

# Reduce TCO w/CRM - ERP Integration ]



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# [ Learning Points

- Gain an overview of the SAP CRM/SD Lean Order interface
- Discuss how the SAP CRM Web UI can be customized
- Evaluation of how to extend the CRM user experience in the order management space to the front office users responsible for order management
- Exploration of other options and how the Lean Order management solution measures up.



# [ Return on Investment

- Leverage your existing CRM and ERP systems and configurations to lower your TCO by integrating functionalities into the CRM Web UI.



# [ Key Learnings

- Understand the business reason and advantage of implementing the CRM/SD Lean Order Interface
- Describe how to implement the CRM/SD Lean Order Interface
- Describe how to configure the CRM Web UI with custom/standard fields from a ECC 6.0 document
- Have enough knowledge to search for further information for more complex ERP/CRM extensions



# [ Agenda

- Presentation Goals/Overview
  - Understanding the SAP CRM/SD Lean Order Interface
  - Objective of the SAP CRM/SD Lean Order Interface
- Business Case
  - Business Scenario
  - Advantages of Integrating ERP documents within the CRM WebUI
- Functional review
  - Options evaluated
  - Features supported
- Technical Requirements
  - ERP Technical Requirements
  - CRM Technical Requirements
- Summary
  - Wrap up



# [ Goals / Overview

## ■ Goals

- Gain an overview of the SAP CRM/SD Lean Order interface
- Discuss how the SAP CRM Web UI can be customized
- Evaluation of how to extend the CRM user experience in the order management space to the front office users responsible for order management
- Exploration of other options and how the Lean Order management solution measures up.



# [ Goals / Overview

## ■ Overview

- After today's lecture you will be able to:
  - Understand the business reason and advantage of implementing the CRM/SD Lean Order Interface
  - Describe how to implement the CRM/SD Lean Order Interface
  - Describe how to configure the CRM Web UI with custom/standard fields from a ECC 6.0 document
  - Have enough knowledge to search for further information for more complex ERP/CRM extensions



# [ Business Case

- In this business scenario....

The business processes are already configured and functioning as desired on the ERP system for sales documents of type Quotation and Sales order(s). In order to fulfill the defined business process, certain customization of the 'document save' user exit was required and implemented.

As a process of continuous improvement and user feature upgrade, SAP CRM is implemented to provide the sales community with the ability to create leads and opportunities through a web-based front end

To improve the process flow, these CRM objects will be part of the document flow to create already defined ERP sales documents. The Lean Order Interface allows the existing sales document configuration and customization functionality to be utilized in the CRM web UI.





# [ Options evaluated

- Use of CRM order and replication to ERP
  - Positive aspects
    - Ability to fully create, edit, manage sales order header and line items in CRM
    - Order is created in CRM and replicated to ERP using CRM middleware.
    - Fully integrated with all CRM functionality, including complaints & marketing.
  - Negatives
    - No data flow between systems
- Transaction launcher
  - Positive aspects
    - Directly launch ERP sales order transaction in SAP ERP via the CRM Web UI
    - Creation, editing, managing of sales order header and line items occurs in ERP.
  - Negative
    - Order is created solely in ERP with no integration with CRM functionality.



