**IBM Global Business Services**
Executive Report



IBM Institute for Business Value

# Analytics: A blueprint for value in midmarket organizations

*Converting big data and analytics insights into results*

## IBM® Institute for Business Value

IBM Global Business Services, through the IBM Institute for Business Value, develops fact-based strategic insights for senior executives around critical public and private sector issues. This executive report is based on an in-depth study by the Institute's research team. It is part of an ongoing commitment by IBM Global Business Services to provide analysis and viewpoints that help companies realize business value.
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*By Susan Miele and Rebecca Shockley*

**In 2012, three of five midmarket** respondents to our annual IBM global analytics study had realized a competitive advantage from information and analytics. But despite having created cultures ready to transition to data-driven decision making, in 2013 we found that midmarket organizations still lag their large enterprise counterparts in implementing important newer technologies. Most in midmarket now have an analytics foundation designed to handle structured data, for example. But few have evolved to more dynamic environments required for big data and a pervasive and prescriptive use of advanced analytics that are essential to survive in a digital world. So, what should midmarket companies do now to improve their capabilities to convert data-driven insights into meaningful results? In this report, we explore how they can tap into their strengths, shore up their weaknesses and learn from analytics leaders.

The IBM Institute for Business Value has researched the field of analytics at ever-increasing levels of granularity since 2009. Our research, combined with the on-the-ground experience of thousands of consultants, continues to probe deeper into the fundamental question: How can organizations achieve positive returns on their analytics investments by taking advantage of expanding types and amounts of data?

In October 2013, we published our global findings in "Analytics: A blueprint for value," where we examined how organizations fare against the benchmarks and best practices exhibited by those organizations creating the most value from big data and analytics.[1] In this report, we examined the top 19 percent of respondents who identify their organizations as substantially outperforming industry and market peers, and attribute much of their success to analytics. We refer to this group as "Leaders." We'll explore here in greater detail what Leaders are doing and how midmarket companies can emulate those best practices. We define midmarket organizations as those that employee fewer than 1,000 employees or generate less than $1 billion (USD) per year.

To benchmark the capabilities of midmarket organizations against these global standards, we analyzed the responses of more than 450 midmarket business and IT executives, managers and analysts to our global survey. This wide-ranging survey examined more than 50 analytics processes, the collection level of 12 types of data, the competency level of data and analytics skills for 15 analysis techniques, and implementation levels of 14 hardware and data management components. The questions were designed to reveal how to translate the high-level concepts associated with delivering exceptional business value through analytics into actions that can truly deliver value. (For more details on how the survey was conducted, the survey respondents and the panel of experts assembled, please refer to the global study report.[2])

Today, few midmarket companies have measurement frameworks and governance in place to support sustainability: the ability to keep growing in the still-emerging digital marketplace. Without stronger governance and more varied sources of data–especially those that target understanding customer behavior, such as social and mobile applications' data–midmarket organizations will continue to struggle.

In fact, midmarket companies have substantial strengths to build upon. They outpace Leaders in their growth-driven expansion efforts, attributing the value of analytics solutions to their ability to increase revenues, increase the speed and accuracy of decisions, and generate innovative ideas. Midmarket executives can benefit from strong culture and trust as they adopt new technologies, develop new analytic methodologies and implement more data-driven processes aligned to the business strategy.

Organizations that derive the most value from analytics take a disciplined approach to performance, and implement processes to manage and monitor analytic investments. Midmarket companies have the foundational elements to do this but need more discipline and investment in platforms, accelerators, skills and/or partnerships for greater returns. Even lacking the resources and budgets comparable to those of larger enterprises, midmarket organizations can aim to use the same tools to tackle analytics challenges in different ways.

## Nine levers of differentiation

Through our research, we identified nine levers that enable organizations to create value from an ever-growing volume of data from a variety of sources–value that results from insights derived and actions taken at every level of the organization.

These nine levers represent the sets of capabilities that most differentiated Leaders from other respondents:

- ***Culture:*** Availability and use of data and analytics within an organization
- ***Data:*** Structure and formality of the organization's data governance process and the security of its data
- ***Expertise:*** Development of and access to data management, and analytics skills and capabilities
- ***Funding:*** Financial rigor in the analytics funding process
- ***Measurement:*** Evaluating the impact on business outcomes
- ***Platform:*** Integrated capabilities delivered by hardware and software
- ***Source of Value:*** Actions and decisions that generate results
- ***Sponsorship:*** Executive support and involvement
- ***Trust:*** Organizational confidence.

## Learning from Leaders

The best practices for these levers–combinations of activities focused on analytics development and delivery–were determined through examination of the top 19 percent of respondents who identify their organization as substantially outperforming their industry and market peers, and attribute much of their success to analytics. Throughout this document, we will refer to this top 19 percent group as Leaders. (For more details about the Leader population, please see the global study report.[3])

Taken individually, each of the levers does not equal one-ninth of the solution. The levers – all present at a consistently high level of capability within Leader organizations – are interrelated. Taken together, these levers help create an environment that supports the use of data and analytics to solve meaningful business challenges – propelling an organization from merely competitive to achieving competitive advantage.

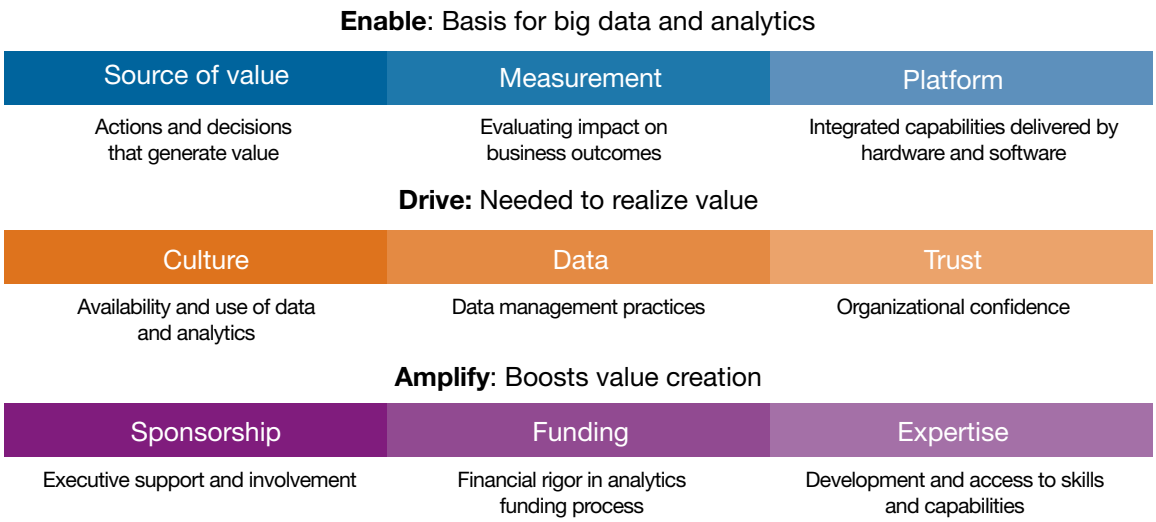
Leaders, it turns out, implement the nine levers in very similar ways, creating a common pattern in the behaviors organizations undertake to create value from analytics. By examining the Leaders' behavior, midmarket organizations still navigating the realities of their unique workplaces can begin to move forward with their own analytics implementations.

## Influencing value creation

While all nine levers distinguish Leaders from other respondents, each lever does not impact value creation in the same way. We found that some levers have greater influence on an organization's ability to deliver value from the data and analytics available. We identified three levels of value impact among the levers:

- ***Enable:*** These levers form the basis for big data and analytics; thus, value creation.
- ***Drive:*** These levers are needed to realize value from data and analytics; lack of sophistication within these levers will impede value creation.
- ***Amplify:*** These levers boost value creation.

Understanding how each lever creates value – whether as an Enabler, Driver or Amplifier – is important in developing an analytics strategy. For example, Enable levers need to be in place before value can be generated through Drive and Amplify levers (see Figure 1).




Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 1:* **The nine levers are capabilities that enable and enhance analytics development, delivery and value creation.**

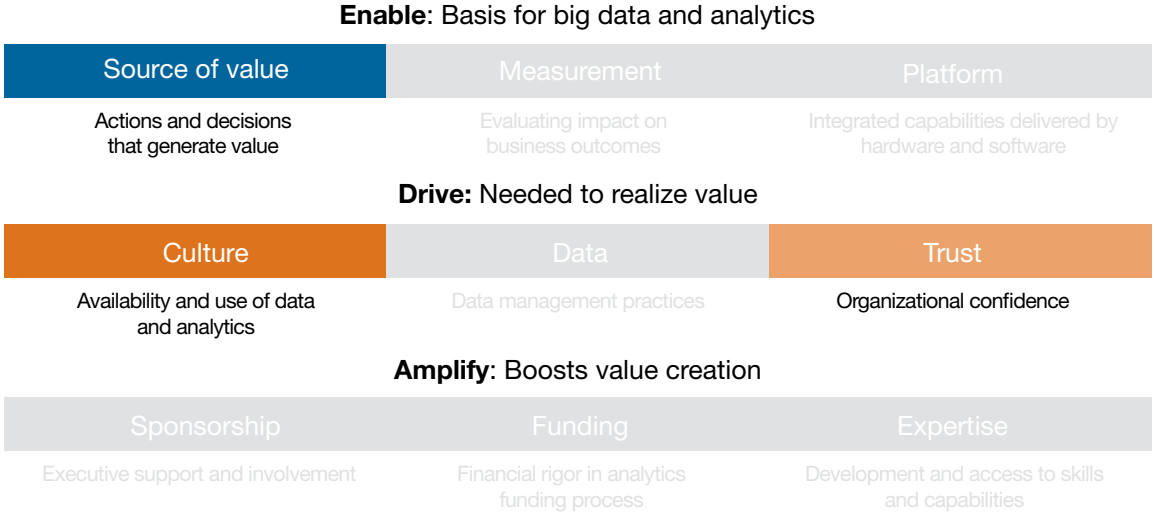
By examining the behaviors and capabilities of midmarket companies against the benchmarks of best practices exhibited by the Leaders, we find that midmarket companies have a clear sense of direction and strong internal support. However, they lack processes and tools necessary to create significant value from their modest analytics investments.

While exhibiting strong capabilities within the *Source of value*, *Culture* and *Trust* levers, we find that most midmarket companies have yet to adopt a *Platform* capable of supporting big data or advanced analytics. They also still need to establish the management processes in the *Measurement*, *Data*, *Funding*, *Sponsorship*, and *Expertise* levers.

## Enable

The Enable levers create the foundation for big data and analytics, capabilities we have found to significantly differentiate organizations creating the most value compared to other organizations. These levers form the basis upon which data analysis, discovery and analytics value creation can occur. Levers at the Enable level are *Source of value*, *Measurement* and *Platform*.

Midmarket companies have a clear sense of what actions and behaviors create value in their organizations and industries, on par with Leaders in the *Source of Value* lever. But they most often lack the *Measurement* practices to document those results. Also missing is an integrated *Platform* capable of handling new sources and types of big data, which limits their ability to create value from information and analytics (see Figure 2).




Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

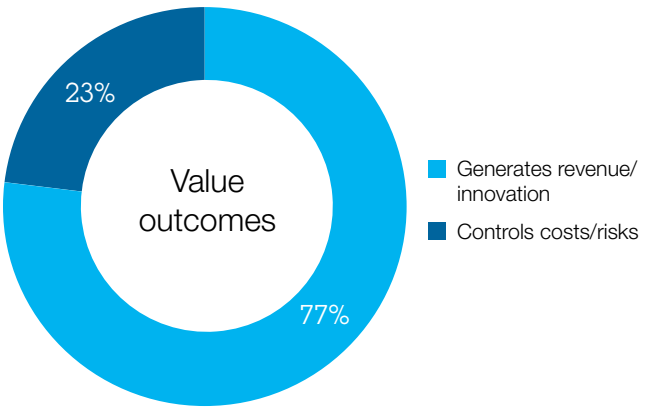
*Figure 2:* **Midmarket companies have a clear sense of direction, and strong internal support, but lack processes and tools.**

### *Source of Value*

*Actions and decisions that generate explicit business results*

Not every organization derives value from the same activities. The spectrum of value outcomes ranges from cost management to revenue generation. Organizations that derive the most value have a clear understanding of the source of that value, and target activities toward meeting specific objectives.

Outpacing even Leaders, more than three-quarters of midmarket organizations reported growth-driven expansion efforts as the source of value from their current analytics investments (see Figure 3). Seventy-seven percent of midmarket respondents and 75 percent of Leaders attributed the value of analytics solutions to their ability to increase revenues, increase the speed and accuracy of decisions, and generate innovative ideas. Only 23 percent of midmarket companies said the primary source of value was from cost-containment activities, such as reducing operational costs and improving efficiency.




Note: Midmarket respondents were asked to describe the source of value derived from analytics. n=277
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 3:* **Midmarket organizations realize value from activities that support revenue generation and innovation. Consolidated response options shown.**

Midmarket companies in our study:

- ✓ **Focus** on revenue opportunities
- ✓ **Generate** innovative ideas with data and analytics
- ✓ **Increase** productivity using data and analytics
- ✓ **Understand** customers better based on analytics insights.

Midmarket companies are laser-focused on revenue generation and growth. Often started as entrepreneurial ventures, these organizations are more likely to have leaders with an ownership stake and broader expansion goals than larger peers. Often, the goal to grow is rated higher because the alternative in these fast-paced smaller markets is irrelevance or even obsolescence. A secondary by-product of this growth focus, however, is an ongoing drive to create operational efficiencies and cost management as they refine business processes to accommodate the new sources of growth or additional business volume. So, midmarket companies understand that revenue generation and growth comes directly from their ability to create value for customers. Their customers are often more personally associated with these smaller organizations.

### *Measurement*

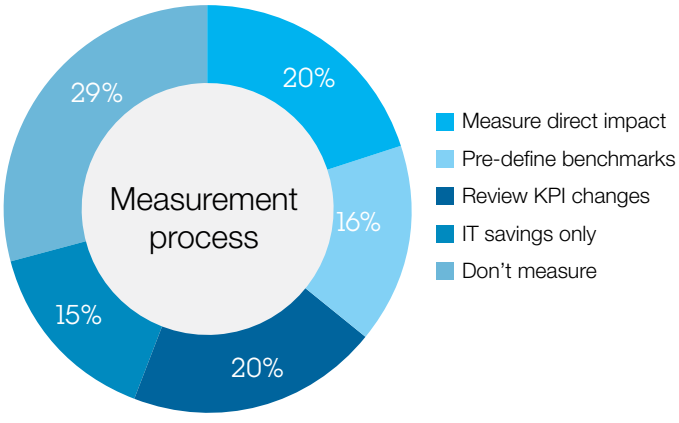
*Evaluating the impact on business outcomes*

Influencing business outcomes is the primary purpose of analytics investments. Organizations realizing value from analytics solutions are those that can readily measure the impact on key performance metrics and recognize their ability to forecast future outcomes. To sustain success with analytics, results must be measured. The midsize organizations in our study:

- ✓ **Realize** a return on analytics investments in less than one year
- ✓ **Impact** outcomes through use of analytics
- ✓ **Use** at least some predictive analytics to forecast outcomes
- × **Lack** strong measurement processes.

While 65 percent of midmarket companies report realizing a return on their investment within 12 months, the prevalent lack of a strong measurement system among these organizations hampers their ability to accurately forecast or track the impact of those investments (see Figure 4). Only slightly more than one-third of midmarket companies predefine the metrics the investment is designed to impact, or measure both the tangible and intangible impacts after implementation. Most of these organizations rely instead on a system of inferred impact captured after implementation.

Almost two out of three midmarket respondents report at least a moderate impact on outcomes from the use of data and analytics, and a majority report using at least some predictive analytics to forecast the outcome of events. However, more than one-third report still using experience or intuition to forecast future events. And, one-quarter of those using predictive analytics only use it in a single instance within the organization.




Note: Midmarket respondents were asked to describe how they measure the impact of analytic investments. n=269
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 4:* **Midmarket companies lack strong measurement processes.**

Measurement is important in demonstrating a return on investment for analytics initiatives. In order to optimize the value attributed to these investments, midmarket companies will need to create an upfront measurement framework that defines in advance the type of return expected from each. These quantified benefits can help justify – or fund – use in other parts of the organization, and helps to verify that invested funds are used appropriately, based on expected outcomes. Creating traceability from investment decision to business outcomes is a key capability. It is a foundation to enabling value creation from the digital assets that are becoming ever-more readily available.

