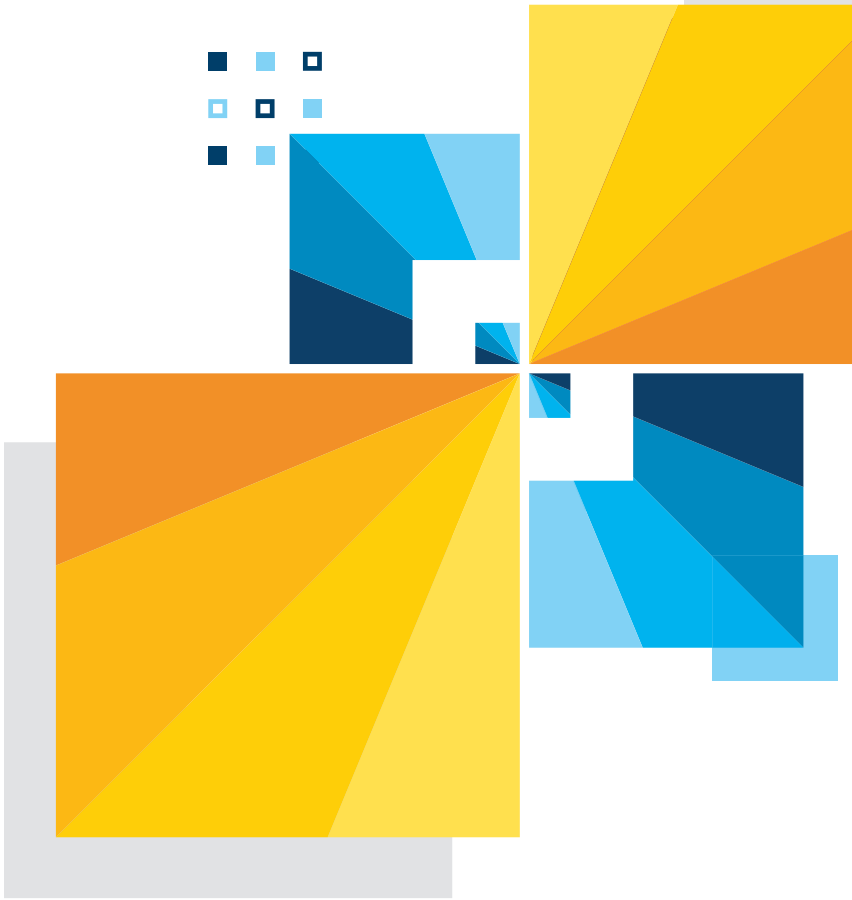
IBM Global Midmarket
Big Data & Analytics



Getting started with Big Data & Analytics: What you need to know

A step-by-step guide to successful big data and analytics projects

Contents

The advent of big data and analytics

Smarter technology has resulted in the instrumentation of virtually everything: cash machines, superhighways, oceangoing vessels, refrigerators and more. Mobile technology has become pervasive, irretrievably ingrained in the way we work and live. And what hasn't been instrumented or mobilized has been socialized through new applications that link us to one another through the exchange of public and personal information. The results have been life changing—smarter cities, more productive workforces, healthcare advances, education reform—and have ultimately created a smarter, more interconnected planet.

The by-product of this global transformation has been the largest generation and aggregation of data in history. Nearly infinite in its variety, staggering in its volume and often overwhelming in its incoming velocity, it's earned the right to its own name—**big data**. It's in the news, online and in conversation. Plug "big data" into a search engine, and you'll get nearly two billion results. But as Paul Zikopoulos, VP of information management technical sales and big data at IBM, says, "There's an implicit myth that big data is just about large data sets. But it isn't only about the volume of data. It's about bringing data together that hasn't been correlated in the past." Without analytics, big data is just a bunch of data.

