Using Forms in Workflows and Guided Procedures
Overview

Business Task Management in SAP NetWeaver

SAP Interactive Forms by Adobe

Guided Procedures and SAP Business Workflow
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</tr>
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*On the concept of IT Practices and IT Scenarios...*
Business Task Management is Evolutionary

- Business Workflow
- Universal Worklist
- BPM
- + Collaboration Tasks
- + Guided Procedures
- + Third Party
  - Duet,
  - UWL API

- 1995
- EP 5.0
- 2003
- SAP NetWeaver ‘04
- SAP NetWeaver 2004s
What Is the Current Situation for Managers?

- Write performance appraisals
- Perform specific tasks
- Control and reduce costs
- Manage budgets
- Perform budget and headcount planning
- Trigger processes
- Initiate personnel data changes
- Delegate tasks
- Recruit the right people
- Motivate employees
- Identify and reward top performers
- Recruit the right people
- Identify and reward top performers

Susan F.
# Business Task Management Components

## Universal Worklist
- Single point of access for managing your work
- Can be personalized to suit each user’s working style
- Process-specific views can be customized for expert users

## Collaboration Tasks
- Enables end-users to create their own ad hoc processes and drive collaboration
- Includes various types of collaboration tasks including actions, approvals, and feedback
- Users track progress of their delegated task

## Guided Procedures
- Designed to implement process flows with greater ease and speed across multiple applications
- Integrates backend system transactions and interactive forms
- Includes process templates that can be easily re-used or copied and easily changed

## Interactive Forms
- Generate forms that contain data extracted from core systems
- Use dynamic or static forms
- Accelerate forms-based business processes

## SAP Business Workflow
- Structured, repeatable, simple to complex business process
- Manages the tasks that need to be performed and who should perform the tasks
- Ensures business process deadlines and service agreements are appropriately monitored and enforced

## Alerts
- Exception-triggered notifications
- Define follow-on activities
- Inter-System alerting

## Duet
- Processes in Microsoft Outlook
Business Task Management – Definition

Business Task Management is the automation, execution and monitoring of tasks

- Coordinate and execute tasks arising from automated process flows and spontaneous events
- Track the progress of tasks

Tasks include a wide variety of activities

- Business Transaction
- Alert
- Form
- Desktop Document
- Impromptu Request
Overview

Business Task Management in SAP NetWeaver

SAP Interactive Forms by Adobe

Guided Procedures and SAP Business Workflow
Forms typically offer a service, share knowledge, or collect and provide answers.

A form is the document that an end user views or interacts with.

The form design specifies the layout, data capture, and final presentation rules for the form.

No complex navigation or business rules.
Challenges in Forms-Based Processes

Paper-based form processes have limitations.

- Error-prone and easily outdated
- Manual data re-entry
- Process status is hard to track
- High costs (e.g. production, storage)
- $30 million per year for a global organization*

Casual users (including executives) are typically unfamiliar with enterprise software.

- Access to enterprise applications needs to be intuitive.

External users (suppliers etc.) are disconnected from the process.

- System-relevant data capture is cumbersome.

* GISTICS independent study, 2004
Interactive Forms based on Adobe Software

Key Capabilities

1. Integrate interactive PDF documents into business processes driven by SAP applications
2. Allow forms-based input combined with workflow to start automated follow-up steps
3. Generate forms that contain data extracted from SAP systems
4. Use dynamic or static forms
5. Complete forms online or offline
6. Submit data from the form back to SAP systems
7. Allow users to print forms
Improving Productivity with Interactive Forms

- Eliminate process latency, duplication and errors in paper forms
- Integrate SAP application Data
- Support casual and mobile users
- Minimize training time
- Get the job done faster, and at lower cost
Scenarios for capturing or displaying data in a Form

1. **Interactive forms**
   - Users complete the form (online/offline)
   - Select options online to submit the form data to a predefined process
   - Optional Support for data validations

2. **Non-interactive forms**
   - Designed to present information to end users
   - Pre-populated with data
   - Data can not be added or modified