### *Platform*

*Integrated capabilities delivered by hardware and software*

Leaders have evolved beyond the traditional infrastructures and analytics techniques of a basic business intelligence platform to a modern, flexible infrastructure that can intake, process and manage the volume, velocity and variety of today's data. While most midmarket companies have an analytics foundation designed to handle structured transactional data in these ways, few have evolved to the more dynamic environments required for big data, or a pervasive and prescriptive use of advanced analytics. Midmarket companies appear hesitant to implement these newer technologies and delivery systems, despite such systems' potential to reduce the need for specialized expertise and lower overall data management costs.

The majority of midmarket companies reported they can support query and reporting (68 percent), data visualization (54 percent) and data mining (55 percent). But beyond those three, their analytics capabilities taper off dramatically. Midmarket organizations:

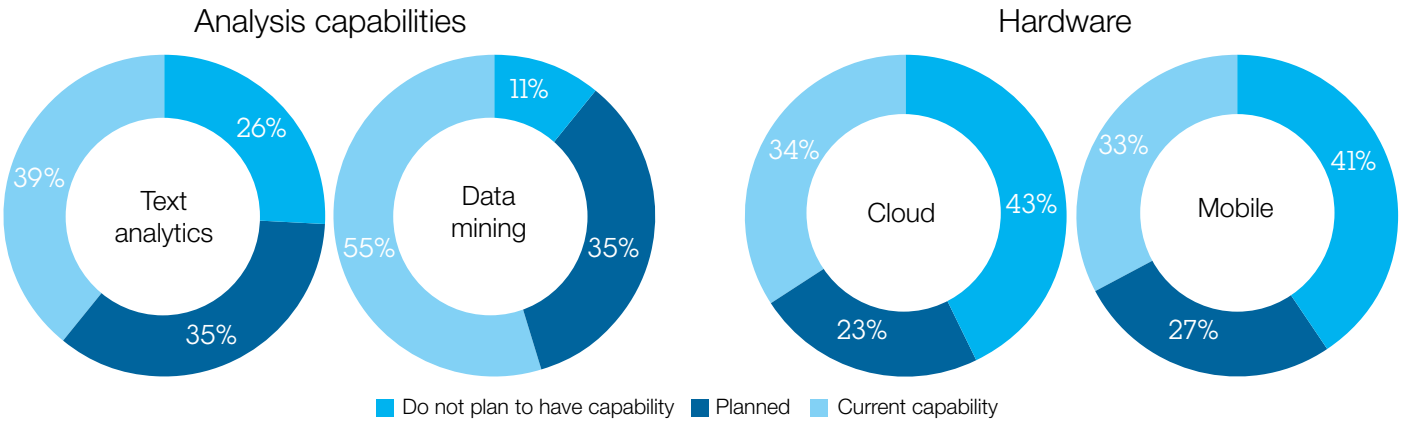
- **Rely** on basic business intelligence platforms
- **Struggle** to integrate data and manage large volumes of it
- **Shun** newer technologies and delivery systems.

Sixty percent of midmarket organizations currently lack the integrated data infrastructure needed to support company–wide use of data, as well as the high-capacity warehouse (61 percent lack) and the scalable storage infrastructure (57 percent lack) needed to support the use of greater volumes and a wider variety of data. Hampered by this data environment, few midmarket organizations have adopted newer technologies such as Hadoop engines (17 percent), NoSQL engines (29 percent) or columnar databases (27 percent), all of which open up new opportunities to manage and analyze data.

And while only one-third of midmarket companies have adopted cloud technologies, they are on par with Leaders who have a 36 percent adoption rate (see Figure 5). Cloud technology adoption–which can often lower data management costs by making data storage and delivery a service, rather than a capital investment–is one area where midmarket may soon outpace larger enterprises.[4] Improvements in both the *Measurement* and *Funding* levers will help midmarket organizations understand how to better harness and recognize both the cost savings and revenue generation potential of these newer technologies.

With this limited hardware and delivery environment (in addition to a limited data environment to be discussed later) midmarket organizations have an equally limited scope of analysis capabilities. Beyond the basics of queries and data mining, fewer than half have implemented text analytics (39 percent), video analytics (30 percent) or voice analytics (24 percent), all of which are needed to analyze customer interactions and other forms of customer commentary made possible by today's digital environment.

The capabilities needed to intake, manage, analyze and act on the volume, velocity and variety of today's big data assets has become an entry point–table stakes, so to speak–for creating value from data and analytics. Without this enabling platform of integrated capabilities, midmarket organizations will miss the opportunity to create new levels of growth through a deeper understanding of their customers, competitors and suppliers.




Note: Midmarket respondents were asked to identify the analysis capabilities and hardware within their organization. A total of 29 platform capabilities were surveyed.
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 5:* **Midmarket companies struggle to integrate data and managed large volumes of it, and shun newer technologies and delivery systems.**

### Ambu achieves efficient innovation through analytics

Ambu is a leading innovator in the healthcare sector, and develops products in three main fields of excellence: anesthesia, emergency care, and patient monitoring and diagnostics. Headquartered in Denmark, Ambu's current strategy revolves around four key focus areas: developing new and improved products; strengthening its position in the U.S., Europe and Asia; making strategic acquisitions to boost its market share in the single-use medical products sector; and enhancing business processes and improving efficiency through IT and lean manufacturing.

"Analytics is a common factor across all four of these strategic focus areas. For example, we need a deep understanding of how our current product lines are performing in order to launch new products successfully and make the right acquisitions," explains Nicolas Fontan, Business Intelligence Manager at Ambu.

"To strengthen our position in different international markets, we need to gain insight into how our sales teams are performing in each territory," he continued. "And to ensure that we can provide this information to our business decision-makers in an efficient and timely way, we need the right IT systems to support our analytics processes."

With the growth of the business, Ambu needed to upgrade the infrastructure that its five-year-old business intelligence system was running on – moving from a single server to a multi-server environment. Fontan said the company decided to upgrade its software at the same time, a move that enabled a wider range of skill levels among its business users to be involved in the analysis process.

"The integration of the tools is a clear advantage: they complement each other, and they all utilize the same data, so they can provide a single version of the truth," Fontan said.

With the upgraded solution up and running, Ambu has been able to develop a number of sophisticated reporting tools that offer new ways of understanding the way its business operates. In addition to updated versions of the company's existing sales and financial analysis cubes, the business intelligence team has created a new report for the marketing department, which gives product managers greater insight into the purchasing behavior of new customers.

"As a result of this analysis, our marketing team has decided to extend one of our product ranges, giving customers more choice and providing products that fit their needs more precisely," says Fontan.[5]

## Drive

The second level of impact – Drive – consists of the levers that start the process of moving an organization from analytics discovery to value creation. Organizations that lack the capabilities represented in these levers will struggle to create value from their analytics investments. Levers at the Drive level are *Culture*, *Data* and *Trust*.

Midmarket organizations are strong when compared to Leaders in two of the three *Drive* levers: *Culture* and *Trust*. But midmarket companies fall short in the Data lever, lacking both the strong data management practices and breadth of data collection we see in Leaders.

Midmarket respondents have established an evidence-based culture, and make day-to-day and strategic decisions based on facts. Thus, they have created an organization prepared to take action on analytics. The primary lever holding back midmarket companies from creating more value from analytics is the lack of relevant digital data from newer sources and data management practices. Without stronger governance and more varied sources of data, especially those that target understanding customer behavior, such as social and mobile applications' data, midmarket organizations will continue to struggle.