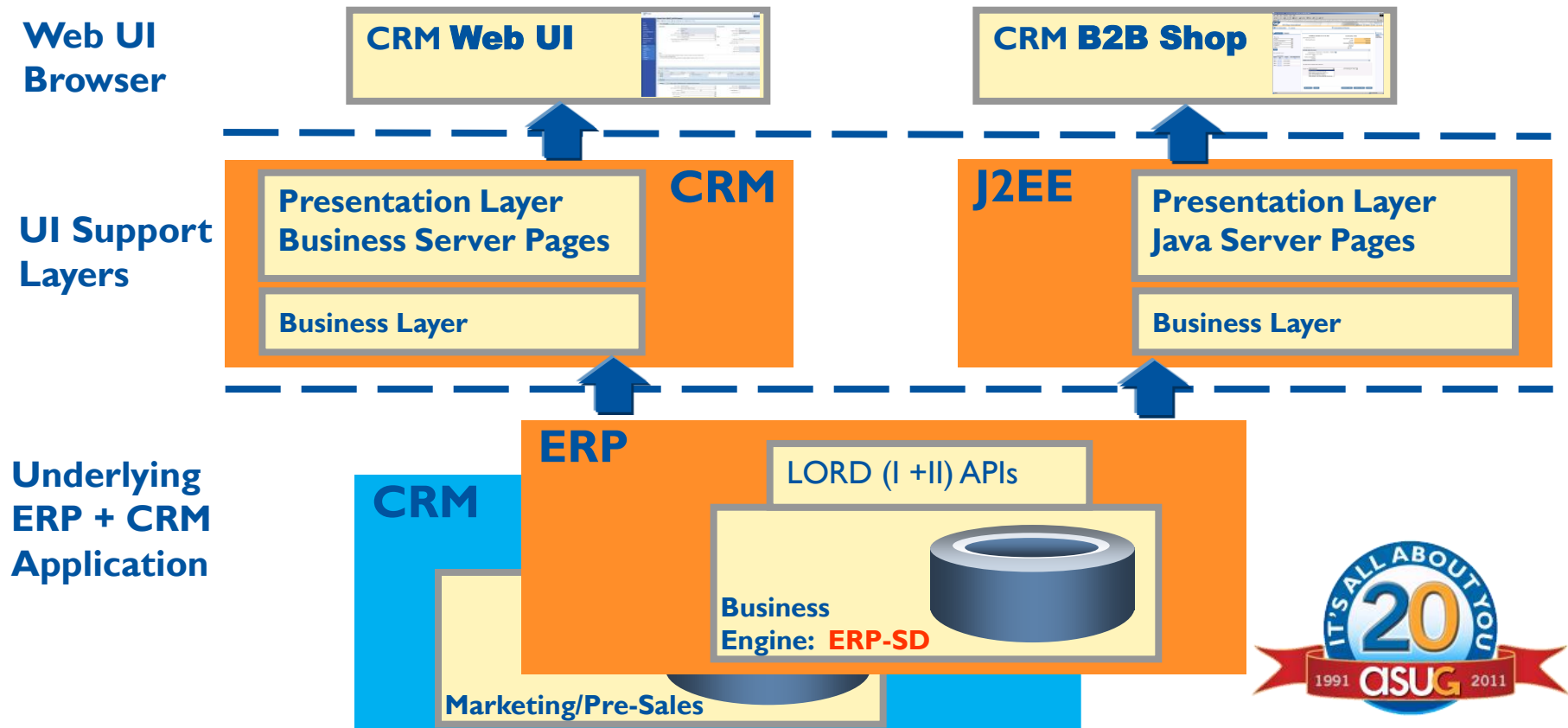
# [ Options evaluated

- Lean order Interface
  - Positive aspects
    - Ability to fully create, edit, manage sales order header and line items in CRM with access to ERP for pricing and ATP.
    - The ERP Sales Order is an actual CRM Web UI screen with standard CRM look and feel.
  - Negative
    - Integration within CRM is limited as the order resides fully in ERP



# [ ERP Quotation and Sales Order in CRM Web UI - Overview

The LORD API utilizes the standard CRM Web UI. A connection between UI support layers and SAP ECC is used to facilitate the flexible UI configuration that is standard for CRM UI in CRM 7.0. The LORD solution enables use of both the CRM Web UI as well as the CRM B2B Web shop UI on top of the supported SAP ERP SD transactions.



# [ Features Supported

	ERP Sales Order in CRM	VA01 in CRM via ITS
User Interface	CRM Web UI	CRM Web UI & transaction launcher UI for VA01
User Interface Ease of Change	Easy to change IC Web Client field labels, position	Programmatic changes for SAP GUI
Line Items	Many	
Order Replication	None - orders exist in ERP only	
Required Release	CRM 2007+ and ECC 2005+ *	CRM 2005 + and R/3 4.6 +
CRM Marketing Product proposal integration (up-sell, cross-sell)	Out-of the-box integration	Not possible
CRM Complaints	Supported through project development	
Sales Contract Support	Quantity contracts	Value and quantity contracts
Alert messaging	Supported through project development	
Index search	Possible	Not Possible
Campaign Related Pricing	Campaign Determination in ERP	
Account Identification	Integrated	Supported through project development

\*Certain functionality requires CRM 7.0 and ERP 6.0 with EHP4 (e.g. product catalog integration, extension concept for ERP Orders with CRM UI, cross sell, up sell)



# [ Features Supported (2)

	ERP Sales Order in CRM	VA01 in CRM via ITS
Pricing	ERP pricing only	
Availability (ATP)	ERP and APO	
ATP Check with Reservation	Supported through ERP	
Document Flow with Preceding Documents (Lead, Opp, Quote)	Yes	Partly
Pricing Download from ECC to CRM	Not needed	
Use of CRM Product Category/Hierarchy in Sales Orders	Yes*	No
Use of CRM Product Master	Required*	Not required
Integration of CRM Product Catalog	Yes*	No

\*Certain functionality requires CRM 7.0 and ERP 6.0 with EHP4 (e.g. product catalog integration, extension concept for ERP Orders with CRM UI, cross sell, up sell)



# [ Order Styles evaluation

## Engineer-to-Order (ETO)

Very complex orders requiring a lot of new design in each order. These orders are highly project based, customer focused during manufacturing. Typically, these order types require high documentation standards.

