



Data Migration: Mistakes to avoid before you start

◆ Monocle Research Team

Data and application migrations are a fundamental part of the digital transformation of financial services organisations. However, migration exercises continue to be afflicted by seemingly inherent delays and cost-overruns, as companies are unable to learn from prior experiences.

90%
CIOs report
data migration
project delays

In 2009, Gartner found that 83% of data migrations either failed or exceeded their budgets and schedules.¹ Ten years later, 90% of CIOs have reported data migration projects fail to meet deadlines due to unforeseen complexity.² While advances in public cloud computing capabilities have made migration more appealing, it is clear that firms continuously struggle to deliver on planned milestones, resulting in constrained timelines and budgets.

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1. Underestimating Migration Complexity

Most migrations begin with an underestimation of the complexity of a technology migration. Invariably, as the project unfolds, complications and legacy issues are uncovered, particularly as assumptions are challenged by the reality of the existing systems and data. This will disrupt even the most detailed project plan and place pressure on agreed upon timelines, deliverables, and budgets.

In order to avoid starting on the backfoot, migrations should commence with a comprehensive and detailed migration assessment (discovery exercise) including:

◆ Data profiling

Assess the volumes, quality, structures, scenarios and homogeneity of the data being migrated. Firms should understand the scope of their data landscape and consider issues such as duplication, deep-rooted data quality issues and other legacy idiosyncrasies.

◆ Data source discovery

Assess the origin of the data to confirm the full scope and lineage of data, including transformations and data cleaning. Furthermore, data ownership and any other critical data roles should be identified and assigned, if necessary, to ensure strong data governance and decision making (see below).

1. Gartner. (2009). Risks and Challenges in Data Migrations and Conversions. Available at: <https://www.gartner.com/en/documents/897512>

2. Cloud Security Alliance. (2019) Enterprise Resource Planning and Cloud Adoption. Available at: <https://cloudsecurityalliance.org/artifacts/enterprise-resource-planning-and-cloud-adoption>

◆ Data gap assessment

Compare and assess any differences between source and target data functionality. Identification of incomplete functionality in the target state or missing data can bring development to a standstill if it is discovered later on in the migration.

◆ Dependency assessment

Identifying and mapping dependencies can ensure the project plan schedules tasks in a logical manner to accommodate prerequisite requirements. The interconnectedness of IT data infrastructure as well as dependencies across the migration process itself will result in operational bottlenecks if not identified, assessed and addressed sufficiently.

◆ Vendor solution assessment:

Issues frequently arise when target system migration tools are found to be incapable of handling conversion complexity or cannot cater for conversion from source data at all. Deficiencies in conversion – the data mapping and data structures required of the target system – will ultimately result in data integrity issues. It is imperative that your organisation is empowered to ask vendors and third parties the difficult questions early on, and appropriately augment project plans and resources based on the feedback.

By considering each of the above, migration projects can be grounded in reality – with project plans that have meaningful tasks, dependencies, and milestones. Risks can thus be identified, categorised, documented and mitigated upfront. The initial assessment also allows key decisions, regarding these obstacles, to be made earlier on in the project lifecycle when interest and motivation from senior stakeholders is high.

Solution: Initial Migration Assessment



2. Assembling the Wrong Team

Due to the technical nature of migrations, projects tend to be driven by technology teams, while a smaller role is assigned to business stakeholders. While technical IT teams will understand the principles and processes required for an efficient and safe migration, without a business's input – the stakeholders who are the data's ultimate end user – technology teams will be unaware of key business drivers and requirements. Therefore, teams should be made up of a **well-balanced combination of technical and business stakeholders** who can identify and tackle potential issues and concerns from the outset, not when the project stumbles upon them.

Another common mistake made during migration projects is to not critically assess and define **roles and responsibilities** of migration stakeholders across the end-to-end migration process. This difficulty is heightened due to migration projects' significant data, system and process inter-dependencies, thereby requiring coordination of tasks across various roles. Take, for example, the redesign of target data models

that are often finalised through an iterative process of analysis and approval between business and technical role players. By defining responsibilities, any further changes can be quickly assigned and resolved amongst the required stakeholders.

A part of defining responsibilities, in your initial assessment, is determining **data and source system ownership**. In many cases, there is no right or wrong answer as to who should own the data, although the preference is often to assign ownership where the data is created. Nonetheless, migration projects that do not define and agree upon ownership and responsibility upfront, run the risk of limited oversight and accountability. This enables business analysts to engage with stakeholders better when gathering business requirements, ensuring that the roles and responsibilities can be properly delegated.

