DATA MODERNISATION IN THE CLOUD:

ARE YOU READY?

In conjunction with

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INTRODUCTION & METHODOLOGY

INTRODUCTION

As demand for digital services grows, financial services firms are looking to innovative technologies and cloud-native architecture to provide them with the flexibility they need to stay ahead of the competition and scale rapidly.

As a result, these companies are more reliant than ever on their data, with many under pressure to break free from cumbersome legacy technology and build modern architecture both on-premise and in the public cloud, capable of leveraging analytics and artificial intelligence (AI).

By modernising data architecture, companies are beginning to convert data into new value propositions for customers, however many are encountering significant challenges and risk falling behind their more agile, cloud-native competitors.

FStech and Pure Storage conducted a survey to assess the role of data and cloud storage in digital transformation across financial services and explore the key drivers and pain points for companies as they look to build a modern data architecture.

What is data modernisation?

Data modernisation is a critical journey in maximising the value of data within financial services. The first step is to understand the data that exists, its owners and any controls placed on it. This often involves breaking down silos; both organisational and technical. Data modernisation is typically driven by a business objective, so ensuring that it is understood and supported by the data within the organisation is essential. Ensuring that the data can be processed, analysed and managed on an effective platform that supports business objectives and provides an important foundation for success.

METHODOLOGY

FStech and Pure Storage surveyed 129 senior decision-makers from leading UK and European financial institutions, including: retail and investment banks, investment and wealth managers, along with insurance firms, brokers and payments providers.

COMPANIES ARE MORE RELIANT THAN EVER ON THEIR DATA

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EXECUTIVE SUMMARY

As the financial services industry undergoes rapid digitisation, many organisations have started drawing up a programme of data modernisation, ensuring that relevant customer and commercial information is located, processed and leveraged within modern data infrastructure. However, while levels of planning for this transformation are relatively high across the industry, advanced implementation remains low, suggesting there is still work to be done to achieve full data modernisation.

The survey highlights data stuck in silos and a lack of access to information as major painpoints for financial services firms as they battle to keep up with more agile, cloud-native competitors. While a majority of firms have already adopted platforms to process and consolidate data, a third said their data is available on numerous platforms rather than a single, unified one.

High quality data and an agile architecture are essential for the effective deployment of AI. However, a clear majority of companies are facing major hurdles to AI implementation due to a lack of modern data management and the presence of outdated legacy technology. This is accompanied by a lack of support and investment from senior leadership who are failing to appreciate the longer-term strategic benefits of AI-led technologies.

Nearly half of financial services firms are running AI and machine learning technologies on legacy systems, which are under-equipped to run these processes at scale. However, there is rising recognition of the value of multi and hybrid cloud environments, as companies begin to modernise their data architecture.

Many financial services firms are encountering challenges when attempting to move applications between cloud service providers and other third party or on-premise systems, with vendor agreements and rigid infrastructure in certain IT environments proving the main blockers. However, more advanced organisations are now harnessing the benefits of micro services-based application architecture and are able to move workloads and applications seamlessly between environments.

Key concerns for companies looking to launch public cloud projects are often centered around data security and additional cost. Meanwhile, other companies are being held back in their use of public cloud by 'lock-in' concerns and a clash in the processes needed to get the project up and running, with a majority of firms delaying or downsizing projects as a result of these challenges, or cancelling them altogether.