**Recommended solution**

**VA01 in CRM via ITS**

## Make-to-Order (MTO)

Configurable end products with minimal design effort during production of end product. End products are driven by customer order and assembling of inventoried or procured products.

**VA01 in CRM via ITS  
Or  
ECC orders in CRM**

## Make-to-Stock (MTS) / Sell-from-Stock (SFS)

Commodity based end products with production planning driving by forecast of sales order placement. End products are sold from inventory

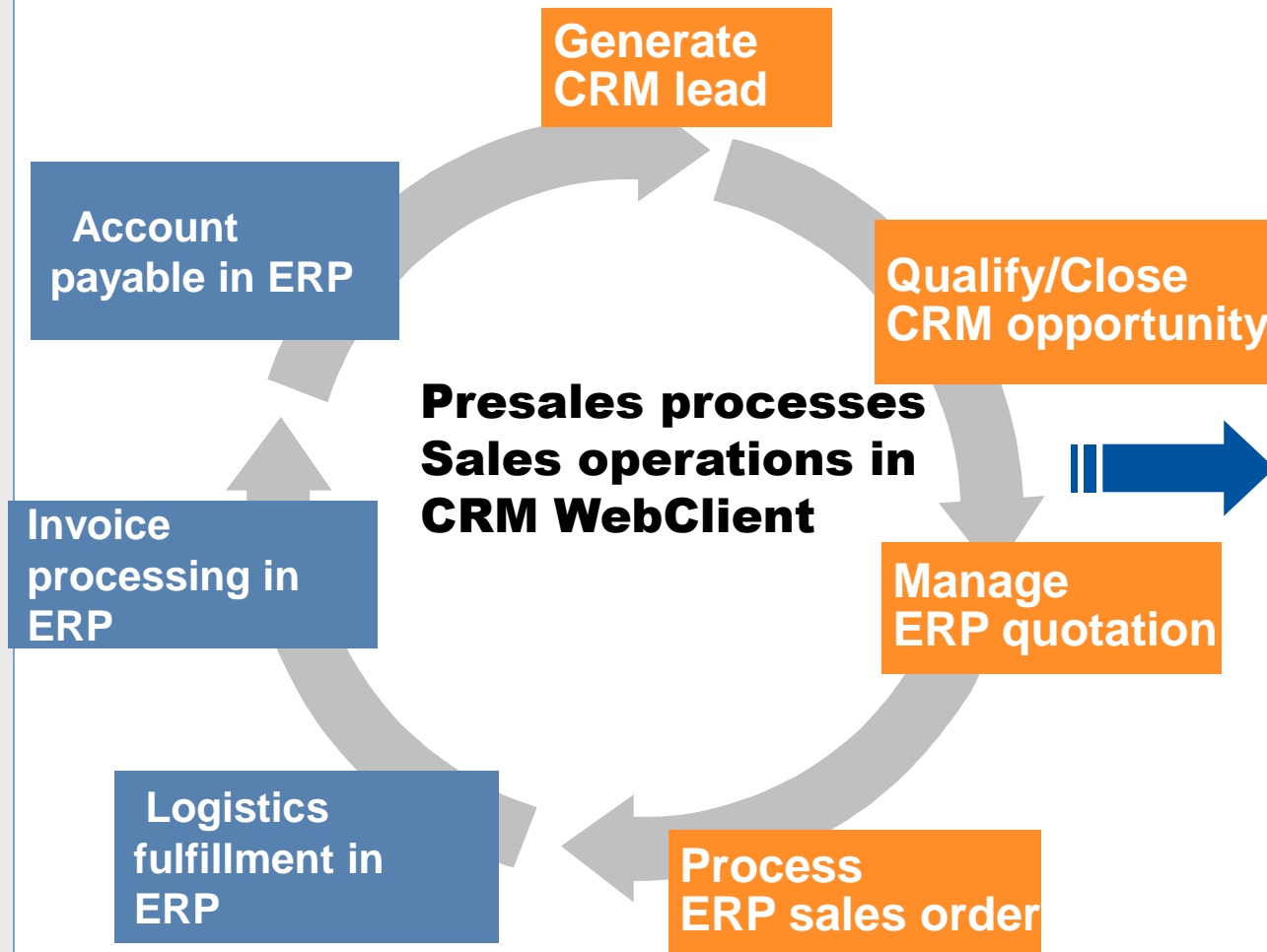
**CRM Order  
Or  
ECC Orders in CRM**

## Subscription-to-Order (STO)

Communications industry orders with mixtures of contract products and one-time products. Contract management and change order management is critical.

