Applies to:
Customers who are planning to implement integration scenarios and interfaces on SAP PI.

Summary
The Mapping Factory is SAP’s approach for the implementation of interfaces on SAP PI. This paper gives an overview of the Mapping Factory. The factory model can be used for implementing a large number of interfaces on SAP PI.

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Starting Conditions

Today's integration is challenging. Within a company's system landscape, there are many heterogeneous applications, using different formats and protocols. Integration is run by different teams, in different regions of the world, consolidation possibilities are not clearly visible. Through mergers and acquisitions, the system landscape is constantly changing.

Typically, there are numerous point-to-point interfaces involved, resulting in high interface cost, operations cost and management cost.

Figure 1 gives an overview of the main cost drivers in the areas of integration.

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**Figure 1: Main cost drivers in integration**

Process Integration is SAP's solution for managing customers' integration in a cost-efficient way. It is based on open standards (e.g. web services) and is the backbone of a Service-Oriented Architecture (SOA). The purpose of PI is not to reinvent, but to leverage the investments that have been made into the existing integration landscape and arrive at a new service-enabled landscape in an evolutionary manner.

Figure 2 shows the evolution from a point-to-point system landscape to an integration managed by SAP PI.

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**Figure 2: From Point-to-Point to managed integration**
The Mapping Factory is SAP’s service to accompany customers on their way to SAP PI-based integration. It is a methodology that is performed partly at the customer’s site and partly offshore in an SAP Global Delivery Center. There are two types of Mapping Factory projects. One of them is to migrate existing interfaces to SAP PI from another integration platform. The other is to implement a large number of integration scenarios from scratch on SAP PI. Please note that for both types, there should be a minimum amount of work for integration scenarios. The exact number of interfaces depends on the specific customer environment and the complexity of the scenarios.

**Migration of existing interfaces to SAP PI**

This type of Mapping Factory project typically leads to the decommissioning of the existing integration platforms. Reasons are:

- Expensive licenses for more than one integration software
- Reduction of maintenance costs
- Reduction of implementation costs
- Simplify Operations

If required, the Mapping Factory helps you to analyze your existing interfaces, followed by the actual implementation on the customer’s SAP PI development system.

**Implementation of interfaces on SAP PI**

This type of Mapping Factory project deals with an implementation of interfaces that are currently not running on an integration platform (typically point-to-point interfaces). The Mapping Factory supports you in creating technical specifications and implements the interfaces on the customer’s SAP PI development system.
Our Solution

Standards and Best Practices
All implementations are performed based on well-known standards and SAP Best Practices. This ensures a future-proof integration approach. The Mapping Factory brings an own set of templates and tools, however, there is flexibility to use customer's templates as well.

Embedded or Stand-Alone
The Mapping Factory can be embedded into a large-scale project or run as a stand-alone project.

End-to-End Integration
The Mapping Factory enables the customer to perform end-to-end integration. Necessary implementations in SAP-based applications can also be performed by the Mapping Factory. Examples:
- iDoc extensions
- Enterprise Service enhancements

Accordance to SOA strategy
All implementations are performed in accordance to the customer's SOA (Service-oriented Architecture) strategy.

Scalability
As a factorized approach, the Mapping Factory offers high resource scalability. A scope extension can easily be handled by onboarding new resources.

Seamless Handover into Operations
After Go-Live, all developments are handed over into operations. The mapping factory produces technical documentation of all integrations scenarios, either based on a customer template or a Mapping Factory template.
Our Approach
Common Management, Quality and SAP Best Practices are key factors to achieve fully satisfying results by the Mapping Factory.

Market Value
In cooperation between customer and the SAP subsidiaries all work packages can be generated, synchronized and organized. Interaction with the Global Delivery Centres of SAP brings in the expertise to estimate and scope the work packages, manage the projects offshore and execute work packages directly in the Global Delivery Centre (GDC). In the end, this means a delivery of completed work packages regarding all customer requirements.

The high level of standardization enables the Mapping Factory to bring this value to the customer as a fixed price offer if required.

Processes and Deliverables
An overview of the key processes and deliverables can be found in Figure 3.

Figure 3: Process and Deliverables Overview

Key Deliverables
The Quick Middleware Evaluation (QME) Phase includes the analysis and classification of interfaces, the estimation of overall efforts, the presentation of an implementation roadmap and verification of planned budgets for integration projects.

In the Business Blueprint Phase an analysis of customer processes is performed. Results of this phase are the specifications for the identified interfaces and its test concepts.

Next step is the Implementation Phase. The interfaces are implemented based on the specifications created in the blueprint phase. The Mapping Factory performs various connectivity tests and can optionally support integration tests. Outputs of this phase are ready-to-run integration scenarios on SAP PI as well as test protocols of the unit test.

Optionally, the Mapping Factory supports various tests to prepare the Go-Live Phase:
- User Acceptance Test (UAT)
- Performance Test

**Roles guiding customer hand in hand to successful Go-Live**

The Mapping Factory methodology provides a number of standard roles to be assigned to SAP or alternatively to customer resources. The amount of customer involvement in the project is very flexible. SAP can either cover all aspects of the Mapping Factory project while joint approaches in all project areas can also be handled.

Figure 4 shows an example of the relationship between SAP and customer involvement.

![Figure 4: Involvement of Customer & SAP resources](image)

The key roles in a Mapping Factory project are described in the following:
- The **PI Coach** acts as the project manager for the Mapping Factory and is coordinating both onsite and offshore resources. He has the level of a Project Manager or a Senior Project Manager.
- The **PI Solution Architect** has a detailed level of technical understanding for the solution. The level of customer involvement is flexible and depends on the customer requirement.

**Global Delivery Center (GDC) Collaboration**

A project will reach high level of effectiveness with the expertise of the SAP Global Delivery Center (GDC). The scalability and the level of qualification GDC brings in raises the value of the results significantly. The Solution Architect acts as the direct line to the GDC to ensure seamless communication between onsite and offshore.
Customer Benefit

The key benefits to the integration challenge with the help of the SAP Mapping Factory are the **reduced implementation costs** and the **expertise** brought in.

Further advantages are:

- Cost reduction in system and project resources and maintenance
- Predictability and scalability
- Short project duration
- Standardized approach
- PI Coach as single point of contact onsite; local coordination of offshore resources

Figure 5 shows the reduction of implementation costs of a Mapping Factory project compared to a regular onsite project.

![Graph showing reduced implementation costs](graph.png)

Figure 5: Customer Benefit Overview
Related Content

http://www.sap.com/mappingfactory

For more information, visit the SOA Management homepage.