



Become a Data Thriver: Realize Data-Driven Digital Transformation (DX)

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INTRODUCTION

IDC defines digital transformation (DX) as a set of practices that leverage new business, technology, and operating models to disrupt rivals and markets in pursuit of business performance and growth. Successful DX relies on converting data into actionable insights, and this reliance on data is contributing to a new era of the data age. IDC forecasts that by 2025 the global “datasphere” will grow to 163 zettabytes (that’s one trillion gigabytes). All this data will unlock unique user experiences and a new world of business opportunities. Organizations that embrace data-driven DX are attracting new customers and developing new revenue streams faster than their competitors. IDC refers to these companies as “Data Thrivers.”

No industry is exempt from the impact of digital transformation, and Data Thrivers can be found in every vertical. One example is General Electric (GE), a traditional manufacturer that is remaking itself into a modern digital business. GE has bet big on the Industrial Internet — the convergence of industrial machines, data, and the Internet. The company is putting sensors on gas turbines, jet engines, and other machines; connecting them to the cloud; and analyzing the resulting flow of data. The goal is to identify ways to improve machine productivity and reliability. GE sees an incremental opportunity worth billions of dollars for its operational technology (OT) software across multiple vertical markets. GE’s Digital Wind Farm, for example, is an adaptable wind energy ecosystem that pairs turbines with the digital infrastructure for the wind energy industry. GE’s previous solution, Wind PowerUp technology, has already been installed in 4,000 units, and has helped improve turbine efficiency by up to 5%, yielding up to a 20% improvement in profitability for each turbine. The new Digital Wind Farm technology promises 20% efficiency improvements, which could help generate up to an estimated \$50 billion of value for the energy industry.

Not all digital transformation initiatives involve reinventing the business: even small digital initiatives can have remarkable impact. For example, the Starbucks app, which allows customers to preorder online and pick up at the store, now contributes 20% of overall Starbucks revenue.

There are six key attributes that characterize Data Thrivers (Figure 1).

Figure 1
Key Attributes of Data Thrivers



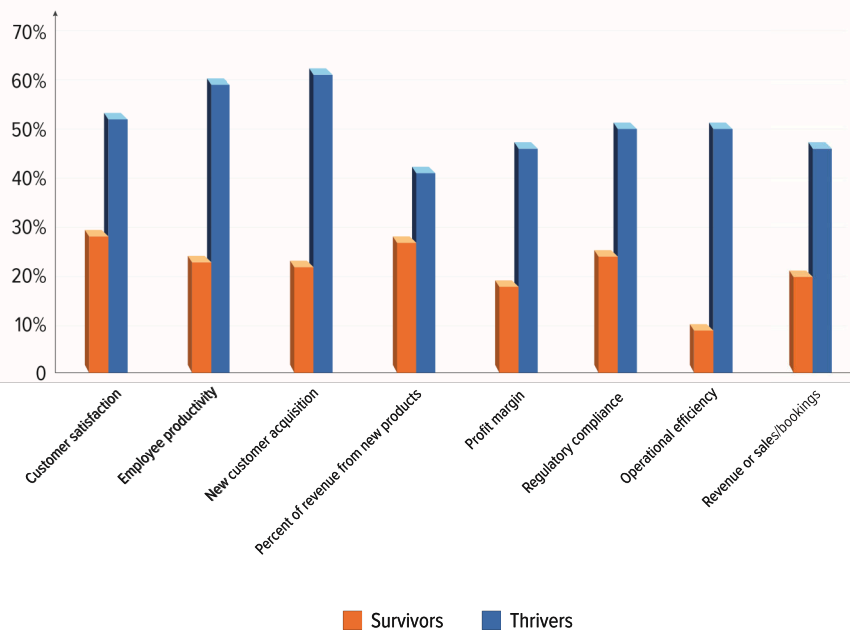
Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

For Data Thrivers, the importance of data is reflected in organizational culture. Data Thrivers are exploiting data to improve profit by speeding turnaround time from order to delivery, upselling and cross-selling products and services, cutting low-margin products and services, and eliminating waste. They are using data to improve customer satisfaction and retention by providing great service, quickly resolving issues, improving customer touchpoints, and instituting rewards programs. They are using data insights to improve topline revenue by acquiring new customers, and they are better mitigating risk and more strongly adhering to security and compliance regulations.