**CRM Order**

# [ From Lead to ERP Sales Order with CRM Web UI



## Business flow

1. Create or generate leads with marketing campaign.
2. Track, qualify and close opportunities.
3. Manage and track ERP quotations.
4. Process ERP Sales orders.
5. Fulfill logistics needs.
6. Process invoices in ERP.
7. Manage account payables

## [ High level overview

- CRM covers only pre-sales functionality, leaving the heavy lifting of core sales functionality to ERP.
- Quotations will be created as a follow-up of CRM opportunities
- Sales documents are created by use of ERP quotation and order. These are integrated into CRM Web UI via LORD interface.
- ECC Sales documents are physically created in ERP
- Loose coupling: documents are not replicated, but linked by means of cross-system document flow





# [ ERP Quote, Order, Quantity Contract in CRM Web UI

Recognizing that many SAP customers have substantial investments in their SAP ERP order management deployments, SAP CRM is now providing a set of capabilities that enable SAP CRM and ERP customers to better leverage these existing investments.

**SAP CRM** Personalize | Help Center | System News | Log Off

Quotation: 20001359, Becker Berlin

Save | Cancel | New | Create Follow-Up

ERP Quotation Details | Edit

General Data

Type: Quotation  
ID: 20001359  
Sold-To Party ID: 675  
Sold-To Party: Becker Berlin  
Sold-To Party Address: Calvinstrasse 36 / 13467 Berlin  
External Reference: Quote 46

Processing Data

Status: Open  
Rejection Status: Nothing rejected

Value

Net Value: 97,034.00 USD  
Pricing Date: 08.09.2008

Dates

Valid From: 04.09.2008  
Valid To: 30.09.2008

Items

Actio...	Item ...	Product ID	Higher Level L...	Product	Qty	Unit	Net Value	Crcy	Rejection Status
	10	HT-1000		Notebook Basic 15	100,000	PC	97,034.00	USD	

Price Totals

Update Pricing

Actions	Condition type	Price Element	Amount	Crcy	Per	Condition Unit	Condition Value	Document Crcy
	PR00	Price	956.00	USD		1 PC	95,600.00	USD
		Gross		USD		0	95,600.00	USD
	Z201	CampaignDiscount CRM		%		0	0.00	USD
	RC00	Quantity Discount		USD		1 PC	0.00	USD
	RA01	% Disc. from Gross	1,500	%		0	1,434.00	USD
		Discount Amount		USD		0	1,434.00	USD
		Rebate Basis		USD		0	97,034.00	USD
		Net Value for Item		USD		0	97,034.00	USD
		Net value 2		USD		0	97,034.00	USD
	UTXJ	Tax Jurisdict Code	100,000	%		0	97,034.00	USD

Expand | Back 1 2 Forward

Parties Involved

Shipping

Billing

Transaction History

Organizational Data

# [ Features at a glance

- Quotations, Standard Orders and Quantity Contracts can be processed in CRM Web UI
- Flexible business processes are configured across systems
  - Follow up transactions after an opportunity can be configured with any type of ERP Quotation, Sales Order or Quantity Contract
- CRM Sales tools are integrated in the ERP Quotation and Sales Order business flow
  - CRM products proposal, cross selling, up selling, campaign-based product suggestions, CRM listing and ERP Historical Orders
  - CRM Catalog Search and Browse ERP Quotation and ERP Sales Order
- Configuration of products is supported
- Returns orders are supported
- Bill of Material explosion in ERP Sales transactions is supported!



# [ Additional Features:

- Document Flow is linking two documents across CRM and ERP in this scenario
  - Track ERP Quotation and Sales Order information in CRM Opportunity
  - Track CRM Opportunity in ERP Quotation and Sales Order
- Copy Control is supported across CRM and ERP systems
  - Actual information included in copy control : Items (Including Item Selection), Notes (Header and Items), Business Partners (at Header and Item Level), Sales Area Data, Product Configuration
- Configured products are supported from Opportunity to ERP Quotation and Sales Order
- Display of sub-items from Bill of Material – explosion in ERP Sales Orders in SAP CRM Channels
  - CRM Interaction Center
  - CRM Web Channel Enablement
  - CRM Web UI
- Manual selection of the item category for return items in ERP orders SAP CRM Channels
  - CRM Interaction Center
  - CRM Web UI



