

# Digital Transformation Trends

Financial Services Industry

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# Foreword



## Global finance sector digital transformation trends

The finance sector has transformed itself over the past decade, ushering in new omnichannel excellence, digital solutions and customer experiences. Paradoxically that doesn't mean it can now do less. It is a hyper-competitive industry, driven by new technologies, new niche digital native entrants, and technologically advanced traditional competitors. At the same time, growing security threats and ever-changing regulatory compliance requirements add to the complexity and challenges faced by ICT leaders in this sector.

To help illuminate a way forward, Fujitsu has partnered with independent research and advisory firm DataDriven to survey 158 ICT leaders in 14 countries on their thoughts and attitudes towards technology in the industry. In this report we are delighted to share our findings and conclusions.

## Driving a trusted future for purpose-driven finance sector organizations

At Fujitsu, we take a human-centric approach to digital transformation that puts people at the heart of everything we do. It's the foundation of a trusted future for finance sector organizations.

When you work with Fujitsu as a partner, you benefit from a broad ecosystem which is not just focused on finance sector technologies – though they are central to what we do. You have a partner focused on helping you become the very best version of your business both now and in a trusted future. We understand the importance of digital transformation in the finance sector and work with you to enable success, every step of the way to keep transforming for the better.

The first part of this report covers DX in terms of:

- Competition and sources of revenue
- Business objectives
- ICT Strategic objectives and challenges
- ICT budgeting and staffing
- DX drivers, challenges, and actual outcomes

Specific finance sector topics include:

- Impact of COVID-19 on the finance sector
- Finance sector DX impact, drivers, progress, challenges
- Cyber security, IoT, AI/ML, and cloud in the finance sector
- Implementation vs investment in finance sector ICT
- Workplace innovation and employee experience
- Ecosystems, partners and digital co-creation
- Customer experience and usage of data
- Responsible banking

## Finance sector are global digital leaders

The finance sector leads in the transformation of our economy from analogue to digital, their digital solutions make our lives easier, and the strategies and initiatives they have embarked on will continue to ensure they play a pivotal role in developing a reliable, trustworthy and sustainable digital economy. We trust that sharing this research provides valuable insight to other ICT



decision makers in the sector to assist them in maximising digital transformation in their organizations.

**Wilhelm Petersmann,**  
Head of Financial Services Central Europe,  
MD Austria and Switzerland, Fujitsu



# Introduction & Key Findings

In February and March 2021, 12 months into the COVID-19 Pandemic, DataDriven conducted an extensive global survey of ICT leaders in the finance sector.

DataDriven applied seven levels of exhaustive selection, screening and validation questions, then conducted intense data scrubbing and removal of non-representative data and outliers.

This resulted in a highly qualified and reliable set of complete responses from 158 ICT decision makers across Europe, UK, North America, Australia, and Japan (14 countries).

This report provides an analysis and key insights generated from the survey.

## **Finance leaders are juggling multiple business priorities**

ICT leaders in the finance sector are navigating complex business and technical landscapes, and face competitive pressures and ever-changing markets and regulations. They need to constantly juggle a range of objectives.

Nearly three quarters (73.0%) of respondents say becoming more efficient is a high or extremely high priority. Next on the priority list are managing risks and cyber security (69.6%) and increasing productivity and collaboration (67.6%). User experience (UX) is also key with 67.2% saying improving customer experience (CX) is a priority, and 66.6% prioritizing employee experience (EX). Customer satisfaction (CS) is a priority for 66.7%.

## **ICT strategy and deployment in the finance sector is mature and widespread**

Most finance sector organizations have mature ICT strategies in key areas: 86% report mature cyber security implementations, 83.8% have rolled out digital transformation initiatives, 83.2% have deployed private cloud and 82.8% implemented workplace innovation.

## **Cyber security in all forms is the #1 ICT challenge in the finance sector, cloud is #2**

Application security is rated the largest challenge (75.2% regard it as a high or major challenge), followed by cyber security (74.0%), enterprise security (73.7%) and database security (72.7%). These four were ranked the highest from a long list of potential challenges, and highlight how seriously the finance sector takes security. Finance ICT leaders also identify the establishment and management of hybrid and multi-cloud environments as key challenges, rating accessing quality cloud services (71.4%), and maintaining an in-house data center (71.1%) in the top 10 challenges.

# Key Findings (continued)

## The finance sector continues to invest heavily in cyber security

Antivirus and spyware has already been deployed by 88.0% of respondents, followed by incident detection response and recovery (83.3%), ransomware protection (83.2%), backup and recovery initiatives (82.7%) and data privacy policies (82.2%). These existing deployments and planned future investments (e.g. 80.0% intend to invest further in web security, 76.2% in information security, 76.2% in data encryption, and 74.4% in database security), reflect how seriously finance sector ICT leaders and their organizations take cyber security.

## ICT budgets in the finance sector, overall, will grow

More finance sector organizations are predicting an increase in their ICT budget this year than are predicting a decrease. Factors driving ICT budget increases are new technologies and technology changes (70.4% of respondents) and investing in research and development (54.6%). Cyber security spending increases are most common (64.1% of respondents will increase spending), followed by communications and networking (62.5%) workplace innovation (61.1%), and sustainability initiatives (59.4%).

## Artificial intelligence (AI) will create competitive advantage in the finance sector

The results show widespread uptake of AI technologies in the finance sector. Respondents indicated the largest use of AI is in anti-money laundering (81.8%), and real-time automated trading (80.1%). More than three-quarters of respondents also use AI in e-learning (79.0%), automated credit decisions (78.4%), and product design and development (77.6%). Around 60% of finance sector organizations report other AI-related activities including recommending solutions based on customer profile (62.6% of respondents), enabling smart financial services (60.4%), and AI-based chatbots (56.7%).

## AI is increasingly used to support and automate customer experience

To achieve their objectives of increasing efficiency, reducing risk and improving customer experience (CX), finance sector organizations continue to invest in AI, automation and IoT-based systems and applications: 74.5% are investing in AI for automation of customer service, 74.2% to support compliance efforts, 74.2% for fraud detection and 73.6% for authentication processes.

## IoT is hot too

The finance sector is also implementing various IoT technologies, often in conjunction with AI/automation initiatives, for use in security systems (85.7%), payment applications (81.3%), paperless operations (80.3%) and training (79.2%).

## Data is king

Automation and data analytics are key to understanding customer trends and developing future services. Many finance sector leaders believe that automation (74.7%), balancing old and new systems (74.6%), data (73.6%), and AI (72.2%) are key to digital transformation. Data usage by the sector will be focused on improving and extending the depth of customer experience via tailored customer solutions and services.





# Key Findings (continued)



## Digital Transformation has many drivers

Several factors are motivating finance organizations to implement Digital Transformation (DX). Key drivers are reducing waste (73.3% reporting high or very high importance), improved risk and security (72.1%), enhanced ability to improve solutions (71.8%), delivering a purpose driven sustainable business approach (71.4%) and increased revenue (71.4%).

## Digital Transformation is delivering on expectations

DX initiatives had a positive impact on increasing revenues (85.0% of respondents) and improving risk and security (84.0%). A large majority of respondents also reported DX initiatives contributing to strengthened customer relationships (83.5%), building trust (82.6%), enablement of new ecosystems (82.3%), and creating a purpose driven sustainable business approach (82.1%).

## DX comes with its challenges

The biggest challenge to DX for finance is the complexity of the implementation - more than three quarters (76.3%) rate it as moderately to extremely challenging. Other challenges are project funding (75.8%), gaining acceptance of new technologies (75.2%), and executive support and availability of talented staff (both 73.8%).

## Workplace Innovation initiatives are increasing

Finance organizations have made significant investments in workplace innovation. The most mature initiatives are in supporting remote working and providing security in remote workplaces (86% of respondents). The largest areas of planned investments in workplace innovation are security (81.2%), and conventional ICT infrastructure such as laptops (80.0%) and smart phones (78.7%). The finance sector is making it easier for staff to work from anywhere.

## Improving employee experience

As part of their workplace innovation programs, finance sector organizations are increasing their ability to provide information to employees (and by extension to customers). 95.9% of finance sector leaders seek to improve access to information, including moving applications to cloud to reduce costs (93.9%).

A significant number of respondents indicated challenges in achieving these objectives including monitoring user experience (93.8%), improving application security (93.0%), applications processing speed (92.4%), and developing new business applications in-house (91.9%).

# Key Findings (continued)

## Covid-19 is having both a positive and negative impact

Asked about the effect of COVID-19 (Coronavirus) on their industry, nearly one-half of respondents indicated that the impact over the past 12 months was positive (48.7%), and almost one-half said the impact was negative (46.2%). In terms of future impact of COVID-19 on their business, more than one-half believe it will have a significant (21.2%) or minor positive (34.4%) impact, while others believe it will have a minor negative (12.9%) to very negative (27.1%) impact.

## The finance sector is a leader in technology adoption

Over two-thirds of finance sector organizations believe they adopt technology early. 14.3% say they're very early adopters and 52.4% say somewhat early adopters.

## DX as a driver for sustainability, trust and purpose driven banking

Respondents were asked about their use of DX to develop and maintain responsible banking into the future. 42.9% of respondents reported that they were co-innovating with suppliers for development of sustainable supply chain management, with another 35.61% working on ensuring a safe data flow. Investing in ethically sound companies (35.6%) and a focus on employee well-being (34.5%) were also important DX applications.

**"The finance sector is a leader in digital solutions. It provides ever-improved solutions, services and experiences for its customers."**

## Implications of key findings

The finance sector has transformed itself over the past decade, ushering in new digital solutions, omnichannel excellence, and customer experience.

Paradoxically, that doesn't mean it can now do less. It is a hyper-competitive industry driven by new technologies, new niche digital native entrants, and technologically advanced traditional competitors. At the same time, growing security threats and ever-changing regulatory compliance requirements add to the complexity and challenge.

The finance sector is a leader in the digital economy. It leads in providing ever-improved digital solutions, services and experiences for its customers. It is now a fully digital industry. The sector has taken advantage of its primarily virtual nature and has leveraged technology transformations to offer us personalised solutions and services.

At the same time, the mobile finance sector apps we use often access data from legacy customer databases in expensive in-house data centers. ICT executives are challenged to transition these to cloud to optimize costs and leverage managed cloud service provider expertise. Finance ICT leaders say the establishment and management of hybrid and multi-cloud environments are key challenges.

Despite the challenges, finance organizations are leaders in the transformation of our economy from analogue to digital, and in driving a responsible business environment.

Their digital solutions make our lives easier, and the strategies and initiatives they have embarked upon, as shared through this research, will continue to ensure that the finance sector continues to play a pivotal role in developing a reliable, trustworthy and sustainable digital economy.



# Competition, Business Objectives, ICT Strategic Challenges and Budgets

The finance sector is hyper-competitive, driven by new technologies, constantly confronted with new niche digital native entrants, and technologically advanced traditional competitors. At the same time, growing security threats and ever-changing regulatory compliance requirements add to the complexity and challenge.

The survey methodology allowed a range of objectives to be compared – financial, competitive and process-related, and people and societal objectives such as those to do with sustainability and corporate social responsibility, customer experience and employee experience.

## Budgets and impacts on spending

Despite the current market uncertainty, finance sector organizations plan to increase their ICT spending across all budget areas compared to the last 12 months.

The drivers for this are changes in technology, increased R&D, positive impact of industry regulations, and increased focus on the organization's security strategy.

The survey also asked questions about key spending intentions. In terms of existing implementation of specific technology areas or initiatives, most respondents have quite mature ICT strategies or implementations in key areas.

The areas, where over 80.0% of respondents are reporting mature implementations are cyber security (86.0%), digital transformation initiatives overall (83.8%), private cloud (83.2%), and workplace innovation (82.8%).