Data Thrivers use a closed-loop process to better use data in their decision making, giving them greater likelihood of better business outcomes than Data Survivors. In contrast to Data Thrivers, Data Survivors execute DX strategy primarily on a project basis and have less repeatable and predictable processes. They also have significantly worse business outcomes than Data Thrivers (Figure 2).

Figure 2

Business Outcomes Percentage Improvement over the Last Three Years



Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

Compared to Data Survivors, over the past three years Data Thrivers have:

- » Six times greater improvement in operational efficiency
- » Three times greater increased profitability, new customer acquisition, and employee productivity
- » Twice as much top-line revenue growth, customer satisfaction improvement, and ability to drive incremental revenue from new product innovations/business transformation

ABOUT THIS STUDY

This study is based on a global survey of 800 LOB executives, IT leaders, and technology-savvy workers conducted in September 2017. Respondents were from 7 countries: the United States, Canada, the United Kingdom, France, Germany, Japan, and China with data weighted according to regional GDP. The sample consisted of large- and medium-sized companies (those with 1000+ employees in the United States and 500+ employees in other countries). Respondents were decision makers with budget control or ability to influence budget spend for DX projects, were involved in DX projects for their company and were responsible for evaluating or architecting at least two data services for hybrid cloud. Job titles included chief data officers, analytics professionals, and DevOps/cloud architects.

This study also draws upon two focus groups run in the United States across industries and three sets of job titles (LOB, IT, and DevOps) and in-depth interviews conducted with dozens of U.S. customers using data services for hybrid cloud and leveraging big data and analytics technology to deliver better business outcomes.

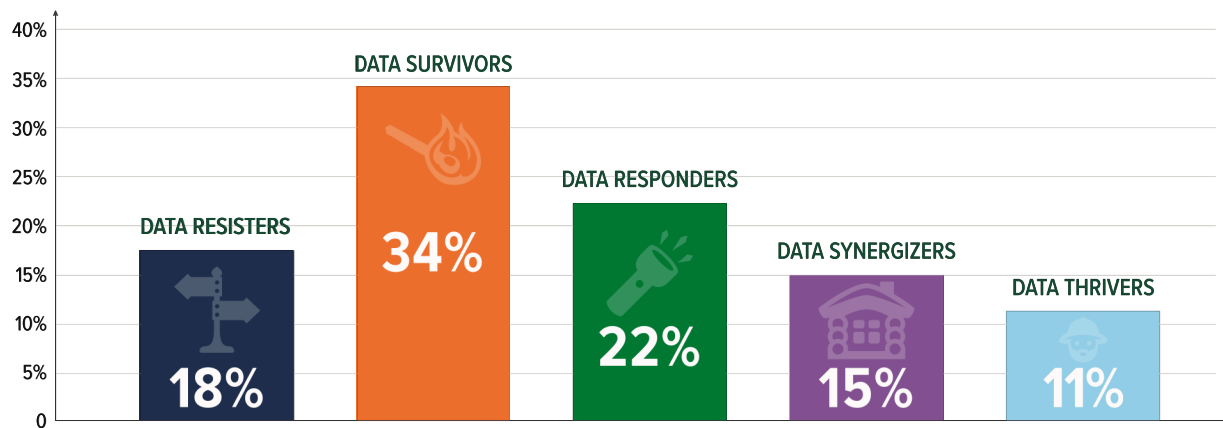
Key findings from the study:

01



Organizations' data-driven DX maturity is still emerging. Only **11%** are Data Thrivers, while **34%** are Data Survivors (Figure 3).

