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Case: Bank Merger

Two small banks are bought by a bigger bank. Their current systems, customers and products must be migrated to the big banks systems from where their customers will be serviced from migration day.

This case description is used as part of the training we provide. The case is used throughout the training exercises to gain hands on experience with migFx.

The case – bank merger

This case is a fictional case where two smaller banks are bought by a larger bank.

The larger bank has started a major offensive to acquire and merge with smaller banks and has decided to use migFx for the purpose.

This is the first project where our Solution will be used, so the setup of the tool must be done from scratch.

The overall aim is that migration of the smaller banks should be completed over a weekend, i.e. from shutting down the old system Friday at midnight and reopened in the new system Sunday.

We enter the case, where the project has been going on for two months and some work have already been done.

Background

The two banks we call Bank30 and Bank40 are currently running on an older bank system that was originally developed for and used by eight banks.

The recent banking crisis has forced the other six banks to close or merge with others, and the whole burden of maintaining and expanding

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the banking system over the past 2 years are too much for the two remaining banks.

Bank30 is the larger of the two small banks with about 12,000 customers and 34,000 accounts spread over 21,500 savings accounts, 11,000 credits and 1,200 loans. Bank40 has approximately 5,600 customers and 17,000 accounts of which 11,000 are savings accounts, 5,600 credits and 600 loans.

The increased requirements from public authorities for reporting and controls, has led to the legislative burden of the system are of a size that threatens the banks' existence.

Over the last years, it has been increasingly difficult to attract new customers and existing customers are increasingly leaving the two banks.

Customer surveys have shown that it is mainly due to the existing banking system does not meet the needs of customers for self-service features like full service internet and mobile banking.

Overall analysis

We come into this case at a time when the agreements to merge are in place, overall planning done, and analysis started. The migration project has been going on for two months.

During initial project planning, there have been several meetings where the functionality of the

two banks the old system (the source system) have been uncovered and the overall functionality and data mapped against the new system (the target system). This has been done by a team of business analysts from respectively the New Bank and the two small banks (Bank30 and Bank40). There has not participated people from either IT departments yet.

Overall there are some source system functionality for handling customers' accounts with the following types of account wages, deposits, credits and loans, payments and limited Internet bank. In addition, a number of aggregated data warehouse similar databases for market research, credit rating, reporting, etc.

The initial analysis has not revealed any gap's, i.e. areas where the new system does not have at least the functionality that corresponds to the old.

By contrast, the analysis showed that the quality of data in the old system is very poor, and that the old system in many areas do not have sufficient information for the data to be migrated to the new system.

As the budget for the project is fixed and limited, it is decided to opt out of certain areas (Table 2).

Table 2: Opt out areas - examples from the list

Customer	All customers should be migrated.
Account	All accounts must be migrated (wages, deposits, credits and loans)
Card	All cards must be migrated (Banks have only debit cards)



Internet Bank	Creating new Internet agreements and mobile banking agreements for all private customers. The old system can only handle private agreements, but they have a structure that is incompatible with the new system, as the result of a migration is estimated to be so flawed that it is better to create new agreements. Also, because there already be set up mobile banking agreements for all private.
Payments	Should not be migrated. For Standing Orders customers will be asked to manually to put payments manually into the new internet bank / mobile bank subsequently.
Entries	Entries up to migration day printed bank statement to customers, but will not be migrated.
Data Ware House	The information found in the old system are estimated to be so inadequate and flawed that they cannot be migrated. Instead, start up the solution from scratch after migration, and the old data warehouse solution kept alive until the new solution can take over completely. That is, during a transitional period will be necessary to look at both the old and the new system, for example by credit ratings.

Project initiation

The initial project analyses established a joint migration project with an initial staffing from all three banks and an overall project plan. The project is lead my New Bank.

In addition to the overall project plan, the project has established a number of sub-projects for each functional area (Table 3).

Table 3: Project organisation

Project Office	Overall project management, steering committee, budget and timeline
Infrastructure	Management of technical infrastructure and links to external parties
Hardware/Software	Purchase and installation of hardware and software
System configuration	Setup New Bank's system to accommodate the two new banks
Data Migration	Migration of data across all areas
Test	Test data migration and new functionality in target system

These different areas of the project all have a project manager and one or more teams.

We focus our attention on the data migration sub-project. The migration teams consist of



business analysts and IT professionals with knowledge of the source and target system.

Internally the migration team is split between Bank30 and Bank40. The project is scheduled

to run for 7 months containing six sequential phases (waterfall) each having milestones and checkpoints at which the projects progress is measured and reported to stakeholders and steering committee (Table 4).

Table 4 – Overall Project Plan

Phase\Time	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
Project Initiation							
Specification							
Test 1							
Test 2							
Test 3							
Go Live							

The overall project model is divided into well-defined stages where tests are viewed to be a central activity. The overall project plan is primarily determined and constrained by the data migration project, which is clearly the largest sub-project.