**“Technology is the basis on which the finance sector depends, and as such is taken very seriously.”**



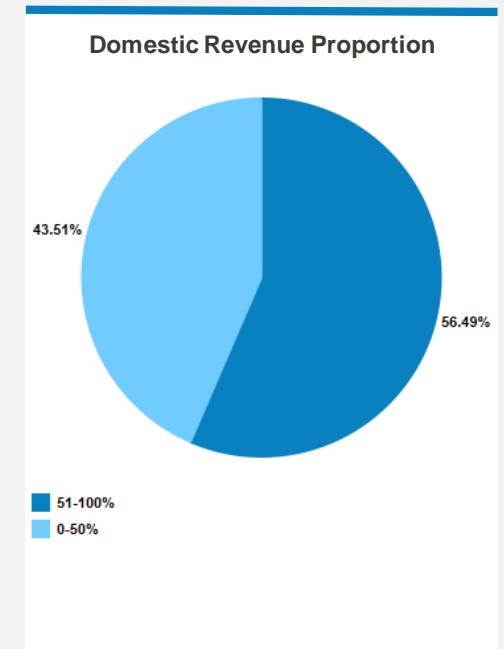
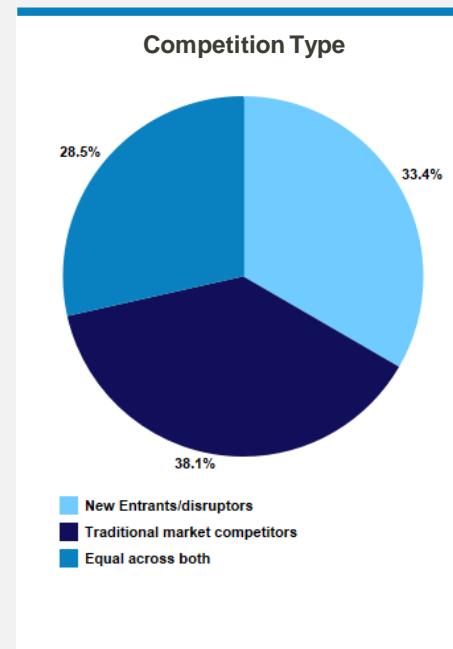
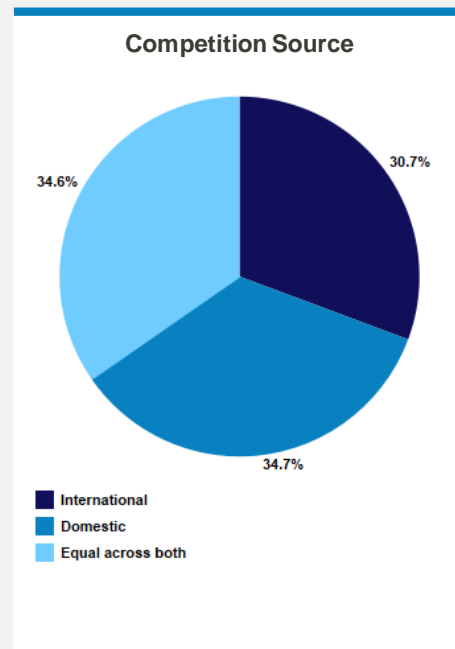
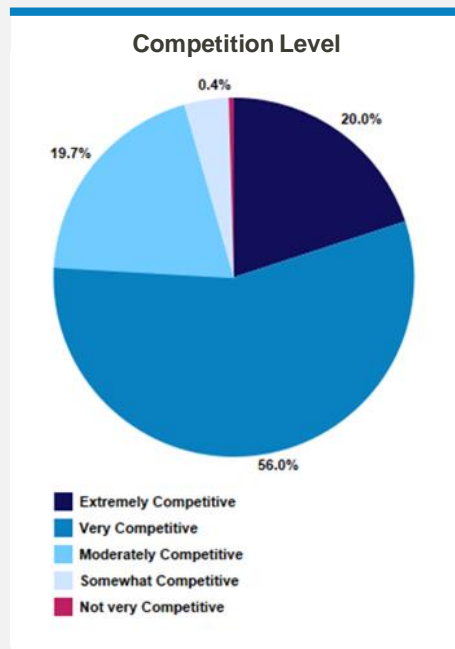
# The Finance Sector Competitive Environment

## The finance sector is a very competitive industry

Respondents were asked a number of questions about the competitiveness of their industry and the source of their competition. More than three quarters of respondents say they operate in an extremely competitive (20.0%) or very competitive (56.0%) environment. An almost insignificant number (0.01%) say their environment is not very competitive.

The source of competition was split roughly three-ways between domestic sources (34.7%), international (30.7%) and across a mix of both (34.6%). 38.1% of that competition originated from traditional market competitors, with new non-traditional entrants to the market creating competition in 33.4% of cases, and the remaining 28.5% equal across both sources.

In terms of revenue sources, 54.49% of respondents report that most of their revenue (51-100%) comes from domestic sales, with 43.51% reporting the majority of their revenue from international sources.



# Key Business Objectives for the Finance Sector

## ICT is all about meeting business objectives

Respondents were asked to rate a number of key business objectives from 'extremely high priority' to 'not a priority at all'. The chart shows the priorities sorted from the top down (grouped as 'extremely high priority' plus 'high priority').

Finance sector organizations have multiple, but often conflicting business objectives. The study found that the most important objectives revolve around creating a more efficient and safe working environment.

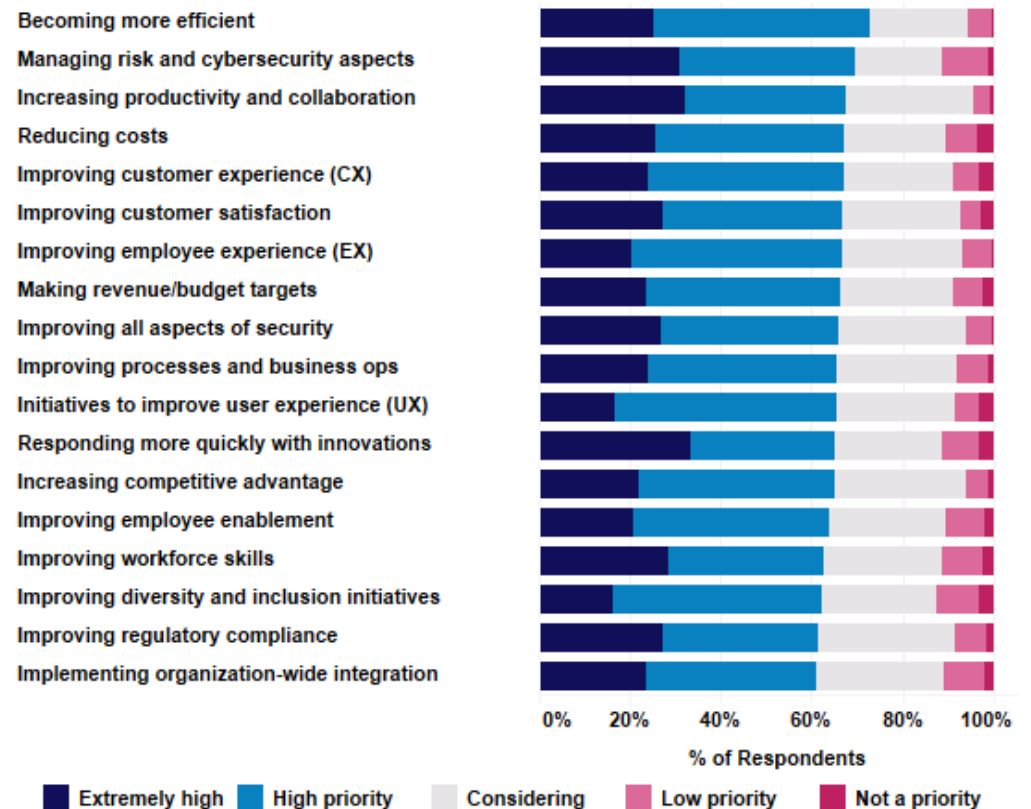
Nearly three quarters (73.0%) of finance sector ICT leaders say that becoming more efficient is a high or extremely high priority. Next on the list are managing risks and cyber security aspects (69.6%) and increasing productivity and collaboration (67.6%).

Of similar importance are improving customer experience (67.2%) and satisfaction (66.7%) as well as employee experience (66.6%).

Improving employee experience and customer experience and satisfaction, while increasing efficiency, reducing physical and virtual risk and managing cyber security are the overriding priorities for the finance sector.

“In the finance sector, becoming more efficient, managing risk and cyber security aspects, and increasing productivity and collaboration are top business objectives.”

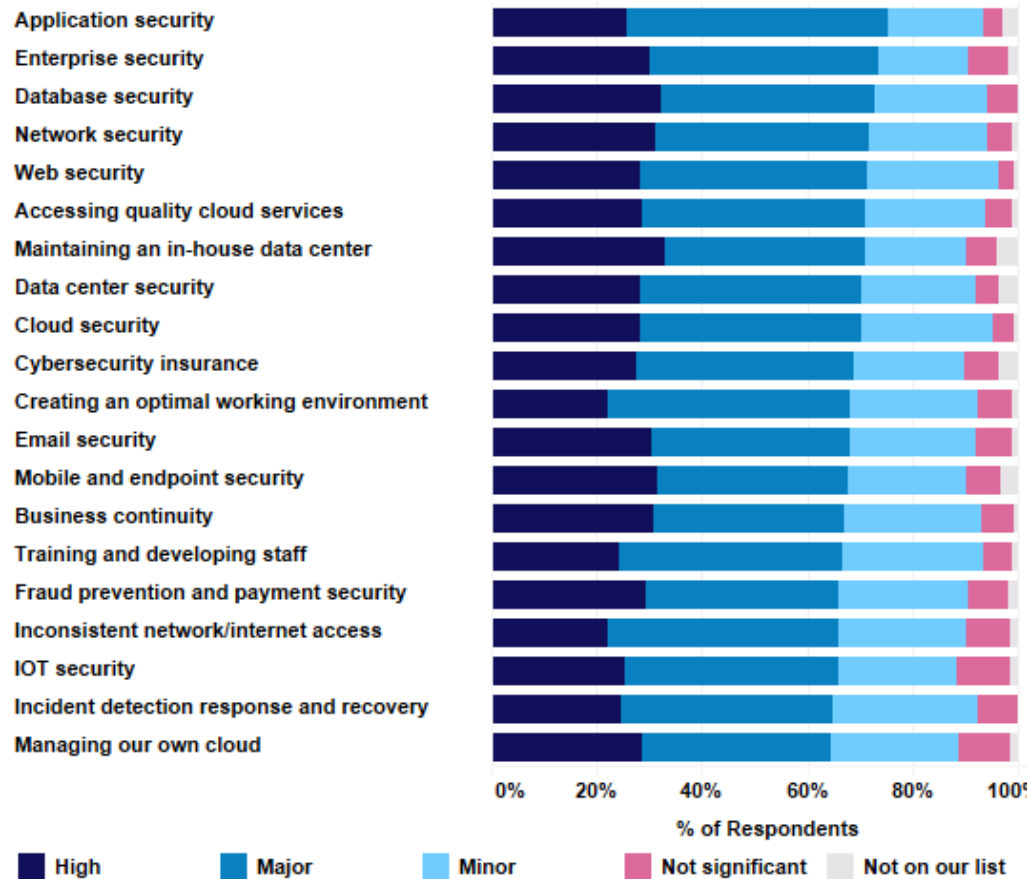
## GLOBAL Finance Sector – Key Business Objectives





# Top ICT Strategic Challenges for Finance Sector

GLOBAL Finance Sector – ICT Strategic Challenges



## Cyber security in all its forms is the #1 ICT challenge in the finance sector

The chart shows all challenges regarded as highly challenging or a major challenge. As a group, cyber security issues were ranked in the top five ICT strategic challenges. Application security is rated the largest challenge (75.2% regard it as a high or major challenge), followed by enterprise security (73.7%) and database security (72.7%), with network and web security following closely. These five were ranked the highest from a long list (more than 50) of potential challenges and highlight how seriously the finance sector takes security.

## Cloud and related topics came in as the #2 ICT challenge in the finance sector

Although cloud provision is now commonplace, ICT leaders clearly identified the area as the next most significant challenge after cyber security. The challenges related to the management of cloud environments include accessing quality cloud services (71.4%), maintaining an in-house data center (71.1%), followed closely by cloud security at 71% of respondents. Managing their own cloud is at the bottom of this list – but still within the top 20 challenges overall (out of 50 or so) and reported by more than 67.0% of respondents.

“Security, in all its aspects, rates as the biggest challenge for most finance sector organizations, closely followed by a number of cloud issues.”

# Impacts on ICT Spending in The Finance Sector



## Technology is the biggest driver of ICT spending

Finance sector ICT leaders see many factors impacting their ICT spending. Positive impacts are viewed as drivers, with negative impacts being inhibitors to spending.

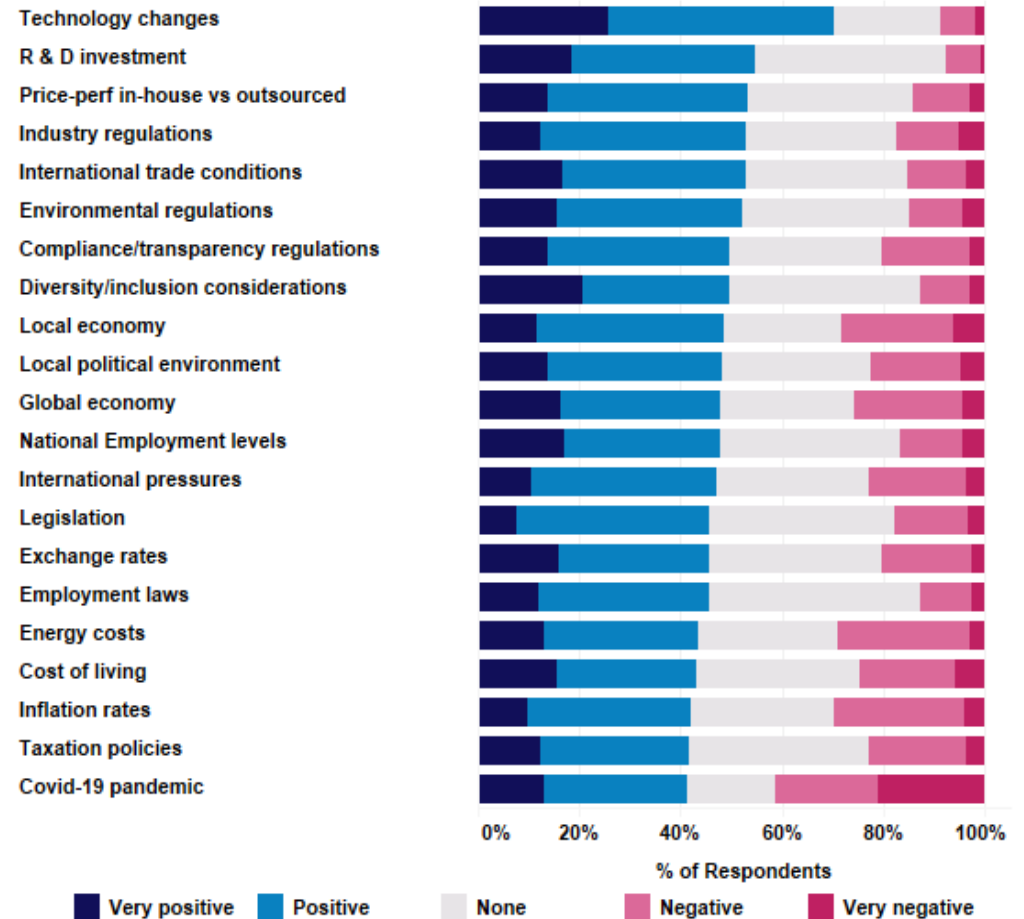
Most important of these by far are technology changes, seen as a positive force driving ICT spending by the majority of the respondents (70.4%).

