

# The Evolution of Demand for Master Data Management

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## Introduction

The essential nature of master data management (MDM) solutions has remained fairly constant since the inception of the technology stemming from the customer data integration and product information management predecessor and adjacent markets in the early 1990s. Dedicated MDM solutions consist of a data hub that provides for mastering one or more data domains, as well as interfaces and business logic that provide for administration and use of the solution (including stewarding and governing of the data mastered).

In this form, typically categorized as “traditional” MDM, solutions are designed to be application neutral and therefore independent of any application, service, or suite that is part of an organization’s master data architecture. A key design principle of these solutions is to serve as the primary source for master data of all domains across an enterprise. Dresner Advisory Services categorizes these solutions as “MDM heavy.” Data integration, not historically part of an MDM solution, is typically realized by external means—whether point-to-point systems integration, enterprise service bus, or, increasingly, via cloud-based *integration platform-as-a-service* (iPaaS) offerings.

Although the primary barriers to entry for MDM predominately remain people- and process-oriented, substantial technology hurdles also exist. Costs for solution acquisition, implementation, and data integration consistently remain high. These factors relegated enterprise MDM solutions mainly to the purview of large organizations.

Evolving requirements from a broader spectrum of different-sized organizations, along with differing expectations of how best to address MDM needs, combine to constrain broad market penetration for traditional MDM solutions. From its outset, the worldwide MDM solution market grew consistently at less than 10 percent per year, with many years showing growth of less than 5 percent. Adoption of cloud-capable, cloud-native, machine learning (ML) and artificial intelligence (AI) technologies by MDM vendors did not demonstrably improve growth rates. The underlying assumption that MDM technology—as originally envisioned in its early stage of maturity—will scale broadly across the worldwide market is not bearing out.

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New direct and indirect competitors are bringing to market solutions decidedly different from MDM heavy—and succeeding (by increasing their market penetration).

With continued exposure by organizations beyond the Global 2000 to the imperatives of master data and need for MDM programs and supporting solutions, expectations and thus requirements evolve from those targeted at the outset of MDM technology development. Within the market, an expanding spectrum of solutions providing for master data via means other than a centralized, enterprise source of master data are now available—and taking market share. Dresner Advisory Services categorizes these solutions as “MDM light.”

Master data and MDM solutions increasingly are relevant to more organizations. No one best approach exists to address MDM requirements, as they tend to evolve over time in response to changing business needs and differing organizational characteristics.

The optimal approach to satisfy core organizational data requirements is by addressing MDM predominately from the perspective of business or mission requirements, rather than taking a technology- or IT-centric approach.

Dresner Advisory Services further recommends adopting a data-centric perspective (rather than an application-centric perspective) when addressing master data and MDM requirements. A data-centric approach will connect data directly to business value and provide greater flexibility in selection of technology that is best suited to fulfill the needs of business users (whether MDM heavy or MDM light).

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## Executive Summary

1. Although 84 percent of organizations report high perceptions of MDM, 61 percent of respondents indicate no planned use or only possible use of an MDM solution.
2. A strong majority of organizations (71 percent) reports increases in MDM applications, systems, and/or services.
3. Organizations expect the number of data domains being mastered to increase substantially in 2023.
4. Traditional MDM solutions continue to strongly resemble those available when the technology debuted in the 1990s. Innovations—such as cloud capable, cloud native, ML, and AI—have not fundamentally altered solution constructs. Imperatives of master data and MDM outside Global 2000 organizations further drives evolving market requirements.
5. Relatively high barriers to entry—including cost and complexity of traditional MDM solutions—have concentrated market share in large and very large organizations.
6. MDM technology will not achieve widespread penetration without addressing new technologies and satisfying additional new market requirements.
7. Organizations increasingly want to address master data and MDM requirements via means other than traditional MDM solutions.
8. A majority of organizations (60 percent) report using an MDM solution as an embedded capability in an application or service, or as a component within a broader application.

