

Telecommunications Operators, Telecom Equipment Manufacturing and Digital Communications Service Providers

Five industry trends that rely on the transparency of master data

Transparent master data is at the heart of some of the most important, transformative business trends within the industry.

The network is now, pervasive. A 5G, edge-connected world is allowing network providers and digital service providers to address new types of subscribers in new ways. Innovative business models embracing diverse partners are bringing new products and services to market. Many of these products and services are uniquely made from data. Mastery of data has become not only competitive, but essential to survive in a competitive market.

Keeping pace with the business transformation requirements of your customers and subscribers means bringing to market products and services that are timely, relevant, coherent and transparent.

To achieve this, communications equipment manufacturers and service providers need to re-examine what constitutes a product, who the customer is, and by what business process products and customers are described.

First fundamental challenge of the telecom industry: product data systems are outdated

For many operators and equipment manufacturers, the capabilities of the systems habitually employed to define products have been surpassed. For that reason, the same operators and manufacturers have developed customized technical remedies and duplicated product management systems, as well as the information they contain.

As a result, there is no single point of product data governance, and product data is allowed to flow unchecked into BSS and OSS environments, manufacturing, billing and then on to external parties including customers, subscribers and partners.

In contrast, a unified process for product information management (PIM) provides a single point of governance that ensures the information describing products and services is placed under business control. A PIM solution sets and controls the policy by which data should be collated, organized, enriched and disseminated.

PIM makes your data transparent. It ensures that it is trustworthy, coherent, auditable and fit for purpose. PIM turns your data gathering activity into a measurable business process run by an accountable organization.

Master data management implements a PIM process that puts your business back in control of the data that differentiates your capabilities and engages your customers.

A unified PIM solution must:

- Provide a business-led strategy for the collection, enrichment and dissemination of product information at an enterprise level
- Implement controls via an organization, as well as processes and tooling to ensure the data that describes products is fully transparent and fit for purpose
- Work alongside (rather than replace) existing infrastructure, applications and processes in order to achieve rapid business benefits with limited impact to existing operations

Second fundamental challenge of the telecom industry: customer data is fragmented and unreliable

Understanding the customer when your business is made up of so many offerings, touchpoints and business models is not always easy. Technologies across lines of businesses are often poorly integrated and data silos compound efforts to create customer-centric offerings.

Master data management implements a customer data management process that uniquely identifies customers and consumers in order to build more transparent and insightful business relationships.

