Unlocking the potential of digital

Digital Reinvention in finance

IBM Institute for Business Value

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Reimagining finance

Digital technologies create unprecedented opportunities by fundamentally changing business economics. This presents new challenges for finance, requiring CFOs to accelerate the shift from analog to digital, unlocking new value from enterprise data faster. We call this process Digital Reinvention™. It involves completing digitization of finance operations and reimagining how a finance organization works. With input from over 500 CFOs and senior finance executives worldwide, we explore how successful finance organizations do just that, and what other organizations can learn from them.

Continual reinvention – the new normal

The digitization of business is a foregone conclusion. The current wave of digital transformation is cresting and organizations that are surfing this wave are well positioned.

What is digital business? It's the convergence of commercial activity onto principally digital forms and platforms. Think about consumers using smartphones, businesses transacting without paper – but on an electronic data interchange (EDI), or better yet, a blockchain platform. The digital economy has permanently changed business economics in fundamental ways and will continue to evolve along this new axis for the foreseeable future. An enterprise or any of its functional areas NOT already marching along this new axis is far behind.

If your enterprise has not started, it's essential to catch up. Most traditional businesses that want to stay in the game will be forced to a digital platform – and growth businesses are already there. Opportunities to leverage digital platforms benefit both top and bottom lines. The "network effect" of digital platform business models compounds revenue growth opportunity. A substantially more scalable business model architecture adds to cost reduction opportunities, resulting in margin improvement.

Finance is the critical component to help the enterprise capitalize on this digital environment. How? By providing the insights, forecasts and foresights to support the enterprise in making strategic decisions. The CEO looks directly to the CFO for an understanding of the anticipated financial impact of new business models and operational changes in an uncertain business market. Finance needs to engage and weigh in much faster on emerging business opportunities, and proactively help manage business growth and risk. Meaningful business partnerships and alignment shape this new paradigm, with a degree of responsiveness enabled by improved curation and analysis of integrated enterprise and environmental data.

68% of surveyed finance executives say that advanced analytics is the most critical technology to the finance function today

89% of surveyed finance leaders have a vision for using digital technologies to reinvent the finance function

82% of surveyed finance leaders have implemented blockchain for invoicing and billing in the order-to-cash process

Yet finance organizations are still struggling with addressing their own operations. Gaps exist between finance's effectiveness in providing input into enterprise strategy and driving integration of information across the enterprise – two of the activities they consider most important.[1]

The total annual finance function cost as a percentage of revenue has risen from 0.93 percent in 2014 to 1.37 percent in 2017.[2] Finance organizations have become less efficient, with increased finance cost reducing enterprise profit. In addition, finance organizations spend only 20 percent of their time on business partnering and decision support, falling short of enterprise expectations.[3] And only 14 percent of CFOs report that their finance functions are in an "optimized" technological state, with their systems enabling data-driven decisions.[4]

Finance challenges seem as if they may only get worse. Sources such as internal operational, administrative and investment data are generating a tsunami of data. Add to that environmental data about your supply chain, customers, competitors and ecosystem. Then tack on complexities associated with accessing unstructured data, and integrating both non-financial and financial data to create new insights. The obstacles can appear insurmountable. Traditional methods using spreadsheets, enterprise resource planning (ERP) systems and online analytical processing tools – all of which still rely largely on human speed and interpretation alone – are no longer enough.

In 2017, the IBM Institute for Business Value (IBV), in collaboration with Oxford Economics, surveyed 511 CFOs and senior finance executives. For more information, see the "Study approach" section.

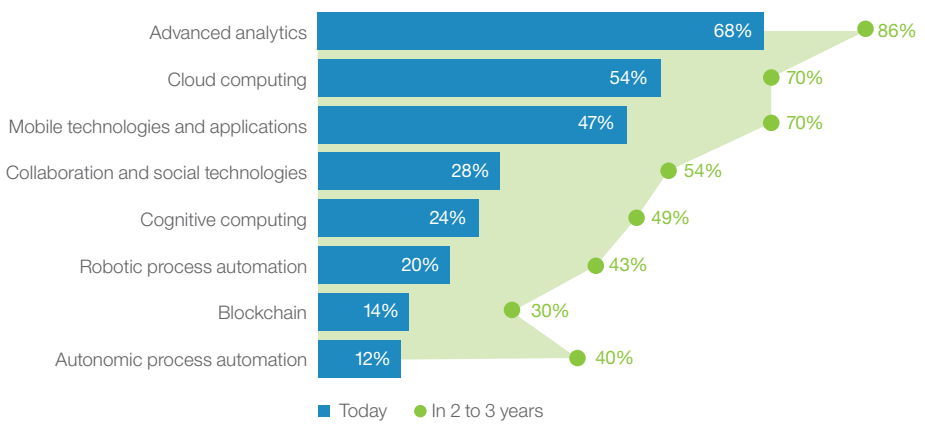
These executives confirmed that finance now has a more prominent role within the business, including applying analytics and creating insights that impact enterprise-wide strategic decisions. These impact areas can include:

