image. D2C also allows for prototyping and getting it faster to the market to test, improving the manufacturers' competitive edge with business agility. Additionally, selling direct to customers allows manufacturers to collect consumer data that ultimately leads to better products, stronger customer relationships and increased sales.

4. PRODUCTS BECOME MORE DIGITAL

Digitization transformed CDs into iTunes and later into Spotify. And while not every physical product can be turned fully into a digital service, almost every product today has a non-physical part. Through a subscription model or by offering smart, connected products, manufacturers can position themselves as part of the customer experience. In the end, customers don't want to own a product per se. They want the ability or the experience that the product gives them. Digitization also allows manufacturers to improve their service operations through remote connectivity and predictive maintenance. By offering product-as-a-service the manufacturer retains ownership of the product and provides all the required maintenance, service and repair. This puts the manufacturers' focus on the outcome and less on products. Digitization and the implementation of a product-

as-a-service model challenge the existing IT systems by the amount of data involved. From products, customers, assets and services to new data generated by these new business models, the data requires quality, accuracy and timeliness. The collection, analysis and distribution of data are essential for success. Because when a product becomes digital, data transforms directly into added value.



5. INDUSTRY 4.0

A popular topic when discussing the current and future state of manufacturing is the trend Industry 4.0⁸. This trend describes the general movement towards automation and data exchange in manufacturing technologies and processes to create both agility and leanness. Industry 4.0 includes cyber-physical systems (CPS), the Internet of Things (IoT), cloud, machine learning and AI. While Industry 4.0 is an abstract and complex term that consists of many components, this trend is driven by the previously mentioned trends. Put together as Industry 4.0, it is expected to disrupt existing business practices. These trends are the digitization of vertical and value chains, digitization of products and services offerings and digital business models that give manufacturers direct customer access.

As manufacturing leaders set the new standards in these trends, others are forced to follow to remain competitive. A full Industry 4.0 implementation requires a huge capital commitment that with the current coronavirus is a risky undertaking. But as the full embodiment of digital transformation in manufacturing, Industry

4.0 sets the bar in a time when going digital is essential for business continuity. Over time, manufacturing as a sector will transform digitally and become more lean and agile.

DATA DRIVES SUCCESS

The common factor in the various ways in which manufacturers can transform digitally, is the extraction value out of data. The ability to manage the data that comes from all the different domains a manufacturer has, will greatly influence its success. From demand planning, supplier sourcing, bills of materials (BOMs) and product specifications, to supply chain, design, vendor management, e-commerce and customer experience. Quality master data makes operational excellence, increased revenues, business agility and stronger customer relationships possible.

A customer survey by Stibo Systems reported that

58% OF ORGANIZATIONS USING THEIR MDM SOLUTION REDUCED THEIR TIME TO MARKET FROM MONTHS-TO-WEEKS AND 36% WENT FROM WEEKS-TO-DAYS.



WHY MASTERING YOUR DATA MATTERS

As the prerequisite for executing business processes and applications, managing your master data is of the highest importance today. Called by the Economist as the world's most valuable resource⁹, data is becoming currency in the 21st-century global economy.

Regardless of the sector you operate in, the age of information is dawning. Whether through market disruptors that tap into unused data lakes and create blue oceans, or slowly and step by step until momentum is built and digital acceleration kicks in. Manufacturers that can create an ecosystem of quality data that's accessible to everyone along the supply chain, will not only have a head start on their competitors. They'll be lean and agile in the run for business.

MDM FOR MANUFACTURING

Newcomers to Master Data Management (MDM) will notice that describing it usually takes long sentences with many verbs. MDM is the core process to identify, define, collect, manage, categorize, synchronize, merge, repair and

enrich master data according to the business needs. It covers the domains of suppliers, vendors, customers, locations, products and more. MDM seems to gobble up everything you can do with master data. That's because, in practice, MDM works like a Swiss knife.

The usage of MDM depends on your specific business goals and needs. It can help with typical manufacturing goals like improving time-to-market, improving compliance, optimizing production and strengthening end-to-end data processes. With increasing demands to reduce time-to-market, while at the same time keeping up with suppliers, distributors and end-users, manufacturers find in MDM the best approach to meeting those demands and deliver business value. MDM enables manufacturers to make faster, smarter decisions for everything from product lifecycle management to rolling out new products. MDM also supports marketing goals such as improving user experience, expanding to other distribution channels and extending product offerings. Or operational goals like getting rid of inaccessible data silos and improving data quality.

'MDM IS ESSENTIAL FOR FOOD MANUFACTURERS'

Joeri Moors, MDM Market Development Manager at Osudio

"The two words that food manufacturers dreads are 'product recall'. It is costly and can seriously impact a manufacturer's corporate image. A product recall is only contemplated when there serious safety, health, product, or legal issues involved. But with ingredients coming from more suppliers and making more stops before filling the grocery shelves, product recalls in the food industry are rising. Finding the leading cause for the product recall is a real challenge today without an MDM in place.

MDM allows food manufacturers to source ingredients back to the suppliers and tracks production, packaging and distribution. That means when a recall is called for, the specific batch can be quickly determined and recalled from the specific vendors involved. And because an MDM allows to track and record data throughout the supply chain, errors are reduced and transparency is significantly improved. That results in fewer product recalls."

