

A blue-tinted photograph of three people in a professional setting, likely a meeting or conference. One person is in the foreground, seen from the back, while two others are facing them. The background shows a window with a view of a city.

# Driving Digital Transformation in Financial Services: Lessons from Digital Leaders

**Research by:**

Ashish Nadkarni | Group Vice President, Infrastructure Systems, Platforms, and Technologies

Rivka Gewirtz Little | Research Director, Financial Insights

An IDC InfoBrief, Sponsored by NetApp | August 2019

# Executive Summary

In 2019, IDC completed a global research study, sponsored by NetApp, to understand the characteristics of the most-mature financial services organizations in the way they manage data and digital technologies, and to draw lessons about how financial services organizations can expand their use of digital technologies to enhance consumer and business outcomes.

Organizations were characterized into one of five categories, from most (stage 5) to least (stage 1) mature:

5. Data Thrivers
4. Data Synergizers
3. Data Responders
2. Data Survivors
1. Data Resisters

We found that the level of digital maturity reported had, not surprisingly, increased since our previous survey sponsored by NetApp in 2017.

**Successful digital transformation (DX)** relies on intelligent use of data, and the most sophisticated financial services organizations are already utilizing it to transform their operations while improving customer experience. They are finding new ways to use data to differentiate their offerings in the market and offer consistent, secure, and automated customer service.

**Financial Services Data Thrivers are operationalizing rich and varied organizational data to transform the way they do business internally and externally. Best-in-class financial services firms look to technology as a source of competitive differentiation in terms of improving their customer experience. They:**

- Leverage data to improve security of their products and services, and to expand customer engagement.

- Are more concerned with automating customer-facing functions and customer communications.
- Embrace public cloud cautiously and prefer software-as-a-service when they do.
- Invest in SaaS applications to improve staff productivity and to simplify and standardize IT, which is consistent with their push to use data for analytics, personalization, and automating and improving customer experience chatbots and related technologies.
- Invest selectively in infrastructure and platform as-a-service for security reasons, though more aggressively in private and hybrid cloud for greater end-to-end control over their environments.
- Are at the forefront of using artificial intelligence (AI) and deep learning (DL) to realize operational insights and improvements, drive decision making, prevent fraud, improve customer experience, and ultimately reduce operational costs.

# Transformation Through Data Operationalization

Digital technologies are transforming financial services.

Firms are using digital information to automate customer functions and call centers. They also use data to streamline internal- and external-facing operations. The financial services industry is on the verge of radically reshaping the way its services are delivered in a secure, consistent, and automated manner.

The financial services industry is awash in data. Mature organizations have unified the data and are now focused on operationalizing data for insights, customer engagement, and operational automation. They focus on offering higher value-added services such as customized products and services tailor-made to their customers' wants and needs.

This shift requires data that is secure and compliant. It needs to be scrubbed clean of sensitive information but remain high quality, so the firm can garner unprecedented insights in real time.

Of course, not all financial services organizations are at the same place in their data journeys. This study explores the practices of Financial Services Data Thrivers and draws conclusions for how other financial services organizations can implement similar practices.