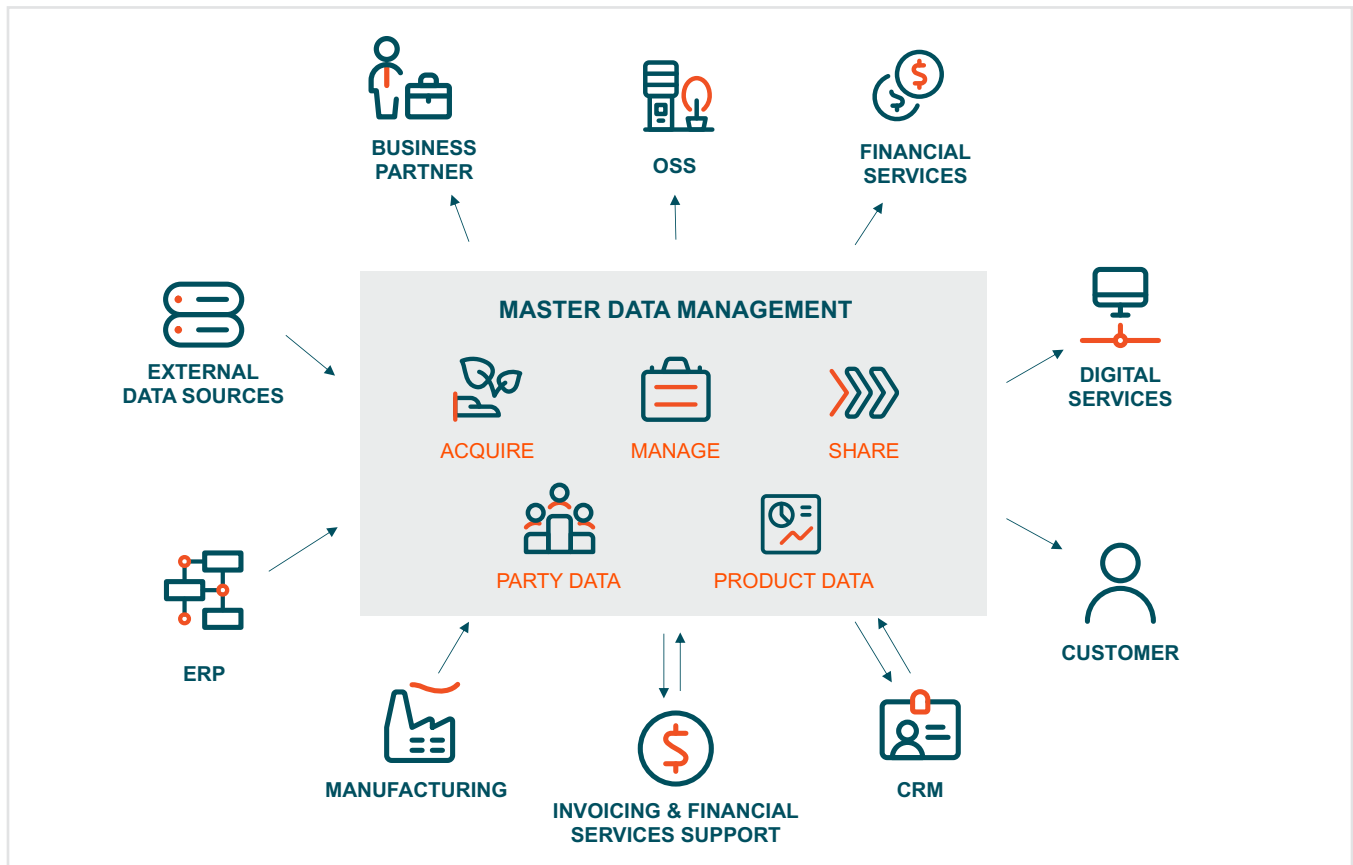
A customer master data management solution must:

- Provide a business-led strategy for the collection, enrichment and dissemination of customer information at an enterprise level
- Implement controls via an organization, as well as processes and tooling to ensure the data that describes customers is fully transparent and fit for purpose
- Be a foundational component to the development of new insight into customer needs

The challenges of defining the products and services of tomorrow include:

- Increasing volume and variety of information needed to support ever more complex and personalized offerings
- Competing pressures require products that need to be revised and released with greater frequency
- Managing customer demands for transparency of offerings including price, social, ecological and personal data consent
- Integrating AI to support scalability and efficiency of operations
- Assuaging regulator demands for transparency in OSS and BSS sides of the business for operators and in GxP for manufacturers.

Unified multidomain MDM process



MDM ensures that data is being governed from a central organization. This enables the sharing of transparent data with all business systems and users.

Five of the top industry trends that rely on transparent master data:

1 Become a financial services provider: Traditional revenue streams are under pressure. Operators are looking to new business models that are wholly digital in nature. These models seek to engage existing customers with new value propositions. Lines are blurring between traditional communications operators and other industries. Becoming a financial services provider has been a focus initiative of many telecommunications operators.

One new type of revenue streams for telecommunications operators is in mobile payment services, and, as a consequence, they compete directly against more traditional players. For example, in regions where a significant number of consumers are more likely to have a mobile before they have a bank account, one often sees convergence of the two services. There are use cases where joining the services together simplifies the construction of the user experience, for example, providing in-car e-payment services for connected cars. Incorporating an e-wallet offering into an operator's portfolio also serves to address a market in rapid expansion. While some operators have chosen to partner to provide such services, others have obtained banking licenses.

