



## **SAP NetWeaver – Web Application Development Environment**

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SAP Slovensko**



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NetWeaver Development Infrastructure

Using Webservices with Web Dynpro

Web Dynpro Applications inside the Enterprise Portal

# What is your preferred web framework?

Many (Web) frameworks have been developed over the years

Example: Poll conducted at the TheServerSide Java Symposium 2005

## → What is your preferred Web framework?

- ◆ Struts 47,0%
- ◆ Spring 20,9%
- ◆ Tapestry 7,9%
- ◆ Other 24,2%

Different frameworks for different usage types:

- Struts for scalability
- Spring for EJB-free magic
- Tapestry for light-weight
- JSF for reusable UI components
- Yet another Web framework from SAP???

# Special SAP Requirements for a Web Framework

Language independent (Java and ABAP) model for building professional user interfaces

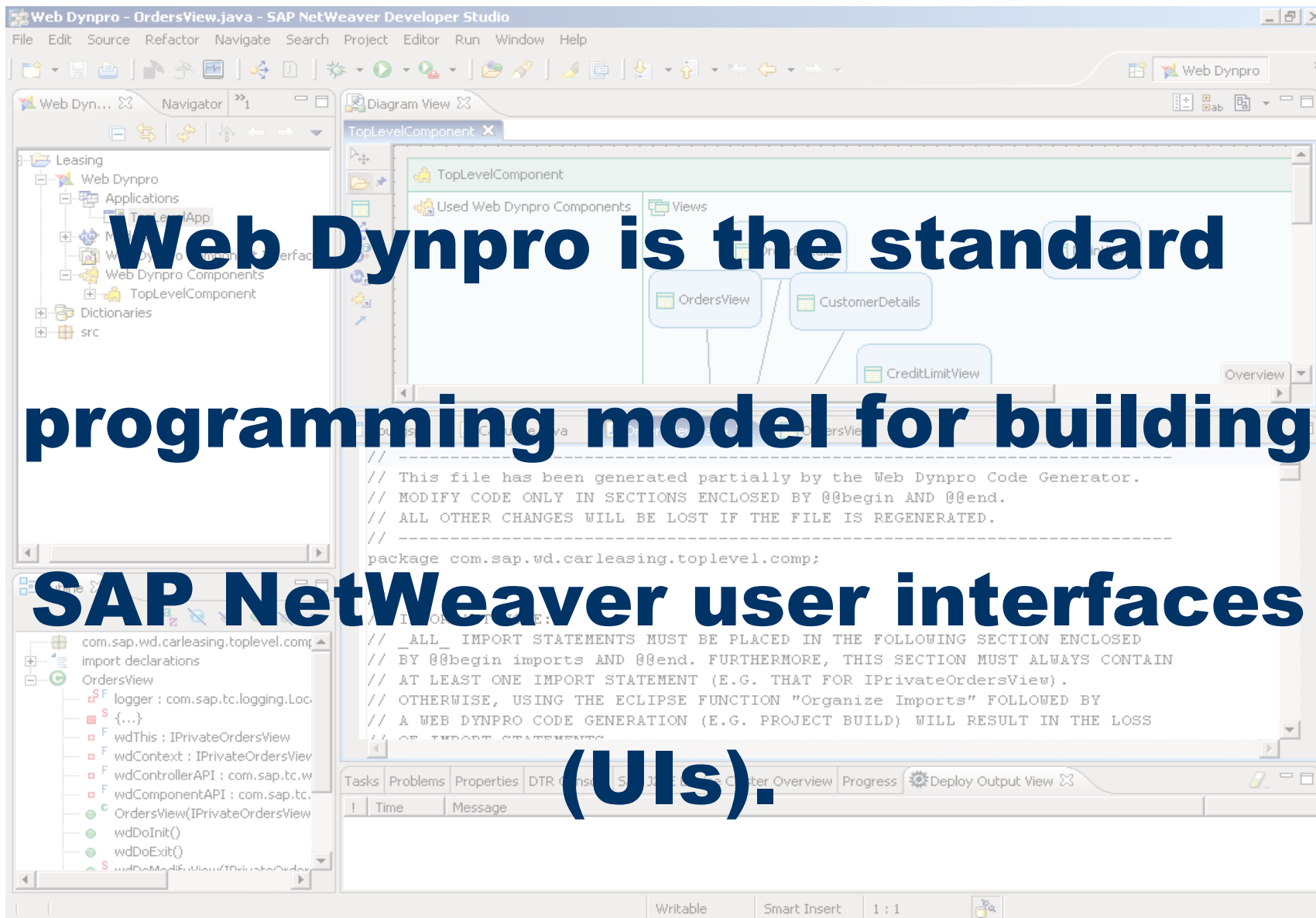
Libraries with standard, complex and graphical UI elements

Predefined interfaces to backend systems (Web Services, JavaBeans, XML, RFC, ...)

Client independency

Personalization/ adaptation for end users

Interoperability

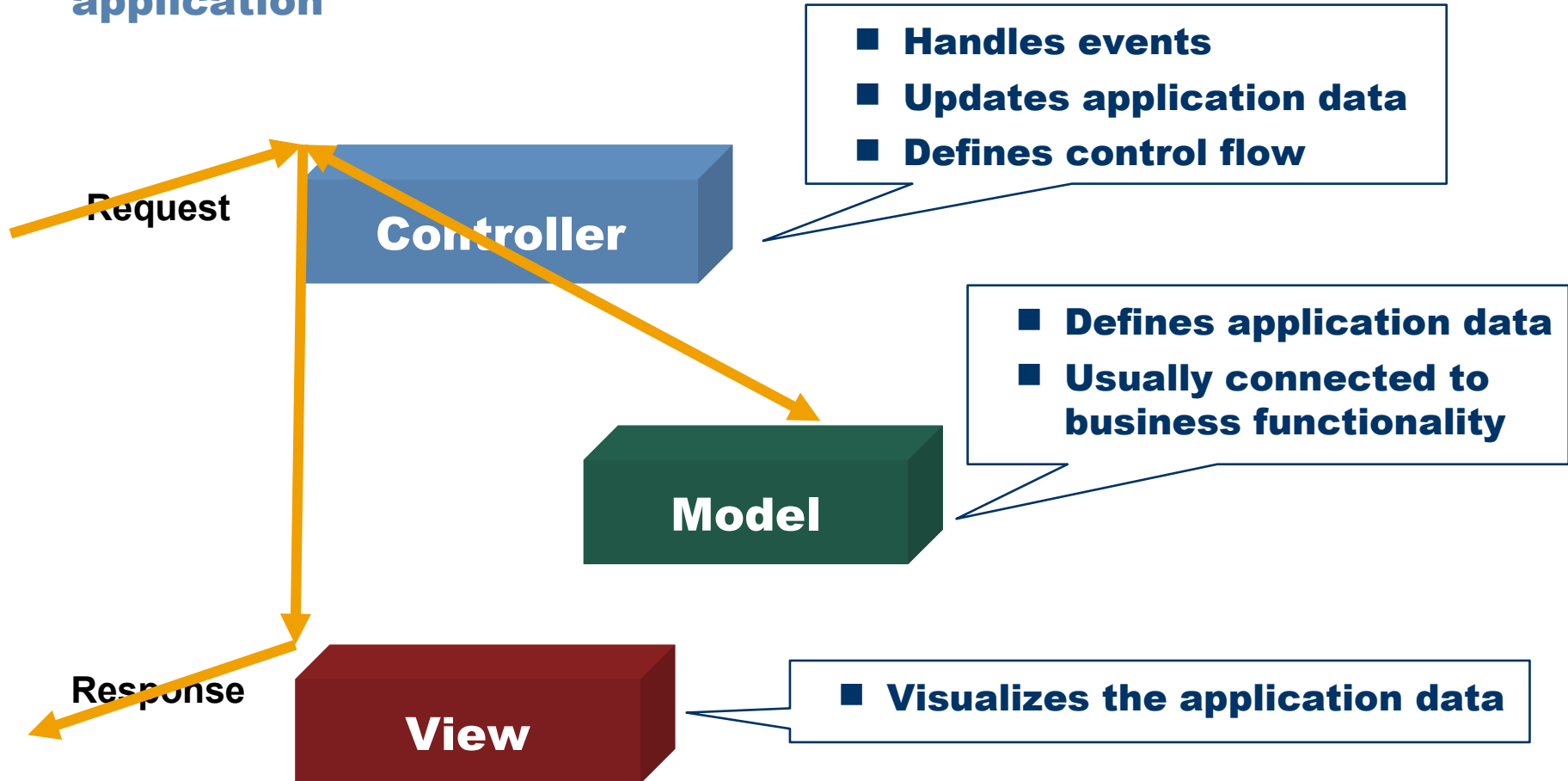


The screenshot displays the SAP NetWeaver Developer Studio interface. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Editor, Run, Window, and Help. The main workspace is divided into several panes: a Navigator on the left showing a project tree with 'Web Dynpro' and 'TopLevelComponent'; a Diagram View in the center showing a UML diagram of 'TopLevelComponent' with sub-components 'OrdersView', 'CustomerDetails', and 'CreditLimitView'; and a Code Editor at the bottom showing Java code for 'OrdersView'. The code includes package declarations, import statements, and comments indicating it was generated by the Web Dynpro Code Generator. The status bar at the bottom shows 'Writable', 'Smart Insert', and '1 : 1'.

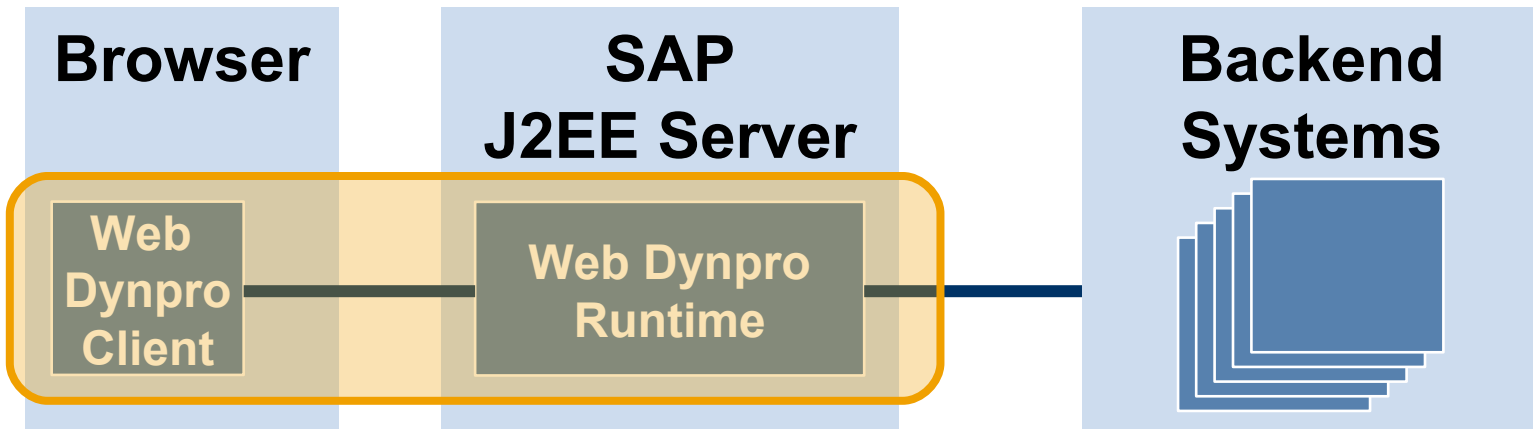
**Web Dynpro is the standard programming model for building SAP NetWeaver user interfaces (UIs).**

