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Architecture Guideline for SAP SRM 7.0

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1 Revision Log

Version	Date	Who	Remarks
0.1	09.11.2007	Manuel Friedmacher	Draft Version
0.2	16.11.2007	Christoph Helmert, Manuel Friedmacher	Pre-Review Version
1.0	29.11.2007	Christoph Helmert, Manuel Friedmacher	Review Version
1.1	24.01.2008	Christoph Helmert, Manuel Friedmacher, Harald Evers, Gregor Tielsch	Review Version with first Action Items

Table 1: Revision Log

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2 Stakeholders

Name	Role
Christoph Helmert	[Author]
Manuel Friedmacher	[Author]
Armin Schwarz	[Program Lead]
Wolfgang Dittrich	[Development Head SRM]
Diego Devalle	[Development Head SRM]
Johannes Wasserfall	[Development Head SRM]
Andreas Stolz	[Development Architect, co-Author]
Harald Evers	[Development Architect, co-Author]
Gregor Tielsch	[Development Architect, co-Author]
Reinhard Sudmeier	[Development Architect, co-Author]
Frank Eck	[Solution Management Head SRM]
Matthias Fuebbeker	[QM Head SRM]
Christian Walch	[QM Lead SRM 7.0]

Table 2: Stakeholders

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3 Key Findings / Recommendations / Open Items

This document contains the architecture guidelines for SAP SRM 7.0 which is a part of the Business Suite 7.0 release. It combines and refers to the key findings of the architecture work groups of the Suite Excellence project and the specific SAP SRM 7.0 characteristics. It provides overall architecture rules and findings for SAP Business Suite 7.0[1]. The document is high-level guideline which contains basic rules that are common for all parts of SAP Business Suite 7.0.

Target group of this document are architects and developers who are involved in the development of SAP SRM 7.0 and the Business Suite 7.0.

This document is reflecting the development plans as they were known during the document creation. Changes can only be addressed with a change request. All rules and guidelines presented in this document are to be obeyed, but the document is not yet a complete architecture guideline. The work in the Suite Excellence project is still ongoing, and therefore architectural rules and guidelines cannot be given for all topics at this time. In those cases, an overview of the work in progress is given, so architects and developers know what is about to come in the future. Open questions and work in progress is listed in each of the topic specific chapters. For these topics, concrete rules and guidelines will be added in a future version of this document. If necessary, chapters about new topics will be added as well.

In exceptional cases ERD documents (sometimes referred to basic architecture documents by PIL 2.0) mentioned by this document could overrule some architecture guidelines. However, those exceptions must be explicitly stated by those ERDs and need to be approved by the SRM Global Architecture Team and the SRM 7.0 Program Architect.

The architecture guidelines are complemented by the programming guidelines (8.2 below) and standard guidelines (8.4 below). An updated version of this document needs to be provided for each enhancement package.

In some chapters you find references to detail documents without a working hyperlink. In those cases the detailed document is not finished yet or is not yet published. The hyperlink will be added once the documentation is published.

Key Issues / Recommendations	Comments / Consequences
Can we assume that ERP is a mandatory component for SRM (at least on-premise)?	ERP must not be a mandatory component for on-demand otherwise we need to host ERP, too. What are the business processes that must be supported for on-demand offering? Certain business scenarios around contract management do not require an ERP system either. What are the on-premise scenarios that do not require an ERP system?
Details of SRM Enhancement Package Strategy	Will be provided in a separate document

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[1] In this document we use SAP Business Suite 7.0 as the name for the 2008 release of the SAP Business Suite. This name shall be treated as a place holder until the final product name is announced.

Table 3: Key Issues, Recommendations

Open Items	Comments / Consequences
Dedicated Project to investigate the compatibility of the NetWeaver Business Client with SAP SRM 7.0	

Table 4: Open Items

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4 Architecture Goals and Guiding Principles

4.1 Basic Architecture Goals, Decisions, Target Architecture

With SAP SRM 6.0 major architectural changes were made in order to support user interface (conversion to Web Dynpro for ABAP) and workflow conversion. These changes were a necessary first step in order to support "Service Procurement" and a "Lean deployment" of SRM 7.0 in particular.

This chapter contains basic decisions on the solution architecture framework.

All changes to the below mentioned assumptions invalidate this document. The bold entries highlight the major changes of the SAP SRM 7.0 architecture.

- o Web Dynpro ABAP plus the SAP Enterprise Portal shall be employed as the primary UI technology for the whole SRM 7.0.

- o DUET and Adobe Forms shall be used as complement for special uses cases.

- o NetWeaver Business Client shall be used as an alternative UI rendering technology.

- o **The Floor Plan Manager framework introduced by the Business Suite 2008 shall be used to establish a harmonized UI within the Business Suite.**

- o **A new optimized UI approach (MVC) will be introduced to improve the performance with respect to memory consumption while handling large business objects.**

- o The results of the Suite Harmonization work stream must be taken into account. As a result the UIs shall be converted to the aligned UI framework based on the ERP Design Guidelines 1.1.

- o **SUS in SAP SRM 7.0 will not be converted to ABAP WebDynpro. It was decided to keep SUS as BSP based application.**

- o Performance optimizations shall be taken into account during the whole development. The defined processes for performance measurement, which have been created during SAP SRM 6.0 development, shall be continued to be used.

- o **In order to guarantee a smooth upgrade process for SAP SRM 5.0 customers it has been decided to also support the SAP SRM 5.0 workflow in SAP SRM 7.0. The strategy for the workflow is clearly to give the customer the opportunity to stay on the SAP SRM 5.0 workflow but lead him to migrate to the new workflow right after the upgrade. By following this strategy this means new features will only be built on top of the new workflow which has been introduced with SAP SRM 6.0.**

- o **With SAP SRM 7.0 the industry solution Government Procurement will be integrated into the SRM Core development.**

- o The eSourcing solution is not part of SRM 7.0. Therefore the bidding engine will not be replaced by the eSourcing solution.

- o SAP SRM (in particular the operation procurement part) shall be aligned much closer with ERP MM and MM-SRV in terms of business processes and user interface in order to allow a clear positioning of both solutions in terms of features and

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ESOA services. In particular an enhanced Service Procurement with full procurement lifecycle and deep ERP integration will be provided.

o SAP SRM shall offer a lean (or low cost) deployment in order to improve the TCO of SRM of customers and SAP (maintenance cost). The customer shall be able to select, deploy, configure, and run specific business scenarios within a few business days with minimal assistance from SAP consulting, support, or services teams. The KPI holds for the Self-Service Procurement scenario with one ERP backend using goods and services or an MDM catalog.

o **The one-client deployment offered by SAP SRM 5.0 on top of ERP 2005 shall be also provided with SAP SRM 7.0. A project has been setup to verify this deployment option on top of ERP 2005 EhP4.**

o Commonly used IMG settings should be delivered in a preconfigured setup. No HR replication is deployed. Further the entire SRM suite shall be deployable on premise or hosted within 1 week with 80% accuracy. The KPI holds for a standard SAP SRM implementation using one ERP 2005 backend for the scenarios Self-Service Procurement, Sourcing and Service Procurement.

o The SRM server supplier shall provide significant enhancements in Supplier Lifecycle Management & Collaboration by employing SAP MDM 7.1 as optional software component to support supplier harmonization (i.e. identifying / avoiding of duplicate suppliers and supplier master data distribution among all systems of the SRM system landscape), supply base management and the SRM supplier portal.

o SAP SRM 7.0 shall be the goto-release of SRM, i.e. it shall provide a stable software architecture and ESOA services that allow partners, customers and SAP to extend the functionality using xAPPS and Enhancement Packs. SRM 7.0 shall be the stable core release which is intend to stay unchanged for the whole Business Suite 2008 lifecycle. Additional features and functions must be delivered within Enhancement Packages. The sable core release is only allowed to be maintained with Support Packages, were as those packages are not allowed to deliver new features and functions.

o The products MDM Catalog, SAP cProject Suite, TREX, DUET Adobe Document Services and IPC are shipped in conjunction with SAP SRM 7.0 but are not developed under responsibility of the SAP SRM 7.0 program. Hence the rules in this document are not applicable for them.

o SAP SRM 7.0 will run on the NetWeaver 7.01. It will support ERP 2005 and previous releases. For the full integration scenario which is part of the Procure-To-Pay scenario the ERP version which is part of the Business Suite 2008 with Enhancement Package 4 must be used.

o Being part of the SAP Business Suite SAP SRM 7.0 will support the shipment of enhancement packs on top of SAP SRM 7.0 as well as the shipment of additional composites based on eSOA technology. A separate document shall be provided to deliver details on the SRM enhancement package strategy.

o As we need to support the enhancement package strategy it becomes necessary to introduce the switch framework.

o An Application Platform (AP) adoption is out of scope for SAP SRM 7.0 according to board decision.

4.1.1 SAP Business Suite 7.0

The goal for SAP Business Suite Release 7.0 is to deliver the most holistic, integrated, business-user focused suite that SAP has ever offered. With SAP Business Suite 7.0 SAP will harmonize the suite offering for customers, while at the same time eliminating duplication of efforts and functions across SAP. For more details please refer to BS_PAG

4.1.2 Stable Core and Enhancement Packages

With respect to Business Suite 7.0 it is necessary to introduce Enhancement Packages as the next generation method of delivering new functionality to the customer.

Beginning with Business Suite 7.0 it is no longer allowed to do major changes outside of Enhancement Packages. This guarantees a stable application platform which will be known as the Stable Core release.

Detailed information regarding Stable Core and Enhancement Packages please refer to BS_PAG.

4.1.3 SAP SRM 7.0 Roadmap
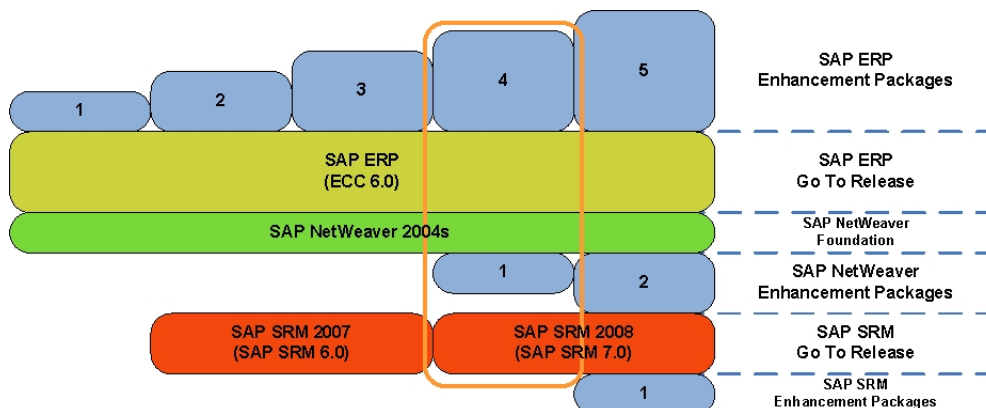
Figure 1: SAP SRM 7.0 Roadmap

SAP SRM 7.0 will deliver the stable core release in Q3/2008. As of now there is no commitment when the first Enhancement Package will be delivered.

4.1.4 SAP R/3 compatibility

The following guideline applies to functionality which is dependent on the backend releases SAP SRM is connected to. SAP SRM might be connected to several backend systems with different releases.

All SAP SRM 7.0 functionality shall be compatible with backend R/3 4.7 and later. However some new functionality of SAP SRM 7.0 may require enhancement packs of ERP 2005.

New functionality should be clearly separable from or compatible to old functionality such that customers can choose to use the existing functionality, e.g. in case they do not want to upgrade their backend release. In case this is not possible because of dependencies between old and new functionality, the original existing functionality must still be supported.

4.1.5   3rd Party Integration

Currently it is not planned to ship any 3rd party tools with SAP SRM 7.0. Hence none are listed in the component list below.

Third Party integration must not impact the PIL standards compliance of SAP SRM 7.0. For example, third party integration must not adversely impact SAP security standards as they apply to SRM. Third party OEM partners must comply with all SAP standards including all requirements specified in TICM. No exceptions are allowed.

Integration must be done such that SAP SRM 7.0 scenarios that are not related to the integration can run unchanged with or without the presence of an installed third party software instance.

Third party integration can be accomplished by use of web services, use of communication via XI or via standard SAP RFC or BAPI calls.

For the integration of 3rd party tools the used interfaces should not be specific to the integrated 3rd party tool.

All new integration interfaces must be approved by the SRM Global Architecture Team.

4.1.6   Reporting

Reporting and analytics span all lists and reports:

- Analytical reporting, formatted reporting as well as planning applications are based on SAP BI.
  Analytical reporting comprises all types of reports where the aspect of decision support is more dominant than operative processing. Typically analytical reporting is based upon replicated read optimized data and offers analytic capabilities such as slice & dice, drill down, graphical display etc.

- Operational reporting is done mainly within the OLTP systems (with SAP List Viewer (ALV)).

  Operational reporting which is also referred to as operative or transactional reporting is characterized by the following aspects:

  • It is typically based on operational, real time data

  • Restricted scope of analytical interoperability

  • Usually integrated into transactional user interfaces in terms of navigation and data write back

A central contact person must be introduced to govern the usage of an appropriate reporting technology, considering also performance, usability, functional requirements and TCO. While writing the document the contact person will be Jain, Divyesh (I036439).

4.1.6.1   Analytical Reporting

The following list provides an overview of the Analytical Applications of SAP SRM 7.0:

- Reporting for Purchasing Process

  - Global Spend is deprecated, it will be replaced by xSA

  - Contract Reporting

  - SUS Reporting

- Vendor Evaluation
- Reporting for Bidding Engine
- Local Master Data Alignment
- Category Management (new with SAP SRM 6.0)

Regarding analytical reporting, the existing BI Content shall be used like in the previous release. In particular this means that the existing data sources have to remain compatible. Through this measure it is ensured that all attached BW Objects (e.g. Queries etc.) stay valid and can be reused.

The extraction shall be supported for both, transactional data and master data.

As of BI 7.0 the way of displaying web reports has changed. BI needs portal as mandatory component to display web reports. Therefore the so called BI Java usage type has been created. This usage type requires Web AS Java & EP & BI Java. This leads into the question how the BI reports should be delivered to customer in the future. If delivered as part of SRM BP, this requires the installation of the BP onto a BI Java stack. If we want to split the reporting from the standard UI, we need to deliver two business packages.

The integration of BI reports into business packages shall be clarified with BI development.

4.1.6.2 Operational Reporting

In addition to reporting in BW there are several reports in SAP SRM 7.0 which are performed directly in the OLTP system. New operational reporting should be provided using WebDynpro ALV.

4.1.7 Extensibility

A suitable extension concept for SAP internal extensions and customers shall be provided for all new developments. In case existing functionality is refactored or replaced it is SAP strategy to provide an upwards compatible solution for all existing customers. The SRM extension framework team (Project Lead: Reinhard Sudmeier) will provide detailed information where needed and shall be invited to all design reviews in order to check the extension concept.

At the time of writing the working assumption is that all extension techniques available in older SAP SRM releases shall be supported in SAP SRM 7.0 without any effort for the customer. Exceptions to deprecate specific enhancements technologies will be approved by the SRM Global Architecture Team if the impact on customers is low and the effort to support the enhancement technology in the future is high. In case of any migration effort for customers or even loss of extensibility an approval by the SRM Global Architecture Team is required.

In case existing extension techniques are changed or new ones are created the project lead must make sure that these changes are reflected within IMG (and Solution Manager) and that the creation of the corresponding customer documentation will be triggered. Additionally the customer extension cookbook must be extended by the necessary information.

ABAP extensibility methodologies used in SRM 6.0 will be supported unchanged in SRM 7.0 by all ABAP software components.

SRM 7.0 does not only support customer extensions, but also SAP internal extensions and industry solutions. So it is also necessary to provide an extension concept for internal extensions. For them it is especially important to have a concept that allows extensions without modification of the core SRM code. On the ABAP stack Switch Framework is used for internal extensions.