3. **Print and fill forms**
   - End user opens and prints the form
   - Fills it out manually
   - Returns it by fax or mail
SAP/Adobe Strategic Partnership
- Solution first available with SAP NetWeaver ‘04

Adobe provides
- Open technology, de-facto standard for forms
- Benefits of combination of PDF with XML

Benefits of SAP/Adobe collaboration
- Adobe Reader installed on virtually all desktops
- “Natural” look and feel of forms
- User-friendly forms design tool lowers cost of operations
- Integration of Adobe’s PDF technology into SAP solutions
- Interactive Forms based on Adobe Software (Java - ABAP)
- Generation of forms to mass print, email or archive (ABAP)
- Linking of processes and Interactive Forms (Java – ABAP)
Where our Integration Starts?

Interactive PDF

- Paper-like layout
  - Self-explanatory
  - Natural look and feel

User Handling

- Save locally
- Distribute via email / Portal
- Apply digital signature
- Print locally

Background Services

- Structured data in XML
- Pre-filled application values
- Pre-filled list boxes, help values, ...
- Automatic data extraction and integration in application

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Interactive Forms – Design Time and Runtime

NetWeaver Developer Studio

ABAP Workbench

SAP NetWeaver Application Server

Java PDF Object

ABAP PDF Object

Adobe Document Services

SAP J2EE Engine
Interactive Forms – Run-Time Architecture

SAP NetWeaver Application Server

**J2EE Stack**
- Application Code (Java)
  - PDF Object (Java)
  - Web Services
    - SOAP
- Web Services
  - Document Service EJB
  - Adobe Document Services Core Components

**ABAP Stack**
- Application Code (ABAP)
  - PDF Object (ABAP)
  - Web Services
    - SOAP

Adobe LiveCycle Designer
Adobe Document Services
DB and OS Abstraction

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You are able to create the design of your form with the Adobe LiveCycle Designer.

- The context elements that were bound to your form can be dragged and dropped onto the form layout.
Execution of Business Task Management

**TASK MANAGEMENT UI** (Universal Worklist)

- Task 1
- Task 2
- Task x

**BPM RUNTIME**

- Interfaces for Data Integration
- Process Integration
- Process Communication

**Integration Process**

**Application Process**

**Events trigger tasks** (workitems, notifications)

**User Interaction with BPM Runtime**

- Business workflows
- Collaboration tasks
- Guided Procedures

**Processes Types**

- **Human Interaction**
  - Collaborative Processes
  - Ad Hoc Processes

- **Dynamic Processes**

- **Stable Processes**
Centralized vs. Decentralized Process Control

“We need to create flexible, robust and highly scalable standardized processes”

Central IT

“We need to supplement the companies core processes with our own departmental procedures.”

Business Department

“I want to delegate some of my tasks to colleagues, and track their progress.”

Individual
We need to supplement the company's core processes with our own departmental procedures.

Central IT needs to create flexible, robust, and highly scalable standardized processes.

I want to delegate some of my tasks to colleagues and track their progress.

Centralized vs. Decentralized Process Control

SAP NetWeaver™
- Unbounded Processes
- Embedded Processes
- Programmed Processes

Central IT

SAP NetWeaver™
- Guided Procedures
- Collaboration Room

Business Department

SAP NetWeaver™
- Collaboration Tasks

Individual

"track their progress."
### Guidelines for Interactive Forms and processes – when to use what tool...

<table>
<thead>
<tr>
<th>Use GP for interactive forms when....</th>
<th>Use BWF for interactive forms when...</th>
</tr>
</thead>
<tbody>
<tr>
<td>You want a simple offline scenario and you have no development resources available to you.</td>
<td>Users normally work online and want to process the forms via their Universal Worklist.</td>
</tr>
<tr>
<td>Your users normally will process the forms without connection to the system.</td>
<td>You are already familiar with Business Workflow.</td>
</tr>
<tr>
<td>When the process should email forms and wait for a reply, or when a form filled in offline should initiate a process.</td>
<td>You want to take existing workflow functions and render them in a form rather than in the current UI.</td>
</tr>
<tr>
<td>When the form is involved in a process that accesses several backend systems. For example, the form is used in CRM and ERP and SRM and various people will interact with the various systems throughout the process.</td>
<td>You have developer resources to assist with emailing out forms for offline usage and creating Web Dynpros for form rendering online.</td>
</tr>
<tr>
<td>The process requires has strict reporting requirements on form approval.</td>
<td></td>
</tr>
</tbody>
</table>

