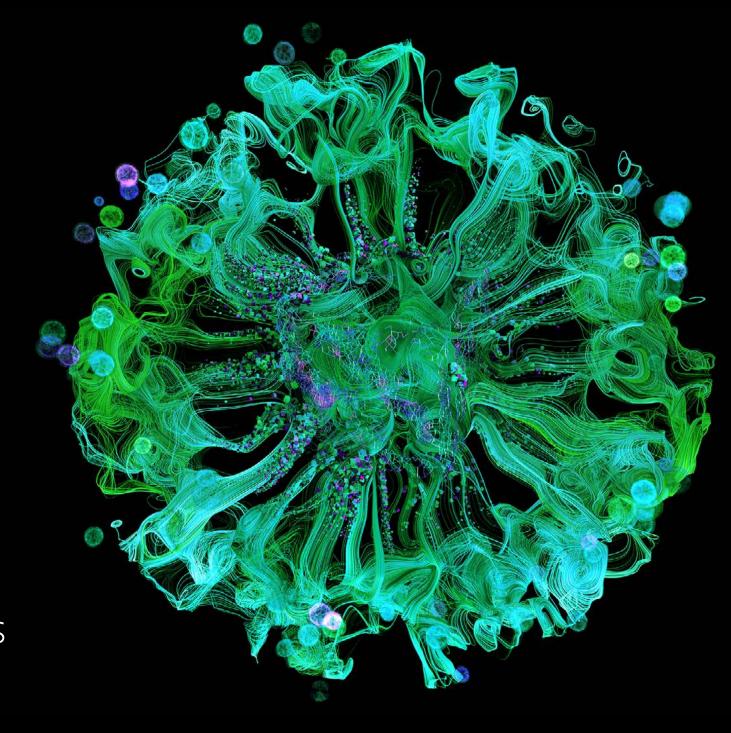
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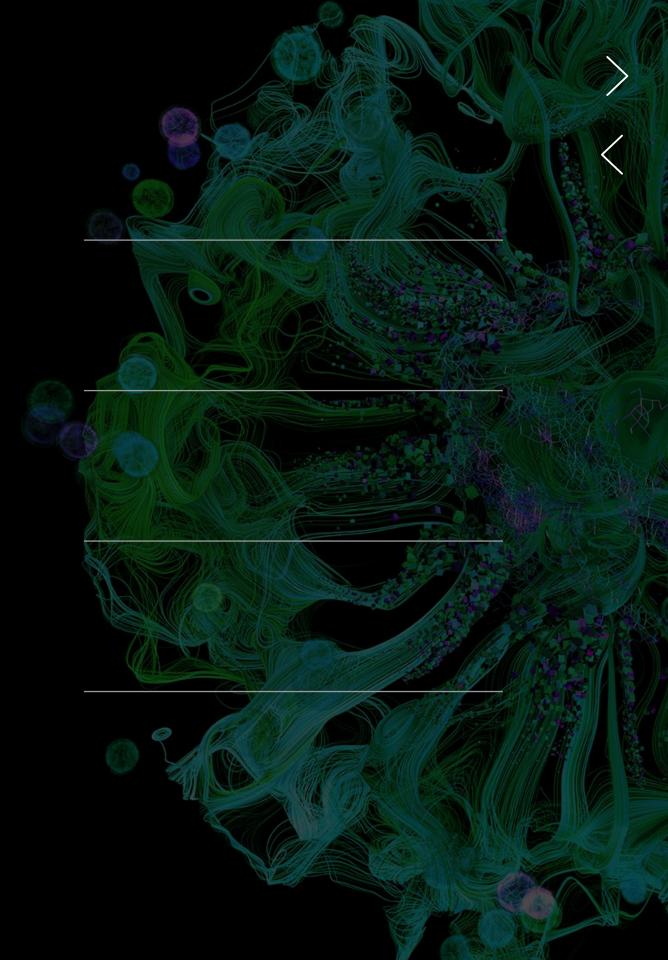


From migration to modernisation

Unlocking more business value with cloud







Application modernisation

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In this paper, we're taking a closer look at application modernisation and why it's increasingly being discussed in board and senior executive circles, especially in relation to cloud strategies.