# Model View Controller (MVC)

Design pattern for decoupling presentation and logic of an application

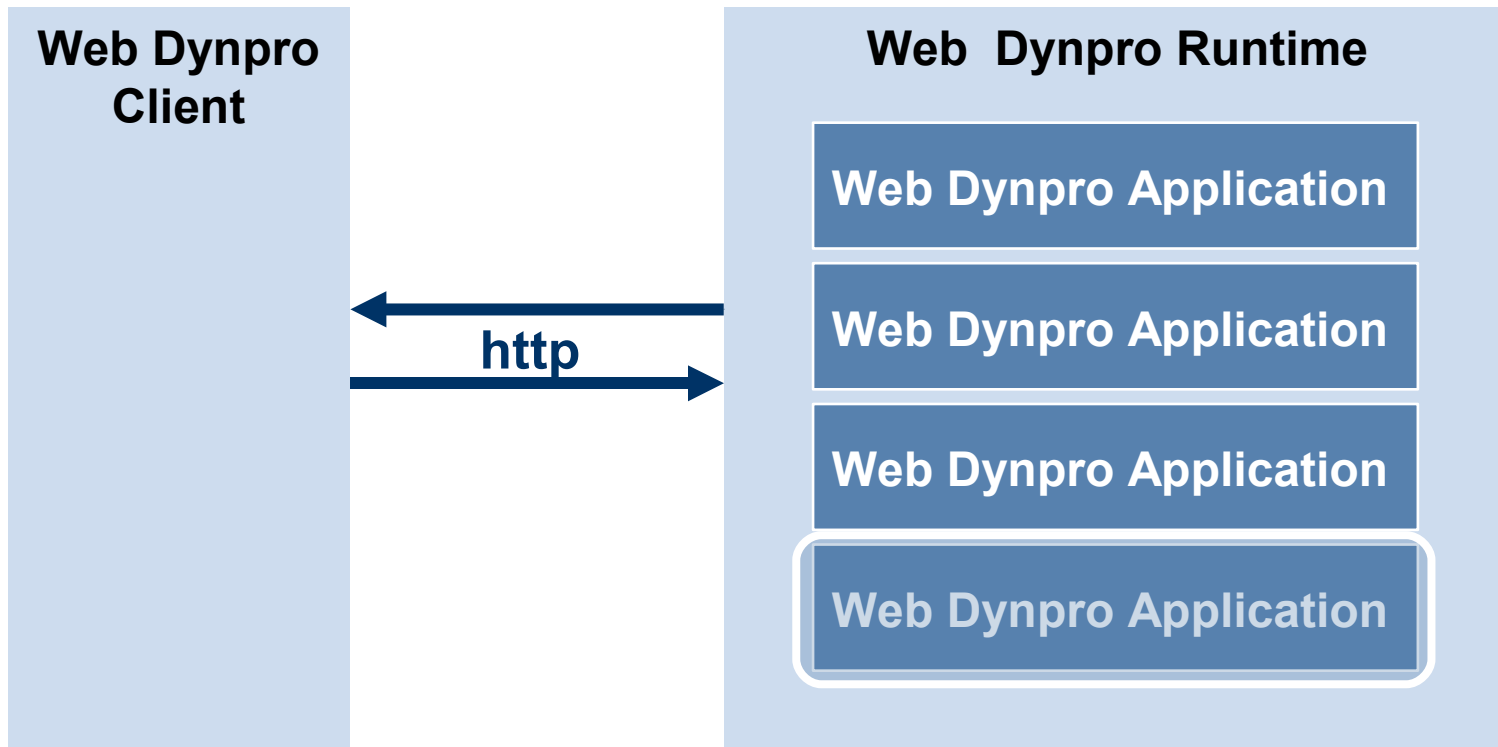


**Web Dynpro is for User Interface design only!**



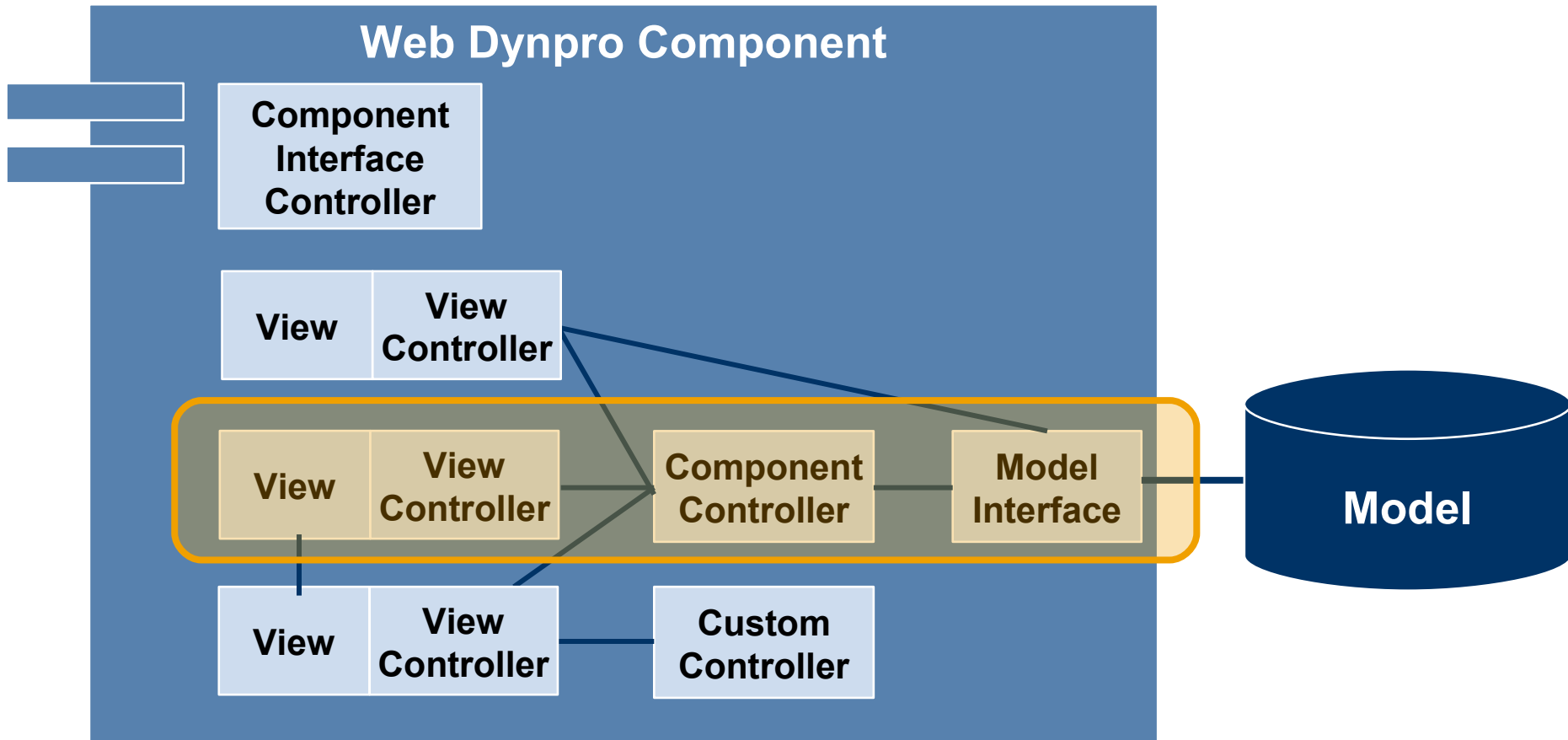
Single channel between client and runtime

Client generates HTML and displays it without page reloads





## Separation of model, view and controller



# Web Dynpro Zoom-in: 10 x 10 x 10 x 10 x 10 x

## View

### Layout

### UI Elements

**Flight Search**

Departure Date: 3/22/2002

Destination: [dropdown]

Airline: [dropdown]

Find [button]

### Nested Views

The coding is in Java  
– everything else is  
platform independent

## View Controller

### Context



### Controller Coding

#### Actions

```
public void onActionSelectRow(com.sap.tc.webdynpro.progmodel.api.
{
    //@@begin onActionSelectRow(ServerEvent)
    //$begin Enterprise Portal Eventing(-1895990454)
    WDPortalEventing.fire(
        "urn:com.sap.test.demo",
        "CheckCreditLimit",
        wdContext.currentCustomerElement().getPartnerid()
    );
    //$end
```

Methods

Event handlers

Error handlers

# Steps in Building a Web Dynpro Application

Identify the backend for the application.  
Create a **model** for this backend or include an existing model.

1 Step  
2 By  
3 Step

Break up the UI into individual, mostly independent **views**.

Consider which views belong to the same focus area. Divide the screen into **view sets** and view areas accordingly.

Assign the views to view areas and draw the **navigation paths** between them.

Identify all the tasks in the user interface. If possible, assign them to the **views' controllers**.

Group the tasks that cannot be attributed to any particular view. Add a **custom controller** for each group.

Design the contexts for each controller and the **mapping** between the contexts, as well as between model and contexts.

Define the **layout** for each view. Bind the layout elements against the view contexts.

**Code event handlers** etc., first for the custom controllers and then for the view controllers.

As an optional step, add special **resource files** (images, style sheets, etc.)



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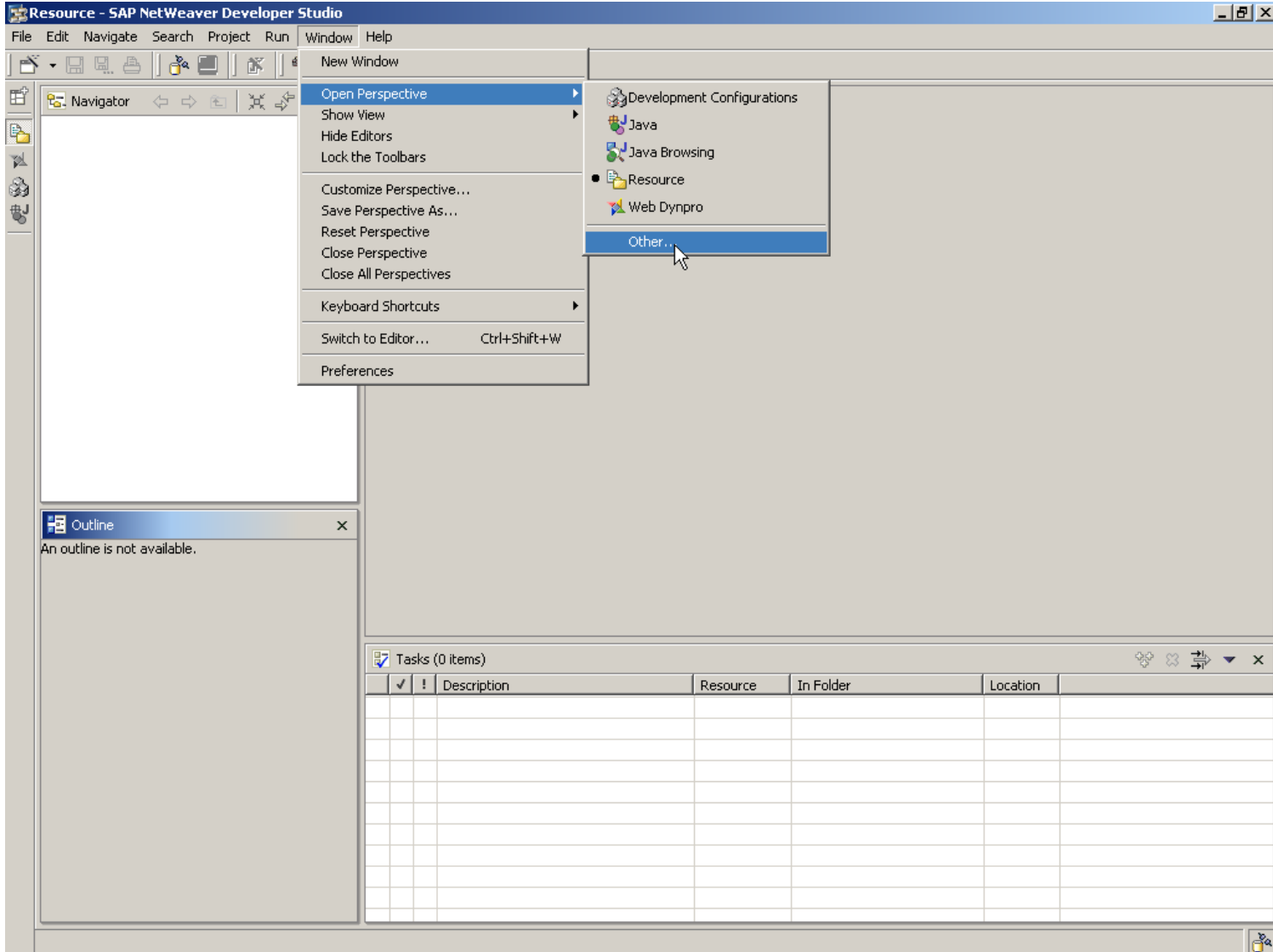
dio

