Cloud
A step-by-step guide to making your transformation a reality
Keeping pace in a rapidly changing environment

It’s clear that there is a continued shift in not just technology but also its impact on the way we work and the expectations of the people we work with.

As the technology landscape continues to evolve at pace, new innovations need to be carefully considered. However, we believe that it has never been a more exciting time to be a leader in the education sector. It is arguably also the most challenging – with concerns including:

• Keeping pace with new technologies
• Recruiting and retaining relevant skills on a tight budget
• Driving down the need for capital investment
• Maintaining resilience in a time of increased cyber threats
• Creating a modern workplace, whilst getting the cultural buy-in for change
• Keeping the student experience at front of mind among the ‘noise’

Cloud provides an environment for scalable agile technology innovation. Our cloud services can empower you to transform.
Cloud - a step-by-step guide to making your transformation a reality
As you migrate to the cloud or implement cloud-based solutions, you’ll need to resolve complexities relating to project management, cost, capability, legal/governance issues, service assurance, security – and more.

That can be challenging. So at Jisc, we’ve created a six-step plan to help you see past these obstacles and guide you through your transformation journey.

The six steps are **Strategy, Discovery, Approach, Plan, Implement** and **Optimise**.

“Whilst we are still at an early stage in our journey, we have learnt a lot and invested in our own capabilities to give us the ability to work in a more agile way. The move to Azure provides interconnected interdependent technology that can underpin that rapid agile approach.”

**Helen Walker, chief technology officer, Department for Education**
1. Strategy
Understand vision and set transformation objectives

A cloud project relies on effective strategy. By understanding high-level objectives, you can achieve clarity, and avoid falling into the old trap of ‘technology for technology’s sake’.

**Set out your vision**
You may already have a good idea of how the cloud might help you or already be using it. But how might these benefits link to your organisation’s wider digital strategy?

Is your main focus on improving curriculum delivery, student outcomes, or the overall digital experience?

Do you hope to reduce risk, facilitate research, save on estates costs, or have more time for your IT team to focus on user needs?

Refine your objectives with a vision in place, you can build on that and refine your objectives in more detail.

What measures of success would you use? If you want to improve curriculum delivery, does that mean improving engagement metrics, satisfaction scores – or something else?

Having clear answers to such questions will enable your cloud project to start with goals in mind - even if they need refining later in the process.

**How Jisc can help**
Our Jisc cloud team can help look into your organisation and identify your key priorities.

Speak to your account manager to find out more.
2. Discovery
Understand stakeholders, technologies and costs

With initial vision and objectives in place, it’s time to enter a Discovery phase – and build a picture of your current environment.

To do this effectively you need to:

• Listen to stakeholders – such as senior leadership, IT administrators, staff, researchers and students – to understand their needs and expectations

• Review and assess your current infrastructure, systems, processes and applications

• Gain an understanding of the range of alternative solutions available

• Understand how you allocate existing resources

By understanding your environment in this way, including the range of technologies available to you, you can more easily spot the gaps between where you are and where you want to be – which will help you define your approach.

“The team have given us a clear and reassuring view of where we are now, what we can adopt, how to do it and the kind of savings we can expect”
Paul Brewer, director for digital and resources, Adur and Worthing Councils

How Jisc can help
Our cloud consultancy workshops help you understand stakeholder needs – and we can also signpost you to a range of related services to help you assess your readiness and review your estate. 
Speak to your account manager to find out more.
Having built a picture of your environment, you can analyse it in detail and formulate your approach to your cloud migration or implementation.

**Identifying quick wins**

To get early buy-in for the project we recommend identifying ‘quick wins’. These tend to be the easiest tasks that still show positive results. This can help build confidence across the organisation in the wider project.

Every situation is different – but to find quick wins in a migration project, for example, you might consider making a list of your environment’s separate elements.

You might then rank them by criteria such as the following:

- **Level of strategic priority for your organisation**

- **How easily they can be moved, taking into account technical, security, capacity, legal/compliance and cost-related factors**

- **How easy it is to measure the success of the migration**

Using this analysis, you could work out what is the best cloud model for each element; see how your architecture might develop to support these models; and assess where quick wins are.

You could use similar analysis to outline phases of action in many kinds of cloud project, including meeting implementation challenges.

At the end, you will have a roadmap that starts with the quick wins, and moves on to more complex tasks once you have built confidence and momentum.

