AB2002 - Business Workflow - v1.0

Business Workflow

1 — PrepareMe

2 — TellMe

3 — ShowMe

4 — LetMe

5 — HelpMe

Business Workflow

1

2

3

4

5

PrepareMe

TellMe

ShowMe

LetMe

HelpMe
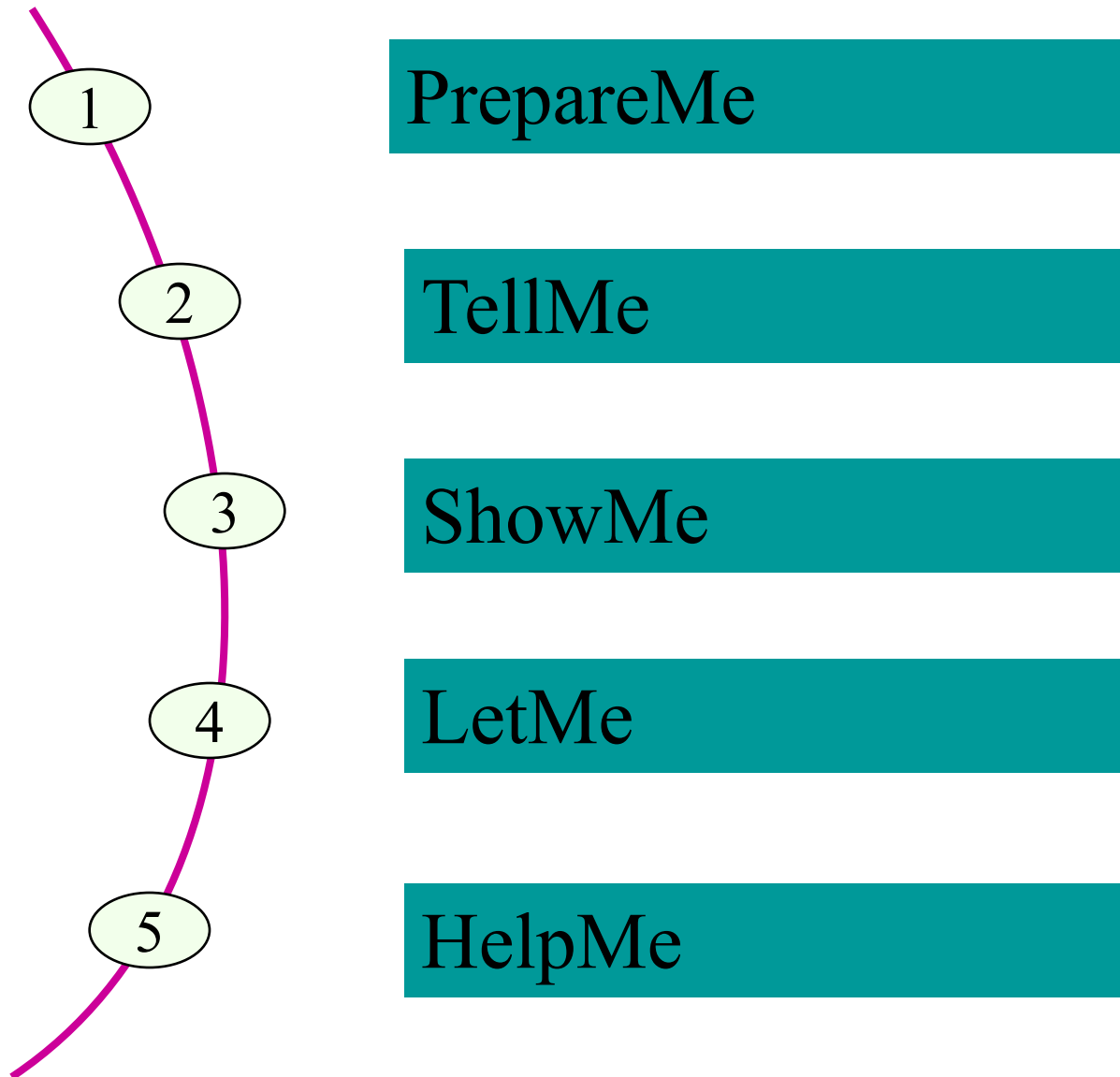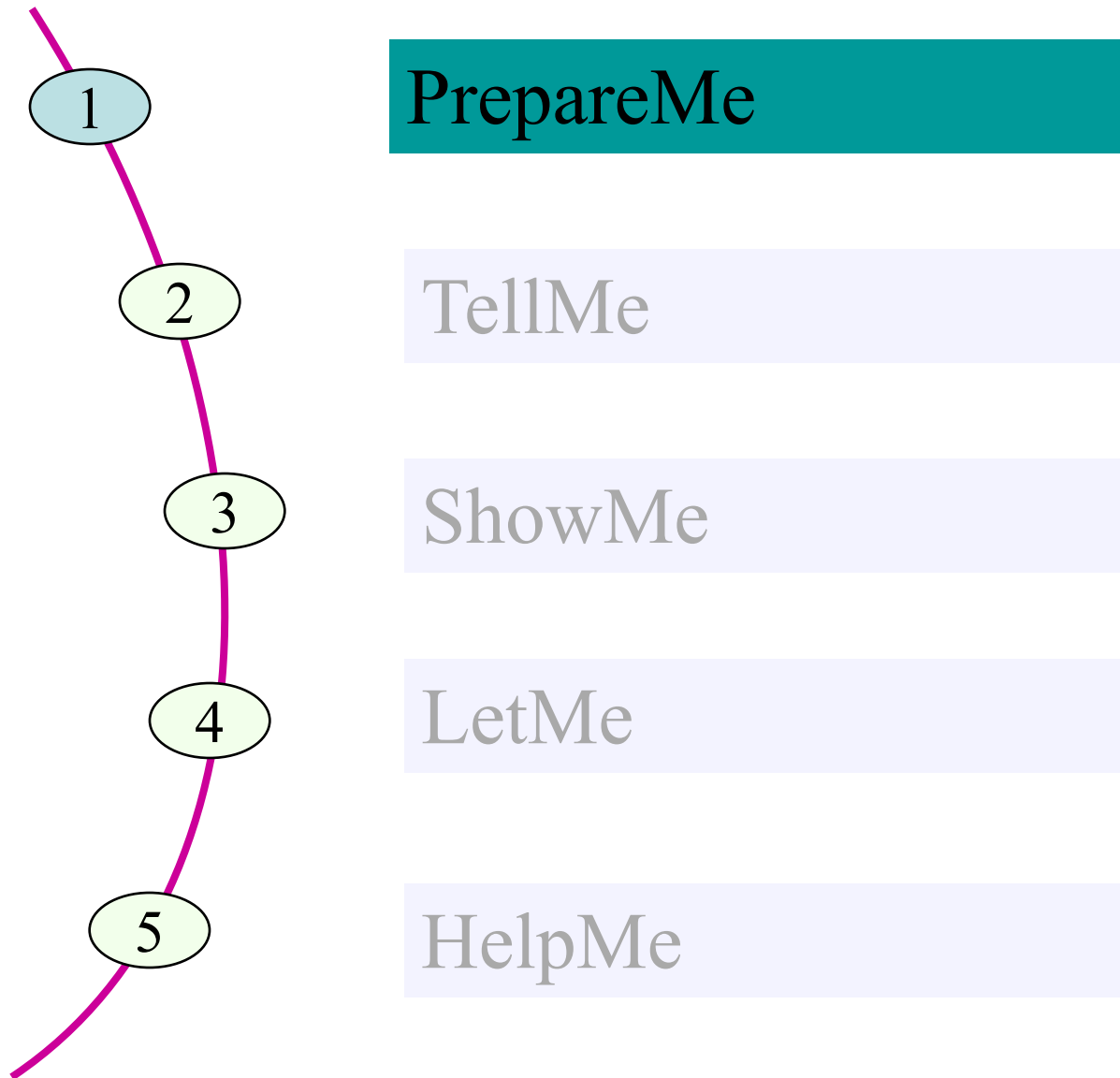
Workflow Definition

- SAP Business Workflow® is a **cross-application tool** that makes it possible to integrate business **tasks/processes** between applications.

- This tool was introduced in R/3 Release 3.0A, and received a substantial facelift in the Enjoy Release, 4.6A, which warranted the new name Workflow Builder.

Need for Workflow

- A business process can consist of several steps. Historically, the tasks have been coordinated manually or by some informal means of communication (sticky note, e-mail, shouting, and so on).

- The common problem in these approaches is :
    - Inefficiency
    - Each lacks a way to trace where a task is
    - Who executed (or is executing it),
    - How much time it required.

- In contrast, the workflow **ensures that the right work is sent to right person at the right time in the right sequence with the right information**.

Why SAP Workflow?

- Tool for the automization of **business processes**
- Not tied up to any particular application
- Operates uniformly **across applications**
- Coordinate all participating tasks
- Provide users with **active support**

Workflow Boundaries

- The component uses the **existing transactions** & **function modules**. The functionality and operability of the existing transactions and function modules are neither changed nor restricted by the workflow control.

- SAP Business Workflow does not intervene in the programmed processes within a transaction

- The component makes the R/3 System easier to operate, which is particularly useful for ***inexperienced or occasional users.***

Business Workflow

1 — PrepareMe

2 — **TellMe**

3 — ShowMe

4 — LetMe

5 — HelpMe
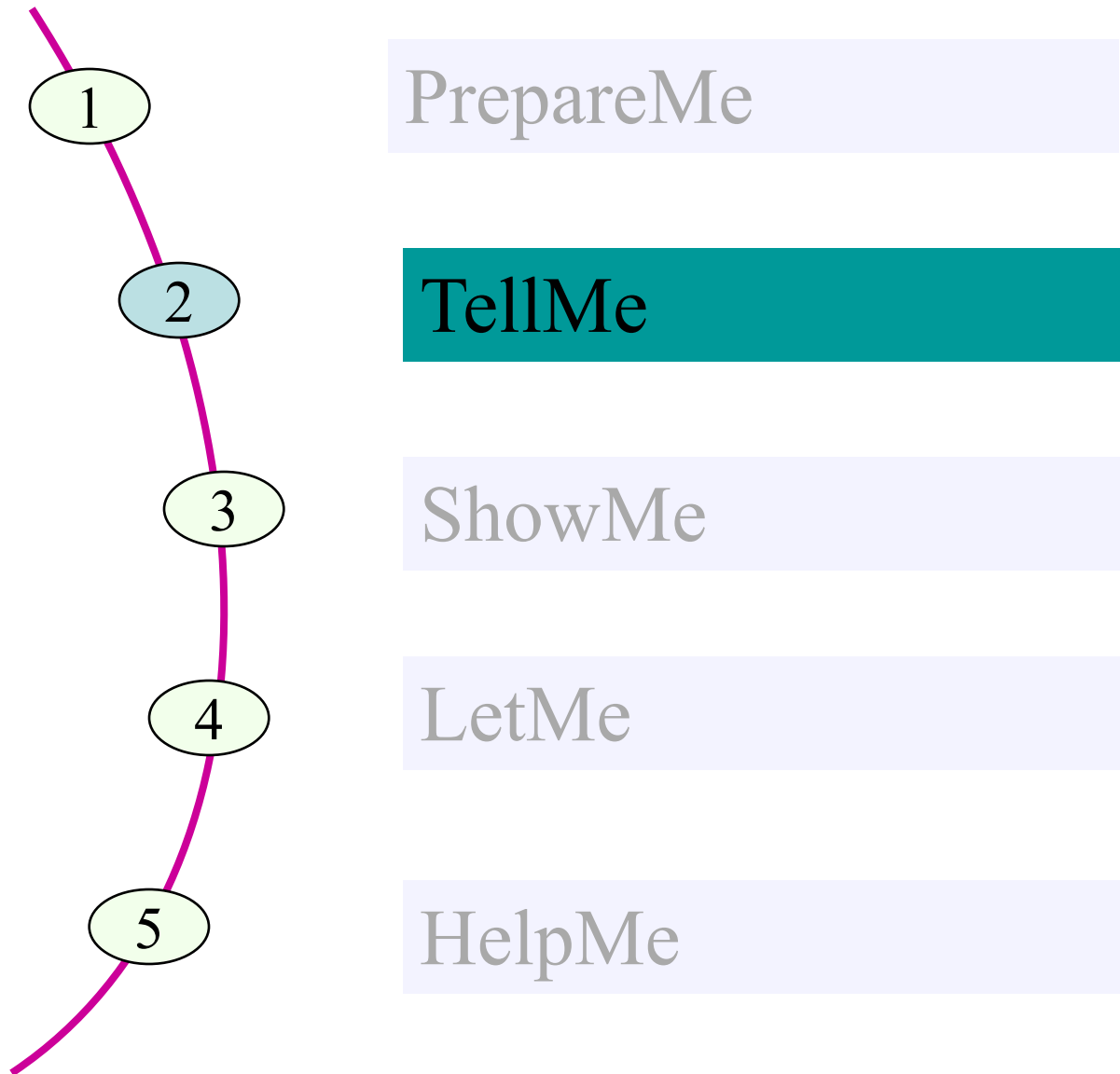
Workflow

- A workflow consists of a sequence of steps, which are processed either by people or automatically by the system.

