HandsFreeERP

Last mile solutions to peak your business performance

Guide

The **Ultimate Guide** to Data Migration from On-premise ERP Systems to Microsoft D365 F&SCM

Contents

Introduction

When moving from a legacy enterprise resource planning (ERP) system to a new ERP system, usually data migration is left for the final leg, with stringent timelines, and substantial costs. However, there is a lot of risk involved. You can lose data or worse transfer duplicates and bad data into your brand-new ERP system. This can later cause multiple operational issues and impact day-to-day business. For example, issuing invoices can be problematic if you have incorrect customer details in your new ERP system. If you do not have historical transaction data, it will be difficult to understand and draw insights into customer behavior and buying patterns.

Most organizations think they can simply use a **"lift-and-shift"** approach and move all the data as is from the on-premise ERP system to the new system but it doesn't work that way. Every ERP system has its own data model, business rules and nomenclature. Therefore, the data needs to be transformed to make it fit into the new system and

here we will be focusing on data migrations from any on-premise ERP to Microsoft Dynamics 365 Finance & Supply Chain Management (D365 F&SCM). Additionally, like moving houses, you need to sort out the junk you have collected and discard or condense data to ensure you have the necessary data to make smart business decisions.

Although moving from an on-premise legacy system to an advanced cloud ERP system such as Microsoft Dynamics 365 Finance and Supply Chain Management has its benefits, the data migration project can be complex and pose several challenges, some of which organizations only realize after they start the data migration as they underestimate the complexity and time a data migration requires. Therefore, our aim in this ebook is to give you the harsh reality and hidden truths and also some secret tips that can help you be better prepared when you embark on your own data migration project to D365 F&SCM.

Determining your data migration project readiness

The timeline for a data migration project depends on many factors. Before you start your D365 F&SCM data migration project, it would help to sit down with your team and discuss the questions shared below before you can set a timeline for your project. This will also help you define the scope of work involved and understand how ready your team is for a data migration project.

Q1 ### How different are the data structures in both systems?
The data mapping in the systems will depend on the logic and rules in each of these systems. If you are migrating from AX 2012/2009 to Dynamics 365, it might be less complex in comparison to migrating from a completely different ERP such as Visma or SAP, for example.

Q2 ### How much data from other ISV solutions/applications exists in your previous systems?
If you have data from different enterprise-ready solutions and applications that you want to consolidate into your new ERP system, you need to account for a plan and timelines. The data structure in these systems will vary from D365 F&SCM.

Q3 ### Does your team have skills in D365 F&SCM?
Although a data migration project is highly technical and needs to involve the IT team who are equipped with business knowledge, it must also involve key business users. The IT organization owns and needs to understand how the data is being used by the business, and which teams need to own the data in the new system. Both technical and functional team members need to be involved in the data mapping, test runs, and data validations to ensure a smooth transition. Having these skills is important as it will either facilitate or inhibit the project. Therefore, completely outsourcing a data migration project is not recommended.

Q4 Do you have a strategy for your data migration project?

Before planning for a data migration strategy it is important to evaluate the data quality and data sources. Having a strategy will help you understand how long a data migration to D365 F&SCM will take you. It is also important to assign roles and responsibilities in the planning stages of a data migration project. During the data migration test runs the responsible team members need to validate whether the migrated data conforms to the requirements and assumed business processes in the target ERP. For example, if data is migrated in Accounts Receivables, the team needs to validate if the Sales Order creation is working as designed, similarly for Invoices and so on. Excluding key business users is often the cause of delays or even project failures.

Q5 What route are you planning to take? Hiring developers or using an ISV solution?

If you have developers on board who are confident that they can manage the project using code, then go ahead and take the customization route. But if you have a complex project and tough deadlines, we recommend scouting the market for enterprise-ready solutions that are configuration-based. This will speed up your project and make it easier for your team to manage the project in-house.

Q6 Are you planning to take on this project in-house?

If you are working with partners that are managing the data migration project, ensure there are people with business knowledge involved. Since there is a dependency on external consultants, have a discussion with them based on your business requirements about timelines. However, it might only be possible to estimate timelines after the scope of data has been evaluated.

After you have discussed these questions with your team you should be in a better position to move forward. Your team will need to completely transform and clean the data before migrating it to D365 F&SCM. Although the ERP offers documentation assistance, data migration projects tend to be complex and technical involving development. Sometimes IT teams do not even realize the complexity till they actually start with the migration and hit a roadblock. There are several mistakes organizations make during a data migration project that you can keep in mind and try to avoid. We share those in the next section.