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Overview

Forms in SAP Business Workflow

Forms in Guided Procedures

Summary and Appendices
Forms in SAP Business Workflow

Overview of SAP Business Workflow

Universal Worklist Basics

SAP Interactive Forms Integration
automation and monitoring of business processes

providing appropriate business knowledge of how to perform business processes

active flow of information
  - bring the right information at the right time to the right people
  - distribution of work according to business rules
  - exception handling and deadline monitoring

providing metrics on business processes
  - e.g. for benchmarking and continuous process improvement
Fast-path Implementation

Workflow in SAP NetWeaver

SAP Workflows

- Standard workflows (more than 500)
- Shrink-wrapped / ‘Best Practice’
- Customizable

Customer Workflows

- Custom workflows workflow modeller
- Customizable business triggers.
- Workflow-Wizards

Comfortable workbench
AccelerateSAP
Literature
Training
User Groups
Consulting Partners
New Workflow

Click here for My workflows
Build Workflow

Activate and Test buttons

Detail (double-click)

Drag & Drop
Test-Execute Workflow in Business Workplace

1. Test Workflow
2. Business Workplace
3. Inbox
4. Create Notification of Absence
Many Systems, Many Inboxes

MySAP CRM

mySAP ERP

R/3
Universal Worklist in Central SAP Enterprise Portal

MySAP CRM

ISV/Third Party

R/3

mySAP ERP

UWL items can include:
- Business Workflow
- Collaboration Tasks
- Guided Procedure Actions
- Alerts
- KM Notifications
Universal Worklist and External Task

MySAP CRM

R/3

mySAP ERP

NetWeaver Web Application Server

Task
First look at the Universal Worklist

UWL is part of the standard user end role, accessed via Home - Work

Hint: To Refresh your lists of tasks, use the drop down menu near the Hide Preview link.

Process-specific views to display context-related columns or details
Typical Customer Landscape

SAP Business Suite (ERP)

SAP Business Suite (R/3…CRM)

Non-SAP Software

Local Portal

UWL

MaryLee

LeeMary

ML005
Universal Worklist and External Task

1. Workflow
- Process Control
- Deadlines
- Invoke Services
- Task Dispatching

2. Universal Worklist
- Display Tasks
- Invoke Tasks
- Generic Task Control

3. Task Definitions
- User Interface
- Context access

MySAP CRM

R/3

NetWeaver Web Application Server

Task
Launch Work Transaction

Parameterized launching for
- BSP
- iView
- URL
- Web Dynpro (Java or ABAP)
- SAP GUI (for HTML)
Launch Customization: ABAP Web Dynpro

XML Example

```
<Action name="launchWebDynProABAP" handler="SAPWebDynproABAPLauncher"/>
```
Launch Configuration: XML generated from table SWFVISU or coded by hand
Forms in SAP Business Workflow

Overview of SAP Business Workflow
Universal Worklist Basics
SAP Interactive Forms Integration
Adobe LiveCycle Designer

You are able to create the design of your form with the Adobe LiveCycle Designer.

The context elements that were bound to your form can be dragged and dropped onto the form layout.
InteractiveForm UI Element Properties

The InteractiveForm UI element has 2 properties that are valid for InteractiveForms.

- enabled – this property must be checked off if the form you are creating is to be Interactive!

- readOnly – set if you want an Interactive Form to become read only.