Workflow Builder

- Modeling tool for creating a workflow definition.
  - Creating and process workflow definition
  - Test and activate a workflow definition

Workflow Definition

- Technical description of a workflow
- Workflow definition is made up of individual steps and events with one step and one or more events making up one unit. These units can be arranged in sequence or in parallel.
- The workflow definition is the set of rules that determine the path that the process takes. For example, how a purchase requisition is processed, from the initial request to the creation of the purchase order

Workflow Instance

- A Workflow Instance, which is often simply referred to as the workflow, is a single workflow run. For example, the processing of a single purchase requisition for computers.

Task

- The Tasks are the steps in the process, which have to be performed either by people or automatically by the software. For example, to check for the availability of the spare computers in the company.

- During runtime a tasks is represent as a Workitem.

- Following tasks exist in the workflow context:
  - Single-step task
    - Activity in which an object method is executed on a specific object
  - Multi-step task (Workflow)
    - Activity whose description includes reference to a workflow definition

Work Item

- A Work item is the task instance that is performed as a single workflow step. For example, check that there are no spare computers available in the company.

Agent

- Agents are the people who process the tasks (via the work items). For example, requisitioner and a member of the purchasing department.

- A system user who participates actively in SAP Business Workflow and executes work items

- Types of agents available
  - Possible agent
    - User who is organizationally authorized to start a task and execute the associated work item
  - Responsible agent
    - User assigned locally to a step in the workflow definition
  - Excluded agent
    - User who is excluded from processing a work item

Container

- Container is the place where all the data used in the workflow is collected.

- Basic common data structure of the various definition.

- Containers have container elements for holding the following:
  - Values (Constants)
  - Structure
  - Object references
  - Complex types

- The container elements can be used to control the execution of work items and workflows.

- Types of container:
  - Workflow container
  - Task Container
  - Event Container
  - Method Container
  - Rule Container

Binding

- Binding is the set of rules that define which data is passed to which part of the process.

- Assignment of values to a container element at runtime.

- Binding definition:
  - Specification of assignment rules describing the assignment of data to a container element or the exchange of data between two container element.

Business Object Builder

- Tool for creating and processing business object types.

- Can be used to access the definition of an object type

- Subtypes can be created for existing Business object type

Object Type

- Business objects integrate the data and functions of business applications into your workflows.

- They enable workflow engine to communicate with business applications with all the flexibility and robustness required for a production environment

Object Type

- Description of data (objects) in the system created at definition time in the Business Object Builder

- Object types are described and implemented by specifying the following components:
  - Basic data
  - Key fields
  - Attributes
  - Methods with parameters, result and exceptions
  - Events with parameters
  - Implementation program

- The Object type must be defined before its data (Objects) can be used in the system.

Workflow project Approach

Identify the Business Processes

Does an SAP workflow already exist in the standard system

Yes

No

Use the SAP workflow

1. Create the workflow

2. Implement the workflow

3. Test the workflow
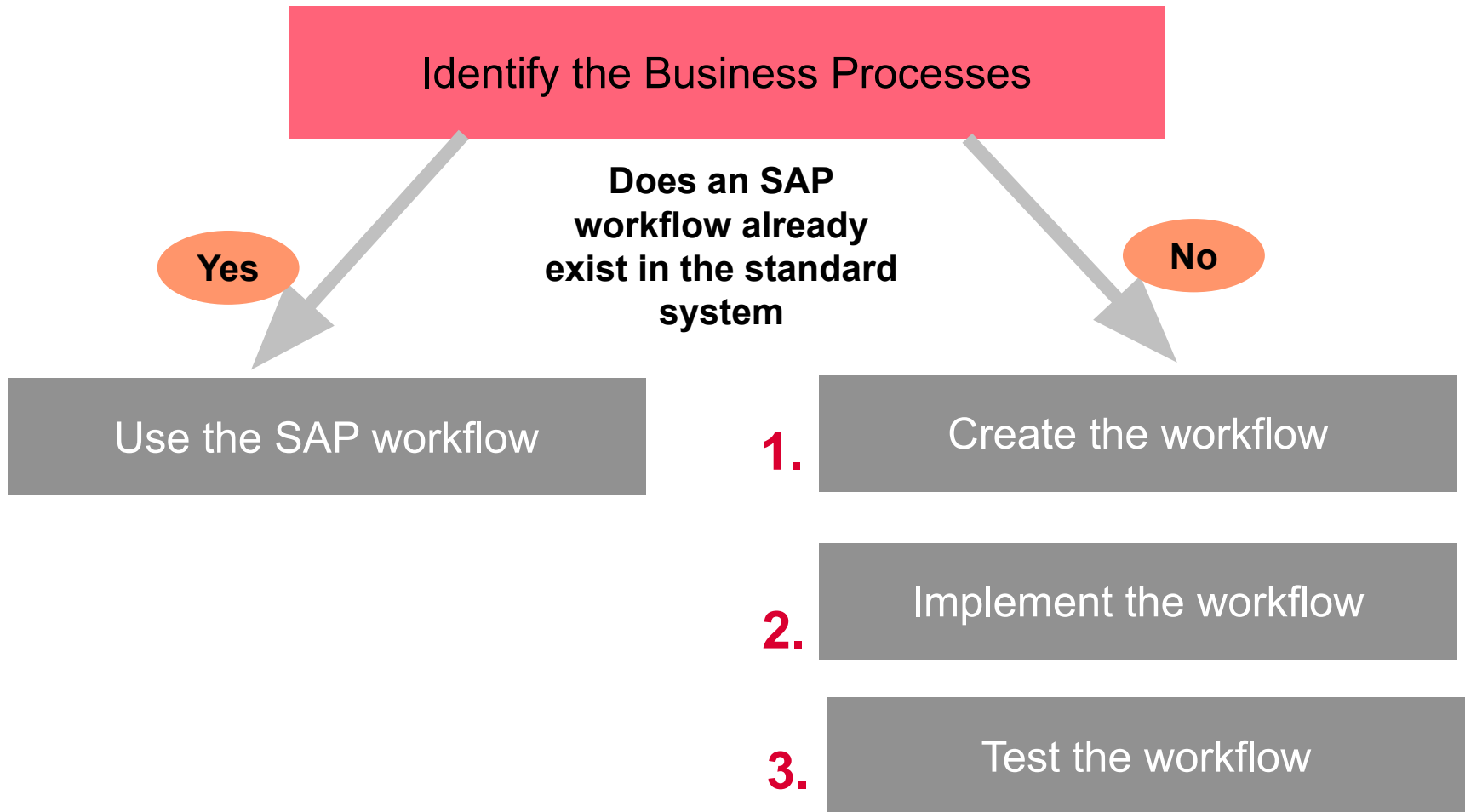
Business Workflow Overview

1 PrepareMe

2 TellMe

3 **ShowMe**

4 LetMe

5 HelpMe
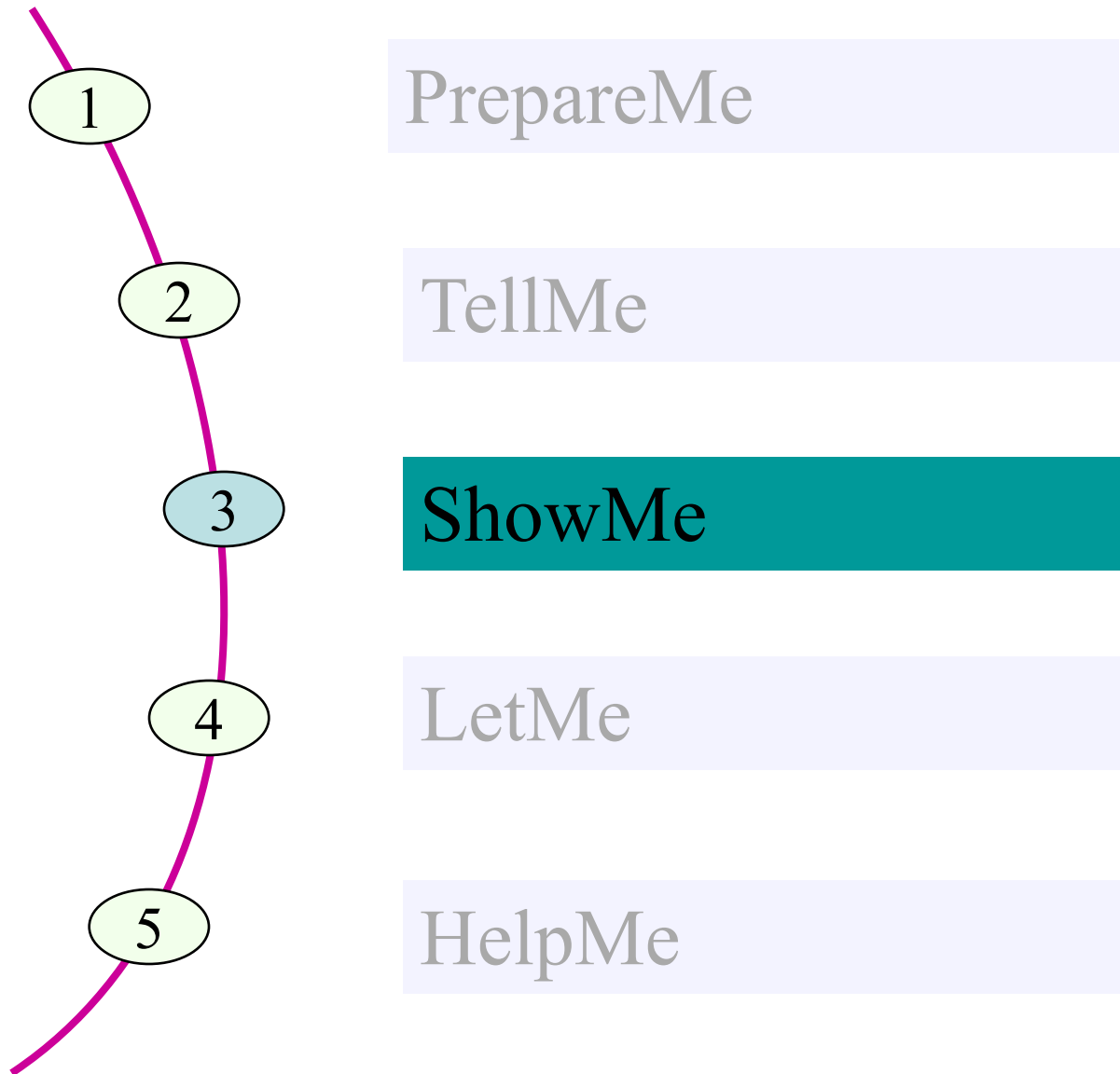
WORKFLOW ARCHITECTURE

Workflow Architecture

Organization

Who is executing the processing steps?