9 fatal mistakes to avoid during your data migration

In 2012, a global multinational provider of electricity and utilities jumped headfirst into their SAP implementation, only to find themselves drowning in budget overruns and extended timelines. Rushing into the ERP implementation without reconciling and validating data proved catastrophic — 15,000 vendor invoices were stuck, employee payments were a mess, and the financial reporting chaos led to denied loans, strangling their cash flow.

Don't let your organization be the next cautionary tale. If you're upgrading to Microsoft Dynamics 365, learn from others who have already made the leap. Here are 9 mistakes organizations make during data migrations that can spell disaster:

1

Treating data migration as an afterthought

Organizations perform data migrations just before going live during an ERP implementation. So, data migration is usually an afterthought and is not well planned. In fact, data migration ranks as one of the top 10 challenges during ERP implementations[1].

Planning and strategy are not prioritized and then organizations realize that they need more time, budget, and resources. To avoid pitfalls, prioritize data migration from the start of the ERP implementation.

2

Unrealistic timelines and budgets

A world-renowned chocolate manufacturer was unable to process $100 million[2] worth of orders despite having supply because they turned on the switch to their new ERP system in a rush. If data migration is an afterthought and you have tight timelines and a limited budget, then this could very well happen to you.
When data migrations go wrong you have data loss, downtime, and errors, which cause problems in operations and can bring your business to a standstill. Rushing a data migration project might cost you more in losses, therefore it is better to evaluate your data and scope of work and plan for the migration keeping realistic timelines. If you face hurdles, extend the deadline, but do not rush to go live.

3

Neglecting data cleansing

The data quality in an organization's legacy ERP is often questionable and inconsistent. Additionally, prior to starting the project, the initial data quality discovery is usually skipped which gives the team an idea of the scope of work involved for data cleansing.

Moving to a new system gives you a chance to evaluate your data quality and move clean data into your new system. But when data migrations are not planned and rushed, there is no time for data cleansing. Ensure your team spends adequate time to weed out inaccurate, inconsistent, or duplicate entries and evaluate data for completeness and relevance.

Rushed launches, like a giant supermarket chain's ERP fiasco[3], where no data quality rules were in check, and training and communication had not been well planned resulted in major supply and demand discrepancies.

4

Skimming over historical data

Moving all your data from your legacy system to D365 F&SCM is never a good idea if you are moving years of historical data. Analyze historical data to discern its value before migrating. Ask your team if that data is relevant for reporting, understanding customer behavior, or tracking buying trends.

However, organizations just move all historical data as is without evaluating it. Because this means they will need more time, resources, and money. However, a data migration project is the perfect opportunity to look at historical data and understand the evolution of an organization.

5

Lack of planning for data mapping

Understanding the differences in system nomenclature and functionality makes data mapping easier. D365 F&SCM has its own business logic and rules. If your team does not understand and plan for data mapping earlier in the data migration, then your team could face hidden challenges. Additionally, most organizations often underestimate the number of customizations required in the target. It is better to plan for data mapping to avoid these hidden challenges.

Inaccurate data mapping can cause disruptions in business if you decide to go live without fixing mapping issues. Revisiting the example of the multinational electricity and utility supplier[4] that went live with their SAP ERP implementation unprepared, the company lost $6 million in overpay and twice as much in short pay and deductions.

6

Overlooking data transformations

Prior to the migration, the data needs to be transformed to fit into D365 F&SCM's Data Management Framework or you will be unable to move data. Unfortunately, organizations start looking for solutions only after they get to this challenge but there is no budget for development or using an enterprise-ready solution. And then there are compatibility issues that need to be addressed as they cannot move the data into D365 F&SCM.

7

Skimping on testing and validation

Rushing testing increases the risk of errors and duplicates. Ensure you carry out thorough testing and validation to prevent post-migration discrepancies throughout a data migration. When you have processes set up to validate data between target and source, you have a higher chance of moving more reliable data into your new ERP system. Not understanding its importance will lead to data that doesn't reconcile accurately between the legacy system and Dynamics 365 ERP. Learn from the example of the electricity supplier whose data discrepancies led to millions in losses and prioritize the critical role of testing.

8

Neglecting documentation

Documentation is often sidelined during rushed migrations. Comprehensive documentation serves as a guide for troubleshooting and future reference. Lack of documentation can result in confusion and inefficiencies when people leave or join mid-project or if you have external parties involved.