Because this big data and analytics marketplace is often mistakenly associated exclusively with big data sets, it consequently is typically associated with large enterprises. This has made it difficult for midsize organizations to find relevant, detailed information on how they can incorporate and leverage big data to improve insight, enhance customer satisfaction and positively affect the bottom line.

This guidebook is designed to help midsize organizations unlock the opportunities of big data and analytics, develop a blueprint for action, and ultimately create a road map that moves them beyond considering big data and analytics to implementing it and experiencing its extraordinary business results.

For this discussion we define a **blueprint** as a high-level picture of what the organization is trying to achieve technologically, why it is trying to achieve it and how it dovetails with the overall goals of the business. A **road map** is the translation of that blueprint into the actual steps the organization will take to implement a big data and analytics initiative. At the end of each section, look for bulleted action items that the organization can use to create a big data and analytics blueprint and to transform that blueprint into a road map for the future.

What is big data? And what do I do with it now that I have it?

If you ask that question in business circles today, you'll find that big data means different things to different people. Your role, the size of your business, the context in which you acquire data, the ways in which you put that data to use—all factor into your definition of big data.

As it relates to this discussion, the term "big data" represents the structured and unstructured data moving throughout the organization from inside and outside the firewall. It's the instrumented data from sensors, automated teller machines (ATMs), cell phones, web clicks, global positioning system (GPS) signals and so much more. It's structured internal data such as customer information, processed transactions, and receivables and payables information. And it's unstructured data elements such as social media posts, emails and customer reviews. Big picture? It's the totality of the 2.5 quintillion bytes of data generated each day on this planet.[1] John Lucas, director of solution delivery at IBM Business Partner Avnet Services, sums it up: "What big data really means is large amounts of data in real time or near real time from a variety of sources that today probably don't talk to each other or may not even today seem relevant to each other, offered up to the business for analysis."

And "big" is, of course, relative to the size of the organization. Typically it just means bigger data than the organization has wrestled with in the past—when most data was highly structured, in spreadsheets or tables and was, for the most part, quantitative in nature. And while a large organization might not think that 2 TB is all that big, a midsize business might think it's huge. It all depends on the company's frame of reference. In fact, many of the subject matter experts interviewed for this guidebook simply stated that big data "is more data than you're used to." No matter the size of the organization, leveraging data through business analytics can drive smarter decision making, improve flexibility and agility, and optimize business outcomes.

The big data and analytics adoption journey consists of four stages, illustrated on the next page, that can help midsize businesses efficiently adopt an effective big data and analytics strategy. Keep these stages in mind as you review this guidebook.

The big data and analytics adoption journey

IBM has defined four data adoption stages along a continuum—**educate**, **explore**, **engage** and **execute**. These four stages can be seen as an overall blueprint that midsize businesses can follow to efficiently adopt an effective big data and analytics strategy.

Educate

It starts with building a base of knowledge to create awareness and an understanding of the opportunities and potential benefits of big data and analytics to the organization.

Explore

In this stage, the organization determines a quantifiable business case, aligned with the company's business objectives, that takes into consideration existing data, the technology foundation, and the organization's analytic skills and capabilities.

Engage

To prove the value of big data and analytics to the organization, many companies undertake proof-of-concept initiatives to validate requirements and quantify expected returns.

Execute

This is the most sophisticated stage of big data and analytics adoption. Organizations in this stage are fully leveraging big data to change the way they do business, and are using analytics to inform decision making throughout the enterprise.

Big data and analytics opportunities, benefits and challenges

Big data and analytics solutions offer a wealth of opportunities to the midmarket. Using advanced analytics, companies can leverage their data to reshape their future—to gain insight to be more predictive and less reactive to change, to reduce risk, to create more-targeted marketing, and to inform virtually every decision the organization makes. Successfully leveraging enterprise data has, in many cases, led to an improvement in overall performance and created differentiation and competitive advantage. For many midsize organizations, big data and analytics can help:

