

Banking on cloud to drive transformation

How cloud-based analytics can help banks increase momentum, mitigate risks and reduce the cost of digital transformation initiatives.



Turning up the heat

For today's banks, digital transformation is no longer just a strategic choice. It's a business imperative. Branches and call centres are expected to handle huge volumes of customer inquiries every day, while meeting customer expectations for thoughtful, personalised advice and support. This balancing act is impossible to achieve at scale without digital support.

Customers also expect the same level of service from online and mobile banking that they get from talking to a real human being.

However, most banks still can't offer their full range of services through online channels, and struggle to embed the intelligence and empathy of human interaction into their online customer experiences.

Back-office processes usually lag even further behind the digital transformation curve. Manual processes abound, and monolithic mainframe-based legacy systems make it difficult to drive radical change.

Unlocking innovation

Banks have the data they need to innovate, but it's imprisoned in siloed databases and unstructured documents. Teams from different departments cannot easily collaborate and the path to insight is fraught with obstacles.

Tough economic conditions act as a further barrier to transformation, as liquidity challenges make it difficult for banks to invest in innovation. Nevertheless, the outlook is not entirely bleak.

The industry's rapid response to the COVID-19 crisis has proved that it's possible for banks to deliver significant change projects in a matter of weeks or even days, rather than the six to nine month cycles of the past.

If banks are to meet the challenges ahead, this rapid delivery model needs to become the new normal for digital transformation initiatives. This will only be possible if banks adopt agile practices and build on cloud platforms to unlock the potential of artificial intelligence and machine learning (AI/ML).

Analytics drives digital transformation

Until now, most digital transformation initiatives have focused on customer-facing systems such as online banking and mobile apps. While these digital experiences are an important first step, the majority of business benefits achieved by digital transformation will come from streamlining operational processes. More specifically, by harnessing analytics to support smarter decision-making and drive intelligent automation in the back office.

However, embedding analytics into business processes at scale is no easy task. Developing and training AI/ML models requires experimentation and incremental improvement - it's an embodiment of the concept of 'failing fast', where the key is to test new ideas quickly and at low cost, and use the lessons learned to find a winning strategy.

Banks often struggle with this philosophy because their existing operational models are not set up to fail fast. Their on-premise infrastructure, siloed data, monolithic applications and regulatory constraints dictate that projects fail expensively over many months, which means experimentation is not an option.

Cloud enables experimentation and innovation

The cloud can be an effective option for banks that are looking to escape these constraints and accomplish their digital transformation goals. By eliminating the need for up-front investment in hardware, allowing transformation teams to spin up new development environments within minutes, and abandoning unprofitable experiments at minimal cost, cloud platforms can shorten the test-and-learn feedback loop. This accelerates the incremental development of AI/ML models and makes it possible to deploy the best candidates and then rapidly scale them up across the enterprise.

Cloud can also bring a host of other benefits for analytics-based innovation projects. It provides a shared platform for collaboration between departments, breaking down the silos created by legacy infrastructure.

Cloud solves the model deployment challenge

The cloud can also help banks implement an efficient model operations (ModelOps) strategy, which is critical to unlocking the value of AI/ML and driving digital transformation.

ModelOps provides a robust set of tools and workflows that act like a set of intermediate gears between the data science and IT operations teams - enabling the smooth transmission of models from development into production, while allowing both teams to work productively and at the right pace.

Act fast

A cloud-based platform for ModelOps can enable reliable deployment even in the most complex banking environments. For example, banks can quickly spin up cloud environments for model development and training, then operationalise and deploy the most successful models back into their own data centre to enable easy integration with legacy systems and processes.

"I recently spoke with a Chief Risk Officer who estimated that during the credit crisis in 2007, delays to model deployment had cost their bank around £500k per month. A sound ModelOps strategy can help banks accelerate delivery, reduce risk, and avoid those significant costs."

Paul Jones, Head of Technology, SAS UK & Ireland

Monetize your services

Cloud also abstracts away concerns about infrastructure management, allowing project teams to focus on the core goal of delivering business value through differentiated offerings.

Moreover, cloud can help your bank think like a fintech by creating new 'X as a Service' offerings. Cloud platforms can help you package your internal expertise into products for large corporate clients - think Treasury Management as a Service, Credit Collections as a Service, or even Risk Modelling as a Service. These new revenue streams can help you future-proof your business as the landscape of banking changes.