# [ Limitations

- No Mobile Sales laptop solution for order capturing (Handheld solution available)
- No integrated view in ERP for Sales support (no Opportunity, Lead etc.)
- No integrated view on all Customer related information in CRM
- Pricing/configuration for Opportunities with different solution (IPC for opportunities vs. SD-pricing for quotes and orders)
- Functions not integrated with SD: Order BOM/Routing, Costing (no calculation in CRM)
- Expert business handling of Sales Transactions will continue to require SAP GUI with ERP
- Follow-up document ERP-Quote out of CRM Opportunity with limited copy control flexibility, due to being hard-wired



# [ Background Information:

- ERP 6.0 EhP4 is required to take advantage of these new business process capabilities
- CRM Web UI for ERP Sales Transactions is targeting casual users:
  - Brings the main steps of business processes in the CRM Web UI User Interface:  
ERP transactions can be rolled out to thousands of front office users to handle standard cases (e.g. self service, order status check)
  - Simplified Terminology for casual users
  - Expert business handling will continue to require use of SAP GUI with ERP
- CRM Mobile Sales cannot be deployed directly with ERP quotation and sales order management
- Extensibility is supported
  - Customer fields in ERP sales transactions (header and item level)
  - User exits and BAdIs (Business Add-In) without pop-ups are supported
- Pricing remains completely in ERP SD (If real-time pricing is required in catalog or opportunity Then IPC Pricing can be used)



# [ Advantages of the Lean Order Interface

- The required data transfer is limited and the process is seamless to the end user. The ability to continue the CRM opportunity to create an ERP quotation is critical to the sales and delivery processes.
- As a result, the need for transactional data replication is eliminated and the user is able to create these documents seamlessly.



# [ Technical Requirements



# [ ERP Technical Set up

- Main Development Objects:
  - Business Package LOG\_SD\_CI\_02 – Must be activated via transaction SFV5
  - Trusted relationship between the ERP and CRM system(s)
- Italicized items are for custom fields
  - *DDIC structures TDS\_\*\_COM\**
  - *Update LORD\_MAPPING table*
  - *Custom fields must be on the sales document screens*
  - *BADI – BADI\_DO\_LORD\_PAI must be implemented with custom fields*





# [ CRM Technical Set up

- Main Development Objects:
  - CRM 7.0
  - Trusted relationship between the CRM and ERP system(s)
- Italicized items are for custom fields
  - *DDIC structures CRMST\_ADMIN\**



- Configuration Tab



# [ Further Information

- For further information, please refer to
  - SAP Note 1224179, 1236015, 1078575
  - SAP Notes, Component CRM-BTX-ERP
  - SAP CRM - Ramp-Up Knowledge Transfer (RKT) <http://service.sap.com/rkt-crm>
  - SAP Public Web <http://www.sap.com/crm>
- CRM Application Help:
  - SAP Customer Relationship Management -> Components and Functions -> Basic Functions -> UI Framework and Configuration -> UI Configuration
  - SAP Customer Relationship Management -> Components and Functions -> Basic Functions.



# [ Summary / Q&A



# [ Thank You!

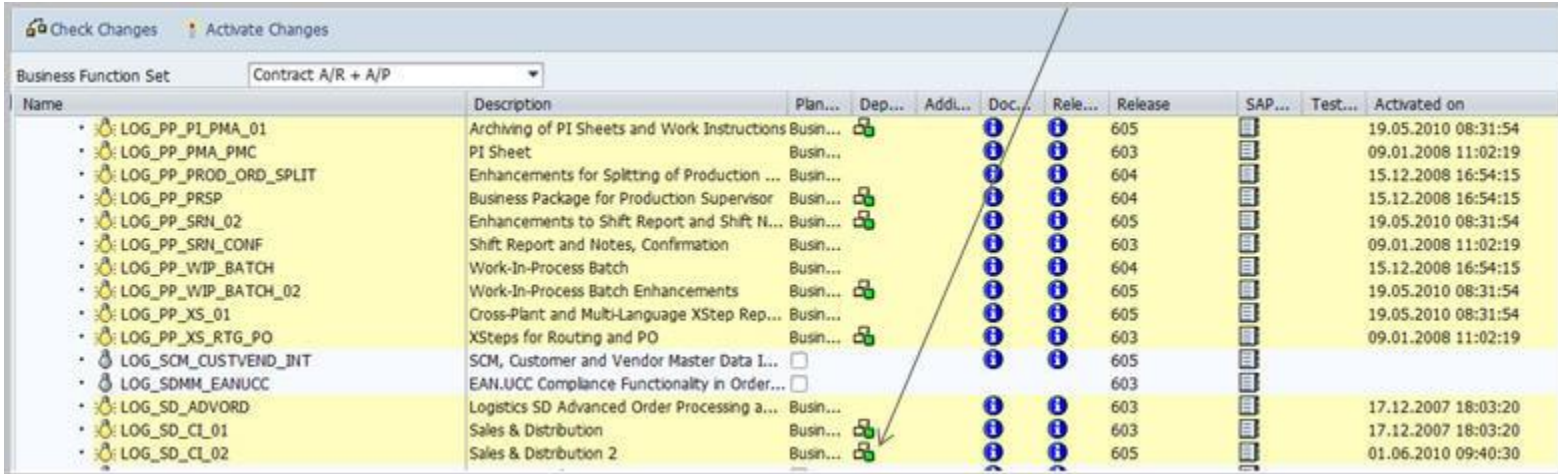
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- 732-672-7363