Other important factors that will impact ICT spending include investing in research and development (54.6%), industry regulations, international trade conditions (both at 54%) and environmental regulations (53.5%).

At the bottom of this list is COVID-19, which will have an important impact, and is discussed further on the next page.

“Changes in technology plus R&D investment are the key drivers of ICT spending in the finance sector.”

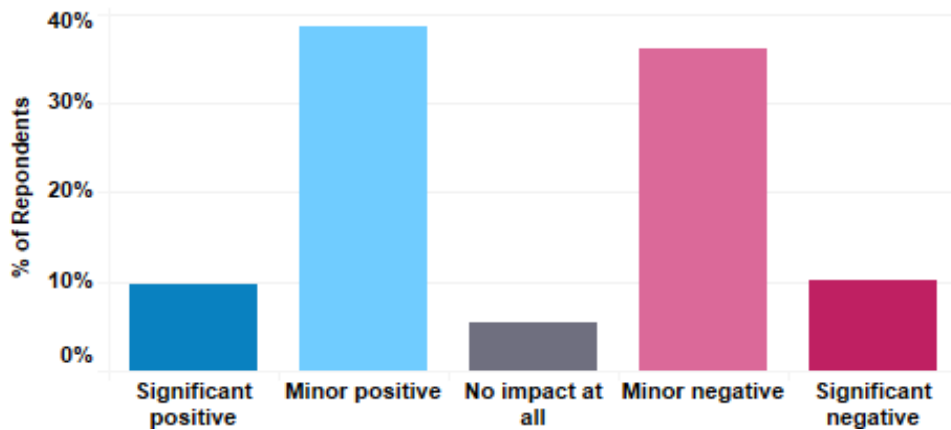
## GLOBAL Finance Sector – Impacts on ICT Spending





# COVID-19 Impacts on ICT Budgets in the Finance Sector

GLOBAL Finance Sector – COVID-19 Impact on ICT budgets last 12 months



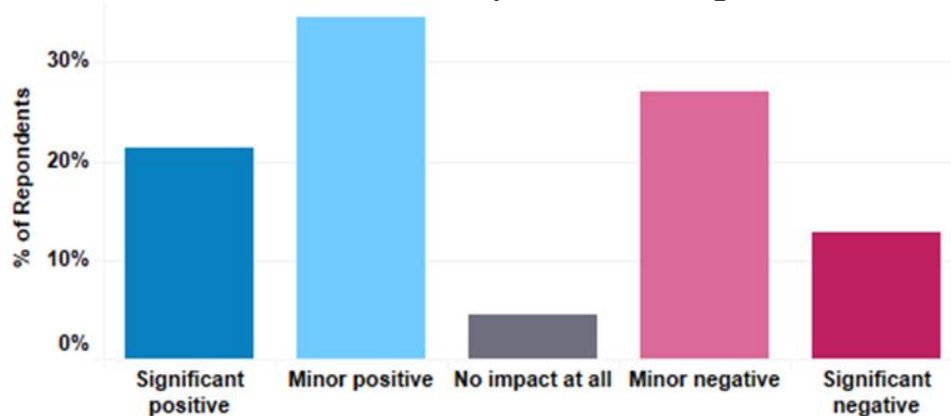
## COVID-19 is having both a positive and negative effect on ICT budgets

This survey was conducted in February and March 2021, 12 months since the COVID-19 pandemic started to take hold globally.

Asked about the effect of COVID-19 (Coronavirus) on their industry, nearly one-half of respondents indicated that the impact on their ICT budgets over the past 12 months was positive (48.7%), and almost one-half said the impact was negative (46.2%).

In terms of future impact of COVID-19 on their ICT budgets, more than one-half believe it will have significant (21.2%) or minor positive (34.4%) impact, while others believe it will have a minor negative (12.9%) to very negative (27.1%) impact.

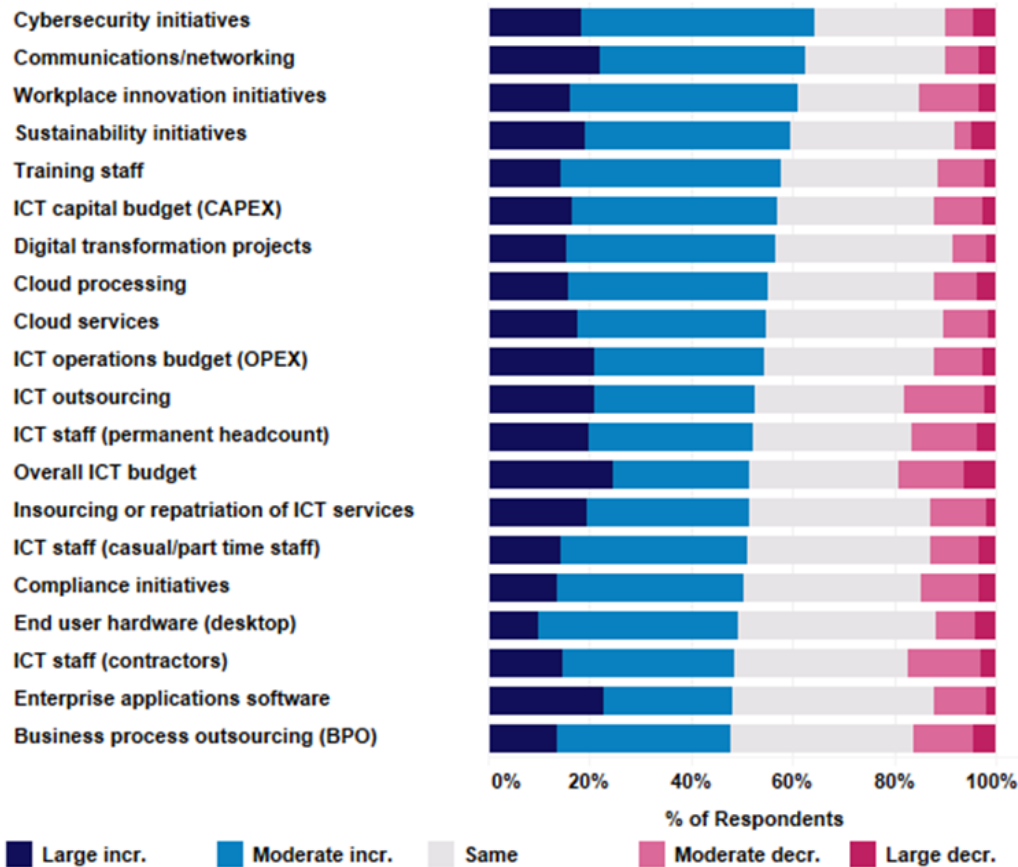
GLOBAL Finance Sector – COVID-19 Impacts on ICT Budgets next 12 months



“The impact of Covid-19 on the ICT budgets of the finance sector is bifurcated, with almost half reporting a positive impact over the last 12 months, and the other half reporting a negative impact.”

# Planned ICT Budget Change in the Finance Sector

GLOBAL Finance Sector – Planned ICT Budget Change



## ICT budgets are generally increasing

The global economy is fragile at the moment, however more finance sector organizations are predicting an increase in their ICT budget than are predicting a decrease. Planned increases greatly outnumbered decreases in every area of budget expenditure.

This chart reflects the major categories of ICT expenditure. In later parts of the report these categories are broken down into their sub-categories for more detailed analysis. This includes digital transformation initiatives (such as AI, IoT), workplace innovation and mobility, sustainable business and cyber security.

For major ICT budget categories, top areas of increase include cyber security (64.1%), communications and networking (62.5%), workplace innovation (61.1%), and sustainability initiatives (59.4%). Other major areas to benefit from increased spending are training (57.7%), ICT capital budgets (56.9%), digital transformation projects overall (56.4%), and cloud processing (55.0%).

Although significant investment in ICT has already taken place, finance sector organizations continue to invest in core areas to maintain competitiveness, create excellent workplaces, and use advanced technologies to drive innovation.

“Despite the current market uncertainty, finance sector organizations plan to increase ICT spending across all budget areas.”



# Digital Transformation in the Finance Sector

The finance sector, already subject to significant transformation via the introduction of new technologies and processes, is at the forefront of digital transformation in the economy – in fact DX is absolutely critical for the industry which is at the forefront of these developments.

## The Finance Sector and Digital Transformation (DX)

In a prior chapter we looked at the overall drivers for investment, strategies, initiatives and challenges across the whole ICT budget spectrum, including digital transformation as one component.

In this part of the report we focus on DX specifically, including current usage and planned implementation of a number of technologies important for digital transformation.

Actual outcomes of DX initiatives are also analysed, as are the challenges experienced by finance sector organizations in achieving these outcomes.

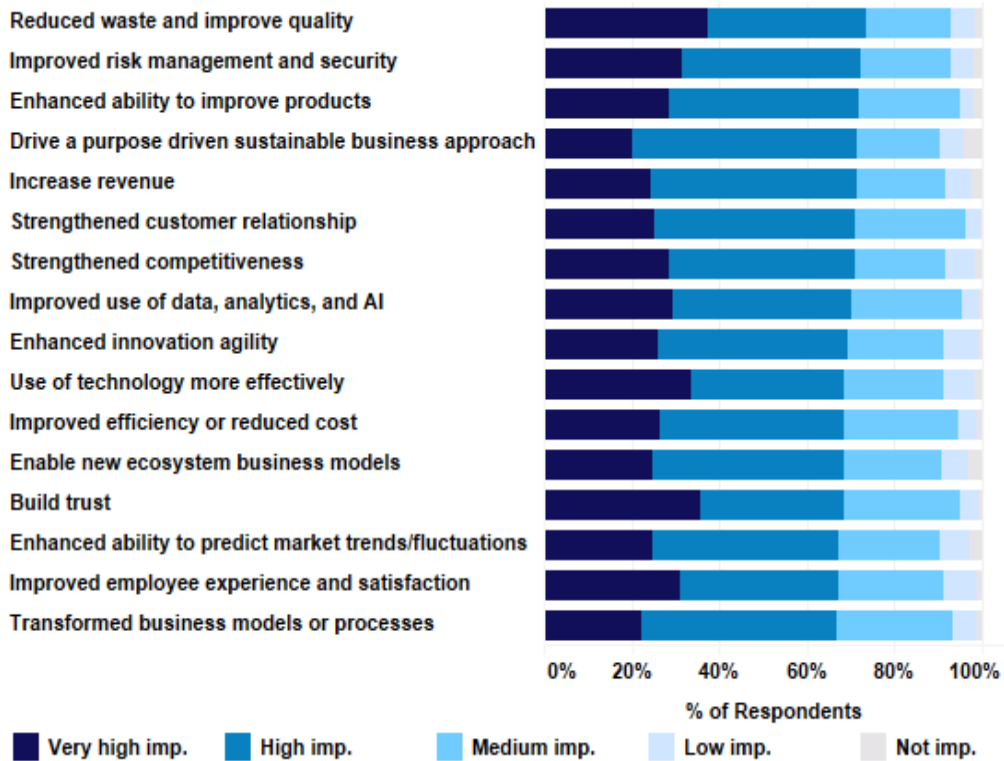
## Key Drivers for DX

There are many tangible and intangible factors driving DX, however finance sector organizations are primarily motivated to increase their digital transformation with the aim of delivering on their purpose driven sustainable business objectives, including reducing waste, and improving products whilst also increasing revenue.

“Trust and sustainable business are seen as foundations for successful digital transformation in the finance sector.”

# Drivers for Digital Transformation in the Finance Sector

## GLOBAL Finance Sector – Drivers for Digital Transformation



### Digital Transformation has many drivers

Several factors are motivating finance sector organizations to implement Digital Transformation (DX). Key drivers are reducing waste (73.3% reporting high or very high importance), improved risk and security (72.4%), enhanced ability to improve solutions (71.8%), delivering a purpose driven sustainable business approach (71.4%) and increased revenue (71.4%).

Other less tangible aspects with fewer harder metrics are also of high importance including strengthening customer relationships, strengthening competitiveness and using technology more effectively and efficiently. Though some of these are more difficult to measure there is a strong understanding that these factors are an essential ingredient to finance sector success.

“A combination of tangible and intangible objectives drive DX in the finance sector.”

# Finance Sector Progress in Digital Transformation Overall

## Digital Transformation is quite mature in the finance sector

We asked respondents to rate their progress across a wide range of digital transformation technologies and strategies. The chart below shows the top 12 out of 22 possible selections.

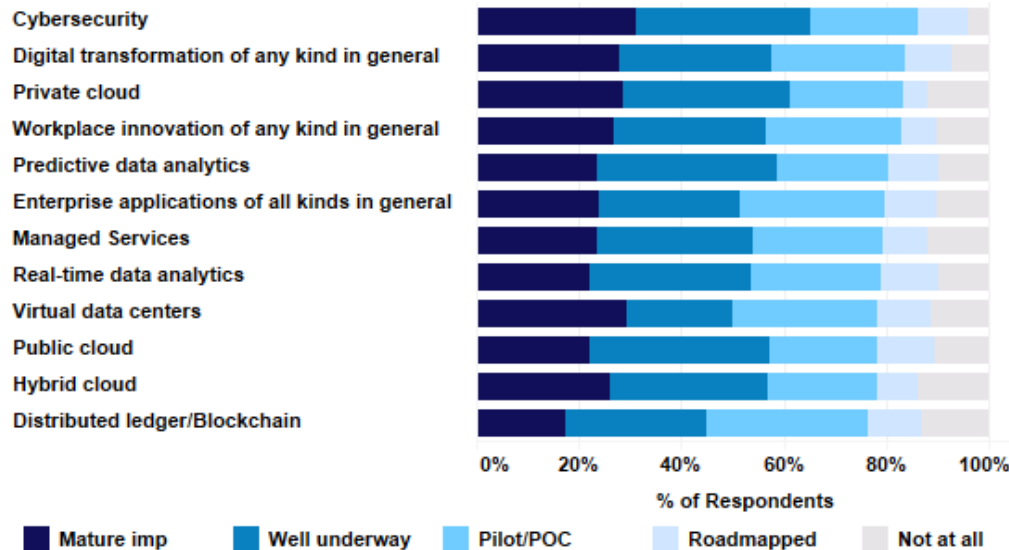
In terms of a five-level capability maturity model, most finance sector organizations reported a mature implementation - or are well underway with digital transformation activities in most areas of their operations. The most mature areas are cyber security (86.0% of respondents), DX in general (83.8%), private cloud (83.2%), workplace innovation in general (82.8%), and predictive data analytics (80.4%).