- onSubmit – if you have a submit button on the form, this event must be assigned an action/event handler.
Workflow Definition

Step 1 → Step 2

Step 3a

Step 3b

Step 4

Workflow runtime

Workflow Item

Workflow Container (global)

Work Item

Work item Container (local)
Accessing Process Data in a Task

Workflow (modeling/customizing)  Your task (program)

1. Automatic

2. Automatic

3. Automatic

4. Code

5. Automatic

Launch Handler

Workflow Container

Work item Container

Work item Container

Work item Container

UWL

Your task
Accessing the Work Item Container

- Every work item has a unique work item ID
- This is passed to the work item execution service via the UWL

```plaintext
workflowrawdata = wd_context->get_child_node('WORKFLOWRAWDATA').

CALL METHOD WORKFLOWRAWDATA->GET_ATTRIBUTE
  EXPORTING
    NAME   = 'WI_ID'
  IMPORTING
    VALUE  = wi_id .
```
Reading the Work Item Container

- The work item container is updated
- The work item is set to completed (and to ‘confirmed’ if this is required).
- This is typically performed in the Web Dynpro start method.

* Write the approved flag the workflow.
CALL FUNCTION 'SAP_WAPI_READ_CONTAINER'
  EXPORTING
    WORKITEM_ID = WI_ID
  IMPORTING
    RETURN_CODE = rc
  TABLES
    SIMPLE_CONTAINER = l_cont.
The work item container is updated
- The work item is set to completed (and to ‘confirmed’ if this is required).
- This is typically performed in the Web Dynpro submit method.

* Set the approved flag the workflow.

* Set the workitem completed and write results

CALL FUNCTION 'SAP_WAPI_WORKITEM_COMPLETE'
  EXPORTING
    WORKITEM_ID   = wi_id
  TABLES
    SIMPLE_CONTAINER   = l_cont.
SAP Web Dynpro uses principles of MVC paradigm

- Controller handle the user input and steers the application
- Views define the layout
- Model holds and provide the business logic
Web Dynpro Plugs and Navigation

Window

View

View Controller

Outbound Plug

Update Workflow

Create Action

Your vacation has been approved.

* Set the attribute ATTR_WI with the value of the parameter:
\[ \text{lo_node.get_attribute(value = WI_ID, name = 'WI')} \]

\[ \_wi_id = \text{WI_ID} \]

* Read the work item container:
\[ \text{CALL FUNCTION 'SAP_WAP1_READ_CONTAINER'} \]

\[ \text{EXPORTING} \]

\[ \text{WORKITEM_ID} = \_wi_id \]
Composite Applications are user centric applications supporting highly collaborative and dynamic business processes which span beyond functional, system, and organizational boundaries.

End-user characteristics

- Rich user experience
- Process context and visibility
- Integrated multisource content
- Enterprisewide collaboration
- High flexibility
Composite Applications make use of data and functions provided as services by platforms and applications, combining these into user-centric processes and views, supported by own business logic and specific user interfaces.

Technical characteristics

- Usage- and process-centric
- Based on services
- Loosely coupled to backend systems
- Abstracting from backend systems
- Dependent on service enabling
Guided Procedures and Composite Applications

Business Processes (Composites)
UI Building Blocks
Services

Service Development
Service Composition
Business Logic

Services
mySAP CRM
SAP NW BI
mySAP ERP

Services

<<Step>> Request Appointment
<<Step>> Find Patient
Patient Exists?
Yes
No
<<Step>> Create Appointment
<<Step>> Notify
<<Step>> Create Patient

Role 1
Role 2
Workcenter

Composite Process

Actions

User Interface

Name
Title
Check

The best-run businesses run SAP™
Guided Procedures enables fast and easy implementation of collaborative user-centric business processes across heterogeneous environments by seamlessly integrating existing and new backend system transactions, services and applications into the business process context.
Process Building Blocks

Reusable Components

Process Instance
- Process Template
- Phase
- Block
- Phase
- Block
- Phase
- Block
- ...  
- Step
- Action
- Step
- Action
- n-Steps
- Block
- ...  
- ...  
- ...  

Runtime
- Design Time

Callable Objects

VC UIs
- Adobe Forms
- Web Services
- CAF Services
- ...
Components of Guided Procedures

Guided Procedures are composed of...