Figure 3
Organizations' Assessment of Data-Driven DX Maturity



Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

This study identified five data-driven DX levels of maturity:

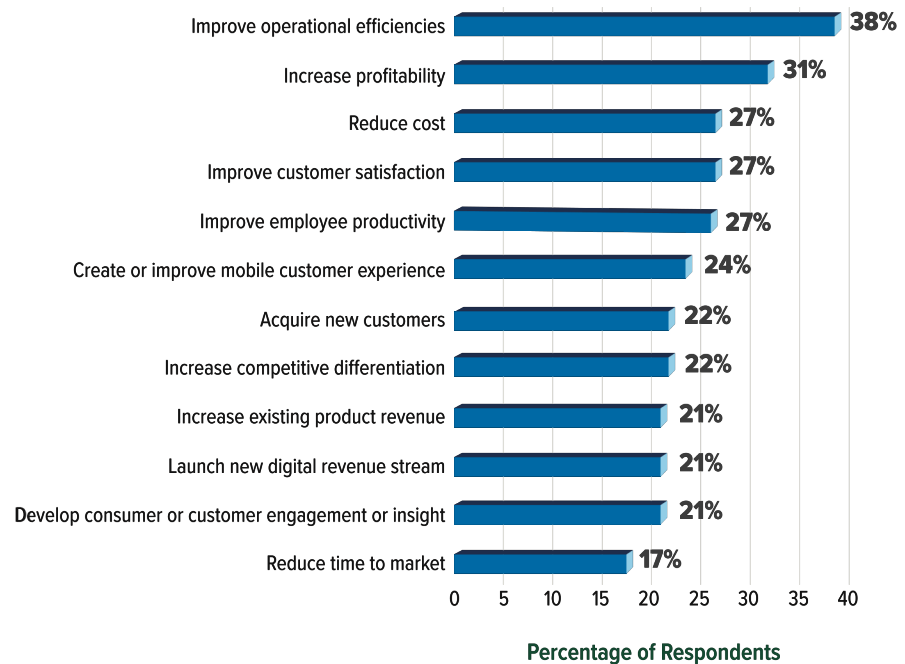
- » **Data Resisters.** Data Resisters' business and IT DX initiatives are disconnected, IT is poorly aligned with enterprise strategy, and data management is poor.
- » **Data Survivors.** For Data Survivors, lines of business realize the need to develop a DX-driven business strategy, but the execution is still on a project basis, and progress is not predictable or repeatable.
- » **Data Responders.** In Data Responders, business and IT goals are aligned at the enterprise level around creation of new products and services, but not yet focused on the full disruption potential of the digital initiatives.
- » **Data Synergizers.** Data Synergizers have implemented integrated line of business and IT management disciplines to deliver DX-enabled products and services on a continuous basis.
- » **Data Thrivers.** Data Thrivers are aggressively using digital technologies to disrupt new markets. Ecosystem and lessons-learned feedback is a constant input to business innovation.

02

DX business objectives are balanced between tactical and strategic priorities, including acquiring new customers and launching new digital revenue streams (Figure 4).

Figure 4
DX Business Objectives

Q What are your organization's most important business objectives for investing in digital transformation (DX)?



