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# Overcoming cloud adoption challenges

**MOVING THE FINANCIAL SECTOR TO CLOUD:  
ISSUES, OPTIONS AND SOLUTIONS**

## Overcoming cloud adoption challenges

**F**inancial services firms are waking up to the advantages of more flexible processes and systems, powered by the cloud. Digitisation, both internally and externally, is driven by an organisation's ability to react and change in an agile fashion.

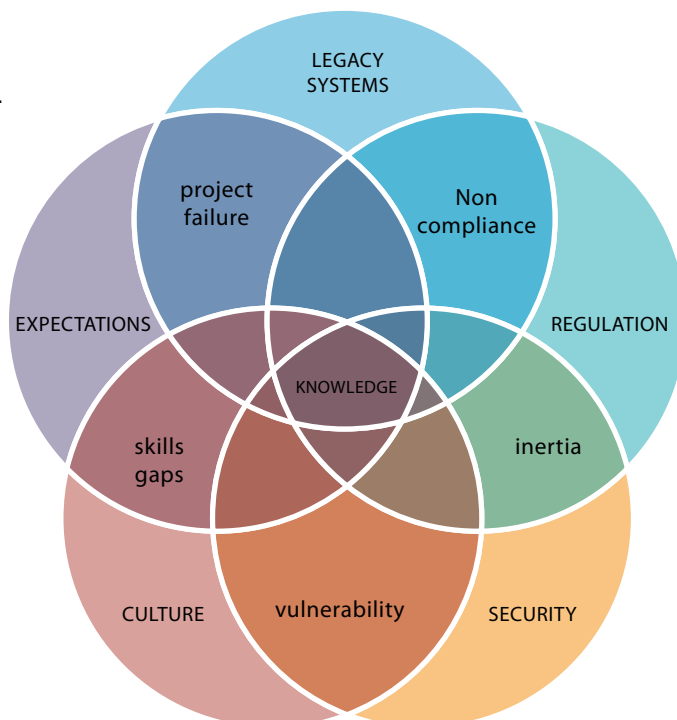
But while the concept of cloud is nothing new, entrenched legacy systems and the complexity of migrating workloads have meant that cloud adoption has been patchy at best. Many firms have been squeezed between the biggest, most well-resourced incumbents, and the smaller, flexible FinTech startups.

The speed of cloud adoption has been slowed by many factors, including:

- Failing expectations, with the complexity of systems and cost of transfer creating inertia.
- Cultural change or lack of leadership to challenge the desire for 'business as usual'.
- Regulation that lacks clarity, but requires preparedness for change.
- A lack of skills internally causing delays and implementation problems.
- Legacy issues which create a complex adoption environment.
- Security concerns which persist despite the potential advantages of enhanced resilience.

This report will look at these key blockers to financial services cloud implementation and what can be done to overcome them.

Diagram 1: intersections of the six main identified issues.



## The cloud adoption landscape

Last year, Rackspace commissioned Forrester Consulting to survey 326 IT professionals to understand the lessons learned from moving systems, applications and workloads to the cloud. (Diagram 2)

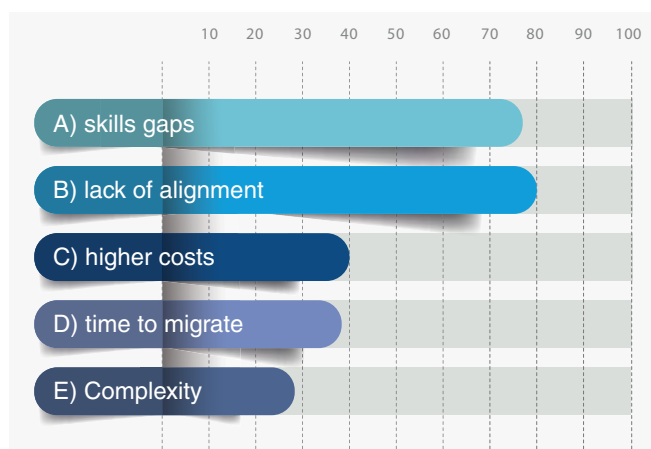


Diagram 2: Lessons learned from migrating systems

The survey found an emerging theme was expectation versus reality: envisioning, managing and driving cloud adoption across an entire business is a complex undertaking. Success requires collaboration to modernise legacy systems and establish IT as a key contributor to digital growth.

Complexities and costs in this process appear to have been underestimated, with relevant skills gaps (77 per cent) and lack of alignment between business and IT (69 per cent) being identified as factors that negatively impacted adoption.

The survey showed higher costs than estimated (40 per cent) - particularly around application transformation - a longer time to migrate applications or workloads to the cloud (37 per cent), and more complexity involved in integrating, maintaining and managing the cloud environment (27 per cent).