- Identifying and evaluating organic growth opportunities (83 percent of respondents)
- Analyzing customer profiles and value (68 percent)
- Responding to changes in strategy and business model (67 percent).

In addition, executives surveyed said that multiple digital technologies (see Figure 1) are critical to finance. These new technologies can help CFOs transform their operations, address disruption and provide influence beyond the finance function.

Figure 1

Finance organizations see a combination of technologies as critical to their function



Source: 2017 IBV Digital Reinvention in Finance Study.

Digital Reinvention in finance

Successful finance organizations should embrace emerging technologies to create business insights and drive new efficiencies, opportunities and innovations. In short, they will need to digitally reinvent their organizations.

Defining Digital Reinvention

Digital Reinvention combines multiple digital technologies to reconceive operations and partner relationships. Digital Reinvention differs conceptually from both digitization of individual activities and the process of digitally transforming major business processes.

Digital Reinvention goes much further. It reimagines the way finance operates and engages with its stakeholders. It relies on a convergence of technologies to support more intelligent operations and the construction of deep business partner relationships. Within that context, Digital Reinvention requires rethinking how a finance organization operates and engages with its partners and the environment as a whole. According to one study, more than 90 percent of finance organizations believe that digital technologies will fundamentally change the way they deliver finance capabilities, including the way they service internal and external customers, suppliers and partners.[5] This same study predicts that digital technologies will also transform the talent and leadership roles that finance organizations need to develop.[6]

Finance leaders with digital advantages

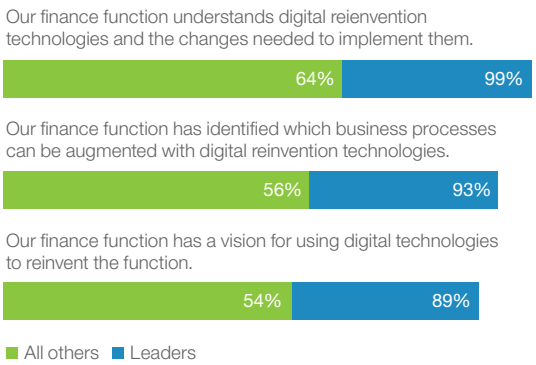
How can finance organizations best respond to disruption with Digital Reinvention? To help answer this question, we identified a small group of finance outperformers, consisting of 14 percent of our sample. This group was more effective than its peers, on average, in ten activities:

1. Finance process optimization
2. Order-to-cash
3. Expense management
4. Management reporting
5. Procurement
6. Profitability and margin analysis
7. Financial planning and budgeting
8. Cash forecasting
9. Revenue forecasting
10. Mergers and acquisitions.

On average, these leaders report better revenue growth 80 percent more than their peers and higher profitability 74 percent more than their peers. These leaders have mature digital strategies and execution plans – 95 percent versus 55 percent of their peers – and they are better prepared to implement digital technologies (see Figure 2).

Figure 2

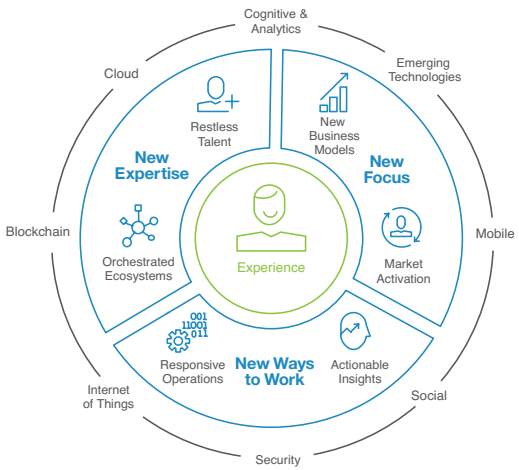
Finance leaders know how to use, apply and manage digital technologies



Source: 2017 IBV Digital Reinvention in Finance Study.