Blocks:
*Blocks are the structural units that build a process in Guided Procedures. They are re-usable and may contain actions, nested blocks, or processes. Items in a block can be executed sequentially, in parallel, in a loop, or let the user choose between several alternatives.*

Actions:
*Actions are executable units that define a single step when implemented in a process template. Each action can refer to either one or two callable objects – one for execution, and an optional one for display. Attaching a callable object to an action is a prerequisite for using it in a process template.*

Callable Objects:
*A callable object is an object that introduces an application or service into the Guided Procedures framework. Callable objects manage the invocation of the external service and enable its use within GP processes. In other words, callable objects are the units of execution in guided procedures.*
Designing a Process

- GP Process
  - Phase 1
    - Step 1
    - Step 2
    - Step 3
    - Step 4
    - Step 5
    - Step 6
  - Phase 2
  - Phase 3

Legend:
- □ Process template
- ▉ Block
- □ Action

SEQUENTIAL
PARALLEL
LCOP
AD-HOC
ALTERNATIVES
Top-down vs. Bottom-up Design

Process Model

- a) Create a process template
- b) Create block(s)
- c) Create action(s)
- d) Create callable object(s)

- d) Create a process template and insert the block(s)
- c) Create block(s) and insert the action(s)
- b) Create actions(s) and insert the callable object(s)
- a) Create callable objects(s)
The GP Design Time Environment

The Gallery...

- Filters
- Content Management
- Actions (contextual navigation panel)
- Objects
- Object Properties
- Folders
- GP Content
Designing a Process

Create Process Template: Basic Data

Define Process Flow

Consolidate Parameters

Consolidate Roles

Define Due Dates

Define Built-in Roles

Grant Permissions

Configure Process Control Items

Grant View Permissions

Add Attachments

Define Info Callable Objects

Add Interactive Forms

Select Views

Configure Process Instantiation

Activate Process

Maintain Role Defaults

Required

Optional
Process Role Configuration

- Which portal roles are assigned to which tasks?
- Can individual task roles be consolidated to single roles?
- When is user assignment to a role performed?
- Are their default users for particular tasks?
Designing a Block

Create Block: Basic Data

Create Block: Basic Data

Configure Exception Handling

Consolidate Roles

Grant View Permissions

Consolidate parameters

Add Info to Callable Objects

Add Attachments

Grant Permissions

Activate Block

Required

Optional
### Block Types

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sequential</strong></td>
<td>The items in the block are executed sequentially in the order that you have defined.</td>
</tr>
<tr>
<td><strong>Parallel</strong></td>
<td>The items in the block flow are executed in parallel.</td>
</tr>
<tr>
<td><strong>Parallel Dynamic</strong></td>
<td>Multiple processors can be assigned to execute the items in this block type. For example, as a part of such a block, a survey can be completed by multiple users and the results sent to the system for further processing. The items are executed in parallel.</td>
</tr>
<tr>
<td><strong>Precondition Loop</strong></td>
<td>The items in the block are executed in a loop, and the loop criteria is checked before the execution of the first item.</td>
</tr>
<tr>
<td><strong>Postcondition Loop</strong></td>
<td>The items in the block are executed in a loop, but the loop criteria is checked after the last item has been executed. This guarantees that the items in the block will be executed at least once.</td>
</tr>
<tr>
<td><strong>Alternatives</strong></td>
<td>At runtime the user chooses one of the available alternatives and his or her decision defines which item(s) is(are) executed.</td>
</tr>
</tbody>
</table>
Designing an Action

Create Action: Basic Data

Attach Callable Objects

- Consolidate Parameters
- Define Ad-Hoc Items
- Add Info Callable Objects
- Add Attachments
- Grant Permissions
- Define Due Date Handling

Activate Action

Required

Optional
Types of Callable Objects

Guided Procedures provides a set of callable object implementations that you can use by simply configuring them in the GP design time. These predefined callable objects are of two main types:

- **Web Dynpro Component (GP Interface)**
- **Java Callable Object for Background Execution**

The predefined callable objects are available in the list of callable object categories that is displayed in the first step of the procedure for creating callable objects. To use a predefined object, you just select it as a type from the relevant category.

