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10 things to know about master data management

AI, analytics and every core business process depend on the same shared data. This paper answers the ten questions organizations ask most often as they start, or restart, their master data management journey.

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01 What is master data management?

Most organizations run many systems that each hold important data about customers, products, employees, suppliers, locations and assets. These silos contain inconsistent, duplicate and incomplete records, which gives a fragmented view of the business. Simple questions, such as *"Which products did our customers use most last quarter?"* or *"Who is our most profitable customer?"*, become hard to answer.

Master data management (MDM) is a business-led program that brings together people, processes and an MDM platform to keep an organization's most important shared data, its master data, consistent, accurate, accessible and governed.

02 Why use master data management?

Organizations compete with data. A complete view of each customer, including what they bought, how they were served and which campaigns reached them, lets teams engage, delight and upsell, growing revenue while reducing sales and marketing costs.

Product data delivers similar value when bringing new products to market or optimizing the supply chain, and other domains, such as employees, facilities, suppliers and reference data, add value of their own. Today there is a further reason: **AI is only as reliable as the data and context behind it**, and master data supplies that context.

03 What are the benefits of master data management?

- **Increase revenue.** Personalized cross-sell and up-sell offers need complete, reliable data for every customer touchpoint. A consolidated customer view sends the right offer to the right customer at the right time.
- **Improve customer satisfaction.** Personalized interactions and a consistent experience across channels build loyalty and sales.
- **Accelerate innovation.** R&D teams launch products and services faster with trusted project, product, supplier and employee data at every stage of development.
- **Optimize the supply chain.** A central product view gives timely, accurate information on inventory, returns and stock-outs, improving inventory turns, forecasting and service.
- **Act on insights faster.** Business users access, manage and visually explore master data directly, and data integration becomes simpler and faster.
- **Improve compliance.** Centralized, complete master data simplifies compliance reporting and reduces its costs and penalties.

04 Who uses master data management?

MDM is a team effort across business and IT, from first implementation through daily use. Executive sponsorship is essential to secure the right resources.

- **Chief data officers** set the MDM vision and make sure people, processes and technology are in place.
- **CTOs and data architects** fit MDM into the wider data and AI architecture.
- **Data stewards** define and run the policies and procedures that keep data fit for use.
- **Data engineers** build consistent, accurate and accessible master data assets.
- **Business users** bring the knowledge of how entities relate and what “correct” means.
- **Analysts, data scientists, developers and AI teams** use master data in analytic, operational and AI applications.

05 What are the top use cases?

Because master data is used everywhere, making it consistent, accurate and accessible improves a wide range of activities:

Product innovation and launches | Customer service | Marketing personalization | Customer journey analytics | Process optimization | Supply chain efficiency | Operational consistency and localization | AI and IoT applications | GDPR and CCPA compliance | Regulatory reporting | Mergers and acquisitions | Risk management | Data and reporting quality

06 Which capabilities matter in an MDM platform?

An MDM platform manages, governs and shares master data, reference data, hierarchies, business glossaries and metadata. That breadth calls for:

- **Flexible modeling and repository.** An extensible repository with flexible data modeling gives a central view of every relationship between data types, including complex cross-domain relationships.
- **Multi-domain MDM.** One platform for customers, products, suppliers, employees, locations and assets, and for reference data such as categories, code lists and hierarchies.
- **Multi-style MDM.** Support for the four main implementation styles:

Centralized

Data is authored in the MDM platform and published to, or subscribed to by, other systems.

Consolidation

Source systems feed the platform, which consolidates records into golden records.

Coexistence

A blend of the two: data can be created in several systems, including the platform.

Registry

Records stay in their sources; the platform aligns their identifiers through cross-references.

- **Real-time, secure data services.** Publish data on demand and let systems subscribe to changes, so accurate master data arrives when and how it is needed, without compromising security.
- **Data quality, workflow and visualization.** Spot and fix quality issues, route changes through approval workflows, monitor processes and build dashboards.
- **A configurable, business-friendly interface.** Model-driven, low-code design generates clean, role-based applications, which speeds adoption.

07 How does MDM support AI?

AI models and agents amplify whatever data they are given. When customer, product and reference data are fragmented, AI produces confident but wrong answers. MDM gives AI **trusted context**: governed definitions, relationships, hierarchies and lineage.

What AI-ready master data looks like

- **Governed, explainable inputs:** every record has an owner, a history and a source.
- **Business context in the data:** relationships and hierarchies tell models how entities connect.
- **Standard access for agents:** with EBX®, Model Context Protocol (MCP) servers let AI assistants and agents work with data, models and workflows, within the permissions of the account they use.
- **AI that proposes, people who decide:** AI can suggest matches, classifications and quality rules, while data stewards approve them.

08 How do you build the business case?

The business case for MDM rests on seven areas of value:

Revenue	Better engagement through better customer insight
Realization	Faster, better-executed business processes
Reporting	Accurate reports for better decisions
Risk management	Fewer operational and business risks
Reinvention	Faster product innovation and launch
Reconciliation	Lower direct costs of bad data
Regulatory compliance	Good standing with the authorities

A practical way to build it:

1. Tie the program to one or two business outcomes and their sponsors.
2. Baseline today: cost of reconciliation, errors, delays and rework.
3. Agree targeted improvements with the business owners.
4. Convert them into financial results and compare with total cost.
5. Track realized value release by release and reinvest.

09 What does successful implementation take?

- **Start from your business strategy.** Whether success depends on customer engagement, innovation or operational excellence should shape the MDM plan. If the goal is cross-sell growth, start with customer master data, including preferences, purchases and activity.
- **Build on a flexible platform.** Strategy will evolve. A multi-domain, multi-style platform lets you start anywhere and grow without re-platforming.
- **Establish governance early.** Define roles and responsibilities, run stewardship through shared workflows, use one change process and reinforce standards across the organization.
- **Deliver small wins.** Focused teams and iterative releases (specification, design, development, testing, deployment) deliver value continuously and reduce risk. Business teams typically own specification and testing; technical teams own design, development and deployment.
- **Use experienced partners.** Specialist implementation partners add capacity and help avoid common pitfalls, and ON EBX Customer Success provides trusted guidance at the right moments.

10 What holds MDM programs back?

- **Insufficient business engagement.** If business users are involved too late, the program lacks expertise and support. Choose a platform with business-friendly interfaces and workflows.
- **Not balancing short and long term.** Enterprise MDM is a multi-year journey. Start with immediate needs to accelerate payback, then extend to more domains on a platform with proven enterprise-scale references.
- **Underestimating data engineering.** Every project must understand, access and integrate source data spread across on-premises and cloud systems. Plan for integration and metadata management from the start.
- **Chasing perfect data quality.** MDM uncovers quality issues. Focus on the quality that affects business outcomes rather than perfection.
- **Missing compliance requirements.** Master data is central to compliance auditing and reporting; build those needs into every release.

Put trusted data at the core of your business

EBX® is a model-driven, multi-domain platform for master data, reference data and metadata, trusted by enterprises worldwide for more than two decades.

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