Figure 3

Digital Reinvention revolves around new experiences



Source: IBV analysis.

For successful Digital Reinvention, finance organizations need to pursue a new strategic focus, build new expertise and establish new ways of working (see Figure 3). For finance, new experiences are about creating deeper relationships with their business partners and providing the improved experiences that their staff needs.

Pursue a new focus

Finance organizations need to employ advanced analytics that incorporate both structured and unstructured data across the enterprise. This can help identify new ways of realizing and monetizing value. Advanced analytics might also help to develop new business models, determine improvements to the value chain and address risk in a more holistic way.

For example, a retailer wanted to uncover hidden relationships between external events and consumer behavior patterns. The company developed an intelligent analytical model that evaluated more than 1,000 variables across seven categories such as economic events, consumers, weather and competitors. The model quantified the impact of abnormal events on normal sales trends across individual product categories. These signals were used in a variety of forecasting models to identify sales anomalies. As a result, product was forward-deployed using numerical optimization techniques, driven by the signals sent in the exception forecast.

Insight depends on a foundation of data commonality. Our study shows that finance leaders outpace their peers in the adoption of common finance data definitions by 83 percent and enterprise-wide information standards by 68 percent. These leaders report implementing common non-financial data definitions more than twice as often as their peers.

Finance leaders apply analytics and cognitive computing to help their enterprises improve operations and manage risk. For example, 71 percent of leaders have applied analytics and 42 percent have applied cognitive computing to provide end-to-end supply chain visibility. As well, 63 percent have implemented analytics and 32 percent have implemented cognitive computing to manage risk. These activities could be one reason why their enterprises report better financial performance versus their peers.

Leading finance organizations have built analytics to identify and evaluate growth opportunities for years. In this study, leaders have analytics for organic growth opportunities in place 67 percent more than their peers. And these leaders have implemented cognitive computing to identify enterprise cost reduction opportunities 29 percent more than their peers. They analyze customer profiles and values 45 percent more frequently. In addition, leaders have connected their front office to their back office 90 percent more than their peers, allowing them to better link customer experience to performance.

Build new expertise

Finance organizations need to identify, retain and build the necessary talent to create and sustain a digital organization.

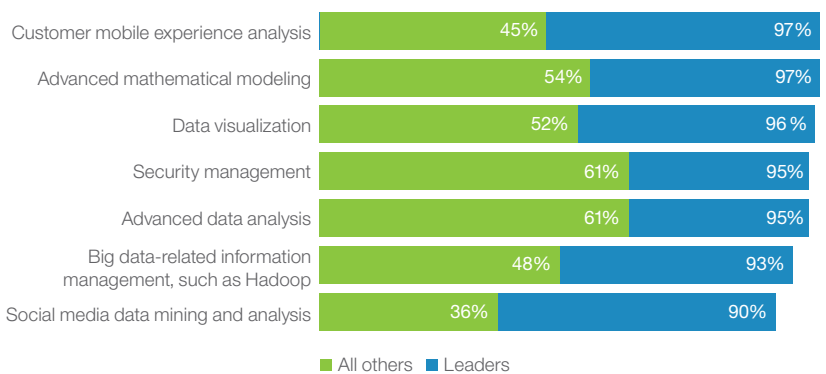
Managing the transition to Digital Reinvention requires discipline and management. In our study, 92 percent of finance leaders have implemented strategies to help their finance employees adapt to changes associated with digital reinvention technologies – a step taken by just 51 percent of their peers. Ninety three percent of leaders also support the shift toward digital with change management versus 57 percent of their peers.

Leaders overwhelmingly recognize that employee roles and skills need to evolve and have made more talent improvements to support Digital Reinvention. This includes building a data-driven culture (92 percent versus 47 percent of their peers) and training employees on using digital technologies (93 percent versus 37 percent).

Additionally, finance leaders recognize the need for specialized skills and have invested in specific roles (see Figure 4). Such skills include analysis, visualization, security, mobile, social, machine learning and modeling. These leaders create service scalability by forming centers of excellence for analytics and cognitive computing 83 percent more than their peers.

Figure 4

Finance leaders have the new skills to support Digital Reinvention



Source: 2017 IBV Digital Reinvention in Finance Study.