SAP SRM 7.0 offers the following ABAP extensibility concepts:

- Appends to INCL_EEW_... structures and Customer Includes (CI) are mainly used for structural extensibility regarding interfaces and database tables respectively.

- BAdIs are used for various changes and enhancements of the SRM system from UI screen extensions over backend-replication mechanism to mapping of field names for incoming/outgoing XML messages.

- BAPIs are released and can be leveraged for application programming on customer side, e.g. BAPIs are released for BOR Objects (e.g. UserEC, AccAssignmentCategor).

- Switch Framework is used for internal extensions.

  This allows for the customer to maintain via transaction SFW5 which extensions are activated. This leads to activation of Data Dictionary extensions, extension source code, etc.

- Meta-data handling

  In SRM 6.0 a new framework for meta-data handling was implemented. Meta-data can be influenced by maintaining several tables. There exist SRM core metadata configuration tables for fields, actions (mostly buttons) and set types (used for tabs mainly). SAP internal extensions may create, modify and delete table entries in these SRM core tables using switch BC-sets. So these changes only get applied to the tables when the corresponding extension was activated in transaction SFW5. (See above). Customers have their own configuration tables and are not allowed to modify the SRM system tables. For details have a look at the design document for the Metadata Configuration in the PDO layer:

  https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Projects/Bootstrap/PDO-Layer/Design/SDD_PDO_Layer_Metadata_Configuration.doc

New extensibility mechanisms (mechanisms not already supported by SAP SRM 6.0) have to be approved by global SRM Architecture Meeting.

4.1.8 Business Configuration

The Business Configuration of the SAP SRM 7.0 solution has to follow the following rules (for details refer to STANDARD_BC):

- All JAVA customizing without ABAP backend must be documented in the Solution Manager.

- All JAVA customizing with ABAP backend should be accessible in the IMG.

- All ABAP customizing must be accessible from IMG.

- All new customizing data must be transportable.

- All customizing activities must use se54 customizing views.

- The logging flag will be active for all customizing tables.

- If customizing entries need to be synchronized between different systems use transaction SCDT_MAPPING for the customizing distribution.

The following business configuration options exist in general for a customer:

- Customizing (in general performed in IMG by a consultant)

- Coding (in general performed via BAdIs by a programmer)

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- Operational Configuration (in general performed in the application by a user)

- Personalization (in general performed by the End-User)

It is the responsibility of each developer and project lead together with solution management to select the appropriate configuration option when providing business configuration capabilities. As a general guideline late binding of configuration settings shall be achieved to give the customer higher flexibility in the configuration of his business processes.

The following exceptions require the approval of the SRM Global Architecture Team and must be stated in design or ERD documents:

- Customizing outside IMG

- Customizing transaction in IMG not based on se54 customizing views

- All changes to existing customizing tables or transactions

A health check to verify business configuration settings shall be provided.

4.1.9   Business Process Platform Compatibility

Although SAP SRM 7.0 shall not be based on Application Platform (AP) this section gives the overall guidelines that need to be applied in order to allow an adoption at a later point in time. In particular in order to allow a smooth transition, it is required that the business objects contained in both products are compatible.

AP 1.0 was built on the SRM 5.0 code base for the SRM related business objects. With SAP SRM 7.0 substantial new functionality will be added to all SRM business objects that are in scope of AP in order to support service procurement in particular and a new RFQ processing software component which is incompatible to the AP RFQ Processing LDU will be introduced. Furthermore, SAP SRM currently employs an MDM based catalog which is not compatible with the currently existing AP Catalogue LDU. However there is no dependency between SRM and the catalog beyond clearly defined interfaces (OCI and XI).

At the time of writing several models of an AP adoption for the SAP Business Suite are under investigation. Since functional developments in SAP SRM 7.0 require enhancements and changes of the SRM persistence the restrictions on database changes that were given for SAP SRM 6.0 do not apply for SAP SRM 7.0. However major structural changes of the SRM persistence require approval of the SRM Global Architecture Team.

Application Platform (AP)	Logical Deployment Unit (LDU)	Process Component (PC)	Business Object (BO)
AP SRM	Purchasing	Purchase Contract Processing	Purchasing Contract
		Purchase Request Processing	Purchasing Request
		Purchase Order Processing	Purchase Order
			Purchase Order Confirmation
		Goods and Service Confirmation	Goods and Service Acknowledgement
	Requisitioning	Internal Request Processing	Internal Request
	RFQ Processing	RFQ Processing	Request for Quotation
			Quote
	Invoicing	Supplier Invoice Processing	Supplier Invoice Request
			Supplier Invoice
AP Catalogue	Catalogue Authoring	Product Catalogue Authoring	Product Catalogue
	Catalogue Publishing	Product Catalogue Publishing	Published Product Catalogue
AP Foundation		Product Data Management	Product Category Hierarchy
			Material
			Service Product
		Business Partner Data Management	Supplier
			Employee

Table 5: Application Platform Business Objects AP 1.0

All changes to the persistence or the semantics of any of these business objects in SRM 6.0 and SRM 7.0 may have impacts for SRM 8.0 and the adoption of a future AP release.

The following rules apply when dealing with SAP SRM business objects that have corresponding platform objects:

Persistence changes

1. Changes to the persistence of business objects that correspond to business objects in the AP Foundation and AP Catalogue layer require SRM Global Architecture Team approval.

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2. Changes to the persistence of business objects that correspond to business objects of the AP SRM layer require SRM Global Architecture Team approval and the involvement of the SRM 7.0 Quality Team.

Changes of the business object semantics:

1. Changes to the semantics of business objects that correspond to business objects of the AP Foundation and AP Catalogue require SRM Global Architecture Team approval.

2. Changes to the semantics of business objects that correspond to business objects of the AP SRM layer require SRM Global Architecture Team approval and the involvement of the SRM 7.0 Quality Team.

3. It is the responsibility of each developer and the scenario / lead architect associated to a project to assess the impact of the business object semantics change on the AP adoption in SRM 8.0.

The guidelines given above hold for ABAP based development only.

4.2 Overview on Architecture Topics

4.2.1 UX Harmonization

4.2.1.1 Basic Principles and Goals

A basic goal is to ensure a unified look of all Business Suite 7.0 applications. The solutions that are part of SAP Business Suite 7.0 must "feel like one suite" and it must be easy to recognize that they all come from SAP. We want to have a recognizable SAP UI Brand on the desktop and we need consistency with the new global marketing campaign. The target time line for achieving this goal is the Business Suite 7.0 delivery.

However, there is an important constraint for the efforts to unify the look of the Business Suite applications: Existing customers shall not be forced to conduct new end user trainings for existing functionality. Only non-disruptive changes shall be made to existing user interfaces.

The Floorplan Manager framework shall be used to establish a harmonized UI within the Business Suite.

4.2.1.2 Portal Usage

The existing SRM Portal Business Packages (BPs) are:

(1) BP for SRM 7.0

(2) BP for Supplier Collaboration 4.0

The BP for SRM 7.0 and the BP for Supplier Collaboration 4.0 are released for use with SRM 7.0 installations. For ERP Alignment the existing BP from SRM and ERP shall be adopted to fulfill the requirements.

All new UIs must be Portal enabled. New UIs shall be added to existing BPs. Customer employee UI should be added to the BP for SRM. Customer supplier UI should be added to the BP for Supplier Collaboration.

Consolidation of the BP for SRM and the BP for Supplier Collaboration is at time of writing not in scope. However, the existing BPs the BP for Supplier Collaboration and BP for SRM shall be

reviewed and redesigned to fit the new UI design of SRM 7.0. Therefore the used Java Web Dynpros shall also be redesigned.

At time of writing it's not clear haw the BI reports will be integrated in the BP for SRM or if it is necessary to establish an additional BP which provides the reporting functionality.

If there is a requirement to create a new BP, the following directions must be adhered to:

- New BPs must follow all content syndication guidelines.
  - o This includes but is not limited to properly registered portal roles, system aliases where needed and merge-id's.
- New BPs must be able to coexist and be able to merge with existing Business Packages on the same portal instance. This requires that new BPs:
  - o Must be able to run on EP installation where portal UME uses an SRM Server running SUS or EBP for user persistence.
  - o Must not require replication: reliance on UME user, role or user-role replications should be avoided as UME is phasing out these concepts in favor of CUA backend replication.
  - o Must not require new TPD installations.
  - o Must be able to run with or without LDAP and with or without CUA.
  - o Must have merge id's appropriate for their workset positioning when merged with existing BPs.
  - o Must use the same system aliases used by current BPs wherever possible.
- New BPs requires program steering committee approval.

The usage of a 3rd Party Portal is not possible as of the usage of Object Based Navigation, which is a SAP proprietary feature of SAP Enterprise Portal. To work with the BP for SRM 7.0 the customer must use SAP Enterprise Portal 7.0; no other release is currently supported.

4.2.2   Business Objects

A Business object represents a specific view on well defined & outlined business content

- This business content is generally accepted & well known in the business world (e.g. in an international standard or industry best practices)
- A Business Object represents content, which a typical business user would expect and understand without too much explanation

The following Business Objects shall be contained in SRM 7.0 (The list also indicates which Business Objects are duplicates with BPP 1.0.

SRM 7.0 Business Objects	PDO Interface Name	Corresponding BPP 1.0 Business Object
Contract	/SAPSRM/IF_PDO_BO_CTR	Purchasing Contract
Global Outline Agreement	/SAPSRM/IF_PDO_BO_CTR (modeled as subtype of Contract)	Purchasing Contract
Purchase Order	/SAPSRM/IF_PDO_BO_PO	Purchase Order

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SRM 7.0 Business Objects	PDO Interface Name	Corresponding BPP 1.0 Business Object
Purchase Order Response	/SAPSRM/IF_PDO_BO_POR	Purchase Order Confirmation
Confirmation	/SAPSRM/IF_PDO_BO_CONF	Goods and Service Acknowledgement
Shopping Cart	/SAPSRM/IF_PDO_BO_SC	Internal Request (in BPP 1.0 the functionality of the SRM Shopping Cart is contained in the BOs Internal Request and Purchase Request but the best fit is the Internal Request)
Invoice	/SAPSRM/IF_PDO_BO_INV	Supplier Invoice
Invoice due	No PDO representation	Supplier Invoice Request
PCard Reconciliation	/SAPSRM/IF_PDO_BO_PC	Not in scope
Quota Arrangement	/SAPSRM/IF_PDO_BO_QTA	Not in scope
Approved Supplier List	/SAPSRM/IF_PDO_BO_ASL	Not in scope
Collaborative Purchase Order	Not modeled in PDO so far	Not in scope
Collaborative Purchase Order Confirmation	Not modeled in PDO so far	Not in scope
Collaborative Goods and Service Acknowledgement	Not modeled in PDO so far	Not in scope
Collaborative Supplier Invoice	Not modeled in PDO so far	Not in scope
Collaborative Supplier Credit Memo	Not modeled in PDO so far	Not in scope
Collaborative Delivery Schedule	Not modeled in PDO so far	Not in scope
Collaborative Delivery Schedule Confirmation	Not modeled in PDO so far	Not in scope
Collaborative Planned Delivery (ASN)	Not modeled in PDO so far	Not in scope
Survey	/SAPSRM/IF_PDO_BO_SURV	Not in scope
Survey Group	/SAPSRM/IF_PDO_BO_SUGR	Not in scope
Questionnaire	Not modeled in PDO so far	Not in scope
Program	No PDO representation	Not in scope
Initiative	No PDO representation	Not in scope

Table 6: Business Objects in SAP SRM 7.0

At the time of writing the integration of Master Agreement with Global Outline Agreement and the representation in the PDO Layer are not clarified. The business objects that are not in the

scope of the Application Platform should be published (e.g. via PIC process) to guarantee SAP wide alignment.

Master Data Objects	Corresponding BPP 1.0 Business Object
Product Catalogue	Product Catalogue
Published Product Catalogue	Published Product Catalogue
Product Category	Product Category (Foundation Object)
Product Category Hierarchy (Master Data)	Product Category Hierarchy (Foundation Object)
Product (Master Data)	Product (Foundation Object)
Service Product (Master Data)	Service Product (Foundation Object)
Supplier (Master Data)	Supplier (Foundation Object)
Employee (Master Data)	Employee (Foundation Object)
Organization Unit (Master Data)	
Purchasing Organization (Master Data)	
Purchasing Group (Master Data)	

Table 7: Master data Objects employed by SRM 7.0

The External Category as master Data object will not be exposed in SAP SRM 7.0 anymore.

It is not planned to introduce any new business objects apart from the ones listed above.

Each SRM business object shall be accessible via PDO layer (the ABAP OO business objects API of SRM).

All ESOA services shall leverage the PDO layer as API to the SRM business objects.
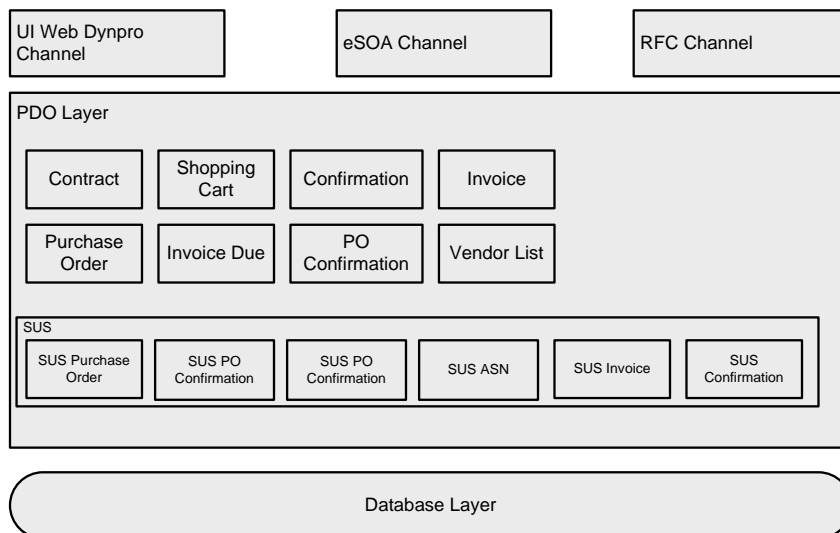
Figure 2: SRM Architecture

In case new business object need to be added to SRM later on the following guidelines apply: All new business objects must be approved by the SRM Global Architecture Team and should follow the PIC process for creating business objects in order to integrate them later into the Enterprise Services Repository.

All new business objects shall be integrated into the PDO layer architecture and stick to the current naming conventions (see PDO_ARCH_I). This means:

- Usage of the Procurement Document Object Framework for the processing of business objects.

- Usage of the current SRM database tables for persistence of SRM server business objects. Exceptions to this approach must be approved by the SRM Global Architecture Team.

- Usage of the application layer for the business object specific methods as wrapper to the PD framework (see table below, *Doc* is the according business object) For the correct naming of PDO business objects refer to PROG_GUIDE_SRM.

- In general the SRM 6.0 persistence (database tables) should not be changed on a major structural level.

4.2.3   Enterprise SOA – Service Provisioning and Consumption

The goal of enterprise SOA is to enable the implementation of innovative business processes spanning multiple Business Suite applications in an efficient and consistent way - via composition and/or integration of processes based on enterprise services and events. This will not only be done by customers and partners, but also SAP will implement new standard functionality through composition against the business process platform wherever feasible to leverage the benefits of enterprise SOA.

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In the SAP Architecture Whitepaper "Near-Term Architecture" SAP's near-term strategy for enterprise SOA and composite applications is depicted. Even though there is still some way to go to completely fulfill the strategy, major steps have already been made in that direction.