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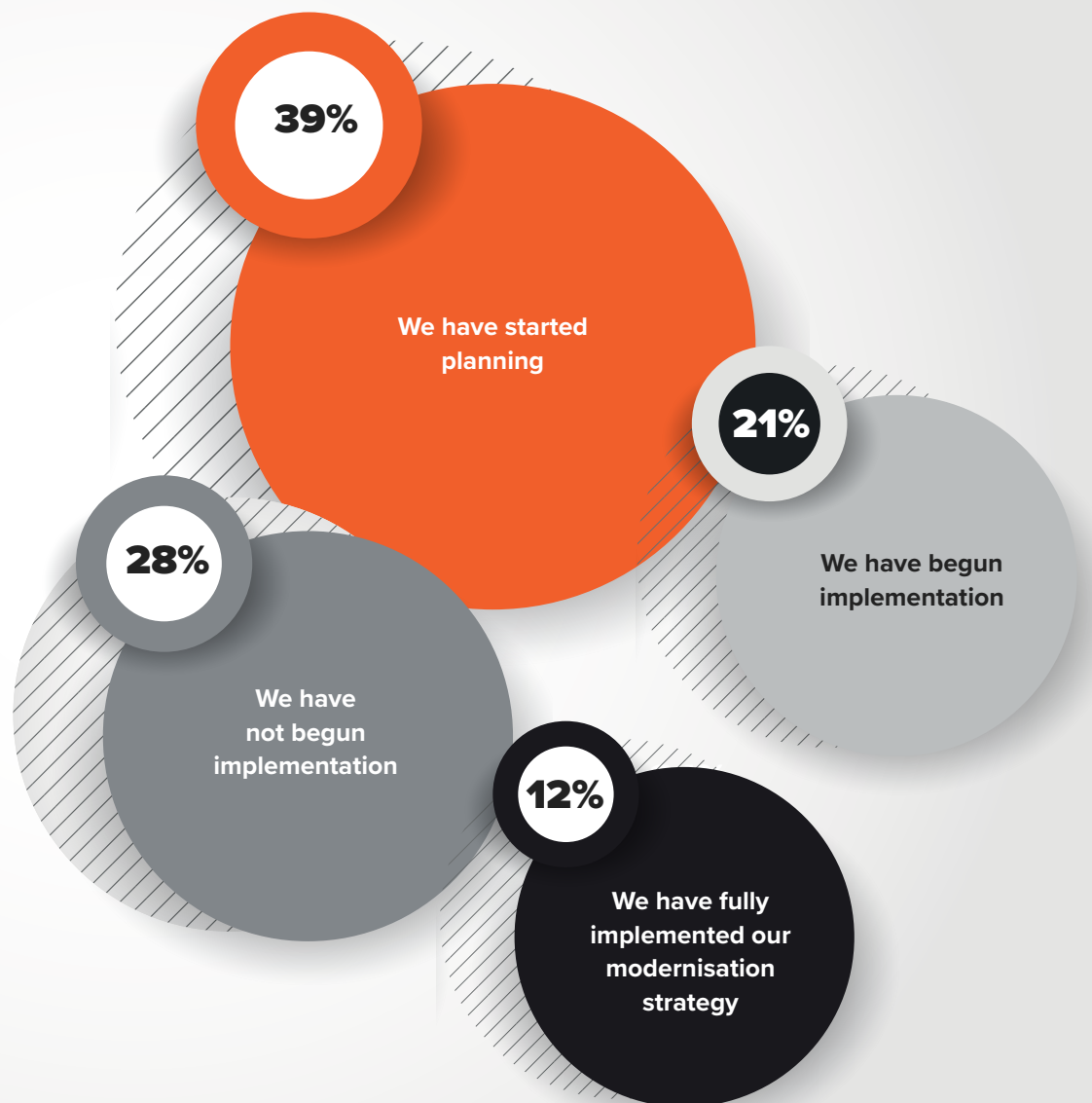
CONTENTS

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1. WHERE ARE YOU ON YOUR DATA MODERNISATION JOURNEY?