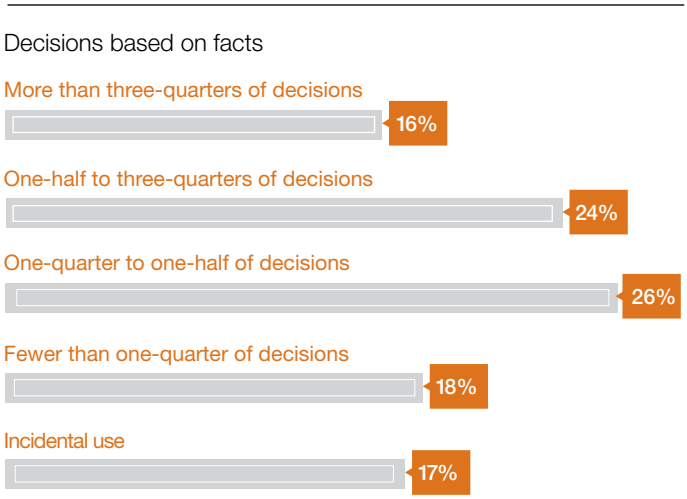
### *Culture*

*Availability and use of data and analytics*

The goal of analytics investment is to influence business outcomes. To achieve that, an organization has to use data and analytics within its decision-making processes. Organizations that do not adopt a fact-based culture will struggle to create value from analytics investments and capabilities. Midmarket companies in our study:

- ✓ **Use** data to make many decisions
- ✓ **Frequently** have the data needed to make decisions
- ✓ **Rely** on predictive analytics to make key decisions.

Midmarket organizations have created a culture – on par with Leaders – prepared to make decisions based on data and analytics. They are beginning to embed the thought processes needed to support a data-driven culture and a growing expectation that decisions are based on data. Forty percent of midmarket respondents said they make at least half of their business decisions based on facts, compared to 47 percent of Leaders (see Figure 6). Additionally, four out of ten midmarket respondents report they frequently or always have the data needed to make decisions, the same percentage as Leaders.




Note: Midmarket respondents were asked to identify the percentage of decisions they personally made based on data and analytics. n=440
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 6:* **Midmarket respondents establish an evidence-based culture, and make a day-to-day and strategic decisions based on facts.**

Almost half of midmarket respondents are using some level of predictive analytics as well, albeit in a limited fashion, to make those decisions. Forty-four percent of midmarket companies report using both current and historic data to create predictive forecasts, which is on par with 46 percent of Leaders.

But again, the limited breadth and depth of the analytics among midmarket respondents offers pause. While today's midmarket organizations are making action-oriented decisions based on the data and analytics available, our findings with the *Platform* and *Data* levers illuminate how narrow these analytics are most likely to be, given the lack of an integrated data infrastructure and the limited data collected. So while midmarket organizations today embrace the analytics at hand, there's much more they can do to create even greater value from analytics.

## *Data*

### *Data management practices*

Decision makers must have confidence in the data before they will use it to guide their actions. In organizations deriving the greatest value from analytics, the governance and security of the data are sufficient to provide most users with a comfortable level of trust, yet flexible enough to allow business users to meet a diverse set of requirements. Furthermore, our research indicates that organizations with poor data management activities will continue to struggle to create value from data and analytics.

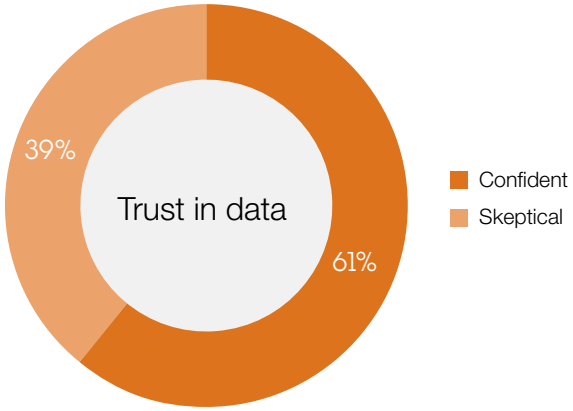
Midmarket companies trust the data they have; the problem is that they don't have much of it. Midmarket companies in our study:

- ✓ **Trust** the completeness and accuracy of the data they have available
- ✓ **Implement** privacy and security policies to protect sensitive data, often rigorous
- × **Collect** only transaction and machine-generated log data.

Midmarket organizations today primarily collect transactional data (65 percent) and machine-generated log data (48 percent); beyond those two sources, the rates of collection among midmarket companies fall dramatically. Only about one-third of companies collect emails (37 percent), customer events (35 percent) or social data (32 percent), and fewer than one in five collect audio data (19.5 percent), free-form text (18 percent), still images or videos (18 percent), point-of-scale or RFID data (18 percent), or sensor data (18 percent).

Based on the data collected – transactions and log data – it is not surprising that most midmarket respondents trust the data used for analytics (61 percent, see Figure 7). This high level of confidence is attributed to the completeness and accuracy of the data available. Transactions and log data, after all, are the basic data of business operations. Moreover, 65 percent of midmarket organizations have taken proactive, often strong, steps to protect the privacy and security of this data. They have policies in place to protect sensitive data, and one-third have also implemented even more rigorous processes, such as role-based access and a strong security infrastructure.

The challenge for midmarket organizations will be to preserve that level of trust internally – through ongoing use of strong security and privacy processes – as they expand the breadth and volume of data collected. But they must protect more than just the trust among internal data users.




Note: Midmarket respondents were asked to describe level of confidence in the quality of data and analytics within their organization. Consolidated response options. n=220
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 7:* **Midmarket respondents trust the completeness and accuracy of the data they have available and implement policies to protect it, but they tend to collect only transaction and machine-generated log data.**

Given that much of this new data will involve customer behaviors and interactions, midmarket companies must keep its security paramount to maintain a strong and positive relationship with customers. Midmarket executives will need to think strategically and communicate transparently about how and what new data sources are collected and analyzed to uphold customer trust as well.

### *Trust*

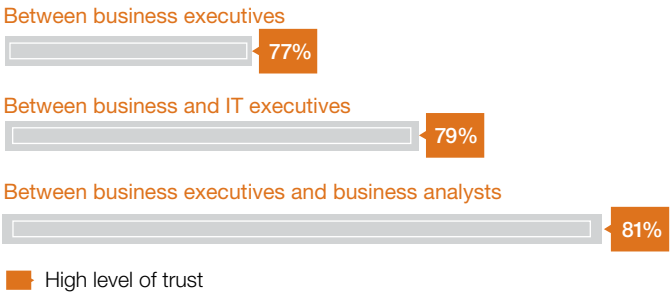
*Organizational confidence*

The surprising lever that directly impacts an organization's ability to create value from analytics is the level of trust among people within an organization. Our research finds, in fact, that a lack of trust is one of the most significant hurdles to value realization.

This is not trust in the quality of the data, the reliability of analysis or the veracity of data. This is the trust between individual people – the old-fashioned kind of trust that is earned by getting to know someone's character and what they are capable of delivering. Midmarket companies in our study:

- ✓ **Believe** other executives will do a competent job
- ✓ **Exude** confidence in IT executives
- ✓ **Rely** on the expertise of analysts.

The level of personal trust – a belief that others will do a competent job, deliver on promises and support the organization's best interest – among midmarket executives is strong and pervasive, even outpacing Leaders in some relationships (see Figure 8). Based on our interactions with midmarket companies, we believe their high levels of interpersonal trust may be more driven by necessity than among their larger enterprise counterparts. Midmarket companies often lack the system of redundancies or liaisons within their smaller organizations, and lack the bandwidth to micromanage other executives. There is a greater level of interdependency among midmarket executives based on the economic reality that if you can't trust someone else to their own job, then the business will likely fail.




Note: Midmarket respondents were asked to identify the level of trust between analytics roles within their organization. n=257
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 8:* **Midmarket companies trust that others within the organization will do a competent job, often because there is so little redundancy within the company.**

Midmarket executives should leverage this trust as they move forward to adopt new technologies, develop new analytics methodologies and implement more data-driven processes. A data-driven culture relies on a trust that everyone is working toward a common goal and the common good. This attitude helps make sharing data, relying on analysis and investing hard-earned dollars possible. The inherent trust within midmarket organizations may be a strength built from necessity, but that strength nonetheless can help drive efforts toward even greater value creation.

### FleetRisk Advisors helps clients reduce accident rates and driver turnover

Founded in 2004, FleetRisk Advisors helps trucking and logistics organizations and commercial fleets significantly improve their performance–increasing efficiency, reducing accidents and related expenses, and decreasing employee turnover. Based in Alpharetta, Georgia, the company employs 25 people and works with some of the largest commercial vehicle operators in the US.

FleetRisk was founded on the premise that companies have access to mountains of data about their drivers and vehicles. Buried within this data are insights that can enable businesses to understand past events, forecast future events, and take action or make decisions to change those future events to their advantage.

