



Your Company's Three Must Haves.

Speed, Big Data and Analytics. Your Company's Three Must Haves.



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Executive Summary

A two-pronged challenge is facing businesses today. First, organizations are being bombarded with substantial amounts of structured, unstructured, internal and external data. Second, these same organizations lack guidance as to how to derive value from this growing pool of data. We believe:

- > Companies that see the growth in data as a storage issue are missing the larger competitive opportunity before them
- > Organizations have little time to devise a coherent and comprehensive strategy for dealing rapidly with this new information
- > Smart companies are already utilizing new technologies to parse, analyze and act upon these new data opportunities

The following pages document the speed with which new information is becoming available for businesses today, specific implications, and strategies for how all firms should take advantage of this information access.

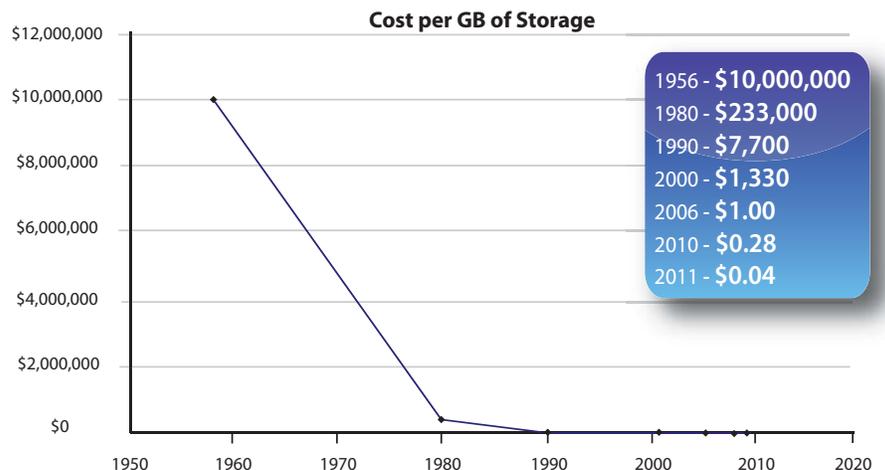
Background

The prices of computer technology components have dropped tremendously over the last 40 years. Virtually every type of technology has experienced this price deflation and some interesting consequences have occurred because of it. These include:

- > Powerful computing capabilities have advanced, so that virtually most of the world's population can hold the equivalent of a computer in a handheld mobile device
- > Disk storage, and soon flash memory storage, is so cheap that gigabytes of data now cost less than 4/10 of a cent to store
- > Combined with these following (Graph A) technologies prices, the proliferation of social and other technologies have enabled massive amounts of unstructured data to fill the Internet

This confluence of factors is creating a "perfect storm" of data that will engage modern businesses.

Storage is Now Unlimited



Sources: PC World, Fry's Electronics advertisements, ALTS LLC

Graph A

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Steel, aluminum, copper and other metals are in great demand in these countries for use in automobile production, capital equipment. Even if your organization interacts directly with other businesses instead of directly with consumers, your organization must deal with large sources of data coming in every day. These sources include:

- > Point-of-Sale transaction data from your customer's customer
- > Benchmarking data being provided by sources such as cloud application software providers
- > News and other intelligence coming from blogs, competitors and other sources around the globe
- > Supplier performance data
- > Weather data
- > Government forecast data
- > Econometric data
- > Currency and market data
- > And many more

"Every 2 days we create as much information as we did up to 2003"

-Eric Schmidt, Google

How Much Unstructured Data is There?

- Over 900 million Facebook Users
- Over 175 million Tweets per day
- Over 2 billion YouTube views per day

Executives who are used to conversations around business files in the megabyte or gigabyte range may be shocked to learn that their competitors are routinely manipulating databases in excess of 1 petabyte of data (i.e., 1 million gigabytes). Furthermore, executives who believe that big data is a problem that only academic researchers, government

institutions and selected organizations ever deal with may be stunned to see that mid-sized organizations are becoming the new users of these products with devastatingly powerful competitive advantage going to the early movers.