## Most finance sector organizations plan investment across many DX areas

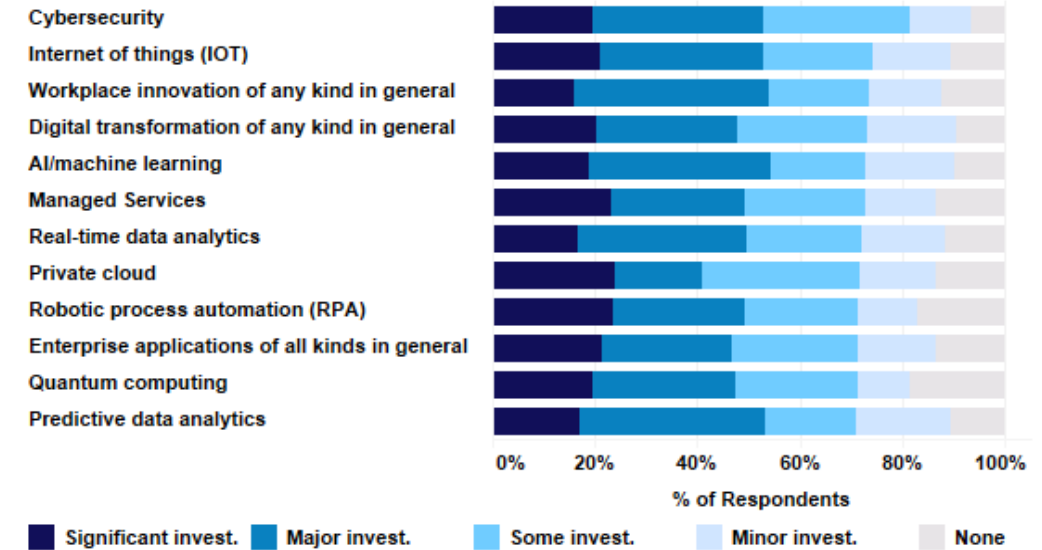
Earlier in the report we discussed overall budget intentions across broad categories of technologies and initiatives. In this part of the survey we drilled down into their plans to further invest into the same 22 categories discussed in the other chart on this page.

Consistent with the #1 ICT challenge reported earlier, the top planned investment in the next 12 months is cyber security (81.4% of respondents). Other large areas of investment are Internet of Things (IoT) at 74.1% of respondents, workplace innovation (73.6%), digital transformation overall (73.2%) and AI/machine learning (72.9%).

GLOBAL Finance Sector – Current Progress of DX



GLOBAL Finance Sector – Planned Investment in DX next 12 Months





# Finance Sector Actual Outcomes in Digital Transformation

## Digital Transformation is delivering on expectations

Finance sector organizations are reporting significant benefits accruing from their DX initiatives.

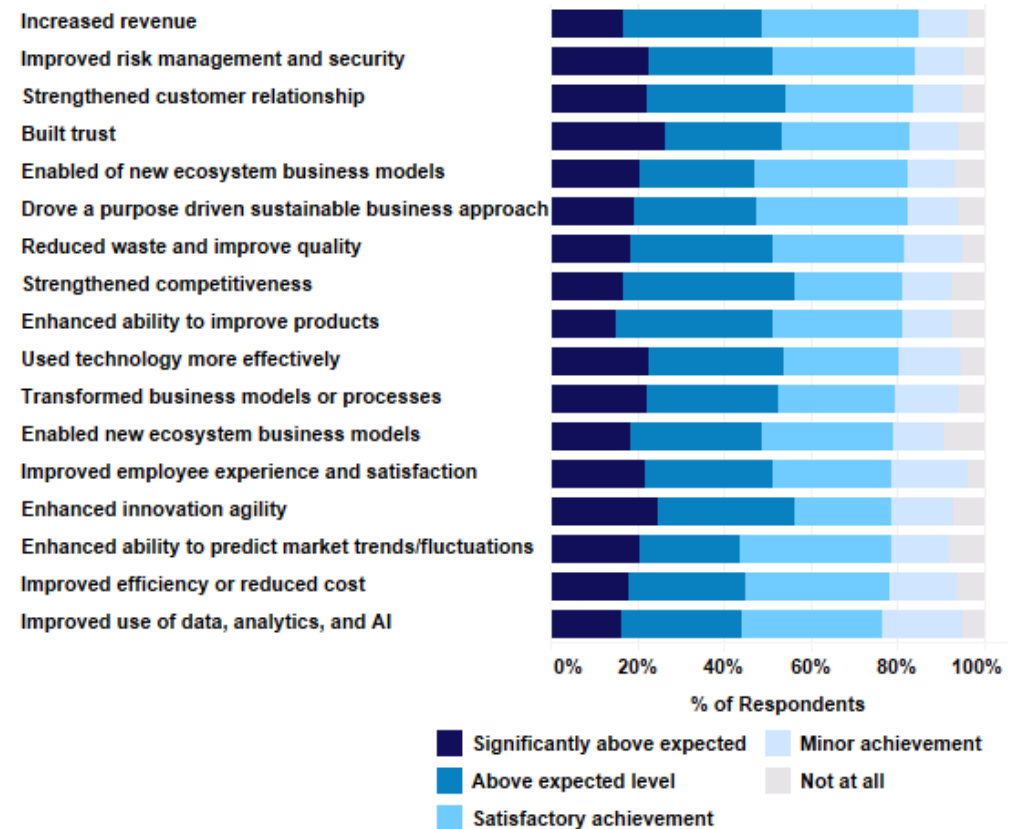
Overall DX initiatives had a positive impact on increasing revenues (85.0% of respondents) and improving risk and security (84.0%). A large majority of respondents also reported DX initiatives contributing to strengthened customer relationships (83.5%), building trust (82.6%), enablement of new ecosystems (82.3%), and creating purpose driven sustainable business approaches (82.1%).

It is notable that many of these actual outcomes closely match the DX objectives reported in the previous section of the report.

Digital transformation is not just a buzz word for the finance sector, it is enabling significant contributions to revenue increases, customer relationships, and delivery of their purpose driven sustainable business initiatives.

“Digital transformation is not just a buzz word in the finance sector – it is delivering measurable outcomes.”

GLOBAL Finance Sector – Actual Outcomes of Digital Transformation



# Challenges to Digital Transformation in the Finance Sector

## The greatest challenge to DX in the finance sector is complexity of technology

Despite the obvious benefits of DX reported before, it is not without significant challenges. The biggest challenge to DX in finance is the complexity of the implementation - more than three quarters (76.3%) rate it as moderately to extremely challenging.

Other challenges are project funding (75.8%), gaining acceptance of new technologies (75.2%), and executive support and availability of talented staff (both 73.8%).

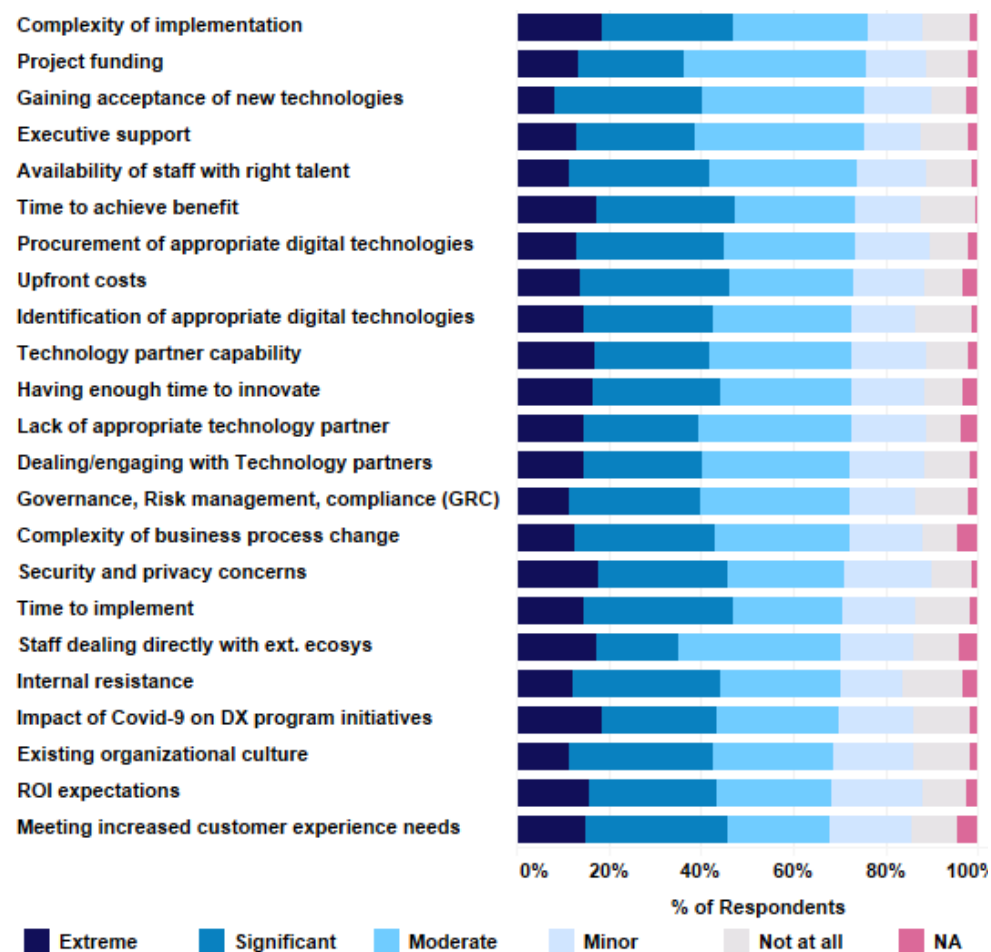
Other key challenges are the time taken to achieve a benefit, identification and procurement of appropriate digital technologies, and upfront costs.

The lack of appropriate digital technologies, dealing with technology partners, and their actual capability were also listed as major challenges.

Overall, digital transformation in the finance sector is difficult for the majority of respondents, with more than 68% rating all categories as challenging.

“DX in the finance sector is a complex process, with many challenges including complexity, funding and gaining executive and stakeholder support.”

## GLOBAL Finance Sector – DX Challenges



# Finance Sector Technologies

Earlier in the report we shared the findings of finance sector challenges, issues, drivers, budget, implementation and investment plans and other aspects of digital transformation initiatives. These were grouped into very broad non-finance specific categories.

In this section, we take a deeper look into finance sector specific DX attributes, plans and views on DX in this industry.

**“Finance sector businesses are leading the charge in transforming our economy with innovative digital products and services.”**

## **The finance sector is a leader in technology adoption**

Over two-thirds of finance sector organizations believe they adopt technology early.

## **Improving employee experience is a priority**

Finance sector organizations are increasing their focus on the employee experience.

## **Workplace innovation initiatives are increasingly important**

Large workplace innovation investments have been made by finance sector organizations.

## **Significant numbers of respondents plan even more cyber security investment**

Future investment plans in cyber security are high.

## **AI and automation are increasingly used to enhance customer experience**

Finance sector organizations continue to invest in AI and automation.

## **Data is king**

Automation and data analytics are key to understanding customer trends.

## **DX is a driver for sustainability, trust and purpose driven banking**

DX is being used to develop and maintain responsible banking into the future.

## **Cloud, Hybrid IT and as-a-service co-exist with traditional infrastructure**

There is a high level of maturity across all aspects of cloud and as-a-service.

## **Participation in ecosystems and co-creation**

Ecosystems and partners enable many players to create competitive advantage.



# Specific Digital Transformation Initiatives in the Finance Sector

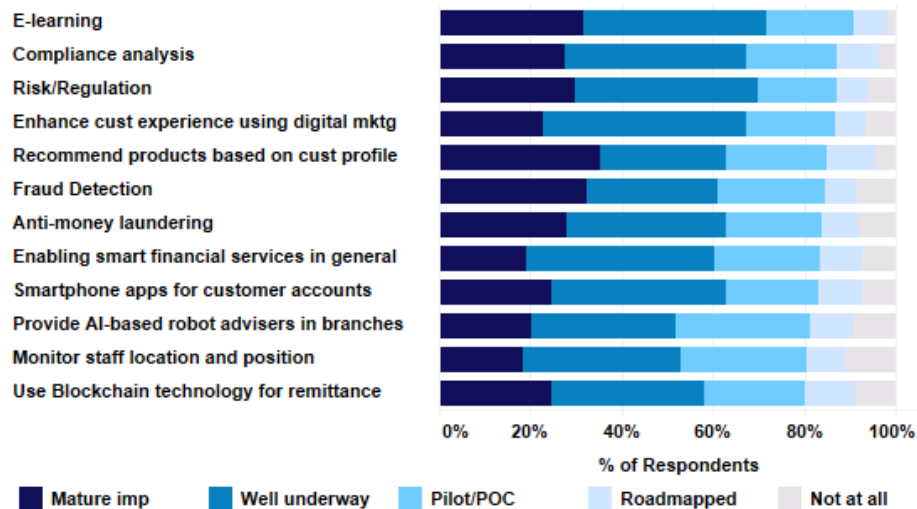
## A wide range of finance specific DX initiatives are mature, with more on the way

These two charts show the current progress or implementation of finance specific DX initiatives, and planned investment for the next 12 months.

