MOZAIC

THE DIGITAL SHIFT

AVOIDING THE TRAPS OF CLOUD MIGRATION

Public cloud services are a fundamental part of the shift towards a digital delivery and operating model. This paper explains the key steps you should take to make that shift successful while maintaining effective control over service delivery and increasing the pace of change.

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Embrace the Shift to Cloud

For most organisations; it isn't a question of whether to migrate to cloud but how. Those who delay risk missing out on the myriad of benefits to be gained from cloud and digital operating models; as well as potentially making the eventual migration even more challenging.

As organisations take advantage of the benefits of modern digital operating models, they face challenges to avoid disruption to traditional operating models potentially leading to loss of visibility and control; risks around data privacy and security and failing to deliver the expected value of this transition.

In this paper we explain the principal pitfalls of this journey and how to avoid or overcome them. Our approach ensures cloud services can be adopted safely and securely; without compromising either the benefits of traditional delivery and change models or limiting the ability to leverage a product based change approach.

Background

The challenge comes in handling both the breadth and pace of what we call the "Digital Shift"; with many dimensions of the traditional model for managing IT services and delivering change being challenged. Most significant among these is the move to continuous development and deployment and DevOps; associated with agile methods and a product based approach to change. For many; this has been made possible by the availability of public cloud services through the ability to rapidly deploy and scale environments at low cost. Implemented well; and with the right management and integration processes and tool; there are huge advantages with these services; providing benefits in cost, flexibility, scalability, security and many more.

The Digital Shift

Whilst some organisations have been successfully built using a digital operating model from day one, the majority need to manage a transition from a traditional operating model and usually requiring an extended hybrid scenario running both in parallel.

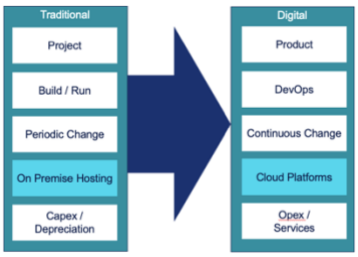

Figure 1 – The Digital Shift

This shows how organisations are moving from a Traditional Plan / Build / Run model of IT change and delivery to a product based model; and some of the key areas / drivers of change.

The move to agile and DevOps presents additional challenges and considerations. This paper seeks to address the move to cloud and demonstrate how this can be achieved in a controlled way which maintains appropriate IT controls allowing the benefits of cloud to be delivered without compromising service and keeping IT leadership in the driving seat of change.

For many organizations, cloud technologies such as Amazon Web Services (AWS) and Microsoft Azure offer access to flexible, scalable infrastructures at lower cost than on-premises infrastructure. However, there is a common misconception that flexibility and scalability come at the expense of enterprise requirements for governance, security, and compliance. How do you balance the need to accelerate application delivery with organizational and structural requirements—particularly when migrating at scale?

Moving applications to public, private, and hybrid clouds en masse requires a structured and repeatable process, careful attention to the details of configuration and resource management, and enterprise-class control to ensure compliance and security considerations are met. This white paper explores these challenges and shares a proven framework to help enterprises simplify and scale cloud migration.

The Key Challenges

The most common challenges we see customers experiencing while making the transition to cloud are:

Application Migration

Arriving at an evidence based and accurate assessment of suitability of applications for migration to cloud; to support decisions around Lift & Shift vs. Reengineering vs. Retirement; building to a supportable and affordable roadmap aligned to business aspirations

Cloud vendor(s)

Assessing the various service offerings of the cloud providers; understanding complex pricing models; and arriving at arrangements which provides best value with flexibility and avoiding lock in to proprietary services.

Cloud Operating Model

The biggest single challenge is often ensuring the Operating Model adapts adequately to a cloud delivery model; preserving and enhancing oversight, visibility, controls and other Service Management disciplines whilst providing the right environment for provisioning services that do not slow down the digital delivery teams

Optimisation & Charging

It is releative easy to acquire, build and deploy cloud services. It is less easy to apply the active management disciplines necessary to control cost and optimize cloud usage

Data Migration

Achieving a stable migration of often large volumes of data can be a challenge; especially where the need exists for ongoing synchronisation across multiple clouds and on premise storage in a hybrid environment

Connectivity

Achieving quality of service and continuity targets requires careful network and connectivity planning; ensuring appropriate levels of bandwidth and redundancy; often using dedicated links to cloud providers

Security and Privacy

While cloud providers provide a typically high level of security and maintain patching currency, up-front consideration of zonal data hosting and access management needs to be made.

Meeting the challenges – Cloud Operating Model

Mozaic believes the one overarching approach to deliver a successful and sustainable shift to cloud is the development of a Cloud Operating Model.

The Mozaic cloud operating model framework focusses on 7 interlocking dimensions (see Figure 2 below).