"Trucking and logistics is an extremely challenging and competitive industry," explains Lauren Domnick, Predictive Modeler at FleetRisk Advisors. "To meet their customers' needs, these companies need to be able to deliver goods reliably and on schedule, while ensuring driver safety and avoiding accidents that can cause delays, damage cargoes, and even cost lives. It can be a stressful environment to work in, and the average employee turnover rate across the industry is in excess of 100 percent per year."

The benefits of analytics for FleetRisk are considerable, says Domnick, but the real story is the results that predictive analytics enable the company to deliver to clients.

"Across our client-base, we're seeing a minimum of 20 percent reduction in the overall accident rate, and an 80 percent reduction in severe accidents such as rollovers, driving off the road or rear-end collisions. By identifying the risk factors–especially those that contribute to fatigue–we help our clients to intervene before accidents happen. This helps them provide a more reliable service for their customers, protects valuable cargo, and most importantly, keeps drivers and other road-users safe," she said.

By analyzing drivers' pay compared to their peers and to industry averages, and combining this with other stress factors and previous employment history, FleetRisk has helped clients improve employee satisfaction, reducing employee turnover rates by a minimum of 30 percent on average. This generated important savings on recruitment and training, which are major cost centers in the trucking and logistics industry.[6]

## Amplify

The final level of impact consists of levers that boost value creation. These levers provide the momentum and capabilities to transform insights into actions that positively impact an organization's bottom line. Levers at this level are *Sponsorship*, *Funding* and *Expertise*.

To amplify the value created from data and analytics, organizations need business-driven sponsorship to guide a common agenda through business unit actions, and financial rigor within a collaborative funding process to support enterprise-level analytics investments. And it comes as no surprise that the final lever that changes the value equation for analytics investments involves experts and analysts within the organization, and especially the level of focus put on the development of their skills.

Midmarket companies lag behind Leaders in each of these levers, impeding progress and limiting the potential for strong results. Midmarket executives can learn much from the best practices of Leaders regarding how they can amplify the value created from data and analytics.

### *Sponsorship*

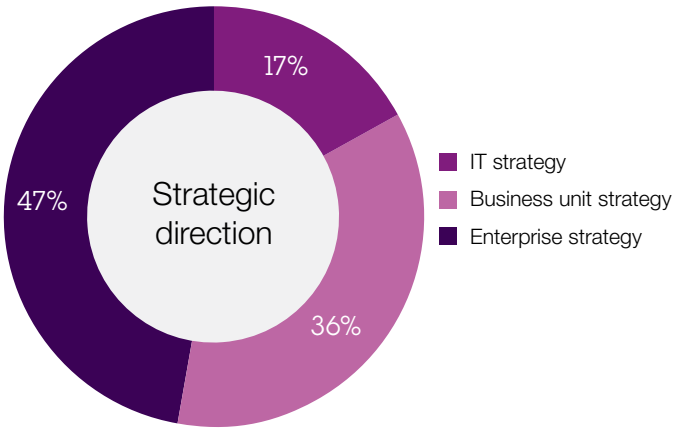
*Executive support and involvement*

Executive support and involvement in analytics are key to value creation. Top-down support and cross-department engagement create more streamlined and efficient analytics investments. Midmarket companies in our study:

- ✓ **Look** to business executives for leadership
- × **Guide** analytics investments based on business unit or IT priorities
- × **Struggle** with budget and governance.

In midmarket companies, the chief advocate for analytics is most often one of the organization's key business leaders. More than one in four see the Chief Executive Officer or the Chief Operating Officer as the primary analytics advocate, most likely due to the high percentage of owner-driven businesses in midmarket. However, a significant portion of respondents said advocacy is either expected by everyone (18 percent) or no one (12 percent), both of which create a leadership vacuum due to the lack of accountability.

As a result, 47 percent of midmarket companies are guided by a company-wide analytics strategy that is shared across business units to guide consistency in analytics investments (see Figure 9). Conversely, the other 53 percent leave the decision-making power regarding analytics policies, projects and needs to the IT department to the IT department or to an individual business unit. In many midmarket organizations, it is simply a matter of following the money: data is considered the province of IT or the business unit itself – rather than a strategic business asset – and so the budget to manage data rests with IT and department leadership. As a result, it is easy to see how this lack of business-driven collaboration, by which a company could define mutual needs and requirements, has hampered the ability to fund upgrades to the analytics *Platform*.




Note: Midmarket respondents were asked to describe who sets the analytic strategy in their organization. n=202
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 9:* **Midmarket respondents look to business executives for leadership, yet guide analytics investments based on business unit or IT priorities.**

Midmarket executives will need to turn their advocacy into action if they want to amplify the value that the use of analytics creates. Their ability to deliver valuable business outcomes from an implementation approach is constrained without the sponsorship and validity that comes from a cohesive business-driven analytics strategy.

### *Funding*

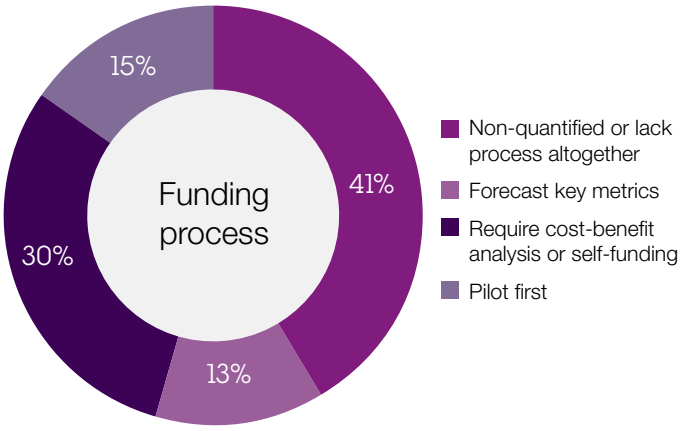
*Financial rigor in the analytics funding process*

Organizations that derive the most value from analytics take a disciplined approach to performance, and implement processes to manage and monitor analytics investments. While there is an implicit connection to the level of sponsorship, we find that the structure, formality and follow-through associated with the funding processes influence how much value the organization will derive from those investments. Midmarket respondents in our study:

- ✓ Pool analytics funding for shared resources or activities
- × Implement weak funding processes.

Investment and funding processes for analytics efforts within midmarket companies falls into two distinct groups: those that do it exceptionally well, and those that do it exceptionally poorly. At one end of the spectrum, 30 percent of respondents said their organization requires that major analytics investments be justified using a quantifiable cost-benefit analysis, or must be self-funded while another 15 percent require a pilot or proof-of-concept implementation (see Figure 10). At the other end of the spectrum, 41 percent don't have any formal funding process, while another 13 percent use only vague, non-quantified criteria to make these critical investment decisions.

Once these projects move into development, the majority of midmarket companies use shared analytics resources, either through a company-wide budget (24 percent), a per-service fee program (19 percent) or chargeback model (15 percent). Pooled resources are often critical in organizations of any size, given the high demand and low availability of skilled analytics resources in the marketplace.




Note: Midmarket respondents were asked to describe the level of business case rigor required for analytic investments. n=113
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 10:* **Midmarket organizations are divided in their approach to funding analytics efforts: they are either very good or very poor at implementing a process.**

A formalized funding process requires organizations to have the ability to measure the outcomes, as well as develop trustworthy forecasts of those outcomes, and is therefore closely linked to the *Measurement* and *Data* levers discussed earlier. In order to truly boost the value that analytics can create within the organization, midmarket companies will need to focus on the management and governance processes woven throughout the analytics environment.

### *Expertise*

*Development and access to skills and capabilities*

Organizations committed to creating the most value from data and analytics are confronted with how to attract, retain and develop one of the scarcest resources in today's marketplace: an analyst who has the skills to extract insights from data and the business knowledge to know what actions can create a positive impact on the business.

Leaders understand that such analysts provide critical data management and analysis techniques. Midmarket companies will need to think creatively about how to fill the skills gaps within their organization.