9

Lack of communication and training

Lack of communication and training can lead to delays and inefficiencies. Plan communication and training before migration for a successful transition and organizational buy-in.
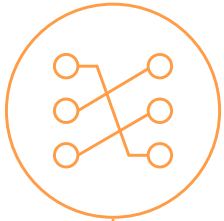
Challenges to overcome while migrating data to Dynamics 365

Data migration is a crucial aspect of ERP migration. Depending on the amount of data and the size of the legal entities/companies involved within the ERP, and the route the organization takes, the time for the data migration project will vary.

Doing this with proper planning and accuracy is important as you do not want to transfer dirty data into your new ERP system, in this case, we are focusing on D365 F&SCM. Say the ERP migration team decides to go the development route and estimates 1.5 years for the project. However, several challenges crop up as speed bumps, slowing down the project and crossing the timelines and budget. That is not ideal. But what if you knew about these challenges and could look for a solution before you even get started? That is what our ebook is here to help you with.

The biggest hurdle we see companies face is the time, effort, and complexity involved in a data migration project. Let's break it down in the challenges below:

Data mapping

Microsoft offers a Data Management Framework with over 1,500 data entities which can be overwhelming to sort through and choose from. And since this is a new system, the data entities could be unfamiliar. The task of identifying the correct ones and then mapping them can be quite time-consuming.

The Data Management Framework and data entities within Microsoft are not flexible. If you do not have the same data entities in your legacy ERP system, mapping becomes a challenge. If you have data in the legacy ERP system from other solutions or customizations, then that adds to the complexity of the data migration project.

Development

If you need to change/create mappings, add conversions or transformations to make your data fit into the data structure followed by D365 F&SCM, and add validations, you need to begin development.

The set-up-release-test-rework cycles involved in coding take a lot of time. This is also an added expense and could extend timelines. Alternatively, you could look for a plug-and-play solution.

Using traditional methods

When you use traditional methods such as Excel sheets and formulas to transfer data to D365 F&SCM, you are more likely to see human errors. For example, if you do not have a data quality rule for a field, you might see an email in an address field and vice versa, or the address entered in an incorrect format. This will cause issues and affect your data quality in D365 F&SCM.

Moving transactional data

There are four types of migrations including master data, transactions, companies, and setup data. Each of them has their own challenges. But the toughest data to move is the transactional data which also happens to be the most important. Without past transactional data to compare and draw insights from, the business will be at a loss. Knowing how much transactional data you need to move is important. The higher the volume of such data, the more challenging and time-consuming it is to move to D365 F&SCM using development.

Your current on-premise system may have different rules around transactional data from Dynamics 365. In that case, when you try to move say financial dimensions, if you do not follow the same business rules as D365 while trying to migrate that data, you will face an issue.

Additionally, for things such as external relations or recID relations, you could also face issues if the system doesn't recognize this number. D365 F&SCM generates a unique 10-digit number for the customer identifier field for records. So, if your old system has a different format, you will see an error when you transfer that data. For example, your old system has a rule that mandates using a 6-digit number for the external relations field but D365 F&SCM uses a 10-digit number, so you will see an error.

Poor data quality

There might be data errors or duplicate records in your old system. When you begin data migration and move that data to a new ERP, it is important to schedule some time for data cleansing. If you decide to do this manually without adding any data quality rules, it will slow down the migration project.

Dependent data

When you are importing data, you need to ensure dependent data is first imported before other data in D365 F&SCM as the system has its own business logic. If you do not follow the data hierarchy, you will see errors when you try to migrate that data. Your team needs to understand these intricate aspects and plan this before they even begin testing.

10 tips and tricks for successful data migrations to Dynamics 365

1 **Assess data quality**

Allocate enough time, resources, and budget and planning for data quality analysis. Data cleansing should be prioritized in the early stages of the migration and periodic data quality assessments should be carried out throughout to improve data accuracy, validity, and integrity of the data. Also evaluate the scope, amount, and sources of data. Analyzing historical data and assessing its value will help you ensure you are not moving 'garbage in' to your new ERP system. Understanding the data quality issues, and involving cross-functional teams will make it easier to understand what rules you need to improve data quality.

HandsFree ERP with data migration solution offers a staging area to validate data prior to moving it into the production environment.

2 **Utilize pre-built templates**

Make use of pre-built templates to ease and speed up your data migrations. Look for enterprise-ready solutions that offer basic templates that can be easily customized with minimum effort. No-code migration solution offer tutorials that serve as a starting point to help you map data.