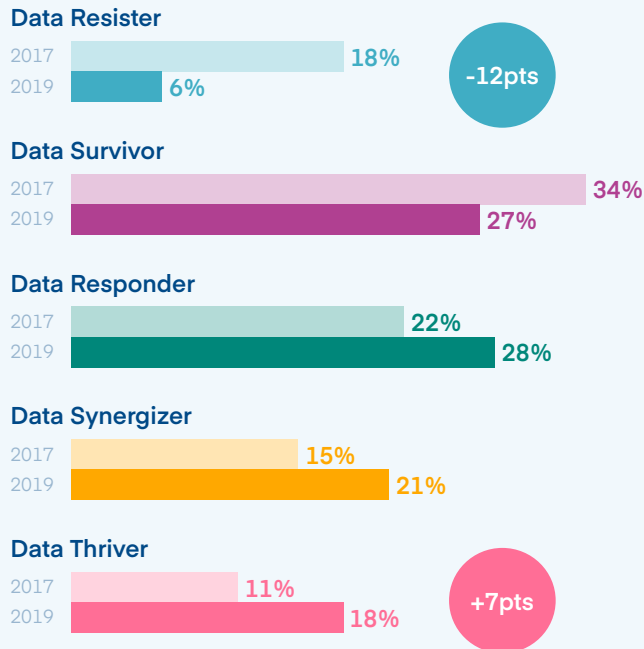
“

We are going through digital transformation. It is a lot of combinations of automation and engagement with the client through digital means – establishing APIs and integration points to integrate internally and with our external clients. We are undertaking a lot of big data projects [that attempt] to provide new services using data we either collect, manage, or create as part of the data process.”

**Head of Business Technology, Major Retail Bank**

# DX Maturity Is Increasing in Financial Services

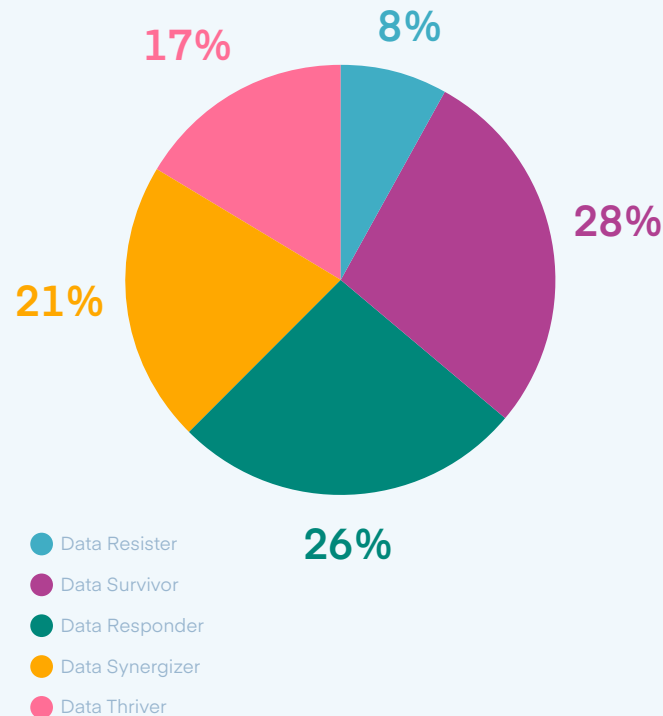
## DX Maturity Self-Assessment (All Industries)



Across all industries, respondents' DX self-assessment improved significantly from the previous survey.

**Data Thrivers** experienced the highest growth rate since the 2017 study, rising from 11% to 18%, while **Data Resisters** dropped from 18% to 6%.

## DX Maturity Self-Assessment (Financial Services)



The maturity mix for financial services companies tracked slightly differently than the total sample in this year's study. It improved only incrementally from the total sample in the 2017 survey.

“

We want to build up greater revenue per claim and increase the number of clients we bring on every year. We aim to improve the efficiency of what we spend.”

Owner, Major Financial Services Franchise

# Financial Services Thrivers' DX Objectives: Improving Customer Experience, Operational Efficiencies, and Profits While Reducing Costs

The top DX use cases for Financial Services **Thrivers** are improving operational efficiencies, improving employee productivity, and launching new digital revenue streams.

**Data Thrivers** stand out most from **Data Resisters** in launching new digital revenue streams. However, they are ahead of their peers in the other two use cases as well.

Financial services firms are on a journey to monetize their sophisticated data use with highly innovative and targeted applications. This means:

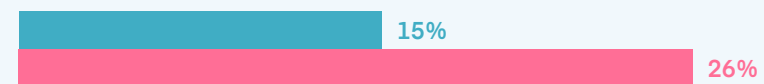
- Continued improvement in data mining, understanding client profitability, and supporting product differentiation
- Capital planning using financial and/or performance data
- Using transaction data to measure customer interaction with digital properties
- Monetizing regulatory/compliance expertise that had previously been in-house