From a high-level perspective the following types of applications providing and consuming enterprise services and events can be distinguished:
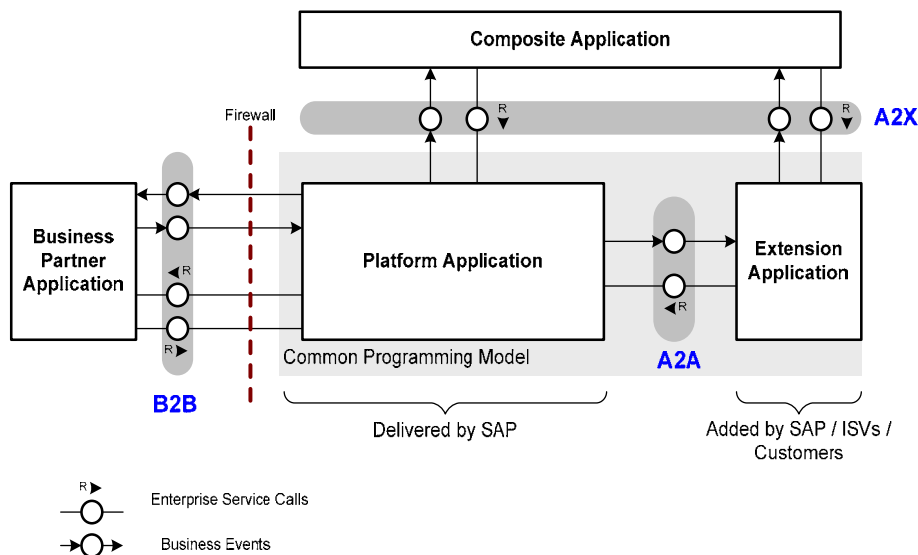
Figure 3: Composite Applications and Platform Extensions

Platform applications deliver a high number of standard, highly integrated, mission-critical processes applicable to many industry or customer segments. They are designed to satisfy a high demand for integration, integrity and legal compliance – and therefore offer controlled flexibility through configuration and extensibility. SAP offers two platforms for large and mid-size enterprises: SAP Business Suite following the "enterprise SOA by evolution" approach, and AP/SAP Business ByDesign based on the "enterprise SOA by design" approach.

Extension applications extend a platform to deliver integrated, mission-critical processes applicable to specific industry, customer or business segments. Examples are "Transportation Management", "Talent Management" or "Bank Accounting" for the Financial Services industries. Extension applications share the key characteristics of platform applications, including their programming model, but are built to satisfy more specific business needs. An extension application is typically closely integrated with one platform: SAP Business Suite or AP/ SAP Business By Design.

Composite applications are specifically built to satisfy more individual business needs ranging from simple extensions of platform and extension applications to new business processes ("next practices"). Composite applications are dedicated to a specific business need of the user, focusing on usability and flexibility.

Platform applications and extension applications expose services and events that allow building additional business processes, user interfaces or composite applications. In addition they may also consume other services. Composite applications, on the other hand only act as consumers and do not provide services themselves.

Composite Applications, Platform Extensions and Platform Applications communicate via Enterprise Services and Business Events.

In general, platform applications, extension applications and composite applications must be designed for independent lifecycles to address the different frequency of changes and to decouple release cycles between SAP, ISVs and customers. Hence the interaction among applications must be based on the principle of loose coupling through stateless services and events. Stateful or transactional service calls are not allowed across application borders.

Business Events are a new concept in addition to service based communication. Conceptually Business Events are different from service calls because the recipient may be unknown to the sender and publish-subscribe mechanisms may be used. The details of the Business Events concept still have to be developed. This is one task of the work stream "eSOA Service Provisioning & Consumption" of the Suite Excellence project. If you have requirements in that direction, please contact the working group.

4.2.3.1   Enterprise SOA by evolution addresses two scenarios

4.2.3.1.1 The composition scenario

This scenario enables customers to easily build or use composites on top of SAP Business Suite. Duet, for example, uses enterprise services to access SAP Business suite applications and therefore falls in this category. Enterprise services supporting arbitrary composition scenarios are called A2X services. They are typically built for peer-to-peer communication between composite applications on one side and platform applications or extension applications on the other side. A2X services are not designed for a specific composite application but are general purpose services for new applications that are not planned or foreseen by the service provider. Very often A2X services are synchronous services and are optimized for UI-like consumption (e.g. by providing descriptions for IDs and codes in response messages).

4.2.3.1.2 The integration scenario

This scenario enables customers to integrate two or more application systems through enterprise services. Business-to-business (B2B) and application-to-application (A2A) integration across and within enterprise boundaries are the classical examples which in particular comprise the integration of the Business Suite and AP-based applications. Mastering heterogeneous landscapes is another example including 3rd party and legacy system integration. A2A and B2B services are very often asynchronous services and designed and optimized for a well-defined integration purpose. Such scenarios often require mediated communication via a SAP NetWeaver PI integration server for proper mapping and routing of messages. A2A integration scenarios have a pre-planned choreography between known partners. This is different to composition where completely new composite applications with arbitrary functionality can be invented.

4.2.3.1.3 SAP Netweaver Composition Environment

In 2008 the target customer landscape will be based on SAP NetWeaver Composition Environment 7.1 (SAP NetWeaver CE 7.1) and SAP NetWeaver PI 7.1 which rely on the Enterprise Services Repository (ES Repository) 7.1. The latter will be shipped with both, CE 7.1 and PI 7.1, but can be shared at customer side:

Figure 4: Enterprise SOA Target Architecture by End of 2007

Customers running SAP NetWeaver XI 7.0 need to upgrade to SAP NetWeaver PI 7.1 to arrive at this target architecture. To avoid such an upgrade as part of the activation of an enhancement package, using SAP NetWeaver PI 7.1 must not be mandatory. It shall be possible to use SAP NetWeaver CE 7.1 in conjunction with SAP NetWeaver XI 7.0 at the expense that two installations are needed for the functionality of the ES Repository:

- The existing Integration Repository as a part of SAP NetWeaver XI 7.0 which is still used for integration scenarios and offering 7.0 functionality only;

- The new ES Repository 7.1 which is used for composition scenarios only.

The general strategy is to support new enterprise SOA capabilities only with SAP NetWeaver 7.1 and selectively with SAP NW Application Server (AS) 7.0 (≥ SP 13) – but not with SAP NetWeaver XI 7.0.

4.2.3.2 Service Provisioning

As mentioned above, SAP Business Suite follows the "enterprise SOA by evolution" approach. A full service enabling over all software layers, covering every object, interface and method, is not in scope for the SAP Business Suite. The scenarios that should be fully service enabled must be identified according to portfolio cases and are coordinated by the central enterprise SOA program team (see https://portal.wdf.sap.corp/go/esoa for details).

According to an SAP-wide agreed definition an enterprise service is a callable entity that provides business functionality and is published by SAP in the Enterprise Service Repository. Enterprise services are structured according to a harmonized enterprise model based on global data types (GDTs), process components, and business objects. They are well documented, guarantee quality and stability, and are based on open standards.

SAP promotes enterprise services by means of enterprise services (ES) bundles. Each ES bundle comprises a set of enterprise services to support an end-to-end business scenario (for example Order to Cash) across SAP Business Suite.

To be compliant with Suite Excellence standards, a corresponding enterprise services bundle (ES Bundle) shall exist for every business scenario.

Note that these ES bundles are only considered from a business point of view. From a technical point of view, however, enterprise services are not delivered within ES bundles but as independent entities within different software components.

For all enterprise services developed in SAP Business Suite the following rules apply:

All services have to follow the PIC governance process for SAP Business Suite (see https://wiki.wdf.sap.corp/display/PTGSOA/Interface+Design). According to the service level concept (https://wiki.wdf.sap.corp/display/PTGSOA/Service+Level+Concept) there exist three "quality" levels (1, 2, 3) for services with increasing degree of harmonization requirements and governance effort.

Modelling of process components, business objects and service interfaces / operations in ARIS business designer is mandatory for all service levels.

All data types, message types and service interfaces / operations shall be defined in SAP's central enterprise services repository (ESR) based on SAP NetWeaver 7.1 (which is currently X8R) and shall be based on global data types (GDTs).

Enterprise services shipped as ESR 7.1 content must also be provided as XI 7.0-compatible content. Therefore certain features of ESR 7.1 cannot be used (e.g. multiple operations per interface). Therefore new software component versions have to be developed in X8R and the attribute "Use of interface object" has to be set to "SAP NetWeaver 7.0".

Every enterprise service shall be callable mediated via XI integration server as well as peer-to-peer via direct invocation of the SOAP / web service runtime of the providing backend system. Therefore web service definitions have to be created in the backend for the generated XI proxies (remark: This is currently only possible for synchronous services, but will be available for asynchronous services with NW04s SP14).

Enterprise services are stateless, self-contained atomic transactions. They must always end up in a – from a business-point-of-view – consistent state in the provider application.

For industry-specific enhancements of standard services the context driver concept has to be used. Details can be found here: https://wiki.wdf.sap.corp/display/IndSOA/Context+Driver

Further and more detailed rules can be found here: https://wiki.wdf.sap.corp/display/PTGSOA/Implementation+Guide

4.2.3.2.1 Forward Error Handling

Forward Error Handling (FEH) is a concept in Enterprise SOA for performing error processing in asynchronous communication on the Receiver side.

By using a synchronous call the sender receives a direct response, in case of an error the sender will be informed about the error and its reason. This is different in an asynchronous call. As soon as the sender has sent the asynchronous message out, the sender expects that the message will be processed successfully. If an error occurs on the receiver side, the receiver is responsible for its resolution. Mind that a confirmation message is not intended for error handling, but for a business confirmation like "10 items of the requested purchase order are committed".

The receiver has different options for error resolution.

In case of a temporary error such as locking errors or missing customizing the error will disappear after re-processing the inbound call (triggered by the FEH).

Sometimes an inbound message cannot be processed automatically, but a manual interaction is needed (e.g. special authorizations necessary). In this case the error can be resolved by manually processing the message request on the receiver side, e.g. posting a financial document manually by an accountant.

However, sometimes the error can only be resolved by involving the sender of the message. In this case, a business user in the receiver will contact the sender (manually or automatically) and clarify together how to resolve this issue. The sending of a cancellation of the message might be the result.

In order to support the business user with the error resolution SAP provides the FEH tool. This tool is a framework containing supporting features like error persistency, monitor capabilities, derivation and triggering of resolution strategies, message editing. For more details please refer to the FEH Implementation Guide.

4.2.3.3   Service Consumption

4.2.3.3.1   Platform Extensions

The AP Adoption Project will pilot, how to build Platform Extensions to the SAP Business Suite-based on AP programming model.

New Platform Extensions of the SAP Business Suite outside of the AP Adoption Project shall be built according to the High-Level Architecture Guideline for Heavy-Weight Composite Applications and Platform Extensions (work in progress).

The most important rules from that guideline are summarized here (unless covered by other chapters of this document)

- Integrate with the platform and other platform extension applications via Enterprise Services, preferably asynchronous via A2A Services.

- Externalize Business Rules using Formula and Derivation Tool or Business Rules Framework

- Use universal work list (UWL) and personal object work list (POWL) to bring the work to the end-user

- Define Portal Roles and Work Centers according to Best Fit Approach of People Productivity4ERP

- Provide application access via SAP NetWeaver Portal and SAP NetWeaver Business Client

- Use SAP NetWeaver 7.0 Usage Type AS ABAP

- Platform Extension Applications shall be deployable to hosting business suite application server component, e.g. ECC 6.0

4.2.3.3.2   Composite Applications

The recommended environment for building composite applications on top of SAP Business Suite 7.0 is SAP NetWeaver Composition Environment 7.1 (SAP NW CE 7.1).

When a composite application is developed in Java as a part of SAP Business Suite 7.0, the SAP NetWeaver Composition Environment 7.10 is mandatory as the design time and runtime platform.

Composite Applications built on CE shall be developed according to the Architecture Guideline for Model-Driven Composite Development in the Composition Environment developed by iCOD.

4.2.3.4 Enterprise SOA compatibility

Service enablement is a goal for SAP in 2007 defined by the board. To achieve quality goals and to be aligned with AP in regards to business semantics the PIC process has been invented. Each Enterprise Service has to pass the PIC governance process. As part of the PIC process a Business Object Model must be defined.

The Business Object basically defines the so-called Service Signature. The Business Object must be aligned with other SAP development areas and AP. The alignment process results in Global Data Types (GDT). All Enterprise Services must be built based on GDTs.

Additionally patterns for communication with the Business Objects are defined. These patterns should be applied to assure the same behavior across Business Objects. As part of the PIC process each development area has to make available Integration Experts. Integration Experts will accompany the PIL process.

Basic guidelines
- All new Enterprise Service have to be aligned with PIC.

- All new Enterprise Services must be built on top of the PDO layer.

- SRM services will not necessarily be identical with AP services.

- All ESOA services in SRM 7.0 follow the "Service Enabling Light" pattern, i.e.: Only stateless Web Services have to be provided.

- Changes to the interfaces in existing systems (use of existing BAPIs/RFCs/Methods) require SRM Global Architecture Team approval and must be stated in ERD or SDD documents.

- Incompatible changes to existing Service Interfaces should be avoided. Incompatible changes require versioning of the service definition and deprecation of the old service.

- For all Enterprise Services eCatts must be provided. All services are being regression tested with each Service Pack; therefore automatic testing is a must.

- All asynchronous Enterprise Services shall support Forward Error Handling.

- All asynchronous Enterprise Services shall support Web Service Reliable Messaging.

- Integration Experts for SRM are Santosh Kumar Addanki, Prashanth B Kumar, Stefan Krauth, Andreas Stolz

PIC provides guidelines and templates for the identification and modeling of services, interfaces, message types, global data types, etc.

For SRM 7.0 both asynchronous and synchronous Enterprise Services are allowed.

4.2.3.4.1 Namespaces and ESR Migration

To be able to deliver the Enterprise Service definitions as part of the Enterprise Service Repository and to be able to use new features provided only via the XI 7.1 Repository, the content must be developed in an XI 7.1 based Repository. The XI 7.1 Repository is called Enterprise Service Repository. However, the XI Content must be delivered for both XI 7.0 and XI 7.1.

Therefore, the XI content must be transported to a XI 7.0 Repository, too. Unfortunately, Integration Content is not downwards compatible.

Due to the ESR migration the existing XI Content needs to be separated into two Software Components. The so-called Service Content, which includes all data type, message types, and service interfaces, and to so-called Integration Content, including all message and interface mappings, integration processes and action, and ccBPM processes.

Instead of splitting up the XI Content in Service and Integration Content, the Integration Content must be maintained both in the PI 7.0 and PI 7.1 Repository. Double-Maintenance is considered error-prone and shall be avoided.