NetWeaver Development Infrastructure

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# Perspectives



# Editors and Views

The screenshot displays the SAP NetWeaver Developer Studio interface. The main editor window shows the source code for the `Optimal` class, which implements the `IBase` and `IExtended` interfaces. The code includes package declarations, imports, and several methods: a constructor, `isOptimal()`, and `setVersion(String)`. The Package Explorer on the left shows the project structure, including the `com.sap.demo` package and its sub-packages. The Outline view on the right provides a hierarchical view of the code elements, such as the `Optimal` class and its methods.

```
package com.sap.demo;

import com.sap.demo.base.IBase;

/**
 * Implementation for optimal usage.
 */
public class Optimal implements IBase, IExtended {

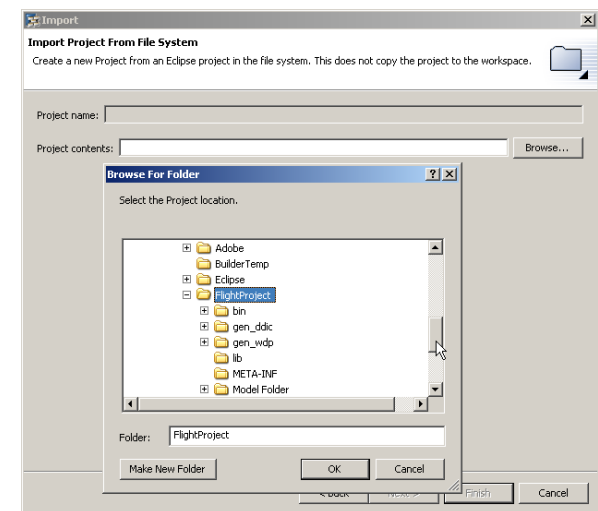
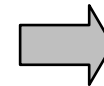
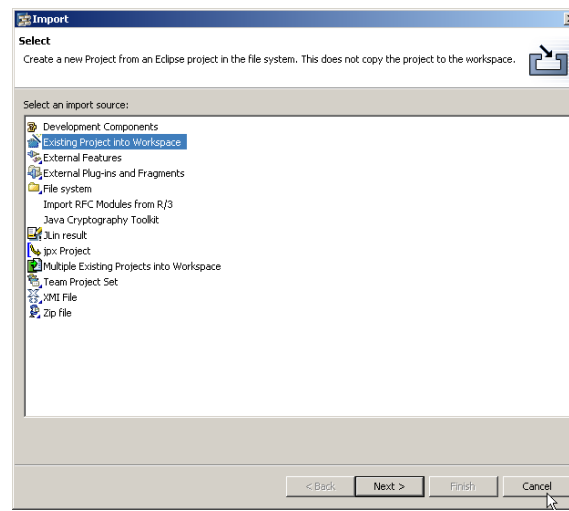
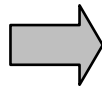
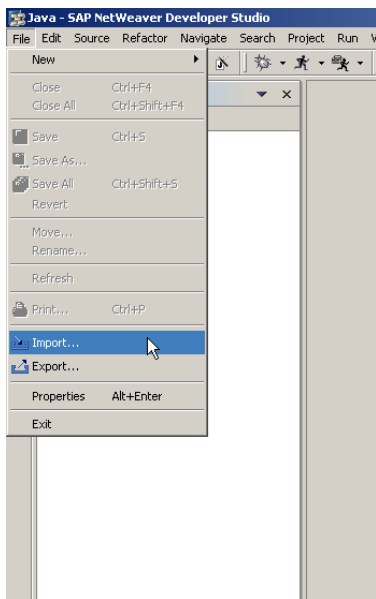
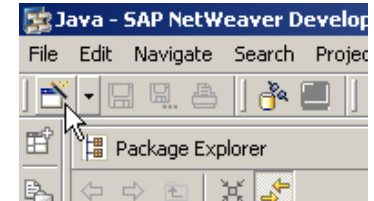
    private boolean mOptimal = true;
    private String mVersion = "3.0";

    /**
     * Creates a new instance
     */
    public Optimal() {
        super();
    }

    /**
     * Returns the optimal flag.
     * @return A boolean value representing the optimal state
     */
    public boolean isOptimal() {
        return mOptimal;
    }

    /**
     * Sets the optimal flag.
     */
}
```

- The Eclipse workspace consists of the set of imported projects
- Projects can depend on each other
- Create a new project: Use the „New“ wizard in the top left corner of the workbench window
- Import an existing project: Use „File -> Import... -> Existing project into workspace“ and select the project folder of the desired project

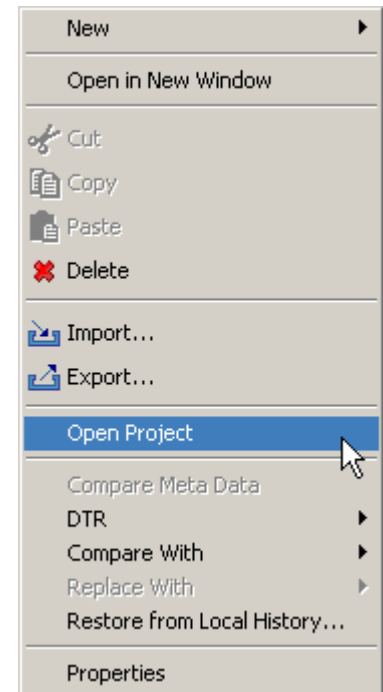


## ■ Projects can be opened and closed

- ◆ Closed projects do not appear in all views
- ◆ Use the context menu of the project (e.g. in the Navigator view) to switch between opened and closed state („Open Project“ resp. „Close Project“)

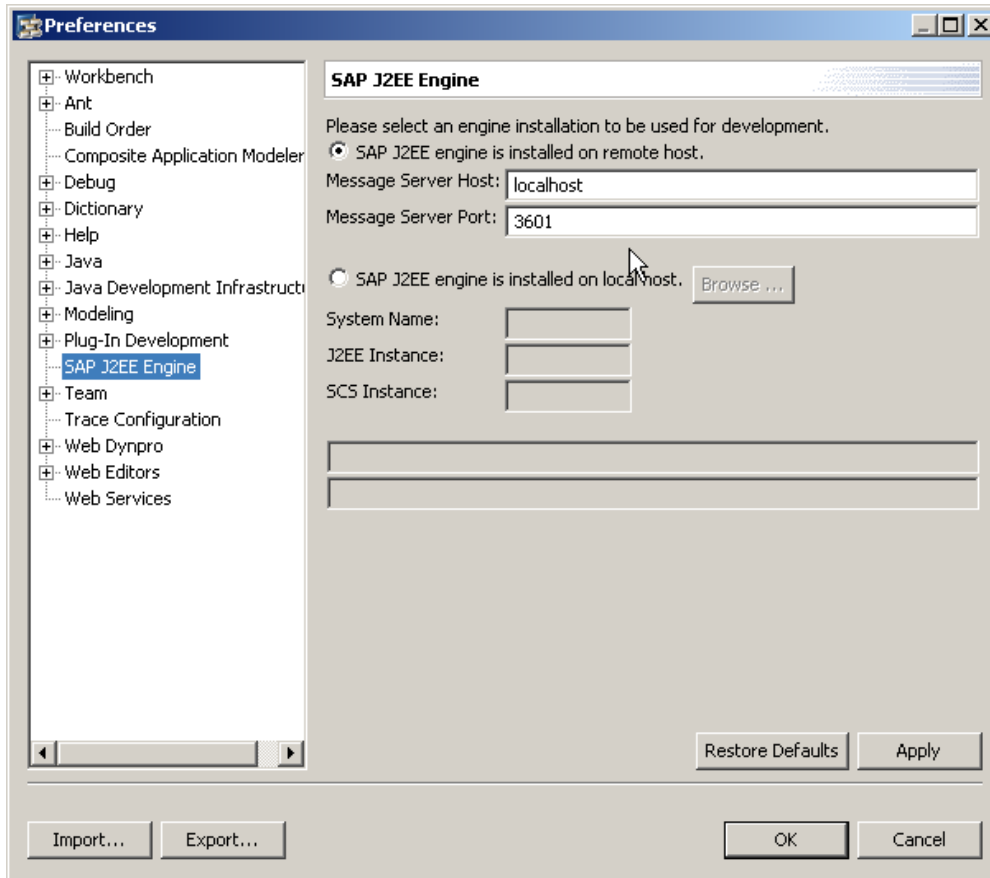
## ■ Delete projects:

- ◆ Select „Delete“ from the context menu of the project
- ◆ Choose if you want to remove the project from the workspace only or completely delete it from the filesystem