Model management challenges



of companies

take more than three months to deploy a new model into production¹



of companies

find that at least 40% of their models fail to reach production²



of companies

lack the technological infrastructure to support deployment³



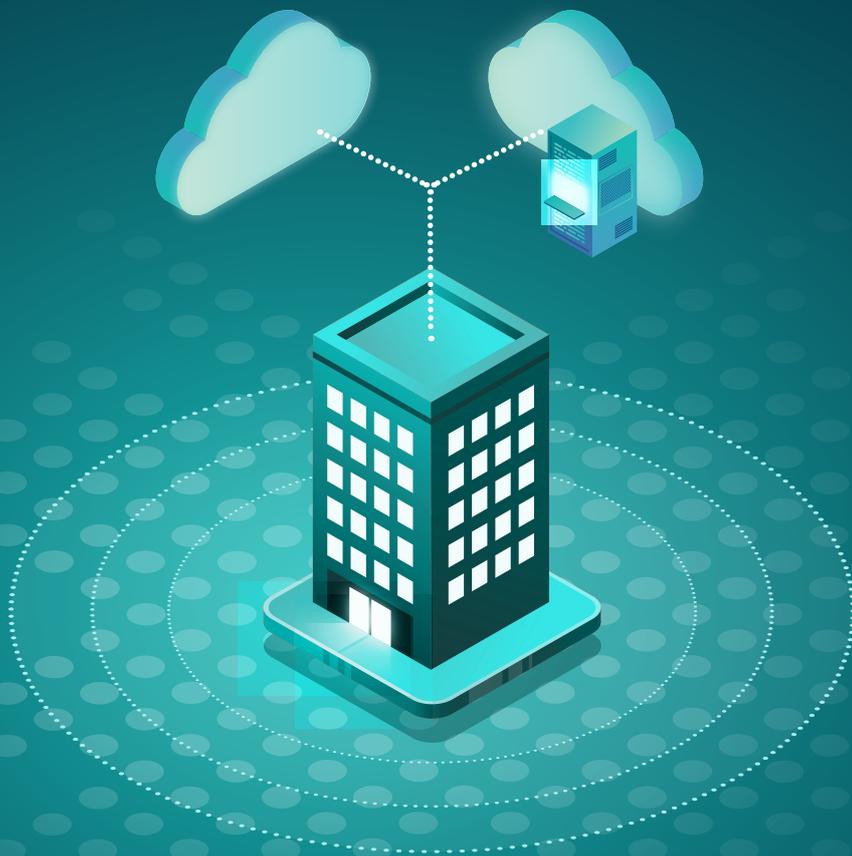
of companies

cannot easily embed AI into decision-making processes²

Finding the right cloud platform

Bearing in mind the scale at which most banks operate, analytics isn't just about the individual brilliance of your data scientists, or even the automation of your data science pipeline. The need to operationalise models and embed them into business processes also creates a wide range of technical requirements: servers and storage systems, operating systems, databases, development tools, data governance frameworks, monitoring and analytics, auditing and compliance capabilities, and backup and disaster recovery processes.

Without all these basic components supporting your model development process, it's impossible to run a successful enterprise-scale data science program and get innovation into production. That's why your cloud solution should provide a complete platform that's designed for running analytics at scale. This comprehensive platform will enable your team to focus on activities that drive differentiation and business value, while leaving day-to-day systems administration and batch processing tasks to a specialist provider.



Five key questions to ask cloud analytics providers

Q1

Does your platform provide a fully-managed cloud infrastructure that enables quick onboarding and easy scalability?

Q2

Will your team take full responsibility for day-to-day tasks such as system administration, batch processing, security monitoring, patches and upgrades?