Midmarket companies in our study:

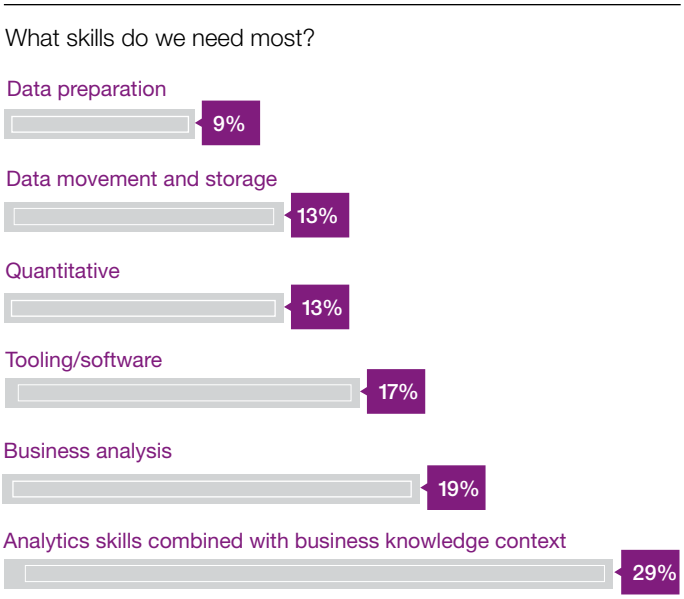
- ✓ **Create** pools of analytics resources to share
- ✓ **Focus** on training current employees
- × **Lack** skills that combine business and analytics knowledge
- × **Struggle** to hire experienced resources.

The majority of midmarket organizations share analytics resources across the company (56 percent) in a bid to provide the broadest possible access to the limited available pool of analytics expertise. The majority (52 percent) also consider the analytics roles within their midmarket organizations to be significant or strategic roles within the company, worthy of formalized training and career paths. Only 10 percent of midmarket organizations reported outsourcing their analytics capabilities completely.

The largest skills gap among all respondents – midmarket and large enterprise alike – is the ability to combine analytics skills with business knowledge (see Figure 11). The analyst who both understands the business and performs higher mathematic or analytics-related tasks is the most sought after in the market. Almost one-third of midmarket respondents (29 percent) cited this as their organization's most pressing skills gap, followed by gaps in business analysis (19 percent) , software-driven analytics skills (17 percent), quantitative skills (13 percent) and data management related skills - data movement and storage (13 percent) and data preparation (9 percent).

As a result, many midmarket organizations focus on training their existing employees in new skills and techniques (29 percent) and allocate experts across multiple projects to increase knowledge sharing (18 percent). Almost one-quarter of midmarket organizations overcome their internal skills gaps by either hiring consultants or outsourcing tasks to external vendors or business partners (24 percent). These suppliers – similar to a centralized analytics unit in some larger enterprises – are able to provide a wide variety of analytics and data management talent for both short- and long-term relationships, becoming a de facto center of competence for the organizations.

While only 9 percent of midmarket organizations report insurmountable skills gaps – a complete inability to find or hire for a specific expertise – that rate is more than double the experience of larger enterprises.




Note: Midmarket respondents were asked to identify where and by whom analytics are preformed within their organization. n=109
Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 11:* **Midmarket respondents most lack the skills that combine business knowledge with analytics.**

For midmarket organizations to grow internal analytics expertise, they should focus on developing the talent that is already committed to their organizations and extend their expertise through trusted partners. As the available analytics expertise grows, so does the opportunity to create even more business value from data and analytics ... a win-win for both the individual and the company.

### Cincinnati Zoo transforms customer experience and boosts profits

Cincinnati Zoo takes pride in the fact that it has the lowest public subsidy of any zoo in Ohio and generates more than two thirds of its $26 million annual budget through its own fundraising efforts. In challenging economic conditions, the Zoo wanted to reduce its reliance on subsidies even further by increasing visitor attendance and revenues from secondary sources such as membership, food and retail outlets. This would secure the Zoo's future and enable it to continue its pioneering work in conservation, preservation and research.

The Zoo's senior management surmised that the best way to realize more value from each visit was to offer visitors a truly transformed customer experience. By using business analytics to gain greater insight into visitors' behavior and tailoring operations to their preferences, the Zoo expected to increase attendance, boost membership and maximize sales.

The Zoo's executive committee began by defining the desired outcomes from the business analytics initiative in business terms, and then decided how best to accomplish them. The key areas were the ability to analyze membership, admissions, food and merchandise sales down to the individual level, in order to understand visitor behavior. It was also important to be able to analyze geographic and demographic information to aid customer segmentation and marketing.

The business analytics solution has given Cincinnati Zoo a better understanding of why customers visit the Zoo, how they behave during their visit and what they spend money on. This has driven dramatic improvements in effectiveness of food and merchandise sales and labor planning, as well as enabling much more effective marketing on a significantly reduced budget.

Cincinnati Zoo has been able to increase attendance and revenues dramatically, resulting in annual ROI of 411 percent. The business analytics initiative paid for itself within three months, and delivers, on average, benefits of $738,212 per year.[7]

## Recommendations: Developing a lever-based analytics strategy

While it's helpful to know how each lever influences value creation, it's equally important to consider where each lever fits in terms of the day-to-day aspects of running a business. Most executives need to approach analytics with a business-driven blueprint – an approach that defines how and why their company will use data and analytics through three lenses: strategy, technology and organization.

- Strategy: The deliberateness with which an organization approaches analytics
- Technology: The enabling capabilities and resources an organization has available to manage, process, analyze, interpret and store data
- Organization: The actions taken to use data and analytics to create value.

This construct, popularized as organizations built business intelligence foundations and other enterprise applications, creates a blueprint that guides executives to consider both the strategic and tactical actions needed to act on data, as well as define the business and technical requirements for the use of analytics.

***Strategy:*** The levers of *Sponsorship*, *Source of Value* and *Funding* represent those capabilities needed to define and enable a strategic approach to data and analytics. By emulating the behaviors of Leaders within these levers, executives can instill a sense of purpose to analytics that connects the strategic vision of the executive suite to the day-to-day actions needed to create value with analytics.

***Technology:*** The levers of *Expertise*, *Data* and *Platform* combine to create the technical capabilities and resources an organization has available to manage, process, analyze,

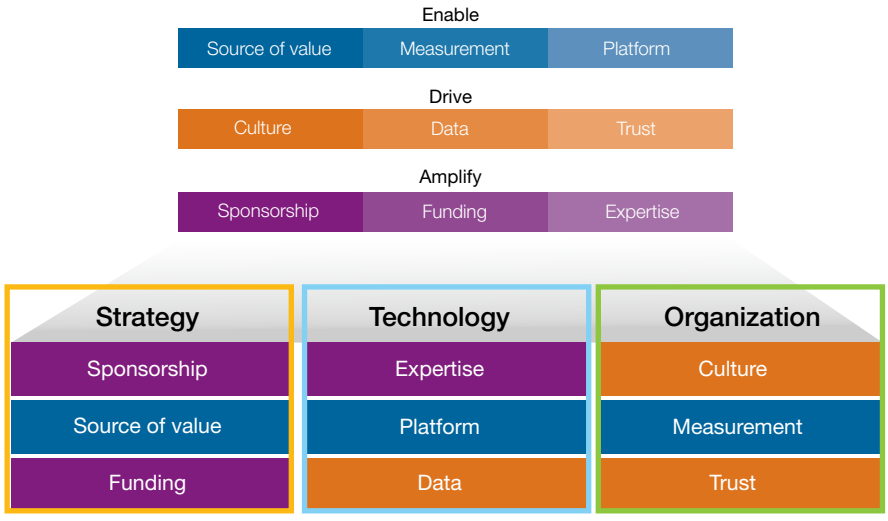
interpret and store data. By identifying the capabilities most needed to solve the organization's unique requirements, executives can create a foundation for analytics discovery to solve today's challenges, while also architecting it for the future.

***Organization:*** The levers of *Culture*, *Measurement* and *Trust* coalesce to form an organization's ability to act on data and analytics, which is the only way to realize a return on investment. Executives need to consider the cultural impact and changes required to operate as a fact-driven organization and be able to measure success when it occurs. But, as noted earlier, it takes more than memos and measurement to transform an organization: it takes trust. It takes trust in the data, but also trust in one another–trust that everyone is working toward the same goal and similar outcomes.

By reframing the levers into a more familiar construct, our goal is to provide the trusted advice midmarket executives need to create a blueprint for insight within their organizations, and unlock the value of data and analytics through discovery and insight (see Figure 12).

## Strategy

***Accelerate analytics with a results-based program.***
Midmarket executives need to establish a business-driven agenda for analytics that enables company–wide ownership, aligns to the company-wide strategy and business goals, and defines any new business capabilities needed to deliver new sources of revenue and efficiencies. Moreover, they need to create a funding process that prioritizes projects that align with this agenda.