- **Detect where operational processes can be improved,** uncover fraud proactively, streamline supply chains and increase efficiency
- **Transform financial processes** and provide the visibility, insight and control over financial operations that many midmarket companies need
- **Take the risk out of risky business,** helping midsize businesses manage compliance and regulatory change
- **Foster innovation and the creation of innovative business models** and new market segments, leading to enhanced revenue and business growth
- **Improve IT economics** while at the same time increasing IT agility, flexibility and the ability to react more quickly to change

And although many small to midsize businesses (SMBs) see undiscovered value in their data stores, they are often strapped for financial resources and lack the skills and the infrastructure needed to seize the opportunity. Many simply don't know where to begin. There are so many questions. How do we get started? Who owns it? Who funds it? What do we need in terms of resources, skills and financing? Those questions, and countless others that will arise, can prove harder for the smaller, resource-challenged midsize business to answer. These action items are a good place to start.

Initial action items for your big data and analytics journey

- **Identify the business outcomes that matter most to your organization.**
- **Begin discussions in your organization around big data and analytics.**
- **Determine which stakeholders and decision makers need to be involved—considering business leaders as well as the IT infrastructure team—and make sure to include them early in the discussions.**
- **Create a list of questions and discussion points.**
- **Set up ongoing meetings with stakeholders.**
- **Keep in mind the basic goal of big data and analytics initiatives: uncovering the insight that translates to business value.**

Just Born proves that big data and analytics is a sweet spot for midmarket

A midmarket candy company located in Pennsylvania, Just Born is known for classic candies such as Peeps and Hot Tamales. Together with IBM Business Partner Sky Solutions, Just Born implemented an IBM Cognos® analytics solution to leverage the wealth of data the company collects to make smarter, more timely decisions on sales, profitability and forecasting.

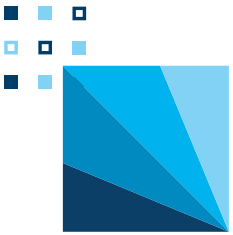
Watch the video **here**.

Designing a blueprint

Creating an effective blueprint for big data and analytics begins by determining the decisions the business needs to make in order to achieve a defined outcome. It may sound simple, but this requires in-depth involvement from line-of-business and front-line managers who can define what success means to the organization. Remember, a blueprint is the big picture of what the organization is trying to achieve, why it is trying to achieve it and how it dovetails with the objectives of the business.

For a majority of midsize organizations, gaining a better understanding of the customer is a logical place to begin. Structured customer data such as transaction records, multichannel interactions, loyalty card data and historical information is often the most readily accessible data. It can enable businesses to quickly gain a more holistic view of the customer's preferences and requirements. Real-time analysis of this data, in combination with unstructured external data such as social media information, can inform targeted marketing campaigns, personalized offers and customer satisfaction campaigns that can achieve near-term results with concrete metrics.

Operational efficiency, risk and financial management initiatives, employee collaboration, and the enablement of new business models are other big data and analytics projects that organizations may elect to begin with because they too can offer relatively quick, achievable, measurable and desired results. As Rick Perret, global marketing leader for Big Data & Analytics Infrastructure at IBM Systems and Technology Group, says,



"From a midmarket standpoint, I think they're going to be focused on how to improve their operational decision making—whether a manufacturer or distributor, how can they make decisions that will drive down the cost or give them more flexibility?"

Action items for designing a big data and analytics blueprint

- **Secure executive sponsorship for analytics initiatives.**
- **Answer these key questions about big data and analytics initiatives:**
  - **What pain points will the initiatives address?**
  - **What is the desired outcome the organization is trying to achieve?**
  - **Which data is most important to achieve those outcomes?**
  - **How will success be measured?**
  - **What key performance indicators will we measure against?**
- **Answer these key infrastructure questions:**
  - **Does the initiative require performance in real time?**
  - **Where does the necessary data reside?**
  - **How many people will need access to these new capabilities?**

Preparing for a big data and analytics implementation

Deploying big data and analytics solutions, overcoming adoption barriers and ultimately achieving a return on investment depend on three key imperatives: the ability to build an integrated data infrastructure that offers ready access to information by the people and systems that require it, the development of a sound business case, and the ability to develop or partner to acquire the analytics skills necessary to make the most of the data.