Establish new ways to work

Finance organizations need to digitize their services and processes. And they need to use digital technologies to create fully integrated, flexible and agile operating environments. A technology foundation that supports digital is critical to both these objectives. Leaders are ahead of their peers in implementing this infrastructure, including:

- Installing data visualization/exploration tools (98 percent more often)
- Creating a flexible data architecture (71 percent more often)
- Rationalizing ERP and financial applications instances (71 percent more often)

For the order-to-cash process, leaders both report applying digital technologies (see Figure 5) and implementing leading practices more than their peers. They tap a combination of technologies for specific areas, for example, blockchain and robotic and autonomic process automation for invoicing and billing. These technologies automate manual repetitive rules-based activities while contributing to working capital improvements and reductions in leakage, fraud and operating costs. With its Hyperledger technology, blockchain provides a security-rich platform, one version of the truth and data visibility to buyers and sellers. (See sidebar, "A high tech organization uses blockchain to save time and reduce administrative costs in dispute management.")

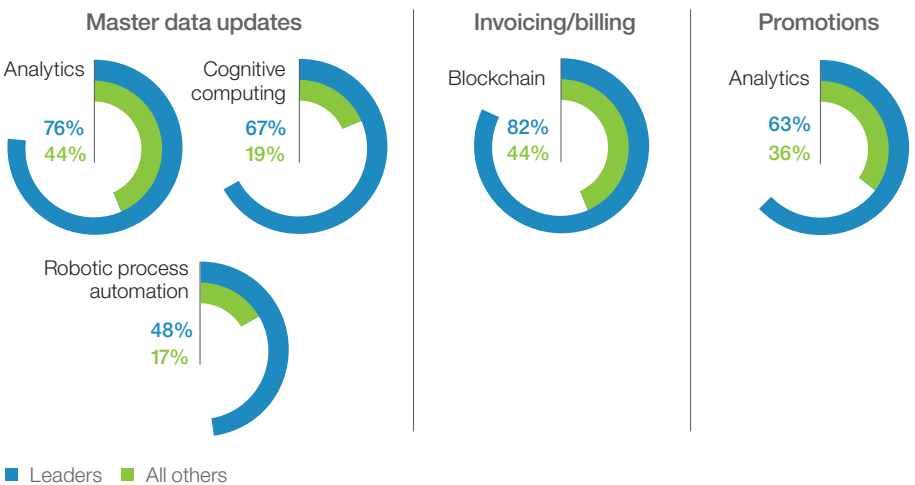
A high tech organization uses blockchain to save time and reduce administrative costs in dispute management

This multinational technology company headquartered in the U.S. has USD 100 million tied up in a high volume of disputes. By implementing blockchain technology, the company gained comprehensive visibility across the entire transaction lifecycle, allowing stakeholders to prevent or speed dispute resolutions. The results included a 75 percent reduction in dispute time and 35 percent gain in capital efficiency during disputes.

In addition, over 95 percent of finance leaders have utilized EDI and web-based invoice payment systems, including customer self-service options, for bill pay. They also use EDI for payment-deduction management systems and customer self-service capabilities for data management, for example, customer billing addresses and contact information.

Figure 5

Finance leaders apply digital technologies in the order-to-cash process more often than their peers



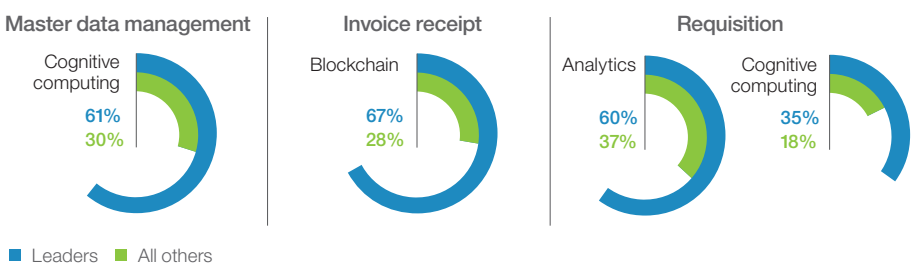
Source: 2017 IBV Digital Reinvention in Finance Study.

In the procure-to-pay process, leaders are also ahead in both applying digital technologies (see Figure 6) and implementing leading practices. As well, 97 percent have "e-enabled" purchase order workflow, automated invoicing, enterprise-wide deployment of standardized supplier pre-selection process, and detailed knowledge of spend trends, including seasonality and cyclicality.