---

**Categories**
- BI Application
- External Service
- Web Dynpro Application
- ABAP Web Dynpro Application
- Composite Application Web Dynpro Component
- Composite Application Service
- Interactive Form
- SAP Transaction
- Portal iView or Page
- Web Dynpro Form
- Web Dynpro Component (GP Interface)
- Content Package
- KM Resource
- Background Execution
- Business Server Page (BSP)
- Decision Dialog
- Web Pages
- Data Forms
- Process Control
- User Management
- Miscellaneous

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THE BEST-RUN BUSINESSES RUN SAP™
Designing a Callable Object

Create Callable Object: Basic Data → Define Object → Define Input → Define Output → Set Configuration → Grant Permissions → Test Callable Object → Activate Callable Object

- Required
- Optional
Design Time Tools

Toggle to the edit mode for the selected object, or for the selected object and for all levels in the hierarchy below and above it.

Toggle to the display mode for the selected object, or for the selected object and for all levels in the hierarchy below and above it.

Save a single object or all objects.

Insert an appropriate existing object, or create and insert a new object, under the selected level in the hierarchy. For example, you can insert a block in a process, an action or a block in another block, and a callable object in an action. The Item drop-down is sensitive to the hierarchical context.

Removes the selected object from the hierarchy.

Revert to the last saved version.

Activate the changes to your process and the objects within it.
Work in the properties frame to change or configure objects in the process flow.
Click on the square next to an object to select it and work with it.

To insert either a new or existing object, select the correct place in the flow, make sure the appropriate object type shows in the Item drop-down, and click either the Insert or the Create New icon.
Creating Callable Objects

Create callable object

1. Basic Data
2. Define Object
3. Set Configuration
4. Finish

Next  Cancel

Type
- BI Application
- External Service
- Web Dynpro Application
- ABAP Web Dynpro Application
- Composite Application Web Dynpro Component
- Composite Application Service
- Interactive Form
- SAP Transaction
- Portal 1View or Page
- Web Dynpro Form
- Web Dynpro Component (GP Interface)
- Content Package
- KM Resource
- Background Execution
- Business Server Page (BSP)
- Decision Dialog
- Web Pages
- Data Forms
- Process Control
- User Management
- Miscellaneous

Name: CO_StartPageXX
Description: Callable Object for Start page for Job Application Process XX
Original Language: English
Folder: GroupXX Choose...
Mapping parameters allows the outputs of one action to be used as inputs for another. For our process, the data form outputs become decision step inputs.
Launch the Process

Initiate Process

1. Select Template
2. Edit Roles
3. Edit Basic Data

Initiator: * Medaille, Paul
Process Name: * JobApplicationProcessXX
Navigation in the Process Instance

- Portal navigation
- Process title bar (with Phase Navigator)
- View selection
- Views
- Components
- Contextual navigation panel
- Navigation area
- Application area
Your Exercise Scenario

Top-Down Modeling

1. Create Business Partner Process
2. Create action(s) and insert the callable object(s)
3. Create form to start the process

Business Partner Process

Create business partner
Read business partner
Display business partner in Web Dynpro form

ERP: M10
BAPI: Create BP
BAPI: Display BP
Parameter mapping between the actions

<table>
<thead>
<tr>
<th>Action 1</th>
<th>Action 2</th>
<th>Action 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create BP</td>
<td>GetBPDetail</td>
<td>Display BP</td>
</tr>
</tbody>
</table>

- **Business Partner Number**
- **FirstName**
- **LastName**
- **SearchTerm**
- **Central Data Person Firstname**
- **Central Data Lastname**
- **SearchTerm1**
- **FirstName**
- **LastName**
- **SearchBy**
Understanding Guided Procedures

Forms in Guided Procedures
Forms in Guided Procedures

Understanding Guided Procedures

Integrating Forms in Guided Procedures
Adobe LifeCycle Designer

Palettes

Layout Editor
Button properties in the Submit tab

Control Type – type **Submit**
Submit Format – format **XML Data (XML)**
Submit to URL `%com.sap.caf.gp.if.PostProcessorUrl%`
Runtime from the End User Perspective

1. Open PDF form
2. Fill in data field
3. Validation
   ✔ Business Partner format
   ✔ Required Fields Entered
4. Click Submit
5. Success Message

Update Business Partner

Business Partner
First Name
Last Name
Search Term

Please complete all fields on form and then click on the Submit button

Submit

SAP Guided Procedures - Success

Your form input was successfully received by the Interactive Forms processor

Thank you

HTTP
Open the gallery, and choose *Create Callable Object* from the contextual panel.