In the next three sections, we'll address these key imperatives.

Action items for preparing for your big data and analytics implementation

- **Begin to have stakeholders prepare to discuss the following:**
  - **The state of the organization's current data infrastructure as it relates to the strength of the technology foundation**
  - **The need to create a sound business case**
  - **Whether there is a need to improve the level of analytics skill within the organization**

Building a solid technology foundation

Having survived the challenges of growth—but in many cases not being large enough to take advantage of the economies of scale that larger enterprises are able to—midsize organizations often hold vast amounts of complex data but lack the technology, tools, in-house skills, personnel and systems to fully leverage data to their advantage. With volumes of structured and unstructured data virtually pouring into even small businesses, an integrated information foundation is key to an analytics initiative. It becomes even more critical with big data. Based on the high-level blueprint that is aligned to the overall goals of the business, midsize organizations must look to build an agile, modernized technology foundation that is capable of taking in, processing and managing larger data volumes than they have in the past. While many SMBs have in place a foundation capable of processing and even analyzing the organization's structured data, most do not have a dynamic information infrastructure capable of managing unstructured and streaming data and leveraging advanced analytical tools.

By referring back to the blueprint, organizations can then determine what changes, additions and amendments must be made to the technology foundation to achieve the outlined objectives.

This means:

- **Building an infrastructure where data is readily accessible in real time, across the organization and throughout departments**
- **Using the right tools to integrate data for optimal access across the enterprise**
- **Deduplicating data and mitigating corrupt or outdated data for cleaner input**

Ambu upgrades its infrastructure to enable better decision making and performance management

Danish healthcare solution provider Ambu needed to upgrade its aging business intelligence infrastructure to handle the company's growth and strengthen its position in different international market segments. At the same time, IBM Business Partner Kapacity helped Ambu upgrade to the latest version of IBM Cognos Business Intelligence software and implement IBM Cognos Insight™ software. Nicolas Fontan, business intelligence manager at Ambu, says, "Cognos has made a huge difference to our business by enabling us to analyze how our products and sales teams are performing in different markets. With daily analysis of a single version of the truth, we have the insight we need to make better business decisions, follow them up with appropriate actions, and then monitor the outcomes. By tracking a set of clearly defined key performance indicators over time, we can clearly see the positive results of this strategy."

Read the case study **here**.

Building a sound business case

In a 2013 study of IBM deployments, Nucleus Research identified a variety of initial barriers to the adoption of big data and analytics in midsize businesses. The study revealed static or shrinking IT budgets, a lack of in-house skills, a need to integrate data sources, and risk-averse stakeholders who felt they either did not need analytics or believed in a more gut-based approach. Nucleus concluded that a valid business case is capable of taking on perceived obstacles, and in many cases provided proof that they weren't obstacles after all. A sound use case is based on the objectives defined in the blueprint and focuses on areas that provide the most value to the organization. This should provide the best return on investment in the shortest amount of time and is well within the reach of most midsize organizations.

Speaking specifically about midsize organizations in its study, Nucleus Research says,

> **"Many [midmarket organizations] also assume that business analytics deployments are large and complicated by definition. However, a straightforward, manageable deployment can be achieved with a focused, use-case-specific implementation of business intelligence, performance management, predictive analytics or a combination of approaches that fit the business need. Midmarket companies need to establish specific goals, and choose the specific analytical capabilities that will achieve those goals in the near term, allowing for iterative expansion."**[2]