The results show that most organisations remain in the early stages of planning their data modernisation journey, with 39 per cent having started planning, but with little concrete progress towards implementation. A further 28 per cent have a plan in place, but are yet to begin implementing it, indicating that there is much work is to be done before the industry can complete the transition from legacy technology to harnessing the potential of modern, agile data management.
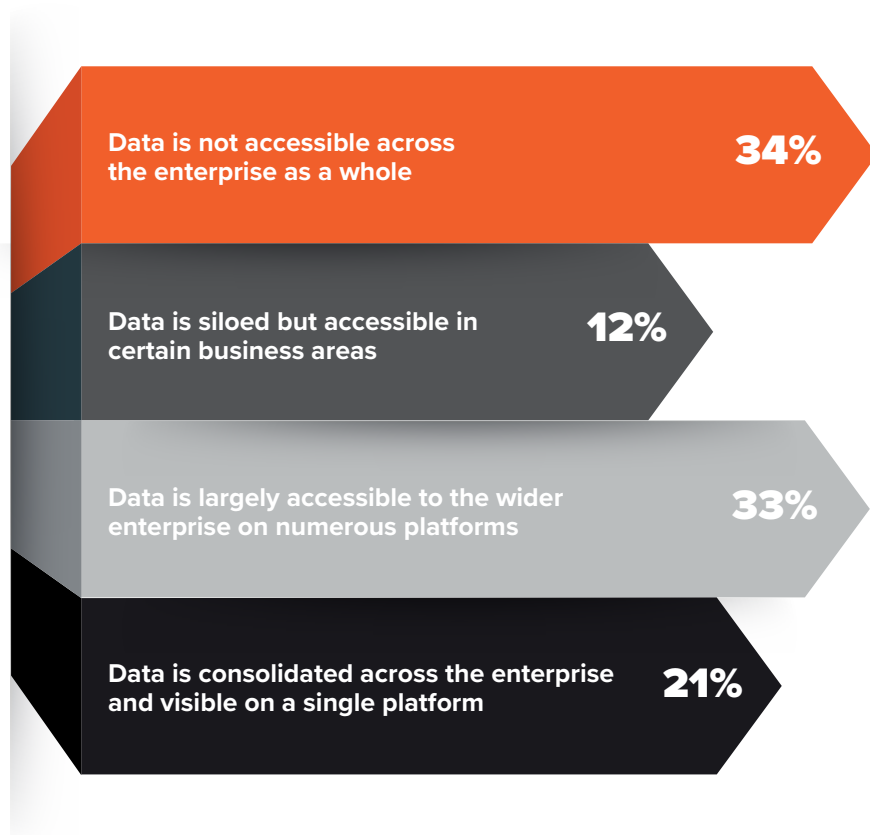
While 21 per cent have started to put their plans into action, just 12 per cent would regard their strategy as 'fully implemented', suggesting that modern data infrastructure - while still in its infancy - is regarded as a key pillar of longer-term digital transformation strategies.

There is a widespread understanding of the value of modern data architecture within the industry, but while data management is regarded as critical to driving efficiencies and unifying systems in the long-term, most are in the preliminary stages of planning this shift to cloud-native applications.

Firms are mostly focused on the mechanics of planning and implementation, but in delaying this stage they stand to miss out on the benefits of real-time data – which a small percentage of their industry peers are already enjoying.

39%

We have started planning

21%

We have begun implementation

28%

We have not begun implementation

12%

We have fully implemented our modernisation strategy

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2. HOW ACCESSIBLE IS THE DATA IN YOUR ORGANISATION?

Data is not accessible across the enterprise as a whole — 34%

Data is siloed but accessible in certain business areas — 12%

Data is largely accessible to the wider enterprise on numerous platforms — 33%

Data is consolidated across the enterprise and visible on a single platform — 21%

THOSE AT AN ADVANCED STAGE OF THE MODERNISATION PROCESS ARE STILL ENCOUNTERING CHALLENGES

Ensuring that employees have access to the data they need to carry out customer service, transactions and compliance is mission critical for financial services firms as demand for seamless, data-driven services grows. Respondents were reasonably evenly split between those who had limited access to data (a combined 46 per cent for options one and two) and those who have already taken steps to consolidate data onto one single or numerous platforms (54 per cent for options three and four).

The industry therefore looks to be split between those who are leading the shift towards data modernisation with connected data systems and those 'laggards' who may be held back by siloed and inaccessible data.

More than a third (34 per cent) revealed that data is not accessible across the enterprise as a whole, while a further 12 per cent confirmed that data was siloed across the business, but accessible in certain business areas, flagging an inconsistent approach to data access as a pain point for those still using complex legacy infrastructure.

A third of respondents said that data is 'largely' accessible, but managed on a number of different platforms, acting as a barrier to seamless data management and opening up the risk of incomplete analysis. Less than a quarter of respondents (21 per cent) said their data was consolidated within a unified system with clear visibility thanks to this single platform.

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3. WHAT ARE THE MAIN HURDLES TO DEPLOYMENT OF AI TECHNOLOGY IN YOUR COMPANY?