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## Recommendations

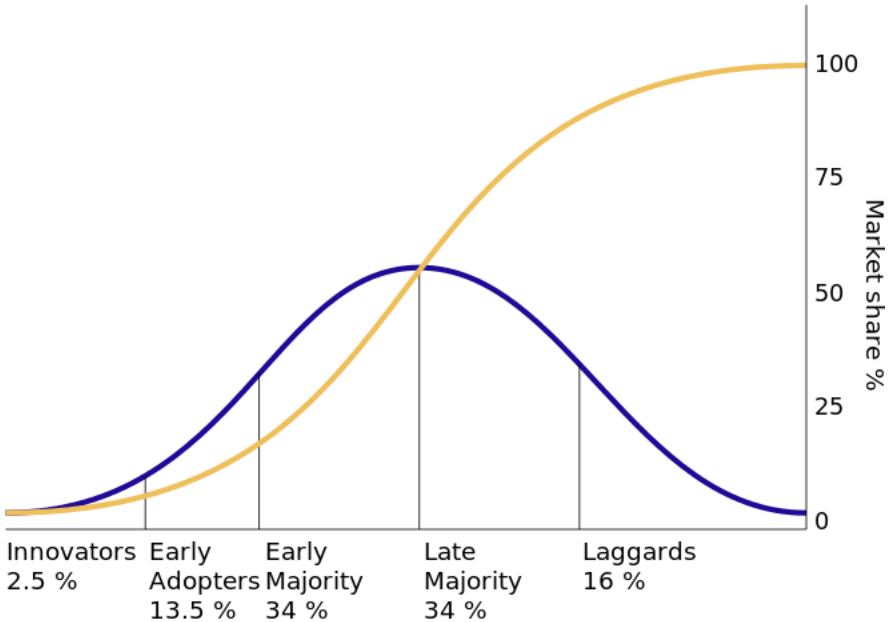
1. Approach MDM as a people, process, and then technology challenge.
2. Identify and confirm business requirements supported by master data.
3. Adopt a singular orientation for master data and MDM. Although most MDM solutions primarily orient toward operational requirements, master data needs to support operational and analytical requirements.
4. Adopt a data-centric approach to enterprise data architecture, master data, and MDM solution requirements. Identify the business value chains and critical business processes—whose nature are operational, analytical, or both—that consume target master data. Leverage these determinations to pinpoint supporting data requirements, which in turn should inform the choice of data technology.
5. Use these connections to confirm master data as a driver to business-oriented key performance metrics and to assess the business value of MDM programs and solutions.
6. Evaluate the optimal technical means by which to achieve current and mid-term MDM requirements based on the maturities of the organization, data architecture, and MDM program. Do not acquire and implement a traditional enterprise MDM solution without first establishing that people, processes, systems, and services are sufficiently mature to make use of such a solution.
7. To address business-requirement-driven MDM and other data management needs optimally, data leaders should educate themselves, their staffs, and their peers on the difference between MDM and application data management (ADM).

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## Technology Adoption Curve

Joe M. Bohlen, George M. Beal and Everett Rogers developed the initial theory of technology adoption through a model called the *diffusion process*. Rogers later generalized use of the model in his 1962 book, “Diffusion of Innovations.”

This generalized model lays out the essential elements of what is now known as the technology adoption curve. The first element is the different categories of adopters: innovators, early adopters, early majority, late majority, and laggards. The second element is relative acceptance of new technology (innovations) on a cumulative basis over time—the well-recognized S-curve of technology adoption.



Source: Wikipedia entry on Diffusion of Innovations ([https://en.wikipedia.org/wiki/Diffusion\\_of\\_innovations](https://en.wikipedia.org/wiki/Diffusion_of_innovations) (last revision: 9 May 2022 17:22 UTC))

The underlying assumption that MDM technology, fundamentally as originally envisioned in its early stage of maturity, will scale broadly across the worldwide market is not bearing out. Projections of broad market penetration by traditional solutions are challenged by evolving requirements within a broader spectrum of organizations and their expectations of how best to address their MDM needs. The differing categories of alternative solutions delivering MDM capability will assume distinct adoption curves. Widespread adoption of MDM solutions, reflected by high levels of market penetration, will be achieved by a cumulative composite of distinct S-curves.