Role   Task

Position   Position/job   Org. unit

Processes

Which steps does the process contain

WF definition   step

Business Objects

All services are provided in the form of executable methods

Attribute   Events   Methods

Object
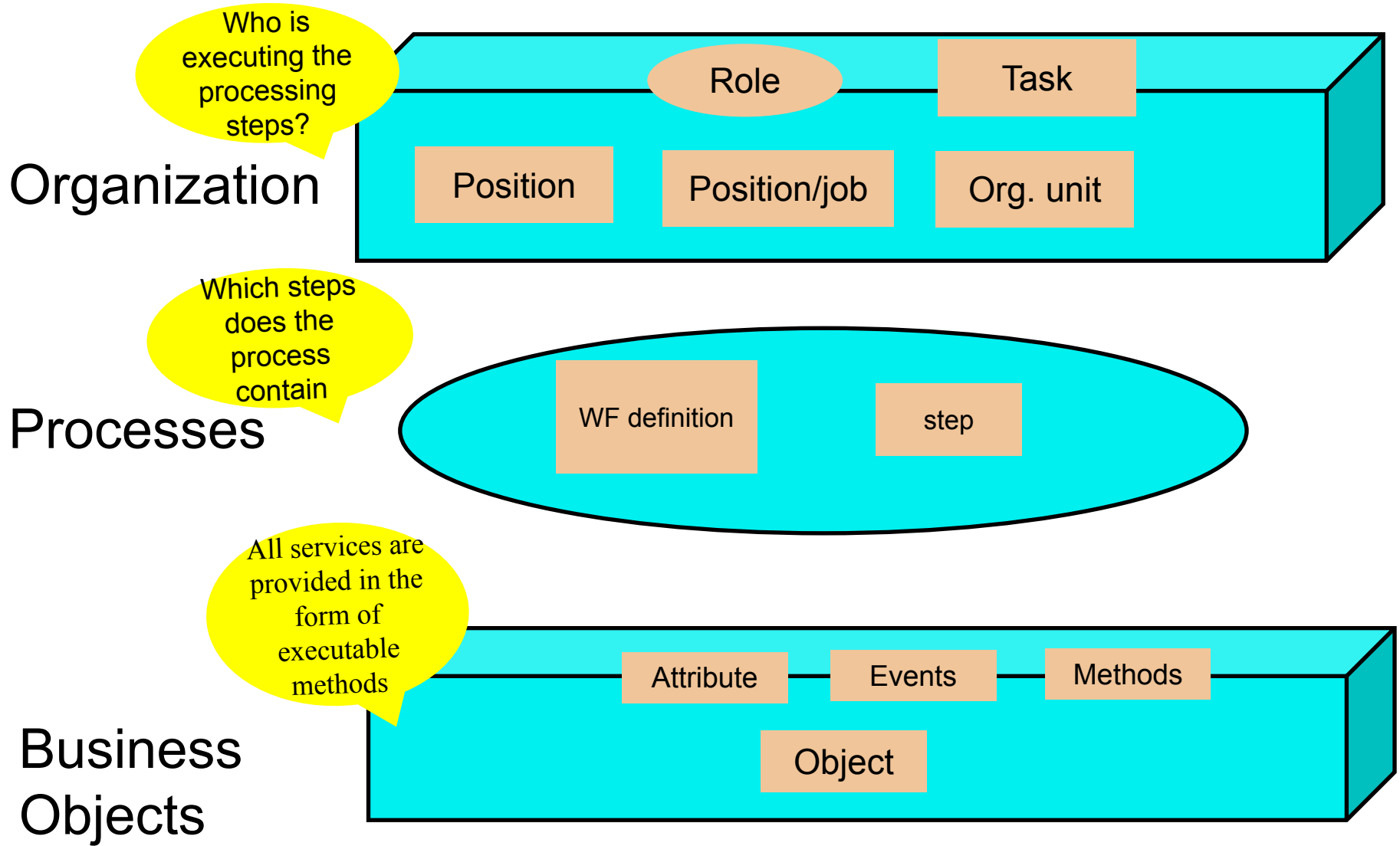
WORKFLOW CUSTOMIZING

What Auto-Customizing Does

- **The automatic workflow customizing sets up the system using defaults so that you ready to use the system as quickly as possible.**

- **The most important activities are as follows:**
  - **Maintain Active Plan Version**
    - **Plan version (with its contents) is seen by the workflow system as the only valid plan version.**
    - **All SAP Workflows supplied automatically become part of the plan version that has been selected as the active plan version**
    - **Only one of the plan versions created in the system can be active.**
  - **Configure RFC Destination**
    - **The runtime system always executes its tRFC calls via the logical destination WORKFLOW_LOCAL_XXX (XXX stands for client number)**
    - **The workflow runtime system is client dependent i.e. a single workflow instance normally executes within one client**
  - **Maintain Workflow System Administrator**
  - **Schedule Background Job for Missed Deadlines**
  - **Maintain Prefix Numbers**

Automatic Workflow Customizing: SWU3

Customizing the system is the very first step that you will take when you plan to use workflow

ORGANIZATIONAL STRUCTURE

Creating an Organizational Plan

Step 1: Create root organizational unit — Executive Board

Step 2: Additional organizational units — Production, Sales Mexico

Step 3: Create jobs — Administrative assistant

Step 4: Jobs Positions — Administrative assistant, Sales Mexico

Step 5: Assign holders

Step 6: Assign holders — Lisa Thompson

Tasks: Word processing, scheduling meetings, phone calls

© SAP AG 1999
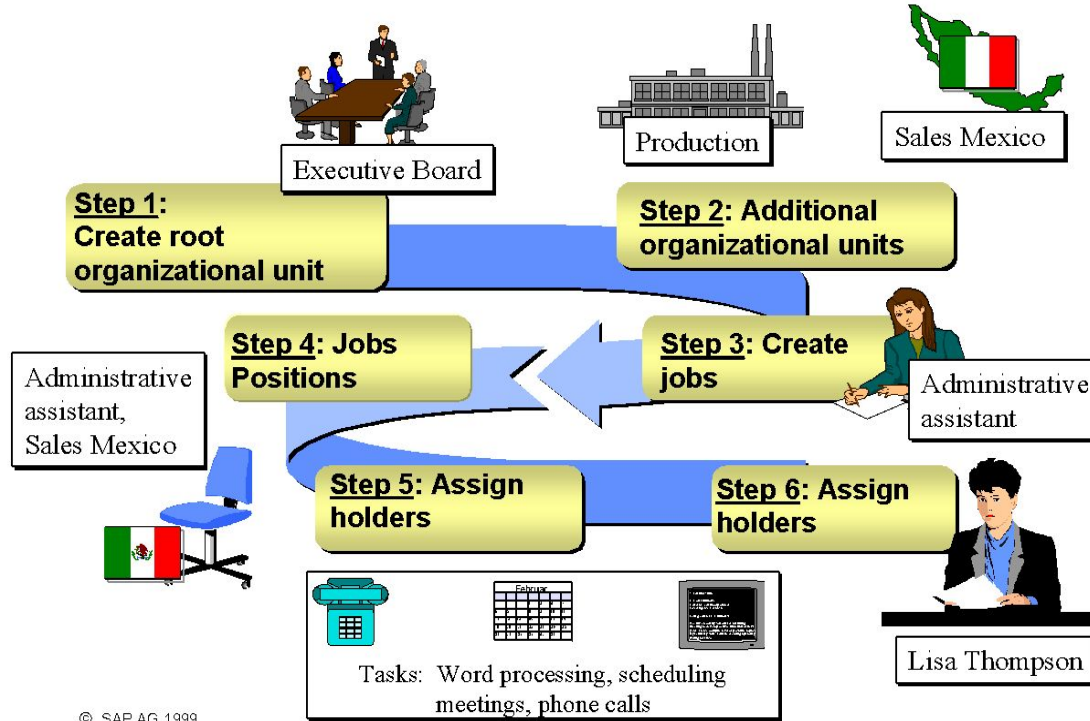
- The above diagram illustrates that the first step in Simple Maintenance is to create a root organizational unit. Once one organizational unit has been created, the organizational units below it have to be created.
- Organizational units and jobs may be created in any order but must exist before the associated positions are created.
- Jobs may exist in the job index or may be created once the model contains an organizational unit.
- Positions are created once the relevant jobs have been created in the job index.
- Tasks are assigned using jobs and positions.
- Holders are assigned to positions, not to jobs.

Assignment Workflow Tasks: Organizational Objects
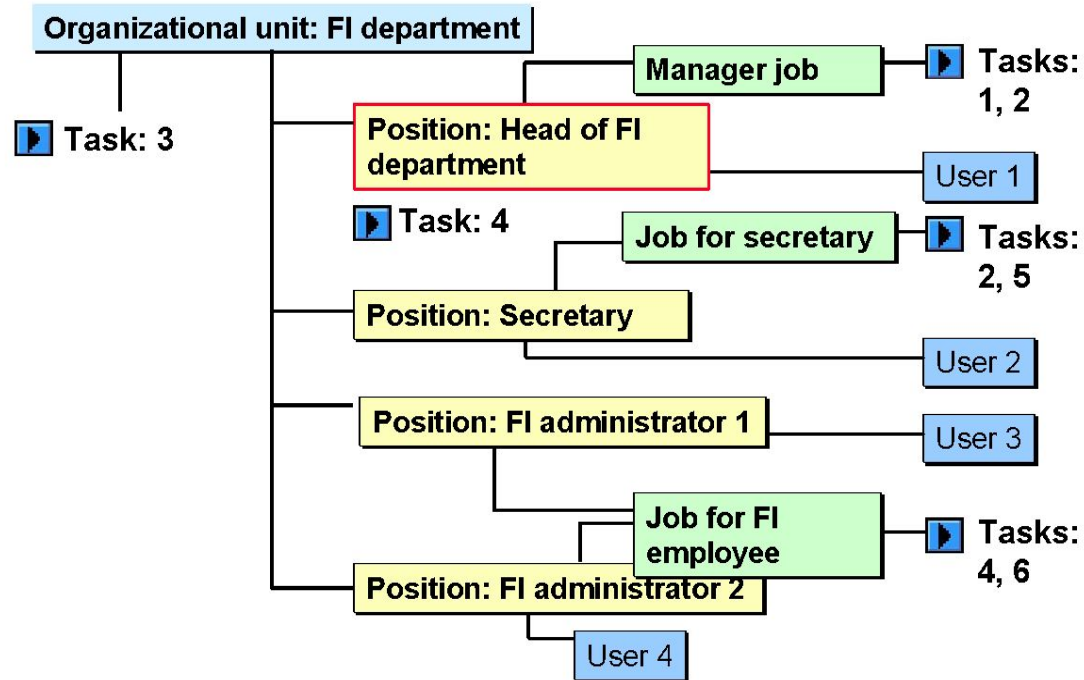
- **The relevant users receive a work item at runtime.**
  - **Task 1: User 1 (via manager job)**
  - **Task 2: User 1, user 2 (via manager job/job for secretary)**
  - **Task 3: User 1, user 2, user 3, user 4 (via organizational unit)**
  - **Task 4: User 1, user 3, user 4 (via position for head of FI department/job for FI employee)**
  - **Task 5: User 2 (via secretary job)**
  - **Task 6: User 3, user 4 (via job for FI employee)**