31%
Legacy technology

29%
Siloed data

57%
Poor data quality

53%
Lack of board buy-in

15%
Cost of deployment

15%
Storage and IT Infrastructure limitation

32%
Lack of skilled resource

27%
Data visibility issues

40%
No use case for AI

A majority (57 per cent) of respondents cited poor data quality as one of their top three barriers to implementing AI throughout their business. Related issues included siloed data (cited by 29 per cent), legacy technology (31 per cent), data visibility issues (27 per cent) and storage and IT infrastructure limitations (15 per cent).

Wider strategic issues are also blocking progress towards deployment of AI, including a lack of investment and support from senior management (53 per cent), a shortage of skilled resources (32 per cent) and cost of deployment (15 per cent).

A lack of support or encouragement for AI-led innovation among senior leadership may also be behind the assertion by 40 per cent of respondents that there is 'no use case' for AI in their business.

BLOCKING PROGRESS TOWARDS DEPLOYMENT OF AI

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4. WHICH OF THE FOLLOWING ARE USED TO SUPPORT AI OR MACHINE LEARNING WORKLOADS?

When it comes to the infrastructure needed to support the data processing demands of AI and machine learning, nearly a third (29 per cent) have turned outside their organisation to third parties providing SaaS, along with structures including public cloud infrastructure as a service (25 per cent). A further 12 per cent are using on premise private cloud and nine per cent are running AI workloads on public cloud as a platform (PaaS).

A total of 47 per cent are still running AI and machine learning workloads on legacy technology systems. These lack the flexibility needed to process and leverage the data flows required for these operations. However, the survey showed that there is use of multi and hybrid cloud environments at 17 per cent and 18 per cent respectively.

LEGACY TECHNOLOGY SYSTEMS
LACK THE FLEXIBILITY NEEDED

| Category	Percentage
Public cloud Infrastructure as a Service (IaaS)	25%
Public cloud Platform as a service (PaaS)	9%
Software as a service	29%
On premise legacy systems	47%
On premise private cloud (e.g IaaS)	12%
Hybrid cloud environment	18%
Multi cloud environment	17%