Source: IBM Institute for Business Value 2013 Big Data & Analytics Study.

*Figure 12:* **While it is important to understand how each lever impacts value, organizations implement change using a different construct.**

To facilitate the necessary activities within each Strategy lever – Sponsorship, Source of Value and Funding – we offer midmarket executives the following recommendations (see Figure 13).

### *Sponsorship*

The first step for midmarket companies is to *pick a key challenge* around which the company can rally its analytics efforts. This top-down leadership both sets the organizational tone that data as a strategic asset can drive business value and provides a collaboration point for business unit leaders.

**Strategy** Instill a sense of purpose

*Accelerate analytics with a results-based program*

**Sponsorship**

- Pick a key challenge
- Use measureable business outcomes to develop an executive strategy and develop a transition path to line-of-business actions
- Set in place management processes to convey a company-wide sense of ownership through communication and endorsement

**Source of value**

- Determine the business capabilities needed to create value
- Focus on opportunities for operational innovation (double bogey)
- Explore the growth opportunities that abound in the still-emerging digital marketplace

**Funding**

- Prioritize funding based on alignment to business outcomes
- Define measureable business outcomes
- Create value-based business cases to justify the investment

*Figure 13:* **Taken together, these steps establish a strategic approach to analytics that enables executives to accelerate analytics with a results-based program.**

An effective analytics approach will create explicit connections between the organization's strategic goals and the analytics activities it outlines. Thus, *use measurable business outcomes* to develop an executive strategy *and develop a transition path* to line-of-business actions. Organizations whose line-of-business executives are personally involved in the development and management of an analytics strategy are the most effective. This involvement includes understanding the strengths and weaknesses of the organization's digital infrastructure – hardware, software, data and talent – and then taking proactive steps to enable the organization to use data as a strategic asset.

Equally important are executive messages that outline – with certainty – how success will be defined. *Set in place management processes* to convey a company-wide sense of ownership through communication and endorsement. With a clear strategic vision from above, each descending level of management should ask, "How can we impact that set of business outcomes?" and "What data do we need to do it?" Effective governance at every level means understanding how independent strategies can work together to achieve that common goal.

In addition to setting the analytics strategy, successful sponsors *convey an enterprise-wide sense of ownership* through communication and endorsement of analytics undertakings. Working together to achieve a common objective is a key strategy in creating value from analytics.

### *Source of value*

While focusing on a single key challenge will get the ball rolling with analytics, midmarket companies need to resist the urge to merely move from one challenge to another. At some point, the company must shift to a broader perspective that connects the common needs across lines of business and *determines the business capabilities needed to create value*. Analytics creates the opportunity to create a more cohesive company-wide strategy that can enable midmarket companies to better streamline and focus their analytics investments. Documenting the specific use of big data and analytics to solve business problems through use cases is highly recommended.

Midmarket should also *focus on opportunities for operational innovation*. Transformations in personal technology – from the Internet to smart phones – have profoundly altered customer interactions and expectations. At the same time, business technology innovations have created new platforms for interaction with customers and suppliers, new means of understanding business outcomes in relevant timeframes and innovative ways to manage the day-to-day operations of the business. Many of these technologies can actually lower data management costs while increasing the average return on investment, thereby often creating a self-funded investment that meets the tight budget requirements of midmarket.

Midmarket organizations are recognizing the value of analytics to identify new sources of revenue and efficiencies. Most *explore the growth opportunities that abound in the still-emerging digital marketplace* of the twenty-first century. They are looking at new business models and strategies that capitalize on the changing information they have about customers, competitors and markets, and leveraging new technologies to create efficiencies throughout the organization.

### *Funding*

Building on the business capabilities blueprint, organizations need to develop an implementation roadmap that encompasses all the proposed analytics-related activities seeking investments across the organization. An implementation roadmap can help the organization *prioritize funding based on alignment to business outcomes*. Due to the economic realities of most organizations, some desired outcomes won't be funded. Organizations unable to prioritize data and infrastructure developments holistically raise their risk of misaligning investments and misusing scarce analytics talent.

Moreover, each analytics investment should *define measurable business outcomes* by which it will be evaluated. A strong funding process must evaluate the worthiness of investments: unquantified returns or non-specific impacts are insufficient measures. The rigorous approach required for analytics funding can often be learned from the Chief Financial Officer's staff. Rather than relying on "best guess" and assumed impacts, organizations need to *invest the time to create value-based business cases* to optimize the likelihood that investments will pay off, preferably promptly. Funding requests that include justifiable costs and anticipated benefits are a minimum requirement among most top performing organizations, many of which also require multiple scenarios to understand the range of business outcomes and proofs of concept to justify potential benefits.

### Technology

*Enrich the core analytics platform and capabilities.*
Most midmarket firms will need to enrich the core analytics platform and capabilities available within their organization to manage, analyze and act on the insights that will deliver value from data and analytics.

Effective use of technology to achieve an organization's strategic goals begins with a strong analytics talent pool – individuals who understand the business or agency's day-to-day operations and challenges, and can combine that knowledge with analytics to create valuable insights that deliver positive business results.

To effectively put this talent to use, midmarket companies need to govern data assets with rigor and create a more robust, flexible and integrated hardware and software. And when making decisions related to their IT infrastructure, they need to look toward their future needs as well, and architect for growth of the organization.

Following are recommended actions to help midmarket organizations gain the capabilities associated with the Technology levers of Expertise, Data and Platform (see Figure 14):

**Technology** Architect for the future

*Enrich the core analytics platform and capabilities*

**Expertise**

- Educate business users on analytics
- Inventory and accelerate key analytics knowledge and skills required to support to value creation
- Use partners to supplement analytic skills gaps

**Data**

- Expand data capture and collection to include a wider variety of sources that are needed to achieve business outcomes
- Focus on data integration to make data usage and extraction easier
- Govern data with rigor and transparency to maintain level of trust in the data

**Platform**

- Expand to more advanced predictive capabilities
- Enable a platform capable of managing both greater volumes and a wider variety of data
- Look to partners to simplify and modernize existing platform with cost-effective delivery models

*Figure 14:* **By working together, business and IT executives can enable the enterprise analytics agenda with shared analytical expertise, new technologies, and a simplified and flexible platform.**

### *Expertise*

Market reality demands that business users need to understand analytics concepts and how they can be used to drive value in order to make sound investments. Midmarket companies must *educate business users on analytics*, enabling them to understand the key analytics considerations needed to make better choices. Our research indicates it is easier to teach critical thinking and analytics software skills to someone knowledgeable about the nuances of an individual business or industry than to instill business knowledge in an outside analytics expert. The availability of online webinars and courses, as well as training sessions offered by business partners and vendors, offer midmarket executives ample opportunity to increase these critical skills without significant investments or expenditures.

Training existing employees is especially prudent given the current low supply of and high demand for strong analytics talent. Midmarket companies are wise to start with an *inventory of analytics skills* and knowledge within the organizations, *and then accelerate development on the most critical knowledge and skills.*

However, some midmarket respondents cited an inability to find and hire needed skills. One option is to invest in newer tools, also known as analytics accelerators, which often require less statistical expertise from the business user doing the analysis. For those complex data management or advanced mathematics skills that cannot be developed internally, we suggest midmarket organizations use partners to supplement skills gaps. These partner suppliers employ a readily available set of specialists that can both provide the needed skills and transfer key knowledge to the midmarket company teams working alongside them.

### *Data*

The immediate opportunity for midmarket organizations to expand their analytics reach is to *capture and/or use a greater variety of data sources.* In most organizations we encounter, there is a vast amount of data captured within transactional systems that is never integrated into the analytics environment; most often considered "extraneous" details about the transaction, this data can actually provide new insights into customer demographics and behaviors. Additionally, the vast amount of customer data available in social media feeds, videos, text chats and other unstructured data cannot be ignored due to its sheer potential for insights. However, enabling a greater understanding of customers and their behavior patterns comes with a responsibility to protect the privacy and security of that data.

As new data sources are collected, midmarket companies must *focus on data integration to make data usage and extraction easier.* Most midmarket organizations have experienced the difficulty involved in integrating disparate data stores into a cohesive company-wide framework, much less keeping it safe and secure in the process. The most effective way to enable data sharing and a single view of the customer is through a set of data management standards that establish uniformity in the data where needed, yet are flexible enough for business units to conduct their own analyses.