Create Job: PPOM

Positions

Task: Approve
vacation request

Job: Chief

Position:
Chief - Europe

Position:
Chief - East Region

Position:
Chief - West Region
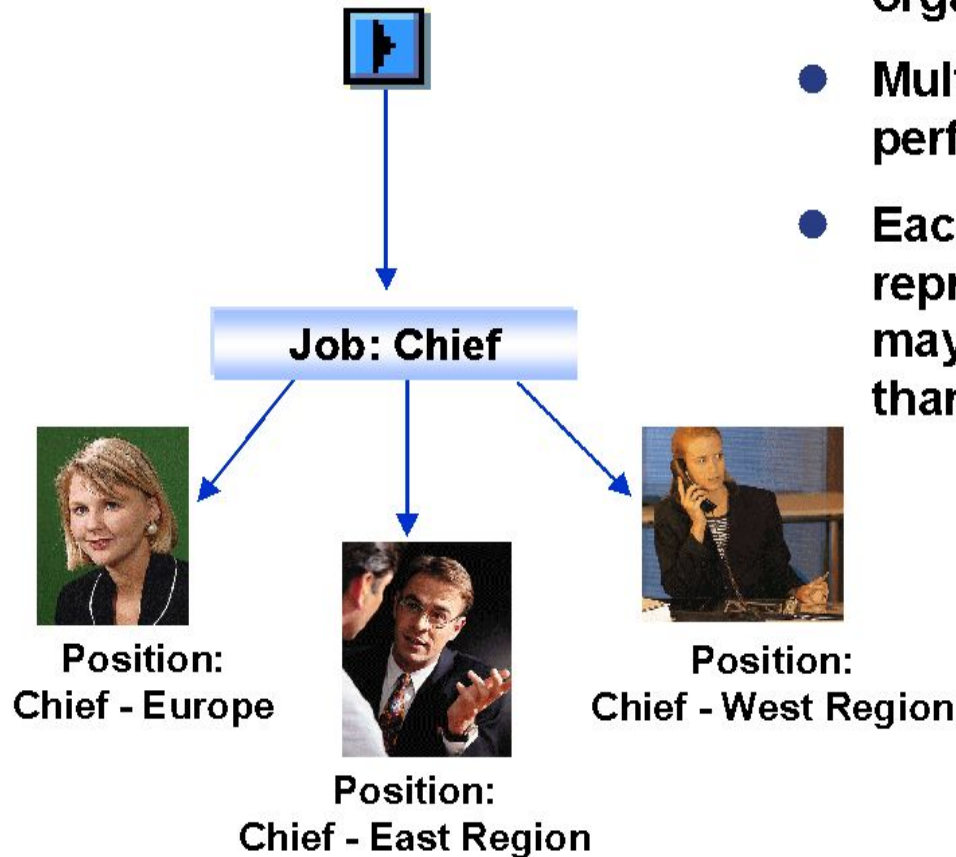
- Positions are specific to your organization.

- Multiple positions may perform similar job tasks.

- Each position typically represents one employee, but may be partially filled by more than one.

Create Position: PO13

Basic HR Definition for Workflow

You can create your organizational plan quickly using the function 'Simple Maintenance' in HR Organizational Management. You only cater for the basic objects and their relationships.
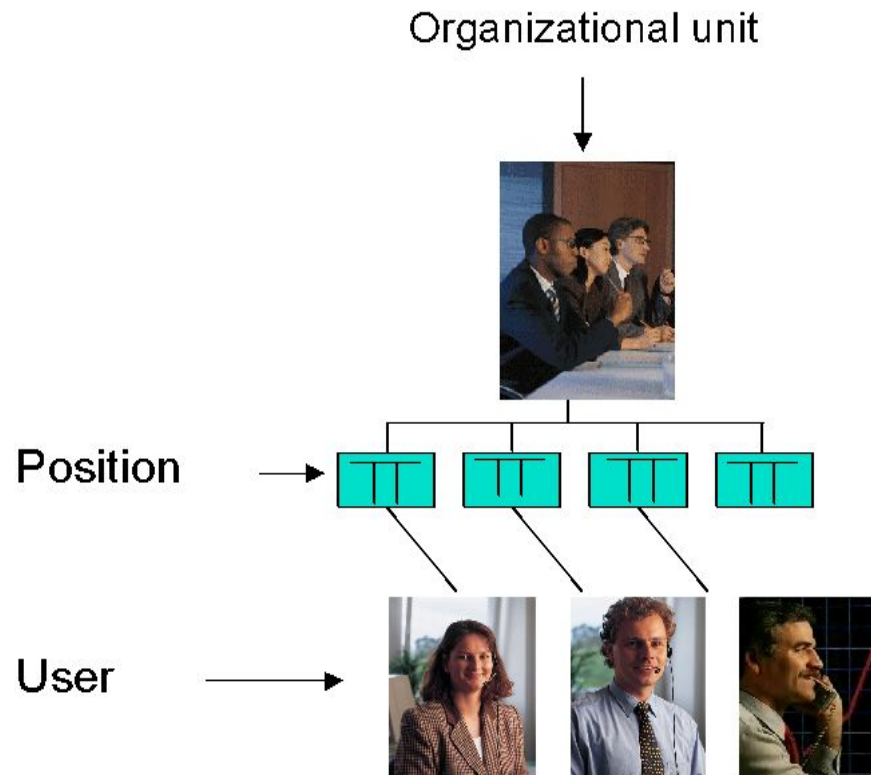
Creation of Workflow or Tasks through T-Code: PFTC

Task: Maintain

Task type: Standard task
- All types
- **Standard task**
- Customer task
- Workflow Template
- Workflow Task
- Task Group

Task

Name

Client Independent
Standard task : **TS**
Workflow Template : **WS**
Task Group : **TG**

No longer used, supported in previous versions

Client Dependent
Customer tasks : **T**
Workflow Task : **WF**

Five Questions for each part of a Business Process and how to map them in Steps/Tasks
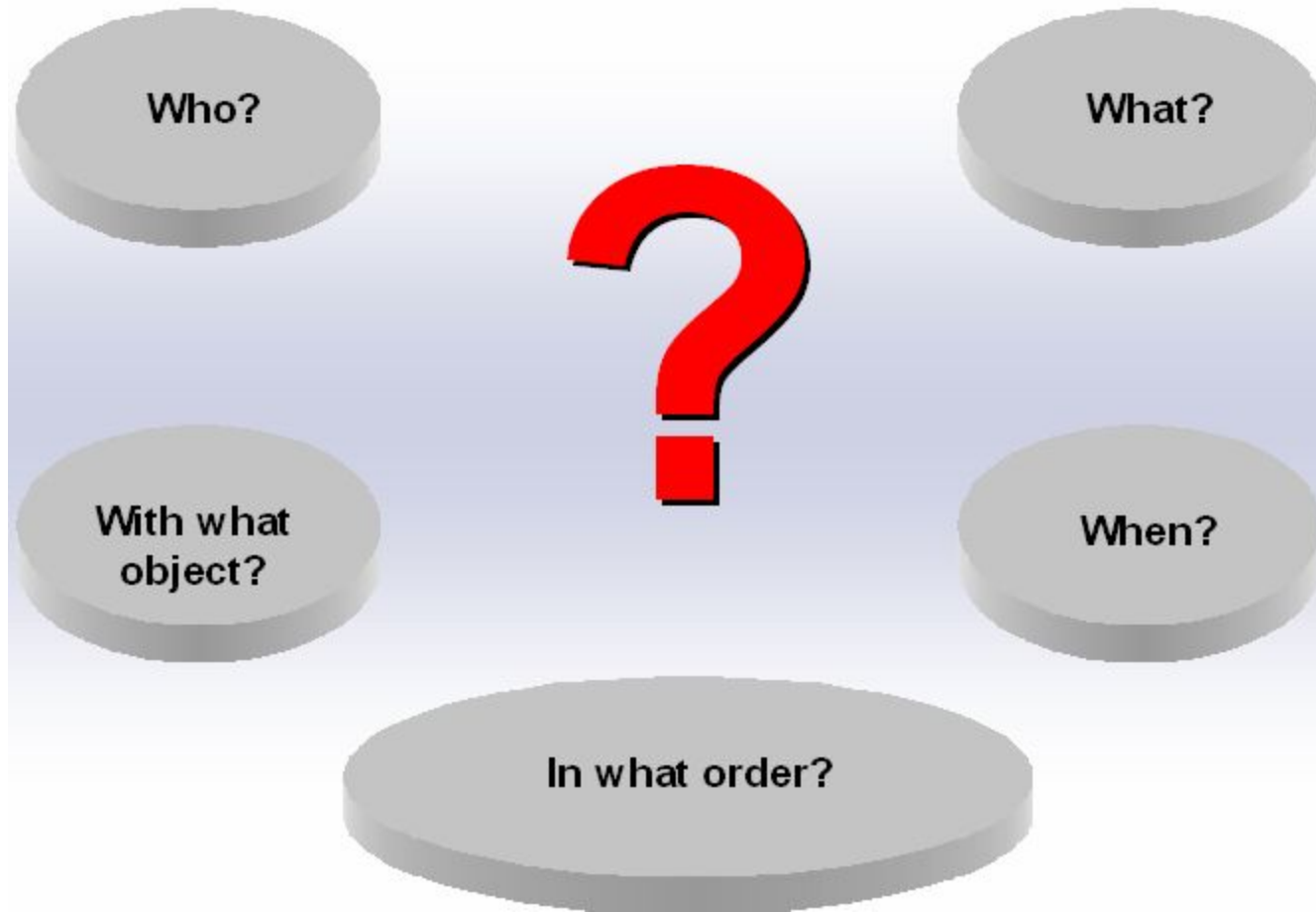
In What Order?: Workflow Definition

● **Workflow definition**

Controls the business process
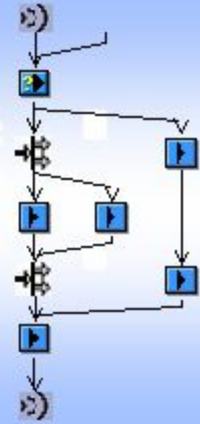
Workflow definition controls the calling sequence of each step. Steps like workflow, can also be triggered by events.