## DX Use Cases (Financial Services)

### Improve operational efficiencies



### Improve employee productivity



### Launch new digital revenue stream



● Data Resisters ● Data Thrivers

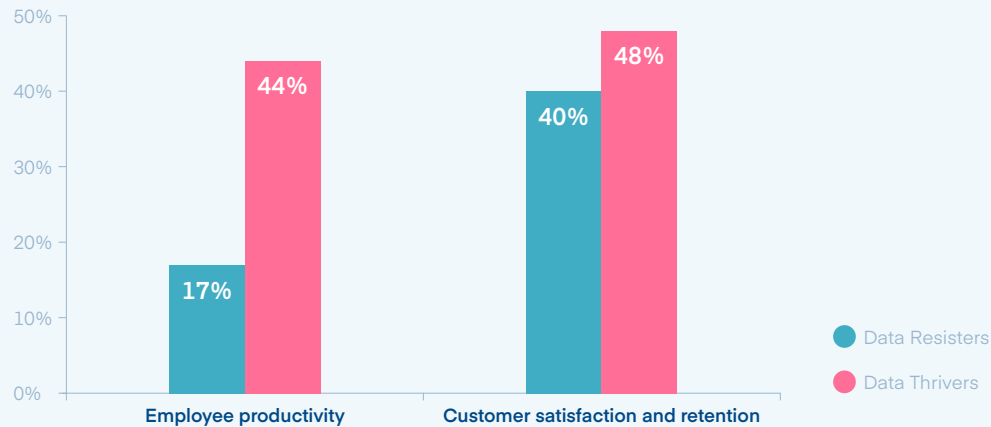
“

Services around managing regulatory requirements are now a line of business.”

Head of Business Technology, Major Global Retail Bank

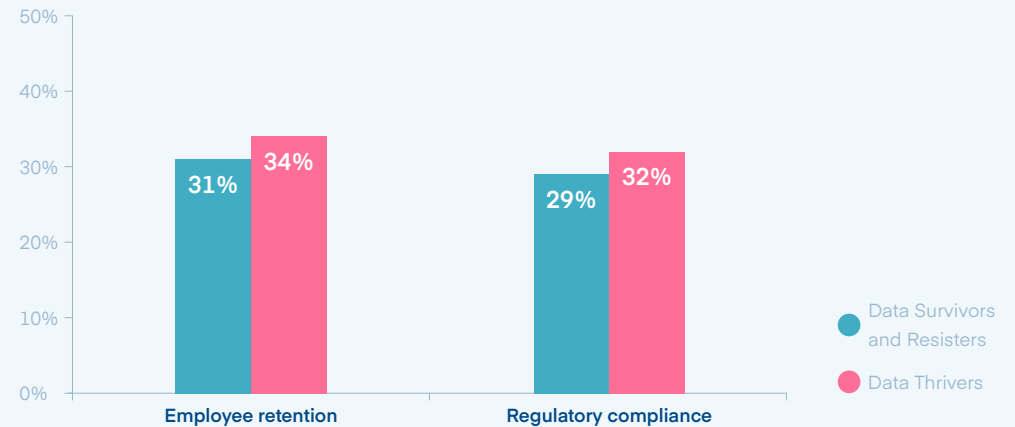
# Financial Services Thrivers' Top Performance Metrics: Employee Productivity and Customer Satisfaction/Retention

## Business Priorities



While the top business priorities of financial services providers *in general* are profit margin and customer satisfaction and retention, **Data Thrivers** are more focused on employee productivity and customer satisfaction and retention.

## Self-Reported Business Outcome Improvement, Past 3 Years

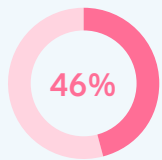


**Data Thrivers** also report having the best business outcome improvements in employee retention and regulatory compliance.