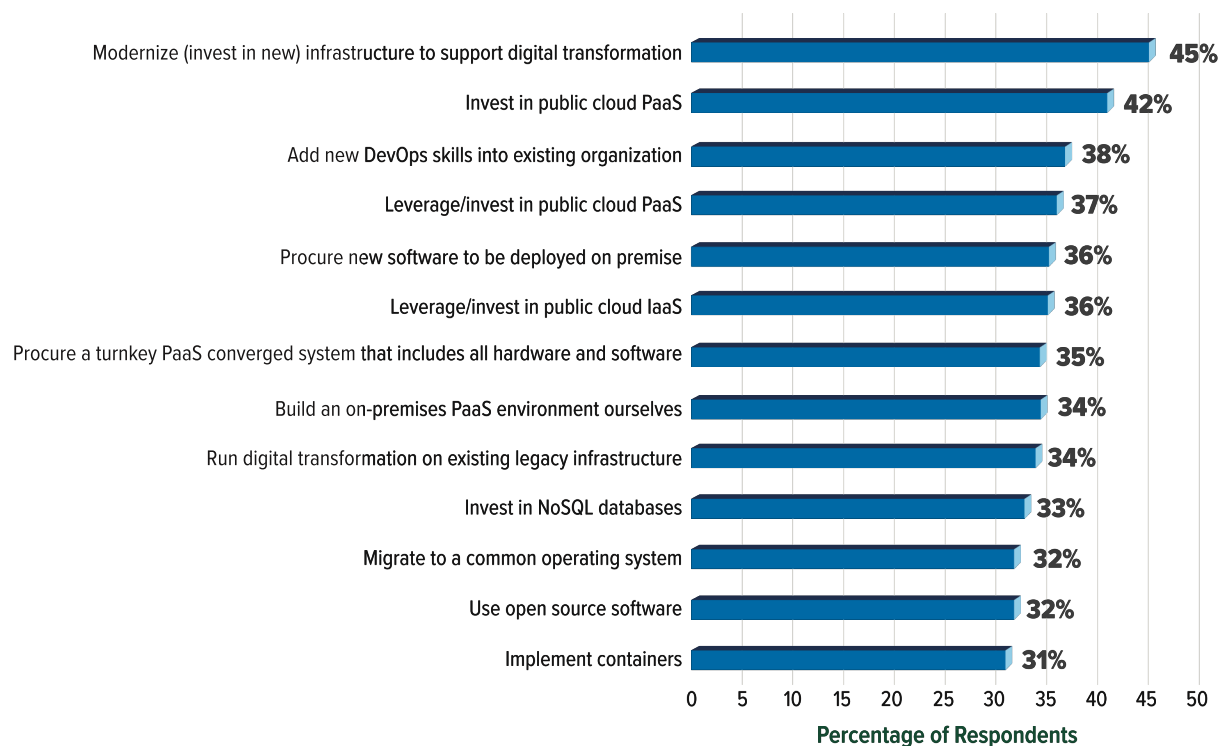
Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

03

Investment in technology for DX initiatives vary from modernization of infrastructure to leveraging cloud services (public and private); from addition of new DevOps skills to implementation of containers and implementation of NoSQL databases (Figure 5).

Figure 5
Investment and Integration Strategy for DX

Q What is your organization's IT investment and integration strategy for digital transformation (DX) projects?



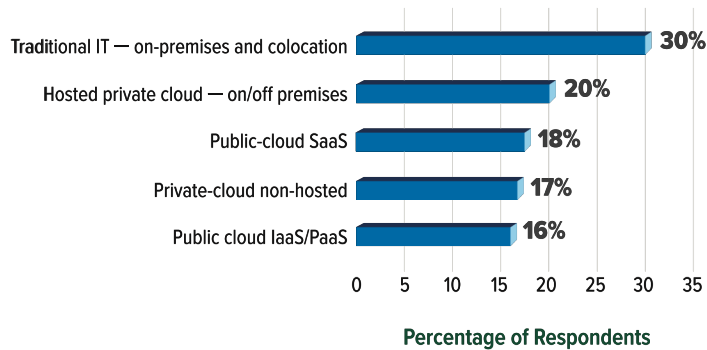
Source: Become a Data Thriver Study, sponsored by NetApp, November 2017

04

Data formats and deployment location. Organizations are placing more importance on varied data formats (including semistructured and unstructured) and working with data dispersed across on/off-premises (Figure 6); **56%** are using hybrid cloud services (Figure 7).

Figure 6

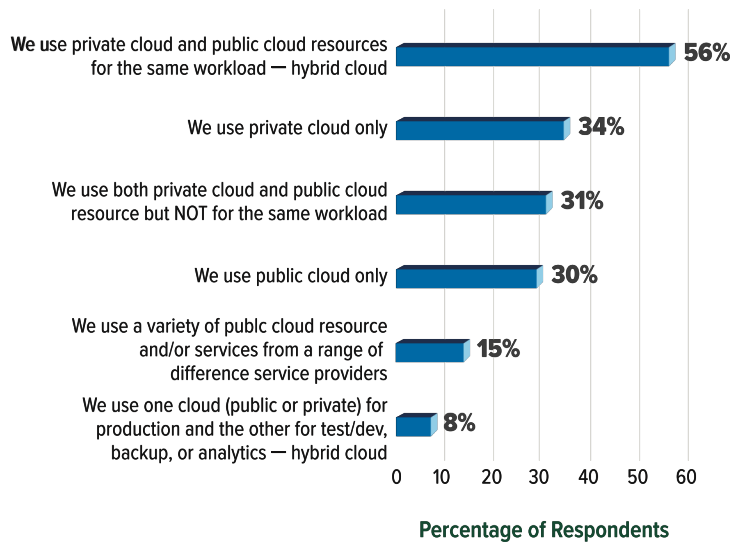
Q *What percentage of your current petabytes of data is split across the following deployment locations?*