THE SIX BUSINESS BENEFITS OF MDM

By intelligently mastering the data within the value chain, manufacturers gain the business assets that support their objectives. Whether it's a faster time to market, improved efficiencies or better experiences, MDM has a direct impact on the bottom and top line.

These six business outcomes are achievable with a unified approach for excellence in data management:

1. A SINGLE SOURCE OF TRUTH

MDM integrates with ERP, PLM, CRM, CMS, e-commerce and marketing automation solutions while also improving these systems. MDM lets you set up data governance for users inputting data, so you'll always have the parameters, including the types of data, structure and list of values needed. MDM supplies a scalable, structured process to initiate, cleanse and integrate data housed in various environments. The created single source of truth is then delivered by MDM as quality data to vendors, wholesalers, retailers, marketplaces and business partners. With quality data accessible to everyone, MDM minimizes the complexity of the data supply chain and improves collaboration and leanness.

2. GAIN BUSINESS AGILITY

The ability to streamline product development and shorten the time-to-market is decisive for a manufacturer's revenue. This requires access to trustworthy data from end-to-end and a data management solution to facilitate collaboration. Business-critical data is generated in multiple departments. When this data is stored in departmental silos it becomes prone to inconsistencies and errors. Gained insights are less actionable and it is hard for teams to collaborate. By collecting, improving and linking data, MDM creates a data hub that

gets data ready for commercialization and launch to market. From design and sampling to manufacturing and distribution, processes are considerably improved by MDM. New products with accurate and consistent product information can be introduced much faster. Keeping track of innumerable service parts, managing suppliers, BOMs, specifications, locations and digital assets becomes easier. Additionally, onboarding new suppliers and vendors goes considerably quicker.

3. FOCUS ON THE ENTIRE VALUE CHAIN

Manufacturers have suppliers that deliver components, materials or ingredients that allow you to build your products and services. Rather than relying on data stored in different systems and locations, you can use MDM as a single, central repository for gathering and integrating supplier information along with your critical internal data. You can connect warehouse and inventory management systems to remove data discrepancies, reduce data maintenance and ensure data timeliness and accuracy. By leveraging a single view of relationships, you can optimize production and reduce the costs of products sold.

MDM provides a single solution to manage each step in the entire value chain. It cuts through disparate data and links information together that delivers actionable insights into the full supply chain. You can start with product design and assembly, from the computer chip that goes into a smart appliance to the water that goes into liquid cleaning products, all the way through to production and delivery. You can reduce time to market by effectively managing information as it flows across the organization and external channels.

4. MAKE YOUR DATA SYNDICATION SEAMLESS

Manufacturers face the daunting task of sharing data with multiple vendors, wholesalers, distributors and retailers. Each of these partners is a data receiver or sender – and each will either deliver content according to their in-house systems or will require you to tailor content to their needs. Attributes, packaging hierarchies, product classification and protocols are just a few of the variables involved. Yet managing and maintaining product data is simpler using MDM to address the challenges of multiple partners maintaining multiple standards. Through data syndication automation, you can do this even if each of your suppliers will have unique definitions, requirements and standards. MDM allows you to control and automate the exact type of data that you distribute per vendor or partner. You can easily share relevant product data in the most efficient manner possible. Content is aligned with predefined data standards, conforming to requirements for both receiver and publisher.

5. MAKE YOUR OPERATIONAL DATA STRATEGIC

You can develop new models and processes for building, managing and shipping products with quality data as your driving force. Whether producing automobiles or packaged food ingredients, manufacturers need precise, timely and consistent data that feeds multiple systems for warehouse management, inventory management, supply chain, shipping and packaging. Determining the exact number of products that can fit onto a pallet, the number of boxes that can be stacked on a pallet and the number of vehicles needed to ship to ensure the right quantity of products reach the shelf and the customer all begins with quality data. As a common, trusted data repository, MDM ensures that the product manager and the sales manager look at the same data sets when making strategic decisions.

Manufacturers also need quality customer data to determine how to get the right product to the right customer in the right channel at the right time. MDM removes touchpoint fatigue because it takes out data duplicates and eliminates multiple emails to the same businesses and individuals, lowering unsubscribe rates along the way. Additionally, MDM fuels analytics with quality data to create actionable insights that result in impact.

6. THINK GLOBALLY

It has never been easier for customers to shop online and buy globally. That provides a tremendous opportunity for manufacturers if they are able to account for regional languages, currency, measurement systems, compliance and logistics. Marketing products internationally and operating abroad requires the ability to manage all product information centrally for efficient collaboration across applications and locations. With MDM, companies can localize data for multiple markets and account for language translations, specialized assortments and product variations, depending on local demand and customer needs. Language issues can be resolved using MDM to create multiple dimensions of a record that include region and channel and market versions. You can then use MDM functionality to apply conversations for all the attributes you need automatically. By providing a single source of truth, systems, locations and teams are aligned in a management framework that enables localization activities. In a sense, MDM gives manufacturers global access to new customers.

