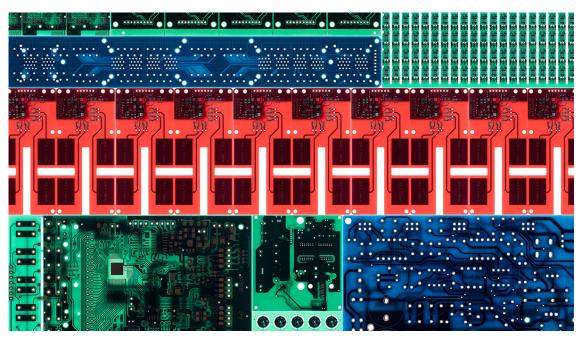
### Harvard Business Review

### **Business Management**

### **Legacy Companies Need to Become More Data Driven — Fast**

by Randy Bean and Ash Gupta

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**Summary.** Legacy companies need to adapt if they want to stay competitive. They should consider these five tactics to focus their efforts and avoid wasting time, effort, and resources: prioritize the data that's most important to their business; link investments in... **more** 

The ability to deploy data as a competitive business asset is what has distinguished a set of well-established, data-rich companies who have reigned as market leaders over the course of the past several decades. However, business conditions evolve, and today, these companies face a new set of challenges that threaten their hard-won leadership positions. How do these well-established data leaders transform from excellence in traditional data and analytics — of the kind that they have deployed in recent decades — to leadership in a new era of Big Data, AI, and machine learning driven decision-making? What do companies that have excelled at disciplines like database marketing, CRM, one-to-one marketing, and advanced analytics need to do to continue to stay on top?

Data and technology are driving business change. As data volumes and computing power increase, and as new AI, machine learning, and big data capabilities rise, established leaders need to adapt and grow. When JP Morgan CEO Jamie Dimon was recently asked about whether there was much to fear from the potential threat of a "Bank of Amazon," "Google Bank," or newer entrants like PayPal, Square, Stripe, and Ant Financial, his response was, "Absolutely, we should be scared," adding, "I expect to see very, very tough, brutal competition in the next 10 years." The insurance industry is beginning to making the transition from traditional data and analytics to machine learning, AI, and Big Data driven analysis, but is also dealing with new competition. In contrast to traditional insurance companies, which have been data rich but have customarily relied on actuarial approaches, startup competitors like Lemonade and Traffk are employing machine learning analytics and drawing upon thousands of data elements to provide personalized analysis and drive insurance purchases.

As coauthors of this article and as long tenured industry executives, using data to drive better decision-making and more personalized customer service has long been our focus during the decades long course of our respective business careers — Randy Bean as an advisor to large companies and a chronicler of the industry, and Ash Gupta as former President for Global Credit Risk and Information Management during a 41-year career at American Express. Our view is that to retain their leadership

positions, traditionally data-rich companies must adapt their data and analytics processes to incorporate the latest techniques, or risk falling behind those companies that embrace Big Data, AI, and machine learning.

Leaders should consider these five high-value tactics:

# 1. Know your business, and prioritize which data is most important to your firm. One of the greatest assets that any business maintains is its unique set of customer data — customer interactions, transactions, and behavioral history. Whether this is information about your customer's behavior, habits, or transactions, or other information, it is essential to understand what unique insights your particular data gives you. Knowing that, and how to combine it with external data sources, allows you to build and maintain a uniquely competitive business asset for your organization.

Highly successful companies distinguish between the quality and quantity of data that they maintain. A typical online customer interaction produces more data than is captured in a lifetime of offline customer interactions. One financial services institution captured 50,000 data elements, of which 48,000 were never used. Too often, companies discard data because it does not have value in one interaction, yet this same data may be valuable in another context. Data-driven companies continually discern that data which is truly useful and will deliver the greatest insight and business value.

### 2. Link technology investments to high-value business

**objectives.** Organizations too often equate success with making leading edge technology investments, while often straying from the core business strengths which has made a firm competitive and unique. To be successful, executives need to synthesize business characteristics with technology capabilities so that organizations do not get lost in the complexity of their solutions. Wise organizations start with the high-value business opportunity

they are seeking to address and ask how technology can be deployed to achieve the desired outcome — they don't start with tech and work backwards. Start by identifying the business problem, not by building a capability and solution with the expectation that if you build it, they will come.