Finance leaders adopt more emerging technologies and converge these capabilities to enable changes in technology and workforce interactions. By combining analytics and artificial intelligence with data, new autonomous processes can perform more routine tasks with basic decision-making requirements, elevating the workforce to higher value activities. (See sidebar, "An educational products and services company uses process automation to address inefficient intercompany reconciliations.") Notably, leaders have implemented

Figure 6

Finance leaders apply digital technologies in the procure-to-pay process more often than their peers



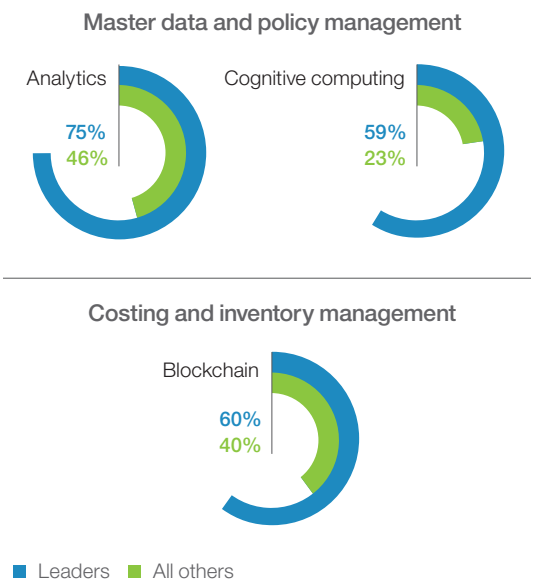
Source: 2017 IBV Digital Reinvention in Finance Study.

An educational products and services company uses process automation to address inefficient intercompany reconciliations

This company performed close to 520 intercompany reconciliations every month, using a manual process that was inefficient in quality, control and speed of execution. By implementing robotic process automation, the company improved productivity by 31 percent for the intercompany end-to-end process. As well, intercompany reconciliations were prepared five times faster.

Figure 7

Finance leaders apply digital technologies in the record-to-report process more often than their peers



Source: 2017 IBV Digital Reinvention in Finance Study.

analytics for accounts payable, requisition, expense management and contracts administration. Blockchain for accounts payable uses the technology's shared ledger and permissions to reduce operational costs and disputes.

Similarly, in the record-to-report process, leaders have implemented digital technologies (see Figure 7) and leading practices. Over 94 percent have automated exception reconciliation and implemented workflow for exception and transaction processing, while addressing closing and consolidations in parallel. In addition, 90 percent of leaders have automated driver-based allocations and 88 percent have employed a virtual close where account analysis is performed throughout the month.

Finance leaders have also made strides in using blockchain and artificial intelligence to enhance process automation across a variety of data management activities. These include data and policy management, costing and inventory management and tax accounting. By leveraging automation and digital technologies, leaders provide better insights into their enterprise's strategic, operational and financial performance. (See sidebar on page 13, "A telecommunications company reduces its overdue debt using collection analytics.")

Surfing the digital wave

Given that finance leaders are already experiencing the benefits of implementing digital technologies, the pressure is on for all finance organizations to digitally reinvent in order to remain competitive and viable within the industry (see Figure 8).

Figure 8
Three key lessons for Digital Reinvention

Source: IBM Global Business Services analysis.

A telecommunications company reduces its overdue debt using collection analytics

The company needed an optimal collection strategy that would positively impact its cash inflows by driving process efficiency and effectiveness. It introduced a risk-based collection strategy using statistical data modeling to segment customers by risk profile based on their past payment patterns and disputes. Embedded predictive analytics, design thinking and process transformation drove substantial improvements, including:

- 48 percent improvement in customer satisfaction
- 44 percent reduction in aged receivables
- Acceleration of collections by 2.5 days
- USD 38 million reduction in 60+ day overdue debt.

To embark on the path toward Digital Reinvention, finance organizations should take four initial steps.

Step 1: Clarify strategic vision
Take a design thinking approach to produce a definitive reinvention blueprint. For example, a workshop could be used to identify blockchain opportunities. This workshop could cover:

- An overview of blockchain fundamentals
- Use cases for blockchain
- Demonstrations on the application of blockchain for specific areas, such as dispute management and the supply chain
- Identification of as-is processes and challenges
- Brainstorming of new ideas to apply blockchain to address the issues
- Creation of a proof of concept
- Identification of system changes and data requirements.

