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# *Master Plan: Getting Your Money's Worth From MDM*

Master data management programs are large and complicated affairs. But well-managed initiatives help ensure that data is consistent throughout an organization, which can pay big business dividends. BY BETH STACKPOLE

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## Don't Let Your MDM Efforts Go to Waste

**MASTER DATA MANAGEMENT** isn't an easy task to take on, for IT and business managers alike. There's more—much more—to a successful MDM program than deploying technology. In fact, technology considerations typically take a backseat to process and policy issues on MDM initiatives, which puts the onus on IT to get the business heavily involved in leading projects. “MDM is hard work and it requires hard decisions, a lot of time and a lot of effort on the part of business [executives],” Gartner analyst Ted Friedman told SearchDataManagement.com contributor Beth Stackpole in her reporting for the series of stories in this guide.

At least, that's the way it's supposed to be. But many organizations don't make that business connection, according to Friedman and other analysts, and their MDM

efforts often languish as a result. That can amount to a lot of wasted IT money, since Gartner has projected annual spending on MDM software will top the \$3 billion mark worldwide by 2015. And that doesn't begin to count the costs of the wasted efforts on both the IT and business sides.

The stories here offer advice on how to avoid the pitfalls and take advantage of MDM's potential for fostering data consistency across business operations. First, we catalog [MDM project management tips](#). Next, we analyze the [technology elements of MDM deployments](#). And we end with a look at the prospective combination of [MDM and big data](#). ■

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## MDM Programs Need Business Sense to Be Successful

A **MASTER DATA** management program typically is a big undertaking for any company, regardless of size. Because of that, properly scoping MDM projects to meet attainable business objectives is crucial both to ensuring short-term deployment success and enabling effective MDM processes in the long run, according to consultants and IT managers.

But that isn't what happens in many organizations, compounding the difficulty of creating and maintaining standardized sets of master data for things such as customer records and product information. For example, consulting and market research company Gartner Inc. in Stamford, Conn., sees a majority of organizations with MDM programs in place struggling to demonstrate any business value or get support for the business process changes that often are needed to make the initiatives successful.

The primary reason: Companies still embrace MDM as a technology-driven affair. "There are far too many efforts where the IT team is pushing the MDM idea and there isn't enough pull from the business side because there isn't a clear articulation of what the business outcome will be," said Gartner analyst Ted Friedman. "Somewhere along the way, the project fizzles out."

Aaron Zornes, chief research officer at The MDM Institute consultancy in Burlingame, Calif., made the same point. "This is not an IT refresh like updating phones with Windows 8—to go at it like an IT initiative is the kiss of death," he said. "This is a business initiative aligned with the strategic direction of the company."

David Mewes, global chief information officer at Invacare Corp. in Elyria, Ohio, learned that lesson the hard way shortly after the outset of an MDM project that was intended to drive data standardization across a diverse infrastructure of enterprise resource planning (ERP) systems—the result of a spate of acquisitions by the maker of medical products for home health care users and long-term care facilities.

The project team initially tried to engage the support of business executives by touting the virtues of the chosen MDM software, but that plan backfired. "In the beginning, to get funding, we focused too much on the technical capabilities of MDM, and it quickly got the label 'voodoo software' because people didn't believe it could do all this magic stuff," Mewes said. "We had to quickly recalibrate and come back to the business and make a case for real value."



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For example, he said that getting a consolidated view of product data across the company's 34 separate ERP systems gave Invacare executives better insight into sales patterns, product quality issues and other business parameters so they could make more-informed decisions on strategy and operations. Before the MDM deployment, creating such views wasn't possible without laborious amounts of manual work by IT staffers.

*“If you're an organization with hundreds of data sources and you think they're all going to be integrated into the MDM hub in a single phase, that's not realistic.”*

*—KELLE O'NEAL,  
founder and managing partner,  
First San Francisco Partners*

Other MDM business benefits cited by Friedman include improved customer service capabilities and increased cross-selling and up-selling opportunities as a result of making more complete and consistent data about customers available to sales and service reps. MDM programs can also help with things such as regulatory compliance and efforts to streamline business processes, Friedman said. The particular business goals will vary from organization to organization, he

added—but the need to provide a “clear line of sight” to them is universal.