These standards create more than a foundation for master data management, though. Traceability and transparency in data's lineage enable analysts and executives from across the organization to understand where the data came from, how it has been processed and what it means; this enables a level of trust that only comes with clarity. Metadata management, a key part of rigorous data governance, is a step in the right direction for organizations that have yet to realize data is a strategic asset.

Organizations that *govern data with rigor* not only enable cross-department data sharing, but instill confidence in the data and allow the organization to make data more widely available and accessible. In addition to protecting customer data, strong security – ironically – also enables wider sharing of data within an organization. Once sensitive data is secured through such practices as role-based access, data masking and monitoring, sharing the data becomes less risky. Increasing the availability and access to data, along with empowering the end user, drives data and analytics usage.

### *Platform*

A critical next step for most midmarket organizations is to expand their current analytics capabilities to *include more advanced predictive capabilities.* One way midmarket companies can advance quickly despite the global skills shortage is to tap into pre-built tools and external resources to shore up the gap. Analytics accelerators are pre-built algorithms and analysis tools designed to be used by novices that mitigate the need for those skills internally.

But predictive analytics – especially insights targeted at understanding and interacting with customers better – will require midmarket companies to *enable a platform capable of managing both greater volumes and a wider variety of data.*

Part of moving the focus from operations to innovation is to rethink what the organization needs today in terms of integrated hardware and software capabilities. Rethink not only what is needed to solve key business challenges, but what core capabilities the organization needs to provide for itself, what needs to be physically on site, and what, if anything, could be provided by newer technologies, outside vendors or business partners.

With today's "need for speed," midmarket organizations should *look to partners to simplify and modernize existing platform with cost-effective delivery models.* Take actions such as: using a cloud model for data storage and delivery; creating reusable extract-transform-load (ETL) components; and reducing data duplication and the number of data model tables by moving to an industry data model.

Cloud-based storage and delivery systems, for example, reduce the capital investment and specialized knowledge required from midmarket companies. The integrated systems within a cloud environment create simplification that results in data that is easier and more efficient to store, manage and access. Furthermore, these more nimble technology components can be optimized for analytics in ways that deliver faster results at a lower overall cost to midmarket organizations.

## Organization

*Drive change with analytics as a core competency.*
Midmarket leaders must drive change with analytics as a core competency within the organization. In most organizations, cultural norms are set from the top down. Thus, executives and business unit leaders must transparently use analytics to make their own decisions, and espouse the merits of a fact-based culture to set the needed expectations and engrain the behaviors within the organization.

In organizations that excel at analytics, leaders ensure that the mechanics of data-driven decision making don't impede the ability to act on data. They proactively work to establish the relationships needed to engender trust in the data, and they measure the amount of influence data has on business outcomes to demonstrate its value to the organization.

We offer the following recommendations to assist organizations in honing the capabilities associated with the Organization levers of Culture, Measurement and Trust (see Figure 15):

**Organization** Enable the organization to act

*Drive change with analytics as a core competency*

### Culture

- Actively enable and empower the use and benefits of data
- Use a management system to extend analytics into business processes
- Enable greater use of data within decision making process

### Measurement

- Define the specific operational level metrics each analytics effort will impact
- Create a feedback loop to measure outcomes
- Evaluate the investments' impact to value creation

### Trust

- Recognize trust is a key ingredients to value creation through analytics
- Invest time to foster and nurture trustworthy relationships
- Extend the high-level of trust outside the organization
- Transform roles to share responsibilities and outcomes

*Figure 15:* **By setting a strong example and expectations, senior leaders can create a data-driven culture built on relationships to generate business value.**

### *Culture*

While the culture in most midmarket organizations is primed to take advantage of an increased level of analytics, midmarket executives need to continue to a*ctively enable and empower the use and benefits of data and analytics.* One of the most effective ways to demonstrate this endorsement is by communicating how data and analytics led to decisions affecting the organization. Decisions based on facts should be presented as such, reinforcing the behavior while also exposing the thought process to scrutiny, which in turn builds trust.

A next step for many midmarket firms is to use a management system to extend analytics within the organization. While we see a significant use of predictive analytics into business processes in midmarket firms, it tends to be concentrated within a single process or business unit. A strong management system that includes business-driven governance of the data promotes consistency, clarity and speed into the analytics process. This management system *enables greater use of data within decision-making processes.* Both the reliability and accessibility of the data can be increased through the *use of pre-built analytics dashboards that automate the push of data onto the desktops of managers and executives* who make both operational and strategic decisions for the organization.

### *Measurement*

A critical part of transparency is measuring the outcomes of analytics investments. If an organization cannot pinpoint the value of analytics strategies, it won't be motivated to invest in them, or to develop and act on insights. Moreover, it could be investing in strategies that only deliver low-value returns and missing opportunities to improve future outcomes.

The only way to solve this is to measure value. Measurement, to be effective, must be integrated into the end-to-end analytics framework: it starts with a strategy that defines the expected business outcomes; follows through to implementation that monitors milestones and pilots; and continues with ongoing evaluation of results as long as that proves to be relevant. Midmarket organizations must measure to understand what works, what doesn't and how to increase the value of analytics.

Therefore, organizations must *identify and define the specific operational metrics* expected to be impacted by each analytics investment at the time of funding. These metrics should be aligned to the target business objective and justified with the forecasted outcomes – tangible and intangible – expected to be delivered.

In order to understand the value created, midmarket companies must *create a feedback loop to measure outcomes.* The value of an analytics investment can best be understood when the cost-benefit analysis of the funding request is examined based on the actual costs and benefits delivered. However, most organizations fail to follow up in this way. Without this level of evaluation, for example, the ability to distinguish between an effective marketing campaign and an interesting idea becomes impossible.

Once analytics investments have been transformed into implemented capabilities, it's time to *evaluate the investments' impact to value creation* using the feedback mechanisms. Understanding where and how a particular analytics-embedded process performed against the pre-defined operational metrics is a doorway to understanding how to improve the process and derive even greater business value. Especially in early efforts, correlating investments to business value improvements through even simple metrics can boost support substantially for future investments.

### *Trust*

Trust and personal relationships established through face-to-face interactions may seem archaic in a world of social media and digital networking, but midmarket companies need to *continue to build trust as analytics use expands within the organization.*

Trust has the power to break down the resistance to change that comes with every cultural transformation because it empowers people to act on data their core business processes did not create. Decision making is all about putting your and the organization's reputation at risk with every action, big or small. If people do not understand where data comes from and how conclusions were reached, even at a high level, they will be skeptical.

The solution is human interaction. *Invest the time needed to create trustworthy relationships.* This requires executives and analysts alike to talk to people: understand what concerns they have about the data and analysis provided; learn what they know about the data they manage or analyze; and discuss how to work better together.

Midmarket organizations need to *extend this high-level of trust outside the organization* to business partners, vendors, suppliers and even customers, all of whom are critical players in the extended midmarket data ecosystem. Strive to remove as much of the anonymity as possible between the data creators and users, among dependent executives and, most importantly, between the executives and those managing, storing and analyzing their data regardless of whether they are internal or external to the organization.

Midmarket organizations already accustomed to a fact-based culture are beginning to *transform roles to share responsibilities and outcomes* between business and data analysts, as well as business and IT executives. The distinction between "business" and "IT" is often blurred within midmarket organizations by expectations that business analysts understand the data, where it comes from and how to use it, what the key measures are, and how analytics can impact the business. In this model for the future, business executives are fluent in the technologies available, while IT executives drive to harness those capabilities to deliver business outcomes.

## Summary

Our research makes it clear that there are specific activities that can help organizations derive more value from their data. The nine levers – combinations of activities focused on analytics development and delivery – help organizations accelerate value creation, create a flexible, cost-effective architecture to handle volume and variety of data, and streamline analytics investments.

By examining their own activities through the lens of the levers, midmarket organizations still struggling to harness the insights buried in their data can begin building a value-based analytics strategy. Midmarket companies that learn from the Leaders in our survey and follow our recommendations stand to answer the question of how to extract value out of analytics investments. By embracing analytics to drive smarter decisions and positively influence business outcomes, these organizations are well positioned to join the leaders in outperforming their industry and market peers.

To learn more about this IBM Institute for Business Value study, please contact us at *iibv@us.ibm.com*. For a full catalog of our research, visit:

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