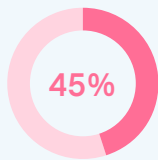
# Financial Services Thrivers' Top Data Challenges Are Data Quality, Compliance, and Data Analysis

## Data Challenges (Financial Services)

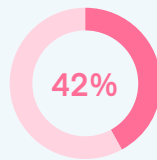
### Data Thrivers



Data quality and cleanliness

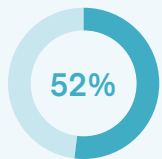


Maintaining regulatory compliance

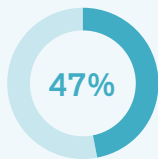


Garnering insights – ability to analyze the data

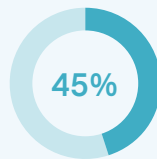
### Data Resisters



Synchronization of data between on-premises and public cloud



Integrate data from different sources



Data quality and cleanliness

**Data Thrivers** are most focused on maintaining regulatory compliance, data quality and cleanliness, and garnering better insights from data. They seek to analyze data to enable better compliance and customer satisfaction. This also allows them to better customize their products and services.

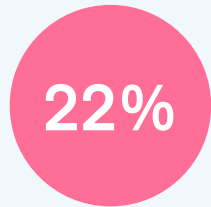
Like **Data Thrivers**, **Data Resisters** are focused on data quality and cleanliness. However, they are also concerned with synchronizing data between on-premises and public cloud and integrating data from different sources.

“

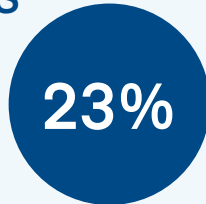
We definitely have the regulatory scrutiny. I think a big part of that is data lineage and quality, which is probably not as big a focus in other industries. That's a big area for us.”

**Head of Business Technology, Major Retail Bank**

# Financial Services Thrivers Embrace Public Cloud Cautiously and Prefer Software-as-a-Service



VS



Financial Services **Data Thrivers** lag behind financial services organizations as a whole – **Thrivers** have 22% of their data in public cloud environments, compared to 23% for all financial services organizations.

Financial services organizations are less apprehensive about moving their workloads to the cloud as cloud providers have actively addressed their data security, visibility, and management concerns.

**Thrivers** see Software-as-a-Service (SaaS) as a mechanism to simplify IT while maintaining a secure environment.

However, it is still imperative for organizations embracing SaaS to ensure that data protection is a core component of their data governance policies.

In our survey, the top cloud adoption drivers in financial services were improving staff productivity, simplifying IT, and improving security.



VS



Financial Services **Data Thrivers** also have 43 SaaS applications on average, compared to 28 for **Data Resisters**.

“

We have two SaaS applications in public cloud targeted toward different users and use cases. It makes it easier for us to add or update them without any downtime, duplication, or conflict.”

**IT Director, Global Financial Services Firm**



# However, Financial Services Thrivers Are Increasing Their Investments in Hybrid and Private Cloud for Infrastructure

62%

of Financial Services **Thrivers** believe it's important to combine on-premises and public cloud locations to provide a hybrid cloud experience.

54%

of financial services organizations say the amount of data in their private or hosted private cloud environments will **increase** over the next two years.

The use of private cloud is steadily increasing in financial services organizations, which recognize that a private cloud offers privacy and security for most workloads. **Data Thrivers** in financial services run complex, multicloud environments, and they use public cloud to complement and supplement their in-house IT infrastructure.

## Financial Services Thrivers look to hybrid cloud to provide:

48%

A single combined compute plane and accompanying workload migration ability

47%

End-to-end control over IT environment, including infrastructure, applications, and data

43%

A single control plane and view of the environment

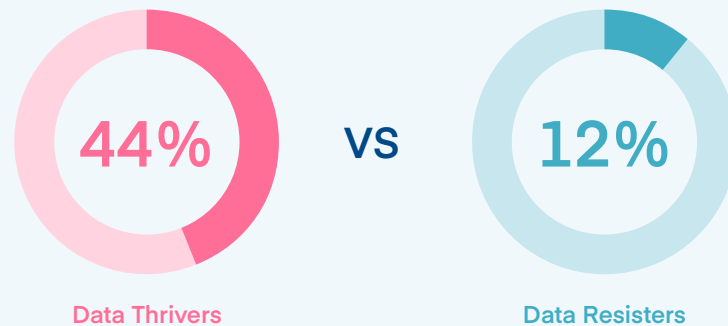
“

Traditional IT is about the custody of the data and the ability to adhere to regulatory issues. However, it is easier for IT to manage data when it is in a hybrid or private cloud.”