# Preferences

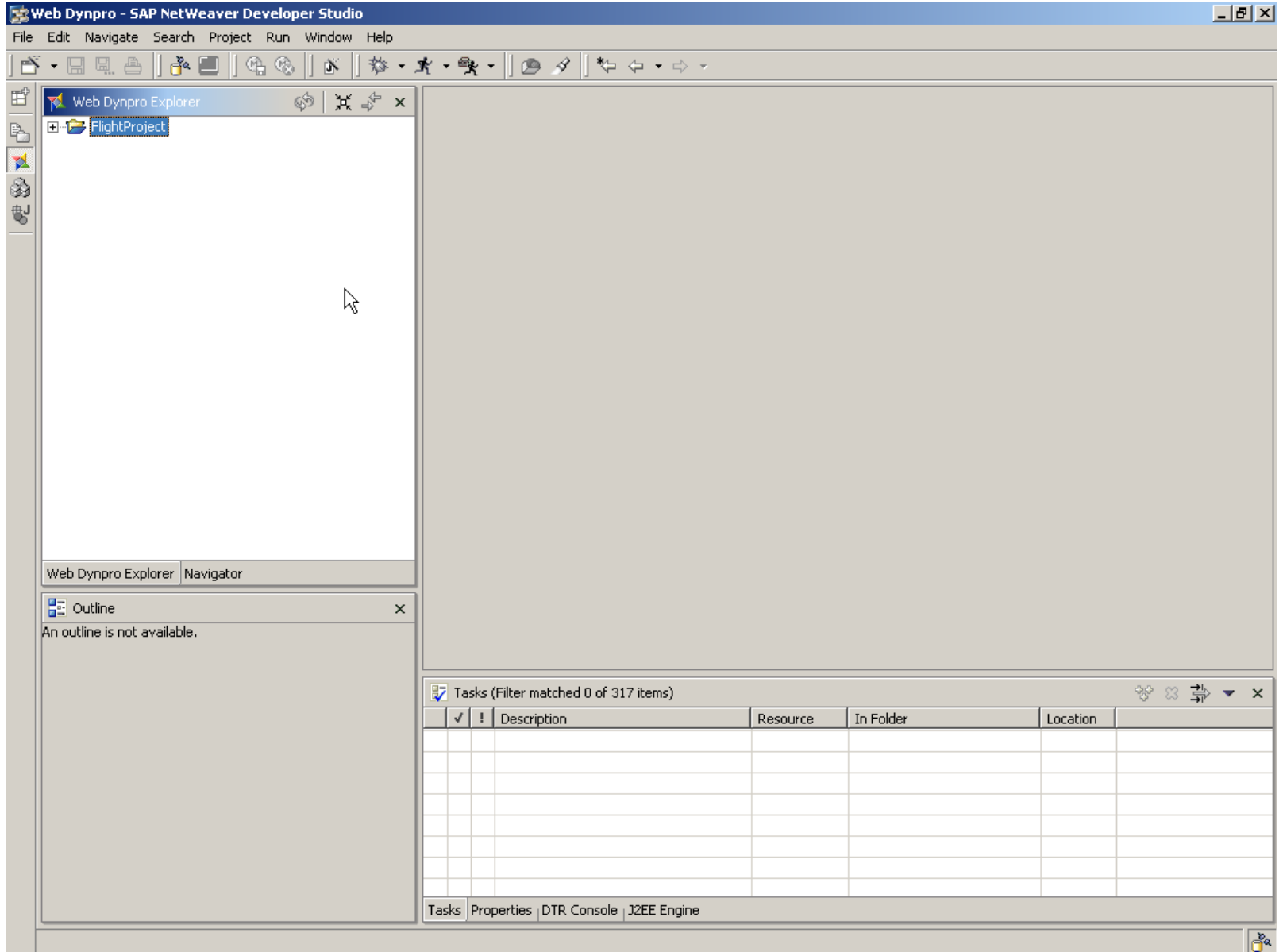


## ■ User settings for all areas of the IDE

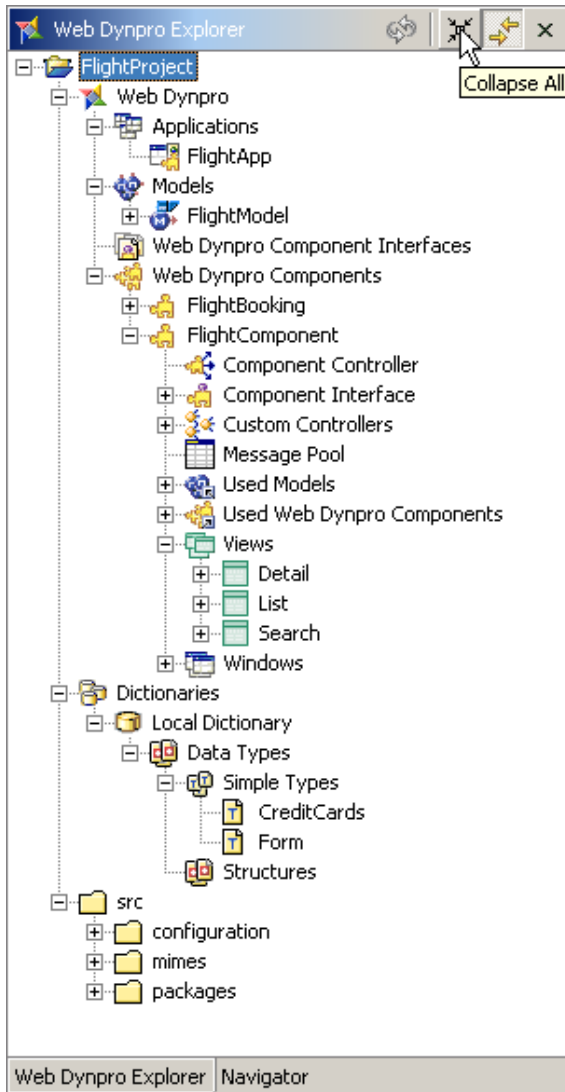
- ◆ Java editor
- ◆ Debugging
- ◆ J2EE server
- ◆ ...

## ■ Reachable via „Window → Preferences“

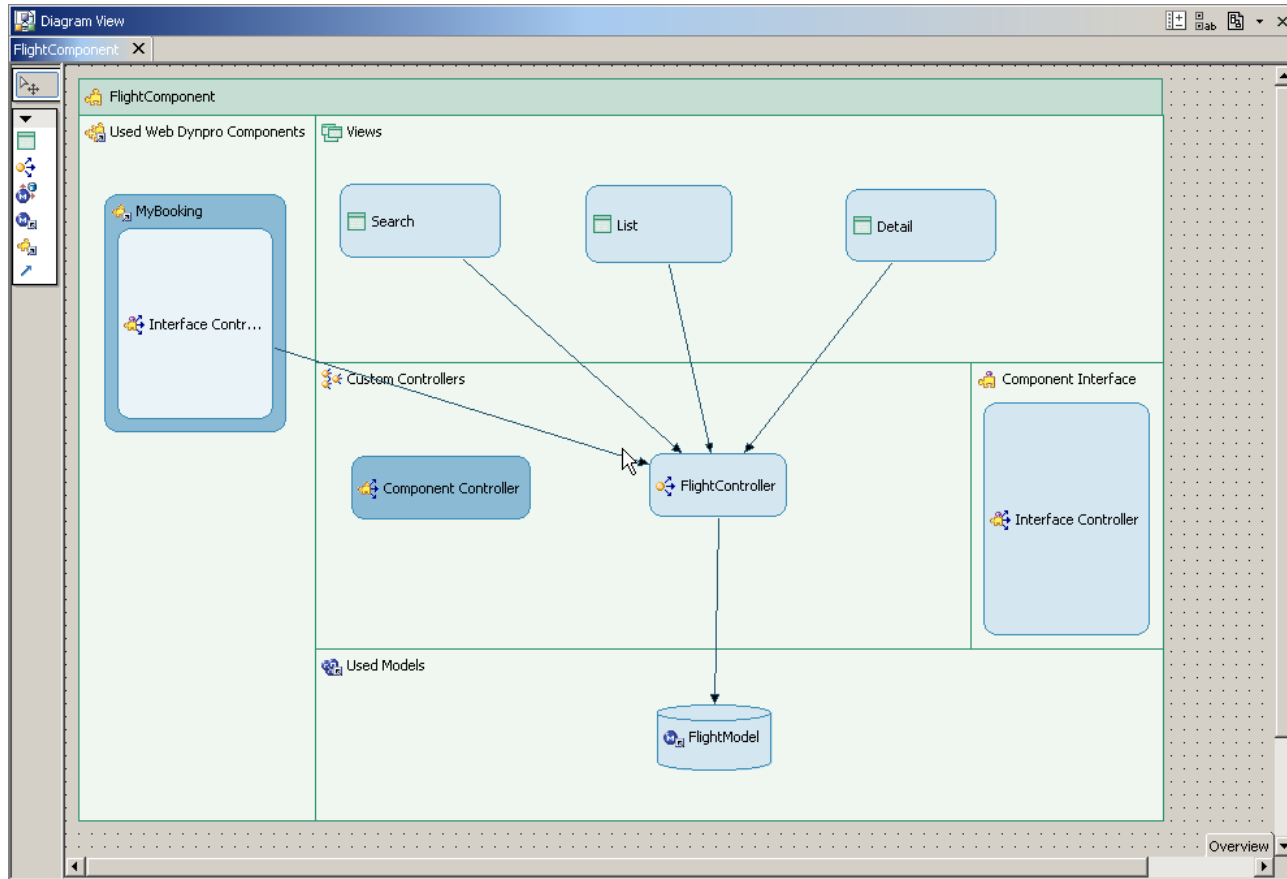
# Web Dynpro Perspective



# Web Dynpro Explorer



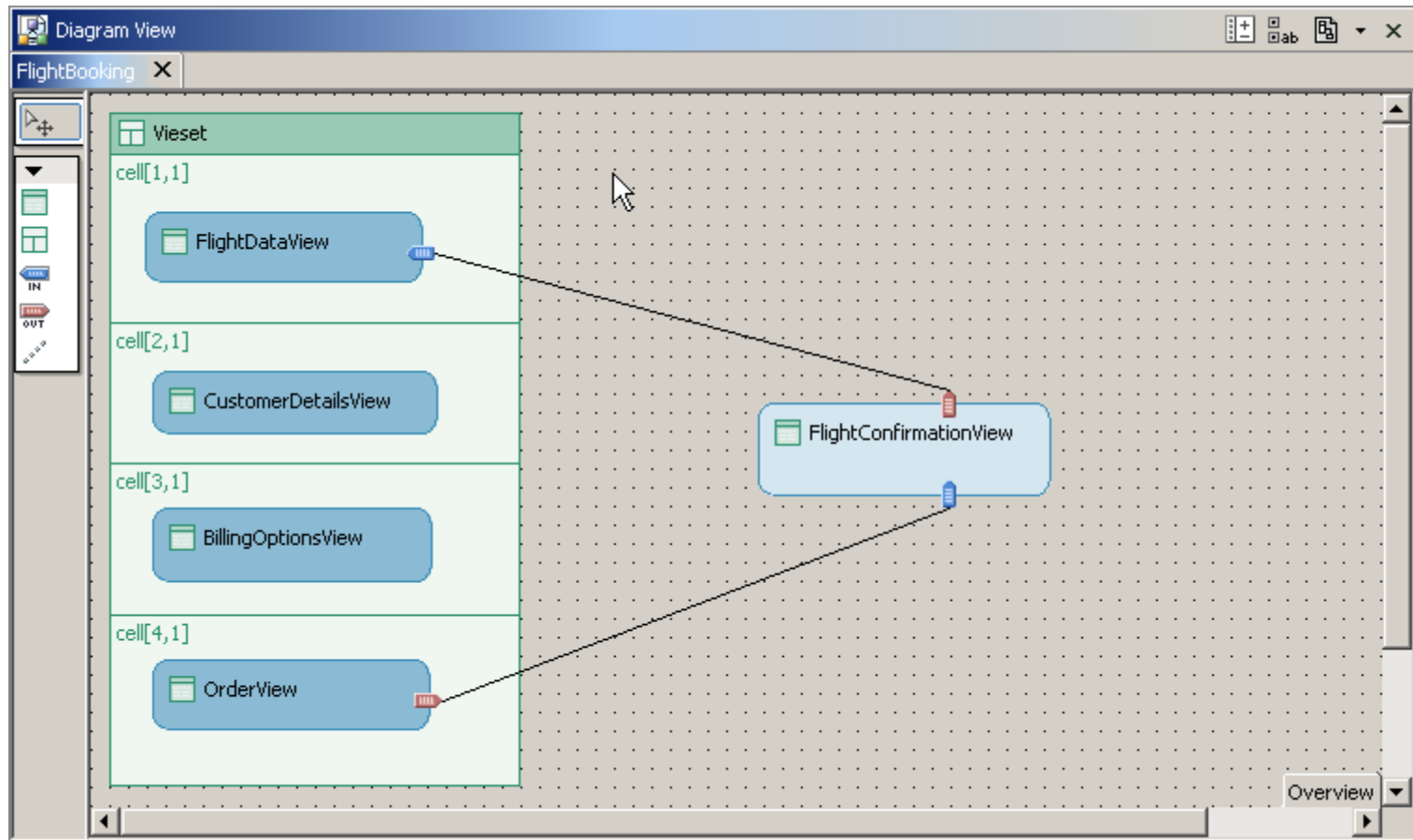
- Provides a logical view onto the objects within Web Dynpro projects
  - ◆ Applications
  - ◆ Models
  - ◆ Components
  - ◆ ...
- Starting point for most operations on Web Dynpro objects
  - ◆ Creating new objects
  - ◆ Editing and deleting existing objects
  - ◆ Building, deploying and running Web Dynpro applications



## ■ Graphical tool to ...

- ◆ Model data flow with the help of data links
- ◆ Create new views, controllers, etc.
- ◆ Define context mappings and model bindings