Dimension	Traditional	Cloud considerations…
Functions	This describes the functional capabilities required within the IT Operating Model, in order to achieve the business objectives.	including how cloud will support delivery of business outcomes
Processes	These describe the policies, processes, procedures that enable the effective flow of work through the IT Operating Model.	to support provisioning, environment management, dynamic allocations
Governance	This describes the control framework for the IT Operating Model.	for charging mechanisms, service vendor management etc
Data	This describes the data architecture required to enable the IT Operating Model.	dealing with issues around data residency, ownership, privacy, replication
Tools	describes the strategy for implementing these tools necessary to underpin the IT Operating Model and enable high levels of automation.	for cloud environment provisioning, analytics, containerisation, scaling etc.
Sourcing	The functional capabilities can be sourced in various way. This component describes the strategy for sourcing these capabilities	of cloud services linked to service level obligations and business outcomes; and cloud expertise
People	This describes the organisation structure, roles and responsibilities, the strategy for building capability and approach to communications and business change.	including teams, capabilities and resources required to deliver cloud based services

Figure 2 – Cloud Operating Model dimensions

Most businesses must embrace migration to cloud against a backdrop of traditional services and with the fundamental need to keep their organisation safe and ensure maintenance of service quality. This can complicate the digital shift and potentially add risk unless handled with care and by looking across the change and service model holistically and with care.

As with most endeavours; when embarking on this journey you should spend time up front working out your destination; and identify some key checkpoints on the way. Consider the journey for your current set of services; which will persist; which retired and which upgraded or re-engineered to take advantage of new capabilities. Think about your current organisation and capability model – which skills will be needed? Where are the gaps? Which areas will come under pressure? And perhaps most importantly consider business strategies and goals; and how business needs can be better met through the Digital Shift; always considering what is needed to keep services safe; performing well and providing the core capabilities needed for business success.

Building the Cloud Operating Model

Your strategy should take a long term view but detailed planning and execution should focus on one transformation horizon at a time. To accelerate your timeline you need to consider packaging work. Each transformation horizon should group a number of tasks into a package of work to help manage scheduling and dependencies.

Where possible identify work packages that can start immediately; while building towards broader transformational goals. Look to identify packages which have a demonstrable benefit; and can be tested in the real world; confirming the model and benefits and providing building blocks for success.

You should consider getting support from suppliers; either your existing supplier community or from specialist providers. This can be enormous help in both acquisition of skills and capacity rather than overloading existing teams. One thing to be careful of here though is avoiding vendor lock in to proprietary tooling or software services so make sure when engaging third parties that you have a clear exit plan; even if that exit is some time away.

Measure and Validate Benefits

The approach to take small and more iterative steps lends itself well to assessing the alignment of goals and enables you to make smaller corrections . There are synergies here in becoming more agile and iterative in both software development and transformation.

Some of the transformation benefits may not be tangible; which makes measurement a challenge. You should ensure that you establish a baseline for measurement before each initiative; recognizing both the transformational benefits of the packages but also any impact on overall service and on traditional service performance and delivery.

It is crucial to ensure that your transformational initiatives align with management of traditional services; and that transformation does not run on separate tracks for too long. There are many examples of organisations which have heavily invested in large scale transformational change and put existing services at risk; often failing to bring existing teams and capabilities along on the journey.

Good governance is key

Your transformation should enable a more dynamic and flexible consumer / supplier relationship. The supplier could be the internal technology organisation or a service provider. To manage this dynamic and flexible relationship, you need significant transformation and alignment of strategies and demand to the service portfolio.

To effectively govern, you need performance visibility of the services that are being consumed and alignment to the service providers within the service portfolio. Internal operational focus on the monitoring of individual capabilities can provide useful data; but only if it can be aggregated to the services. Achieving performance visibility early in the transformation project enables validation of the strategy and planning and ongoing governance of change.

While transformation priorities can target cloud capabilities early to act as an enabler, the reality is that you may wish to start quickly driving changes more aligned with digital capabilities. This is especially true if competitors already have an effective cloud operating model and more compelling digital services. While cloud is the focus in the infrastructure domain, digital is primarily the focus in the application service domain.

Summary

Successful cloud migrations rely on balancing many factors. Success is achievable and can deliver impressive benefits at pace; but there are many pitfalls and organisations should avoid a piecemeal or unstructured approach. The temptation to rely on support from systems integrators can be great; but must be balanced by the risk of loss of control; knowledge and capability retention and the need to avoid vendor “lock in”.

Most organisations can benefit from independent and holistic support around their target cloud operating model; aligned to their transition through The Digital Shift; enabling a safe and high value transformation. When well planned, implemented and managed in a sustainable way the adoption of public cloud services will allow your business to maintain digital competitiveness. and avoid becoming a digital relic.

How Mozaic can help

Mozaic have developed a series of operating model principles and templates which support and de-risk the digital shift.
Applying these allows organisations to achieve a planned and predictable model for cloud migration and management; working seamlessly with traditional enterprise management practices. Mozaic are partners to the the primary public cloud providers – AWS, Microsoft Azure and Google Cloud – and provide a variety of services designed to ensure the best model and commercial terms are in place.
Our proven methodology provides rapid, actionable insights and a clear case for outcome delivery; allowing customers to achieve a safe and value added shift.

Moziac can also provide advice and expertise in Tooling and Process design; Cloud servce selection and negotiation and in supporting the migration of applications and data.

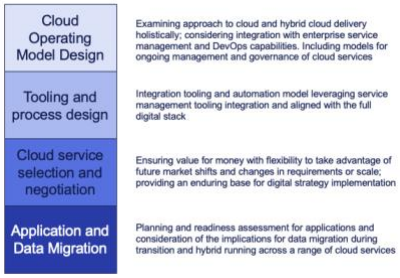

Figure 3 – Mozaic Cloud Services

About Mozaic

Mozaic is a specialist independent IT Consultancy. We offer client-side advice and operational support, always acting impartially to best serve our client's needs.

Please call us on +44 (0)203 709 1625 to discuss your thoughts on our white paper; we would be delighted to hear from you.