Over the last few years, a prevailing view has emerged that after more than a decade of cloud adoption and migration, it's clear that some of the anticipated benefits that come with this shift haven't fully materialised – because the full capability of these modern platforms haven't been fully exploited. This is why focusing on modernisation is now seen as a way of rectifying this under-performance, while at the same time achieving business and technology goals, minimising costs and delivering value in above-the-line areas such as innovation, agility and growth, superior customer service, faster time to market and better employee engagement.

While there will be different definitions, we expect this phenomenon to stay on the executive agenda in the years to come as organisations pursue their respective missions – whether it is through cloud strategies or other business innovations.

So, what do we mean by application modernisation, exactly? At Deloitte, we think of it as this:

"Application modernisation can help you reimagine and rearchitect your business and IT functions. By taking an accelerated, efficient and holistic approach to transforming legacy platform-based enterprise applications, companies can garner value out of their existing systems and start using new technologies for innovation and growth."

11 key drivers

Traditionally, cloud strategies have sometimes underplayed the importance of business value. Modernisation can help unlock this value and ensure that cloud becomes a strategic objective, rather than just a migration exercise.

Increasingly, clients want to use modernisation to simplify the existing technology landscape, de-risk ageing assets and address this business-value imperative. Other drivers include:

Changing the functionality or experience of an important application to better serve a business area in the future

Reducing complexity and expenses by rationalising older applications and embracing fewer, more flexible components

Making applications more maintainable and manageable by breaking apart ageing monoliths and replacing legacy underpinning foundations

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Improving the efficiency, security and quality of operations via modern automation technologies

Reducing maintenance costs and effort by taking advantage of evergreen platform foundations (e.g. PaaS and native services)

Outsourcing large pockets of infrastructure and code-based maintenance (e.g. SaaS)

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Enabling easier experimentation with modern artificial intelligence (AI) and machine learning capabilities by aggregating or serving data differently

Refreshing and improving the current design and architecture of some underpinning application components.

Taking advantage of spiky

Achieving greater resilience without managing complex, expensive cluster configuration (e.g. PaaS, SaaS)

Future proofing your workforce: Making yourself attractive as a potential employer to a workforce that is increasingly 'born in the cloud' and expects to develop and consume modern platform and software services; and

demand to scale infrastructure up or scale down and pay by IOPS (that is, input/output operations per second)

Overcoming challenges

Even if the business case for modernisation is clear, implementation can present hurdles.

Many organisations have a diverse and expanding technology landscape in which cost blowouts have become the norm. Others find executives don't know how to initiate change. These challenges can lead to procrastination, poor decision-making and, ultimately, ineffective outcomes.

As a starting point for successful modernisation, it is advisable to:

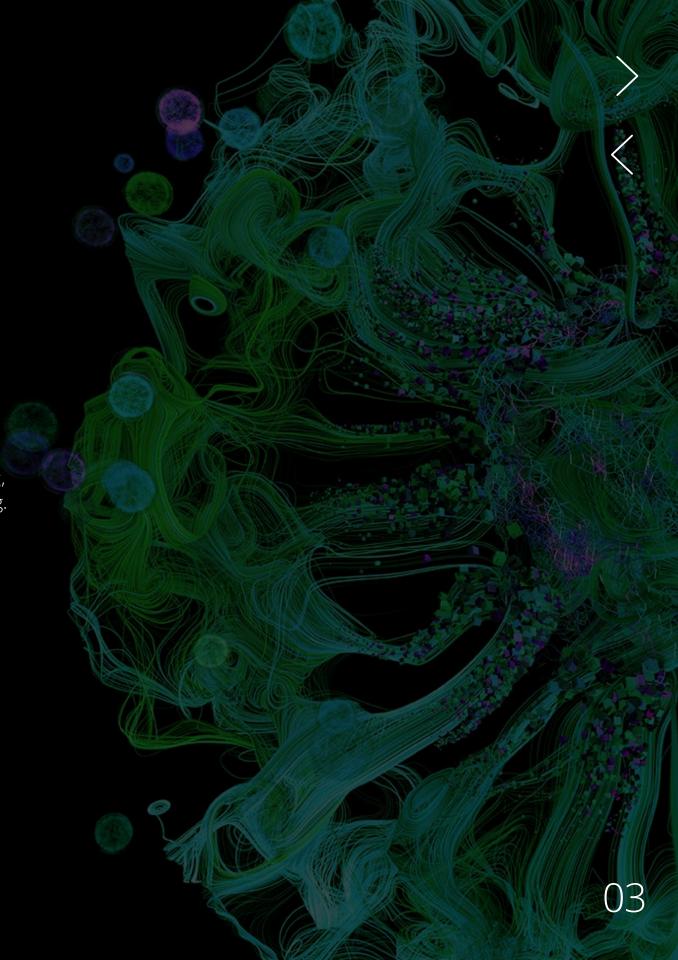
- **get consistent sponsorship** visible leadership is needed to propel programs and lend credibility to the transformation program
- **ensure someone is driving the change** this is crucial for execution and to mobilise all parties involved
- **get skin in the game** for a modernisation project to succeed, all stakeholders must be able to see the benefits and want it to work