Solution: Balancing Technical and Business Stakeholders Who Have Defined Roles and Responsibilities

3. Insufficient Buy-In and Unrealistic Expectations

Migrations projects in the financial services industry are subject to intense pressure, from across the business, to manage operational risk while meeting deadlines and providing expected benefits. This pressure can lead to overly optimistic plans being developed to placate impacted stakeholders. It is essential that **unrealistic expectations** are interrogated and addressed early on as to avoid their impacts on formalised commitments. Risk, audit and the relevant management stakeholders should also be involved in providing their assessments of project plans to ensure a balanced and robust evaluation.

With functionality of legacy and future state solutions in a state of flux during a migration, it is essential that strong project governance is maintained throughout the duration of the project. A migration can be highly disruptive to various stakeholders across the organisation, so ensuring **stakeholder buy-in** from the start is important. Critically, project managers should enable and drive open and transparent communication between the various stakeholders.

However, unforeseen obstacles are bound to be uncovered as the migration progresses. During **project planning** (guided by a comprehensive initial assessment) project managers should ensure their plans consider these various intricacies and complexities. By building in enough “fat” – contingency margin – projects can cater for unforeseen delays caused by infrastructure instability, iterative designs and development cycles, etc. Any underestimation will result in unrealistic timelines and budgets that could lead to continuous extensions. ERP migrations are notorious for their prolonged delays and unexpected costs that can have a material impact on a company’s share price and financial results. This can be detrimental to stakeholder buy-in and may leave organisations with a suboptimal dual solution, ongoing unplanned costs, negative customer impact and potential fines imposed by regulators for missing regulatory deadlines.

Solution: Proactive Stakeholder Involvement Through Open Communication, Transparency and Project Planning




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Measure Twice, Cut Once

Migrations are gaining considerable momentum, particularly in the cloud migration space, with cloud infrastructure service expenditure increasing by over 30% worldwide each year. This growing demand as well as the limited supply of cloud skills, makes it tricky and expensive to save an underbudgeted and under resourced migration.

Therefore, Monocle recommends a measured approach, from the beginning of any migration, that focuses on limiting reliance on assumptions, understanding the reality of your data and building a well informed and balanced team from the onset.

Summary - Avoid migration mistakes by:

Underestimating Complexity

- Prioritise and perform an initial migration assessment through:
 - Data profiling
 - Data source discovery
 - Data gap assessment
 - Dependency assessment
 - Vendor solution assessment

Assembling the Wrong Team

- Balance team structures with both technical and business stakeholders
- Define and allocate roles and responsibilities up front
- Determine and allocate data and source ownership up front

Insufficient Buy-In and Unrealistic Expectations

- Identify and interrogate expectations (with input from risk, audit and management)
- Drive open and transparent communication to ensure stakeholders are informed of and prepared for future project events
- Ensure project plans have adequate contingency margins to absorb unexpected delays

or refining migration strategy, establishing project roles and building a realistic, high-level migration roadmap.

2. **Business analysis:**

We assist organisations in their migration journey, with skilled business analysts for feature/functional analysis and data mapping.

3. **Migration solution development and verification:**

Our certified and technically strong development teams have extensive experience in end-to-end migration development tasks, including data extraction, data preparation, transformation, load and verification. This allows us to ensure that the data underpinning your migration (and ultimately your target solution) is complete, accurate and reliable.

4. **Project management and migration leadership:**

Lastly, we have strong migration project management expertise to guide migration projects throughout the initiative. We take numerous factors into consideration, such as defining the cloud and data strategy, stakeholder coordination and management, governance and relevant regulatory compliance including BCBS 239, POPIA, PIC, IFRS, KYC, GAAP and more.

About Monocle

Monocle is the largest independent management consulting firm in South Africa specialising in banking and insurance. Since our establishment in 2002, we have worked with industry-leading banks and insurance companies around the world, including institutions in the United Kingdom, Europe, Scandinavia, Asia, South Africa and throughout sub-Saharan Africa.

We design and execute bespoke change projects, from start to finish, bridging the divide between business stakeholders' needs and the complex systems, processes and data that sit under the hood. We offer several unique capabilities to our clients, which have been forged over time through the combination of our highly specialised skillsets and extensive experience working with the systems, processes and people that are at the heart of the financial services industry.

How Monocle Can Assist

Monocle's migration service offering spans the end-to-end process, from pre-migration discovery, to design and preparation, execution, and post-migration support. With our unique expertise in migrations, we are able to assist our clients across four core offerings:

1. **Initial migration assessments:**

Our data and business analysis teams assist in unpacking migration complexity, defining

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