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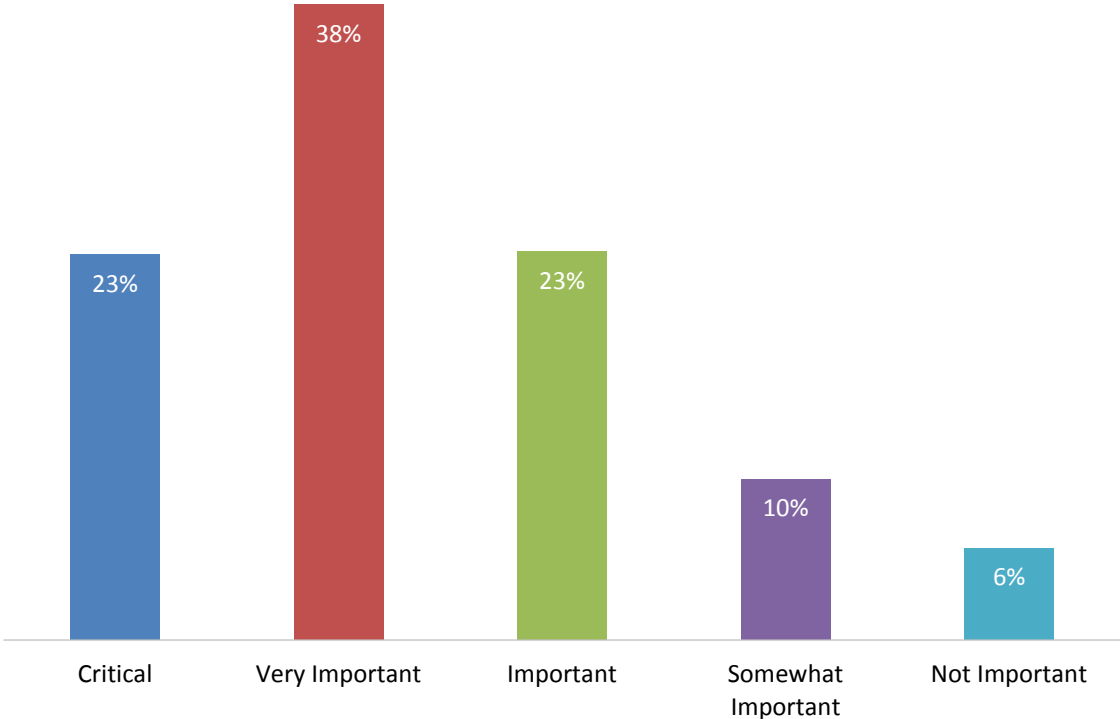
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## The Ongoing Importance of MDM

Since inception of the MDM market in the 1990s, our data show that the relative importance of master data and its management has grown in importance. This led to a recognized market category for MDM solutions and its viability over time.

Respondents in our study attribute a relatively high level of importance to MDM. Critical, very important and important perceptions combined represent 84 percent of responses. Larger organizations more often perceive MDM as critical or very important.