- avoid fragmentation or risk ending up with an incoherent strategy and entity; and
- **be holistic** a piecemeal approach will inevitably fail for a complex project that seeks to improve the architecture, infrastructure and delivery of legacy platforms.

Traditional application portfolio management approaches often concentrate on elements such as periodical licensing, technology life cycles, rationalisation and decommissioning. Innovation and evolution are often neglected.

Another challenge is that the seven common migration strategies, known as the 7Rs – re-architect, re-platform, re-purchase, re-host, relocate, retain and retire – focus on enterprise migration speed, rather than true modernisation. This approach often emphasises technical, data-driven assessments and limits the potential for true transformation and modernisation.

To unlock more business value, it's better to upgrade only those applications that need to be improved, to target obvious re-platforming opportunities, to re-host where applicable, and only then to re-architect and re-factor what cannot be addressed through the earlier steps.



Looking through a business value lens

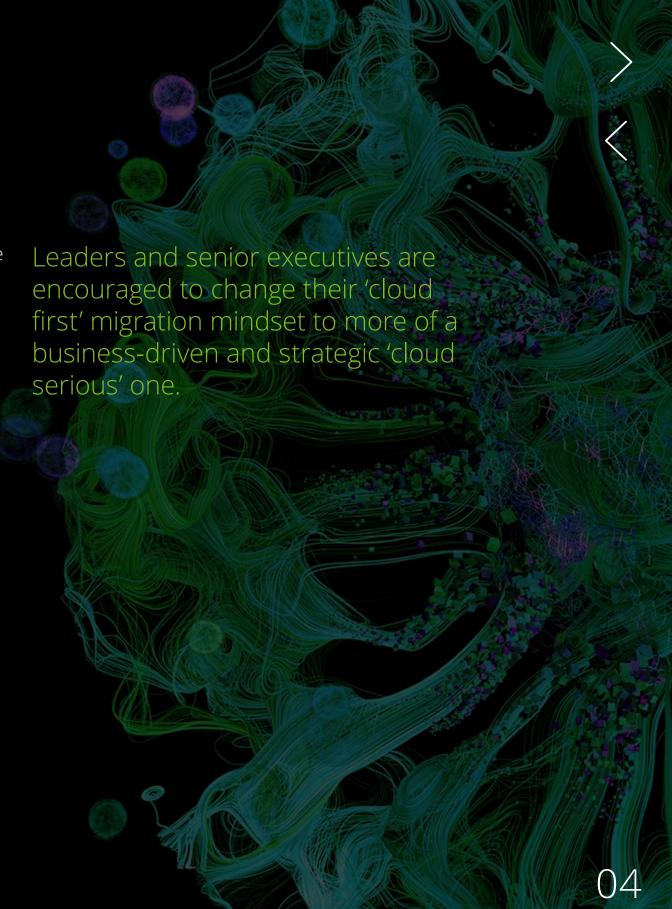
A comprehensive application modernisation framework should put a far greater emphasis on realising value than is often the case.

Then, at a basic level, any modernisation assessment typically needs to balance two elements:

- **1. The value of the opportunity** (i.e. how likely it is that any investment will deliver a return); and
- **2. The complexity and feasibility of goals** (i.e. how much effort and investment it takes to deliver the desired outcomes).

Modernisation programs often come with a significant price tag. Given this truth, a company should understand the desired benefits while appreciating the upfront investment required to reap those multi-year benefits. All elements should be working together to result in a full end-to-end (E2E) modernised state.