Implications

Some executives may see the overwhelming growth in information as no more than a storage problem. This is a fatal and naïve conclusion. Your organization will not be able to store every blog post, tweet, customer comment, YouTube video, etc. about your organization, your products, your employees, etc. This would be a grossly incorrect approach to the explosion of data as well.

Businesses must recognize the following:

"United Airlines Breaks Guitar"
YouTube, almost 12 million views

- > **Power has shifted** (from sellers to buyers) in the marketplace as a result of the explosion of information and information sharing.
- > **Businesses can no longer control the message** or the content in many cases. Sometimes the best they can do is to act rapidly to mitigate potential damage and initiate corrective proceedings. The YouTube video "United Airlines Breaks Guitars" is a great example of how viral every business has become.
- > **Speed will be as important as the observation** of the trend in the market. Your organization will no longer have the luxury of taking days, weeks or months to evaluate a customer support issue. You will need to identify the frustrated customer's comments in the blogosphere within minutes of its posting and be able to react to it in an equally fast timeframe.
- > **Your competition is not waiting.** They are taking advantage of opportunities and leveraging new innovations at a pace never seen before.
- > If your organization still operates at a slow, comfortable speed of business that was acceptable in the 1980s, **it may perish in 2012.**

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Getting your arms around the “Big Data” issue

Not long ago, salesforce.com purchased the software company Radian6. Radian6 and technologies like it monitor blogs, tweets and other unstructured, commentary found on the Internet. In a sales situation, Radian6 helps sales professionals by creating a fairly comprehensive and up to the minute profile of prospective buyers and their employers. This could be information that may:

- > Help you build or cement a relationship
- > Provide your sales professionals with heretofore unknown specifics that could shape the deal more effectively
- > Identify factors that your competitors are emphasizing in other deals

While this data is unstructured, it also belongs to the group of information called big data. Big data generally represents large collections of information that are often found outside of the ERP (enterprise resource planning) systems used by most businesses. Big data includes information beyond accounting transactions.

What's the Competition up to?

Companies are using big data for all matter of purposes. For example, retailers use weather information to determine optimal staffing levels for their stores. Retailers use sales and point-of-sale data to optimize the pricing of goods, especially the timing and amount of discounts used for sales.

The best companies are merging their transactional or ERP data with unstructured data to create new insights. For example, manufacturers who use the point-of-sale transactional data from their customers' customers are better able to predict product demand, avoid stock outs, improve relations with their key customers and improve their profitability and competitive standing.

The best companies are creating powerful predictive models with this information. These organizations are no longer content to draw forecasts from relatively insular internal transaction data. Third-party information allows companies to extend their experiences with those found in third-party sources to create a more complete picture of business markets, the competitive landscape, pricing information, etc.