In What Order?: Workflow Builder (SWDD)…How it looks

Workflow definition

Triggering event

Step

Workflow Builder:

→ Navigation and display area
→ Print: Local / R/3 spool / file
→ Check and activate

Symbol for workflow start and end
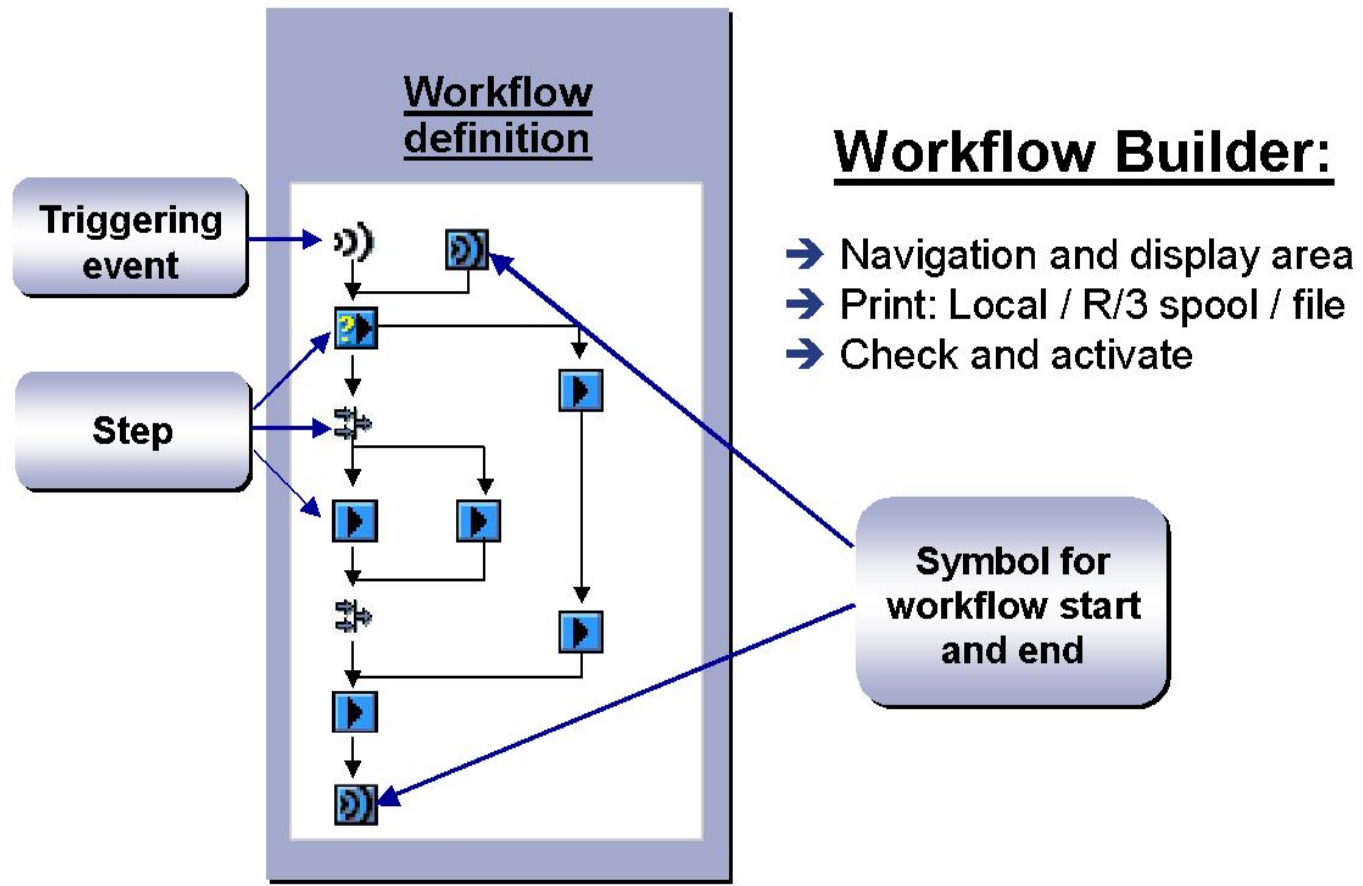
With What Object? What?:
T-code: PFTC, Calling Methods within a Task

Attach Object Method here, give Object Category, Object Type and Method Name

Define
- Synch / Asynch
- Dialog / Without Dialog

Define binding between Task Container and Method here.

With What Object?: Business Object and its Method

Business Object
E.g. BUS2089

What?: Method Configurations

What?: Method Parameters

WHO: Agents

Responsible Agents

Excluded Agents

Possible Agents

Button turns green if agent assignment is configured

Possible Agents assignment

When? T-code: PFTC

Events can be used to trigger:

- •Workflow instantiation
- •Commencement of a step
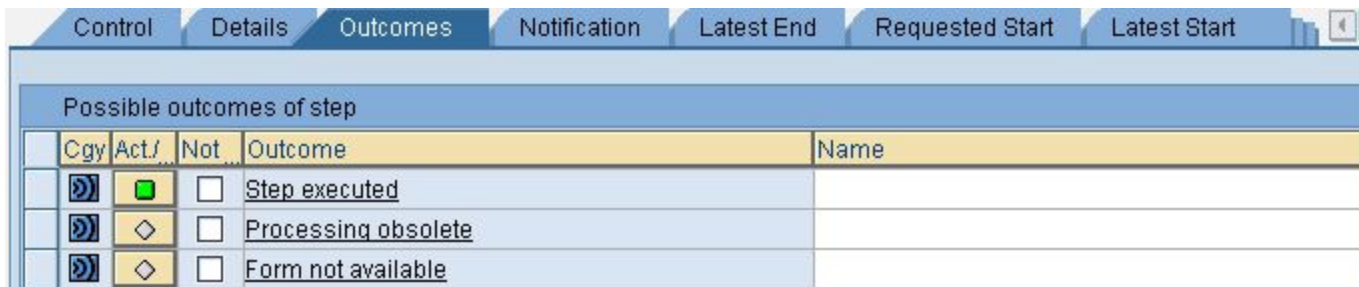- •Completion of a step, normally for asynchronous tasks

		Basic data		Description		Container		Triggering events		Terminating events		Default rules		SAPphone

Standard Events

		Binding	Object Category	Object Type	Event	Name
		☐				
		☐				
		☐				
		☐				

When?
SWDD⬜ Double Click on Step…

A Condition, Multiple Condition and User Decision step have more than one outcome and depending on the conditions only one of them is executed.

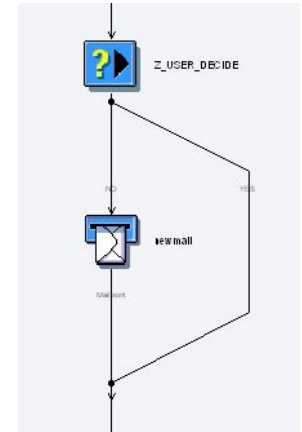Outcomes can be labeled for easy understanding.

Control	Details	Outcomes	Notification	Latest End	Requested Start	Latest Start	◄ ►

Possible outcomes of step

Cgy	Act./	Not	Outcome	Name
》	🟩	☐	Step executed	
》	◇	☐	Processing obsolete	
》	◇	☐	Form not available	

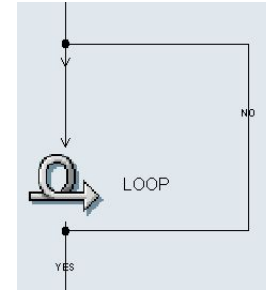# STEP TYPES

Step Types in Workflow

User Decision

- The agent is asked a question and given a pre-defined list of answers

- All the options are available in the work item.

- Each answer is a separate branch in workflow
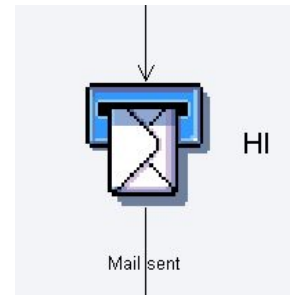
Step Types in Workflow

Loop (Until)

Runtime use:

- for the purpose of iterative processing of a few steps based on certain condition.

Step Types in Workflow

Send Mail:

- The text entered in this step type is sent as an e-mail

- Both external (on the outlook id) and internal mails (SAP mails) can be sent

Step Types in Workflow

- <u>Send Mail:</u>

The subject line of the mail - 50 characters at the max.

To insert Container Elements

To enter text in mail

Step Types in Workflow

- Send mail:

Within the Task (under the CONTROL tab) The subject line of mail shown in Work item Text

The Mail Text is present under the description Tab within the Task
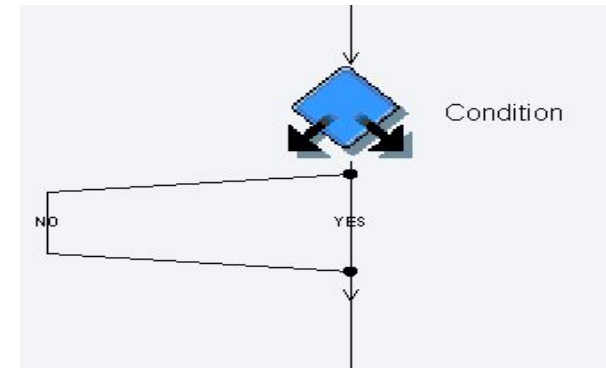
Step Types in Workflow

Condition

Condition

Run time use:

 - Can be used in a scenario where further course of action depends on the condition being true or false

Condition

Step Types in Workflow

Process Control

  - This can be used to cancel the execution of a work item or workflow or set a work item to obsolete

  - It facilitates the alternate steps to be taken in the process obsolete branch

Step Types in Workflow

Process Control:

The workflow step is to be mentioned depending on the Function chosen

The options available with Process control

Step Types in Workflow

Multiple Condition:
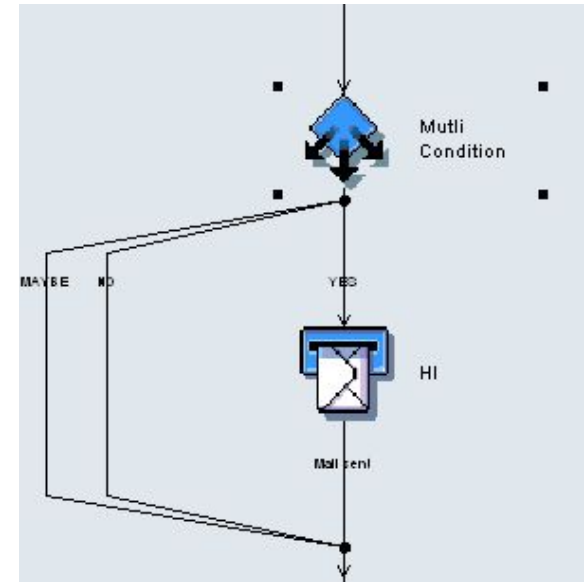
Based on the value of a workflow container element one of the several branches in workflow is processed

Multiple Condition

Step Types in Workflow

Event Creator :
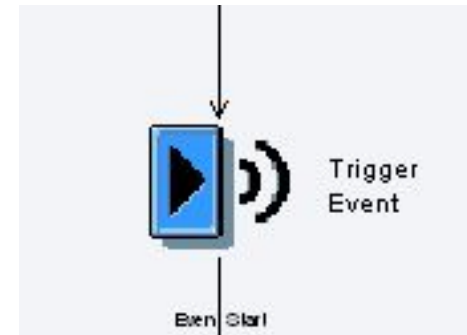
- To raise an event in the workflow

- Data moves from workflow to event

Step Types in Workflow

Wait:
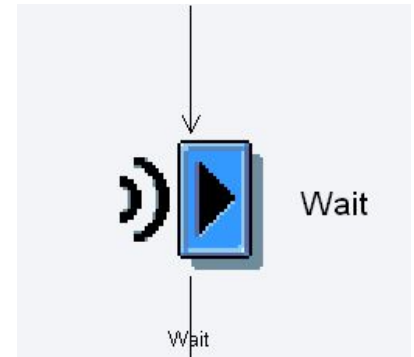
- The system waits for a specific event to be triggered

- The work item is only completed if the expected event occurs

Step Types in Workflow

Fork:

- Used for the purpose of parallel processing

- The user can define the number of parallel processes and how many should be completed for the Fork to terminate and workflow to continue