The most mature areas are E-learning (72.0% of respondents), followed by risk and regulation (69.6%).

Around 60.0% of finance sector organizations are reporting high levels of maturity in AI-related activities including recommending products and solutions based on customer profiles (62.6%), enabling smart financial services (60.4%), and using AI based chatbots (56.7%).

GLOBAL Finance Sector – Current Progress of Financial DX Initiatives



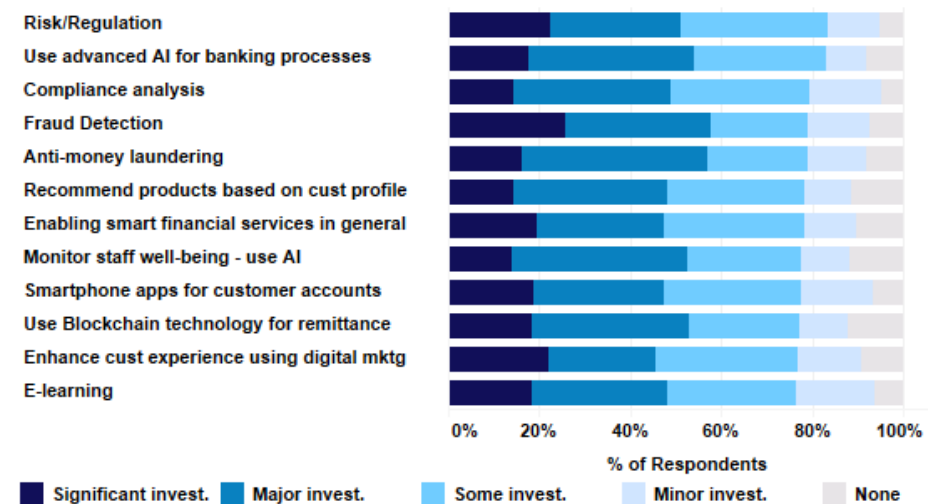
## Risk, regulation and compliance will drive finance sector DX investment

The majority of respondents plan to invest in many different areas of DX specific to the finance sector. The technology initiative with the highest investment revolves around DX for risk and regulation (83.3%) and use of advanced AI for banking processes (82.9%).

Many other security related technologies are also on the investment list. Nearly 80.0% of finance sector leaders will be investing in compliance analysis (79.3%), fraud detection (78.9%) and anti-money laundering (78.8%).

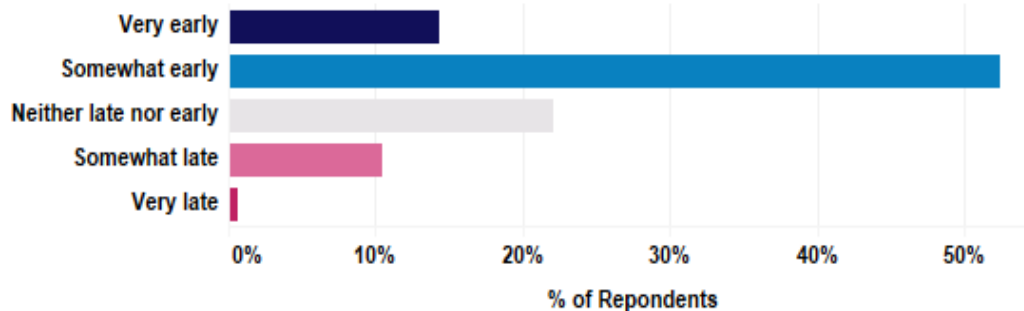
All of these investments are being driven by significantly higher customer expectations in the finance sector, combined with regulatory and compliance requirements and an increasing requirement for employee engagement and experience.

GLOBAL Finance Sector – Investment in Finance DX Initiatives Next 12 Months



# Technology Adoption and Customer Experience in the Finance Sector

## GLOBAL Finance Sector – Technology Adoption Profile

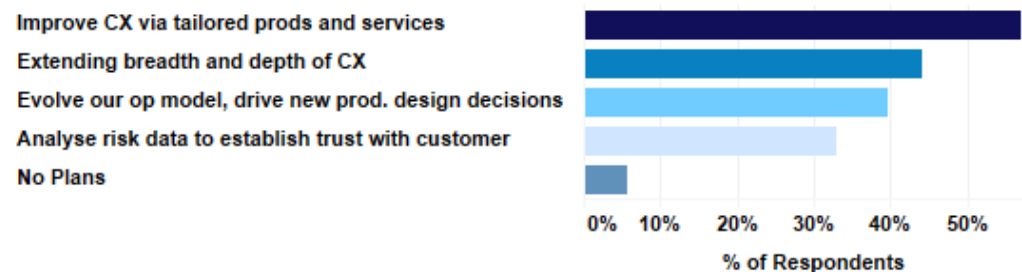


## The finance sector has an aggressive approach to technology adoption

The survey asked respondents to identify where their organizations stand on the technology adoption profile. Finance sector organization respondents believe they are very early (14.3%) or somewhat early adopters (52.4%) of technology. Nearly one-quarter (22.1%) say they are neither late nor early adopters.

In most industries, the results for this part of the survey are more evenly distributed, with the majority being neither late nor early adopters. However the overwhelming number of respondents in the industry reported they are very early or early adopters which is entirely consistent with the current levels of implementation and planned investment in technology identified in the other parts of the report.

## GLOBAL Finance Sector – Data Usage Objectives



## Data is key to customer experience (CX)

The survey asked respondents to identify their key data usage objectives. Using data to ensure a positive customer experience (CX) via the creation of tailored products and services rated highly (57.1% of respondents), as did extending the breadth and depth of CX (44.2%).

Two other areas where the focus is also on the customer are the use of data to evolve their organizations' operating models in order to drive new offerings (39.7%) and a focus on analyzing risk data to establish trust with the customer (32.8%).

“As advanced technology users, with almost instant access to extremely large volumes of customer data, finance sector organizations are highly focused on leveraging this data to improve and extend the customer experience to develop and tailor new financial solutions.”

# Employee Experience (EX) in the Finance Sector

## Improving the employee experience is also important to the finance sector

We asked respondents what considerations were important when deciding on the implementation of new applications. Many considerations related to workplace innovation and the overall employee experience.

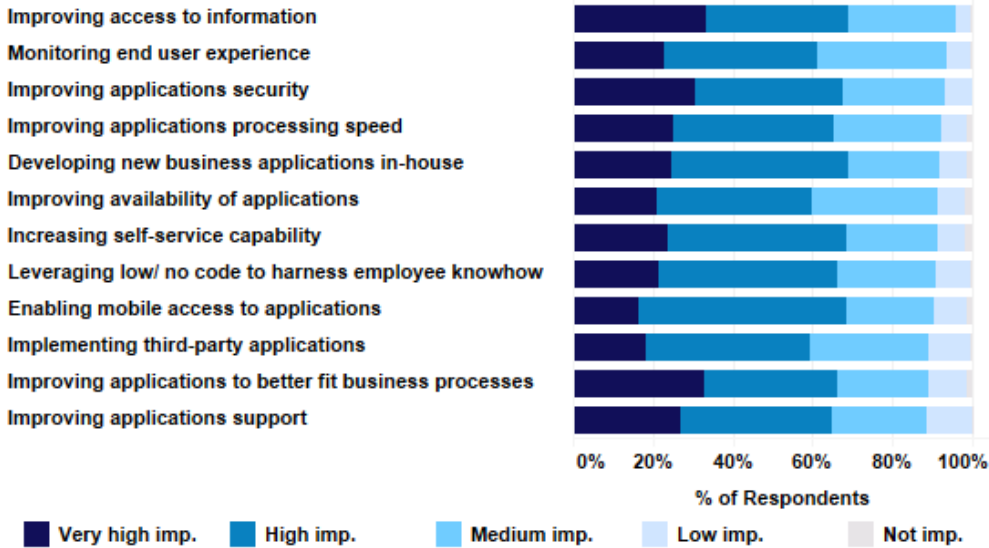
The large majority of finance sector leaders are looking for ways to improve access to information (95.9%), including moving applications to cloud to reduce costs (93.9%).

A significant number of respondents also indicated the importance of monitoring the user experience (93.8%), improving application security (93.0%) and applications processing speed (92.4%), and developing new business applications in-house (91.9%).

The provision of self-service capabilities and the leveraging of employee know-how via employing low code/no code approaches (also called citizen development) also rated highly and are a strong indication of an increased desire to enhance the engagement of employees and EX in general.



GLOBAL Finance Sector – Consideration for Enterprise Applications



“Improving employee and customer experience, and implementing workplace innovation initiatives are very strong application requirements in the finance sector.”



# Workplace Innovation in the Finance Sector

## The finance sector has made significant investments in workplace innovation

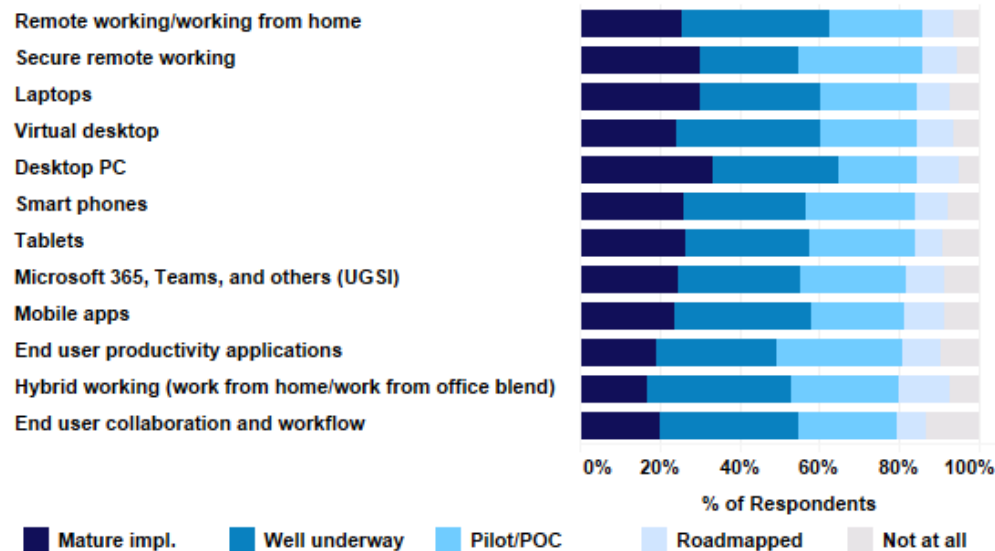
The most mature areas of workplace innovation initiatives are in supporting remote working and providing security in remote workplaces (86% of respondents).

The provision of remote working equipment including laptops (84.5%), desktops (84.3%) and phones (83.4%) was also high on the current implementation list.

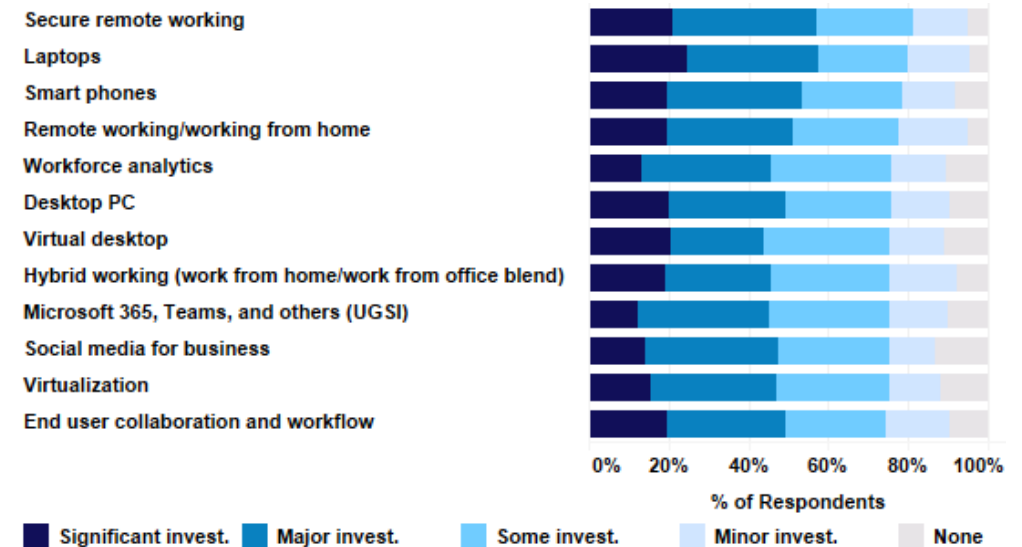
This level of investment is also set to continue over the next 12 months. The largest areas of planned investments in workplace innovation are security (81.2%), and conventional ICT infrastructure such as laptops (80.0%) and smart phones (78.7%).

“Finance sector organizations have mature levels of workplace innovation, including provision of remote working ICT equipment, and associated security environments.”

## GLOBAL Finance Sector – Current Progress of Workplace Innovation



## GLOBAL Finance Sector – Investment in Workplace Innovation next 12 months



# Cyber Security in the Finance Sector

## Keeping finance sector services secure

In terms of specific cyber security services and initiatives already implemented, respondents indicated a high level of use of established products like antivirus and spyware (88.0%). Other technologies which enable efficient and continued operation, such as incident detection response and recovery (83.3%), ransomware protection (83.2%), backup and recovery initiatives (82.7%), and data privacy policies (82.2%) have also had significant implementation in the finance sector.