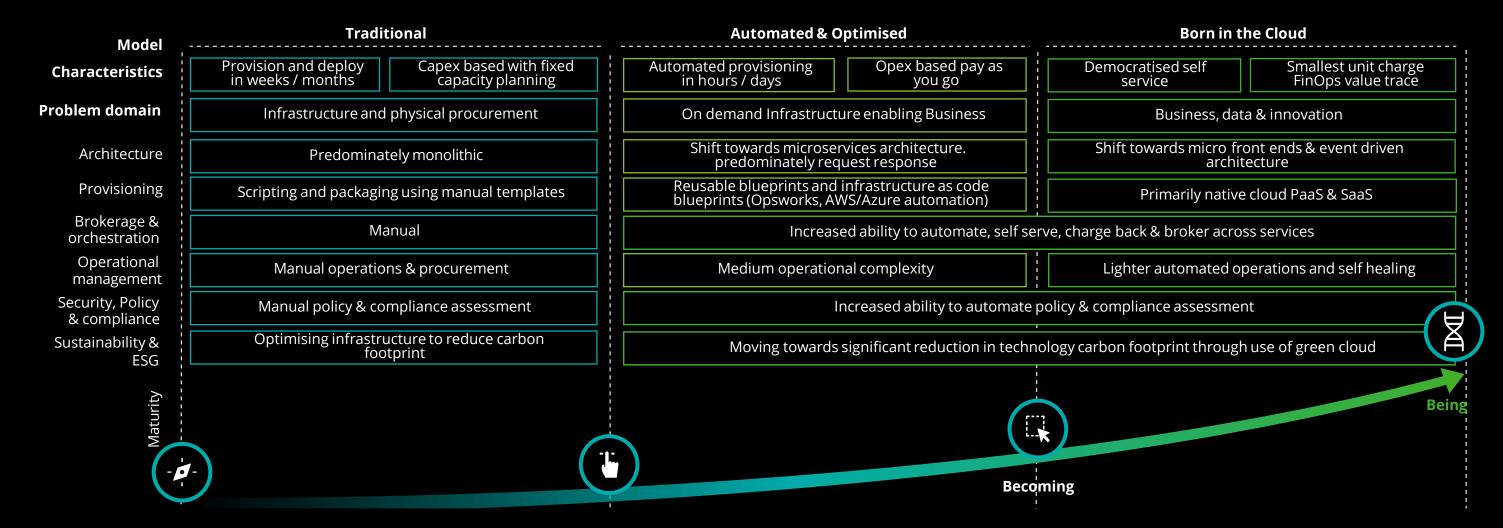
The key is to take a long-term view, rather than opting for initial savings that could result in an inferior solution that will potentially rob organisations of more substantial benefits over a period of years.



Modernisation maturity model

In order to optimise your organisation's modernisation journey, it's important to understand where you are today. Our modernisation maturity model summarises how

you can take steps to change your organisations' strategic focus towards truly 'being' in the cloud, thereby unlocking business benefits like being greener, better and more innovative.



Deloitte's Modernisation Index - your starting point

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Deloitte's Modernisation Index is designed to help you understand where to start your modernisation journey once you have mapped where you are today using the Modernisation Maturity Model outlined on the previous page. You can't modernise everything. We recommend you start your journey towards truly 'being' in the cloud by prioritising strategic business potential against current business requirements across your technology landscape. This will give you a data-driven view of the best candidates for modernisation, rationalisation and simplification.

Transition challenges

Before taking any action, it's important to be aware of four key transition challenges which the Index can help you overcome with confidence:

• Business buy-in

Developing understanding of and buy-in from internal stakeholders on your strategic direction

Secure funding

Ensuring you have sufficient funding to execute on your Cloud initiative

Limited resourcing

Making sure you have the right people with the right skills to deliver; and

• Data-driven decisions

Being prepared with the right data and insights in order to make informed, fast decisions throughout your initiative.

High potential

Prototype to production

Seize opportunities for quick wins to prototype and innovate using new technologies or business paradigms

Improve agility to test the ROI of bold plays

Support

Sunset

Remove functionality that is no longer used

Reduce technical debt and streamline operations

Strategic

Differentiated

Rearchitect or build new to change business functionality to take advantage of Cloud-native

 Exploit the full advantages of Cloud to optimise development, deployment, and operation and reduce technical debt, including redundant code

Key operational

Stable

Reuse existing functionality that works well, use automation to fit to target technology where required

 Reduce risk and retain functionality with a more cost-effective and modern infrastructure

Low

Strategic business potential

Low

Fit with current business requirements

High

Our modernisation roadmap: Are you ready?

When engaging with our clients, we help create a modernisation roadmap to drive future business value, digitally transform operations and serve customers.