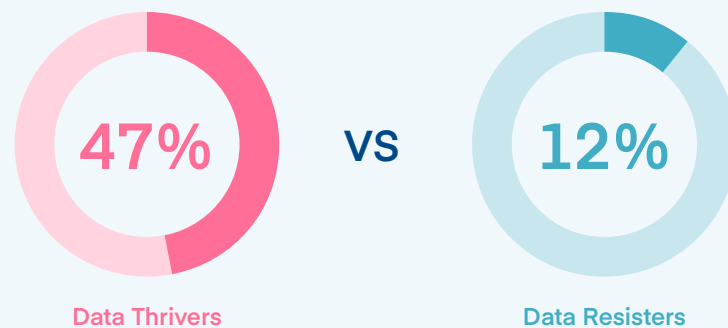
**IT Director, Global Financial Services Firm**

# Financial Services Thrivers Use AI and DL to Customize and Improve Product/Services Security

Using artificial intelligence (AI)  
in customer-facing production workloads



Using deep learning (DL)  
in customer-facing production workloads



Top drivers of AI, ML, and DL in financial services are to realize operational insights and improvements, provide an improved customer experience via new customer-facing services and offerings, reduce operational costs, and make better business decisions.

For **Thrivers**, the top use cases of AI, ML, and DL (in decreasing order of importance) are:

- Customizing offerings to customers' wants and needs
- Improved security/anti-fraud detection
- Risk analysis
- Understanding and targeting the most profitable customers

Although AI is paving the way for more intelligent, data-driven processes, it is challenged to an extent by a firm's ability to integrate, prepare, clean, and aggregate data from multiple sources for ML, AI training, and/or AI inferencing purposes.

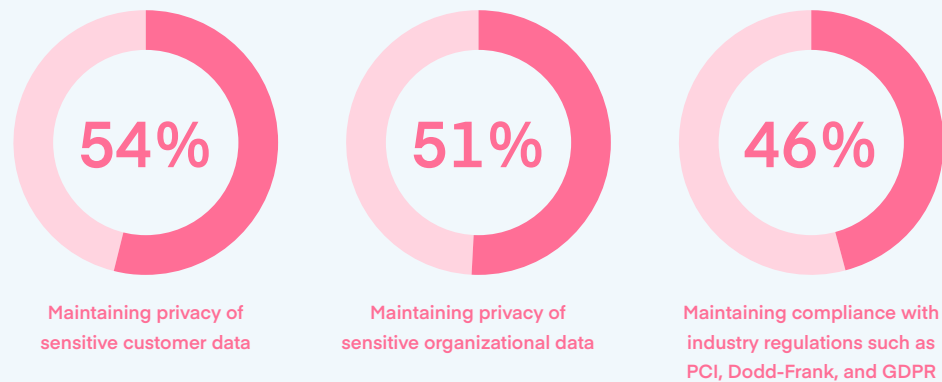
“

AI is all about providing better customer service, especially Tier 1 support, and doing more to automate some of the call center functions.”

SVP, Major Retail Bank

# Challenges for Data Privacy, Security, and Compliance

## Financial Services Thrivers' Data Privacy, Security, and Compliance Drivers



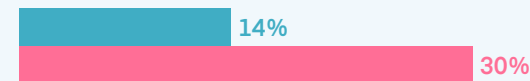
Customer data protection, security, and privacy are the top data drivers for Financial Services **Thrivers**, followed by maintaining privacy of organizational data and maintaining regulatory compliance.

Customer records include sensitive data such as credit card, social security, and bank account numbers, as well as other personal identification information.

These records pose an attractive target as their black-market valuation can be hundreds or thousands of dollars, much more than any other source of data. And once leaked, the resulting damage can be very expensive to the firm financially, never mind the loss of reputation. Financial services organizations are prime targets for attack and have suffered high-profile incidents.