### Perceived Importance of MDM



Source: Dresner Advisory Services

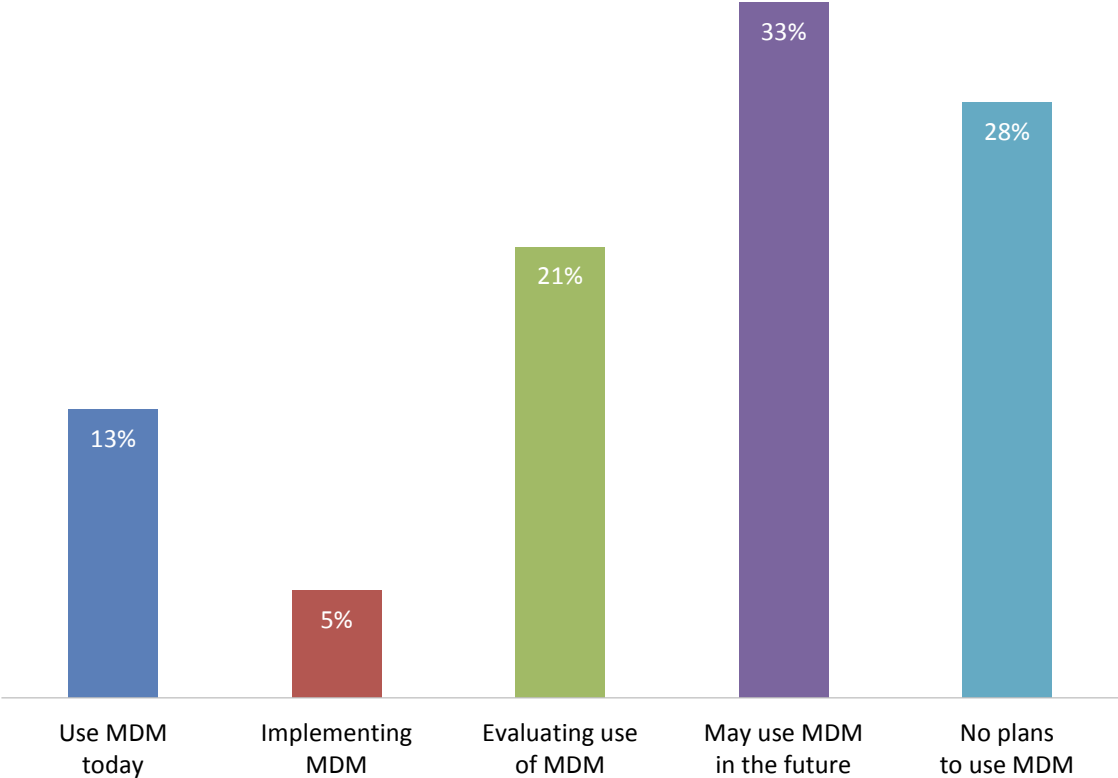
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## Future Plans for MDM Solutions

Despite the highly perceived importance of MDM, respondents report surprising rates for potential MDM use in the future. A majority of organizations (61 percent) indicates that they only may use or have no plans to use MDM. Only 18 percent of respondents either use or are implementing an MDM solution.

### MDM Use



Source: Dresner Advisory Services

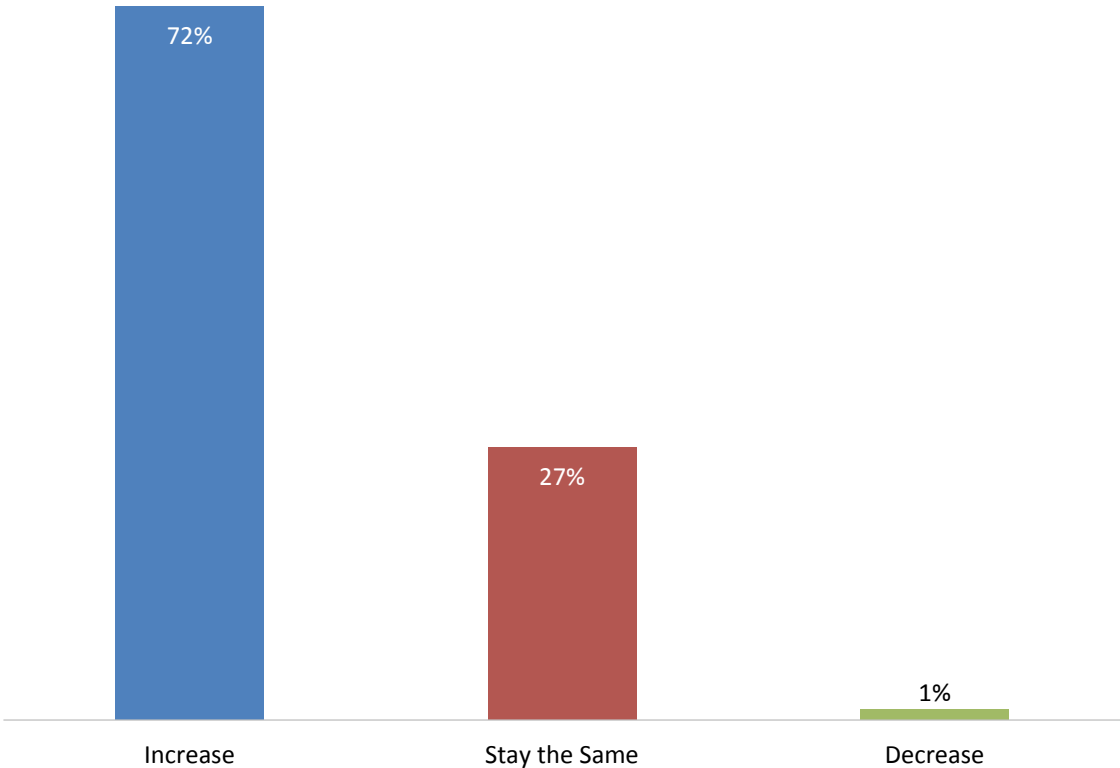
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## Increasing Use of MDM

