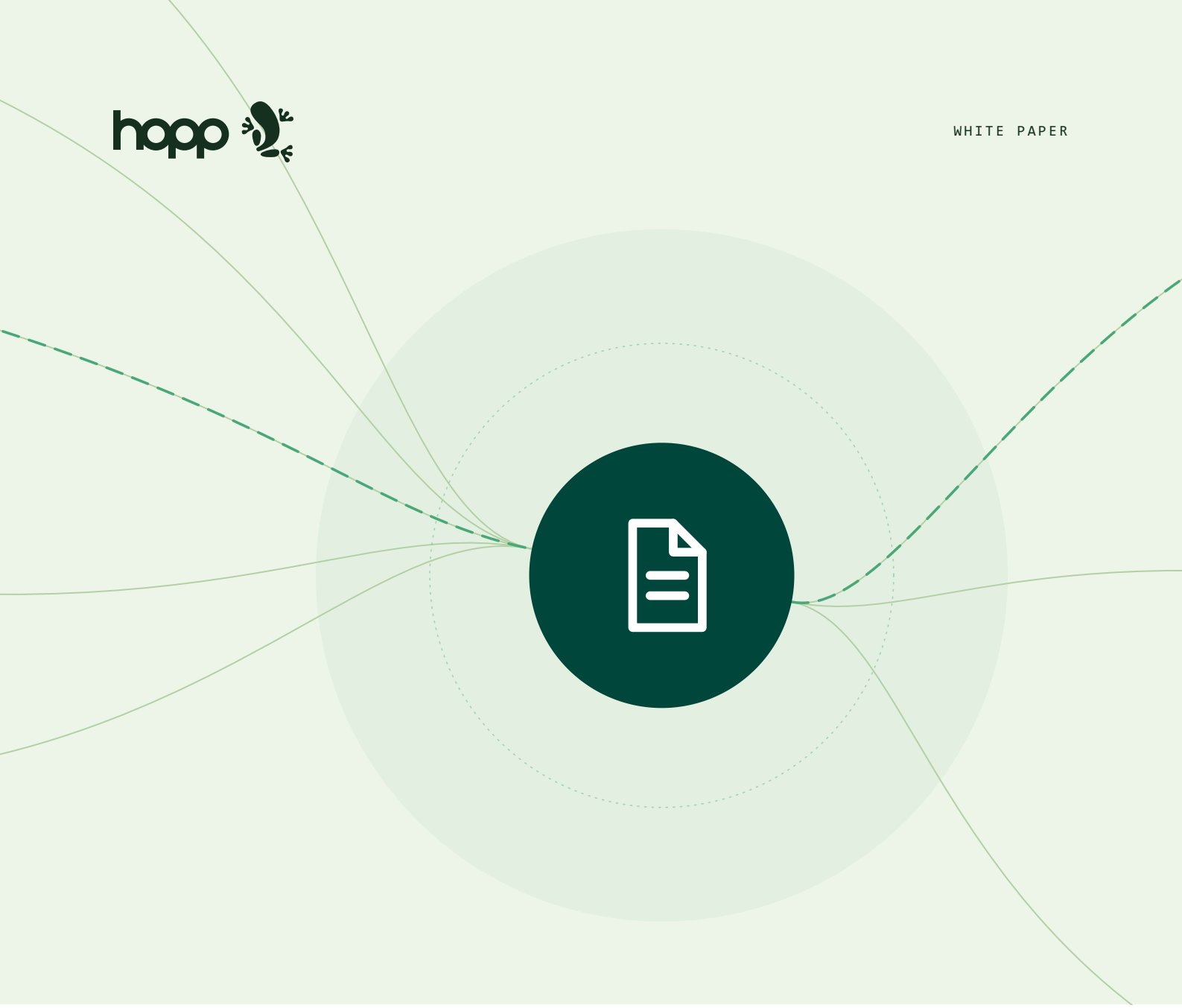
WHITE PAPER



What are Considerations and Pitfalls in Complex Data Migrations?

A paper for data migration professionals

INTRODUCTION

Data migration is a complex process. It needs a robust methodology and good supporting software to deliver a high-quality result as quickly and cost-efficiently as possible.

These tips will help you identify the challenges and risks in any data migration project, and show that there are better and worse ways to handle them. Moving data can be complicated and time-consuming, but if you prepare well and think the process through, you can avoid the common errors.