MDM TURNS YOUR DATA INTO JET FUEL FOR YOUR ORGANIZATION.

Sign up for a free MDM assessment! Our experts will identify potential benefits or assess your current MDM set-up. No strings attached.

FREE MDM ASSESMENT

STARTING WITH MDM: SUCCESS FACTORS AND PITFALLS

With the importance of data and a centralized method to managing it now clear, it's time to see how your organization can become data-driven. This transformation will have a different point of departure for each organization as the business benefits sought after differ. However, there are certain success factors and pitfalls that should always be considered when choosing an MDM system.

MDM SUCCESS FACTORS

Before considering an MDM solution, it is necessary to assess the readiness of the organization. To determine where you are today, consider the following five MDM success factors.

1. MDM is a concept, not a product – But the product has to support the concept. MDM is about recognizing the value of data.
2. MDM is strategic – and therefore needs management focus. All business processes and goals are somehow relying on quality master data.
3. Focus on the business – changes in data governance organization and processes are required and should bring added value. Choose those data domains where you can expect ROI.
4. Do not underestimate the internal effort – MDM is strategic and touches your entire organization, budgets are needed for people and technology and should address value, not costs.
5. Choose the right partner → no need to start from scratch! Having a reliable partner such as Osudio which can assist you by sharing expertise, learnings and best practices from other projects will make your MDM implementation a success.

MDM PITFALLS

Finding the right platform that makes mastering your data easy, manageable and maintainable can be tricky. Be sure to avoid the following four pitfalls in your MDM selection.

1. Ignoring data governance needs. When choosing an MDM, you are actually implementing governance for managing data. As data governance encompasses the people, processes, partners and systems, these needs will be unique to each organization.
2. Not building the business case. The data governance needs are mandated by business goals and needs. Without a business case, executive sponsorship and organization buy-in suffer as your MDM project is seen as just another IT project. You need to translate business problems and operational pain points into data quality issues to gain support.
3. The Big Bang approach. While there are a lot of domains where quality master data will provide value, don't set the scope to include them all in a single initiative. This size will strain the project's timeline and put it at risk of failure. Focus on a single domain where you can demonstrate strategic value to your sponsor and stakeholders.
4. Ignoring change management. Each organization has a different background and different organizational needs when implementing MDM. Making MDM work, requires best practices in change management, business verification of existing functionalities, on-the-job training for your employees and an integrated approach and governance.

CONCLUSION

Covid-19 is accelerating the digital transformation for manufacturers. Those that manage to ride the wave of innovation will be ready for the post-Covid world where digital is the norm for business continuity. Digital transformation turns manufacturers both agile and lean. Understanding how master data enables manufacturers to become digital is essential for future success.

MDM drives digital transformation. It allows manufacturers to define, manage, centralize, organize, categorize, localize, synchronize and enrich all of their master data. With a single source of truth, manufacturers will improve their supply chain excellence, time-to-value and revenue generation. Decisions become data-driven and business processes and channels are fed with accurate, quality data.

The coronavirus puts on more pressure for manufacturers to embrace digital transformation. Therefore, it's crucial to start with MDM in a strategic and value-focused approach. As an MDM expert with more than 20 years of solid experience in delivering MDM/PIM solutions in a wide range of organizations and markets, we know how to make MDM work for your organization. Ready to embrace the future? Contact our MDM specialists today.

Joeri Moors

MDM Market Development Manager at Osudio



FREEING YOUR SILOED DATA: THE VALUE OF MDM

Free the siloed data in your company to reach operational efficiency and build a solid foundation for digital transformation



MDM: CREATING JET FUEL FOR YOUR BUSINESS

Top 6 signs your organization is ready for Master Data Management and the value MDM can bring you



MORE MDM INSIGHTS

Receive more valuable insights on how to drive your business with MDM.

ABOUT OSUDIO

Osudio is part of the SQLI group and one of Europe's largest and most experienced e-business specialists. Having worked in e-business since the '90s we understand what works, what doesn't and what drives growth. Many of our national and international clients are market leaders. Our goal is to make our B2B and B2C clients successful in an ever-changing digital world, by combining the best of design and technology.

With our full-service MDM practice and the best experts out there, we don't only implement technologies but also think business and assist companies in their change. We help our clients through their MDM journey and finish it successfully. From data management, data modelling, data workflows, data quality, integration and architectural consultancy, to print and DAM. We have more than 20 years of solid experience in delivering MDM/PIM solutions in a wide range of organizations and markets. We know what it takes to make MDM work for you.

OSUDIO.COM



ABOUT STIBO SYSTEMS

Stibo Systems, the master data management company, is the trusted source of MDM solutions that help companies create transparency in their business processes. Our solutions are the driving force behind forward-thinking companies around the world, including 42 among the Fortune 500, that have unlocked the strategic value of their master data; empowering them to improve the customer experience, drive innovation and growth, and create an essential foundation for digital transformation. Stibo Systems is a privately held subsidiary of the Stibo A/S group, founded in 1794, and is headquartered in Aarhus, Denmark.

STIBOSYSTEMS.COM



Ready for take-off? Contact us today with any data concern you are having.

CONTACT US



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