Split XI Content Procedure

1. X7R: Copy existing SRM Server 6.0 Software Component Version (SWCV) to new SWCV SRM Server 7.0
2. X7R: Create new Software Component „SRM Server Integration Content", version 7.0
3. Move all Integration Content from SRM Server 7.0 to SRM Server Integration Content 7.0
   - Originals SRM Server Integration Content 7.0 in X7R
   - Non-modifiable copy of SRM Server Integration Content in X8R
4. Migrate SRM Server 7.0 to X8R
   - Originals SRM Server 7.0 (Service Content) in X8R
   - Non-modifiable copy of SRM Server 7.0 in X7R
5. Adapt XI Directory configuration (Routing-, Interface determination, etc.)
6. Document re-configuration to compile customer documentation
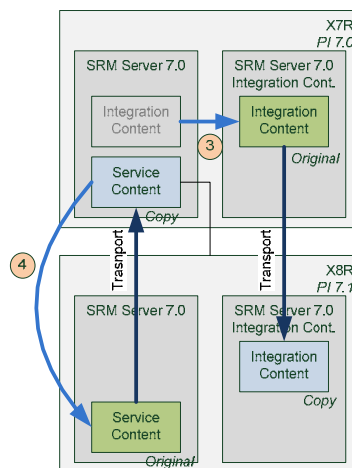
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SRM Server 7.0 (Service Content)

The local namespaces in the software component version SRM Server 7.0 are:
- http://sap.com/xi/EBP
- http://sap.com/xi/GovernmentProcurement
- http://sap.com/xi/SRM/Basis/Global
- http://sap.com/xi/SRM/ContractManagement/Global
- http://sap.com/xi/SRM/Invoicing/Global
- http://sap.com/xi/SRM/Leasing
- http://sap.com/xi/SRM/Procurement/Global
- http://sap.com/xi/SRM/Sourcing/Global
- http://sap.com/xi/SRM/SupplierEnablement
- http://sap.com/xi/SRM/SupplierEnablement/Global
- http://sap.com/xi/SRM/SE/Global
- http://sap.com/xi/SRM/SE/Global/Testing

SRM Server IC 7.0 (Integration Content)

The local namespaces in the software component version SRM Server IC 7.0 are:
- http://sap.com/xi/EBP/IC
- http://sap.com/xi/GovernmentProcurement/IC
- http://sap.com/xi/SRM/Basis/Global/IC
- http://sap.com/xi/SRM/Invoicing/Global/IC
- http://sap.com/xi/SRM/Leasing/IC
- http://sap.com/xi/SRM/Procurement/Global/IC
- http://sap.com/xi/SRM/Sourcing/Global/IC
- http://sap.com/xi/SRM/SupplierEnablement/IC
- http://sap.com/xi/SRM/SupplierEnablement/Global/IC

The GDTs and Message Types that do not yet exist must be created in the global namespace http://sap.com/xi/SAPGlobal/Global in the software component version SAPGLOBAL 2.0.

This global namespace contains all GDTs approved by the PIC Council – they must be reused by copying them into the local namespace. New services should be defined using existing GDTs. The creation of GDTs follows the PIC process und must be approved by the PIC council.

All Enterprise Services will be created in the namespace http://sap.com/xi/SRM/SE/Global. All other namespaces as stated above remain for downwards compatibility. Services Interfaces in these namespaces are not GLOBAL 2.0 compatible.

Further information can be found in SAP_INTERFACES, XI_CONTENT, and PIC_COUNCIL.

Any usage or creation of new namespaces requires the approval of the SRM Global Architecture Team.

4.2.3.4.2 Web Service Reliable Messaging (WS-RM)

In scenarios where Business Suite applications are coupled using asynchronous A2A services with compatible signatures, customers should in addition be enabled to decide, by mere configuration, whether the communication should be mediated by an Integration Server or direct, point-to-point communication using WS-RM protocol. Enabling point-to-point communication between Business Suite applications / components would make the Business Suite a more convincing business process platform: communication between the platform components no longer requires a costly integration server, the platform is already integrated, and its components can thus directly communicate with each other.

Note that the intention is not to offer pairs of asynchronous Enterprise Services in the Business Suite, with one Service supporting the XI 3.0 protocol only, the other one WS-RM. One and the same Enterprise Service shall support both protocols.

Really introducing the support for asynchronous, WS-RM based communication is not possible without enhancing the existing applications, though.

This is evident for the services consuming applications, the code of which has to be adjusted to call asynchronous instead of synchronous services. The impact is in fact bigger than simply replacing service names, as both switching from synchronous to asynchronous communication and switching from mediated to point-to-point communication shift responsibilities between the involved applications, and in some aspects even introduces new responsibilities. The impact is a considerable change in the (programming) model.

The shift and introduction of responsibilities leads to the conclusion that Enterprise Services implementations on the Business Suite side also require enhancements: It is not sufficient to simply add support for the WS-RM protocol on the communication level, but the implementations have to be enhanced to take over responsibilities added or shifted from the Integration Server to the Service Provider.

For more details please refer to the paper "Concept for Provisioning and Consumption of Enterprise Services supporting WS-RM protocol" currently being prepared by the SAP Business Suite Service Enabling – Architecture Core Team.

4.2.3.4.3 GLOBAL 2.0 Migration

Existing XI Interfaces based on GLOBAL 1.0 data types shall be migrated to GLOBAL 2.0 data types if they're used within Integration Scenarios with other SAP Applications. Existing IDOC – XI Integration does not need to be migrated to GLOBAL 2.0 unless the Signature of the service isn't changed. Any change in the signature requires the XI-Interfaces to be migrated to GLOBAL 2.0.

Besides the XI Interfaces used for IDOC – XI Integration most Interfaces are already migrated to GLOBAL 2.0. That is the SRM – SUS Integration, whereas the MM – SUS Integration is based on IDOC – XI communication. Within the Suite Excellence project some of these MM – SUS communication will be Enterprise Service enabled, and thus be based on GLOBAL 2.0.

The existing Leasing (LAM) Integration scenario between CRM and SRM is not yet migrated to GLOBAL 2.0 on SRM side. These Interfaces will be migrated within SRM 7.0, too. The migration will be done by replacing the Data Types in the Signature definition by GLOBAL 2.0 GDTs. The full PIC Process does not need to be applied, unless the Signature is changed.

The status of all existing XI Interfaces, not based on GLOBAL 2.0 GDTs, shall be set to deprecate. The status deprecate indicates, that these Interfaces shall not be used in new Integration Scenarios anymore. Existing Scenarios are not affected; deprecated Interfaces are to be supported at least one more release.

4.2.4   Business Integration

In SRM 7.0 the following business integration scenarios and scenario variants are supported:

- Catalog Content Management
- Contract Management
    - o   Legal and Operational Contract Collaboration
    - o   Operational Contract Management
- Plan Driven Procurement
    - o   Plan-Driven Procurement with Supplier Integration
    - o   Plan-Driven Procurement with Plant Maintenance
- Self-Service Procurement
- Sourcing
    - o   Strategic Sourcing with RFx
    - o   Strategic Sourcing with Live Auction
- Supplier Qualification
- Category Management
- Analytics
    - o   Spend Analysis
    - o   Supplier Evaluation

- Service Procurement

The standalone Plan-Driven Procurement scenario variant is not supported anymore. Depending on the procurement process and the customer configuration a classic or an extended procurement process is started.

This list is supposed to be complete for SRM 7.0 development. Additional business integration scenarios and scenario variants may be added in subsequent waves.

The classic procurement process has the following characteristics:

- Only Shopping Cart, Bidding Engine and Contract in SRM
- Confirmation in SRM is optional
- Purchase Order, Invoice, Goods Receipt and Service Entry Sheet (SES) in ECC

The enhanced procurement process has the following characteristics:

- Shopping Cart, Purchase Order, Invoice, Bidding Engine, Contract and Confirmation in SRM; Purchase Order, Invoice, Goods Receipt (for Confirmation) and SES (for Confirmation) as read-only duplicates in ECC

An enhanced procurement process is required for collaborative procurement processes and mixed service procurement.

In SRM 7.0 the Standalone business integration scenario is not supported anymore. As a consequence SRM 7.0 relies on the availability of an SAP ERP backend system in the on-premise deployment model. In a hosted or on-demand deployment mode a light integration with an ERP backend system shall be provided (e.g. based on XI communication).

4.2.4.1 SUS Process

SRM 7.0 supports two deployment scenarios:

- SUS-MM
- SUS-SRM

No enhancements are planned for the SUS-MM deployment scenario. In particular this means that only the procurement of materials is supported in this deployment scenario via SUS.

In the SUS-SRM deployment scenario the collaboration is done in SRM. In this deployment scenario SRM acts as a hub for the communication with the supplier. The collaboration process can also be initiated from an ERP system by sending a Purchase Order to the SRM system via the existing PurchaseOrderCreate XI message.

A direct communication between SUS and an ERP system supports the same business scenarios as in SRM 6.0. No enhancements are planned for the direct communication SUS-MM. Collaboration between SUS and ERP shall be enabled by leveraging SRM server collaboration capabilities (workflow; inbox for purchase order response, supplier confirmation and supplier invoices). The communication between multiple ERP systems and SUS is enabled via the usage of the SRM server as collaboration hub.

The SNC application as a complementary supplier collaboration solution shall be integrated in the supplier portal to provide an integrated supplier collaboration offering.

SUS will not be integrated into a composite SNC in SAP SRM 7.0.

SUS is shipped as an integral part of SAP SRM 7.0 in the deployment scenarios described in 7.3.

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SUS will not be converted to use the new Suite Floor plan Manger as UI technology. It has been decided to stick to the old BSP infrastructure as it was in SAP SRM 5.0.

SUS and SNC compatibility shall be provided on the same level as in the past. SNC shall be integrated in the SRM Supplier Portal.

Master data integration with SNC is not in the scope of SAP SRM 7.0. No enhancements of SUS in the direction of direct material procurement are planned. Instead the service procurement capabilities of SUS shall be improved.

4.2.4.2 Procurement Alignment

For SRM 7.0 a common procurement solution together with ERP is developed. The solution is contained in the Procure-To-Pay Enhancement Package of ERP 2005 and will require SRM 7.0 and ERP 2005 EhP4 or higher. The UI integration will be achieved by aligning the existing SRM and ERP business packages in the Enterprise Portal. For a high-level overview on the deployed components see Figure 5: SRM Architecture.
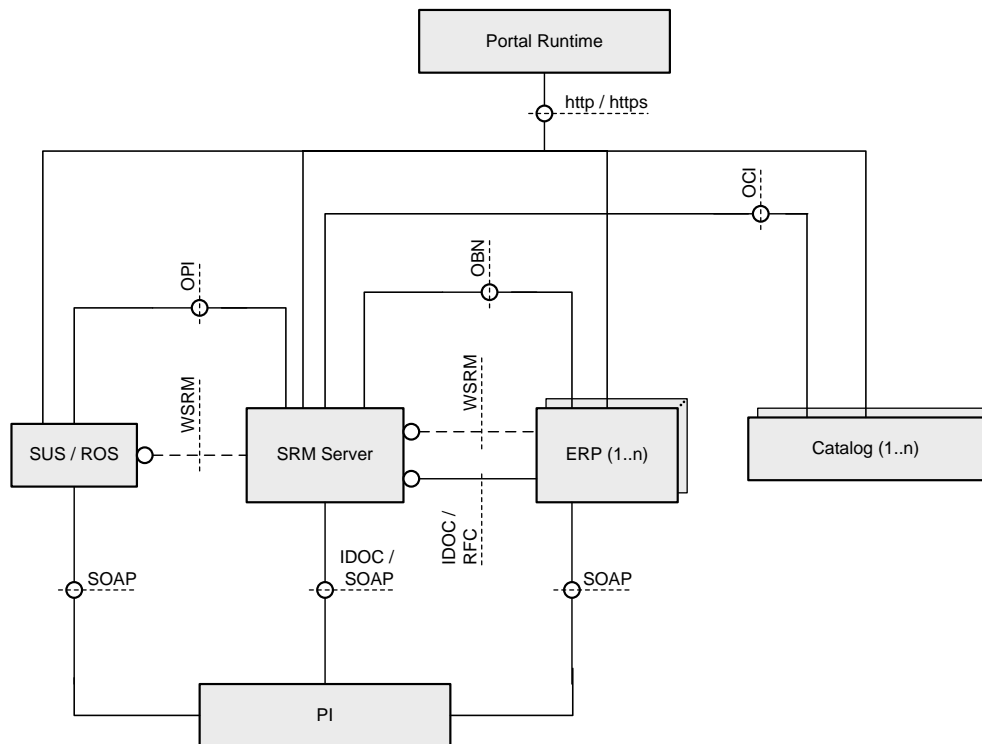
Figure 5: SRM Architecture

For the integration of older ERP releases no UI integration is provided. However the RFC/IDOC interfaces between ERP and SRM must work for these releases, too. For details about supported R/3 and ERP releases see Section 4.1.4.

Note that for compatibility reasons the SRM system shall also support the entry of the Goods Receipt in the backend system. Similarly the entry of the invoice in the backend system shall be supported. 4

In order to simplify the process flow in the SRM system it is planned to use the same API in SRM for create, update and read operations of business objects independent of whether they are created in the backend only or also in the SRM system.

For details of the ERP Alignment architecture refer to the Basic Architecture Document ERP Alignment (ERD_PISA see 11.1).

4.3   List of ERDs

Planned ERD	Responsible Architect
Organizational Management	Martin Zielonkowski, Macro Eidinger
Services procurement	PadmaPrasad Munirathinam
ERP / SRM alignment	Carsten Schmitz

Table 8: Planned ERDs

All ERDs must comply with the Technical Architecture Modeling (TAM) guidelines defined by Product Architecture (xuPA) and NetWeaver Architecture teams, see reference TAMS.

All mentioned ERDs must be stored in the cRoom **PTU Apps SRM 7.0 Development Projects** within the SAP Corporate Portal.

All ERDs must be available prior to the specific depending design documents. All ERDs must be reviewed by the SRM Global Architecture Team.

5 Technology Decisions and Constraints

5.1 Technology Selection

This section will provide a collection of technology components which are used within SAP SRM 7.0.

5.1.1 ECCN Classification / Export regulations

In order to reduce the risk of infringing U.S. export regulations and to comply with regulations of German authorities (Bundesausfuhramt/ Federal Export Bureau) SRM shall adhered to the following guidelines:

- Cryptographic algorithms must not be part of SAP SRM software.

- SAP SRM shall not provide functionality that allows explicitly managing military actions.

- SAP SRM shall not be developed in order to meet specifically the needs of military organizations.

- SAP SRM shall not be developed with input from (e.g. specifications) or in cooperation with military forces.

In case of any questions, Thomas Koleyko or Reiner Beck shall be contacted in order clarify the ECCN classification to avoid unintentional export restrictions. The SRM Global Architecture Team and ASM must be involved in case any of the above guidelines are infringed.

5.1.2 NetWeaver Hub Compatibility

Additional information on this issue can be found by following the links:

http://ency.wdf.sap.corp:1080/wiki/NW_Architecture_Assumptions#Compatibility_and_Interoperability

The NetWeaver hub concept poses the following on SAP SRM 7.0:

- SAP SRM 7.0 Portal, BI, XI, and DUET content does not need to be compatible with any NetWeaver release prior to 2004s. NetWeaver 2004s is used since SAP SRM 5.0.

- SAP SRM 7.0 must be compatible with SAP SRM 6.0 Portal, BI, XI, and DUET content perhaps with some functional limitations.

Any violation of the compatibility guidelines mentioned above need an approval of the SRM Global Architecture Team.

5.1.3 User Interface

In order to ensure UI consistency and reduce maintenance effort across all SAP applications SAP's Product Technology Board (PTB) has decided that SAP will use Web Dynpro as its one mainstream UI technology in the future, see also https://portal.wdf.sap.corp/go/255-list.

All new applications, application components, software components and functional components shall use WebDynpro (ABAP or Java) as UI technology. The terms applications, application components and software components are used here with the same context that they are used and defined in PPMS. The term functional component used here refers to functionality that em-

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bodies one or more business scenarios and uses a common UI technology. For example, in this context, in SRM 7.0, EBP, SUS and MDM catalog are functional components.

For SRM 7.0 the user interface shall adopt the Business Suite's Floorplan Manager framework to assure a harmonized user experience. The adoption shall be achieved by either introducing the Floorplan Manager on top of the existing CLL – PDO stack or by rebuilding certain use cases based on a performance optimized MVC – BORF architecture.

SUS is excluded from this directive and the existing BSP based user interface is preserved.

5.1.3.1   UI Guidelines

UI Guidelines in its released version UI Guidelines 1.1 shall be followed.

5.1.3.2   UI Framework

5.1.3.2.1   SAP Enterprise Portal

All user interfaces of SAP SRM 7.0 must run within the SAP Enterprise Portal. The SAP Enterprise Portal shall be the rendering engine for all control and work.

5.1.3.2.2   iViews

The SRM business package defines iViews for each use case. The iViews mainly refer to Web Dynpro for ABAP floor plan applications with certain start-up parameters that are either static (defined with the iView properties) or dynamically passed when calling the iView and propagated to the application.