3 **Data mapping optimization**

The data structure, business rules, and naming convention differ in Dynamics 365 F&SCM from other legacy systems. Clear naming conventions in project deliverables for project naming, interfaces naming, source documents, etc. should be followed to avoid errors. Determine the location of the business logic whether it is the staging or the data migration solution you are using to check for data quality and data mapping.

Picking team members who are familiar with both systems will make the data mapping process go faster. Planning for data mapping between source and target systems earlier in the data migration process will help you understand what kind of transformations are required prior to moving the data. Our solution can map any field or table using transformations, conversions, and default values without any need for development and ease the data mapping process.

4 Plan for incremental migration

A gradual migration or a phased approach will help you test data and also understand how to optimize the speed of the data imports. As you increase the load of data testing, you can check for data quality and mapping issues.

Using our data migration solution, you can perform incremental tests and none of the test data will show up in the production environment. And if there are errors during the migration, the import will continue from the point of error, saving you time that would have otherwise been spent in processing the entire data import all over again.

5 Data validation and error handling

Data validation ensures you do not have incorrect critical data such as customer addresses or bank account details when you go live which can cause operational issues. Determining the right business data owners to sign off the migrated data samples is another form of validation that should not be overlooked. You can add data quality rules to check for the accuracy, validity, completeness, and integrity of the data. Master Data Management Solution allows you to add data quality rules, run duplicate checks and connect to external web services to validate the accuracy and completeness of the data.

6 Collaborate with stakeholders

Although data migration is a highly technical project, it needs to involve key stakeholders who understand the business challenges and the issues with data quality. It is also better to assign roles and split responsibilities instead of having one person work as a Functional Consultant and Developer. Scrimping on resources will only extend timelines for the project. Additionally, including data owners in the planning stage and assigning clear responsibilities will help the data migration team plan and evaluate data better to ensure business requirements are met. Our no-code data

migration solution help you map, transform, and validate data during testing and migration in staging tables. You can also track past data imports in the history feature.

7 Optimize performance

Optimizing the data migration process and harnessing the processing power of D365 F&SCM is important. To ensure you can utilize the capabilities of D365 F&SCM to the optimum, you can use features such as parallel processing and multi-company imports provided in our solution. This will help you manage project costs during the data migration.

8 Document and communicate at every step

Documentation and communication are often ignored in a data migration but ensure a smooth transition to D365 F&SCM and facilitate the change management process required during an ERP implementation. Documenting and communicating at every stage is therefore important to have organizational buy-in. Additionally, if you have changes in your project team and external consultants involved, the documentation will serve as a reference guide and can be used for troubleshooting and auditing as well.

9 Automate processes

Automating repetitive tasks can help you speed up processes and minimize the load on resources. Consider plug-and-play data migration solution that allows you to automate a part of your data migration by using the same business logic.

10 Post-migration data validation

After go-live, there could be issues such as duplicate data or missing data if you have employees entering data in both systems or incorrect systems. It would be best to communicate a cut-off date to enter data into the on-premise system. It is also important to continue prioritizing data quality checks and add data quality rules that run in the background as this will help you minimize issues after the data has been migrated. Using STAEDEAN's Master Data Management Solution, you can add data quality rules that will be active even post a data migration. Also, for any issues you can check the history of past data imports to resolve them quickly and ensure business operations are not disrupted. We have 10 more advanced tips and tricks in this **blog** that can help you become the superhero in your ERP project and ensure a smooth data migration to D365 F&SCM.

Real-world customer scenarios:
How our solutions resolved data migration challenges

Our no-code Data Management Solutions will empower your in- house technical experts to manage your data migration project with ease. Using our data migration solution, you can greatly reduce the complexity of your project and speed up the project as compared to doing it by development or the outdated Excel sheet method.

Below we share two scenarios where we helped customers manage their data migration project and meet their timelines.

Scenario 1

Meeting timelines and reducing complexity for our customers

This was a complex data migration that required a lot of manual work and customizations. The company established a large team for the data migration but was not able to meet timelines. The customer was moving from multiple different ERP systems and wanted to migrate all that data to Microsoft Dynamics 365 Finance & Supply Chain Management. So, the project was very complex since there were different functional and technical data structures in their previous ERP systems. This was difficult to work with for the team using the standard functionality offered by Microsoft in D365 F&SCM.