**How Jisc can help**

Our team of cloud experts have a vast experience in planning cloud migrations, helping you to identify the quick wins and map out your approach to cloud.

Speak to your account manager to find out more.
4. Plan
Design your specific project plan

It’s often said that the ‘devil is in the detail’. With quick wins identified and an outline in place, it’s time to move on to more detailed project design and management — overseen by a project board or steering group.

Once you have an idea of approach, it is time to put together a specific plan. This will go into deliverables - what will be done, when and by which teams.

Aim to keep strategy and objectives in mind — for example, by including the data you would need to gather to meet objectives you identified in Step 1.

Planning in milestones
As you plan, look to break the project down into smaller phases with clear milestones.

This allows you to review progress in Step 5, and assess whether you need to adapt any aspect of your approach.

Planning for risk
The planning stage is a chance to make sure you’ve understood the range of risks and governance issues that could affect your project.

These could range from common risk factors such as data compliance, security and financial risks, to ‘human’ factors such as planning for cultural change, or ensuring you have skills and capacity.

“The team’s invaluable experience of working with public service organisations and understanding of cloud strategy has provided the partnership that CBH needs to progress the delivery of our new applications and move our IT strategy forwards.”
Louisa Dowsett, corporate project manager at Cheltenham Borough Homes

How Jisc can help
As part of our strategy & roadmap service we can provide you with a detailed plan to the cloud. This includes key milestones and risk mitigation.

Speak to your account manager to find out more.
5. Implement
Build, deploy, test and review

At last: it’s time to implement your cloud project. But remember that few IT projects turn out as you envisaged at the start – and that’s not necessarily a bad thing.

The approach you take to implementation will depend on the results from the discovery and planning phases, and will be completely unique to your organisation. When looking at your existing service infrastructure we recommend you follow the five R’s to decide how to deploy to new environments:

**Rehost** - Redeploy applications to a new hardware environment and change the application’s infrastructure

**Revise** - Modify or extend the existing code base to support legacy modernisation requirements

**Refactor** - Run applications on a cloud provider’s infrastructure

**Rebuild** - Rebuild the solution on PaaS, discard code for an existing application and re-architect the application

**Replace** - Discard an existing application and use SaaS

**An agile workflow**
During this phase it is important that you are continuously looking to iterate, test and respond to user feedback. We recommend taking an agile approach to managing the project - by doing this, you can refine your plan to meet changing user needs, while meeting strategic goals.

**Review outcomes**
A project is never really ‘complete’ until it’s decommissioned. So after implementation, you should review project outcomes – so you can optimise and consolidate going forward.

**How Jisc can help**
Our consultants, architects and engineers can support you implement cloud projects and become more agile as an organisation.

Speak to your account manager to find out more.
6. Optimise
Review, Environment scan and identify new areas for innovation

Once you have successfully moved to the cloud, that is not necessarily the end of the project, it’s important that your set-up is optimised for public cloud and you are aware of the latest services these providers offer.

Public cloud is so much more than a like-for-like replacement for on-premise compute and storage. In addition to giving you new options in terms of speed, cost, agility and global reach, it can open up entirely new technologies like serverless infrastructure, IoT and AI and provide the flexible core infrastructure to deliver the digital services that customers and employees need and expect.

To truly realise the potential of public cloud, you need to do two things particularly well:

1. Understand and optimise your own architecture

2. Keep pace with change being offered on your chosen platform

How Jisc can help
Our cloud team can keep you informed about the relevant updates from your chosen provider, identify ways in which these could be used to benefit your organisation, and provide ongoing support.

Speak to your account manager to find out more.
In the Jisc cloud consultancy team, our certified cloud experts can help you cut through the complexities of the cloud.

No matter what step of the journey you’re at, we’re here to act as a ‘critical friend’, helping you meet your digital goals.

We offer tailored advice and support, specifically targeted to your needs – and grounded in our experience as a not-for-profit organisation serving the research and education sector.

“...the value of Jisc and the cloud team specifically is as a critical friend and to help keep my head in the strategic cloud and not in the technical detail.”

Philip Gourlay, associate director IT service delivery and operations, Goldsmiths, University of London

Find out more
To find out more about our cloud consultancy service, please contact your account manager (jisc.ac.uk/contact/your-account-manager).

For further information, see jisc.ac.uk/consultancy/cloud or email cloud@jisc.ac.uk