# [ Appendix

## ■ ERP System Configuration

- Business Package LOG\_SD\_CI\_02 (txn SFW5) is activated via the Switch Framework  
FICAX -> ENTERPRISE\_BUSINESS\_FUNCTIONS -> LOG\_SD\_CI\_02



The screenshot shows the SAP Business Function activation interface. At the top, there are buttons for 'Check Changes' and 'Activate Changes'. Below them is a dropdown menu for 'Business Function Set' currently set to 'Contract A/R + A/P'. The main table lists various business functions with columns for Name, Description, Plan..., Dep..., Addl..., Doc..., Rele..., Release, SAP..., Test..., and Activated on. A yellow arrow points from the text in the list group to the 'LOG\_SD\_CI\_02' row in the table.

Name	Description	Plan...	Dep...	Addl...	Doc...	Rele...	Release	SAP...	Test...	Activated on
LOG_PP_P1_PMA_01	Archiving of PI Sheets and Work Instructions Busin...				i	i	605			19.05.2010 08:31:54
LOG_PP_PMA_PMC	PI Sheet	Busin...			i	i	603			09.01.2008 11:02:19
LOG_PP_PROD_ORD_SPLIT	Enhancements for Splitting of Production ...	Busin...			i	i	604			15.12.2008 16:54:15
LOG_PP_PRSP	Business Package for Production Supervisor	Busin...			i	i	604			15.12.2008 16:54:15
LOG_PP_SRN_02	Enhancements to Shift Report and Shift N...	Busin...			i	i	605			19.05.2010 08:31:54
LOG_PP_SRN_CONF	Shift Report and Notes, Confirmation	Busin...			i	i	603			09.01.2008 11:02:19
LOG_PP_WIP_BATCH	Work-In-Process Batch	Busin...			i	i	604			15.12.2008 16:54:15
LOG_PP_WIP_BATCH_02	Work-In-Process Batch Enhancements	Busin...			i	i	605			19.05.2010 08:31:54
LOG_PP_XS_01	Cross-Plant and Multi-Language XStep Rep...	Busin...			i	i	605			19.05.2010 08:31:54
LOG_PP_XS_RTG_PO	XSteps for Routing and PO	Busin...			i	i	603			09.01.2008 11:02:19
LOG_SCM_CUSTVEND_INT	SCM, Customer and Vendor Master Data I...				i	i	605			
LOG_SDMM_EANUCC	EAN.UCC Compliance Functionality in Order...						603			
LOG_SD_ADVORD	Logistics SD Advanced Order Processing a...	Busin...			i	i	603			17.12.2007 18:03:20
LOG_SD_CI_01	Sales & Distribution	Busin...			i	i	603			17.12.2007 18:03:20
LOG_SD_CI_02	Sales & Distribution 2	Busin...			i	i	605			01.06.2010 09:40:30



# [ ERP DDIC/Interface Updates – Mapping table

LORD\_MAPPING = Lean Order Mapping Table

Maintained via transaction SM30

Table is Cross Client

**Change View "Mapping Table for Lean Order Interface": Overview**

New Entries

Mapping Table for Lean Order Interface

Object ID	Field Name	Internal Field Name	Reference Field	External Field Name	Program Name
HEAD	VKORG	VBAK-VKORG			SAPMV45A
HEAD	VSART	VBKD-VSART			SAPMV45A
HEAD	VSBED	VBAK-VSBED			SAPMV45A
HEAD	VTWEG	VBAK-VTWEG			SAPMV45A
HEAD	WAERK	VBAK-WAERK			SAPMV45A
HEAD	WAKTION	RV45A-WAKTION			SAPMV45A
HEAD	XBLNR	VBAK-XBLNR			SAPMV45A