Data migration has come a long way, and you should look for tools that automate as much of the process as possible.

01

Considerations and pitfalls

A cautious approach to data migration is the smart strategy in a system upgrade or an application replacement.

What you need to consider depends on whether you steer the ship, as a business owner or project manager, or work on board, as a business analyst or IT developer. So we have written two lists of vital factors to keep in mind.

02

For project managers and business owners

1. **What is your migration strategy?** Define precisely what you intend to migrate, and set a timeline for it. Remember that you are in control. Set a clear scope and agree it with your stakeholders. Think about business logic and business value.
2. **Don't underestimate data migration, or what it involves.** Keep it in mind when you decide which new application to acquire, which data to migrate, and when and how to proceed: time, cost and effort.
3. **Understand the data requirements of the new application in depth.** Does it have solid documentation, an interface and a methodology for data migration? Pay attention to the quality and availability of the data it needs.
4. **Break the migration into manageable chunks.** Think about how to stage and phase the deliverables, to get early successes and to spot problems sooner. Think agile to reach your goals.
5. **Flexibility is important.** A way of working that accommodates requirements changing during the migration can make all the difference. Again, an agile approach is a valuable asset.
6. **Have full visibility and auditability.** Make sure your team uses a structured, documented approach, so you can keep track, monitor progress and deal with problems as they come up.
7. **Automate, because it cuts costs.** Automate as much as you can, and rely less on manual tasks. People make mistakes, so use automated, repeatable processes wherever possible.
8. **Commit resources, and accept the cost up front.** There must be internal commitment and involvement: you cannot outsource everything. Data migration needs your best people, and can be harder than you expect.
9. **The new system is different from the old one.** You are moving data to a new system because it gives you new functionality. It delivers that value only with clean data, used correctly.
10. **Monitoring and transparency are important.** Data migration is both a big decision and a big risk. You need a transparent view of where you are in the process, so you can understand the issues and make informed decisions.

03

For business analysts and IT developers

1. **Identify and involve business users early.** Find the right business users from the start: people who know and understand the business data. Involve the people who will use the data, because they will operate the system once it goes live.
2. **Specialists are needed.** A common issue that management neglects or underestimates: it does not give data migration enough attention, treating it as a routine IT task that needs no extra support. But data migration is not just a matter for IT. It involves almost every part of the organization, and needs experts from other departments, data users and others. It often needs significant system resources too, to run quickly and efficiently.
3. **Unrealistic scoping and budgeting.** Data migration may seem daunting at first, but it is crucial to identify and document every task involved. Skipping this step hides the scope and the cost. Do not underestimate the cost, and be careful with cost-cutting at this stage. Underestimating the scope, likewise, leads to a long migration and to frustrated data users across the organization.
4. **The wrong tools.** The right tools are vital to success. Yet many organizations use tools they already have, such as data warehousing tools, that were not designed for the task. Investing in dedicated data migration tools is the right approach, even if it is not what most companies do.
5. **Data governance and organization.** Who decides what is in the project, and in the business organization? Decisions are needed on which data moves from system A to system B, and on what to do when data quality is poor or the data needed does not exist. Progress depends on knowing who gives the go-ahead for these decisions.
6. **Poor data quality in a legacy system.** Once you understand the requirements of the new system, assess your existing data as it is, before the migration starts. Not knowing the quality of the legacy data is a big pitfall, and companies often spend too little time on it. Ask whether the current data will meet the requirements of the new system. Identify missing data and look for solutions. Consider whether some data cannot be recreated. A thorough assessment makes the effort easier to estimate.
7. **Neglecting validation, and redefining business rules.** Your business and validation rules may not be current, or may not apply in the new system: as systems change, so do rules and processes. Too often, too little attention goes into defining and confirming these rules, let alone into making sure the data conforms to them. You may think you have a business rule, but does your existing data match it? Auditors also need to be sure that data moved from a legacy system has been validated, especially critical data such as financial, inventory and payroll data.
8. **Failing to validate and test the migration.** Do not leave validation and testing to the last minute: do them at every stage. How will you test the data? Who will test and evaluate it? Who signs off the quality of the migrated data? And who is its ultimate user? Testing should be part of the project's lifecycle, yet many companies fail to align data testing, validation and migration with the project timeline.

As with any list, however long, this one is never complete. Every project has issues of its own, from the systems and the organizations involved.

Use this list, and others, as you set out on your first or next data migration. Good luck!

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