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5. HOW EASY IS IT TO MOVE APPLICATIONS BETWEEN CLOUD SERVICE PROVIDERS AND OTHER THIRD PARTY OR ON-PREMISE SYSTEMS?
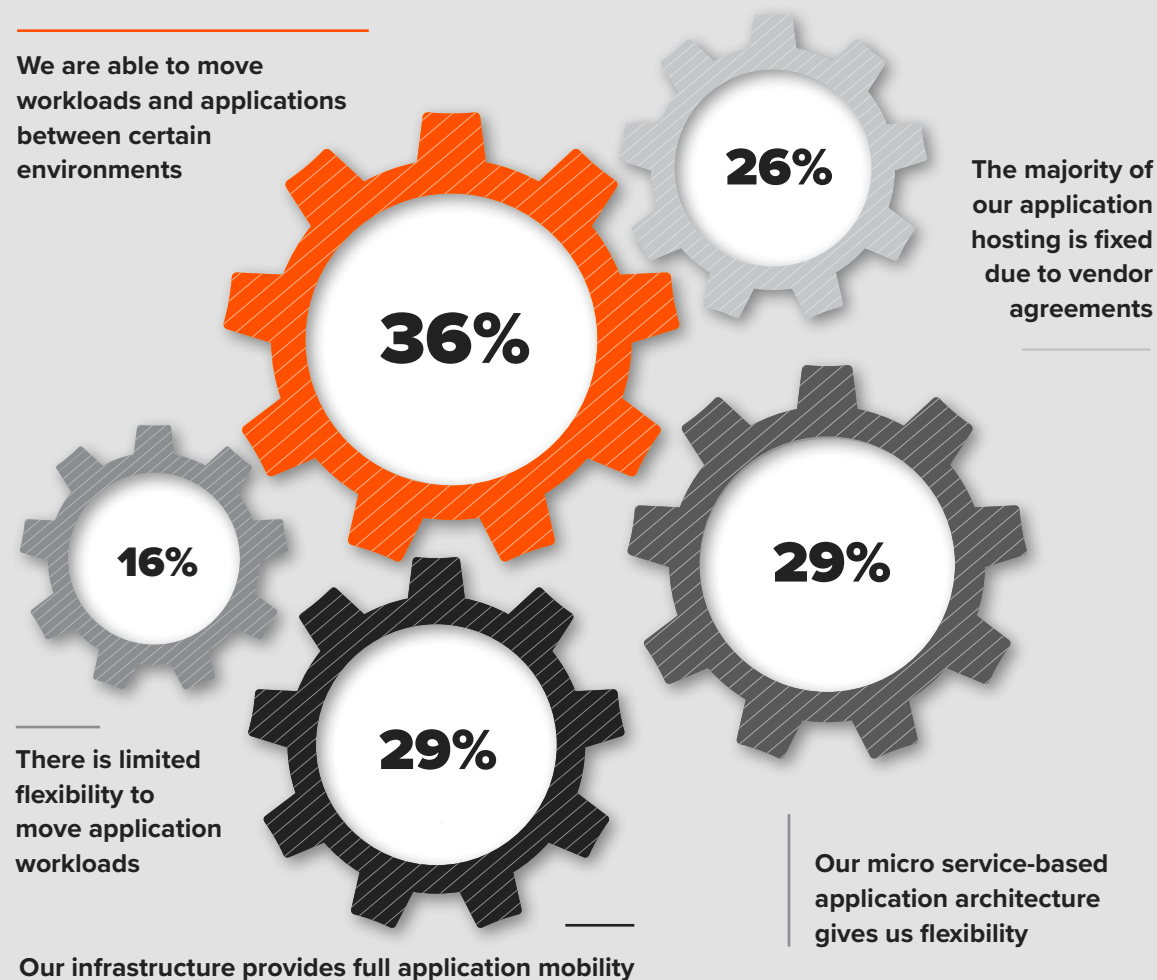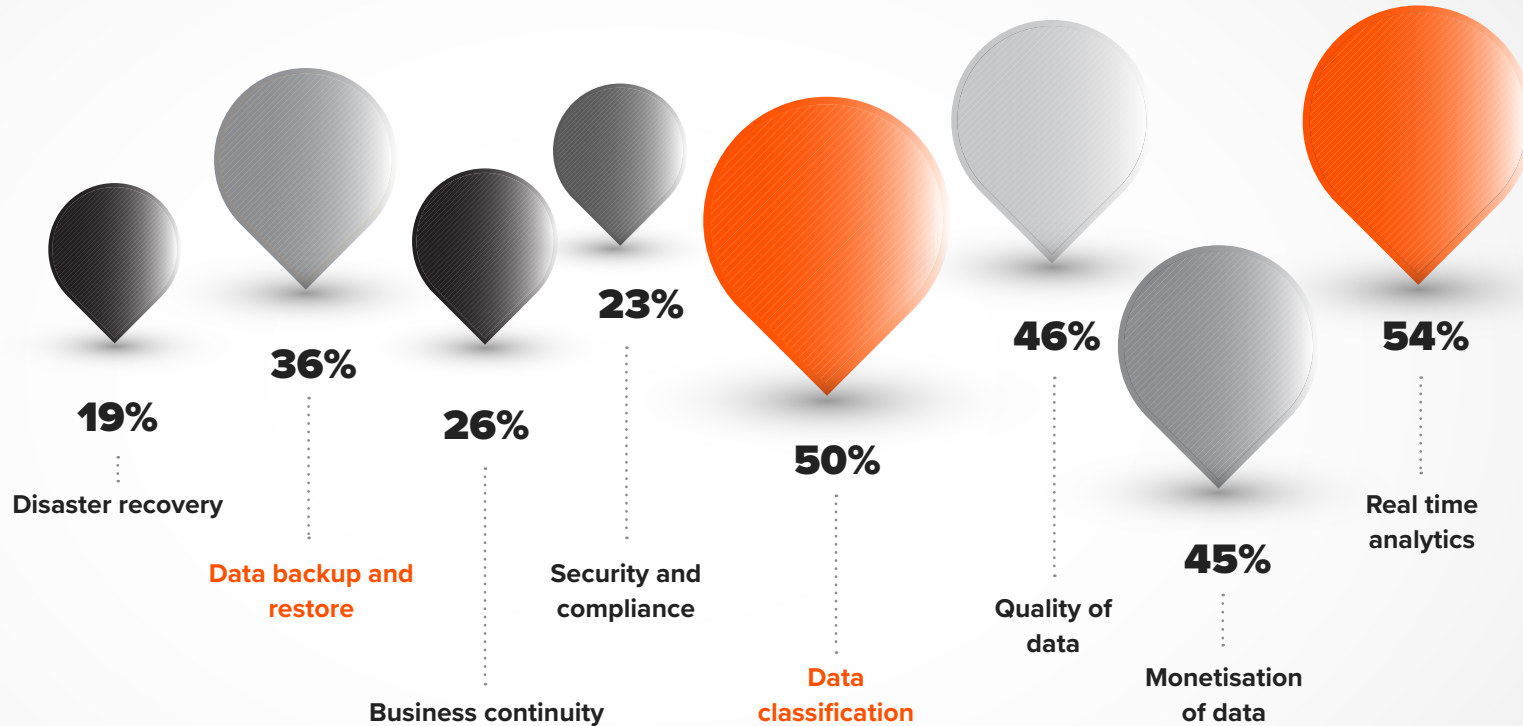
When it comes to moving data and applications between cloud service providers and other external or on-premise systems, the majority of companies indicate that they are relatively well advanced, with systems and certain IT environments well-equipped to provide flexibility for data sharing and movement between applications.