The start of the three test phases is a data migration iteration where the migrated data is inserted in a target test system. In the test system the two banks are set up as they would be in the target system allowing users to test predefined use cases involving the two new banks.

In Test 1, the focus is primarily on testing that the business objects are mapped, migrated and work in the new system as expected. A test case could be to see if a customer's address appears correctly in the new system or if interest rates on individual accounts are correct – etc.

In Test 2, where the mapping is expected to be completed, the focus is on a cross functional test, batch runs, and integration test against other systems.

Test 3, is a dress rehearsal when the whole migration flow is tested as it would run on the go live weekend. It will run the entire migration process from data reception through the data migration and insert the target system, hereby testing the migration result, signoff procedures and endpoint evaluation.

The final phase 'go live' covers the production weekend and the subsequent follow-up period and decommissioning of source system and project.

The individual test cases will be specified and performed by resources from New Bank and from Bank30 and Bank40.

Data Migration Project



The data migration project at New Bank is established with the following roles:

- **Project manager**
- **Domain responsible for clients and Map**
Represents the roles of business analyst, folders and operator of internal testing.
- **Domain responsible for accounts**
Represents the roles of business analyst, folders and operator of internal testing.
- **Domain responsible for internet and mobile banking**
Represents the roles of business analyst, folders and operator of internal testing.
- **System Operator / Technician**
Is responsible for data reception and settlement of formalized test iteration (Test 1-3 and production), implementation of manual rules to the extent that the domain controller can not, and technical setup in general.

Similar staffing exists in the subprojects for Bank30 and Bank40 involving IT department.

There are established four teams:

- Data Reception
- Customers and Cards
- Accounts
- Internet and Mobile Banking

In addition, there is an internal team in New Bank working on getting the technical infrastructure around migFx in place. These are tasks such as how to return data and insert in New Banks banking system? How to pull information about the setup of the two banks out of New Banks banking system, and delivered to migFx?

Project Status – where we enter

The project has been going on for two months and are now in the middle of the specification phase. The momentum is overall as expected, and all teams follow their plans except Mapping Team Cards.

Technical infrastructure

Agreement on the technical infrastructure is in place. Functions to extract setup data of the two banks from New Banks systems are implemented and tested. Functionality to insert data from the migration into New Banks system is under development and expected to be ready for Test 1.

Data Reception Team

This first delivery was made using an ad hoc physical media, but going forward the project will be using a secure FTP connection where Shared IT upload data extracts to a server from where migFx can subsequently retrieve them. The FTP connection and load process must be up and running and tested as part of Test 1.

There have been two team meetings with the participation of persons from our project and the two banks shared IT department (hereinafter Shared IT).

The following was agreed:

- Data available as text files (also known as CSV files)
- The columns are separated by a semicolon
- Decimal's places
- Dates are in the format YYYY-MM-DD, and always 10 digits
- Is the field null, or otherwise, without content, the field must be supplied blank



- The files are delivered via an SFTP connection
- The files are named using an agreed standard

Shared IT delivers to the project team a spreadsheet with column field names and formats of the data files later provided – we call them Source System Metadata.

The first delivery is received and the contained formats and content for all source data structures (meta data).

Based on the Source System Metadata the different teams can start mapping– no need to wait for the actual data to arrive.

Mapping Team – Customer

The focus so far has been on mapping Customers.

There have been two constructive meetings in the team, and the mapping of Customers in both the Source and Target is completed.

By running the mapping and numerous internal test iterations any known serious errors have been resolved, and the customer area is considered ready for Test 1.

Mapping Team - Accounts

In this team, there has been held one team meeting, and we are about halfway in mapping and internal testing.

There are still considerable number of errors, several of which are awaiting clarifications and additional setup of the new banks, while others have not yet been analysed.

There are also areas which have not yet been analysed in detail, and where the data quality is not satisfactory, so these must be addressed. One the next meeting we discuss repayment of

credits and loans to clarify the requirements for these business objects.

Mapping Team - Cards

This team has not yet started, as there is disagreement in the overall project on how Cards should be created.

Your team now need to get going to catch up with the rest of the project.

You start by looking at the targets systems structure and data requirements (metadata) and agree on how to best structure the Cards area in what we call a Business Object. You might need child business objects before you start forming relationships and with Customers and Accounts and add rules, events etc.

Challenges facing the teams

The teams are now faced with several challenges, which we through the training exercises will work our way through finding solutions using migFx.

The main challenge is to be ready for Test 1, where the migration result for the first time is going to be tested directly in the target system by testers and Business users.

All teams need to progress, and their relationships tried and tested.

Where you start

The training exercises start with you focusing on Cards where the project is behind schedule.

You are provided a training setup reflecting the state of our case now two-month in.

It is not complete, and you will work have to with the team to finalise the different elements.



This is done through analysis, understanding of the tool and several iterations. So, at the

end you will have a data migration project that is ready to go live!

Good luck and have fun 😊

This paper provides the background information you need to understand the case 'Bank Merger' we use throughout the training.

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