There's more to MDM success than a [business focus](#), of course. MDM practitioners and consultants also listed the following project management recommendations:

■ **Do MDM in concert with data governance.** Zornes and other analysts said [data governance and MDM initiatives](#) should be joined at the hip. A comprehensive governance program that enlists business representatives and designates data stewards to oversee information can forge common data definitions and business rules that are then enforced by MDM processes and systems. “You don't have to have data governance to do MDM, but it becomes a technical exercise without that,” said Anne Buff, a member of a customer advisory group at analytics and data management software vendor SAS Institute Inc. “You're not addressing the business issues if you don't bring [governance] to the table at the same time.”

■ **Don't over-scope an MDM initiative.** Not all data needs to be mastered. Kelle O'Neal, founder and managing partner of consultancy First San Francisco Partners, said organizations should identify the systems and data—usually related to customers or products—that are most critical to meeting overall business needs and focus on them. “If you're an organization with hundreds of data sources and you think they're all going to be



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integrated into the MDM hub in a single phase, that's not realistic," O'Neal said. "You have to work with the businesspeople to prioritize the data sources that are the most meaningful and that need to provide the most reliable data."

■ **Take an incremental approach.** Companies often misfire on MDM when they try to do too much at once. Mewes said Invacare's [MDM program started small](#), with a series of one-off projects to help provide consolidated business reporting capabilities. By showcasing the potential value of MDM processes with those initial steps, the project team was able to build on its successes and move forward. Now, he said, it's putting together a deployment plan and technology architecture to support the installment of a full-fledged MDM hub.

To get an MDM program off to an auspicious but still manageable start, target individual data sets that are important to business operations and clearly "can benefit from being maintained in a more structured and rigorous way," said Darren Peirce, chief technology officer at Kalido, an MDM software vendor in Burlington, Mass. "We tell customers, 'Think big, but start small with a specific problem and evolve from there.'" ■



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## Tech Choices Loom Large on MDM, Despite Process Focus

**MASTER DATA MANAGEMENT** isn't necessarily a technology-heavy initiative. For example, Gartner Inc. analyst Ted Friedman says a typical MDM project team spends about 85% of its time on people, policy and process issues and just 15% on the technology side of a deployment.

But there are IT choices to be made in planning an MDM program—and lots of tools to choose from, including a mix of products from vendors of data management suites and MDM-only software providers. There are offerings that target specific data domains, primarily customer and product information; on the other hand, companies can buy multidomain MDM software for use across different domains. In addition, tools tuned to the needs of individual industries, such as financial services and pharmaceuticals, are available for the taking.

One of the primary considerations in [evaluating and selecting software](#) is deciding how to structure the underlying MDM architecture for storing master data and distributing it to systems throughout an organization.

A centralized MDM hub moves master data off of source systems, which then retrieve the data from the hub after it has been consolidated, cleansed and

matched to remove errors and inconsistencies. Another option is a registry-style hub, which handles data cleansing and matching but creates an index pointing to the master data in source systems instead of storing the information itself. Hybrid approaches combine the two styles, maintaining reference links to master data entities in source systems but also serving as the primary source of the data for new applications.

### THE POLITICS OF MDM

Consultants say the registry approach might be preferable when there are a large number of source systems spread around a company; it can avoid some of the [political wrangling](#) that is bound to result from efforts to relocate master data to a centralized hub and overwrite it in the source systems. A centralized architecture also tends to take much longer to implement, but it offers advantages when the quality of master data is questionable in source systems or an organization wants to have a single, authoritative repository for all of the data.

Ultimately, there's no right or wrong way to go—the choice depends on the goals and requirements of an MDM program, according to Anne Buff, a member of



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software vendor SAS Institute Inc.'s customer advisory group. "Don't get stuck on one concept or another, because it will attract you to specific vendors and you'll be sold on terminology rather than business need," she said.

In addition to the hub, other technology components that have roles to play in MDM initiatives include [data integration tools](#) for moving master and reference data between systems and data quality software for automating the process of cleansing and consolidating the information.

Depending on an organization's overall IT infrastructure, the data integration layer can encompass anything from traditional extract, transform and load tools to messaging middleware and complex event processing platforms. On the data quality side, there typically is a need for data cleansing tools and a specialized matching engine for synchronizing data elements such as customer names and addresses. Data deduplication and merge/purge capabilities are also common checklist items.