Source: *Become a Data Thriver Study, sponsored by NetApp, November 2017*

Figure 7

Q *Which of the following scenarios describes how your organization uses cloud services today?*



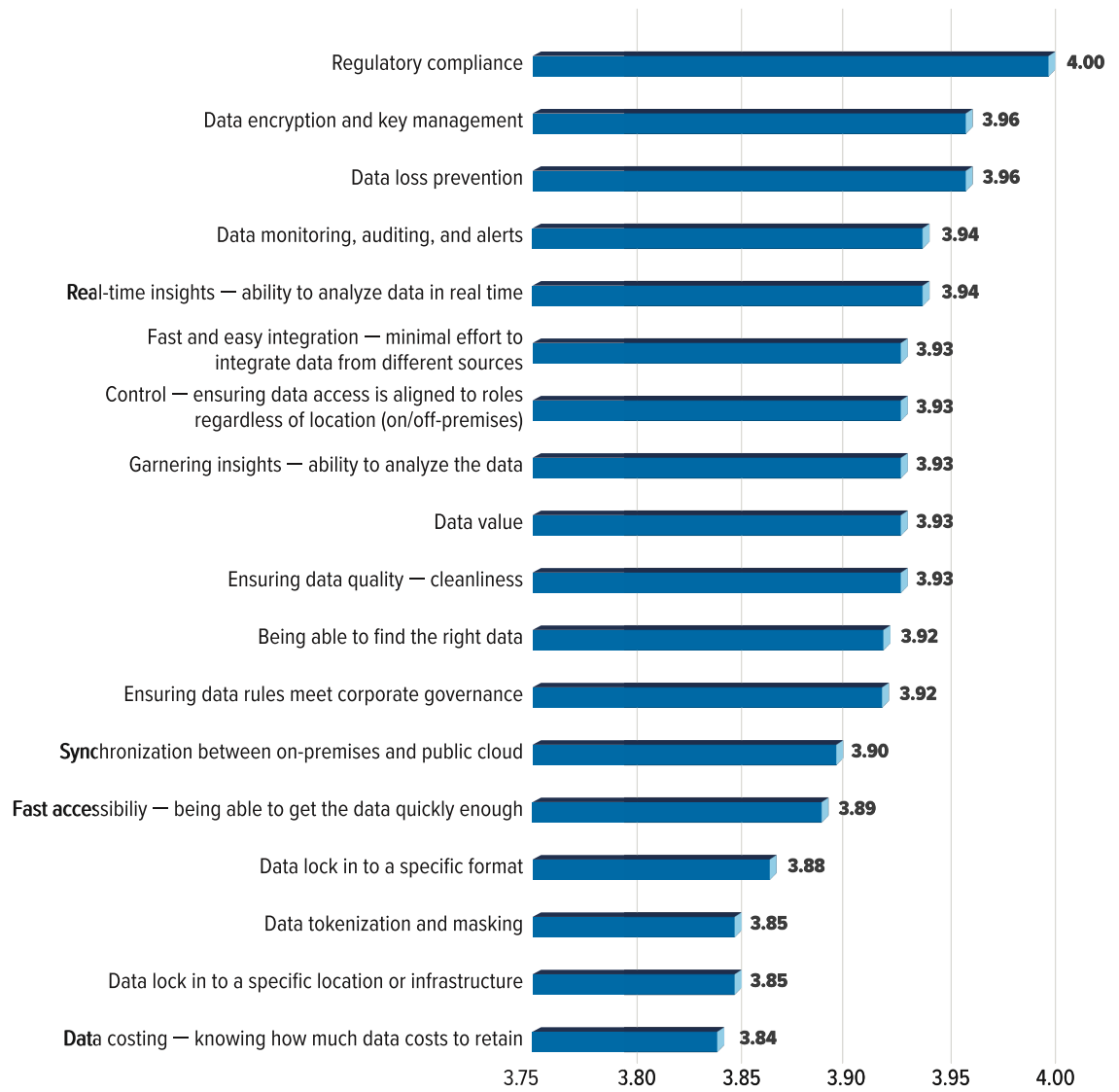
Source: *Become a Data Thriver Study, sponsored by NetApp, November 2017*

05

Data challenges and data roles created to address them. Data related challenges vary from security and compliance to data access, quality, and analysis (Figure 8). New data roles and technologies are being used to manage challenges as **47%** of businesses have a chief data officer (Figure 9).