More than a quarter (26 per cent) said they were restricted in their ability to move seamlessly between applications due to pre-existing third party agreements, and 16 per cent said they had limited flexibility due to rigidity in their systems, with more than a third (36 per cent) stating applications and workloads could be moved but only in 'certain environments'.

More advanced players are now able to leverage the flexibility of micro service-based application architecture (29 per cent), while the same amount have infrastructure allowing for full application mobility.

We are able to move workloads and applications between certain environments

36%

26%

The majority of our application hosting is fixed due to vendor agreements

16%

29%

There is limited flexibility to move application workloads

29%

Our infrastructure provides full application mobility

Our micro service-based application architecture gives us flexibility

RESTRICTED IN THEIR ABILITY TO MOVE SEAMLESSLY BETWEEN APPLICATIONS

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6. AS YOU LOOK AT DATA MANAGEMENT ACROSS YOUR ORGANISATION, WHICH OF THE FOLLOWING ARE HIGH PRIORITY?

19% Disaster recovery

36% Data backup and restore

26% Business continuity

23% Security and compliance

50% Data classification

46% Quality of data

45% Monetisation of data

54% Real time analytics

The findings confirm that financial services firms are acutely aware of the need for agile and efficient data management as part of a wider modernisation strategy. Priorities for data management focus on capabilities which allow firms to leverage the insights within their information to create value, such as real time analytics (54 per cent), monetisation of data (45 per cent) and data quality (46 per cent).

It therefore follows that the architecture in which this data is managed and processed is of utmost importance, with half of respondents citing data classification as a high priority.

FIRMS ARE ACUTELY AWARE OF THE NEED FOR AGILE AND EFFICIENT DATA MANAGEMENT

Other business areas cited as key challenges for data management include security and operational resilience of systems, including data backup and restore (36 per cent), business continuity (26 per cent), security and compliance (23 per cent) and disaster recovery (19 per cent).

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7. IN WHAT WAYS HAVE YOU BEEN ABLE TO MONETISE DATA IN YOUR BUSINESS?