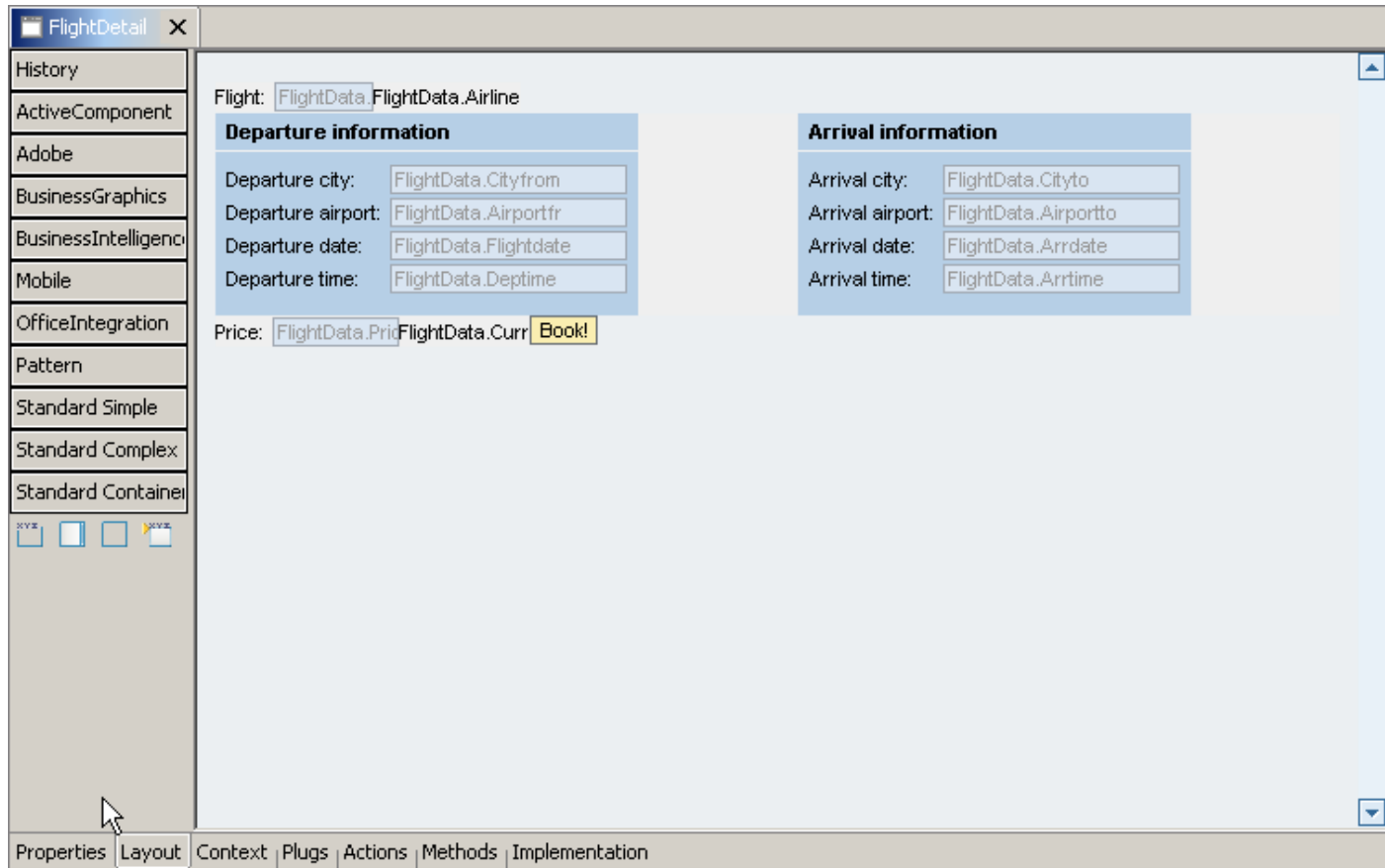
# Navigation Modeler



## ■ Graphical tool to ...

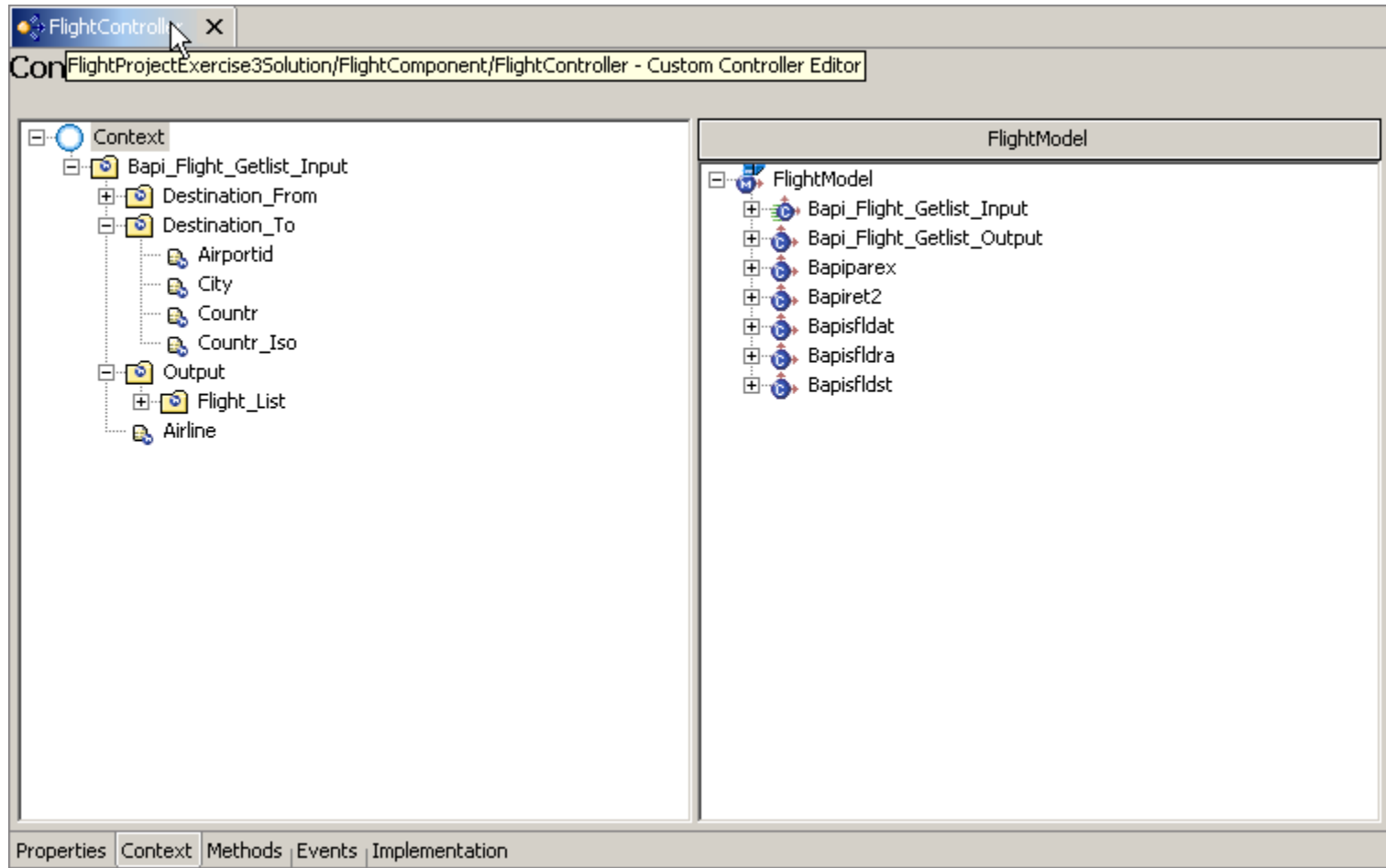
- ◆ Define the arrangement of the views of a Web Dynpro application
- ◆ Define the navigation structure

# View Designer



- WYSIWYG editor to define the user interface of a Web Dynpro view
- Maintain the context structure for the data used in the view (see context editor)
- Maintain usage relations, actions, methods and Java coding

# Controller and Context editor



- Maintain the context structure for the data used in the controller
- Maintain usage relations, methods, events and Java coding

# Message Editor

Message Editor

Message Key	Message Type	Message Text	Translate
ERR_NO_FLIGHTS	error	No flights were found for your search	true
TEXT_SMOKING_NO_SMOKING	text	This flight is a {0} flight.	true

- Maintain error messages and other texts used within Web Dynpro applications
- One-to-one relation between Web Dynpro component and message pool





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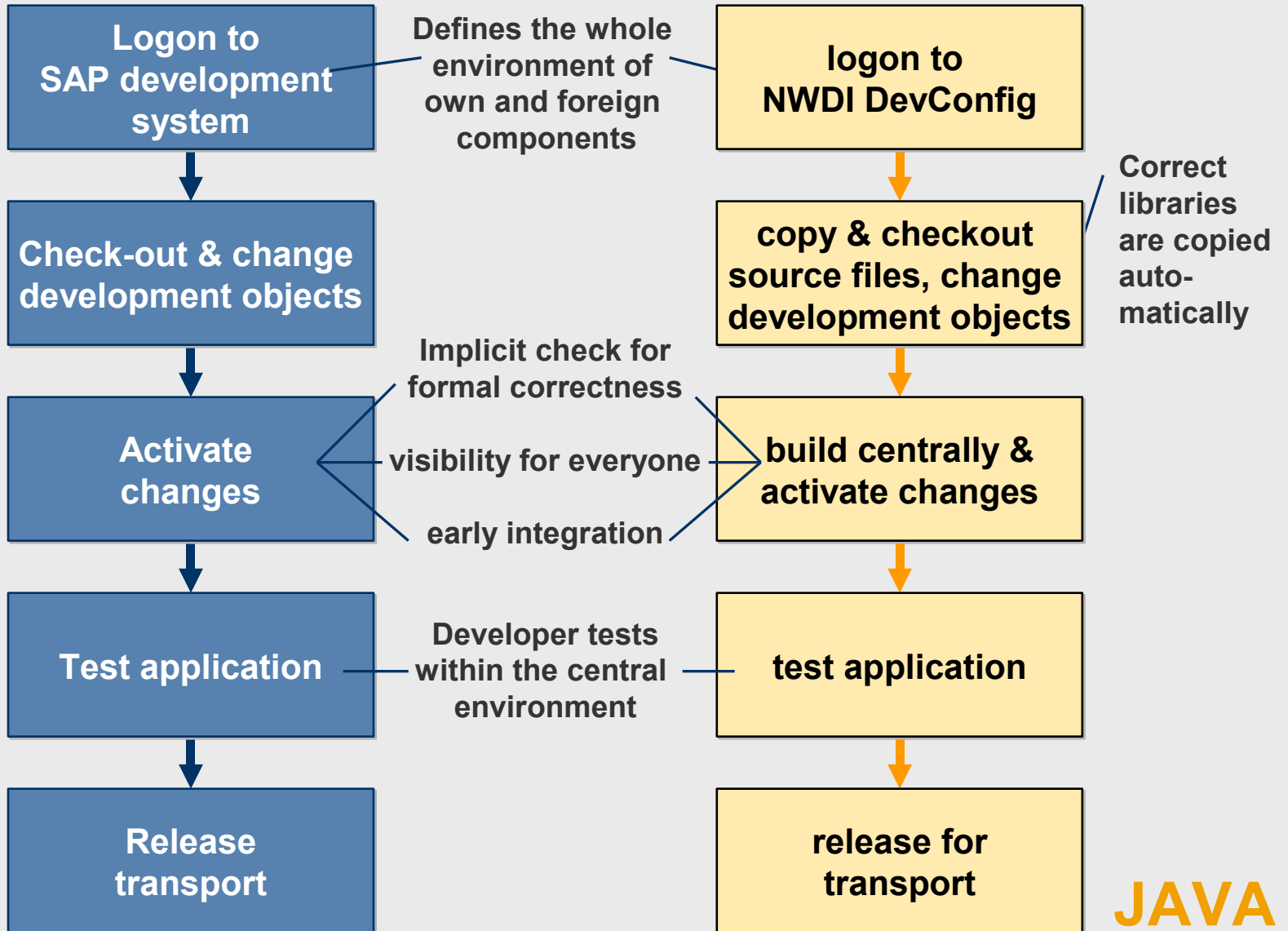
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## **NetWeaver Development Infrastructure**