For specific purposes other iViews variants can be employed, e.g.:

- URL iView for catalog integration
- SAPGUI iView for Records Management integration

5.1.3.2.3   Object Based Navigation

Object based navigation is the preferred way to call portal content targets. Appropriate objects and operations have to be defined in the portal content and must be associated with the corresponding iViews.

5.1.3.2.4   Personal Object Work List (POWL) Channel

The POWL channel provides the feeder implementations required for the different POWL variants in the portal's work centers. Each feeder implementation serves as the basis for POWL configuration that introduces the categories and queries visible in the work center.

5.1.3.2.5   Web Dynpro for ABAP

The Suite's Floorplan Manager shall be used as the Web Dynpro for ABAP UI framework. The FPM can be either applied on top of the existing SRM 6.0 UI framework (CLL on PDO) or be introduced together with the new MVC – BORF architecture.

5.1.3.2.6   Web Dynpro for Java

Web Dynpro for Java is used in Category Management, only.

5.1.3.2.7 NetWeaver Business Client (NWBC)

The use of the NetWeaver Business Client shall be supported in SRM 7.0.

5.1.3.3 UI Landscape and Secured Access

Primarily, the SAP SRM UI landscape consists of the SRM ABAP Stack and a portal system.

To provide a scalable landscape a load balancing device needs to be installed. The SAP Web Dispatcher can be used to fulfill these requirements. The SAP Web Dispatcher is not a must have component and can be replaced by any load balancing device.

SAP SRM exposes some portal content and the corresponding applications to external roles. A separate portal system and separate reverse proxy solutions are recommended for a secure access to the external facing SRM content.

Each floor plan shall provide internal and external facing applications. Thereby, application configurations can be introduced that are constrained to an internal or external access. This provides a mechanism to filter content which is treated to be only available internally. Moreover, the floor plans shall prevent calling the in standalone mode (without portal environment and iView embedding).
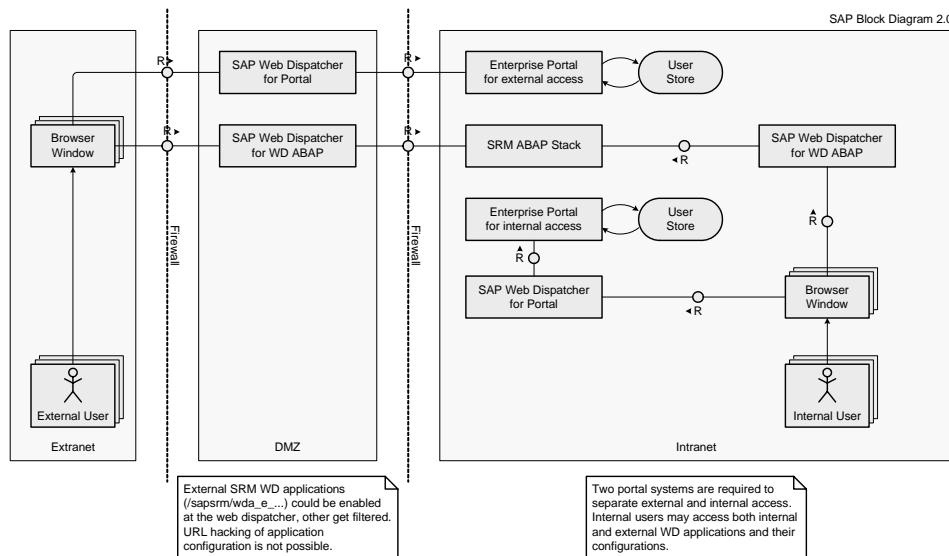

Figure 6: UI landscape of internal and external access

5.1.3.4 Deprecated UI Technologies

There is a list of UI technologies that must not be used for new developments in SAP. In addition these technologies have to be phased out where ever possible. The so-called 255-list looks as follows (https://portal.wdf.sap.corp/go/255-list):

- BSP

- HTMLB
- Internet Application Components / Easy Web Transactions (powered by ITS)
- Flow Logic
- JSP
- Portal Framework (partly based on HTMLB)
- PDV
- XHTML or Plain HTML
- BI Reporting Framework!

SAP SRM 7.0 will not be completely 255-list complied because it will still use Java Applets to provide Live Auction capabilities. At the time of writing it is under discussion whether this Java Applet should be replaced by an AJAX based solution (if an AJAX based UI is used this requires explicit approval by the SRM Global Architecture Team).

Due to risk minimization SUS will stay on BSP based UI.

5.1.3.5   Performance of WebDynpro Use Interfaces

As performance is one critical topic with WebDynpro for ABAP applications, it is necessary to have an ongoing performance measurement process established.

We will use FrontEndMeter as the main tool for measuring the front end performance. For further analysis of the roundtrips and the transferred data we will use HTTP Watch from Sim Tec (this tool can be downloaded from the Software Corner).

5.1.4   Unicode

SAP SRM 7.0 fulfills the globalization standard and is therefore Unicode enabled. For details on ABAP and Java Unicode requirements refer to:

- ABAP_UNICODE
- JAVA_UNICODE

5.1.5   BAdI usage

All new BAdIs must be realized as Kernel BAdIs. No new ABAP-based BADi's are allowed.

The entry point for defining kernel based BAdIs is the enhancement spot. An enhancement spot should contain all BAdIs that are necessary or optional to provide an additional functionality.

If you define BAdIs with several methods the following rules apply:

All mandatory methods for an additional function should be defined within the same BAdI.

For all optional methods that can be implemented independently of each other an own BAdI has to be defined.

All of these BAdIs should go to the same enhancement spot.

The advantage of several BAdIs for optional methods is that every implementer of the BAdIs can choose which methods to implement.

There are two types of BAdIs. One is for solution and country versions and the other one is for customers. One difference between classic BAdIs and kernel Based BAdIs is that kernel based BAdIs use the same namespace as other program objects. Therefore the naming convention changes a little bit. All customer BAdIs have to contain the term _BADI_ and all solution BAdIs have to contain the terms _BADI_and _ICC at the end.

BAdIs are subject to the following naming conventions

Customer BAdIs:

BBP_BD_<object>_<addition>

If the BAdI is specific to a software component with namespace (WebDynpro UI or PDO layer, for example) this changes the convention:

/<namespace>/BD_<object>_<addition>

The corresponding enhancement spot has the naming convention:

BBP_BD_<object>_<addition> or BBP_BD_PROCDOC_<addition>

Or with namespace

/<namespace>/BD_<object>_<addition> or /<namespace>/BD_PROCDOC_<addition>

An enhancement spot can contain several BAdIs. In this case the enhancement spot of course should have a generic name covering the features of all contained BAdIs.

Internal Enhancement BAdIs:

BBP_BDI_<object>_<addition>

If the BAdI is specific to a software component with namespace (WebDynpro UI or PDO layer, for example) this changes the convention:

/<namespace>/BDI_<object>_<addition>

The corresponding enhancement spot has the naming convention:

BBP_BDI_<object>_<addition> or BBP_BDI_PROCDOC_<addition>

Or with namespace

/<namespace>/BDI_<object>_<addition> or /<namespace>/BDI_PROCDOC_<addition>

Example:

BBP_BD_PMORDER_CHECK   for   customers   and

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BBP_BDI_PMORDER_CHECK   for   internal   extensions

Enhancement spots should be assigned to composite enhancement spots that contain enhancement spots of a whole area. The idea is to have a tree of composite enhancement spots that contains all enhancement spots below a root composite enhancement spot in a grouped way.

Here is an example to make the differences between old and new concept a little bit clearer:

classic BAdI BBP_DOC_CHANGE_ICC:

Method name	Method description
BBP_BID_CHANGE	Method for Changing Bid Invitations
BBP_CONF_CHANGE	Method for Changing Confirmations
BBP_CTR_CHANGE	Method for Changing Invoices
BBP_IV_CHANGE	Method for Changing Invoices
BBP_PCO_CHANGE	Method for Changing Purchase Order Confirmations
BBP_PO_CHANGE	Method for Changing Purchase Orders
BBP_QUOT_CHANGE	Method for Changing Bids
BBP_SC_CHANGE	Method for Changing Shopping Carts
BBP_SUSASN_CHANGE	Method for Changing Confirmations
BBP_SUSCF_CHANGE	Method for Changing SUS Confirmations
BBP_SUSINV_CHANGE	Method for Changing SUS Invoices
BBP_SUSPCO_CHANGE	Method for Changing SUS Purchase Order Confirmations
BBP_SUSPO_CHANGE	Method for Changing SUS Purchase Orders

If you implement this BAdI all methods are implemented

The new version can look like this:

Define an enhancement spot BBP_BDI_PROCDOC_CHANGE and assign it to composite enhancement spot BBP_BDI_PROCDOC_PROCESS

The enhancement spot contains the following BAdIs:

BAdI name	BAdI description	Method
BBP_BDI_PD_BID_CHANGE	Method for Changing Bid Invitations	CHANGE
BBP_BDI_PD_CONF_CHANGE	Method for Changing Confirmations	CHANGE
BBP_BDI_PD_CTR_CHANGE	Method for Changing Invoices	CHANGE

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BBP_BDI_PD_IV_CHANGE	Method for Changing Invoices	CHANGE
BBP_BDI_PD_PCO_CHANGE	Method for Changing PO Confirmations	CHANGE
BBP_BDI_PD_PO_CHANGE	Method for Changing Purchase Orders	CHANGE
BBP_BDI_PD_QUOT_CHANGE	Method for Changing Bids	CHANGE
BBP_BDI_PD_SC_CHANGE	Method for Changing Shopping Carts	CHANGE
BBP_BDI_PD_SUSASN_CHANGE	Method for Changing Confirmations	CHANGE
BBP_BDI_PD_SUSCF_CHANGE	Method for Changing SUS Confirmations	CHANGE
BBP_BDI_PD_SUSINV_CHANGE	Method for Changing SUS Invoices	CHANGE
BBP_BDI_PD_SUSPCO_CHANGE	Method for Changing SUS PO Confirmations	CHANGE
BBP_BDI_PD_SUSPO_CHANGE	Method for Changing SUS Purchase Orders	CHANGE

All these BAdIs have one method CHANGE, as normally the implementer needs this functionality only for some of the object types.

BAdIs are defined in the package **BBP_EXIT** or in a corresponding namespace package.

Alternatively you also can define the Enhancement Spot and BAdI in you own development class, especially if using the generic BBP_EXIT development class leads to use access errors

All new BAdIs must be:

1. listed in an ERD, if there's an ERD for the functional component
2. described in a requirements specification
3. detailed in a design specification
4. approved by the SRM Global Architecture Team.

BAdIs that change the semantics of existing BPP 1.0 business objects must be designed and implemented in alignment with AP.

BAdIs, either new BAdI's for existing BPP 1.0 business objects or for objects not included in BPP 1.0 should include an evaluation of the impact of the new or changed BAdI functionality on AP Adoption.

For more details please have a look at the Design "SRM 6.0 Extension Concept Switch Framework" in cRoom PTU Apps SRM Global Architecture (EXT_SWITCH).

5.1.6   Forms

With SAP Web AS 6.40 Adobe Forms have been introduced into the SAP Netweaver stack. With release SRM 6.0 Adobe Forms have been introduced to SAP SRM. In SRM 7.0 all forms shall be based on Adobe forms. For reference see ADOBE_FORMS.

Any existing Smart Forms still supported in SRM 6.0 (an appropriate customizing setting shall be provided to switch between Smart Forms and Adobe Forms) shall be deprecated and no new Smart Forms shall be provided.

5.1.7 DUET

SAP SRM 7.0 will not offer DUET functionality directly. These functions will be provided separately. They are of the Suite Edge development program. SAP SRM 7.0 will offer a well defined interface definition which must be used by all external applications which require access to SAP SRM 7.0 specific functionality.

5.1.8 Integration Technology

As ESOA is a strategic topic, and becomes more and more important, future developments shall focus on using ESOA as communication technology.

New projects requiring new integrations should only be done via Enterprise Services and should go through the PIC governance process.

Please refer to chapter 4.2.3.1.2 for further details on A2A and B2B interfaces.

Exceptions shall be approved by the SRM Global Architecture Team.

5.1.9 Catalog Interfaces

Currently SAP SRM leverages the SAP MDM catalog. The following catalog interfaces are used: OCI (in order to search) and XI (to exchange product master data).

OCI is an industry standard owed by SAP. OCI shall not be changed with SRM 7.0 in an incompatible way in order to avoid incompatibilities with other catalog providers. At least a minimal integration with any OCI catalog shall be provided for the most critical business scenarios like Self-Service Procurement and Service Procurement.

Changes to OCI are not planed right now. Changes will become necessary and must be done in a early phase of the development. If changes are necessary they must be done in a way so backward compatibility is guaranteed. Changes must be communicated to 3rd party software vendors at a timeframe which allows them to adopt their products to fulfill the latest version of OCI.

XI shall not be changed in an incompatible way in order to provide compatibility with previous releases of the MDM catalog shipped with previous SRM releases.

Beyond OCI and XI no other interfaces between SAP SRM and SAP MDM catalog shall be employed.

The SAP MDM catalog is the recommended catalog to integrate SAP SRM 7.0 with although integration with other catalogs is also supported via the Open Catalog Interface version (OCI 4.0).

The current integration of the catalog shall be investigated. A multi-window integration shall be provided for a more flexible and more user-friendly integration of a catalog.

It must be possible to connect different catalogs to SRM 7.0 with no limitation regarding the codepage the catalog is using. The transfer of catalog data back to SRM 7.0 must be independet of the used codepage (mixture of Unicode and Non-Unicode must be possible).

5.1.10 Monitoring

The monitoring of a new component has to be based on the CCMS interface. All components must provide monitoring interfaces to connect to CCMS.

All 3rd party components that are shipped with SRM 7.0 must be connected to CCMS for application monitoring.

Special attention must be paid to the monitoring of cross-system processes. All new components should enable the tracing and monitoring of cross-system processes in CCMS.

A2A interface based on RFC interfaces will be monitored either by CCMS or SRM application monitors.

As a monitoring capability for forward error handling must be provided. Please check chapter 4.2.3.1.1 for more details.

5.1.11 Search

All free text based search should be based on TREX or Enterprise Search using TREX. The use of any other search engines is prohibited.

The TREX is treated as an optional component, but is strongly recommended for SRM 7.0.

The existing search services shall be adopted to support the old search as well as the new TREX based search. The customer shall be able to switch between both search variants.

All BOs must provide the functionality to be indexed by TREX.

To support searching beneath system boundaries the Enterprise Search becomes a must have component.

In addition to that all new UI input elements must provide a value help where possible. Value helps must consider performance effects for unspecified search queries and display warnings prior to searching when the retrieval of the expected result list is extraordinarily time-consuming.

5.1.12 Identity Management

SAP NetWeaver Identity Management is the central hub for managing Identities for all kind of SAP systems as well as for non-SAP systems (see **Error! Reference source not found.**). It uses a Central Identity Store to store basic information of all identities, mainly

- Userid of all systems (with information in which systems the user exists)

- Name

- Basic address information (email, telephone, workplace address)

- Assigned Roles and Authorizations

By defining and assigning Business Roles (that consist of roles from different systems and applications), the Identity is automatically provisioned and granted access to these systems and applications.