Action items for building a sound business case

- **Create a meaningful business case focused on fostering new revenue generation, sharpening operational efficiency or mitigating risk.**
- **Identify the most critical, accessible and viable data sources.**
- **Determine the users or business functions with the most need for analytics.**
  - **Assess the analytics skills needed for those users or business functions.**
- **Evaluate the effect of the business case on business outcomes.**
- **Develop a clear understanding of the desired outcomes, keeping in mind that not every organization derives value from the same activities.**
- **If beginning with customer-focused initiatives, understand the need to consolidate and analyze vast amounts of customer data.**
- **Be prepared to take proactive steps to ensure that results from big data and analytics initiatives can be accurately measured.**
- **Identify the infrastructure plan—the degree to which current capabilities will suffice or changes will need to be implemented.**

Raising the analytics skill level

One of the bigger challenges midsize companies are likely to encounter in undertaking big data and analytics initiatives is an exponentially increasing variety of new tools that often are not leveraged due to a shortage of in-house analytical skills—in particular, predictive analysis and visualization capabilities. A 2013 IBM study revealed that one-third of respondents identified the lack of skills to analyze and interpret data into meaningful business actions as the chief barrier to the better use of analytics in their organization.[3] The choices are simple and not mutually exclusive. You can build skills in-house, partner with trusted vendors that understand the business and its challenges and analytics maturity, hire for required skills or use a combination of methods that evolves over time.

Again, for most midsize companies, in-house skills are limited. Working to improve the skills of in-house employees raises what Paul Zikopoulos calls the organization's "analytics IQ" and offers the benefit of having employees who understand not only analytics but also the ins and outs of the organization's strategic business initiatives.

Solution providers such as IBM and IBM Business Partners, other vendors, universities and freelancers can all provide deep analytic skills while in-house skills are being developed and acquired.

Action items for raising analytics skill levels in the organization

- **Through research and networking, attempt to gain an understanding of the traits and capabilities of skilled analytics resources.**
- **Understand the scarcity of this sought-after resource.**
- **Invest—be prepared to spend on training in-house employees or strategically source from an outside vendor.**
- **When upgrading internal skills, look for candidates who also have a clear understanding of the business.**
- **Expand mentoring and knowledge–sharing opportunities to create communities of competency among analytics experts.**

Moving from a blueprint to a road map

As big data and analytics initiatives mature, the organization evolves from a strategy and a blueprint to a more defined road map. A road map, again, is defined as the step-by-step plan that the organization will follow to implement a big data and analytics initiative. Three keys to a successful evolution are **executive sponsorship, data availability** and a clear **understanding of the obstacles** that will arise along the journey.

- **Executive sponsorship:** There are many entry points for big data and analytics, particularly in midsize organizations. They may be through line-of-business executives, the CIO, or even the CEO or CFO. It is also entirely possible that sponsorship may shift from one executive to another as capabilities mature. For example, the initial focus may be from a technology standpoint as the organization builds out its information foundation, but as the business case develops, a function-specific executive such as a CMO or CFO may take over leadership. What is clear is that for big data and analytics efforts to succeed, a sponsorship model by a business executive is critical to success.

- **Data availability:** As big data capabilities evolve, the demand to decrease the time span from data capture to action grows. When organizations learn the value of leveraging their data, the value of its timeliness becomes increasingly important. Investments in streaming data, technologies such as in-memory analytics, machine-to-machine processing and other innovative advancements should be expected. Investments in optimized systems can enable the real-time processing of information. That in turn can lead to a more rapid response to customer needs and changes in the marketplace.

Hans Mize, president of IBM Premier Business Partner Data41, sums up the state of many SMBs in terms of data availability:

"Some of our larger clients have a better understanding of what they want to do with it because they built their enterprise data warehouse. They've got a collection of all their transaction data in one single repository or smaller data marts to allow them to go in and run analytics and reporting off of that. Midsize clients, on the other hand, typically have a number of disparate data stores all over the place, making access to the data and overall analytics of the data even more challenging."