2 Become a platform provider: Operators used to have complete control over their consumers. This is perhaps, no longer the case. Introducing new products and services might help to introduce more points of consumer interaction. Alternatively, operators could become underlying technology providers, with a platform of services available through APIs. This approach could accelerate the development of new business models and innovative applications thus benefiting the consumer. Moving to a platform economy business model, the ecosystems that would be serviced would potentially create vast amounts of valuable data. For the operator, there would be significant potential to monetize the data generated by these ecosystems.

3 Proactively address growing regulatory pressures: As the communications industry continuously evolves to serve customers better, codes for industry ethics aim at greater control and transparency. For operators, this is particularly true for pricing and product description where regulators including the FCC (USA), OFCOM (UK) and ARCEP (France)

strive to help consumers have access to more transparent information for interconnection charges and retail prices.

Operators are steadily deploying more AI technologies in a variety of sectors of activity. For automated processes that involve personal information, regulations such as the Algorithmic Accountability Act are likely to increase the demands on operators to implement AI governance and demonstrate non-bias, explainable AI (XAI) in decision making.

Enhanced scrutiny from regulators may need to see new regulatory information management (RIM) systems being implemented that will need to be fed with high degrees of available, accurate and coherent information in order to establish the basis for compliance reporting.

4 Scale and automate with AI: Virtual assistants, preventative maintenance, bandwidth provisioning, supply chain optimization, marketing and much more – AI has found its way into every corner of a telecommunications network provider or DSP.

Three of the most widely reported barriers to development of AI-based initiatives include cost, skills and the availability of data. Sourcing data requires sifting through operational silos and remediating incoherent and poor-quality data. To scale, machine learning needs training on reliably structured synthetic data sets. These data sets should be created from operational data and complemented with the use cases that describe exception and error handling.

Equipment manufacturers will use AI to help operators maintain high levels of service with AI-enabled preventative maintenance and to create new types of product and service models.

5 Create a 5G, immersed experience: Streaming applications, games, live experiences, immersive applications, vehicle sensors, advanced tracking technologies and private cellular networks are among the many products and services that are set to be taken to new levels with 5G connectivity services.

As the number and complexity of digital value propositions for customers increases, mastering the ability to define, manage and distribute them in a coherent fashion relies on scaling and automating data management capabilities.

To overcome the alarming data challenges and to meet the propitious industry trends, master data management can help by:

- Providing centralized, business-led controls on the completeness, accuracy and availability of product and party information in order to maximize its value to the business, to customers and to partners.
- Establishing the foundational components from which additional informational value may be built. This includes understanding the 360° relationship with customers and their extended relationships, recording consent and preferences and making more insightful information such as behavior and sentiment more available across the organization.
- Implementing a data governance foundation that provides and ensures rigor in the process of offer description. This can facilitate a more flexible way in which offers may be described as consumable bundles that better target customer segments and solution spaces.
- Managing a unified and unique source of product and customer reference data for the purpose of supporting AI-driven business processes. This can help creating representative synthetic data to test them and implementing XAI auditability to ensure non-bias.
- Giving the business the ability to direct control over the product and party data that feeds compliance and regulatory reporting. This can help to avoid service outages costs and penalties associated with data errors and inappropriate consent management.

Learn more about MDM for telecom at stibosystems.com/telecommunications



About Stibo Systems

Stibo Systems, the master data management company, is the trusted enabler of data transparency. Our solutions are the driving force behind forward-thinking companies around the world that have unlocked the strategic value of their master data. We empower them to improve the customer experience, drive innovation and growth and create an essential foundation for digital transformation. This gives them the transparency they require and desire – a single, accurate view of their master data – so they can make informed decisions and achieve goals of scale, scope and ambition. Stibo Systems is a privately held subsidiary of the Stibo A/S group, founded in 1794, and is headquartered in Aarhus, Denmark. More at stibosystems.com.