Although a much smaller set than our overall survey population, almost all survey respondents that use MDM indicate their usage will remain the same or increase during the next 12 months (99 percent).

### MDM Usage Plans



Source: Dresner Advisory Services

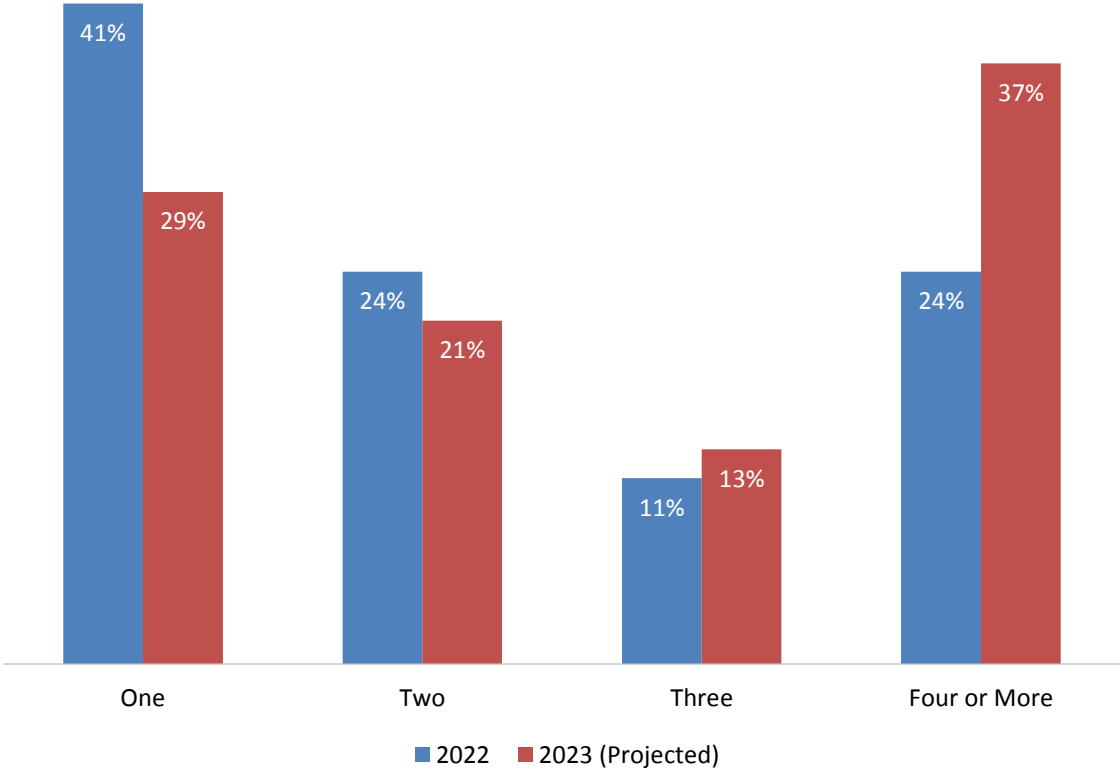


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## An Increasing Need to Master More Data Domains

The projected increasing use of MDM is reinforced when considering the number of data domains being mastered. A majority of organizations (65 percent) reports mastering one or two data domains in 2022.