Mapping Table for Lean Order Interface

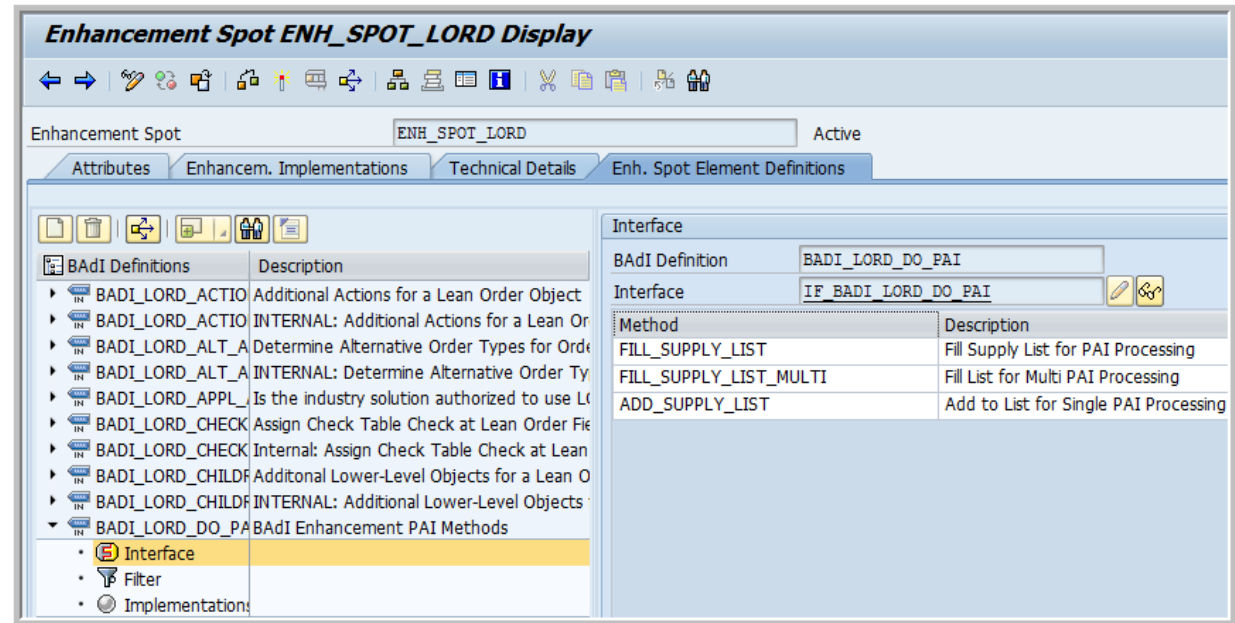
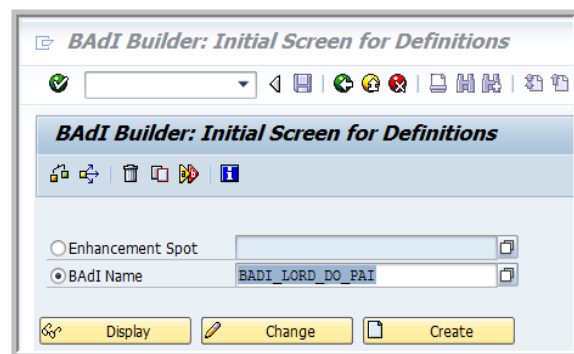
Object ID	Field Name	Re...	Con...	No Conver...	Display Only	Search Help Name	Search Help Type	Search Hel
HEAD	VKORG	4440		<input type="checkbox"/>	<input type="checkbox"/>	H_TVKO	Search help	VKORG
HEAD	VSART	4302		<input type="checkbox"/>	<input type="checkbox"/>	H_T173	Search help	VSART
HEAD	VSBED	4440		<input type="checkbox"/>	<input type="checkbox"/>	H_TVSB	Search help	VSBED
HEAD	VTWEG	4440		<input type="checkbox"/>	<input type="checkbox"/>	H_TV KOV	Search help	VTWEG
HEAD	WAERK	4440		<input type="checkbox"/>	<input type="checkbox"/>	H_TCURC	Search help	WAERS
HEAD	WAKTION	4440		<input type="checkbox"/>	<input type="checkbox"/>			
HEAD	XBLNR	4311		<input type="checkbox"/>	<input type="checkbox"/>			



# [ ERP Screen Fields / Userexits – BADI Implementation

BADI - BADI\_DO\_LORD\_PAI Must be implemented with the Extension fields

Method FILL\_SUPPLY\_LIST must be active and the CT\_SUPPLY parameter must be populated with the field names to be used in the ERP extension





# [ CRM Screen Fields / Userexits

The screenshot shows the 'Access BSP WD Workbench' window. It has a menu bar with 'Component', 'Edit', 'Goto', 'Debugging', 'System', and 'Help'. Below the menu is a toolbar with various icons. The main area contains a 'Component' field with a dropdown menu showing 'ERP\_H' and a 'Test Application' field. At the bottom, there are three buttons: 'Display', 'Create', and 'Test'.