Using Webservices with Web Dynpro

Web Dynpro Applications inside the Enterprise Portal

# NW Development Infrastructure: Learning from ABAP

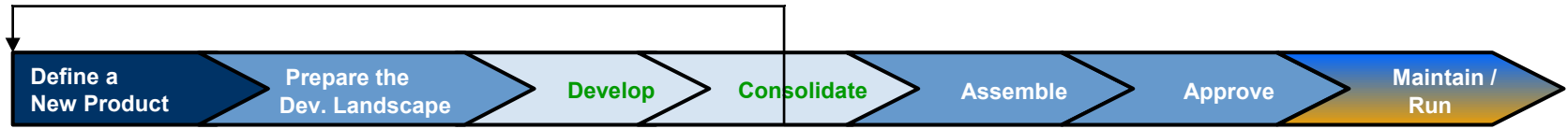


ABAP

JAVA

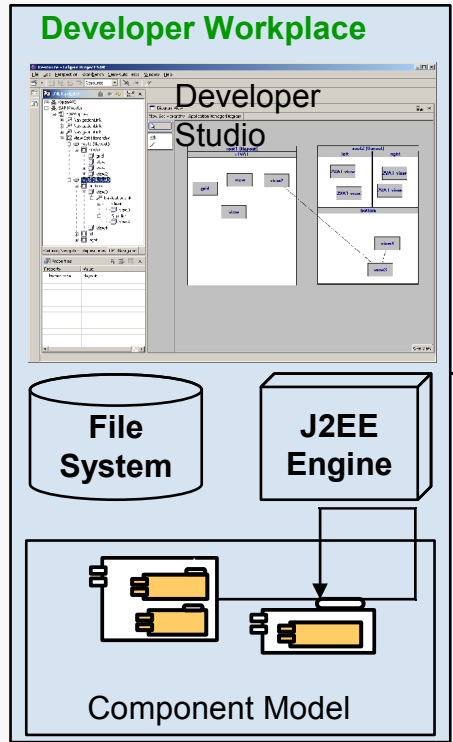
# Overview: SAP NetWeaver Development Infrastructure

SW Life-Cycle

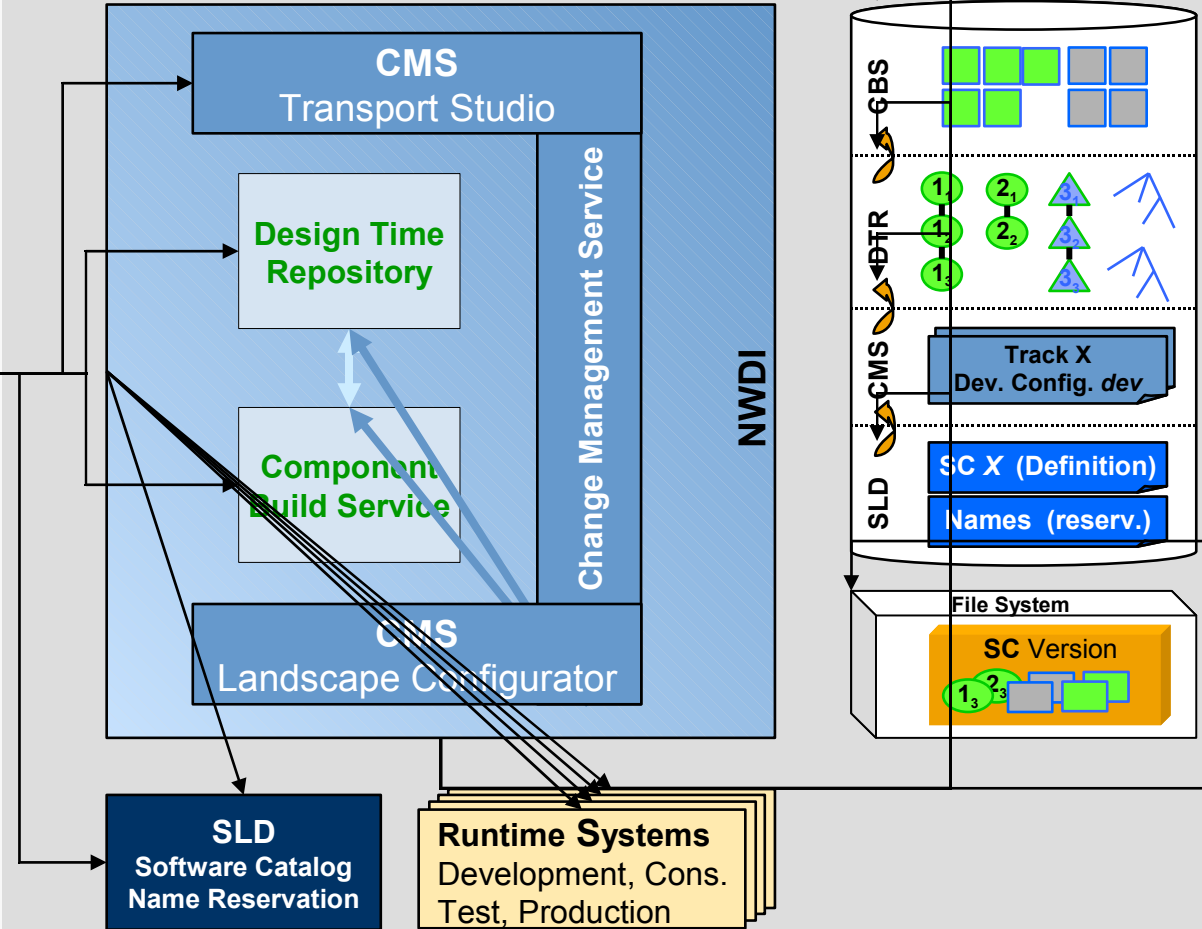


Development Environment

## Local Installation



## Central Development Infrastructure on NW AS



# JAVA Development with the NWDI

Few test problems due to consistent development environment and CBS activation concept. Defined release process for completed objects. ✓

Central test and release objects

Very few build problems due to centrally stored archives and additional check of used objects during CBS activation. ✓

Central build

Check-in changed files

Local build, local test

✓ Build results can be tested in the local development environment. Only defined components can be used

Change development objects

Find correct foreign libraries

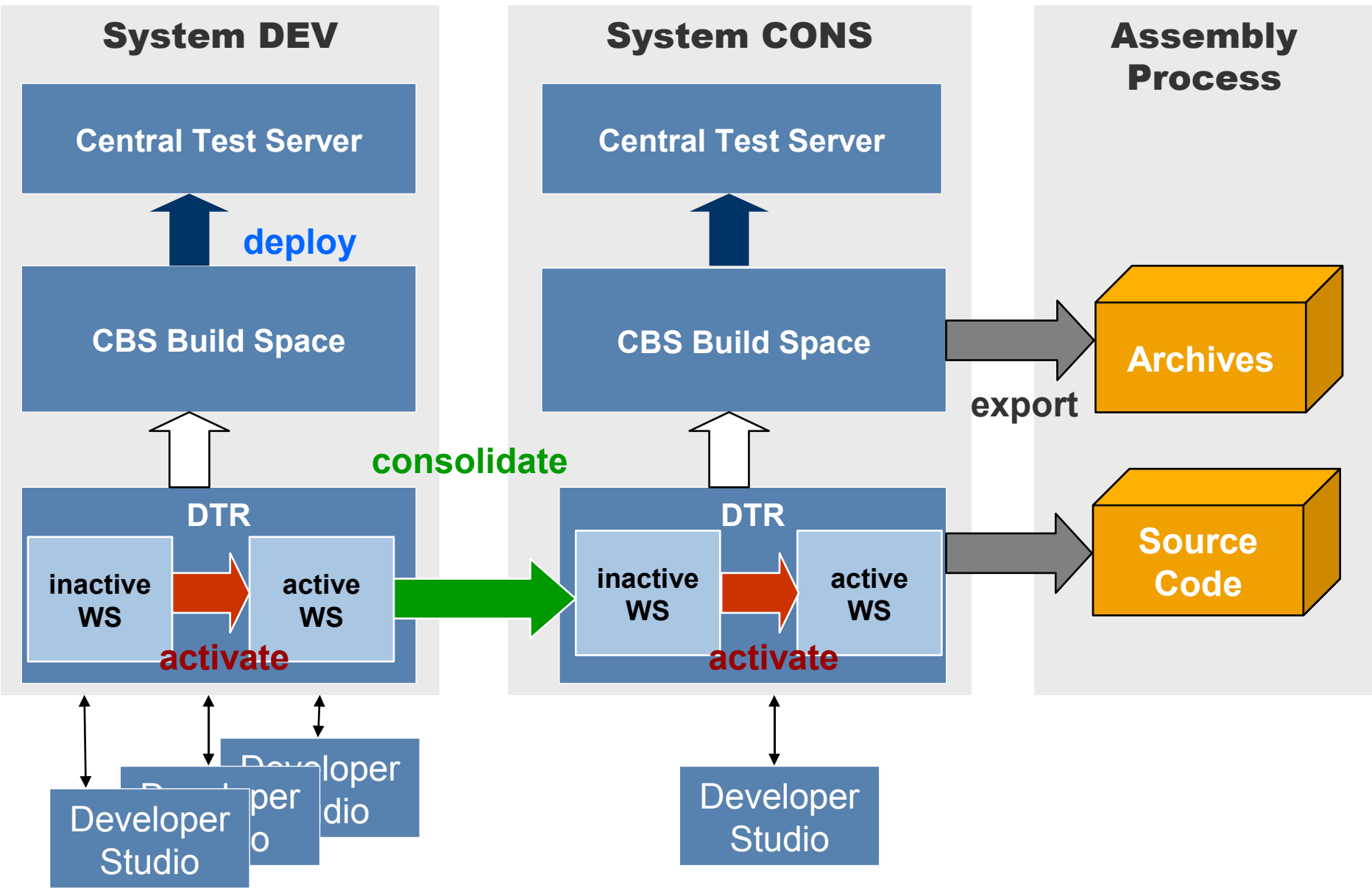
✓ Access to correct archives because of central archive management in the CBS.

Copy & checkout source files

Find correct sources

✓ Access to correct sources because of central source management in the DTR and defined dev. environment in development configurations.

# Software Life-Cycle Management: Track





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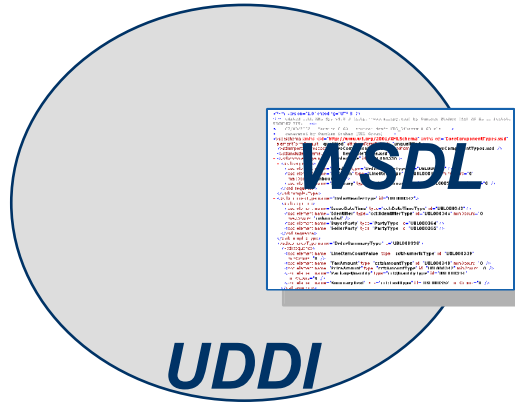
NetWeaver Development Infrastructure

## Using Web services with Web Dynpro

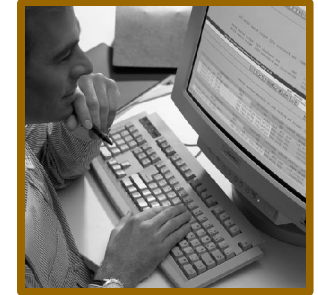
Web Dynpro Applications inside the Enterprise Portal