- **Understanding of the obstacles:** Organizations must embrace the fact that at virtually every stage in big data adoption, the initiatives will be scrutinized for their financial feasibility. Key to overcoming this obstacle, as we have repeatedly suggested throughout this guidebook, is the construction of a solid business case that provides measurable benefits. Hand in hand with resolving this obstacle is the need to acquire the technical, analytic and governance skills, in-house or through strategic sourcing, to operationalize the data.

Derby Cycle puts business analytics into high gear

One of Germany's largest bicycle manufacturers, Derby Cycle was challenged by complex manual processes that made it difficult to produce the daily reporting it needed to analyze the health of its current business. Using IBM Cognos Business Intelligence technology, Derby Cycle has unified and automated its reporting and analysis system. The web-based IBM solution is centralized and provides decision makers with the daily management information they need in the form of reports and dynamic analyses.

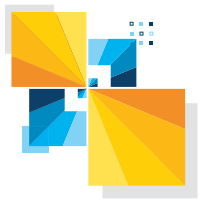
Read the case study **here**.

Defining the road map

Paul Zikopoulos sees assembling a jigsaw puzzle as an apt metaphor for a big data implementation in midsize companies. The hardest part, he speculates, is getting started—finding those pieces that build the edge of the puzzle. The easier phase is putting the last few pieces in place. The same is true for implementing a big data and analytics strategy. The hardest part is the beginning—deciding which data to start with; which projects to tackle first; and where to acquire the skills, the sponsorship and the funding. But the opportunity to use new data, technology and analytics exists to some degree within every organization. A big data and analytics road map for the future can help midsize businesses improve decision making and create a better understanding of who they are, how they operate, what their customers think and believe, and what direction the marketplace is heading.

IBM has defined a series of use cases, commonly seen across organizations of all sizes in most industries, that can guide organizations in deciding where and how to get started. Reviewing these may help companies begin to discover what business objectives they need to achieve, where their skill gaps are, what data is most important to them and which technologies make the most sense for the initiatives they're undertaking. That blueprint can then become the basis for the road map of the future of the business. As Marc Rittner, technical sales specialist with IBM Business Analytics, says,

> "That road map will reflect your vision of the future; big data is going to help get you there."



It is important to note that there may be stumbles and roadblocks, but by seeking out expertise early in the process, they can be minimized. The depth and sophistication—as well as the success—of big data and analytics initiatives will vary from business to business, from department to department. Big data and analytics is most likely a major shift from the way business is being done. Consequently, organizations, SMBs in particular, will need to fill analytic skills gaps by developing skills in-house or partnering with a trusted vendor to better prepare for those stumbles and roadblocks.

Action items for defining a future road map for big data and analytics

- **Establish a step-by-step, results-based, business-driven program aligned to business goals.**
- **Create and define a funding process that prioritizes future big data and analytics projects.**
- **Establish the strategic intent of these initiatives by creating defined connections between the outcomes and outlined activity.**
- **Continue to secure executive sponsorship for big data and analytics projects while at the same time conveying a company-wide sense of ownership.**
- **Use measurable, quantifiable results to transition from executive strategy to line-of-business action.**
- **Continue to invest the time to create viable, value-based business cases.**

Lessons learned

IBM has implemented countless Big Data & Analytics projects in businesses of many sizes. This valuable experience has provided lessons that can save midsize businesses time, money and, in some cases, considerable pain. Keeping these key lessons in mind can help ensure successful projects.

- **Begin with existing data:** To achieve near-term success and measurable benefits, midsize organizations must be realistic. This means starting at the most logical and cost-effective place—existing enterprise data. Starting with existing internal data enables organizations to leverage their existing systems, software and skills to relatively quickly deliver near-term value. A positive experience, together with quantifiable business results, can encourage future initiatives and pave the way for more complex projects and an expansion in the volumes and varieties of data.

- **Collaborate, collaborate, collaborate:** Big data and analytics projects don't just happen—and most certainly don't succeed—in a vacuum. It is critical to forge shared objectives on big data initiatives and to keep lines of communication open, particularly between executive sponsors and IT. Ongoing, constructive dialogues about the projects can help ensure their success.