Component

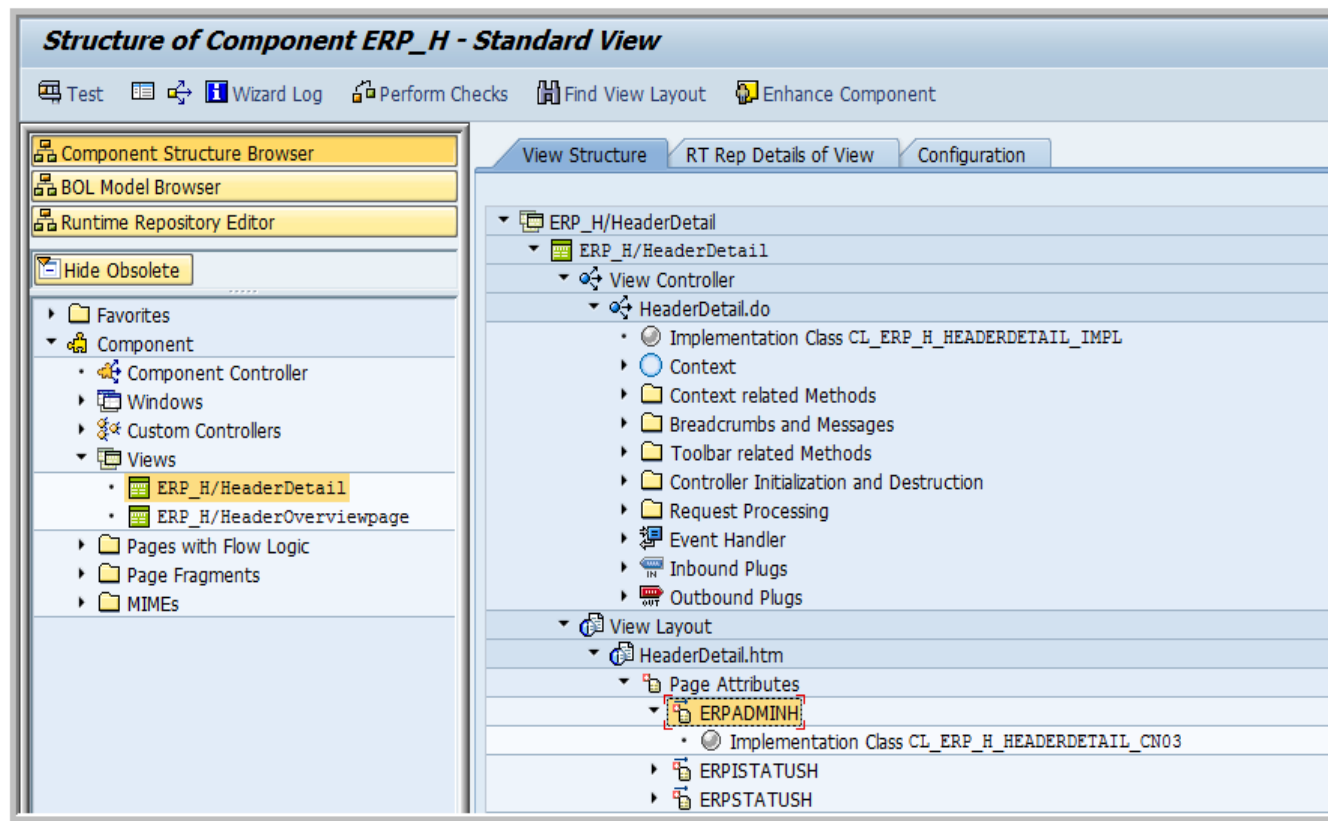
Test Application

Transaction

BSP\_WD\_CMPWB



# [ CRM Screen Fields / Userexits



Views:

ERP\_H/HeaderDetail





# Thank you for participating.

Please remember to complete and return your  
evaluation form following this session.

For ongoing education in this area of focus, visit [www.asug.com](http://www.asug.com).

**SESSION CODE:**  
**ASUG 108**