Figure 8
Data Challenges

Q On a scale of 1-5, please rate how challenging the following data-related challenges are?



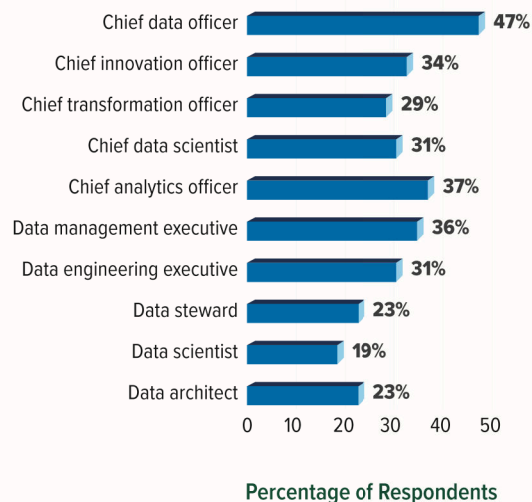
Scale 1-5

Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

Figure 9

New Data Roles

Q Do you have any of the following roles created in your organization to be the change agents/visionaries for digital transformation?



Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

IDC GUIDANCE: DATA-DRIVEN DX

Digital Darwinism is impacting businesses across industries and sizes. Organizations are moving away from business as usual and embracing digital transformation to become more competitive. Companies are modernizing their systems, models, processes, and architectures. These improvements are earning organizations new revenue streams and opening up new services offerings.

An example of a firm driving new revenue through enhanced use of data is Stara, a Brazilian manufacturer of farm equipment. In 2005, Stara began manufacturing its own sensors, software, and computers, and 2015 it launched a telematics system. Today, Stara has transformed itself from a commodity supplier of farm equipment to a provider of “precision farming” solutions. Twenty one percent of Stara’s revenue is now derived from computer hardware and software, with 40% of revenues coming from products launched in the last three years.

Another example is John Deere, the 179-year-old agricultural equipment manufacturing company that has recently created the go-to digital platform for the

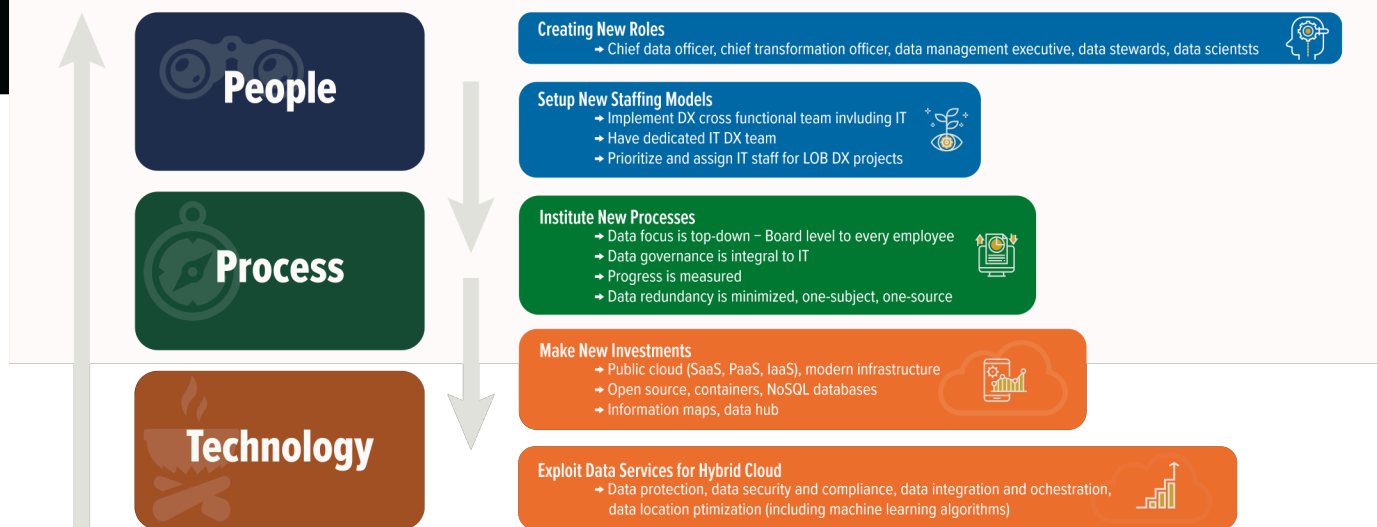
agricultural industry. John Deere has transformed itself from an pure equipment manufacturer to an enabler of digital farming, driving revenue and share price growth that outpaces less digitally-savvy competitors.