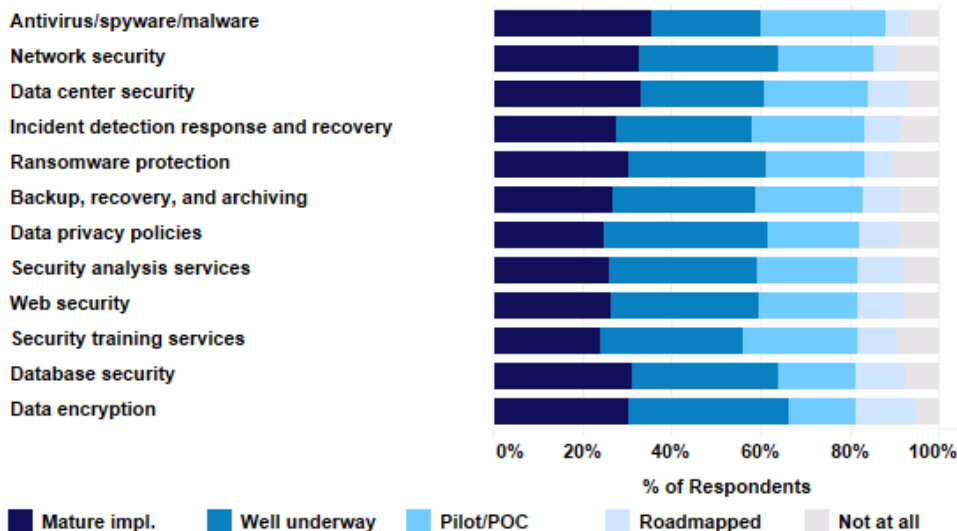
As reported earlier, cyber security is the #1 challenge and also the number one strategic objective of finance sector organisations. The current very high level of implementation is indicative of the current focus.

## Significant numbers of respondents plan even more cyber security investment

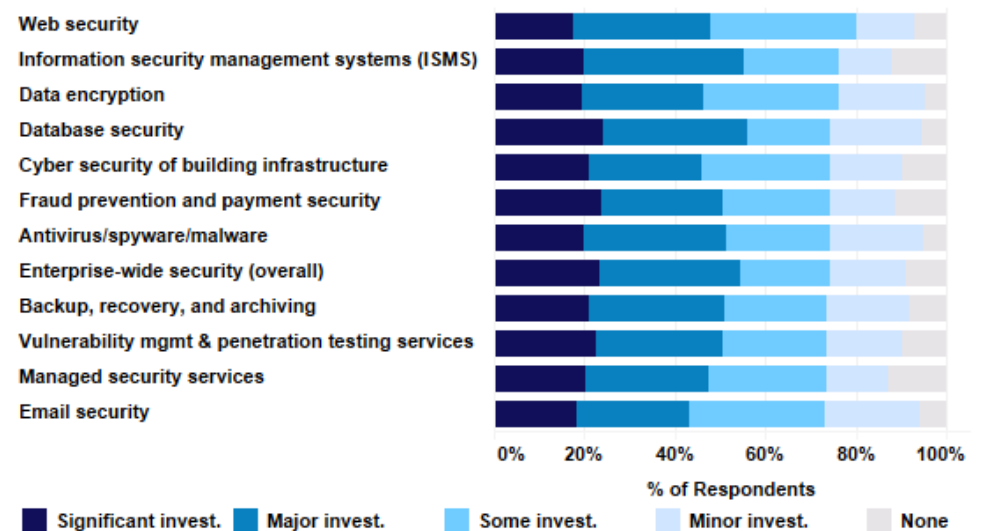
Future investment plans in cyber security are also high, with a significant percentage of respondents planning to invest further in many areas. This includes web security (80.0%), information security (76.2%), data encryption (76.2%), and database security (74.4%).

Although already heavily implemented in most respondent organizations, future investment across a very wide range of cyber security initiatives will continue over the next 12 months.

GLOBAL Finance Sector – Current Progress of Cyber Security



GLOBAL Finance Sector – Planned Investment in Cyber Security Next 12 Months



# Artificial Intelligence (AI) & Internet of Things (IoT) in the Finance Sector

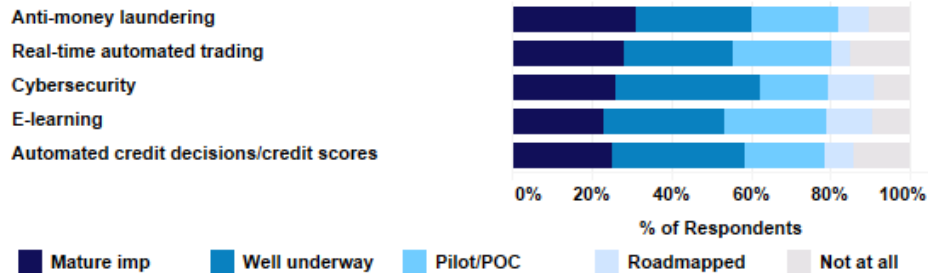
## AI is increasing in maturity within the finance sector

The results show widespread uptake of AI technologies in the finance sector.

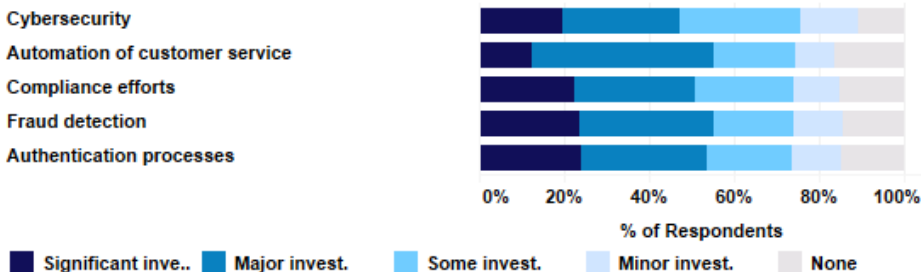
Respondents indicated the most mature use of AI in the areas of anti-money laundering (81.8%), and real time automated trading (80.1). Other areas of current AI use include E-learning (79.0% of respondents) and automated credit decisions (78.4%).

To achieve their objectives of increasing efficiency, reducing risk and improving customer experience (CX): 76.0% plan to invest further in AI for cyber security.

### GLOBAL Finance Sector – Progress in AI Initiatives



### GLOBAL Finance Sector – Investment in AI Initiatives Next 12 Months

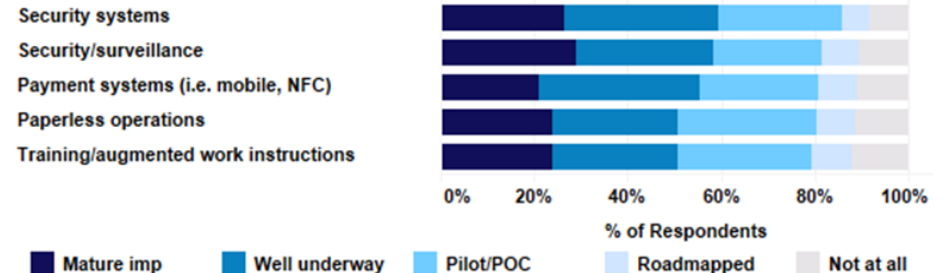


A further 74.5% intend to invest in AI for automation of customer service, 74.2% to support compliance efforts, and 74.2% to invest in AI for fraud detection and 73.6% for authentication processes.

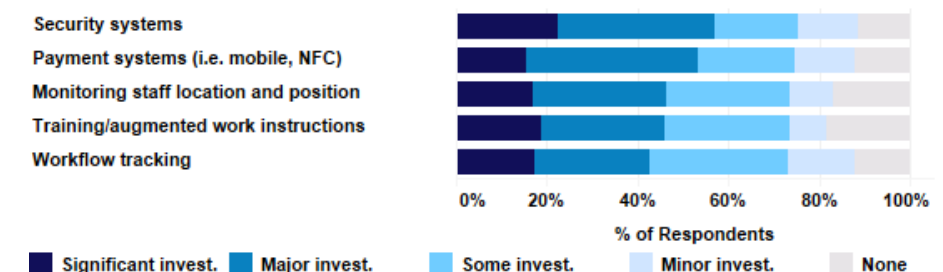
## IoT is also receiving increased attention

The finance sector plans to implement various IoT technologies, often in conjunction with AI/automation initiatives, for use in security systems (85.7%), payment applications (81.3%), paperless operations (80.3%) and training (79.2%).

### GLOBAL Finance Sector – Progress in IoT Initiatives



### GLOBAL Finance Sector – Investment in IoT Initiatives Next 12 Months





# Responsible Business in the Finance Sector

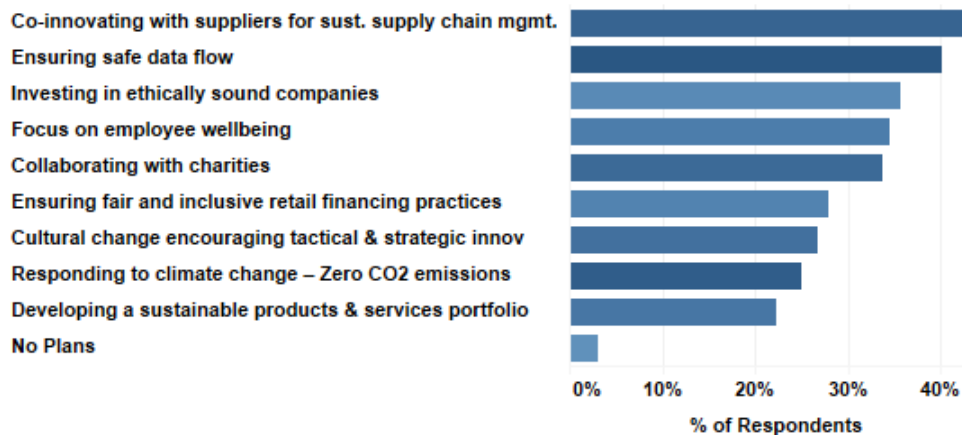
## DX as a driver for sustainability, trust and purpose driven banking

Respondents were asked about their use of DX to develop and maintain responsible banking into the future. 42.9% of respondents reported they were co-innovating with suppliers for development of sustainable supply chain management, with another 35.61% working on ensuring a safe data flow.

Investing in ethically sound companies (35.6%) and a focus on employee well-being (34.5%) were also important DX applications.

Collaborating with charities (33.8%), ensuring fair and inclusive retail financial practices (27.9%), and responding to climate change with a target of Zero CO2 emissions (25.0%) were also important.

## GLOBAL Finance Sector – Responsible Banking Initiatives



“The finance sector has wide ranging goals for driving sustainability, trust and purpose driven business, with DX as the key enabler.”

# Cloud and Related Enterprise Infrastructure in the Finance Sector

## Cloud, hybrid IT and as-a-service continue to co-exist with traditional infrastructure

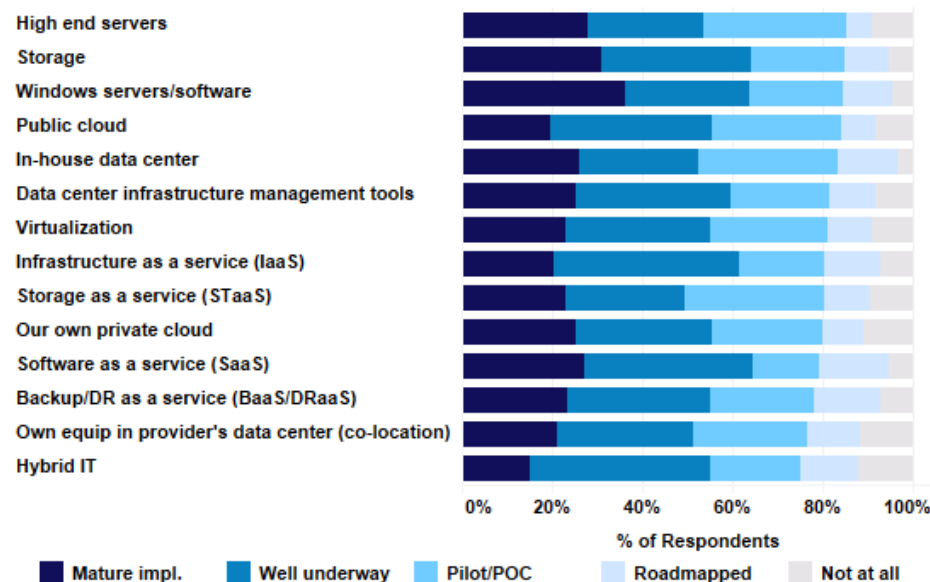
Respondents were asked to rate their current capability maturity in the cloud and enterprise infrastructure areas.

They reported that high-end servers (85.5%), storage (85.1%) and windows servers/software (84.6%) have the highest current levels of implementation. Other traditional enterprise infrastructure categories with high implementation levels include In-house data centers (83.6%), data center tools (81.6%), and data center co-location (76.6%) indicating significant usage for most in-house computing technologies.