### TOO MANY TOOLS?

But organizations might be able to utilize existing data quality and integration technologies instead of investing in separate tools for an MDM program, said Rick Sherman, founder of consultancy Athena IT Solutions in Maynard, Mass. "Too many times, companies have

integration tool X in-house and then buy another one for MDM," Sherman said. "And then they're stuck with two data integration tools when they only needed one."

*The process-oriented nature of MDM programs does raise the question of whether a hub system and related technology are really necessary to get the job done.*

The process-oriented nature of MDM programs does raise the question of whether a hub system and related technology are really necessary to get the job done. While automating MDM processes isn't an absolute requirement, Friedman sees it as a must-do item in almost all cases. "In theory, you can do MDM without technology," he said. "But in practice, given the scale and scope of these moving parts, it's naïve to think you can be successful without it."

Aaron Zornes, chief research officer at The MDM Institute, said the accumulated evidence in the historical record of MDM deployments points to a similar conclusion. "Can we do MDM without technology? The answer is yes, because we've been doing it that way for 30 or 40 years," he said. "We just haven't been very good at it." ■



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## MDM, Big Data Courtship Heading Toward Marriage

**BIG DATA AND** master data management seem destined for a future together, but for now their relationship remains murky and unresolved.

At first blush, the two seem like a mismatched pair. Big data environments typically encompass large volumes of text and other forms of unstructured data from a variety of sources, such as social networks, Web server logs and sensors, while MDM initiatives are meant to create a trusted source of highly structured transaction data throughout an organization.

But even with that apparent disconnect, data management analysts see a prospective link, with MDM processes playing a role in aggregating useful information from pools of big data and then matching it against the master data in transaction systems. “The world of big data is a world of unknowns, and you need to somehow anchor it to the stuff you do know and trust—that’s the relationship between big data and master data,” said Ted Friedman, an analyst at Gartner Inc.

### ALL EYES ON CUSTOMERS

The primary goal, according to Friedman and other analysts, is to provide a more complete view of customers

for marketing, sales and customer service purposes. For example, customer service reps might be able to use a combination of [big data and master data](#) to reach out to customers to address complaints they’ve posted on Twitter or other social media sites. Marketing and sales teams could get a better idea of people’s interests and affiliations to aid in the sales process.

It isn’t a case of putting raw streams of social network data through an MDM filter with data consistency and governance in mind; trying to govern external data is clearly a dead end.

The more likely approach is to mine sets of big data for valuable nuggets of information using sentiment analysis software and other analytics tools and then deploy MDM-fueled data matching capabilities against the results.

“Applying MDM against raw, unstructured content is of questionable value,” said Evan Levy, vice president of business consulting at software vendor SAS Institute Inc. “But distilling that content down to have some sort of meaning and then linking it to a specific customer—that’s where MDM can come into play.”

Companies are starting to see—or picture, at least—a connection between MDM and big data, according





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to survey results published in November 2012 by The Information Difference Ltd., an MDM consulting and research company in London. Only 17% of the 209 corporate respondents in North America, Europe and Asia said they expected big data applications to generate new master data in their organizations. But 59% said they thought MDM hubs and [big data systems](#) could be linked together for business uses, including the ability to use master data to automatically detect customer names in sets of big data.

### **BIG BUT DISPOSABLE**

Just because there appears to be a future for the two doesn't mean the pairing is free of complications. For one thing, big data applications often are developed with a disposable mind-set, spun up quickly to support specific analytics tasks and then taken down. "The architecture and business practices for big data are ephemeral—it just comes and goes pretty fast, and that goes against the grain of MDM," said Aaron Zornes, chief research officer at The MDM Institute.

Zornes also pointed to potential disconnects between the IT staffers on MDM teams and the [data scientists](#) and other analytics professionals who use big data. "The

data scientists have been elevated by the press to rock star status, and culturally they don't like the rest of IT," he said. "They see IT as the old farts that they don't want to deal with."

*Only 17% of the 209 corporate respondents in North America, Europe and Asia said they expected big data applications to generate new master data in their organizations.*

In addition, it might be only a matter of time before MDM and big data technologies can be easily hooked up to one another—but that time isn't here just yet, according to Kelle O'Neal, founder and managing partner at consultancy First San Francisco Partners.

"It's still fairly new, and everything is evolving and maturing," O'Neal said. "Vendors are creating ways to automate the process so [companies can] have better faith in social media data as it pertains to a customer or product. But for now, it's going to take some manual intervention." ■



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