# Implementing a Web Service Client

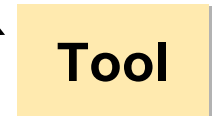
## Service Provider



## Service Requestor

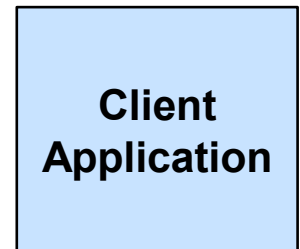


1 Read WSDL



2 Generate

3 Implement



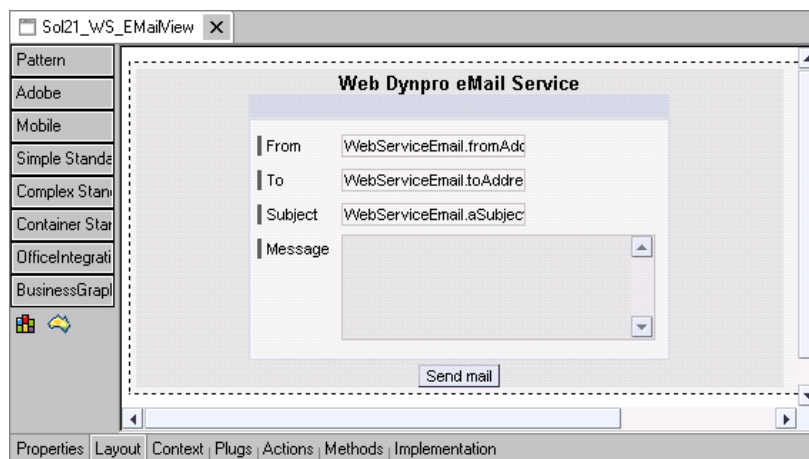
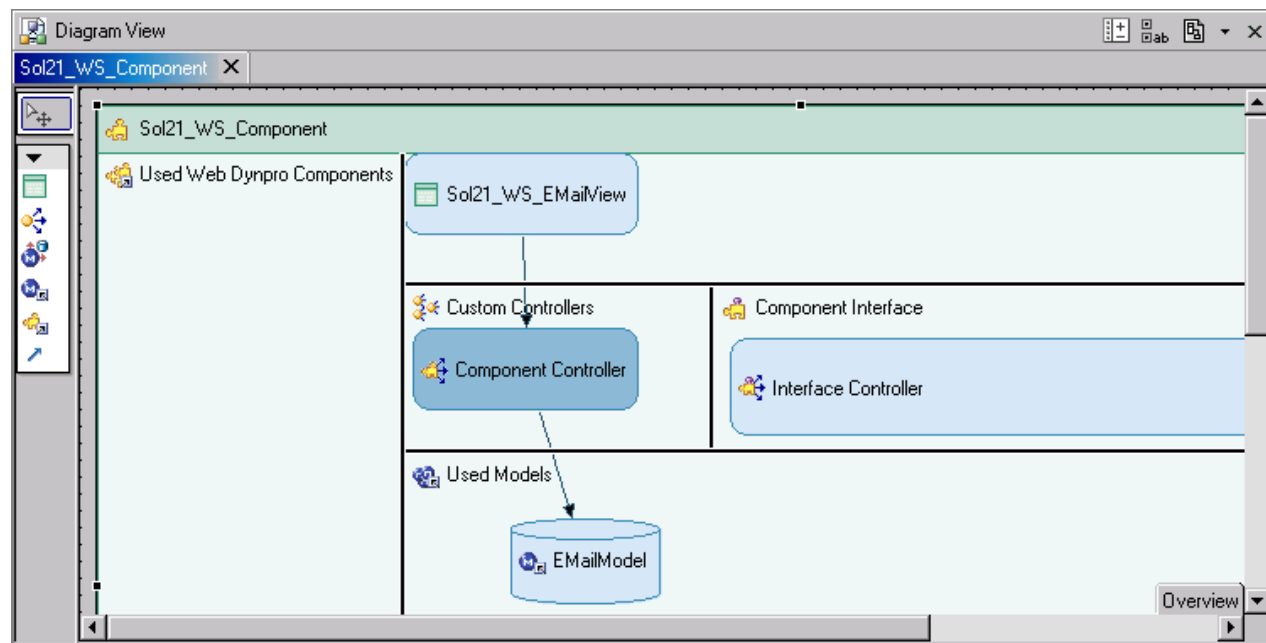
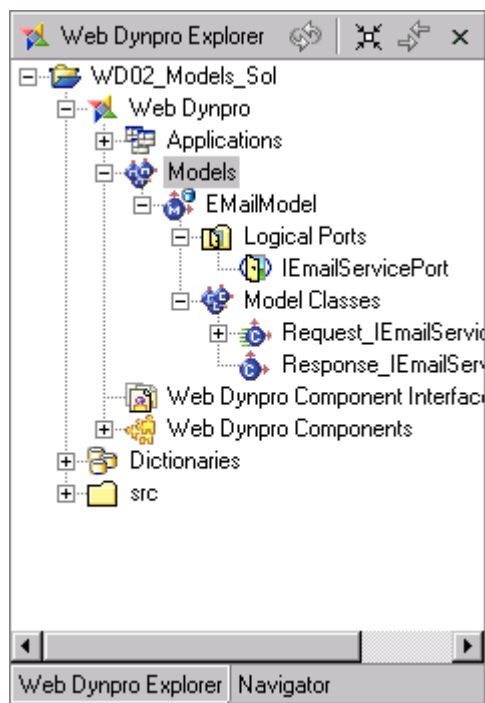
calls

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Web Service Application

# Web Dynpro and Web Services







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NetWeaver Development Infrastructure

Using Webservices with Web Dynpro

**Web Dynpro Apps inside the Enterprise Portal**

# Personalization and Navigation

*My Role*

*Corporate Branding*

**Top-Level Navigation**

**iViews**

**Detailed Navigation**

*My iViews*

*My Page*

The screenshot shows the SAP My Role interface. At the top, there is a header with 'Welcome Manager Test' and 'SAP' logo. Below it is a navigation bar with 'Plant Management', 'HR Executive Analytics', 'My Staff', 'My Budget', and 'Em'. A search bar is also present. The main content area is divided into several sections: 'Alerts' (No alerts found), 'KPI Watch List' (a table of key figures), and 'Universal Worklist' (a list of tasks). A context menu is open over the 'KPI Watch List' table, showing options like 'Detail Display', 'Personalize KPI', and 'Display KPI History'. The interface is annotated with several callouts: 'My Role' at the top, 'Corporate Branding' at the top right, 'Top-Level Navigation' pointing to the main navigation bar, 'iViews' pointing to the KPI Watch List, 'Detailed Navigation' pointing to the left sidebar, 'My iViews' pointing to the Universal Worklist, and 'My Page' at the bottom.

Status	Key Figure	Unit	Current Value	Trend	Target Value	Difference	Difference [%]	Time Stamp
Red square	CAPACITY_MANAGER_NEU	%	0.000	➡	90.000	90.000-	100.00-	14.09.2004 11:08
Red square	Ca	%	0.000	➡	91.000	91.000-	100.00-	14.09.2004
Red square	Test	%	180.500	➡	100.000	80.500	80.50	15.09.2004
Yellow triangle	TEST	%	4.600-	➡	0.000	4.600-		17.04.2004
Green circle	TEST_ASUG_TEST	%	1.000	➡	0.000	1.000		08.09.2004 13:19

Subject	From	Sent	Attachments
Complete 0001 in quality notifi	WF-BATCH	Apr 8, 2004	1
Account assignment approval	WF-BATCH	Feb 2, 2004	1
Approval for 00001051 Barbara Fischer	ERHARDTC	Apr 2, 2004	2

# From the Standard to Your Corporate Design

## SAP Design

The screenshot shows the standard SAP user interface. At the top, it says "Welcome Sabine" and "In Meeting". Below that, there are navigation tabs for "Opportunities", "Products", "Accounts", "Sales", and "Service". The main area displays a table of opportunities with columns for Prospect Name, Transaction Description, Phase Description, User Status, Start Date, Closing Date, Exp. Sales Vol., Curr., and Employee Responsibility. Below the table, there are tabs for "Sales", "Sales Team", "Goals", "Products", "Valuation", "Competitors", "Sales Assistant", and "Partner". The "Products" tab is active, showing a table of products with columns for Item, Product Category, Product, Quantity, S/Wh, Exp. Prod. Val., Net Value, Curr., Description, Item Category / Cat., and Higher Level Item. Below the table, there is a detailed view of a product, showing fields for Product Category, Item Category, Product, Quantity, Exp. Prod. Val., Net Value, Curr., Description, Product 01, S/Wh, and Net Value. There is also a section for "Comments" and a "Submit" button.

Theme Editor

The screenshot shows the SAP user interface with a custom corporate design theme. The top navigation bar is blue and white, with the SAP logo on the right. Below the navigation bar, there are tabs for "Opportunities", "Products", "Accounts", "Sales", and "Service". The main area displays a table of opportunities with columns for Prospect Name, Transaction Description, Phase Description, User Status, Start Date, Closing Date, Exp. Sales Vol., Curr., and Employee Responsibility. Below the table, there are tabs for "Sales", "Sales Team", "Goals", "Products", "Valuation", "Competitors", "Sales Assistant", and "Partner". The "Products" tab is active, showing a table of products with columns for Item, Product Category, Product, Quantity, S/Wh, Exp. Prod. Val., Net Value, Curr., Description, Item Category / Cat., and Higher Level Item. Below the table, there is a detailed view of a product, showing fields for Product Category, Item Category, Product, Quantity, Exp. Prod. Val., Net Value, Curr., Description, Product 01, S/Wh, and Net Value. There is also a section for "Comments" and a "Submit" button.

The screenshot shows the SAP user interface with a custom corporate design theme. The top navigation bar is blue and white, with the SAP logo on the right. Below the navigation bar, there are tabs for "Home", "My Pages", "Applications", "Products", and "Information". The main area displays a table of opportunities with columns for Prospect Name, Transaction Description, Phase Description, User Status, Start Date, Closing Date, Exp. Sales Vol., Curr., and Employee Responsibility. Below the table, there are tabs for "Sales", "Sales Team", "Goals", "Products", "Valuation", "Competitors", "Sales Assistant", and "Partner". The "Products" tab is active, showing a table of products with columns for Item, Product Category, Product, Quantity, S/Wh, Exp. Prod. Val., Net Value, Curr., Description, Item Category / Cat., and Higher Level Item. Below the table, there is a detailed view of a product, showing fields for Product Category, Item Category, Product, Quantity, Exp. Prod. Val., Net Value, Curr., Description, Product 01, S/Wh, and Net Value. There is also a section for "Comments" and a "Submit" button.

# How to Integrate Business Applications

The screenshot displays the SAP Portal Administration interface. At the top, there is a navigation bar with 'Welcome Administrator' on the left and 'Help | Personalize | Log Off' on the right, along with the SAP logo. Below this is a secondary navigation bar with tabs for 'Online Shop', 'Content Administration', 'User Administration', 'System Administration', 'Welcome', and 'Online Shop'. The main content area is titled 'Portal Content' and includes a breadcrumb trail 'Portal Content | Portal Content Translation'. A left-hand navigation pane shows a tree structure of folders, with 'ForresterScenario' selected. Below this pane is a 'Quick Info' section with fields for ID, description, and title. The main workspace is titled 'New iView Wizard' and contains a 'Step 1: Template Selection' section. This section includes a 'Refresh' button and a list of templates with radio buttons. The 'Crystal Enterprise Report' template is selected. At the bottom right of the wizard, there are 'Cancel', 'Back', 'Next >', and 'Finish' buttons.

Welcome Administrator

Help | Personalize | Log Off

Online Shop | Content Administration | User Administration | System Administration | Welcome | Online Shop

Portal Content | Portal Content Translation

Portal Content | History | Back | Forward

Browse | Search

Business Objects

Portal Content

Content For Line Managers

Content For Specialists

Content Provided by SAP

ForresterScenario

temp

Customer

Online Shop

Product Catalog

Product Order

Migrated Content

Portal Administrators

Portal Users

Templates

themes

Quick Info

ID

pcc:portal\_content/forresterscenario

com.sap.portal.pcm.Description

com.sap.portal.pcm.Title

ForresterScenario

Overview | New iView

New iView

iView Wizard

Step 1: Template Selection

This wizard guides you through the steps required to create a portal iView based on an existing template. In this screen, select a template. The template list reflects the contents of the cache, and may need refreshing.