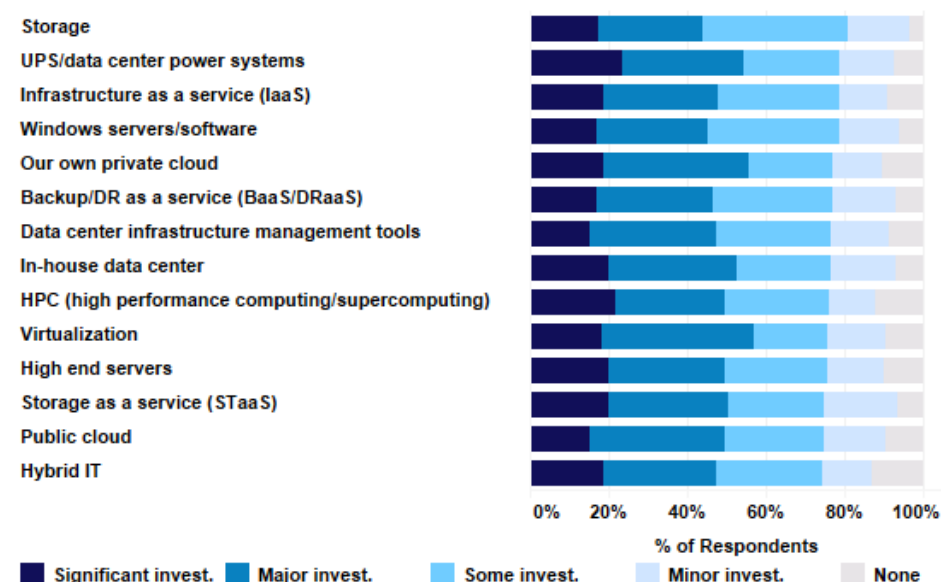
## All categories of cloud are also at high levels of implementation

There is a high level of maturity across all aspects of cloud and as-a-service technologies, including public cloud (84.3%), virtualization (81.1%), IaaS (80.6%), Storage-as-a-service (STaaS – 80.4%), SaaS (79.3%), Backup-as-a-service/DR-as-a-service (BaaS/DRaaS) and hybrid-IT (75.3%). The relative positions of traditional and cloud implementation shows that the financial sector favours a combination of both approaches – or hybrid IT. Planned investments in the next 12 months show the same areas, but in a slightly different order, and very little difference in the level of planned investment with more than 80% of respondents for each category.

GLOBAL Finance Sector – Current Progress of Cloud & Infrastructure



GLOBAL Finance Sector – Investment in Cloud & Infrastructure Next 12 Months



# Preferred Ecosystem and Co-Creation Partners for the Finance Sector

## Participation in ecosystems and preferred co-creation partners

Co-creation refers to the development of applications, processes and solutions in conjunction with other parties and organizations. If done well it enables many players to develop innovative ways of creating competitive advantage.

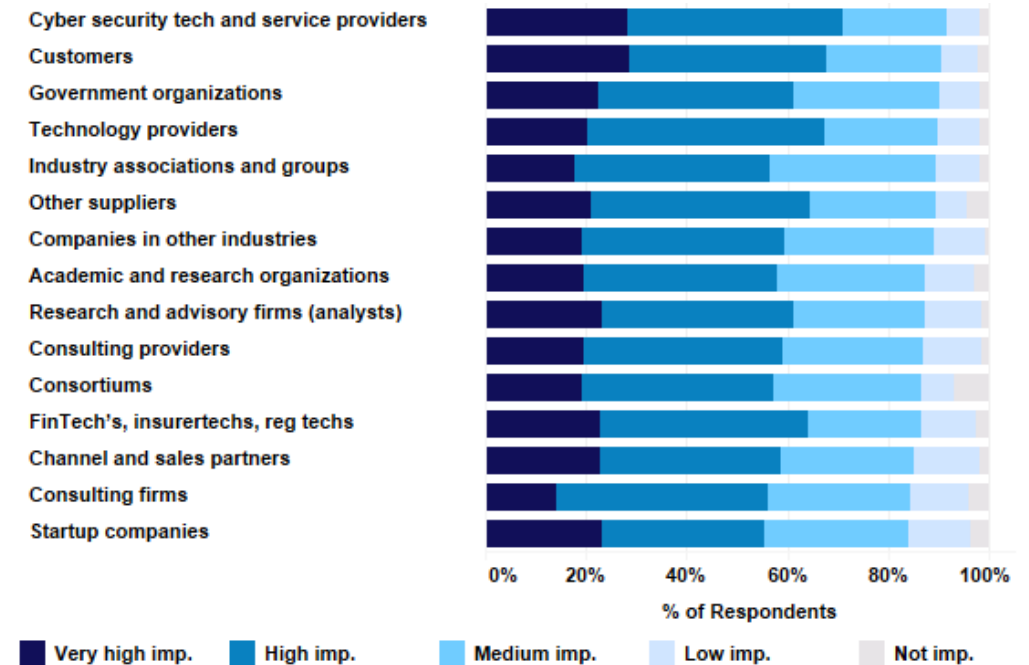
Finance sector organizations have a strong preference for co-creating with cyber security technology and service providers (91.7% of respondents). Based on past surveys this is the first time this topic has come anywhere near the top of the list and is a very clear reflection of the incredible focus on cyber security across the respondent base. 90.6% say customers are high or very high in importance as co-creation partners, followed very closely by government organizations (90.3%) and technology providers (89.6%). Next on the list are industry associations and groups, and other suppliers in the same industry (both at 89.4%).

The finance sector is also actively discussing data and how to monetize it effectively.

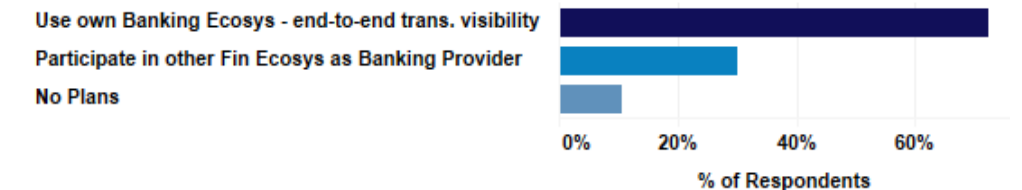
We asked respondents what their plans were in terms of participating in ecosystems in this area. Over 70% of financial organizations intend to launch in-house banking ecosystems to support the rapid evolution of their business value propositions, with 29.8% intending to participate in other financial ecosystems as a banking provider.

“Participation in ecosystems and co-creation enables many players to develop innovative ways of creating competitive advantage.”

## GLOBAL Finance Sector – Preferred Co-creation Partners



## GLOBAL Finance Sector – Participation in Ecosystems for Data Monetization





# Views on the Future of the Finance Sector

## Financial sector ICT decision makers' views on the future of ICT in the sector

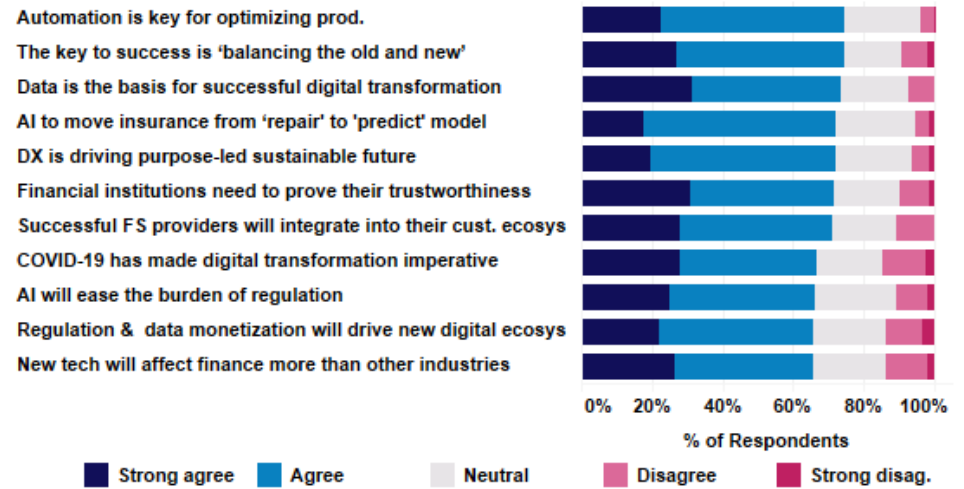
Respondents were asked the extent to which they agreed with a number of statements about the future of the finance sector in relation to technology.

75% agreed that automation is key for optimizing productivity. Balancing old and new systems (74.6%) and data as the basis for successful digital transformation (73.6%) also had strong agreement.

Respondents also agree that AI will move the insurance industry from a 'repair to predict' model, and that DX is driving a purpose led sustainable future in the finance sector (both at 72.2%).

More than 61.5% of respondents also agreed with the rest of the statement, indicating a strong belief in the power of harnessing technology for a sustainable and responsible finance sector future.

## GLOBAL Financial Sector – Views on Technology and the Future of the Sector





# Conclusion

The finance sector has done more than most industries to transform itself over the past decade, ushering in new digital solutions, omnichannel excellence, and customer and employee experience – all supported by business transformation and enabling technology.

Paradoxically that doesn't mean the industry can now just maintain this stance. It is a hyper-competitive industry, driven by new technologies, new niche digital native entrants, and technologically advanced traditional competitors. At the same time, growing security threats and ever-changing regulatory compliance requirements add to the complexity and challenge.

**“Finance sector businesses have delivered huge value to customers but must run even faster to survive and thrive.”**

## **The finance sector is a leader in digital solutions**

It leads in providing ever-improved solutions, services and experiences for its customers. It is now a fully digital industry, and it is almost impossible to run a finance sector business without a digital technology foundation.

The sector has taken advantage of its primarily virtual nature and has leveraged technology transformations to offer us personalised solutions and services. Services previously available only to private banking clients serviced by high-cost account managers are now the norm. We get to transact almost all our financial transactions with a swipe and a tap on our phones.

## **Cyber security challenges keep finance sector ICT leaders awake at night**

The #1 challenge for finance sector ICT leaders is cyber security. The sector has legal obligations to secure our personal and financial data and is continuing to invest heavily to comply. Cyber security spending increases represent the most common uplift in technology budgets over the next 12 months (almost two-thirds will increase cyber security spending).

## **The move to cloud is a high priority but not without challenges**

ICT executives are challenged to transition existing application to cloud to optimize costs and leverage managed cloud service provider expertise. Finance sector ICT leaders say the establishment and management of hybrid and multi-cloud environments are key challenges, rating accessing quality cloud services (71.4% of respondents) and maintaining an in-house data center (71.1%) in their top 10 challenges.

## Conclusion (continued)

### Employee experience (EX) supports customer experience (CX)

Smart businesses know that when they provide great experiences for their own employees and partners that translates to great experiences for their customers. Respondents to this survey tell us they are prioritizing EX at a similar level to CX. Finance sector organizations have made significant investments in workplace innovation. The most advanced initiatives are in supporting remote working, virtual teamwork and providing security in remote workplaces. They report plans to continue to invest in improving EX, especially in the time of COVID-19, and their digital transformation initiatives are a major part of this.

### The finance sector customer experience keeps improving

The sector has been a leader in customer experience (CX), but it is not stopping there, it is continuing to lead. This research shows finance sector ICT leaders are prioritising their customers: over two-thirds say improving customer experience (CX) is a priority, and a similar number are prioritizing customer satisfaction (CS). They are using new technologies like Artificial Intelligence (AI) and IoT (Internet of Things) to keep improving CX, with three-quarters investing in AI specifically for automation of customer service.

### DX as a driver for sustainability, trust and purpose driven banking

The finance sector is very focussed on the use of DX to develop and maintain responsible banking into the future. Most respondents are co-innovating with suppliers for development of sustainable supply chain management, working on ensuring safe data flow, and focussing on employee well being.

### The finance sector is pivotal to transforming our economy

Finance sector organizations have been leaders in the transformation of our economy from analogue to digital, their digital solutions make our lives easier, and the strategies and initiatives they have embarked on, as shared through this research, will continue to ensure that the finance sector continues to play a pivotal role in developing a reliable, trustworthy and sustainable digital economy.





# Demographics

## Exhaustive data collection and demographics.

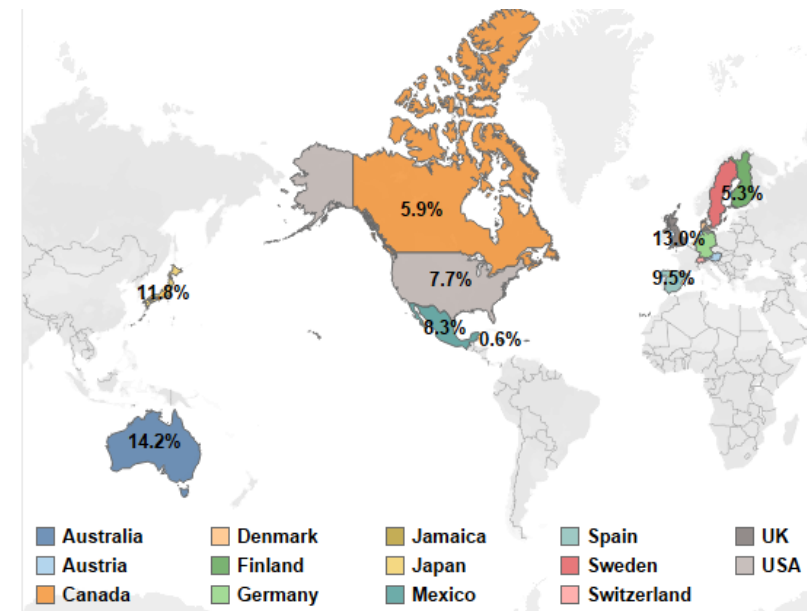
DataDriven applied seven levels of exhaustive screening and validation questions, then conducted extensive data scrubbing and removal of non-representative data and outliers using SPSS.

The result is a highly qualified and reliable set of complete responses from 158 ICT Decision makers in the finance sector.

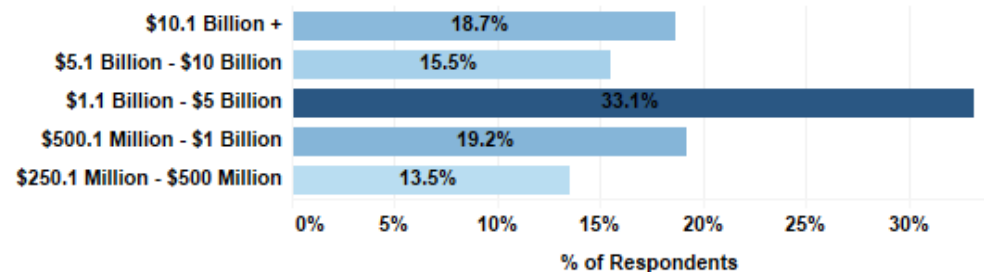
The respondent base came from 14 countries, representing major economies across Europe, UK, North America, Asia/Pacific and Japan.