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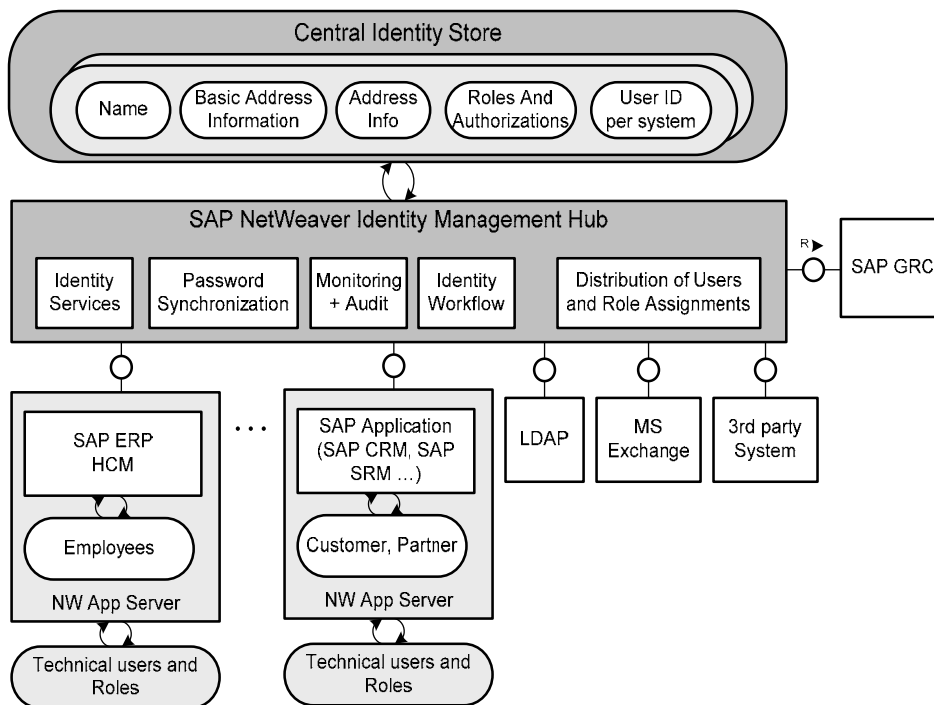
Figure 7: SAP NetWeaver Identity Management Hub

5.1.13 Roles and Authorizations

o The creation of new SRM roles must be approved by the Program Architecture Team.

o The creation of new internal company SRM roles, if approved, must include the creation of new portal roles in order to maintain the current 1:1 relationship between SRM and Portal roles..

o New roles must be developed according to the guidelines of the people productivity project (see ROLE_GUIDE) and the usage of work and control center technology. For the implementation of work / control center and related topics the guidelines are available in TWIKI.

o The complete navigation within the Portal is based on the control center / work center concept (since SRM 6.0). To adjust to new requirements and to reflect possible changes in this navigation concept, the structure of the BP for SRM 7.0 still needs to be reviewed. However, no major changes are expected at the time of writing.

o The SRM standard roles must be reviewed and adopted to fulfill the requirements which have been introduced during the UI conversion. Therefore the roles must be cleaned out. All roles shall be recreated to fulfill the SRM naming conventions (all roles must begin with /SAPSRM/).

o Only relevant SAP Gui Transaction Codes are allowed to be maintained in the SRM standard roles. All old ITS Transactions need to be removed to fulfill the security standards. No "*" is allowed as value for the authorization objects.

o The option of uploading SRM roles (ABAP based) to the Enterprise Portal needs to be verified.

o To support NetWeaver Business Client it is necessary to provide a menu structure in the roles which fit's to the Control Center / Work Center paradigm. Also the functionality of the service map must be taken into account while creating / refactoring the roles..

5.1.14 Document Management

Use the R/3 Document Management System (DMS) for the storage and management of documents (e.g. attachments for Purchase Orders...) when the required functionality is covered by the tool.

The use of cFolders and Knowledge Management (KM) must be approved by the Program Architecture Team and should be minimized in general.

5.1.15 Alerts

For the implementation of alerting features the *Alert Framework* (provided by NetWeaver) must be used. This Framework offers following routing services:

- Active delivery of mission critical information in real-time

- Support for e-mail, SMS/Pager, Fax, Web Interface

- Personalized alert delivery

- Publish and Subscribe mechanism for alert topics

In the portal environment visualization of alerts (alert inbox) as well as the subscription and personalization of alerts has to be implemented using the *Universal Work List* (UWL).

The above-mentioned monitors provide a UI for the activation of alerts.

Other implementations have to use the Alert Framework API for triggering Alerts.

Portal-based scenarios using other implementations of alert inboxes (for example *OPS Alert Monitor*, *BI Alert Item* or *CRM Alert Monitor*) have to switch to the UWL.

5.1.16 ARIS Modeling

ARIS is a tool used primarily by Solution Management for modeling business processes. Its main use is within PIC for the PIC0 modeling and BO modeling. All SAP SRM 7.0 business process scenarios shall be documented as ARIS models. It is also possible to synchronize ARIS models with content stored in the solution manager (for example, ARIS models can be uploaded to the Solution Manager, where the models can be linked to system configuration and customizing).

The scope of the PIC 1 phase is to finalize the object model and to derive the concrete messages from it. Here it is important to follow an outside-in driven approach wherever possible. That means that the backends, which might be old fashioned, not object oriented or full of SAP semantics need to be hidden to the service consumers. The interfaces have to follow given Outside Standards as well.

5.1.17 BAPIs

With respect to the SAP strategy the communication across system boundaries, ESOA shall be used as the underlying technology. It is not a goal of SAP SRM 7.0 to switch the complete

communication environment to ESOA, but for future development the usage of ESOA instead of BAPIs or RFCs must be considered.

BAPIs and RFCs should be used to provide external data input. All guidelines and standards for BAPI development, found in BAPI_GUIDE in 11.1 must be adhered to.

If RFC functional modules are required, for integration of external applications, they must provide well defined RFC interfaces.

All BAPIs made publicly available by previous releases of SRM shall still be supported by SRM 7.0. Any changes require SRM Global Architecture Team approval.

In addition to BAPIs all new APIs must be fully commented and documented. Once an API is made publicly available, it cannot be removed in the subsequent release – it can only be made deprecated.

If it is required to not use ESOA as intercommunication technology, a exception must be approved by the global architecture team.

5.1.18 SAP Business Workflow

To provide the customer the option to run through a smooth upgrade project it has been decided to use the suite workflow (already used with SAP SRM 5.0). This support is limited to the functions already in place with SAP SRM 5.0. New features will only be developed with respect to the workflow introduced with SAP SRM 6.0

All existing and new workflows of SAP SRM 7.0 shall be based on SAP Business Workflow with the exception of cross component workflows employing 3rd-party components. For the latter ccBPM shall be used instead.

The existing design tools for workflows have to be used according to the following rules:

- The Workflow Builder is used by developers as the standard design tool for workflows

- ARIS is used for specification

- Do not use ccBPM for workflow except for 3rd Party Integration

- Do not use the (Java) Ad-hoc Workflow within SAP SRM coding directly. It will however be needed for User Self Registration as part of the Portal User Management.

- Do not use Workflow Modeler (originally from CRM, now in ABA).

- BI Process Chains shall only be used for BI load processes.

In the portal, the standard workflow inbox is the Universal Work List (UWL). No other portal based inbox for workflow items must be allowed. UWL is not built for mass data however. In case mass of work items need to be pushed to the user, a summary work item which points to the application work list (for example Object Work List (OWL) in Work Center) shall be used.

A new SRM workflow framework which leverages the SAP Business Workflow was introduced with SRM 6.0. The new SRM workflow framework is an abstraction to any kind of (Workflow) engine. It is tailored to support approval processes in general and the very specific requirements of SRM (i.e. complex Approval Preview, ad-hoc approvers, early warning and reviewing/appraising) as well. The SRM Workflow Framework consists of three essential blocks:

- the SRM Workflow Framework Core

- supporting functionality for the adoption of the framework and a set of reusable components (for decision making, and process visualization)

- adapter to Business Rules Framework (BRF) for flexible configuration.

Note that the workflow can be configured at run-time by a business user and thus has significantly higher flexibility than static workflow configuration models used in other solutions.

Each SRM business object (BO) that wants to provide approval processes with these features has to implement an adapter to the SRM Workflow Framework, the so called approval document view (ADV); for details please refer to the SDD SRM Approval Process Integration. In addition each BO has to specify a set of attributes and algorithms to determine responsibility for approval (approvers). The attributes are exposed to the BRF and can be used in combination with the algorithms at IMG to configure standard approval processes.

While documents are in approval, the framework (actually the SAP Business Workflow) requires full control over the document, especially with respect to document access and document changes. Every BO that consumes the framework has to adhere rigidly to this concept to guarantee consistency of the process (and document). Centrally maintained functionality is provided that can be reused in the specific BO ADVs to gain this.

For all kind of workflows associated with PDO layer business objects the use of this SRM workflow framework is mandatory. Please contact the workflow team (Silvana Kempf, Erik Dick, Oliver Hilss) for support and guidance. The workflow team must be invited to all reviews regarding workflow topics. See also SRM_WFL_FW for a description of the SRM workflow framework.

5.1.19 SAP JCo Client Usage

For SRM 7.0 running NetWeaver 7.01, the SAP Java Connector (SAP JCo) Client Service will continue to be used in existing Business Packages with Web Dynpro applications accessing RFCs and BAPIs through SAP JCo connections.

Configuration of Business Packages that contain both the SAP JCO Client Service and the Connector Framework is confusing: each has its own connection pooling mechanism, properties configuration and different integration with portal and J2EE.

New BPs must use the SAP JCO Client Service to avoid confusion when merged with existing BPs.
For all exceptions, approval of the SRM Global Architecture Team is required.

Note that the XI SLD or a standalone SLD must be used for system aliases used in SAP JCo connections.

5.1.20 cFolders, cProjects, GTS Integration

The existing interfaces for cFolders and cProjects must be supported in SRM 7.0. Currently three integrations with cFolders exists:

- Create cFolder Collaboration from Bidding Engine (no live Auction).
- Create external requirement via ExtReq interface from cFolder Collaboration
- Legal Contract Authoring

Two integration scenario with cProjects exists:

- Create external requirement via ExtReq interface from cProjects project
- Maintain initiative as project in cProjects in Category Management.

An integration with GTS is currently available in SRM 5.0 & 6.0 with the Bidding Engine.

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5.1.21 Solution Manager

The SAP Solution Manager supports the entire lifecycle of software solutions from the Business Blueprint through configuration to production operation. It provides central access to tools methods and preconfigured content that a customer can use during evaluation, implementation and productive operation of his systems.

The content of the SAP Solution Manager is provided by SRM Solution Management and SRM Knowledge Management with the support of SRM Development.

5.1.22 Programming Guidelines

The SAP wide programming guidelines in its current version (release 0.9) shall be followed. The programming guidelines can be found in PROG_GUIDE.

5.2 Prohibitions for technology issues

In general all technologies which are not supported anymore by NetWeaver 7.01 shall not be employed. In case not supported technologies are already in use, they should be substituted by supported technologies. For new components only technologies shall be used which are still supported by NetWeaver 7.01.

In addition the following general guidelines apply for SAP SRM 7.0:

- SAP SRM 7.0 supports exclusively SAP A2A/B2B interfaces (formerly referred to as SAPXML) including (mapping to). However, IDocs could still be used for communication with an R/3 backend (e.g. SUS – MM).

- All XSLT based document mapping shall be replaced by generated XI mappings, which are specialized (but generated) java binaries. The generation of the mapping is done at design time, based on the XML schema descriptions (XSD) of the involved documents. With the help of a visual tool (at ESR) a developer has to describe the attribute mapping from one document to the other. In a final step this mapping is translated into java coding.

- SAP Business Connector shall not be used. It shall be replaced by means of XI technology.

- Cross-Component BPM (ccBPM) must not be used for integration of SAP applications. The use case for ccBPM is 3rd-party integration (non-SAP applications) and cross-system integration like B2B in distributed SAP environments at customer projects. The use of ccBPM for 3rd-party integration is under investigation.

- The list of UI technologies that must not be used for new developments in SAP (see https://portal.wdf.sap.corp/go/255-list for the "UI 255-list" of UI technology that has to be phased out), will be adhered to in SRM 7.0. For SRM 7.0, additions of UI using UI technologies that are already used in SRM is permitted.

- In general SAP NetWeaver Composition Environment (SAP NetWeaver CE) shall only be employed for light weighted Java composite apps. At time of writing it is not defined if Java applications will be part of SRM 7.0 and if the existing ones will be migrated to ABAP or stay und will become able to be run on NetWeaver CE.

5.3 Exceptions for technology issues

Exceptions to the rules contained in this document must be approved by the SRM Global Architecture Team.

Exception 1: SUS will stay on BSP technology.

Exception 2: Workflow will be enabled to support SRM 5.0 workflow for upgrade customers.

5.4   ERP Alignment

As SAP SRM 7.0 becomes part of the Business Suite and is one of the most important parts of the procure-to-pay scenario a project was started with the focus to harmonize the usage of SRM and ERP. For further details please refer to the corresponding ERD document listed in chapter 4.3.

6 Reuse Decisions and Constraints

Bringing all parts of the Business Suite together (harmonizing the applications) will increase the reuse potential within the suite. It will become more important to have an appropriate software layer that supports reuse, and a team and infrastructure to help make reuse reality.

In the past, the software component SAP_ABA was the reuse layer for business applications, but has been used less and less because of its restrictions. SAP_ABA is delivered as a part of NetWeaver and therefore development in SAP_ABA is affected by the schedules and restrictions of SAP NetWeaver. The granularity for consuming changes (entire support package stacks) and the different schedules of SAP NetWeaver (early development close) were obstacles for reuse in the past: Often reuse opportunities are recognized late, when NetWeaver development is already closed. And sometimes there is the need to introduce or change reusable functionality, but without forcing the reusing applications to move to a new version of the entire NetWeaver.

Business Suite 7.0 has two reuse layers: The software component SAP_ABA and the new software component SAP_BS_CO. The software layer SAP_BS_CO has been introduced as a new reuse layer for the Business Suite to tackle the "reuse problems" with SAP_ABA.

6.1 Selection and Prohibitions for reuse issues

Reuse software (software component version)	Owned by (BPP / ECC / other)	Maintenance until end of extended maintenance of application?	Usage (must / should / must not)	Remark / explanation
Business Partner	ABA	Yes	Must	Business Partner has to be used for the entire application.
Product	ABA	Yes	Must	Product has to be used for the entire application.
Web Survey	NetWeaver	Yes	Must	
Alert Framework (ALM)	NetWeaver	Yes	Must	
SAP Business Workflow	NetWeaver	Yes	Must	
PD-Org	NetWeaver	Yes	Must	
MDM catalog	NetWeaver	Yes	Must	
OPI	SRM	Yes	Must	
OCI	SRM	Yes	Must	

Reuse software (software component version)	Owned by (BPP / ECC / other)	Maintenance until end of extended maintenance of applica- tion?	Usage (must / should / must not)	Remark / ex- planation
SAP Smart Forms	NetWeaver	Yes	Must Not	
Adobe Forms	NetWeaver	Yes	Must	
IPC	ABA	Yes	Must	
DMS	NetWeaver	Yes	Must	
PCD	NetWeaver	Yes	Must	
CCMS	NetWeaver	Yes	Must	
BSV	NetWeaver	Yes	Must	
Records Management (RM)	NetWeaver	Yes	Should	

Table 9: Reused Software Components

6.2 Exceptions for reuse issues

All exceptions to the rules above must be stated explicitly in an ERD or SDD and require Pro- gram Architecture Team approval. The reuse of components/tools that are not listed explicitly in this overview must be approved by the Program Architecture Team as well.

Only the use of components/tools that are generally available at shipment date of SRM 7.0 and are supported during the SRM 7.0 support and maintenance period is permitted.

7   Software Layers and Components

7.1   Software Layers

The following diagram provides an overview of the SAP SRM 7.0 architecture. SAP SRM is mainly written and deployed in the ABAP stacks on the NetWeaver platform.