Refresh

Choose Template \*

- Crystal Enterprise Report
- Database JDBC iView
- Proxy-to-Remote iView
- SAP BSP iView
- SAP BW Report iView
- SAP Connector iView
- SAP IAC iView
- SAP MiniApp iView
- SAP Transaction iView
- SAP Web Dynpro iView
- URL iView
- Yahoo! iView

Cancel | Back | Next > | Finish

# Usage of Client-side Eventing

Works between iViews on the same portal page

Can transfer any string from, avoids copy and past of information

## Prerequisites:

- J2EE for EP and Web Dynpro must be reachable full qualified
- System for WD J2EE must be created in EP (incl. Alias)

## Usage:

### ■ firing Events:

```
WDPortalEventing.fire("namespace", "event", "parameter=value");
```

### ■ subscribing to Events:

```
WDPortalEventing.subscribe("namespace", "event", wdThis.wdGetPortalEventAction());
```

### ■ unsubscribing from Events:

```
WDPortalEventing.unsubscribe("namespace", "event", wdThis.wdGetPortalEventAction());
```

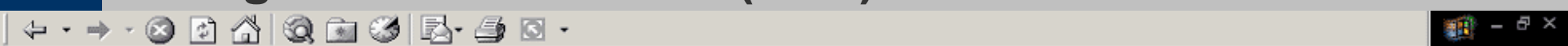
# WorkProtect Mode

The screenshot displays the SAP Enterprise Portal 6.0 interface. At the top, a navigation bar includes 'Content Administration', 'User Administration', 'System Administration', 'ESS', 'Welcome', and 'Web Dynpro'. Below this, a breadcrumb trail shows 'Administration | Demos (CSF) | Demos (SSR)'. The main content area is titled 'Work Protect Mode' and contains a 'Detailed Navigation' sidebar with options like 'Eventing', 'Navigation', and 'Work Protect Mode'. The main configuration area has three radio buttons for 'Work protect mode': 'NONE', 'STANDARD' (selected), and 'APPLICATION\_ONLINE'. Below this are 'Application state' controls, including 'Set dirty', 'Set clean', and a checked 'Application dirty' checkbox. A 'Test for WorkProtect' button is highlighted with a blue circle and the number '1'. A 'Web Page Dialog' window is overlaid on the configuration, with a warning icon and the text 'Your current page contains unsaved data'. It offers three options: 'Continue with navigation and open new window' (selected), 'Go back to your page and save data', and 'Discard changes and open content in same window'. The dialog has 'OK' and 'Cancel' buttons and is highlighted with a blue circle and the number '2'.

Web Dynpro applications can use the Work Protect mode to prevent, that unsaved data inside the Web Dynpro application is lost, if the user navigates to another portal page.



# Management Self Service (MSS) with OBN



**Plan W-Class Compensation Review for Period 2004 ( 01/01/2004 - 12/31/2004 ) - Annually**

**W-Class Merit Increase** | **W-Class Bonus**

Total Adjustments: 22,481.96 US Dollar  
 Average Adjustments: 3.38 %

Budget	Total	Distributed	Remaining	Currency
1	16,000.00	15,257.40	742.60	US Dollar
2	8,000.00	7,224.56	775.44	US Dollar


0.0

Employee	Position	Budget	Calculation Base	Amount	Percentage	Total	Currency	Effective On	Status
<input type="checkbox"/> <a href="#">Williams, Marc</a>	Sales Representative	1	53,249.92	1,863.75	3.50	55,113.67	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Williams, Anna</a>	Graphics Specialist	2	39,520.00	1,185.60	3.00	40,705.60	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Smith, John</a>	Sales Representative	1	60,311.92	2,110.92	3.50	62,422.84	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Rollins, Samantha</a>	Secretary	1	38,484.00	1,346.94	3.50	39,830.94	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Mussen, James</a>	Sales Representative	1	53,899.84	1,886.49	3.50	55,786.33	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Klein, Betsy</a>	Graphics Specialist	2	36,504.00	1,095.12	3.00	37,599.12	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Harvey, George</a>	Sales Support	1	47,340.00	1,656.90	3.50	48,996.90	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Green, Cam</a>	Representative	1	53,699.92	1,879.50	3.50	55,579.42	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Green, Andr</a>	Specialist	2	33,524.40	1,150.00	3.43	34,674.40	US Dollar	01/01/2004	●
<input type="checkbox"/> <a href="#">Grafton, Vincent</a>	Sales Representative	1	44,940.00	1,572.90	3.50	46,512.90	US Dollar	01/01/2004	●

Show overview  
 Show projects  
 Show sales

Display All Amounts In

**With OBN, this can be achieved with a direct mouse click → Actions show up**



**SAP NetWeaver Portal is SAP's strategic platform to access all SAP and partner business applications**

**Web Dynpro is SAP's strategic approach to build professional user interfaces for different clients**





 Západoslovenská energetika

Víta Vás  
ElektroWeb

ID užívateľa \*

Heslo \*

 Prihlásenie

Vitajte Radoslav Sloboda



Nápoveda Odhlásenie

Úvodná stránka **Odborné miesta** Faktúry Platby Žiadosti

Moje odberné miesta

Moje odberné miesta

História Späť Dopredu

Hľadať Reset

Miesto spotreby	<input type="text"/>	Ulica	<input type="text"/>
Odborné miesto	<input type="text"/>	Miesto	<input type="text"/>
Akt. zmluva	<input type="text"/>	PSČ	<input type="text"/>
Dátum od	<input type="text" value="1.1.2005"/>	Dátum do	<input type="text" value="31.12.9999"/>
Typ tarify	<input type="text"/>	Distribúcia	<input checked="" type="checkbox"/>
		Predaj	<input checked="" type="checkbox"/>

Zoznam miest spotreby / odberných miest obchodného partnera 510000867

Zoznam miest spotreby / odberných miest

Hľadať Výmaz História spotreby Export

	Miesto spotreby	Odber. miesto	Akt. zmluva	Dátum od	Dátum do	Miesto	Ulica	Číslo domu	PSČ	Reg.	Int.	Druh služby
<input checked="" type="checkbox"/>	3108032520	4803252000	130045102	1.1.2005	31.12.9999	BRATISLAVA	JONÁŠA, JÁNA	9612	841 08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	3108032520	4803252002	140120259	1.1.2005	31.12.9999	BRATISLAVA	JONÁŠA, JÁNA	9612	841 08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	3107000161	4700000312	140120261	1.1.2005	31.12.9999	BRATISLAVA	JONÁŠA, JÁNA	9612	841 08	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	3107000109	4700000445	140119972	1.1.2005	31.12.9999	MARTIN	Priemyselná	9042/1	036 01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	3108056760	4805676000	130045594	1.1.2003	31.12.9999	BRATISLAVA	LOKA ČISTIČKA VW BA	9606	841 07	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Riadok 1 z 10

Detail miesta spotreby 3108032520 / odberného miesta 4803252000

Vitajte Radoslav Sloboda



Náповед Odhlásenie

Úvodná stránka **Odborné miesta** Faktúry Platby Žiadosti

Moje odberné miesta

Moje odberné miesta

História Spät Dopredu

História spotreby

Spät Od 2005 Do 2005 Merná jedn. kWh Aktualizácia Export

Detail celkovej spotreby za obdobie - Obchod

0 kWh

Detail celkovej spotreby za obdobie - Distribúcia

182 015 965,59 kWh

Spotreba za distribúciu			
	Miesto spotreby	Odborné miesto	Množstvo
<input checked="" type="checkbox"/>	3108032520	4803252000	182 015 965,59
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

Riadok 1 z 1

Klikom na riadok tabulky s miestom spotreby sa zobrazí detail

Grafy histórie spotreby

Graf spotreby za distribúciu

Spotreba za 3108032520 / 4803252000					
	Platné od	Platné do	Množstvo	Reg.	Int.
<input checked="" type="checkbox"/>	1.1.2005	31.1.2005	17 314 560,59	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.2.2005	28.2.2005	18 094 306	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.3.2005	31.3.2005	19 391 737	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.4.2005	30.4.2005	19 257 152	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.5.2005	31.5.2005	18 727 416	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.6.2005	30.6.2005	18 488 015	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.7.2005	31.7.2005	18 129 292	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.8.2005	31.8.2005	13 388 279	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.9.2005	30.9.2005	19 979 221	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	1.10.2005	31.10.2005	19 245 987	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Riadok 1 z 10

Klikom na riadok tabulky sa zobrazí detail

Graf spotreby za 3108032520 / 4803252000

Vitajte Radoslav Sloboda



Nápoveda Odhlásenie

Úvodná stránka **Odberné miesta** Faktúry Platby Žiadosti

**Moje odberné miesta**

Moje odberné miesta

História [Späť](#) Dopredu

**Detail spotreby intervalovo meraného miesta spotreby 3108032520 / odberného miesta 4803252000**

[Späť](#) << Od 1.1.2005 Do 31.1.2005 >> [Export](#)

**História spotr. za jeden mesiac**

	Platné od	Množstvo	Techn.
<input checked="" type="checkbox"/>	1.1.2005	2 206 252,285	kWh
<input type="checkbox"/>	2.1.2005	2 229 520,255	kWh
<input type="checkbox"/>	3.1.2005	2 677 128,175	kWh
<input type="checkbox"/>	4.1.2005	2 835 935,78	kWh
<input type="checkbox"/>	5.1.2005	3 179 349,565	kWh
<input type="checkbox"/>	6.1.2005	3 304 465,775	kWh
<input type="checkbox"/>	7.1.2005	3 747 969,94	kWh
<input type="checkbox"/>	8.1.2005	4 516 028,03	kWh
<input type="checkbox"/>	9.1.2005	5 960 103,105	kWh
<input type="checkbox"/>	10.1.2005	7 646 397,84	kWh
<input type="checkbox"/>	11.1.2005	8 415 953,715	kWh
<input type="checkbox"/>	12.1.2005	8 626 987,405	kWh
<input type="checkbox"/>	13.1.2005	8 681 996,88	kWh
<input type="checkbox"/>	14.1.2005	8 686 762,42	kWh
<input type="checkbox"/>	15.1.2005	5 509 279,865	kWh
<input type="checkbox"/>	16.1.2005	5 129 943,875	kWh

**Spotreba za jeden deň**

	Popis hodnoty	Minúta/Ozn.	Hodina	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
<input type="checkbox"/>																						

**Export do súboru**

Kliknutím na linku sa otvorí Excel v novom okne.

[T\\_Hsmes33.xls](#)

[Späť](#)

Oblasť obsahu

Vitajte Radoslav Sloboda



Nápvoved Odhlásenie

Úvodná stránka Odborné miesta Faktúry Platby Žiadosti

Moje faktúry

Moje faktúry

História Spät Dopredu

Výberové kritériá

Miesto spotreby  Zmluvný účet   
 Variabilný symbol  Ulica   
 PSČ  Mesto   
 Splatnosť od 1.10.2005  Splatnosť do

Hľadaj

Faktúry

Variabilný symbol	Typ faktúry	Zmluvný účet	Suma	Pdf
7010012528	Vyúčtovacia faktúra	6400000550	31 739 640	Pdf
7010013989	Vyúčtovacia faktúra	6400000551	26 248	Pdf
7010014708	Vyúčtovacia faktúra	6400000550	27 973 575	Pdf
7100106575	Vyúčtovacia faktúra	24.10.2005 6400000551	77 923	Pdf
7100123354	Vyúčtovacia faktúra	24.11.2005 6400000551	38 597	Pdf
7100125709	Vyúčtovacia faktúra	5.12.2005 6400000550	94	Pdf

Riadok 1 z 6

Spolu suma 59 856 077 Sk

Úvodná stránka Odborné miesta Moje faktúry

Moje faktúry

Výberové kritériá

Miesto spotreby Variabilný symbol PSČ Splatnosť od 1.10.2005

Faktúry

Table with 2 columns: Variabilný symbol, Typ faktúry. Rows include 7010012528, 7010013989, 7010014708, 7100106575, 7100123354, 7100125709.

Table with 5 columns: Description, Suma bez DPH [Sk], DPH [%], DPH [Sk], Suma [Sk]. Rows include Za spotrebu, Odpočítané zálohy, Spolu, Zaokrúhlenie, Nedoplatok.

Zapadoslovenska energetika, a. s. Culenova 6, 816 47 Bratislava 1, www.zse.sk Peter Blazo, key account manager, T +421-(0)907 71 83 65, F +421-(0)2-50 61 49 89, blazo@bazse.sk

Príkaz na úhradu form with fields for Bankové spojenie, na farchu účtu, kód banky, Banke, Pobočke, Splatný dňa.

Spolu suma 59 856 077 Sk

# Questions??