- The fork can be terminated by defining a condition too

Step Types in Workflow

Container operation:

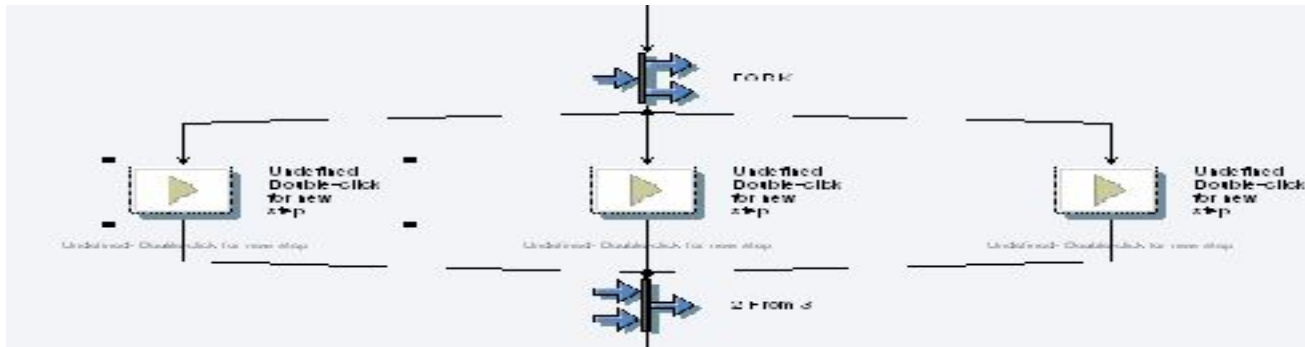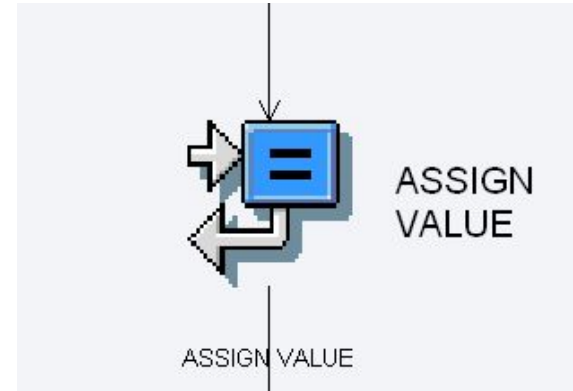- For the purpose of performing arithmetic operations or value assignments to workflow container

- Constants and data within workflow can be used

- Multiline operations are allowed

Step Types in Workflow

Ad hoc anchor

- Gives user the option to select between various
  workflows at runtime

- The steps of the selected Workflow shall replace this
  one

Step Types in Workflow

Web Activity

- The selected container elements are posted using the http protocol in an XML or SOAP message

Step Types in Workflow

- Subworkflow:

  - An activity that refers to another workflow rather than a task

- Undefined Step:

  - These can be used as placeholders during development

  - They are ignored at run time

CONTAINER & BINDING

What is a Container

- Containers are a common way of holding data throughout the workflow instance's lifespan.

- Containers are used in interface between different parts of the workflow and between the workflow and business applications.

Type of Containers

- A workflow container for each workflow and subworkflow
  - **Only container elements classified as import can be filled when the workflow is started.**
- A task container for each task
  - **Import container elements are filled from the workflow container and export container elements are transferred back.**
- A method container for each method
  - **Import container elements are filled from task container and export container elements are transferred back.**
- An event container for each event
  - **All event containers are export container elements only.**
- A rule container for each rule
  - **The import container elements are filled from the workflow container (or task container). The _RULE_RESULT elements is the only export parameter and this is optional.**

Binding

- Data can be passed from one type to another using binding.

- At runtime, the bindings are executed at the appropriate point in the workflow.
  - For instance, for a synchronous task, the workflow-to-task binding is executed as part of work item creation and the task-to-workflow binding is executed as part of work item completion.

Containers and Bindings
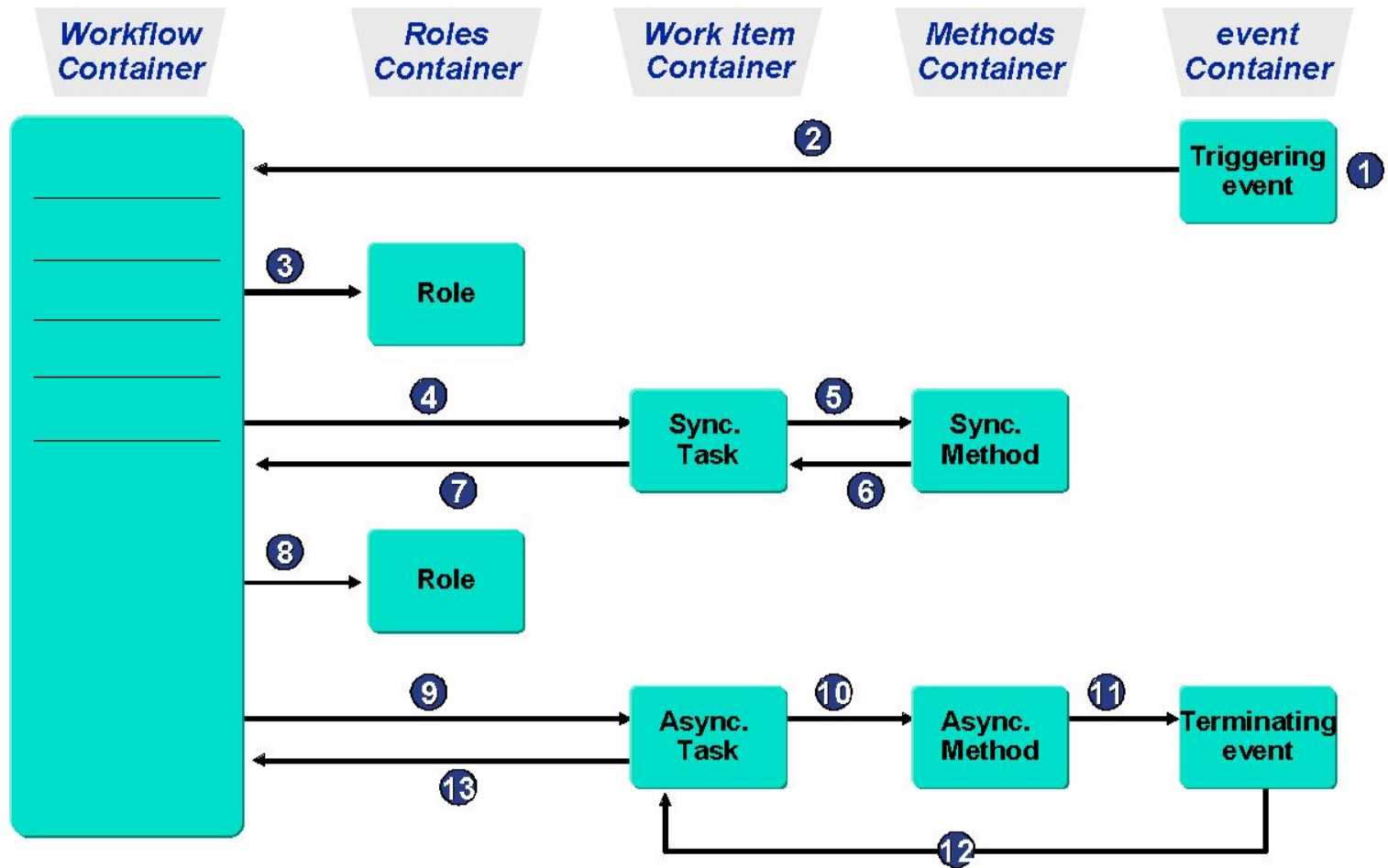
WORKITEM

Work Item

- Object that represents a task or action in the workflow system at runtime.

- Work items are subdivided into a specific work item type according to their assignments. The internal processing procedures are controlled via this work item type. The work item type determines which statuses and transitions are valid.

- Depending on the work item type, some of these work items are displayed in a user's work list. Other work items, on the other hand, are only used and processed internally.

Work item Types

- A **Work item that represents a Work Queue**
- B **Work item for Background step**
- C **Work item that represents a container linkage**
- D **Deadline work item; Notification upon Missed Deadline**
- E **Workitem that waits for an Event (Wait step)**
- F **Workflow (Also subworkflow)**
- N **Notification Item (Obsolete)**
- P **Work item that Represents a Remote Work item (Proxy WI)**
- R **Work item that Represents a Remote Work item (http)**
- W **Dialog work item; Represents a Single-step Task**
- X **Work item that Represents a Block**

Work item Status

- WAITING**: Waiting (Also: Work items in Resubmission)**
- READY
- SELECTED**: Reserved**
- STARTED**: In Process**
- ERROR
- COMMITED**: Executed (Only If Expl. End Confirmation Is Expected)**
- COMPLETED
- CANCELLED**: Logically Deleted**
- CHECKED**: In Preparation**
- EXCPCAUGHT**: Exception caught**
- EXCPHANDLR**: Exception Being Handled**

Deadline Monitoring

Deadlines for Workflow Steps

- Deadlines have individual time references and agents

- Possible deadlines
    - Requested start
    - Requested end
    - Latest start
    - Latest end

- Simple deadlines versus modeled deadlines

SU	MO	TU	WE	TH	FR	SA
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Deadlines for Workflow Steps

- Requested start
  - **Earliest possible point in time for the commencement of processing**

  - **The requested start is not a monitored deadline in the strict sense. It is when a work item first appears in an agent's inbox**.

- Requested end
  - **Requested end deadline for processing a step**

- Latest start
  - **Latest start deadline for processing a step**

- Latest end
  - **Deadline by which the processing of a step must be completed.**

Note:
  All deadlines are monitored using the background job SWWDHEX with job class A. The job calls the report RSWWDHEX.

Business Objects

Creation of Object type

- New Object type
- Sub-type of an existing Object type
- Adv of sub-type: It automatically inherits all the components (methods, attributes, and events) of the original object type including its implementation.

Sub-type

- Tools->Business Workflow -> Development -> Definition Tools -> Business Object Builder

- In the field object type enter the object type you want to extend.

- Choose subtype.

- Enter a unique name, object name, name, short description and name of the program.

- Save it.

Object Type Definition

- Transaction Code : **SWO1**
- Basic data
  - General: Super Type , Release , Generation
  - Change & Transport
  - Default : Method & Attribute

» Contd.

Object Type Definition (contd..)

- Key Fields

  – Determines which application table (s) the data is saved

  – One or more key fields can be used

  – Combined key field values provide unique identification for an object instance.

  – Can refer to a database table or a view.

  Contd…

Creation of Key fields

- Position the cursor on the entry Key fields and choose the "create" button.

- If you want to create the key field with a database table then enter 'yes'.

- Enter the table name e.g.: VBAK

- The list of key fields will be displayed, select the respective ones, e.g.: VBLEN.

Object Type Definition (contd…)

- Attributes
  - Property of an Object
  - Source of Information
    - Database Field
    - Virtual
    - Object
  - Multi Line:
    - A multiple-line attribute corresponds to   in ABAP
      » Contd.

A database attribute is defined with reference to a column (not a key column) of the related application table.

A virtual attribute is calculated with ABAP code.