Despite this, IT leaders are continuing to invest in cloud as part of their digital growth strategies (86 per cent), although more than half said they would hire experienced

cloud experts for future projects. In fact, 41 per cent admitted their cloud infrastructure is too complex to manage and called for leaders to leverage outside help – with 77 per cent agreeing that they rely upon service partners to help run workloads in the cloud.

Rackspace solutions director Tim Bull explained that despite technical expertise and cloud vendor choices increasing, business leaders are becoming less confident in making platform decisions, perhaps because of the exponentially larger number of options available to them.

## Culture and ownership

Despite this desire for third party assistance, one of the most crucial challenges faced by financial services firms making this transition, is the preparation of internal culture for digital delivery and migration to cloud structures.

In addition, the process and service management changes that are required when moving to an agile workplace methodology are often underestimated, causing costly delays and management problems down the line.

“Leaders must maintain a strong grasp of the scope of their modernisation programme: is it targeting legacy IT, customer service Key Performance Indicators (KPIs) or an entire product go-to-market? Often the required expertise for these areas is quite different and operating in silos,” noted Bull. “Maintaining programme or service delivery agility requires communication of progress against a benefits realisation plan in order to manage expectations and avoid getting into a habit of simply grasping for shiny new things.”

A recent report from the Association for Financial Markets in Europe with PwC, sourced from almost 100 interviews with tech-focused senior staff at European banks, revealed that 90 per cent believed the impact of new technologies on the workforce would lead to business and IT skills merging and future roles becoming more relationship focused. (Diagram 3)

The research suggested competition for expertise will be high, requiring banks to invest in re-skilling the existing workforce and drive cultural change to attract new talent. It identified four core technologies: data and analytics, cloud computing, artificial intelligence and distributed ledger technology.



Diagram 3: Future roles

“A clear data management strategy is an immediate priority, as it is the enabler for the four core technologies identified,” read the report, although it noted the varying levels of maturity in the way which data is currently managed and the approaches to realise its future value.

Isabelle Jenkins, partner at PwC, added that success will depend on the ability of banks to achieve long-term benefits from new technologies, by “looking to collaborate where possible, identifying and developing the skills needed, and building a culture of innovation”.

Rhys Sharp, solutions director at Rackspace, explained that ingrained management culture is often a barrier. “There’s been a shift to customer service across the industry, but that’s not always been reflected within businesses, where it’s quite a shock when back office workers have to start thinking about how their systems and processes impact clients and consumers.”

Nick Allen, chief technology officer at lending platform Freedom Finance - which recently completed a cloud migration - explained that moving to a cloud model brings significant changes to an organisation.

“Agile and digital cut into the culture and structures of an organisation and there is no doubt this can be a

difficult thing to change,” he stated. “But this shouldn’t deter organisations from pursuing this journey, as it’s necessary to transform an organisation so it develops the capability and culture to thrive in a radically changing environment.”

Chris West, head of cloud adoption at Travelex, pointed out that cloud services will likely be introduced to a business through a small group of passionate advocates for the technology.

“The next step, however, is that this separate team will establish its own culture and ways of working more suited to a small-scale, agile and cloud-native environment – the inherent conflict between this new culture and the incumbent leads to phenomena such as ‘shadow IT.’”

Shadow IT - projects that are managed outside of, and without the knowledge of, the IT department - presents an opportunity for agile change, but conversely may also have the potential for security risks and creating a patchwork of systems that can, ironically, make systems less agile as a whole.

West commented that the biggest cultural challenge is accepting a loss of ownership and control.

“With on-premise infrastructure it’s possible to see and touch the physical device holding sensitive data or hosting a critical service, but that surely needs to be replaced with trust in an outside organisation, and all of the artefacts and processes that make that trust possible.

“Ultimately the cultural shift is just as necessary as the technological shift – without it cloud becomes, in the words of the popular cliché, just someone else’s computer,” he added.

### Regulatory compliance

Last July, a global survey of over 32 top tier investment banks by IT consultancy GFT (Diagram 4) found that concerns regarding cloud adoption are mainly related to regulation – with 90 per cent of respondents citing this as their main concern.

The biggest regulatory sticking point was the lack of clarity on how cloud will be governed in the capital markets sphere, with various new sets of rules requiring increased due diligence requirements for work with third party cloud providers.

Delays in project initiation included data sovereignty,





Diagram 4: concerns regarding cloud adoption

market systemic risk and personal data sharing constraints. For global businesses, the impact of various local regulations must be considered – many of which are vague on cloud implementation. Future stances from regulators may even see institutions which have not embraced cloud as not being competitive enough, creating potential ecosystem risk.