From the *Type* list, select *Form → Interactive Form* and enter the required basic data.
Specify the XDP Template file created with the Adobe LiveCycle software.
Interactive Form Callable Object: Define Input via Prefilling

You can define Prefilling Service

Form template input parameters are parsed and displayed as *read-only*
Interactive Form Callable Object: Define Form Validation

Service mapping Form

1. Select a validation service
2. Define input for service co_BuPaCheck
3. Define error handling for form CO_BuPaChangeRequest_GRP

Error Handling
Enable Use in Guided Procedures

- Create an Offline Interactive Form and send it by e-mail
- Create an Interactive Form and Complete Process Step

Enable Use as Standalone Interactive Form

- Send to Processor via E-Mail
- Start a Process on Completion
- Define Standalone Form Timeout
- Provide an Impersonalized Interactive Form
Enable the use of the interactive form within a GP process. The form is exposed as a callable object that is executed in background mode. The timeout of the form is handled automatically by the GP framework.
The form is generated from the form template, and is sent as an offline interactive form by e-mail.
The interactive form is generated from the form template, and stored in the process context.

Optionally, you can configure the form to be sent by e-mail to the processor. To do that, enable option Send to Processor by E-Mail. You can choose the template for the e-mail using “Choose Template”.
Enable the use of an interactive form independently of a GP process. Standalone forms can be processed offline, or accessed by an URL, and are either personalized or impersonalized.
The processor will receive an email upon successful post-processing of the interactive form.

You can choose the template for the e-mail using “Choose Template”.
Select a process template that will be initiated upon successful post-processing of the interactive form.
Define timeout for the standalone interactive form. If the form is not returned to the system for post-processing before the timeout expires, it gets invalidated.
Create an impersonalized form that is not associated with a particular user session, and may be submitted to the system multiple times.

Note: You cannot use Impersonalized Forms as a step in a process.
THANK YOU FOR YOUR ATTENTION!
Please complete your session evaluation.

Be courteous — deposit your trash, and do not take the handouts for the following session.

Thank You !
Appendix: Tasks for the GP Administrator

Screenshots from Web Dynpro workflow
Impersonalized forms in the Administration workset

- Impersonalized form templates created in GP design time appear under *Impersonalized Forms* in the *Administration* workset.
You can edit the service `caf/eu/gp/model` (GP configuration parameters) using the Visual Administrator.
There choose `Cluster → Server → caf/eu/gp/model`. 
Configuration Tasks for SAP NetWeaver Administrator

- SLD Data Supplier service is configured to connect to a system where the Adobe Document Services (ADS) server is enabled
  - HTTP settings
  - CIM client generation setting
Configuration Tasks for SAP NetWeaver Administrator

- Web Services Security service settings for the ADS Web Service client
Appendix: Tasks for the GP Administrator

Screenshots from Web Dynpro workflow
Web Dynpro and Workflow: WI_ID Parameter

Web Dynpro Explorer: Display Interface View for ZTECHED_BEM250_00

- **Interface View**
  - APPROVEWINDOW

- **Inbound Plugs**
  - **Parameter**: WI_ID  
    - **Type**: STRING
Web Dynpro and Workflow: HANDLESTART method

Web Dynpro Builder: Change Window for ZTECHED_BEM250_00

- **Object Name**: ZTECHED_BEM250_00
- **Component Interface**: APPROVIEWWINDOW

**Properties**
- **Event Handler**: HANDLESTART
- **Parameter**:
  - **NAME EVENTS**: IMPORTING
  - **VI_ID**: IMPORTING

**Code Snippet**

```plaintext
1_vi_id = vi_id,

Read the work item container

CALL FUNCTION 'SAP_WAPI_READ_CONTAINER'

EXPORTING
  WORKITEM_ID = 1_vi_id
  RETURN_CODE = rc
  TABLES
    SIMPLE_CONTAINER = 1_cont
```