Becoming a Data Thriver is an ongoing process, starting with a leadership culture willing to invest in new technology, processes, and business models that drive more value to customers and employees. It requires implementing cross-functional teams and aligning the organization with data. Data governance and data-driven decision making are integral to digital organizations’ day-to-day operations.

Companies that resist evolving are putting their businesses at risk. Developing a data-driven DX roadmap is necessary to innovate and remain competitive in today’s business climate. IDC advises businesses to perform a holistic transformation involving people, processes, and technology to achieve targeted business outcomes (Figure 10). Planning and executing on a digital transformation journey requires iteration based on organizational scope and learnings.

Figure 10

Data-driven DX Framework



Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017

Data Thrivers create new roles and staffing models through which senior IT and line of business executives collaborate on data initiatives. Data is important to the boardroom and also trickles down to the lowest level managers. Members of enterprise architecture (EA) and enterprise data management (EDM) groups set the policies and governance methodologies associated with application and data architecture. They are responsible for ensuring that these standards and policies are enforced. They set goals to reduce data redundancy and use enterprise information integration and maps to access data as needed. They have the vision to consolidate to one data source for one subject area: customer, vendor, partner, products, and services. Data Thrivers measure their achievements via KPIs. They collect data about successes and failures and have closed-loop processes to take corrective actions.

Leading digital organizations covered in this study are discovering that the cloud — with its power to deliver agility and flexibility — is indispensable for achieving their DX business objectives. For most organizations, this leads to hybrid IT in which data is generated and stored across a combination of on-premises, private cloud, and public cloud resources. This hybrid infrastructure causes

