

Framework for Data Migration in SAP environments

Data migration is about far more than just moving data into a new application or environment – it's about building trust that the data will work in the new application or environment

Affecto's "Framework for Data Migration in SAP environments" consists of a best-practices methodology combined with efficient market leading software tools and Affecto consultancy expertise

Does this scenario seem familiar? Want to save 50% in migration costs?

You are about to consolidate two or more applications – you are facing risk of hidden costs – the synergy potential is still a bit unclear – you have to meet a demand for an increase in effectiveness! Furthermore there is a risk, that the future application will be based on inconsistent data with low quality. This may occur, if you do not ensure the level of data quality in the migration process. In other words you get – garbage in garbage out!

To consolidate two or more IT systems to a single IT platform, or just migrating data from one system to another can cause both high fever and headaches. We call it "The Migration Migraine". And we have the perfect cure – Affecto's "Framework for Data Migration in SAP environments". This framework consists of a combination of tools/technologies from leading software vendors and best-practices in the form of a proven methodology, but most importantly our consulting services with extensive experience in Data Migration projects. The framework is built to mitigate risk and reduce cost in data migration projects from one (or multiple) platform(s) to a common standard platform. In close collaboration with implementation partners, the framework has been used in multiple projects including one of the largest SAP migration projects worldwide (for an anonymous customer), as well as in migration projects for Swedish Postal Service, the Norwegian Defense, Dong Energy (E2), Cerdo Bank, and others.

Business cases show that by using a framework, related standard technologies and best-practices, there is an average cost saving of more than 50%. Below an example from a major Danish SAP-implementation project, where data from more than 100 data sources were migrated into SAP based on standard technology from Informatica:

| Task | Share of total project | Savings using standard technology |
|----------------|------------------------|-----------------------------------|
| Profiling | 25% | 60% |
| Extract | 10% | 60% |
| Validation | 5% | 50% |
| Cleansing | 15% | 75% |
| Transformation | 15% | 50% |
| Load | 10% | 40% |
| Documentation | 20% | 60% |

The primary business driver is minimizing risk, and ensuring that the projects are delivered on time and budget

Even though potential cost savings are easily identified, recognized and significant within a migration and conversion project, these cost savings are not the main business driver for utilizing Affecto's framework. The primary business driver is minimizing risk, and ensuring that the projects are delivered on time and budget, at a high quality level, and with the required documentation for auditors.

Complexity and volumes

What's so difficult?

A large number of challenges make this type of project a high risk and difficult. The core issues here are:

Exceptions in data are time-consuming and expensive.

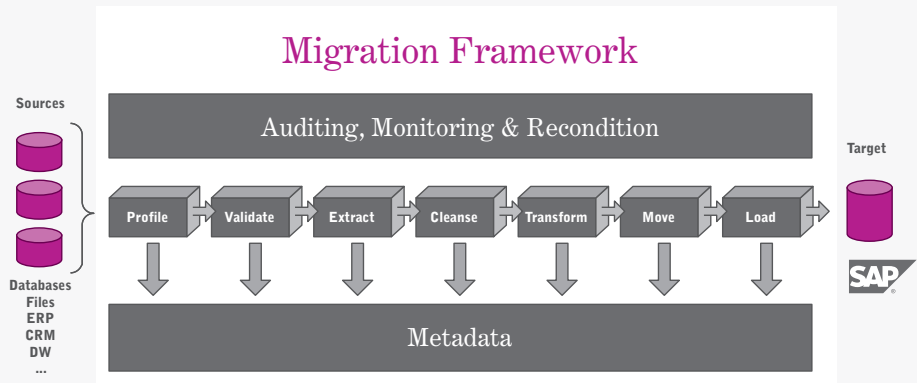
- **Handling** the complexity of data in source and target systems combined with data volumes that typically exceed original expectations. Even though the organization claims to have sufficient documentation and that volumes are not an issue, these two factors always exceed expectations.
- **Understanding** the source data available, combined with the target requirements – and mapping these. Typically, documentation for the target application will describe which data is required to be loaded in order to get an application running following data migration. This documentation will be mapped against source system(s) content, or what is believed to be content, at a column-by-column level. When migrating data, a number of exceptions will be found or caught either in the process or when making the final data load, and then the only way to correct them is to start again with the source data. This is a very time-consuming task in any migration project.
- **Data Quality.** Even though data in the current system(s) may seem to be OK in terms of quality, there is always a need to clean data in order to fulfill requirements from the new target application. Data is always more faulty and unaligned than first assumed, and the degree of redundancy always exceeds expectations. On top of this, the target application will typically have a different interpretation of data causing semantic data problems, and resulting in data having to be transformed in order to meet target requirements. So again – garbage in garbage out.
- **Documenting** every move throughout the entire project, and making this documentation available to stakeholders. When moving data from one platform to another with the purpose of launching a new business-critical application with data from legacy systems, there is always a risk that the data might not have the correct content once populated in new target applications. This is often found whenever something goes wrong, i.e. wrong financial balance, wrong invoice, wrong order, wrong customer etc. The only way to find out what happened is to look through documentation and audit trails for how data was moved between systems, and what kind of transformation and business logic was applied to it to create the current result. Any migration project designed to launch a new business-critical target application must be audited prior to "going live". Regulators and local laws usually require a level of historical data to be stored for a given period (e.g. 5 or 10 years), and this historical information must be documented. Therefore the link between historical and current data is crucial.

Data is always more faulty and unaligned than first assumed.

Audit trail.

The four challenges mentioned above constitute major risk for any migration project, and make it extremely difficult to estimate resources required to close the project within required time and budget. This is why Affecto has developed the "Framework for Data Migration in SAP environments" – and used it with success during implementation of several projects.