## Data Privacy, Security, and Compliance Challenges

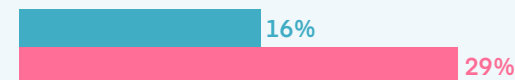
### Different product for different infrastructure



### Performance issues



### Scale issues



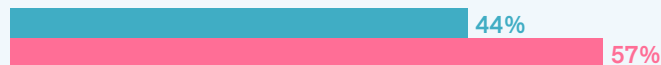
● Data Resisters ● Data Thrivers

Financial Services **Thrivers** are more likely to be concerned with infrastructure heterogeneity (i.e., different products for different environments) due to challenges associated with having a common provisioning and operations model applied consistently across the board. It also leads to greater risk with inconsistent data management and governance policies. They are concerned about performance issues and, not surprisingly, scale issues.

# Data Roles and Ownership in Financial Services

## Roles in the Organization

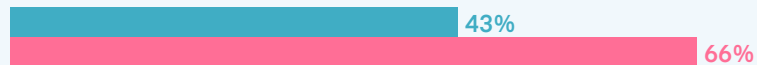
### Chief Data Officer



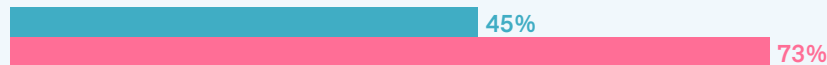
### Chief Innovation Officer



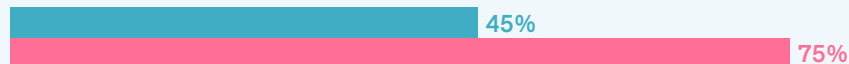
### Chief Transformation Officer



### Chief Data Scientist



### Chief Analytics Officer



### Data Management Executive



● Data Resisters ● Data Thrivers

Financial Services **Data Thrivers** and **Data Resisters** are likely to have Chief Innovation Officer and Data Management Executive roles. However, **Thrivers** also place noticeable importance on Chief Analytics Officer and Chief Data Scientist roles.

Both **Thrivers** and **Resisters** identify the role of Chief Transformation Officer as having significant influence on data strategy and policy.

“

When it comes to [data] ownership that's a different team. I work in the IT department and we facilitate – the ownership may be the manager or the managing directors.”

IT Director, Global Financial Services Firm

# Conclusion: Using Data Improves Value and Differentiation of Products and Services

Financial services organizations are moving past the early stages of unifying data and into the era of operationalizing rich data for actionable insights, innovative services, expanded customer engagement, and operational efficiency. A unified strategy maximizes the usefulness of data in decision making at both the level of the entire organization and the individual customer.

The desire to increase competitive differentiation by offering highly personalized products and services, having automated customer service functions, and providing a secure banking environment are three examples of how financial services firms are utilizing data to transform their business. At the same time, they are using data to realize operational efficiencies, streamline their business and technical operations, and improve staff productivity. One could say they are using data to improve profit.

Successful financial services organizations are already leveraging data as part of the new digital era. Technologies like cloud, AI, ML, and DL are helping businesses transform how they gain customer insights and conduct internal business and external customer-facing operations with privacy, security, and regulatory compliance. As impressive as the improvements are, most financial services organizations are only beginning to realize the benefits that digitization promises for their business and their consumers.

# Appendix:

## Study Methodology

The findings in this study were developed in part on a series of focus groups IDC conducted in January 2019 with information technology and data executives in financial services, healthcare, and manufacturing. The healthcare and manufacturing groups were conducted in Chicago while the financial services group was held in New York.

These groups were followed by a global survey of 900 information technology and data executives in the U.S., U.K., Germany, France, China, Japan, and Australia. Typical respondent titles include CIO, VP of Data Management, Chief Data Scientist, and Data Architect. Of the total survey sample, 300 of these completes came from financial services providers. **The data provided in this InfoBrief come from those 300 completes.** The global study was conducted in April/May 2019.

# Additional Resources

## Brought to You by NetApp

Learn how you can accelerate your journey to digital transformation.



**Demystify Digital Transformation –**  
Watch the [On-Demand Webinar](#)



**Build a Data-Driven Culture –**  
[Get Executive Insights from IDC,](#)  
[The Wall Street Journal, and](#)  
[NetApp](#)



**Data Expertise for Financial Services –**  
[Streamline data management with comprehensive solutions from NetApp](#)