- **Don't do big data for big data's sake:** As we've mentioned before, without analytics, big data is just a bunch of data. Investing in analytics tools and skills will move efforts from "data science projects," as Paul Zikopoulos refers to them—data for data's sake—to strategic initiatives based on real business objectives.

- **Build skills based on business objectives:** As big data and analytics increases in importance, in particular to the midmarket, there is often a widening gap between the opportunities and the analytical skills in most organizations. Development of in-house analytic skill sets—starting with employees familiar with the business's unique challenges and objectives—should be a priority. These skills can be advanced and enhanced through strategic outsourcing with experienced, trusted partners.

- **Build an integrated infrastructure based on business objectives:** Highly secure, open and integrated systems that can enable the organization to leverage today's powerful data analytics solutions must also be in place. IBM Optimized Systems, such as IBM Power Systems™ servers, provide the reliable, security-rich, high-bandwidth platforms needed to address the objectives of the business.
- **Work toward measurable results:** It bears repeating. A solid big data and analytics strategy requires a quantifiable business case aligned to business objectives. The importance, then, of sponsorship from one or more business executives who can engage collaboratively with IT and other key executives factors significantly in the success or failure of the project.
- **Work toward realistic time frames:** Every big data and analytics project is different. By working toward appropriate time frames for each project and taking into consideration skills, infrastructure capabilities and data volumes, realistic expectations can be set.

Creating a culture of analytics

Remember, without analytics, big data is just noise. By building a culture, then, that infuses analytics into every step of business operations, by ensuring that governance and security of data is paramount, and by making the necessary investment in a platform that is tuned to big data and analytics, midsize businesses can leverage their data for the insights needed to transform the way they do business.

To achieve that, an organization must create fact-based cultures—ones that infuse every step in the decision-making process with big data and analytics. Failure to do so will make creating value from big data and analytics investments difficult, if not impossible. A culture of analytics means that:

- **Decisions are made using data,** not intuition
- **Data is relevant** and at hand
- **Tools are in place** to perform predictive analysis of that data

IBM Institute for Business Value conducted research in 2013 on big data and analytics and found that almost half of midmarket respondents are using some level of predictive analytics to make decisions, and 44 percent of midmarket companies report using both current and historic data to create predictive forecasts.[4] These positive numbers reveal that cultures of analytics are growing in the midmarket. But the study also found that 60 percent of midsize organizations lacked the integrated data infrastructure to support company-wide data analytics, and 61 percent lacked high-capacity data warehousing capabilities.[4] And so although today's midsize organizations are making critical business decisions based on the analytics available, these analytics may be narrow in scope given the lack of an integrated data infrastructure and the limited data collected. So, how to balance the willingness to leverage analytics with the lack of resources?

Executives in these organizations can drive a cultural infusion by actively demonstrating the value and benefits analytics can bring to the organization. An effective way to demonstrate this is to use data and analytics to support decisions that are transparent to the organization. These fact-based decisions should be presented as such. This reinforces the behavior and exposes it to scrutiny, which in turn can build trust and ultimately lead to a cultural shift in the way business is carried out.

History Colorado makes analytics its mission

Attendance at most museums has been trending upward over the past several decades. The History Colorado Center, however, was acutely aware that attendance at history museums was in a steady decline. Kathryn Hill, COO at the museum, says, "We had not just a business problem to solve; we had a mission problem to solve." Working with IBM Business Partner Avnet Services, the museum began collecting and analyzing information about attendees. Deep insight into visitor behavior has helped History Colorado double membership sales in one year and maximize its marketing spend with more targeted campaigns.

Read the case study **here**.
View the video **here**.

Why IBM?

IBM is highly qualified—through decades of customer service engagements in the midmarket and with one of the broadest hardware, software and services portfolios in the industry—to help midsize businesses take advantage of the opportunities that big data and analytics has to offer.