Step 2: Experiment with pilots
Develop prototypes using agile development. Test and deploy them to elicit feedback and iteration. To continue with our blockchain example, this step implements the proof of concept and determines the use case value by digitizing the business processes, focusing on operational efficiency and selecting ecosystem partners.

Step 3: Iterate continuously for speed

Augment digital capabilities with strategic initiatives. Continue to build and deploy necessary applications aligned to the target Digital Reinvention operating model and ecosystem strategy. (See sidebar, "A global pharmaceutical company leverages cognitive computing to improve forecasting.") As pilots evolve, impediments to development will emerge, highlighting limitations in existing capabilities. Adopt a continuous, iterative approach to addressing these limitations by building new or extending existing capabilities. In our blockchain example, the emphasis is on demonstrating operational effectiveness and adding ecosystem partners.

Step 4: Orchestrate ecosystems

Embrace a strategy based on holistic reinvention rather than a series of point solutions. Maintain a clear focus on deep needs, aspirations and desires of partners and colleagues, such as service providers. Focus on ecosystems to expand and align a broader set of capabilities and to help create and deliver on customer promises. In our blockchain example, the technology would be deployed to all ecosystem partners and then used to explore new revenue streams.

A global pharmaceutical company leverages cognitive computing to improve forecasting

The company faced low forecast accuracy at a drug level using traditional methods. In addition, slow reaction to competitive actions resulted in a suboptimal return on investment and high turnaround times for analyzing data and determining actions.

It developed a cognitive simulator solution that drives end-to-end dynamic, integrated and streamlined financial planning. The solution includes:

- A machine learning-based forecast
- An external perspective for true market potential through a live scenario planning engine
- An accurate capture of the impact of client and competitor actions, policy changes, market dynamics, new regulations and more.

The result was an increased drug-level forecast accuracy of 97 percent plus. And by optimizing investments and driving significant efficiencies through on-demand planning, this organization achieved an estimated USD 115 million incremental profit over two years.

Key questions

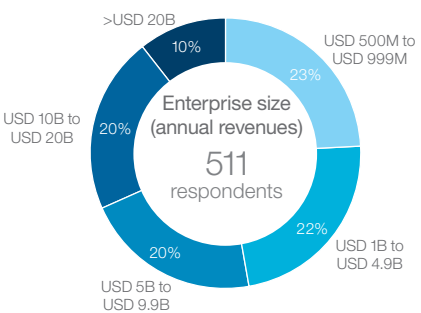
- How can your finance organization transform to drive process efficiency and effectiveness?
- How can your finance organization become more agile in its response to unexpected challenges and opportunities?
- How can you make your finance workforce open and flexible enough to quickly embrace new ways of working and new strategic priorities?
- How can your finance organization enhance enterprise operations to optimize actions and improve customer experience?
- How can your finance organization strengthen data integration and enterprise insight to deliver enhanced financial performance?

Study approach

In cooperation with Oxford Economics, the IBM IBV surveyed CFOs and senior finance executives in the 2017 IBM IBV Digital Reinvention in Finance Study. Roles of responding executives included CFOs, heads of finance and direct reports to CFOs. In total, 511 respondents participated in the study – 23 percent from North America, 5 percent from South America, 29 percent from Europe, 12 percent from the Middle East and Africa and 30 percent from Asia Pacific.

Our analysis identified a small group of leaders (14 percent of our sample). This group is more effective than its peers, on average, across ten activities: finance process optimization, order-to-cash, expense management, management reporting, procurement, profitability and margin analysis, financial planning and budgeting, cash forecasting, revenue forecasting, and mergers and acquisitions. All data is self-reported.

- 6% Energy and utilities
- 6% Electronics
- 6% Chemicals and petroleum (including oil and gas)
- 6% Industrial products
- 7% Automotive
- 6% Banking
- 6% Telecommunications
- 7% Retail
- 6% Healthcare
- 6% Insurance
- 6% Travel
- 7% Transportation
- 6% Consumer products
- 6% Media and entertainment
- 6% Life sciences and pharmaceutical
- 6% Education



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Related reports

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IBM Corporation
New Orchard Road
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Produced in the United States of America
January 2018

23012423USEN-00