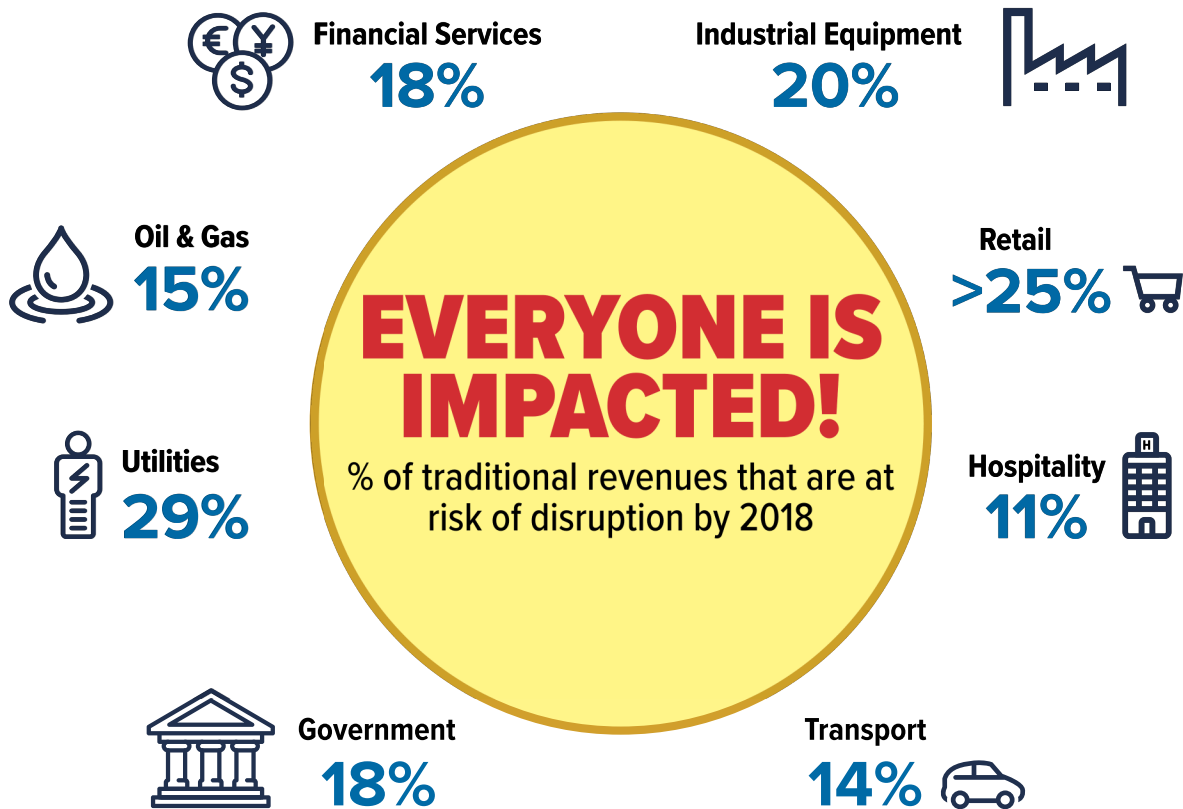
a new set of data management challenges, including organizational data being widely and unpredictably spread across multiple repositories. This creates numerous challenges for IT staff ranging from knowing what data is where, to performance and reliability issues in protecting and integrating data, securing and ensuring compliance, and employing labor intensive processes for optimized data placement. Today, most organizations purchase and manage overlapping tools to address these unique challenges. Integrating information from these disparate tools may be either time consuming or impossible. In aggregate, these hurdles prevent organizations from efficiently managing and deriving maximum value from all of their data.

To address these data challenges, gain a competitive edge, and thrive in the DX era, organizations need to make investments in cloud while also adopting data services for hybrid cloud. Data services for hybrid cloud is location- and infrastructure-independent software that understands and performs various protection, security, integration, and optimization functions on data for the purposes of agile and economic data management and faster time to insights. These functions can be performed in place or following data movement.

CONCLUSION

Digital disruption is real. The average company lifespan on the S&P 500 index in the 3rd Platform era — the era characterized by cloud, social, mobile and big data technologies, beginning circa 2005 — is 18 years, compared to 61 years during the 1st platform era (characterized by the mainframe). IDC research shows that organizations across every industry are under threat; the average percentage of traditional revenues that are at the risk of disruption vary from 11% for hospitality to 29.0% for utilities (Figure 11).

Figure 11
Traditional Revenues at the Risk of Disruption



Source: *Become a Data Thriver Study*, sponsored by NetApp, November 2017



CONCLUSION

Resistance to change can be fatal, with examples abounding in the business press. Blockbuster was at its prime when Netflix was launched as a disruptive startup. Now, Netflix is a \$28 billion enterprise and Blockbuster is gone. So what happened? Blockbuster was very resistant to change. Comfortable with its healthy revenue stream — mostly generated by late fees — the chain saw no immediate need to evolve to a new revenue subscription model.

While the threat is real, leading digital organizations are embracing DX to improve their existing business and develop entirely new businesses. An example is McCormick & Company, a 125-year-old spice company that recently realized the need to digitally transform to remain a market leader in the modern world. The company launched FlavorPrint, an online flavor recommendation tool that visually represents consumer tastes. Consumers start with a 20-question quiz about eating habits and food likes and dislikes. FlavorPrint takes this data and uses algorithms to generate personalized recipe suggestions. It has been dubbed “the Netflix for food” for its ability to suggest recipes based on individuals’ tastes. FlavorPrint has been such a success that McCormick spun it off into its own technology company called Vivanda.

We believe by following the steps outlined in this paper and prioritizing the role of data insights in your organization, you can transform your business to become a Data Thriver. IDC advises every business to embrace DX and build a multi-year data-driven DX roadmap to guide this transformation.



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