Our goal is to deliver business value metrics through a multifaceted, cross-organisational effort. A comprehensive technical assessment of the state of applications results in the prioritising of investment that eliminates poor applications and favours high-value applications that can form part of an organisation's strategic future. We want to simplify the cloud and IT landscape for businesses and help solve complex business problems while using cutting-edge technologies.

Advising – applying a lens across an organisation's application portfolio to determine those applications that are suitable for modernisation

Typically, we follow a three-step process that entails **Implementing** – scoping applications for modernisation, typically with a view to realising the full value of cloud and other innovations through four modernisation paths (see below); and

Operating – pairing our experienced team with clients to coach, train and reskill them to work in an integrated DevOps, Site Reliability Engineering (SRE) and cloud operating model.

Our PACE approach is at the heart of our modernisation roadmap, which helps businesses achieve value by holistically embedding considerations across four pivots:



Process (using modern DevOps, with an emphasis on being agile, iterative, measured and improving)



Architecture (drawing on evolutionary architecture such as cloud native, microservices, serverless computing and containerisation)



Culture (focusing on the organisation and the workforce, with a view to building empowered teams); and



Engineering (using cloud infrastructure such as CI/CD to assist with application development).

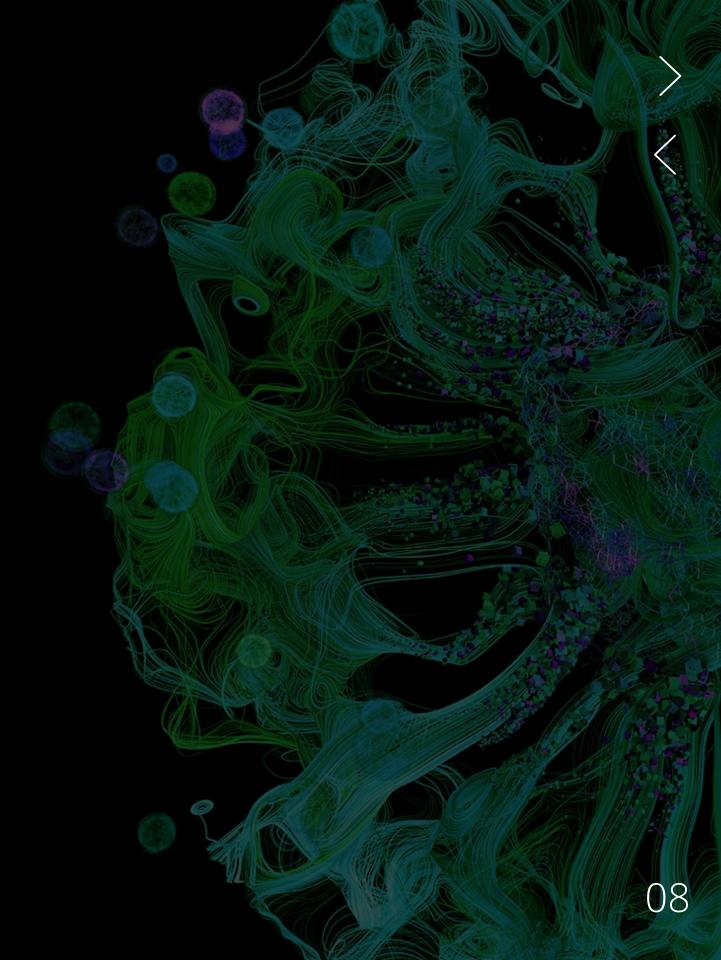
Our track record – some examples

At Deloitte, we are helping a range of clients with their modernisation roll-out, allowing them to capture the full potential of cloud strategies. We offer a collaborative team with the industry experience and technical skills to ensure you realise the full benefits of this transformation.

Our Deloitte Cloud & Engineering team has a proven record, with two recent projects underlining our credentials.

For example, we have helped a leading Australian health agency deliver the first phase of its modernisation of the national digital health infrastructure. This project delivers a secure and scaleable platform for exchanging and accessing health information, including priority areas such as vaccinations and aged care data. A new Health Information Gateway will also provide improved support for the integration of health information from multiple sources into clinical information systems.

Another recent example is our current work for a large Australian bank, involving undertaking an application rationalisation capability assessment that is designed to produce ongoing operational cost savings for the bank and provide business optimisation opportunities.



Stay connected and find out more

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Digital modernisation white paper

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