### Number of MDM Domains Being Mastered



Source: Dresner Advisory Services

The high perceived importance of master data and its projected increased use shows in the increase in mastering three or four data domains in the next 12 months—a 43 percent increase. Year over year, the data for the needs to master one domain and four domains show a near reversal.

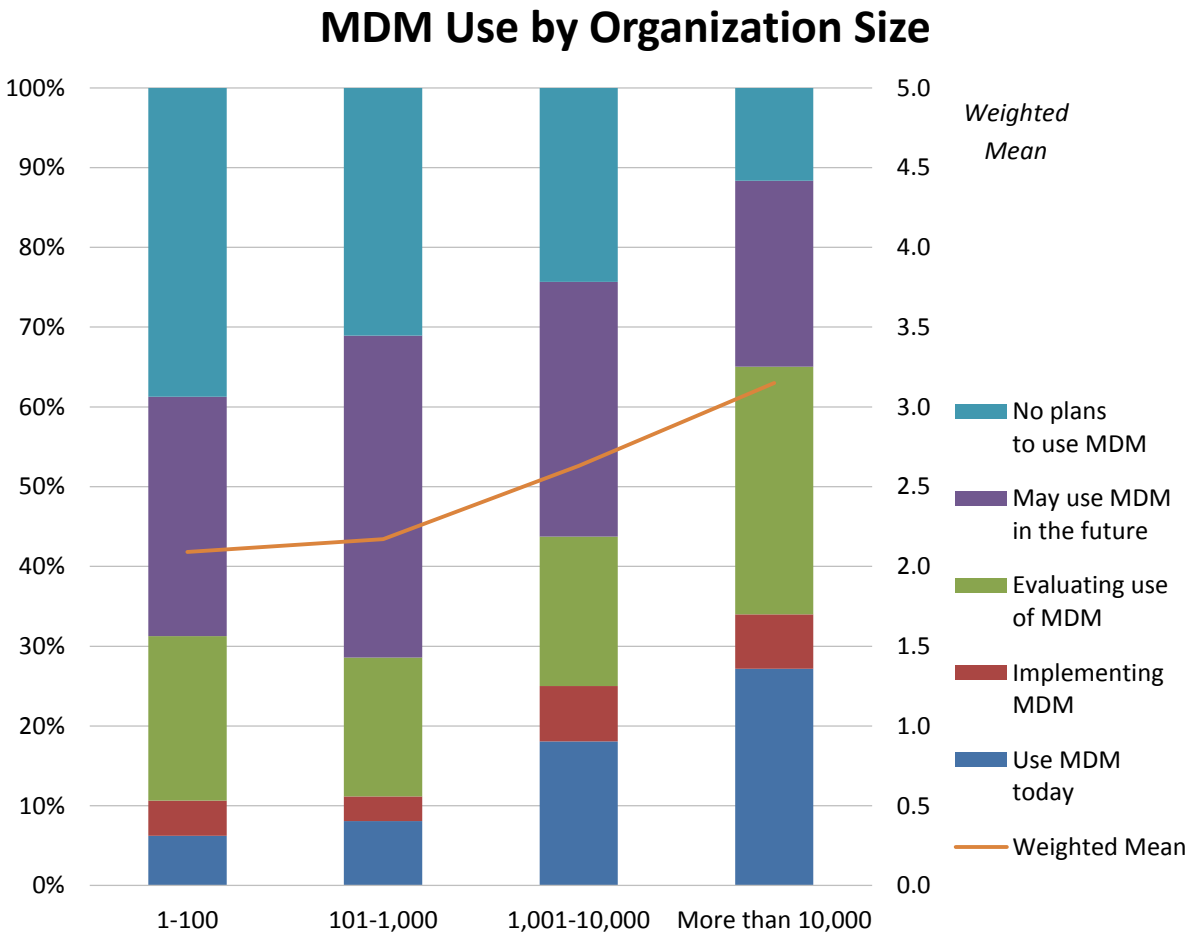
The consistency shown in the data for needing to master two and three data domains suggests the change will result from a strong uptake of multidomain MDM. This projected change reflects broader understanding of the value of scaling MDM broadly.