Tim Bull from Rackspace commented that both the Financial Conduct Authority (FCA) and Prudential Regulation Authority (PRA) have a clear focus on safeguarding customers and the economy by making sure financial services firms are assuring service transformation and are able to provide technology service continuity. This is underpinned by maintaining clear liability and assuring that liquid capital insurance is in place and proportionate to the value of the services they provide.

“Banks and insurers must maintain ownership of their ultimate cloud service delivery, but third party providers can add significant supporting by providing the relevant information to speed up the approvals process with clear sets of Service Level Agreements [SLAs] and KPIs,” he stated.

Chris West from Traveler said that several regulators now acknowledge the existence of cloud infrastructure providers and have some provision for pooled audits for simpler use of their services.

“Unfortunately, they also require a tested exit strategy from each cloud partner which, taken at face value, means having to abandon some of the key benefits of consuming a commodity service in the first instance.”

He noted that a common theme in compliance

frameworks is that a key part of cloud is excluded: the administration or control panel that allows operators to configure services and infrastructure.

“When checklists designed for on-premise compliance are updated for the cloud, most elements will have a one-to-one relationship with a new part of the setup, or will remain the same – so, for example, ensuring that software is up-to-date and fully patched remains the same,” said West.

“But physical access to servers is now the responsibility of the cloud vendor, which will have to provide evidence that this has been audited, and superficially this is just a tick in the box.”

### Skills shortages

A shortage of skills among the workforce means that adoption can be slower, more costly and potentially riskier. These issues are exacerbated by the fact that technology is moving very fast in financial services – meaning that many organisations are finding skills gaps akin to the internet rush of the late 1990s.

Recent statistics from the Edge Foundation suggested there are an estimated 600,000 tech vacancies in the UK - a figure predicted to reach one million by 2020 - while 52 per cent of digital businesses report that these vacancies are hard to fill, costing the UK economy an estimated £63 billion a year in lost additional GDP.

Crucially, analysis by Frontier Economics showed that 18 per cent of the digital sector’s three million workers are foreign born, with one third of those coming from EU countries.

Matthew McDermott, director of public policy at ICT consultancy Access Partnership, said that as organisations wake up to the value of cloud, the demand for cloud skills is growing rapidly across the economy. “While job hunters with technical skills in areas such as machine learning, security and cloud integration are more in demand than ever before, the shortage of these skills not only means vacancies go unfilled, but companies are unable to take advantage of the benefits offered by cloud.”

A study by 451 Research for open source software firm Canonical, among more than 1,000 participants across EMEA and North America, revealed that acute skills shortages in cloud platform expertise (46 per cent),

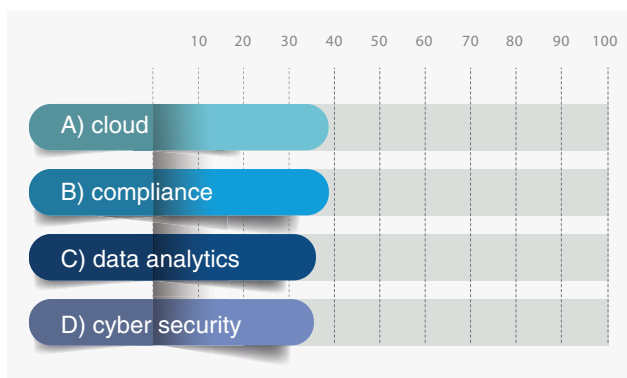


Diagram 5: skills shortages

information security (41 per cent) and machine learning (37 per cent) were the main factors holding back established financial services firms from keeping up with their cloud-native competitors.

Meanwhile, administrative services provider Intertrust (Diagram 5) surveyed more than 500 executives in the asset management, capital markets and private wealth sectors, finding that almost a third (29 per cent) admitted that just keeping up to date with the latest technology innovations was a challenge. The biggest skills shortages were in cloud and compliance (both 39 per cent), followed by data analytics (35 per cent) and cyber security (34 per cent).

### Legacy systems

Last summer, the European Banking Authority warned that many incumbent banks had “very formal and slow governance structures, further restricted by legacy ICT systems or legacy non-performing assets”, which were holding them back.

The regulator’s report divided banks into three baskets: proactive front-runners with aggressive strategies, reactive followers which take a ‘wait and see’ approach, and passive ‘reluctant to change’ lenders which risk getting left behind.

Nick Allen from Freedom Finance reckoned legacy systems impact the time and effort of digitising, as they are often more difficult to integrate and scale.

“It may make more sense to use the digitisation initiative to redevelop the architecture of the business so it gains all

the advantages of the cloud computing model, develops an agile capability and sets itself up in a strong position to become a high-performing business,” he said.

Deloitte’s 2019 tech trends report noted that while technology has created a multitude of ways to engage financial services customers, the tech stack required to do so is incredibly complex and challenging if not developed within the parameters of a digital strategy.