Many organizations are discouraged in their efforts to undertake data-driven initiatives because the technology investments appear to be too great or take too long to demonstrate business value. How often do we see companies abandon initiatives because they are unable to point to immediate ROI, while ignoring the sustained business value that results from these investments? The consequence is that too many organizations never get started or repeat a cycle of failed technology investments. Companies that sustain a leadership position understand that technology is a tool, not a solution. Innovators and leaders invest in core capabilities that provide unique competitive advantage and distinguish themselves from their competitors. For instance, they teach their teams to be experts in quantitative decision-making techniques and they leverage their employees' deep knowledge of their business when they're building important models. Buy technology and AI platforms and workflow engines — don't reinvent the wheel.

### **3. Centralize data infrastructure, decentralize customer management.** Business units have a natural tendency to feel a strong sense of ownership of "their data," but successful companies manage data as a team sport, in collaborative manner. A business unit or geographic region may feel that they "own" the customer relationship and data within their purview, without taking into consideration the broader organizational benefit from both a customer service and enterprise business perspective.

While this guardianship has many benefits, these can be parochial in contrast to the benefits that are derived when organizations willingly share data and break down traditional operating silos. Just look at the velocity at which a Covid-19

vaccine was developed once scientific, public health, and governmental organizations were willing to collaborate across pharmaceutical, jurisdictional, and agency lines. The 9/11 Commission once famously said, we had the data, we just didn't put it all together.

Organizations can benefit by centralizing their technology infrastructure, policies, practices, and standards to ensure consistent treatment of data, and consistent legal and ethical use. Concurrently, organizations can benefit from decentralized analytics and local customer management by those lines of business and regions that are closest to the customer and know the customer best.

## **4. Educate C-Suite executives on the business value of machine learning and Al.** It is long past the time when C-executives can profess ignorance of these new technologies. Though the distinctions may seem obscure to non-technical specialists, it is important to understand the differences between AI, machine learning, and deep learning — AI leverages machines to replicate human cognitive functions; machine learning relies upon teaching machines to make data-driven predictions based on data and learned experiences; deep learning employs complex algorithms to enable high-level abstraction in data.

While executives need not understand technical details of "the how," they should absolutely grasp "the what" of the resulting business value to the firm. It is too important to abdicate or outsource these responsibilities. The CEOs of traditional leaders like Capital One and American Express prided themselves in their understanding of the data and technology. CEOs must embrace the new approaches and understand what they must do to exploit the value. Always remember though to communicate the business benefit to the customer, and to employees, in clear terms and simple language that can be well understood and easily explainable.

**5. Start small and demonstrate measurable business outcomes,** while recognizing that transformational change often takes decades. Eric Brynjolfsson, director of the Stanford Digital Economy Lab, observes that businesses are taking a hurry-up-and-wait approach to AI, commenting, "We have a few superstars that are doing really well, but the whole reason it takes so long in the first place is that it's not easy." Brynjolfsson notes that with transformative technologies like AI, which have the power to transform entire business models, it can take decades before changes yield real-world results. He notes that much of the momentum behind adoption of AI is tied to eking out efficiencies through data and analytics. NewVantage Partners 2021 Big Data and AI Executive survey substantiates these perspectives, with only 12.1% of executives surveyed indicating that AI is in widespread production within their firms.

Too many organizations focus on cure-all solutions, home runs, moonshots, or major transformational initiatives. Truly innovative companies proceed one step at a time, demonstrating measurable outcomes each step along the way. Becoming and staying data-driven is a process and continuing journey, seldom a destination. Implement cost-management processes to ensure that investments tie to measurable business outcomes.

Demonstrating a consistent return on investment that is tied to carefully managed costs will establish business credibility and build organizational support and commitment. Organizations must provide maximum latitude and safety for experimentation without fear of failure. Innovative organizations are characterized by test-and learn-cultures, which encourage growth and learning through trial and error. Engage test and learn processes to fail fast and learn faster.

Senior leaders of companies that follow these steps will be far more likely to differentiate themselves from their more cautious competitors. They will distinguish themselves as innovators who will shape the future of their industries and markets in an age of disruption, Big Data, and AI. Randy Bean is the author of Fail Fast, Learn Faster: Lessons in Data-Driven Leadership in an Age of Disruption, Big Data, and AI. He is a contributor to Harvard Business Review, Forbes, and MIT Sloan Management Review, and The Wall Street Journal, and is Innovation Fellow, Data Strategy with Paris-based Wavestone (EPA: WAVE) and Founder/CEO of NewVantage Partners, acquired by Wavestone in December 2021. You can contact Randy Bean at rbean@newvantage.com and follow him on LinkedIn.

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