SAP_SRM
SAP_BS_CO
SAP_AP
SAP_ABA
SAP_Basis
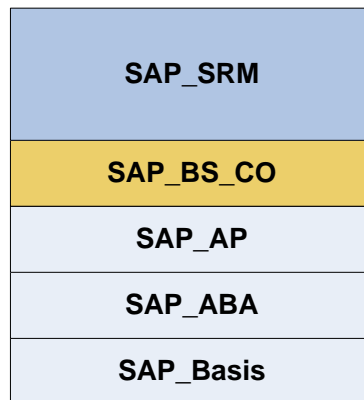
Figure 8: Software Layer

7.2   List of Components

7.2.1   Own Application and Software Components

Application Component	Required Underlying Application Release and Application Component	Software Component Version	Owner	Technically Dependent On
SAP SRM 7.0 SRM Server	SAP Netweaver 7.01 ABAP Server	SRM Server 7.0	own	
		SAP AP 7.0	Other BU	
		SRM Plus 7.0	own	SRM Server 7.0
		SAP Web AS 7.00	other BU	
SAP SRM 7.0 Catalogue Content Management	SAP Netweaver 7.01 ABAP Server	SAP SRM-MDM Catalog 3.0	other BU	
		SAP Web AS 7.00	other BU	
SAP SRM 7.0 SAP cProject Suite	SAP Netweaver 7.01 ABAP Server	CPRXRPM 400	other BU	
SAP SRM 7.0 TREX	SAP Netweaver 7.01	SAP NETWEAVER 7.01 Search and Classic. (TREX)	other BU	
SAP SRM 7.0 XI Content	SAP Netweaver 7.01 XI Server 3.0	XI CONTENT SRM-MDM Catalogue 3.0	other BU	
		XI CONTENT SAP_APPL 46C	other BU	
		XI CONTENT SAP_APPL 470	other BU	
		XI CONTENT SAP_APPL 500	other BU	
		XI CONTENT SAP_APPL 600	other BU	
		XI CONTENT SRM SERVER 7.0	own	SRM Server 7.0
		XI CONTENT SRM ENABLEMENT 7.0[2]	own	SRM Server 7.0
SAP SRM 7.0 BI Content	SAP Netweaver 7.01 SAP BW 7.00	BI Content 7.0.4	own	
SAP SRM 7.0 Front-end GUIs	SAP Netweaver 7.01	SAP Netweaver 7.01 Front-end GUIs – SAP GUI for Java 7.10	Other BU	
		SAP Netweaver 7.01 Front-end GUIs – SAP GUI for Windows 7.10	Other BU	

---

[2] XI CONTENT SRM ENABLEMENT contains the enterprise SOA delivery of SAP SRM 2008.

Application Component	Required Underlying Application Release and Application Component	Software Component Version	Owner	Technically Dependent On
SAP SRM 7.0 Portal Content	SAP Netweaver 7.01 J2EE Engine and EP	BP SRM 7.0	Own	
		BP SRM SUPPLIER COLLABORATION 7.0	Own	
		BP SRM CATEGORY MGMT CONT	own	
SAP DOCB 3.00 Document Builder	SAP Netweaver 7.01	PSDOCB 300	own	
		XI CONTENT PSDOCB 300	own	

Table 10: Application Components

Software Component	Software Component Version
DOCB DUET DOC AUTH JAVA	1.0
DOCB DUET DOC AUTH NET	1.0
SRM OSP CONTRACT MGMT JAVA	6.0
SRM OSP CONTRACT MGMT NET	6.0
SRM OSP SHOPPING CART JAVA	5.0, 6.0
SRM OSP SHOPPING CART NET	5.0, 6.0
SRM OSP SIMPLE BUY JAVA	6.0
SRM OSP SIMPLE BUY NET	6.0

Table 11: DUET Software Components

The above dependency depends on the delivery model. At the time of writing the scope of a hosting / on-demand offering is not finally defined. The table above list the components used for on-premise. The component list for on-demand / hosting is a sub-set of the on-premise list.

7.2.2   Non-SAP Software Components

Software Component Version	Classification	Remark	Requires Legal Changes?
<software component version>	<3rd party / open source> <3rd party supplier>		Yes / No
<software component version>	<3rd party / open source> <3rd party supplier>		Yes / No

Table 12: Software Component Version

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7.3 Deployment Scenarios

The figure below shows the position of the SAP SRM 7.0 solution within the SAP reference system landscape. The systems surrounded in yellow are the minimum systems to run SAP SRM 7.0. The ones with a green surrounding are the recommended systems which shall be in place to get the most beneficial solution.
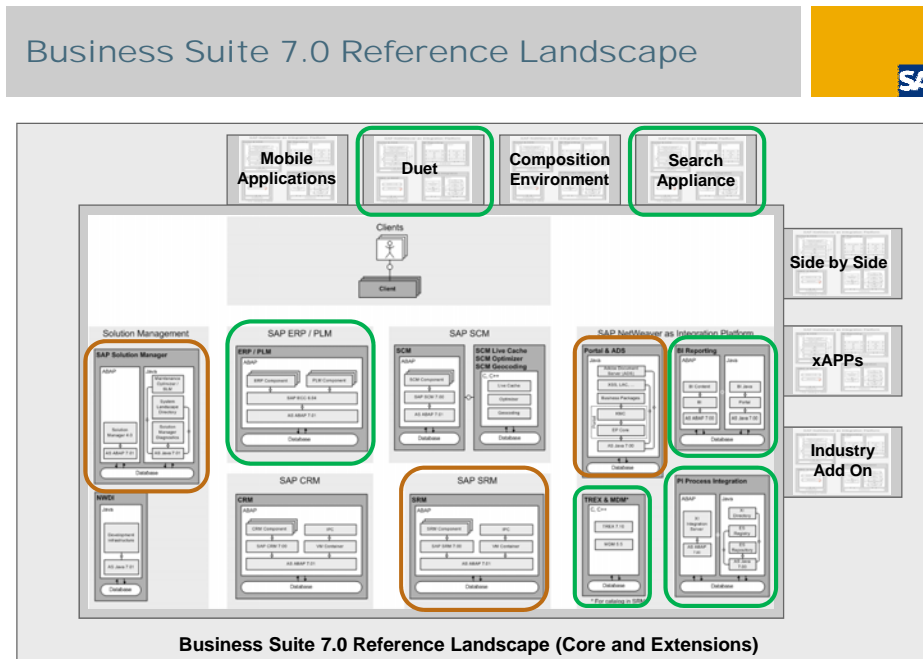
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Figure 9: Reference System Landscape

7.3.1 Delivery Model On-premise

On-premise installations will support ERP and SRM deployed on different application servers and against different database instances. Integration between ERP and SRM will leverage tight integration techniques such as RFC. SRM shall provide On-premise with minimum configuration cost to the customer.

SAP SRM offers also additional functions like SUS and ROS. These components can be run on different SRM instances, depended on the security requirements of the customer.

The SRM server shall be employed for backend integration in particular in order to provide multi-backend capabilities (ECC integration). The SRM Server and ECC must use dedicated ABAP servers (not necessarily physical machines). SRM Server / ECC integration shall support multiple ECC releases. Functional or usability limitations are acceptable depending on the ECC release level. Maximum integration shall be achieved with ERP 2005 EhP4. The already exist-

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ing integration technologies shall be employed further on. However a refinement shall be done in order to support lean deployment.

MDM shall be used as optional component for the distribution of supplier master data and in addition for finding supplier duplicates. In particular for the latter and to control supplier distribution an integration of ROS with MDM shall be done.

8 Relations to Standards and Guidelines

The SAP SRM 7.0 Program Architecture Guidelines follow the SAP product standards (see 8.4) and the overall SAP UI strategy (see 5.1.3.1).

8.1 Related Program Architecture Guidelines

This document overwrites the ERP architecture guidelines in the areas that apply for the SRM part of ERP. If a fundamental aspect of the SAP SRM 7.0 program is not covered in the Program Architecture Guidelines for SRM the corresponding ERP Program Architecture Guidelines apply for the SRM program.

8.2 Programming Guidelines

The following programming guidelines complement the architecture guideline:

1. SRM Programming Guidelines (ABAP Development)
2. SRM Programming Guidelines (NetWeaver Development)
3. SAP Programming Guidelines (see 11.1)
4. PDO Architecture Guidelines (see 11.1)

8.3 Impact from SAP architecture adoption guidelines

Adoption Guideline	Impact on Architecture / Deviations from guideline

Table 13: Adoption Guidelines

8.4 Product Standards

Product Standard	Impact on Architecture
Accessibility (see link)	Must be considered.
Application Integration & Interfaces (see link)	Must be considered.
Customizing & Configuration (see link)	Must be considered.
Data Archiving (see link)	Must be considered.

Product Standard	Impact on Architecture
Development Environments (see link)	Must be considered.
Documentation (see link)	Must be considered.
Functional Correctness (see link)	Must be considered.
Globalization (see link)	Must be considered.
Multiple Clients (see link)	Must be considered. Only Portal and BW content may have exceptions.
Opensource/Third Party (see link)	Must be considered.
Performance (see link)	Make sure that resource consumption of existing functions does not increase when new functions are added or the architecture is changed, assuming that the existing functions are used in the same way. This means that the following values may not increase by upgrading from one release to the next: - Number of accesses to the persistence layer - Net data volume transferred per request - Peak memory consumption - CPU consumption of functions / methods - Number of round trips between front-end and application layer - Amount of bytes transferred between front-end and application layer For more information see Performance Checklist for Planning in SAPNet Quick Link /pil → Product Standards → Performance.
Security (see link)	Must be considered.
IT Service/Appl. Management (see link)	Must be considered.
Technical Implementation and Change Management (TICM) (see link)	Must be considered.
Usability (see link)	Must be considered.

Table 14: Product Standards

The TREX Platform restrictions list can be found at http://service.sap.com/pam. The latest published version of the TREX platform restrictions is for Netweaver 7.01.

Note that as of SRM 5.0, TREX is required for the Invoice Management System and Contract management.

All new development for SRM 7.0 must comply with the SAP Product Standards except the development of portal and BW content because Enterprise Portal and BI do not fulfill the Multi-Client Product Standard.

No improvements are planned for the SAP Product Standards compliance of existing functionality. For a detailed description of the SAP Product Standards refer to the documents listed below.

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8.5 Review Process

Reveal, discuss and clarify potential problems, defects or obscurities of important documents in the early phases of a development project.

Benefits of having a review process are:

- *Defects can be corrected in early phases and without too much effort.*

- *Software quality is increased*

- Cost intensive after effects are reduced

8.5.1 Phases of Review Process

There are four phases of Review which are:

- Review Planning

- Review Preparation

- Review Execution

- Review Post Processing

8.5.1.1 Review Planning

Review Planning includes

- **Set-Up review Planning**

  All review meetings within a project can be planned in the Review Planning Template on the basis of the respective Q-Planning.

- **Identify Stakeholders**

  Stakeholders have all the required Know-How for specific topics. Some of these might be: Solution Management contact, Project architect, Interface owner, Representatives of involved components, Knowledge Management, Product Standard contacts, experts in own project

8.5.1.2 Review Preparation

Review Preparation includes following steps

- **Define required experts for review**

  The required experts for the review can be defined as a subset of the identified stake-holders.

- **Create final review version**

  Author should use current templates for Specification (T010) and Design documents (T011).Author should closely contact stakeholders during document creation in order to clarify all fundamental issues.

- **Dispatch review invitation and draft version of document**

  The draft version shall be sent to the participants at least five working days prior to the review meeting.

- **Prepare for review meeting**

  A comprehensive preparation of all experts is mandatory.

8.5.1.3   Review Execution

Review Execution includes following steps

- Walk through the document

- Find problems and errors (no solution discussions)

- Create List of Problems / Actions

- Agree on a status of the document

  OK (no further review required)

  Partly OK - Revise and Verify (no further review required)

  Partly OK - Revise and Review (a new review is required)

  Not OK (a new review is necessary)

8.5.1.4   Review Post Processing

- Distribute review meeting minutes to experts

- Close open items and action items according to agreed deadlines

- Create revised document version after review and update status of review minutes accordingly

- Further procedure according to review status:

  - **Status OK**

    Distribute revised document and revised review minutes.

  - **Status Partly OK – Revise and Verify**

    Distribute revised document and revised review minutes and request active approval by the experts.

  - **Status Partly OK – Revise and Review**

    A new review is required.

  - **Status Not OK**

    A new review must be set up.

- Upload documents into cPro

  - Review version of document

  - Review Meeting Minutes

  - Final version of the document

8.5.2   Role in Review Process

Role	Description
Author	Author of the review document and therefore initiator of the review.
Coordinator	Coordinates the review activities (e.g. invitations, room booking, etc).
Moderator	Leads the discussion during the review meeting.
Minute Taker	Person who records the review minutes.
Expert	Brings in the domain knowledge with individual preparation and signs off the document.
Verifier	Mandatory Expert of each review; i.e. solution architect/solution management representative for SRS, project architect for SDD. Also signs off the document.

Table 15: Roles in Review Process

8.5.3   Guidelines for Review

- Required experts as well as the date and the duration of the review must be defined preferably 3-4 weeks before the document.

- Participation of additional members who are not involved in review meeting is not recommended

- Author should use current templates for Specification and Design documents. The review document must be written completely in English.

- Dispatch the review document to the participants at least 5 working days before the review meeting and ensure the upload of the review version to cPro.

- Expert must prepare individually by active reading of the review document and keeping the feedback/comments ready before the review. Expert should not go through the document during the review

- If one expert is not available for any reason, he should look for a substitute or should mail his own notes to the moderator

- During execution of the review meeting, walk through the document chapter by chapter asking for questions, obscurities or found issues

- Always keep an eye on the remaining timeframe and avoid unnecessary follow up review meetings

- Don't tolerate long discussions about problems and possible solutions

- After review meeting moderator should distribute review meeting minutes to experts

- Close all open items and action items according to the deadlines

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- As soon as the author has sent the revised document , send the revised document   and the updated review minutes to all participants of the review

8.6   Testing

Planning of tests is done with an objective to scope the test as per requirements. Scope of each test is decided on the results from previous test, new developments so as to test the regression and new development for each SP. Test planning also includes test effort estimation.

8.6.1   Test Phases

8.6.1.1   Regression Test (RT)

RT cycles are scoped and executed by TCC with an objective to provide an early feedback to dev during development period and also to provide feedback during various test cycles. The scope of the RT is determined by the analysis of the preceding regression test cycles and parallel testing activities like AT, MIT and SIT. Corrections in this phase are via transports.

8.6.1.2   Module Integration Test (MIT)

MIT is executed by developers to test the developments done during the specific Support Pack (SP). Quality Management team (QM) leads and monitors MIT . Corrections in this phase are via transports.

8.6.1.3   Acceptance test (AT)

AT is executed with a set of experienced testers to test the regressions and new developments for each SP. Emphasis is to test various functionalities in standalone mode. Corrections in this phase are via transports.

8.6.1.4   Scenario Integration Test (SIT)

SIT is executed to test the end-to-end business scenarios and it variants for the application. The objective is to test various scenarios which are valid for each SP. Emphasis is to test functionalities as per business scenarios. Corrections in this phase are via transports.

8.6.1.5   Pre-Validation Test (ExSIT)

ExSIT is conducted after ECC by the customer success team and TCC. Testing in this phase is done prior to handing over an SP to validation. Corrections in this phase are via notes.

8.6.2   Test Management

A new user concept needs to be verified. No functional users shall be used for the tests. Each tester will become a set of named users which must be used during the tests. This helps development to easier identify and solve problems like short dumps.

8.6.3   Authorizations during Test Phases

During the tests the test users are only allowed to have the SRM standard roles assigned to them. It is not allowed to assign SAP_ALL are any role / profile which provides equal permission to a test user.