The survey indicates that a large part of the 'monetisation' of data for financial services firms does not come from data sharing with third parties, as is the case in other industries, but from using software that can draw insights from data to design products and services that create value for the customer – with 37 per cent saying their way of creating value from data is using it to improve customer experience.
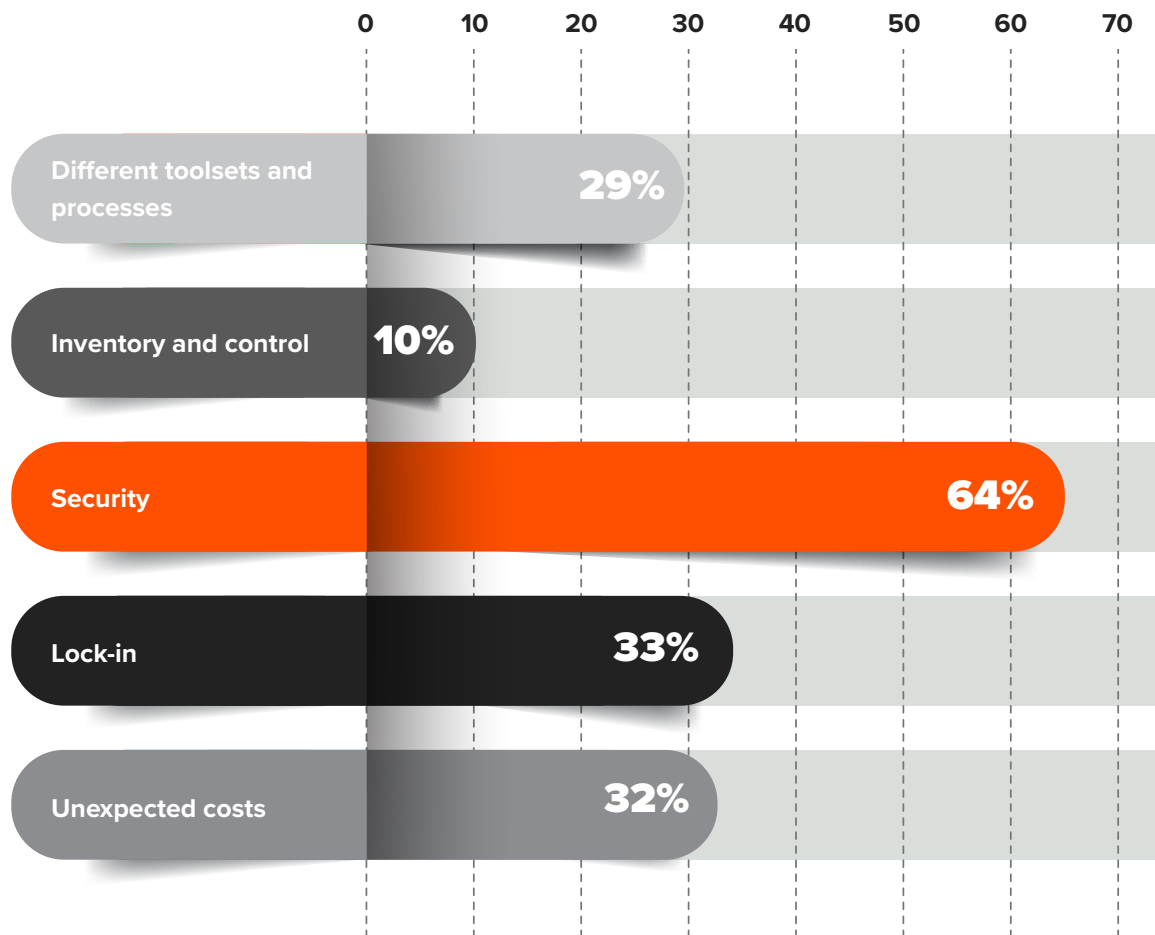
In the same vein, nearly a third (31 per cent) said that data is allowing them to personalise their marketing campaigns to make them more relevant to their customers, and 18 per cent are using data to inform the development of new products and services, evidencing the strategic role that data analytics can play in long-term plans to drive revenue growth.

Leveraging these insights is also helping 16 per cent of respondents to optimise their applications or website for customer and employee benefit, while the same amount (16 per cent) are able to monestise the insights in data to target potential leads and boost product cross-selling.

DESIGN PRODUCTS AND SERVICES THAT CREATE VALUE FOR THE CUSTOMER

18% Designing new products or services

Personalising/targeting existing products or services **13%**

37% Improving customer experience

Speeding up or improving application and website features **16%**

31% Making marketing campaigns more relevant

Increase product cross-selling **16%**

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8. WHAT CHALLENGES OR CONCERNS HAS YOUR ORGANISATION EXPERIENCED WITH PUBLIC CLOUD PROJECTS?