**Additional Information**

- **Window**: APPROVIEWWINDOW
- **Object activated**

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Web Web Dynpro and Workflow: HANDLESTART Code

```plaintext
METHOD HANDLESTART.

data: to_node type ref to IF_WD_CONTEXT_NODE,
    _cont type standard table of SWR_CONT,
    _cont_line type SWR_CONT,
    rc type SY-SUBRC.

l-wl_id type SWR_WL_ID,
l-object type SWR_OBJECT,
l_formabsenc TYPE swrforms.

data:
    node_workflow algorithms type ref to IF_WD_CONTEXT_NODE.
    ELEMENT_WORKFLOW_DATA type IF_WD_CONTEXT_ELEMENT,
    STILL_WFWorkflowData type IF_WD_CONTEXT_WORKFLOW_DATA.

* navigate from CONTEXT to WORKFLOWDATA via lead selection

node_workflow->workdata = wd_context->get_child_node(name = IF_APPROVED_WINDOW->mdct->workflow).

* get element via lead selection

ELement_workflow->workdata = node_workflow->workdata->get_element( ).

* hole eine Referenz auf den Knoten mit Namen aus dem Kontext

CALL METHOD WD_CONTEXT->GET_CHILD_NODE EXPORTING
INDEX = USE_LEAD_SELECTION
NAME = 'WORKFLOWDATA'.

receiving
child_node = to_node.

* Set the attribute ATT_ID with the value of the parameters WL_ID

WL_ID->set_attribute(value = vl_id, name = 'WL_ID').

l-wl_id = vl_id.

* Read the Work Item Container

CALL FUNCTION 'SP_WAIP_READ_CONTAINER' EXPORTING
WORK_ITEM_ID = l-wl_id.

* Importing RETURN_CODE = rc.

TABLES SIMPLE_CONTAINER = l_cont.

CALL METHOD WD_CONTEXT->GET_CHILD_NODE EXPORTING
INDEX = USE_LEAD_SELECTION
NAME = 'FORMABS'.

receiving
child_node = to_node.

* Read parameter

clear l_cont_line, read table l_cont with key element = 'WL_OBJECT_ID' into l_cont_line.
1_object = l_cont_line_value.
1_formabsenc-formnumber = 1_object.object.

CALL FUNCTION 'S_DIAI_GET_FORMABSENC' EXPORTING
FORMNUMBER = 1_formabsenc-formnumber

IMPORTING
FORMABSENCE = 1_formabsenc.

EXCEPTIONS
NOT_FOUND = 1.

OTHERS = 2.

set parameter
1_node_set_attribute(value = 1_formabsenc-formnumber name = 'FORMNUMBER').
1_node_set_attribute(value = 1_formabsenc-firstday name = 'FIRSTDAY').
1_node_set_attribute(value = 1_formabsenc-lastday name = 'LASTDAY').
1_node_set_attribute(value = 1_formabsenc-procstatus name = 'PROCSTATE').
```

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Web Dynpro and Workflow: PDF object
Web Dynpro and Workflow: LiveCycle Designer

From DDIC procsate
Web Dynpro and Workflow: SentToWorkflow

Web Dynpro Explorer: Change View for ZTECHED_BEM250_00

Event Handler: ONACTIONSENTOWORKFLOW

CODE:

```plaintext
  l_cont_line-element = 'W3_Result';
  l_cont_line-value = Item_Procstat;
  append l_cont_line to l_cont.

  // Set the workitem to complete and pass it the container of results.
  CALL FUNCTION 'SAP_WAPI_WORKITEM_COMPLETE'.
  EXPORTING
      WORKITEM_ID          = l_wi_id
      return_code          = rc
      tables
          SIMPLE_CONTAINER = l_cont
          message_lines    = l_message_lines.
  IF Item_Procstat = 'X'.
      wd_this->Fire_Approve_Flag( ).
```

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Web Dynpro and Workflow: SendToWorkflow code