“CIOs are being called on to transform legacy systems and build new infrastructure to support next-generation data management and front-office customer engagement systems,” it read.

Rackspace’s Tim Bull pointed out that before legacy systems are modernised or transformed, supply contracts with incumbent service providers can often be a major blocker to cloud adoption and benefits realisation and may need to be negotiated prior to technology discussions.

His colleague Rhys Sharp added that really archaic systems which can’t be moved to the cloud can be ring-fenced. “This has been the case when trying to support the move to Open Banking – many have found that they can keep the old systems of record in place and develop secure connections to cloud hosted, agile front end solutions.”

### Security fears

Hybrid and multi-cloud strategies increase the importance of security and data provenance. While most vendors can meet today’s security norms, adapting and complying with bank security policies is a major obstacle to project implementation.

Last year’s Rackspace survey revealed that when asked about current cloud infrastructure concerns, 76 per cent ranked security and privacy as a top concern, with 69 per cent realising they were out of their depth and unable to maintain control both during and after migration.

The FCA’s cloud outsourcing guidance, published last July, noted that uncertainty around the regulator’s approach was acting as a barrier to firms moving to the cloud. It sought to clarify its position by laying out - amongst other things - the key data security considerations.

Firms should agree data residency policies with providers, setting out the jurisdictions in which data can be stored, processed and managed.

Firms should also take appropriate steps to mitigate security risks so that the overall security exposure is acceptable, and consider how the data is transmitted, stored and encrypted.

“Using the cloud can provide more flexibility, enabling innovation and bringing benefits to firms, their consumers, and the wider market,” stated the FCA. “However, it can also introduce risks that need to be identified, monitored and mitigated – these risks primarily affect the degree of control exercised by the firm and specific issues such as data security.”

Tim Bull from Rackspace argued that as a clear and obvious target for cyber criminals, cloud service providers have some of the strongest security in the world. This includes a rigorous maintenance of strong posture measures, best practice process and proactive cyber-hunting for inserted threats or malicious trends across multiple threat vectors. Despite this, they may still have some way to go in convincing prospective clients of the security, as they lose the ability to ‘see and touch’ many of the lines of defence once they have moved in to the cloud.

“Security is a fundamental service delivery tenet near the top of every new service transformation agenda. But a lack of confidence in cloud security can sometimes mean that when a company does sign up, they request additional - and often disproportionate - layers of security, which can increase cost and reduce agility”.

## Conclusion

The initial process of cloud migration is often blocked by a lack of business preparedness for the transformation, with hurdles that can be just as much cultural as technical.

Potential solutions are to be found by laying the

groundwork for cloud adoption with skills training, an expanded role and resource for IT teams, and third-party assistance. Technical expertise, both internal and external, needs to be a priority from the top down, and properly integrated into a company-wide cloud policy, in order to combat business silos and a lack of support from the top.

Of course, every sector within financial services has different pressures, but the six factors outlined in this report should help provide a checklist for any organisation at any stage on their cloud transformation journey.

Checking back in with those interlocking pain points, it's clear that unless there is buy-in at both board level and with those carrying out tasks in the back office, even large IT investments are likely to fail. However, if time is taken to explain the benefits of cloud adoption and moving from old systems, then potentially arduous and expensive tasks can be carried out quicker and easier by motivated staff and understanding leaders.

By taking a systematic approach to building in-house capabilities and leveraging outsourced capacity, no issue is insurmountable.

## Next steps

Cloud technology powers digital transformation in the financial services industry and serves as a central platform for profitable growth. If you want to learn more about undertaking cloud projects and how to overcome cloud adoption challenges, then get in touch with [Rackspace's experts today](#).

Alternatively, [read more about common financial services cloud obstacles](#) and how you can overcome them to achieve your business's digital transformation goals.

## About Rackspace

More than ever before, financial services organisations are adopting cloud technology and creating new digital workflows in order to reduce IT costs and improve their agility.

At Rackspace, we accelerate cloud value during every phase of your digital transformation. By managing apps, data, security and multiple clouds, our professional services experts can help your business innovate with new technologies and maximise the value of your technology investments.

As a recognised Gartner Magic Quadrant leader, we're uniquely positioned to help you close the gap

between the complex reality of today, and your business aspirations for tomorrow.

## What we do

We combine decades of customer experience, expert guidance and a deep understanding of the unique security, performance and scaling needs of financial services businesses.

Our professional services experts can help you deliver migrations, modernise and automate business processes, secure everything, maintain compliance, navigate

complex architectures, and make better decisions with data.

## How we can help

We help financial services organisations enable more effective collaboration between formerly siloed business areas.

Passionate about your success, we provide unbiased expertise, based on proven results, across leading cloud technologies. We offer the industry's broadest portfolio of applications, data, security and infrastructure services to help our customers thrive in a multi-cloud world.

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