IBM Big Data & Analytics Platform

IBM provides the industry-leading Big Data & Analytics Platform that enables midsize organizations to address a comprehensive range of big data and analytics challenges—handling myriad types of data, supporting virtually all types of decisions and pursuing a wide variety of business opportunities. The platform enables midsize organizations to infuse analytics with governance, security and privacy. Midsize organizations can start small and add capabilities as the business increasingly adopts analytics. Our platform includes the following key capabilities:

- **Business intelligence:** The IBM Big Data & Analytics Platform offers insight to users with dashboards, reports, analysis and modeling on desktops, the web and mobile devices.
- **Predictive analytics:** The platform performs statistical analysis, data and text mining, and predictive modeling to reveal patterns and trends from structured and unstructured data.
- **Planning and forecasting:** The platform can help organizations create more dynamic and efficient planning cycles such as target setting, forecast rollout, reporting, analysis and reforecasting.
- **Discovery and exploration:** The platform enables organizations to gain a context-relevant view of a business through federated navigation, visualization and interaction with a broad range of internal and external data sources and data types.
- **Data management:** The IBM Big Data & Analytics Platform enables midsize organizations to achieve industry-leading database performance with multiple workloads while lowering administration, storage, development and server costs.

- **Data warehousing:** The platform enables companies to gain speed with capabilities specifically optimized for analytics workloads. Systems can be installed and running in less than four hours.

The IBM Big Data & Analytics Platform, embodied by IBM Watson™ Foundations capabilities, offers many more elements, including information integration and governance, decision management, content analytics, content management, Apache Hadoop systems and stream computing.

An integrated Big Data & Analytics infrastructure

The high-performance IBM Big Data & Analytics Infrastructure includes critical server, storage, networking and systems software technology. It is capable of accelerating the flow of data and insights, providing shared and highly secure access to virtually all types of data where it resides, and significantly improving the availability of information. The IBM Big Data & Analytics Infrastructure provides the following to midsize organizations:

- **Scalability:** Organizations can choose to scale in, scale up or scale out infrastructure to support the complexity and breadth of analytics workloads.
- **Parallel processing:** Parallel processing can enhance data processing and ingestion through workload and data-layer parallelism that uses distributed analytics processing.
- **Low latency:** The Infrastructure provides discrete speed enhancements to accelerate analytics workloads.
- **Data optimization:** Those companies that optimize their data assets can implement storage solutions that provide optimal speed, scale, quality of service and reliability for data-iterative applications.
- **Security:** When security is enhanced with big data and analytics, the Infrastructure enables companies to manage risk from cyber attacks through cloud and mobile environments. The distribution of these security capabilities is enabled by advanced analytics from security intelligence.

- **Cloud:** Companies can choose between private, public or hybrid cloud delivery for simple, powerful cloud solutions.

IBM Business Partners and the midmarket

IBM's broad Big Data & Analytics portfolio, decades of experience and extensive network of IBM Business Partners provide organizations with an outcome-driven portfolio of solutions tailored for virtually every industry, including banking, retail, insurance and healthcare.

Tackling complexity and enabling growth with consulting and implementation services

IBM and our extensive network of IBM Business Partners provide deep industry and domain experience to help midsize companies improve business insight by providing customized big data and analytics strategies.

Examples include:

– Data exploration and visualization

– Operations and supply chain analytics

– Digital front office and customer analytics

– Finance, fraud and risk analytics

– Industry business use cases and value accelerators

For more information about the IBM Big Data & Analytics portfolio visit:
ibm.com/midmarket/us/en/business-analytics.html

Additional information

About the subject matter experts

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Rick Perret
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Marc Rittner
is a technical sales specialist with IBM Business Analytics.

Paul Zikopoulos
is VP of information management technical sales and big data at IBM.

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Contact us

For more information about the IBM Big Data & Analytics portfolio and how IBM can help your midsize business begin its journey, contact your local IBM representative or visit:

ibm.com/midmarket/us/en/business-analytics.html

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