Challenge	Percentage
Different toolsets and processes	29%
Inventory and control	10%
Security	64%
Lock-in	33%
Unexpected costs	32%

SECURITY WAS A KEY CHALLENGE

Resistance to public cloud projects within financial services firms is often led by concerns over cost and data security. The survey confirmed this trend, with 64 per cent saying security was a key challenge involved in the rollout of public cloud projects, alongside the added risk of unexpected costs, which were cited by nearly a third (32 per cent) of respondents.

The issue of 'lock-in' was identified by a third of respondents as a significant challenge involved in migrating to the public cloud. A further 29 per cent of companies have encountered friction when trying to merge different toolsets and processes during the implementation of public cloud. Inventory and control can hinder moves in the public cloud, however just 10 per cent of respondents identified this as a challenge, suggesting that many organisations in the industry have already taken steps to control their inventory.
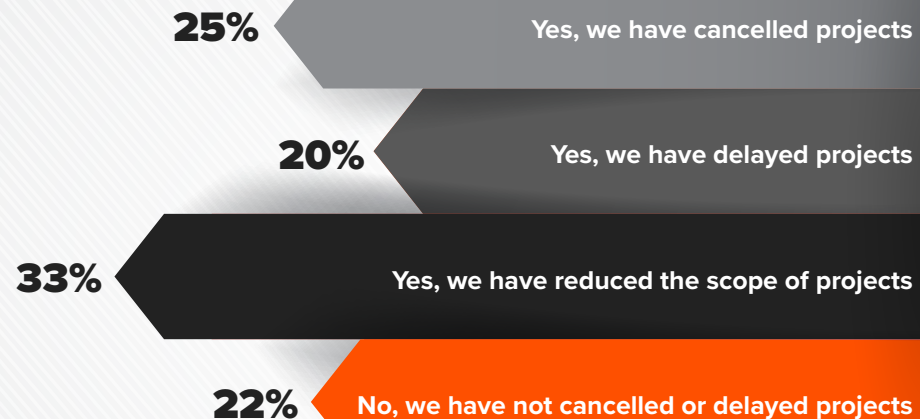
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9. HAVE ANY PROJECTS BEEN DELAYED OR CANCELLED DUE TO THE CHALLENGES AND CONCERNS HIGHLIGHTED ABOVE?

A quarter of respondents said that their challenges with public cloud projects had been so acute that they had been forced to cancel projects altogether, while a further third have pulled back on their public cloud ambitions and reduced a project's scope.

Key concerns - including data security, vendor lock-in or unexpected costs - also resulted in 20 per cent of projects being delayed, while just 22 per cent have felt empowered to complete their public cloud project after these challenges were identified.

The results show that a significant proportion of public cloud projects are failing to get off the ground due to a range of challenges that many companies likely consider insurmountable.

PUBLIC CLOUD PROJECTS ARE FAILING TO GET OFF THE GROUND DUE TO A RANGE OF CHALLENGES

25% Yes, we have cancelled projects

20% Yes, we have delayed projects

33% Yes, we have reduced the scope of projects

22% No, we have not cancelled or delayed projects

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CONCLUSION

While many firms have a clear appreciation of the value of data management, cloud-native applications and hybrid cloud environments, many are experiencing multiple roadblocks to implementation, including the burden of legacy technology systems.

The majority of firms appear be in the early stages of a path to data modernisation with the planning stages well underway. However, when it comes to implementation of real time data analytics, AI and public cloud projects, many financial services providers are lagging behind their more agile cloud-native peers.

However the survey also shows that firms are now confident in turning to trusted third party SaaS providers to give them the cloud-native architecture they need to meet customer demand for digital services and progress on their data modernisation journey.

And while challenges persist with the security and cost implications of public and hybrid cloud environments, it is clear that many see the flexibility of this infrastructure as a key route to leveraging insights from data and driving greater value for their customers.

MANY ARE LAGGING BEHIND THEIR CLOUD-NATIVE PEERS

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