While migrating to D365 F&SCM, their biggest hurdle was the migration of their transactional data as they had 12 financial dimensions. As we mentioned earlier, D365 has rules around financial dimensions and business logic that differ from other ERP systems. Their earlier ERP system had no rules for financial dimensions which posed a major issue for data migration, and it kept giving the team an error during import. They had 1k+ transactions where they needed to resolve this issue.

This was extremely complex and time-consuming as they would have to do this for all the 12 financial dimensions 1 by 1.

So, using our data mapping solution they were able to validate all the 12 financial dimensions and fix errors. They had estimated that this activity would take months and they were able to bring that down to two weeks using our solution. The data import message was fairly complex and needed data manipulations. The team could use conditions, transformations, constructs, and other features of our solution to resolve this issue.

By using data migration solution, they were able to automate certain processes, reduce complexity, ease the load on their team, and meet their timelines.

Scenario 2

Navigating a big and complex rollout

It was a complex scenario with a big rollout of 23 companies/legal entities. This was scheduled to be done per legal entity, month by month. The project had a lot of risk because of the number of transformations required sinces it was a highly customized on-premise system they were migrating from. The customer had to use a mix of data entities and tables to migrate their data.

The consultants started the project by loading the data from their old system into a staging database. After that, some business logic was used to remodel the data. Since the data needed additional transformations, our data migration mapping was used to load and transform data from the staging area into the tables in D365 F&SCM. Doing the data transformations in the solution made it easier to track the transformations configured. However, this double transformation process was not performed for all data records. Records such as parameter data, customers, vendors, and items were migrated directly using the solution via an ODBC connector.

Since this implementation was done by our partner, we asked the consultant involved to share their experience on the performance of our solution during the migration project, and Johann Donner, Avanade Austria shared his experience.

> **Data migration solution offers a quick way to migrate data compared to the Data Management Framework (DMF). Some data entities within the ERP can be slow and that is where I use the tables directly from STAEDEAN's solution. I have used an ODBC connection ever since I started working with data mapping solution 7 years ago.**
>
> – Johann Donner, Avanade Austria

The team started with incremental testing using our solution with just a snapshot of data. Post that, they ran 5 full loads, and each load took around 3 weeks. After all the data issues were resolved, they planned to go live. This had to be planned properly as the production process for the customer had to be stopped for a maximum of 24 hours. So, there was limited time to move data that was essential for production. 2 weeks before the planned go-live date, the team migrated customer and vendor records, then 1-week prior item records were migrated, then sales and purchase order records were migrated a few days prior and then finally it was time to go live.

For some time since there was no interface permanently running and the key users had to enter data in both systems. For the second go-live, a validation process was set up in the data migration solution, by comparing data from the old system and the new system. Then a report was prepared and that helped the team identify the data discrepancies.

Ready to solve your data migration challenges?

We have helped 600+ customers integrate, simplify security assignment, and migrate data using our Data Integration and Security Solution. Our solution helps reduce the complexity in your data migration project and helps you map data between your legacy system and D365 F&SCM using simple configurations. Whether you are moving data from multiple sources including ERPs and other business solutions, or transactional data such as recID relations or ledger journals, we can help you transform, test, and migrate that data.

Our solution allows you to use tables, views, and entities to simplify data migrations. Embedded in D365 F&SCM, you can use conversions, placeholders, or existing data entities during data imports. Since our solution is built within the same environment, as Dynamics 365, you can ensure you migrate data using a structure that will not throw an error during imports. Additionally, you can import into multiple legal entities at the same time speeding up your project.

If you are interested in learning more about our Data Integration and Security Solution, download our factsheet below. If you want to understand how our solution can solve your data migration challenges, watch our **on-demand webinar** where we highlight the capabilities of our solution. For any questions, **reach out to our experts.**

Our Data Integration and Security Solution helps you simplify data imports and exports between Dynamics 365 and your business systems and applications without development. This includes high-volume exports to your Build Your Own Database (BYOD). You can also monitor your data imports and exports with ease using the monitoring application.

Ease segregation of duties (SoD), role assignment to the duties, privileges, and entry point level, simplify audits, and optimize license utilization using the security functionality of our solution.

Our Data Integration and Security Solution also offers functionality for EDI that helps you streamline business messaging with your trading partners and manage exceptions from within the ERP.

After you move your data to D365 F&SCM, you can use our Master Data Management Solution to keep your data clean. Add data quality rules to ensure data accuracy and completeness, and also connect to external web services to validate data authenticity.

Sources

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