Creation of Attribute


```
18  include <cntn01>.
19  parameters: sales_order_key like vbak-vbeln.
20
21  data: sales_order type swc_object,
22        sales_group type swc_object.
23
24  * create object(-reference)
25    swc_create_object
26     sales_order 'Z_BUS2032' sales_order_key.
27     if sy-subrc ne 0.
28       "Do your own error handling.
29     endif.
30
31  * read attribute SalesGroup of Order
32    SWC_SET_ELEMENT CONTAINER 'Sales_Group' OBJECT-SALES_GROUP.
33
```

Attribute Sales_Group

Attribute	Sales_Group
Object type	ZTEST_03
Release	640
Status	modeled

Texts

| Name | Sales_Group |
| Description | Sales_Group |

Source
- ● Virtual
- ○ Database field

Attribute properties
- ☐ Multiline
- ☐ Mandatory
- ☐ Instance-independent

Data type reference
- ○ ABAP Dictionary
  - Reference table
  - Reference field
- ● Object type   TVKGR   Sales group
  - Inverse attribute

Object Type Definition contd.

- Methods
  - Dialog/Background
  - Synchronous/Asynchronous
  - Function Module
  - BAPI
  - Transaction Code
  - Report
  - Other
    - » Contd.

Types of methods
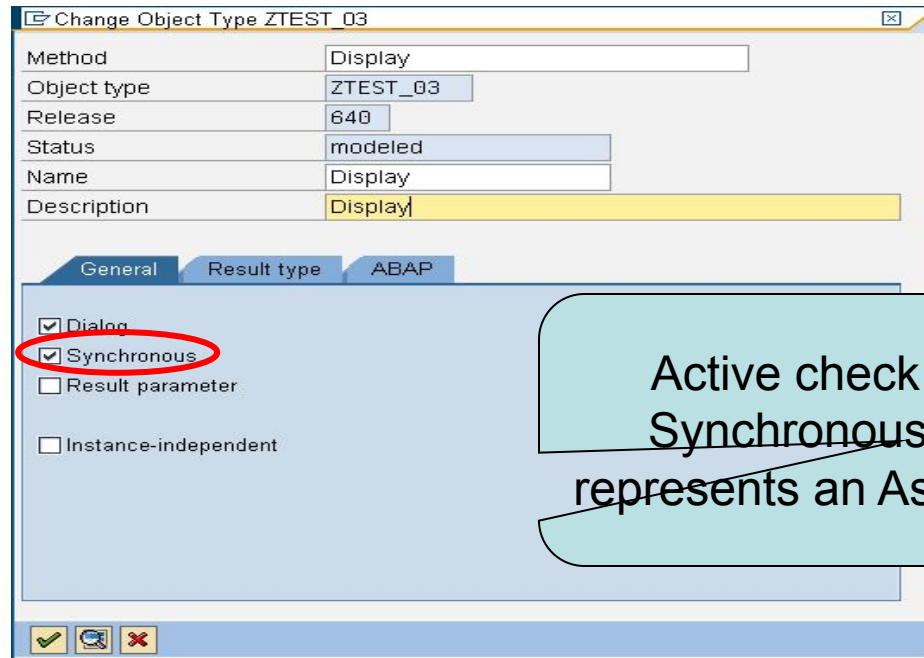
- Synchronous methods:
  - Export parameters are returned directly to the calling program.
  - Exceptions may be triggered.
- Asynchronous methods:
  - Method execution consists of a synchronous part and subsequent update.
  - Export parameters are not authorized.
  - Exceptions are only possible in the synchronous part.

Parameter calls from methods

- Import parameters
- Export parameters
- Result (special export parameter)
- Exceptions:
    - Temporary error
    - Application error
    - System error

Object Type Definition Contd...

- Events
  - System wide message about a change in state of an Object

- Events should be used only in conjunction with SAP Object

- The SAP application must raise the event and not the Object type.

Release Status

- Modeled   :   **Not accessible at runtime.**

- Implemented: **Only in test or internal use, possibly unstable.**

- Released: **Released for use by the customer.**

- Obsolete:

  The functionality has been replaced. The old functionality is still supported for two releases.

Macros used during SAP Object Programming

- Include <cntn01> OR Include <object>
- Container Declaration : SWC_CONTAINER <container>
- Container Initialization : SWC_CREATE_CONTAINER <container>

» Contd.

Macros used during SAP Object Programming contd.

- Writing a Field value :
  SWC_SET_ELEMENT <container>
  <element> <value>
- Reading a Field value :
  SWC_GET_ELEMENT <container>
  <element> <value>
- Writing a Multi Line field value:
  SWC_SET_TABLE <container>
  <element> <value>
- Reading a Multi Line field Value:
  SWC_GET_TABLE <container>
  <element> <value>

DELEGATION

Delegation
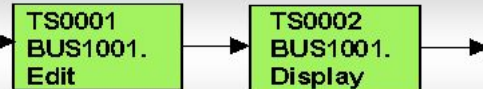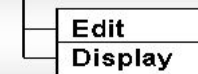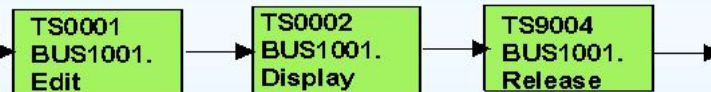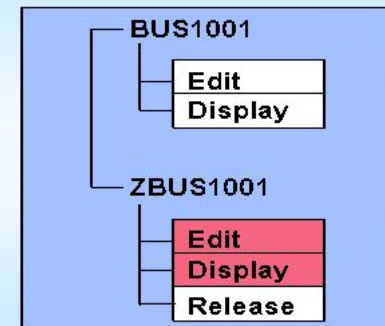
Delegation

- If you create a subtype of an object type, you can choose to delegate the superior type to the subtype. Delegation means that wherever the super type is referenced throughout workflow, the subtype will actually be used instead.

- Delegation lets you use all the existing tasks and workflows based on the SAP object type as if they were using your own subtype.

- Customers use their own object extensions with the tasks, events, etc. supplied by SAP

- Without having to redefine existing tasks, you can use standard objects with customer extensions

EVENT

Events

- Events are part of business object, are triggered for changes in the state of the object, which can cause other processes to begin.

- Used for Triggering the Workflow

- Necessary information needs to be entered on "Triggering Events" tab of the Workflow Builder.

- Workflow Engine will automatically generate the binding. You can change it afterwards.

- Events can also be defined in Classes. Their behavior is similar to the events declared in Objects.

Event Creators & Receivers
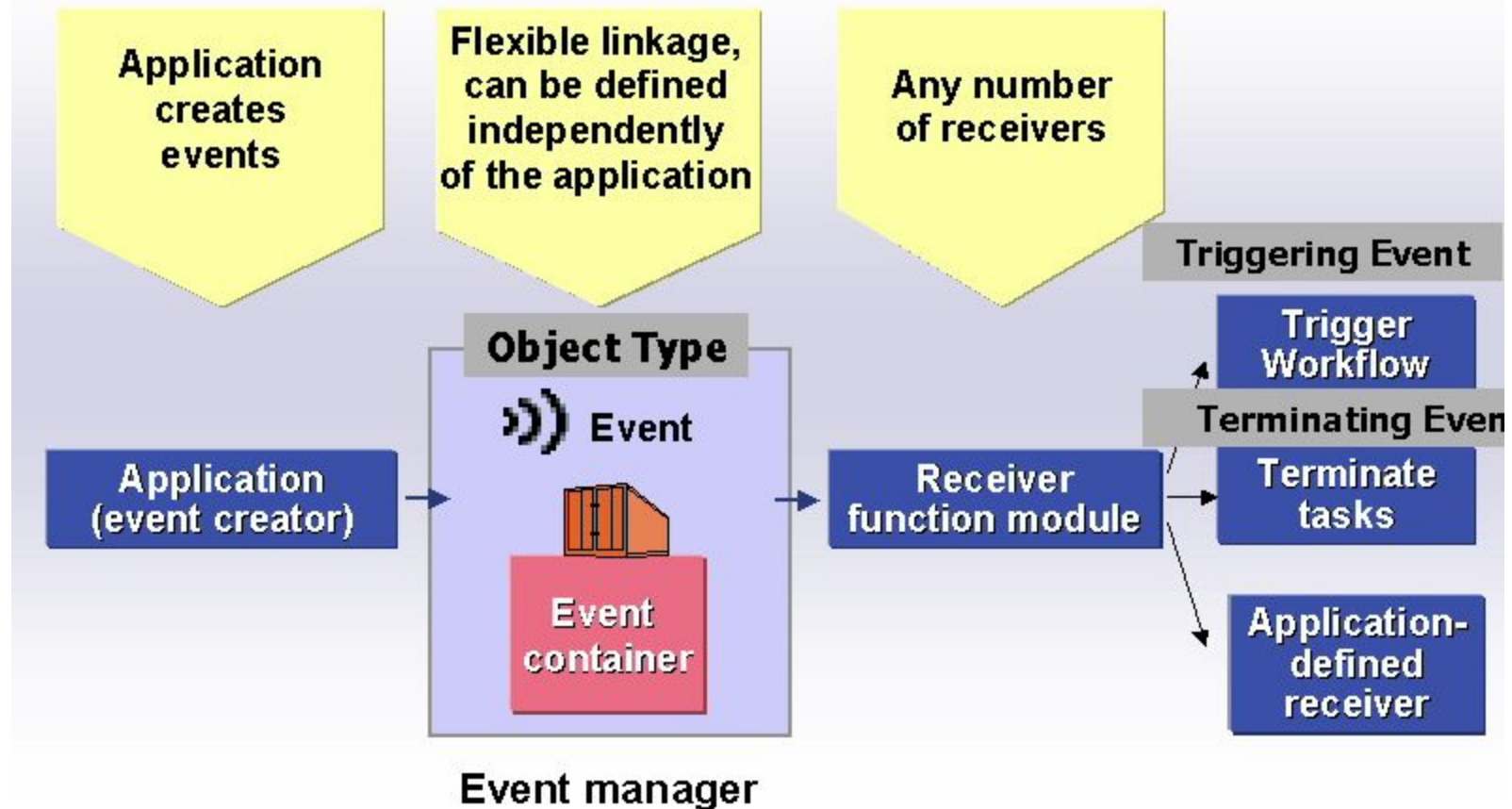
Event Creation and Triggering

- Define Object in Business Object Builder
- Trigger Event:
  - Implicitly via generic tools, for example change documents, status management, message control etc
  - Explicitly via function module
    - SWE_CREATE_EVENT