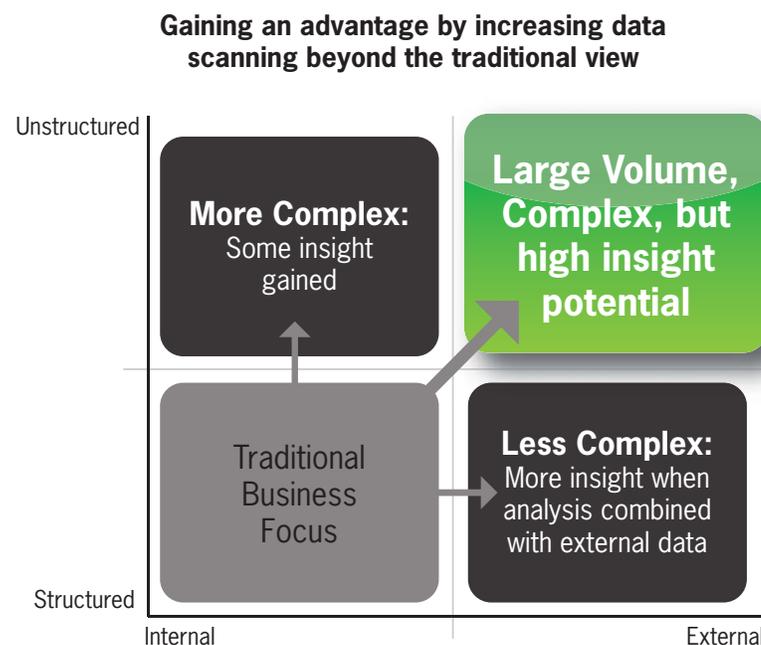


Figure A

We have been pleasantly surprised at the speed, range and effectiveness that the midmarket companies are taking advantage of new data sources and new technologies to analyze these data gold mines. Moreover, we find the exceptionally low cost of these new technologies to be particularly appealing to midmarket and large enterprise buyers. Many of these technologies are available as software-as-a-service (SaaS) products that run on a cloud. Data can now be quickly sourced or uploaded to cloud technologies where it can be raw material for in-memory database driven analytics software. The bottom-line is that new technologies and big data have a democratizing effect on businesses today. If your organization thought its scale would prevent smaller competitors from gaining material market share, current events should disabuse you of this idea.

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Guidance

In the preceding pages, we've tried to point out the nature of changes occurring simultaneously in the market. First, is the explosion of data that is available to companies who choose to take advantage of it. Second, is the speed with which companies must react in the marketplace if they intend to remain relevant, manage downside risk, and optimize market opportunities opening up before them.

Organizations must act now to devise a coherent and comprehensive strategy around speed and data. Delays may prove to be crippling, at best, or fatal to an organization's overall health.

We believe every company should:

- > **Understand the available data.** Embark on a crash course to understand and inventory new sources of data available to their organization. While not exhaustive, this list should include benchmarking data, data about one's customers and their customers, inventory and commodity pricing information throughout the entire value chain, news, events, weather and so much more.
- > **Understand the available technologies.** Become familiar with the technologies that can be harnessed to quickly and insightfully analyze these new information sources. We believe every organization should begin its search by analyzing the available on-demand offerings on cloud services.
- > **Define your strategy.** Develop a comprehensive strategy regarding the use of these new data sources and technologies. In particular, we caution companies to look at this more broadly than as just a technology problem. We suspect that many organizations will have significant shortfalls in personnel and lack knowledge of statistical sciences, forecasting abilities and other critical skills. Likewise, information technology organizations may lack knowledge around the use and presentation of unstructured data. Additionally, there may be numerous change management hurdles to move an organization to think, act and behave with all new groups of constituents.
- > **Create a culture of organizational speed.** Expand their strategic thinking, so that the company can improve its reaction time. As noted earlier, the speed with which businesses must change and adapt to the marketplace has accelerated tremendously; however, our experience with clients would indicate that little or no change has occurred with organizations and their ability to react at the speed of business. In other words, competition, news and other things are now moving at the speed of the Internet while many organizations are still operating with industrial age processes, workflows, approvals and other carriers to handle decision-making and action. You should be challenging your fellow executives on how fast your company can move and what must be done systematically to achieve these goals. We can say with a high degree of certainty that plodding, bureaucratic or ossified businesses will become irrelevant in the near term.

We believe Market Leaders will be those that:

- > **Broaden their scan from the traditional internal structured data** point of view illustrated in Figure A.
- > **Use the information within social media** for more than just responding to customer care concerns. Specifically, we believe the best companies will seek out process improvements, product innovations and more from customers, non-customers and others interested in seeing an organization continue to succeed in the marketplace.
- > **Become a "real-time" organization.** Rapidly reading and reacting to internal and external data predictors, which impact inventory mix, customer satisfaction, product profitability, employee satisfaction, and many more areas which enable competitive advantage.
- > **Learn how to make decisions using more than internal transaction data.** More specifically, we believe a new science around management by less exact or proxy type data will be required as more and more decisions will be based on projected trends or events. To achieve this, many organizations may have to overhaul their management reporting systems, their executive briefing processes, their data collection methods, and the ways they analyze and report data. The management of organizations is going to change. The organizations that can define their future management will likely be those who solve the questions of big data and real-time decision-making and quickly.

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