Framework for Data Migration – the principle.



The illustration shows the overall migration process within the framework. The steps included are:

- **Profiling.** Using an “assume nothing” theory and technology, the automated data profiling step will create documentation about the source systems across all databases, tables and columns plus any flat file source data that might be considered a source system for the migration project. This will be done from an automated process, which will minimize risk very early in the process, since you 100 % of the data will be profiled. Many customers are doing this as part of the blue print phase.
- **Validate.** Match the profiling results against the business requirements of the target in order to identify and address discrepancies prior to starting the migration.
- **Extract.** Data can be extracted from any source in any format, and loaded to any target application. The interfaces supported by the framework include a large variety of interface types: all major database types, flat files, XML, mainframe sources, as well as certified interfaces to ERP applications such as SAP and Oracle
- **Cleanse.** Categorize, standardize, enhance and match reference data including customer, supplier, product, item, organisation or other data descriptions. The framework is delivered with data dictionaries that can identify, clean and enhance name and address data from many different countries across the world.
- **Transform.** Apply any business logic to data in order to adhere to target requirements. These steps should be written with mapping documents at a detailed level in order to be able to have an ETL developer applying the logic without having to worry about the reason for the transformations.
- **Move.** Data must physically be moved to a target application platform in order to avoid network and performance bottlenecks.
- **Load.** Use the load capabilities within the framework to populate the target application. This is done in order to “close the loop” with regards to documenting the full process. This step will create business critical process metadata in the form of what was loaded, how much, by whom, status, etc.

Automated collection of metadata

On top of these steps there is an automated collection of metadata to support audit and reconciliation following the final migration. The benefits of using a framework are many. These benefits must of course be weighted including the benefits of:

- **Automated Data Analysis:** Source system analysis is probably the single largest and most time-consuming part of the migration project.
- **Audit documentation:** Documentation is critical for final sign-off of the migration project by auditors (external and internal).
- **Data quality.** Data quality issues are the main reasons why migration and integration projects fail, or exceed budget by a large factor.

Affecto has extensive experience with SAP migration projects – using Informatica PowerCenter

About SAP and Informatica

On October 20, 2005, Informatica signed a global Master Relationship Agreement with SAP AG and a Go-to-Market Agreement with SAP America focused on accelerating the time-to-value of SAP data migrations and other strategic data integration initiatives for SAP customers. With the new CA-DMI certification, Informatica PowerCenter 7 and PowerCenter Connect are certified for SAP NetWeaver. SAP also previously awarded certification to Informatica for SAP Business Information Warehouse and ALE/IDOC integration.

Benefits by using Informatica in SAP data migration

- Ensure a successful SAP data migration with a single, unified enterprise data integration platform with SAP’s Data Migration Interface (CA-DMI) and “Powered By NetWeaver” certifications.
- Avoid costly project overruns by understanding and addressing data migration issues early.
- Reduce project risk by relying on a proven track record of joint customer success in new SAP implementations, SAP upgrades, and consolidations of multiple SAP instances.
- Reduce project costs and time-to-value by leveraging shared expertise and proven best practices

Summary:

By choosing Affecto's “Framework for Data Migration in SAP environments”, you will make a choice that has been proven within a number of the largest organizations in Scandinavia. Affecto has extensive experience in integration and migration projects, through projects with a large number of the top 1000 companies in the region, as well as local presence and domain experts to support you in your project. Affecto uses market-leading and proven technologies for every project we engage in, and are proud to deliver within time and budget.

About Informatica

Informatica Corporation delivers data integration software and services to solve the problem of data fragmentation across disparate systems, helping organizations gain greater business value from all their information assets. Informatica's open, platform-neutral software reduces costs, speeds time to results, and scales to handle data integration projects of any size or complexity. With a proven track record of success, Informatica helps companies and government organizations of all sizes realize the full business potential of their enterprise data. That's why Informatica is known as the data integration company.

Market Leaders Rely on Informatica:

- 83 of the Fortune 100 Companies
- Leading Industries:
 - Telecommunications: 18 of the top 22
 - Financial Services: 44 of the top 60
 - Healthcare: 9 of the top 11
 - Energy & Utilities: 25 of the top 34
 - Insurance: 18 of the top 22
 - Life Sciences: the 11 largest
 - Government: 100+ U.S. Federal and 80 state and local government agencies; government agencies in 20 countries

Revenue in fiscal year 2005 was \$267.4 million. Informatica customers and partners are supported by a comprehensive ecosystem created to ensure their ongoing success and maximum return on investment.

About Affecto

Affecto's IT services business focuses on the company's two strong areas of expertise: business intelligence (BI) solutions and operational IT solutions. Affecto is the leading provider of BI solutions in the Nordic countries. In operational solutions, the company has a significant presence in Finland and is particularly well established in the Baltic region.

Affecto's versatile IT solutions improve the efficiency of organisations' business and support the related decision-making. The solutions are always customised to meet the specific needs of each customer.

Affecto offers business intelligence (BI) solutions enabling the further processing and effective utilisation of information generated by ERP systems. The company also develops operational IT solutions, such as geographic information systems (GIS) and enterprise content management (ECM), to assist organisations in collecting, organising and analysing available digital information in support of their business processes.

Affecto is headquartered in Helsinki, Finland. The company has subsidiaries in Estonia, Lithuania, Latvia, Sweden, Norway and Denmark. In 2006, Affecto turnover totalled €50.2 million, and employed a staff of over 1.000.

It requires extensive application, data, process and project skills and experiences to scope, develop and deliver on time and budget. Data migration is about far more than just moving data into a new application or environment – it's about making data work once within the new application or environment.