By revenue, most of the respondents came from organizations with between US\$1.1 billion and \$5 billion in revenue (33.1%). Nearly one in five (18.7%) were in organizations over \$10.1 billion, with another 15.5% in organizations with revenue between \$5.1 and \$10 billion in revenue. The remaining 13.5% represented smaller finance sector organizations (\$250m to \$500m).

GLOBAL Financial Services – Respondents by Country



GLOBAL Financial Services – Respondents by Gross Revenue



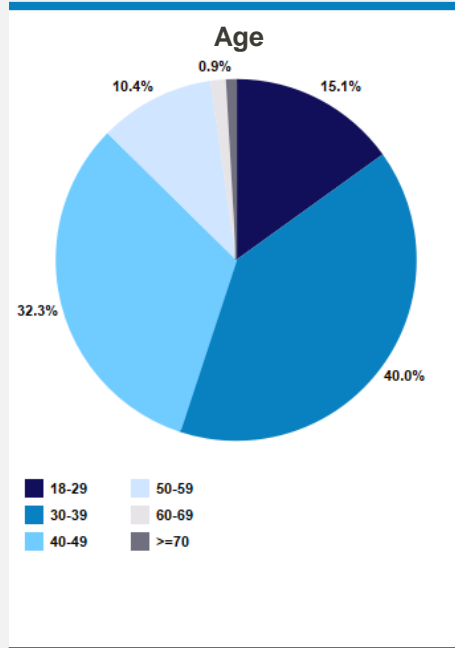
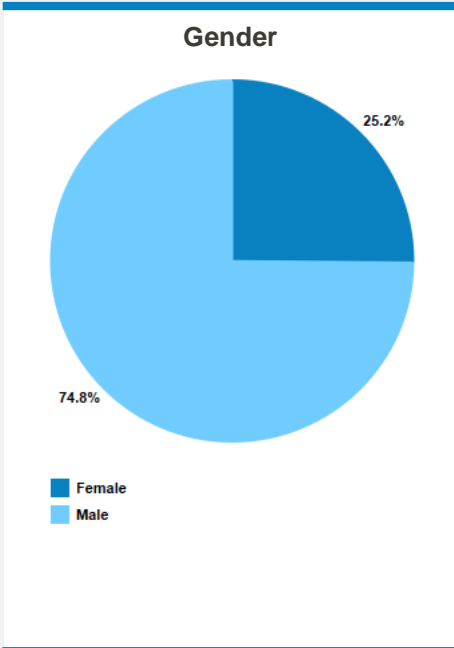
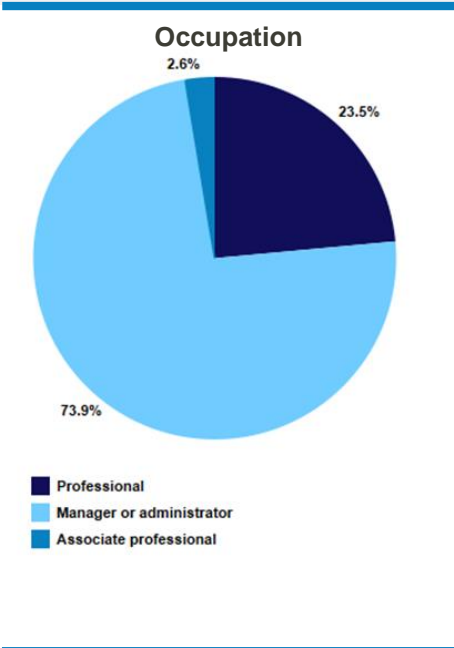
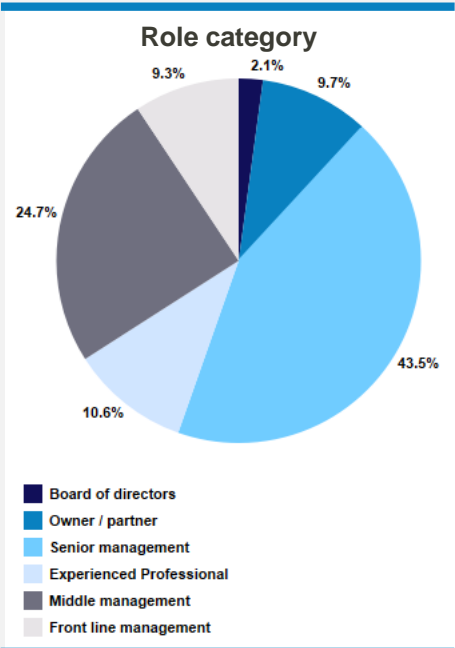
# Demographics of Respondents from the Finance Sector

## Respondents by role, occupation, gender and age

More than half of the respondents are very senior decision makers in their business, with 43.5% senior management, 9.7% owner or partners in the business, and 2.1% board directors. The remainder are middle management, experienced professionals or front-line managers.

More than three quarters (77.1%) described themselves as managers or administrators, and the remainder are professionals or associated professionals.

Just under three quarters are male (74.9%) with 25.2% female. 40% were aged between 30-39, 32.3% are in their 40s, with 15.1% aged between 18-29 and 10.4% in their 50s.





# Research Framework, Methodology and Approach

The DataDriven Digital Transformation Technology Matrix (DXTM) drives all of our research.

DataDriven has developed a proprietary taxonomy of technologies and trends to ensure consistency of terminology. The DataDriven Digital Transformation Technology Matrix (DXTM) provides a comprehensive model for our research focus.

## A comprehensive research framework

The **Digital Transformation Technology Matrix (DXTM)** comprises five user groups, from the individual to the wider society:

- **Individual:** The effect of Digital Transformation on individuals, at work and in their personal lives.
- **Workplace:** The effect of Digital Transformation on individuals and workgroups within the workplace.
- **Intra-Enterprise:** The effect of Digital Transformation on business practices and business models within the organization.
- **Extra-Enterprise:** The effect of Digital Transformation on the way the organization interacts with other organizations.
- **Society:** The effect of Digital Transformation on the economy, government and the wider community.

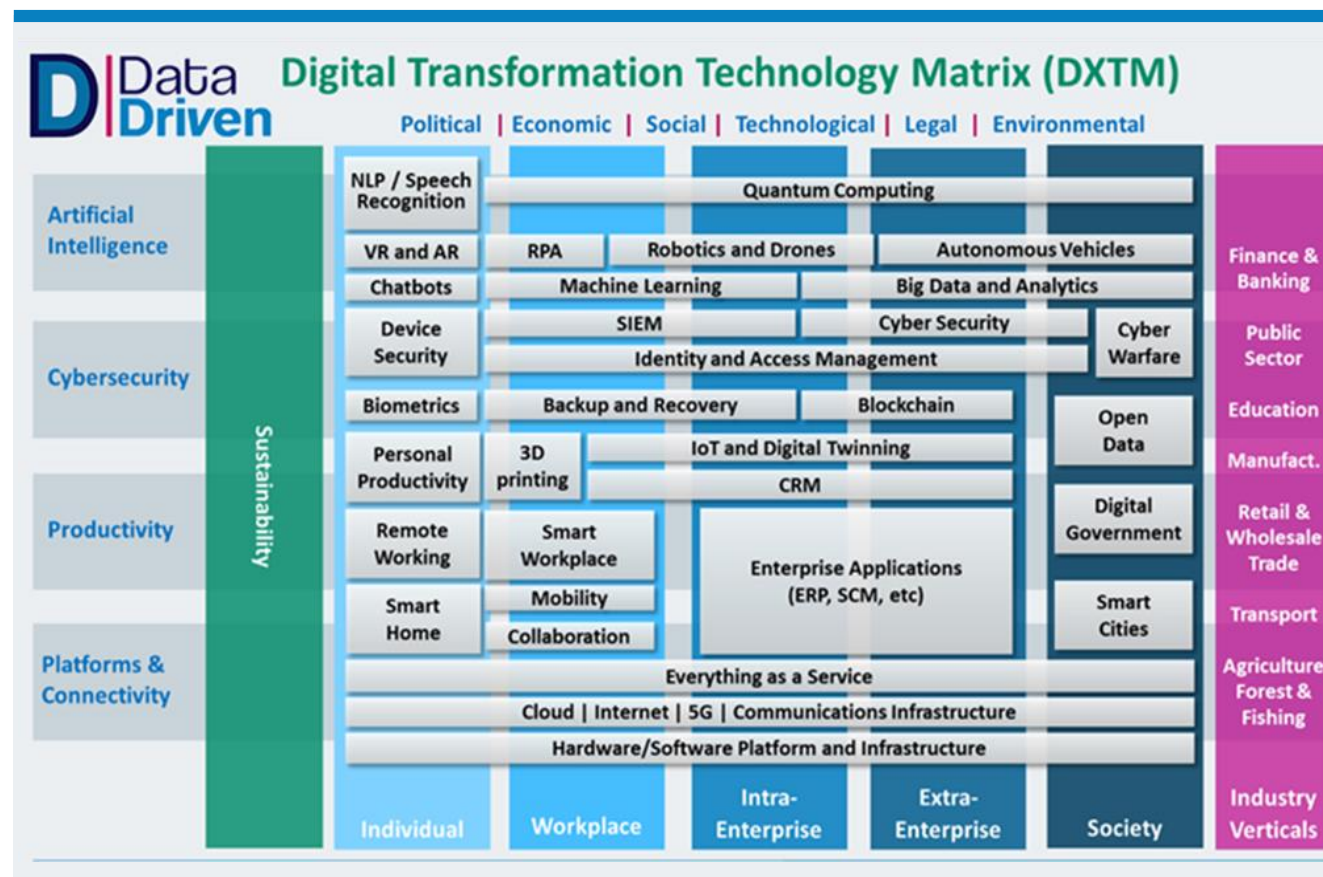
“A common taxonomy drives higher quality survey results and outcomes.”



# The DataDriven Digital Transformation Technology Matrix (DXTM)

Four major classes of application or technology are overlaid on these five user groups. Some of these have their primary effect on only one level, some affect two or more. The four application or technology areas are:

- **Artificial Intelligence:** Machine based technologies which enable new applications through the simulation of human reasoning
- **Cyber security:** Technologies which prevent unwanted intrusions, and which enable the efficient and continued operation of the other technology areas
- **Productivity:** Technologies which enable and increase the productivity across functions at every level and across levels
- **Platforms & Connectivity:** Technologies which enable individuals and organizations within each level to communicate and interact with others at their level and beyond. At the base are the underlying connectivity technologies – Cloud / Internet / 5G / Comms infrastructure/Hardware & Software Platforms – which sit across all five user groups and are the key enablers of the interconnected world at every level.



**Sustainability/Corporate and Social Responsibility (CSR)** are increasingly critical considerations at all levels, and also overlay the four major classes of application and technology.

**Industry Verticals** have differing levels of technology uptake and maturity and are therefore specifically included in the research focus. For this report the focus was the finance sector.

# Research Approach Based on DXTM

## **The DataDriven Digital Transformation Technology Matrix (DXTM)**

**Our unique methodology** enables us to clearly and consistently identify key technologies and the groups they affect. We discover the trends in each area through primary research – comprehensive and intensive large-scale surveys of IT decision makers across major industry sectors and geographic markets.

**Extensive demographic grouping and analysis** then allows us to measure and compare the effect of each technology in each industry sector and also to compare their impact across different sizes of organization and different markets. Primary research of this nature is based on what the users of the technology are thinking and doing.

**This quantitative analysis is complemented by qualitative research** based on interviews with key players in the user, vendor, industry and government communities and secondary research from reputable and peer reviewed sources.

**Our research is based on highly reliable and valid facts** ... not opinion. Our proven methodology offers insights simply not available with secondary research.

**It is the users of technology** that ultimately determine the success and speed of its implementation. When predicting futures there is no substitute for asking the users of the technology about their attitudes, behaviors and intentions.



**“The users of technology are the final arbiters and the ultimate source of truth for understanding the global ICT market.”**

## GLOBAL ICT TRENDS SERIES

# How to contact us

### Acknowledgement to ICT decision makers

DataDriven would like to thank the many hundreds of people and organizations involved in the production of this report. We would particularly like to thank the ICT decision makers/CIOs and senior IT managers who responded to the survey upon which it is based.

### About Fujitsu

Fujitsu is the leading Japanese information and communication technology (ICT) company offering a full range of technology products, solutions and services. Approximately 130,000 Fujitsu people support customers in more than 100 countries. We use our experience and the power of ICT to shape the future of society with our customers. Fujitsu Limited (TSE:6702) reported consolidated revenues of 3.9 trillion yen (US\$35 billion) for the fiscal year ended March 31, 2020. For more information, please see [www.fujitsu.com](http://www.fujitsu.com)

### About DataDriven

DataDriven is a global research and advisory services firm specializing in the areas of ICT Strategy for technology users and providers, research-based thought leadership, market and competitive intelligence, and marketing and technology strategy consulting projects. DataDriven is also highly experienced in the area of cross-cultural communications and leadership, managing virtual teams across multiple geographies and runs training and workshops in these areas. In addition DataDriven associates are skilled at the delivery of presentations at events ranging from facilitation of small C-level roundtables, through to 'big-tent' major keynotes with audiences in the thousands. Over the past four decades DataDriven associates have supported hundreds of ICT providers and other private and public sector organizations. DataDriven has successfully executed projects globally, but has a particularly strong focus on Asia/Pacific and Japan. For more information, please see [www.datadrivenservices.com.au](http://www.datadrivenservices.com.au)

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