Q3

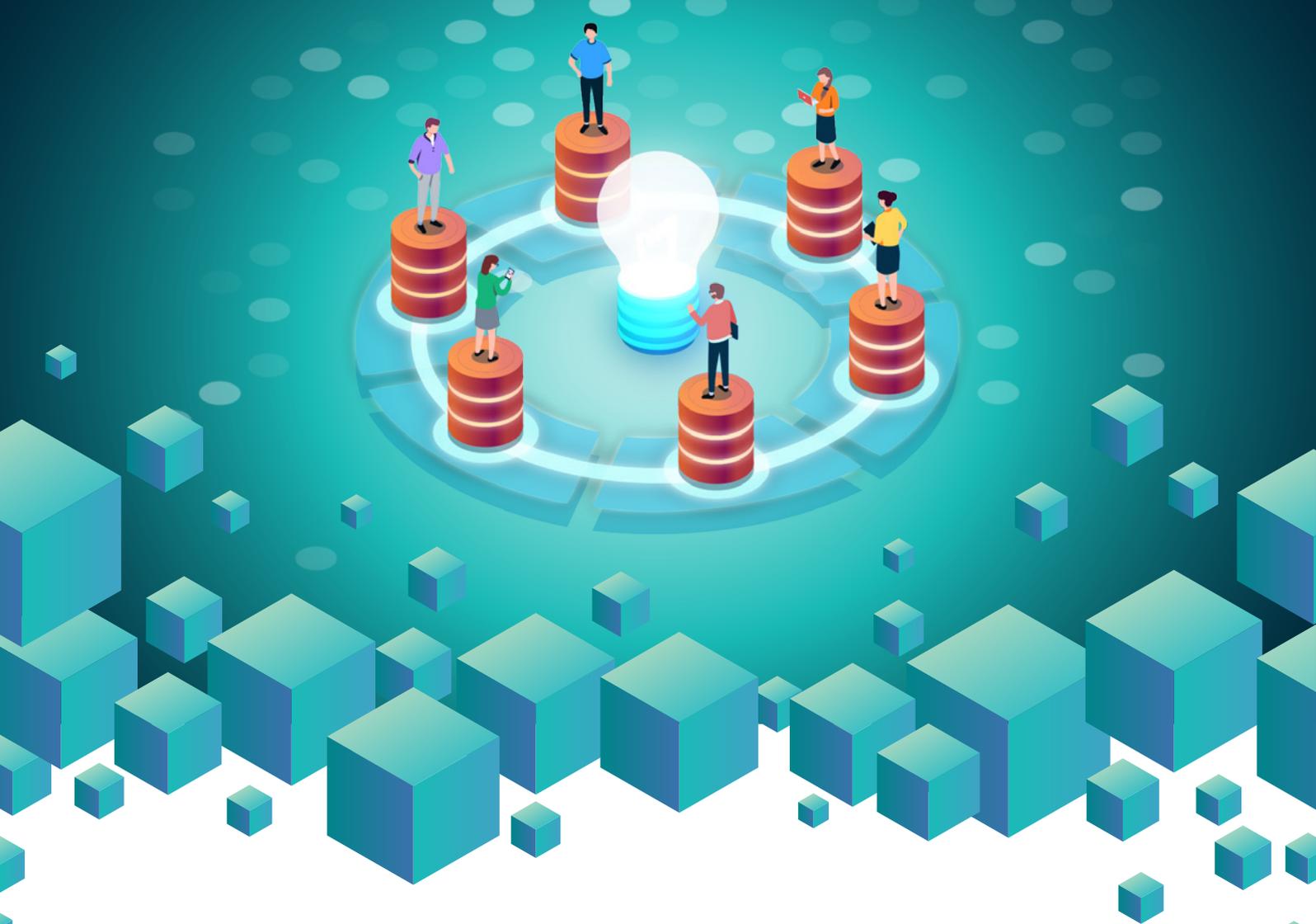
Do you offer an automated data science pipeline with built-in ModelOps to de-risk and accelerate deployment?

Q4

How do your legal and commercial frameworks ensure that our data, models and intellectual property will remain under our control?

Q5

How can you guarantee that the analytics we develop on your platform will be portable to other cloud and on-premises platforms?



Taking the next steps

Moving to a cloud analytics strategy is no easy task, and at SAS, we've experienced the challenges at first hand. As both a data science company and an IT operations company, we've been working on the concept of a scalable enterprise analytics platform for over 40 years. With the maturity of cloud technologies, and the widespread adoption of practices such as continuous integration and deployment (CI/CD), we've now started to see our clients turning this vision into reality.

Break siloes, unite teams

We can show you how to use the cloud to break the model lifecycle out of departmental silos and provide a commercial model that suits the experimental, fail-fast approach that agile organisations need. Meanwhile, our ModelOps capabilities can provide common ground for your data scientists and IT operations teams to collaborate effectively, and ensure proper governance while managing models at scale.

These strategies have already helped many SAS clients in the banking and financial services sector achieve their goals. For example, Covéa has gained the ability to efficiently deploy complex machine learning models efficiently in high volume real-time scenarios,⁴ while Standard Chartered Bank has enhanced its support of IFRS 9 by accelerating its data science pipeline - a project that won The Asian Banker's Enterprise Technology Implementation of the Year award.⁵

If you'd like to find out more about how SAS can help your bank drive digital transformation through cloud-based analytics, take a look at the latest insights and ideas from our expert banking team.

Sources

1. SAS, 'The new analytics ecosystem'
2. Ibid
3. McKinsey, 'AI adoption advances, but foundational barriers remain'
4. Demarq, 'Actuarial Transformation at Covéa Insurance'
5. SAS, 'Standard Chartered Bank and SAS awarded The Enterprise Risk Technology Implementation of the Year at The Asian Banker Risk Management Awards 2018'