For identifying problems additional roles for debugging have to be created. This roles will be created in cooperation with Development, QM, RE and DSS

9 Development landscape

The following picture shows the proposed starting development landscape for SAP SRM 7.0 available at P2D. This landscape models the SRM 6.0 development landscape. Each test environment will have a parallel Java environment running on its own NW04S environment. Configuration of these environments will be from standard set of import test import workbooks.
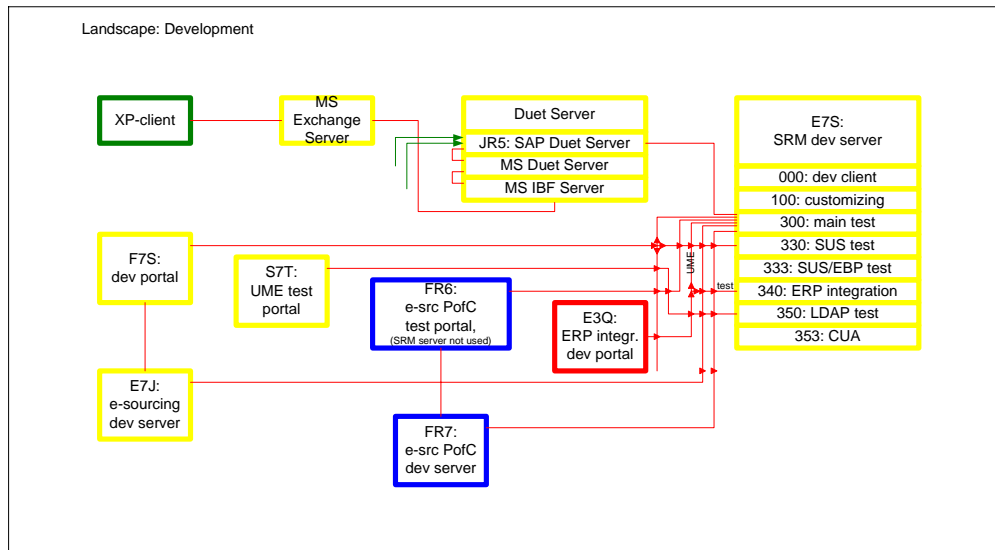

Figure 10: Development Landscape

More details regarding the SAP SRM 7.0 development landscape can be found on the RE homepage.

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10   Glossary

ALV	SAP List Viewer. Tool to display operational reporting data. There is an ABAP and a WebDynpro based version.
AP	Application Platform. Organizational unit that develops BPP.
Application	Software unit comprising a specific collection of business processes required to address defined business needs. Example: SAP ERP
Application release	Release of an application. Consists of application components. Example: SAP ERP 2005
Application component	Group of technically dependent software component versions. Common technical unit of installation and upgrade. Can be seen as a "server"; corresponds to a PPMS instance. Example: ECC ABAP Server within SAP ERP
AVL	Approved Vendor List. Business Object in SRM that groups approved vendors in a group.
BAdI	Business Add-In. Interfaces that can be implemented by the customer for customer specific ABAP coding.
BAPI	Business Application Programming Interface. Public interfaces of ABAP systems that can be called by external systems (based on RFC technology).
BI	SAP Business Intelligence. Analytical content.
BOR	Business Object Repository. This repository should not be mixed with the ESR (Enterprise Service Repository).
BP	Business Package. Enterprise Portal content is delivered as Business Package
BPM	Business Process Management
BPP	Business Process Platform. SAP wide platform for all future business processes.
BSP	Business Server Pages. Business Process Platform. HTML based technology to display dynamic ABAP content in a browser. See JSP
BSV	General Status Management in R/3
BW	SAP Business Warehouse.
ccBPM	Cross Component Business Process Management
CCM	Catalogue Content Management. An SAP catalogue solution. Version 2.0 of this solution runs on Netweaver 7.01. No current (10/25/05) plans in place to port CCM 2.0 to Netweaver 2005. A suitable substitute catalog application may replace CCM in SRM 6.0..
CCMS	Computing Center Management System. Central monitoring system.
CUA	Central User Administration. ABAP based User Management.

DMS	R/3 Document Management System
DTR	Design Time Repository. Storage and versioning system for non-ABAP sources.
ECC	Enterprise Core Component
EP	Enterprise Portal
ERD	Engineering Response Document
ESA	Enterprise Services Architecture
ExtReq Interface	Interface to push external requirements to SRM for procurement.
SGAT	The SGAT (SRM Global Architecture Team) is a team of SRM architects headed by the program architect (Wolfgang Dittrich).
GDT	Global Data Type. See PIC.
GR	Goods Receipt
GTS	SAP Global Trade Services. xAPP for the handling of foreign trade regulations.
Hosting	In a hosting deployment a software product is installed and run by a hosting provider. Configuration of the software product is either done by the hosting provider or the customer. The software runs in the network of the hosting provider and is accessed by the customer over secured connections (e.g. VPN connection plus secure internet connection)
IMG	Implementation Guide. Tool to collect customizing activities for ABAP based applications.
IPC	SAP Internet Pricing Configurator
IV	Invoice Verification
ITS	Internet Transaction Server. Technology to display ABAP Dynpros in a browser.
JSP	Java Server Pages. HTML based technology to display dynamic JAVA based content in a browser.
KM	Knowledge Management (Portal component for document management)
LDAP	Lightweight Directory Access Protocol (Standard for storage of users and organizational structures)
MM	R/3 Materials Management
OCI	Open Catalog Interface. Public interface for the integration of catalogs.
OPI	Open Partner Interface. Public interface for the integration of supplier directories.
OLTP	On-Line Transaction Processing
On-Demand	On-demand deployment means that a software product is installed, preconfigured and run by an On-Demand software provider. A customer can use the complete or parts of the software product via inter-

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	net.
On-Premise	On-Premise deployment means that a software product is installed, configured and run by as specific customer in the network of this customer only.
PCD	Portal Content Directory. Portal based persistence.
PD Framework	Procurement Document Framework ("Method framework")
PDO Framework	Procurement Document Object Framework. ABAP OO based layer developed in SRM 6.0 on top of PD-Framework to provide unified access to Business Objects from all channels (UI, eSOA,..)
PD-Org	Personal Development Organization. SAP organization tool part of the Human Resources component
PDV	Portal Data Viewer. Portal UI technology for presentation of analytical data.
PIC	Process Integration Content. It contains process integration messages published by SAP.
ROS	Registration of Suppliers. Application in SRM for Supplier Self Registration and Self- Maintenance..
RFC	Remote Function Call
SES	Service Entry Sheet.
SDD	Software Design Document. Document that describes HOW a feature will be implemented.
Software component	Smallest unit of installation and maintenance. Corresponds to a Support Package track. Example: SAP KERNEL 32Bit
Software component version	Release of a software component. Building block for application components. Example: SAP KERNEL 6.40 32Bit
SUS	Supplier Self-Services. Application in SRM for Supplier Order Collaboration.
TAMS	Technical Architecture Modeling Standard http://ency.wdf.sap.corp:1080/wiki/TAMS
TPD	Trading Partner Directory. Java API of UME to connect users to Business Partners.
TREX	Search and Classification. SAP Search Engine.
UME	User Management Engine. SAP J2EE Engine based User Management.
UWL	Universal Work List. Portal based task and alert inbox.
XI	SAP Exchange Infrastructure
XPRA	e**x**ecute **Pr**ogram **A**fter upgrade (Upgrade programs for ABAP based applications)
Business Event	Upcoming concept in addition to service based communication. The sender of a business events need not know the recipients and publish-subscribe mechanisms may be used. Details are still being developed.

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Business Process	A business process is a set of activities transforming a defined business input into a defined business outcome.
Business Process Platform (BPP)	The combination of SAP's Application Platform with SAP's technology platform, which supports the creation, enhancement, and seamless execution of business processes and business scenarios.
Business Scenario	A sequence of business processes designed to achieve key business objectives. A business scenario is either specific to one industry (industry-specific scenario) or applicable to multiple industries (cross-industry scenario).
Composite applications	Built based on services and events offered by platform applications and extension applications to satisfy specific business need of the user, focusing on usability and flexibility. Composite applications range from simple extensions of existing applications to new business processes. They are service consumers that don't provide services to others.
Deployment Scenario	A Deployment Scenario is the representation of a business scenario in a concrete system landscape. It consists of a list of technical components and of a configuration bill of material. It describes the physical shipment of a scenario and considers the various release levels.
Enhancement Package	Mechanism to ship innovations in a non-disruptive way based on a stable core release. Enhancement package follow a set of rules to ensure that they can be installed smoothly and fast without affecting the customers business processes. New functionality in enhancement packages must be explicitly switched on by the customer in order to become effective.
Enterprise Service	A Web service that has been co-defined by SAP and/or partners. Enterprise Services provide business processes or business process steps that can be used to compose business scenarios while ensuring business integrity and ease of reuse.
Extension Application	Extends the business platform (SAP Business Suite or AP/ SAP Business By Design) by adding integrated, mission-critical processes applicable to specific industry, customer or business segments. They are closely integrated with platform applications but are built to satisfy more specific business needs.
Floor Plan	A floor plan defines the composition of user interface building blocks on the screen. Depending on the floor plan, only certain user interface building blocks and sequences are allowed.
Stable Core Release	The stable core release of SAP ERP is ERP 6.0. For all other products of the business suite it is the 2008 release of the SAP Business Suite. After the stable core release innovations are shipped via enhancement packages. Support packages of the stable core contain only bug fixes but no new functionality.
Platform Application	Application which is part of either the SAP Business Suite (enterprise SOA by evolution) or AP/ SAP Business ByDesign (enterprise SOA by design). Platform applications deliver standard, highly integrated, mission-critical processes applicable to many industry or customer segments. They offer controlled flexibility via configuration and extension mechanisms.

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11   Appendix

11.1   References

The abbreviations are used as references throughout the document.

Abbreviation	Document Name / Link
AP_ADOPT	Application Platform Adoption Project see https://portal.wdf.sap.corp/irj/go/km/docs/Infocenters/AP%20Root/AP/Engineering/Adoption/Platform%20Adoption%202005/index_new.html
AP_BP_XLS	List of BP objects that must not be changed see https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Architecture%20Documents/Related%20Materials/BBP_AP_BUPA_OBJ.xls
BADI_NEXT	BAdI – The next generation see https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Architecture%20Documents/Related%20Materials/NewBAdI_220205.ppt
CONTENT_GOV	CONTENT_GOC see https://portal.wdf.sap.corp/irj/portal?NavigationTarget=navext(ROLES://portal_content/com.sap.sen.application_platform/roles/com.sap.sen.application_platform/application_platform/com.sap.sen.cookbooks|WCMS://Infocenters/AP%20Root/AP/Engineering/~/Content%20Governance%20!26%20Coaching)
ADOBE_FORMS	Application Developer Guide: Creating PDF-Based Forms see https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Architecture%20Documents/Related%20Materials/forms_accessible.doc
STANDARD_BC	SAP Product Standards see https://portal.wdf.sap.corp/irj/portal?NavigationTarget=navext(ROLES://portal_content/com.sap.sen.ptg.workspace_ptu_app.f_applications/com.sap.sen.ptg.workspace_ptu_app.f_roles/com.sap.sen.ptg.workspace_ptu_app.rl_ptu_applications/f_applications/com.sap.sen.ptg.workspace.pg_standards_and_tools|WCMS://Infocenters/WS%20PTG/PTG/Standards%20%26%20Tools/~/PIL%20Product%20Standards)
SRM_WFL_FW	SRM_WFL_FW see https://ifp.wdf.sap.corp/sap/bc/bsp/sap/edms_files/edmsviewfilesession.htm?filename=dummy.pdf&refId=16494AEA055F6C4D8E98FC2FF8D55AB3&type=TTO&relId=L&objId=3ECE1A8C8806804B91DD90E91D91A4E2

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Abbreviation	Document Name / Link
SRM_UI_FW	SRM_UI_FW see https://ifp.wdf.sap.corp/sap/bc/bsp/sap/edms_files/edmsviewfilesession.htm?filename=dummy.pdf&refId=AA4AA0E7EF6F704697057CFD23B395C9&type=TTO&relId=L&objId=D51B945E065DB84585D5565E4656D6F8
SRM_UI_META	SRM_UI_META see https://ifp.wdf.sap.corp/sap/bc/bsp/sap/edms_files/edmsviewfilesession.htm?filename=dummy.pdf&refId=AA4AA0E7EF6F704697057CFD23B395C9&type=TTO&relId=L&objId=30286A3B60956B4496B800D3E576FC04
SRM_UI_MSG	see
PDO_ARCH_I	PDO_ARCH_I see https://ifp.wdf.sap.corp/sap/bc/bsp/sap/edms_files/edmsviewfilesession.htm?filename=dummy.pdf&refId=F17D7CCC99D0394AB138AA3903BCFDBC&type=TTO&relId=L&objId=F04BF033ABE4D2438A5C43405956DC84
PDO_ARCH_II	PDO_ARCH_II see https://ifp.wdf.sap.corp/sap/bc/bsp/sap/edms_files/edmsviewfilesession.htm?filename=dummy.pdf&refId=F17D7CCC99D0394AB138AA3903BCFDBC&type=TTO&relId=L&objId=898CD92DB6ABF349BEA1295AA7DAE250
PDO_ARCH_III	PDO_ARCH_III see https://ifp.wdf.sap.corp/sap/bc/bsp/sap/edms_files/edmsviewfilesession.htm?filename=dummy.pdf&refId=F90941163006914A9B6914050FC0E3A7&type=TTO&relId=L&objId=769A318B8068EB4EB60623C4E9E35C4D
PDO_UI_REFAC	https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Architecture%20Documents/SAP%20SRM%207.0/PDO_UI_Refactoring_List.xls
PROG_GUIDE_SRM	https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Guidelines/SRM%20Programming%20%20Guidelines_v1.doc
PROG_GUIDE	PROG_GUIDE see https://wiki.pal.sap.corp:8443/display/SAPGuide/Home
UI_GUIDE	http://mysap.wdf.sap.corp:2080/resources/resources_internal/UI_Guidelines_for_Professional_Applications_in_ERP_2007.doc
UI_WORKCENTER	http://mysap.wdf.sap.corp:2080/resources/resources_internal/mySAP_ERP_2005_WC_Guidelines.doc
ABAP_UNICODE	http://bis.wdf.sap.corp:1080/abap/docs/nls/Unicode/abap.htm
JAVA_UNICODE	http://bis.wdf.sap-ag.de:1080/twiki/bin/view/Techdev/?topic=UnicodePrinciplesForProgramming
EXT_SWITCH	https://portal.wdf.sap.corp/irj/go/km/docs/room_team/cm_stores/documents/workspaces/a1cef343-0969-2810-2392-8da21e85622b/Projects/Bootstrap/Extensibility/Design/Design%20SR

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Abbreviation	Document Name / Link
	M%206.0%20Extension%20Concept%20Switch%20Framework.DOC
BAPI_GUIDE	https://portal.wdf.sap.corp/irj/go/km/docs/corporate_portal/WS%20PTU%20SAP%20NetWeaver/Product%20Information/Key%20Capabilities/Integra-tion%20Broker/Application%20Development/Content%20Development/BAPI%20-%20BAPI.htm
ROLE_GUIDE	https://portal.wdf.sap.corp/wcm/Infocenters/WS%20PTU%20Suite%20Optimiza-tion/Suite%20Optimization/Projects/User%20Experience/UI%20Projects%20and%20Products/People%20Productivity%20for%20ERP
BS_PAG	\\dwdf051\SRM_DOC\SRM Development 7.0\Architecture\Program Architecture_Guidelines\PAG_2_Suite_Excellence_Architecture_Guide-line v 0.8.doc
FrontEndMeter	https://portal.wdf.sap.corp/irj/go/km/navigation/corporate_portal/WS Research & Breakthrough Innovation/PDMS/Performance/Performance Know-How/Tools/FrontEndMeter?StartUri=/corporate_portal/WS+Research+%26+Breakthrough+Innovation/PDMS/Performance/Performance+Know-How/Tools

Table 16: Abbreviations

11.2   Tables

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11.3 Figures

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