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## Evolving Demand for MDM Solutions

The potentially conflicting data—high importance for master data, projected increased use of MDM, yet relatively muted plans for future use of MDM—begin to make sense in the context of evolutionary forces within the market.

Relatively high barriers to entry—including cost and complexity of traditional MDM solutions—have concentrated market share in large and very large organizations.



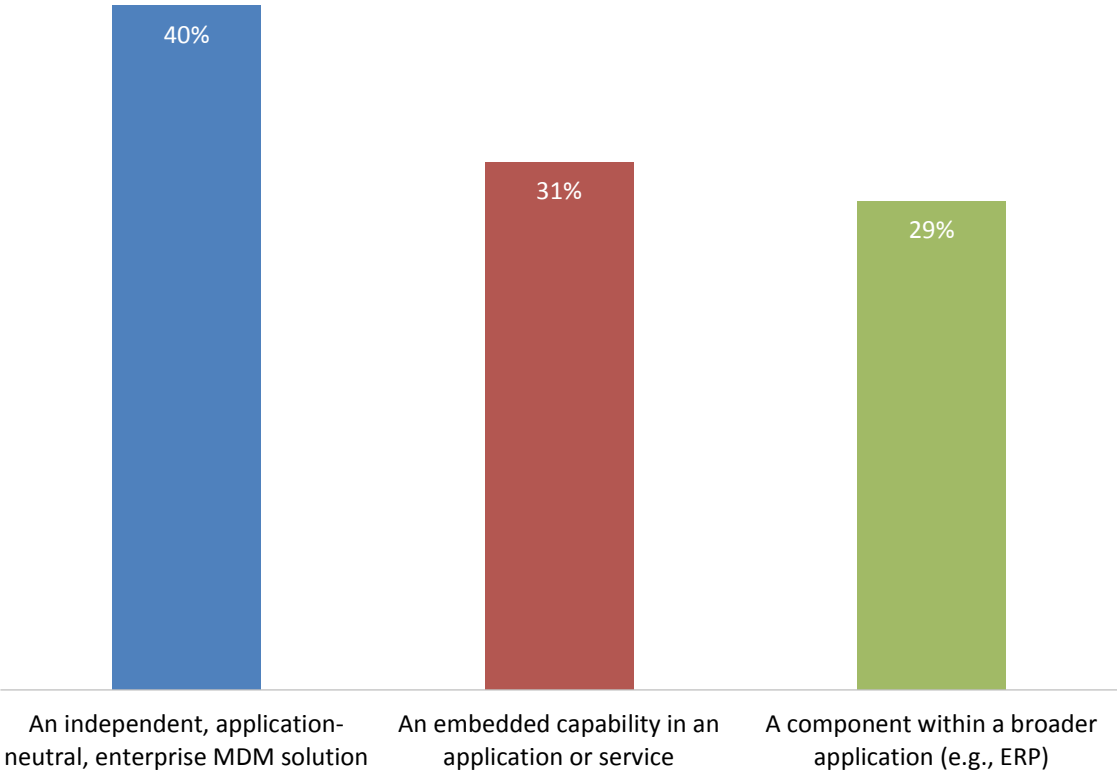
Source: Dresner Advisory Services

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Most frequently, an organization views its current solution as an independent, application-neutral, enterprise MDM solution (40 percent). This characterization aligns to the majority of dedicated (MDM heavy) solutions.

## The Nature of MDM Solutions In Use



Source: Dresner Advisory Services

However, a majority of respondents (60 percent) view their current MDM solution as either an embedded capability in an application or service, or a component within a broader application. These two categories suggest something other than traditional (heavy) MDM, and reflect what previously was identified and defined as ADM (that is, mastering of data within the specific context of a host application, service, or suite). Dresner Advisory Services characterizes these solutions as MDM light.

Master data and MDM continue to rise in importance, even as market expectations as to how to address this need shifts away from the MDM-heavy solutions that comprise the majority of current offerings.