Event Triggering: Status Change
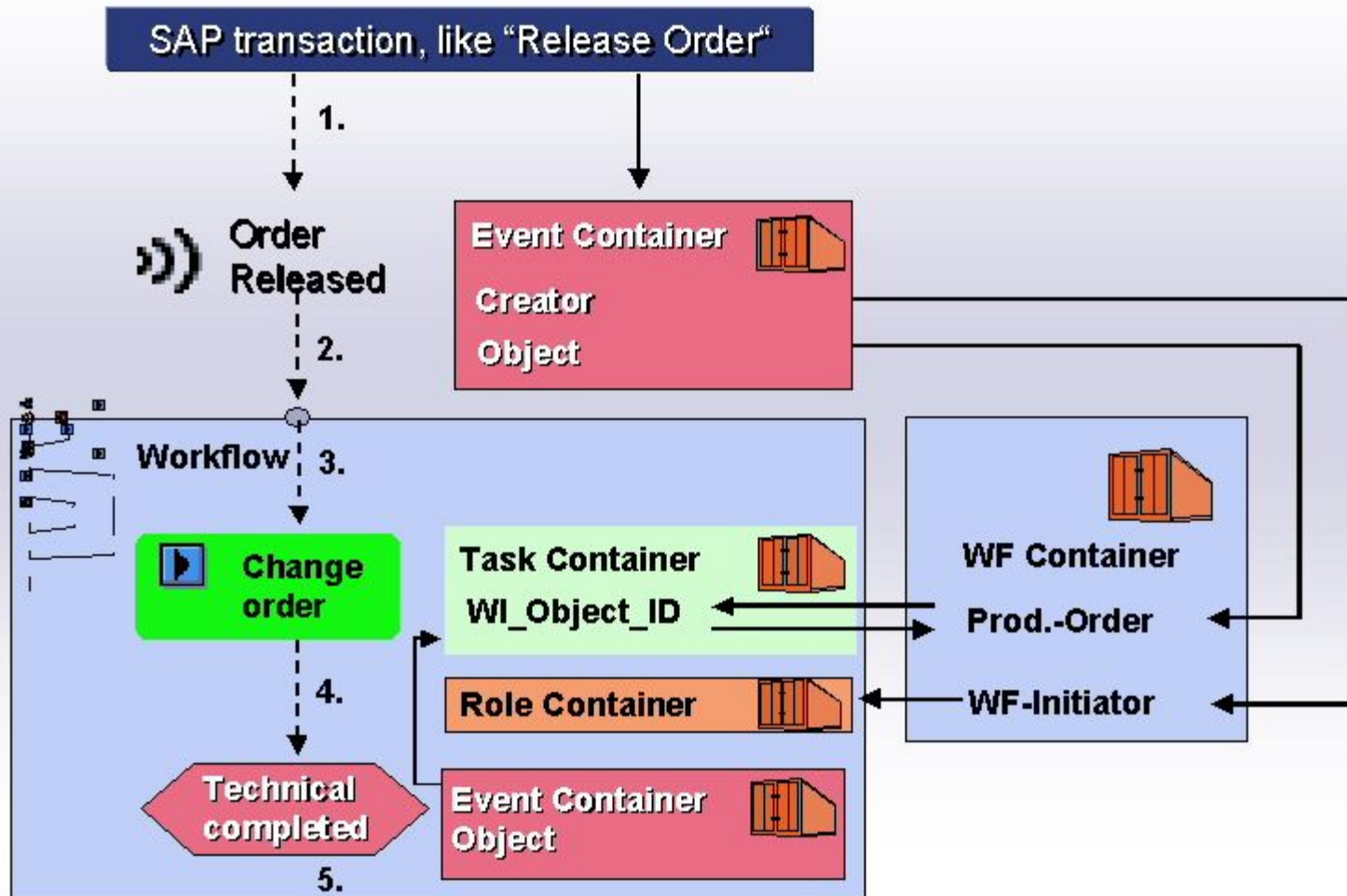
Event Triggering: Message control

- Create a separate output type and declare 9 (workflow event) as transmission medium

- Create a condition table

- Create a access sequence

- Assign the access sequence to the defined output type for a workflow event

- Define condition records and declare the event

- Assign the output type to a procedure

Event Triggering: Change Documents
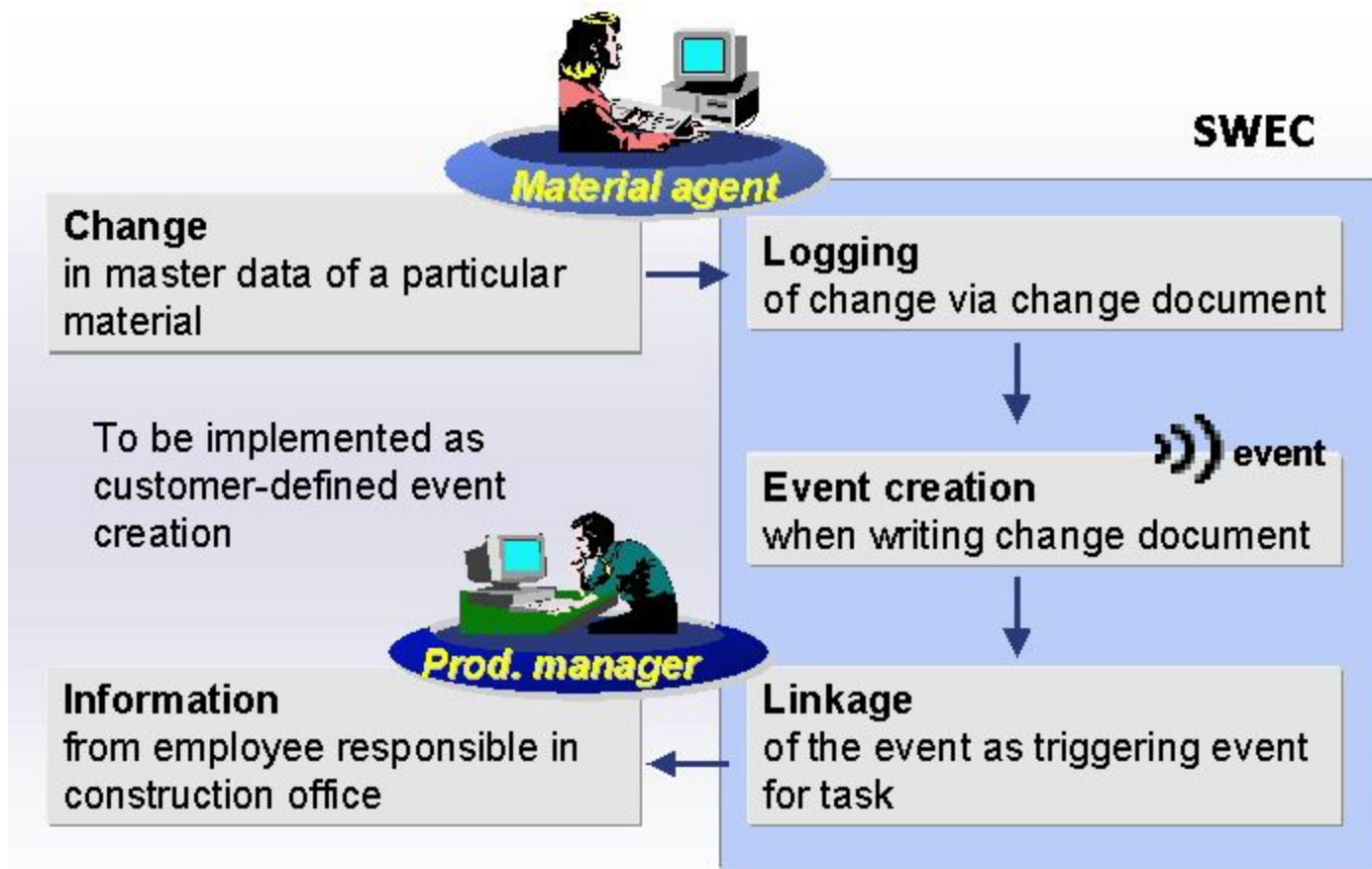
Event Triggering: ABAP Code

- Fill event container with event parameters
- Compose object key for triggering object
- Call SWE_EVENT_CREATE
- FM Call error handling
- Trigger event with explicit commit work

```
include <CNTN01>.

data: begin of asset_key,
        company_code like anla-bukrs,
        asset_no     like anla-anln1,
        sub_number   like anla-anln2,
      end of asset_key.
data: object_key       like sweinstcou-objkey.
      swc_container          evt_container.

* Write parameters into event container
swc_set_element evt_container 'flag_equi_aendern' 'X'.

* Compose object key
asset_key-company_code = '0001'.
asset_key-asset_no     = '000000123456'.
asset_key-sub_number   = '0100'.
object_key = asset_key.

* Trigger the event
call function 'SWE_EVENT_CREATE'
     exporting
        objtype = 'BUS1022'
        objkey  = object_key
        event   = 'changed'
     tables
        event_container = evt_container
     exceptions
        others  = 01.

if sy-subrc ne 0.
  " do your own error handling
endif.

* start tRFC processing
commit work.
```

Business Workplace

Worklist as Interface for End User

	Application		Workflow
SD clerk	Change customer master → Change document	))	Send work items to persons responsible

Sales representative — Arrange visit

Credit representative — Adjust credit limit

Production manager — Change production plan

Each task is an entry in the Business Workplace
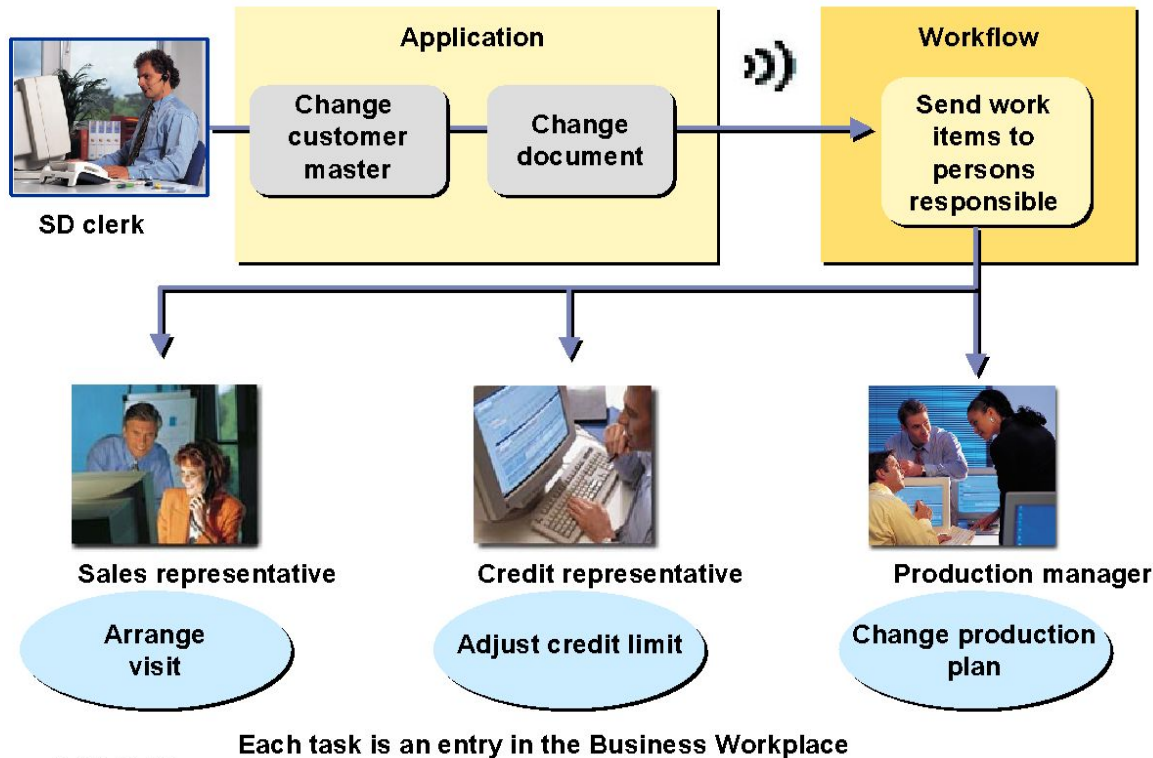
- The Business Workplace is part of the SAP Business Workflow runtime environment. The employees responsible receive the documents and work items for processing in the Business Workplace. Once a task (= a work item) has been executed and completed, the process can be continued.

- The worklist contains all the work items (all the activities to be processed) assigned to this user. The Business Workplace is therefore the most important interface for an employee in their day-to-day work.

Business Workplace in SAP R/3

- The Business Workplace has three screen areas:
  - Overview tree
  - Worklist
  - Work item preview

Business Workflow

1 — PrepareMe

2 — TellMe

3 — ShowMe

4 — LetMe

5 — HelpMe
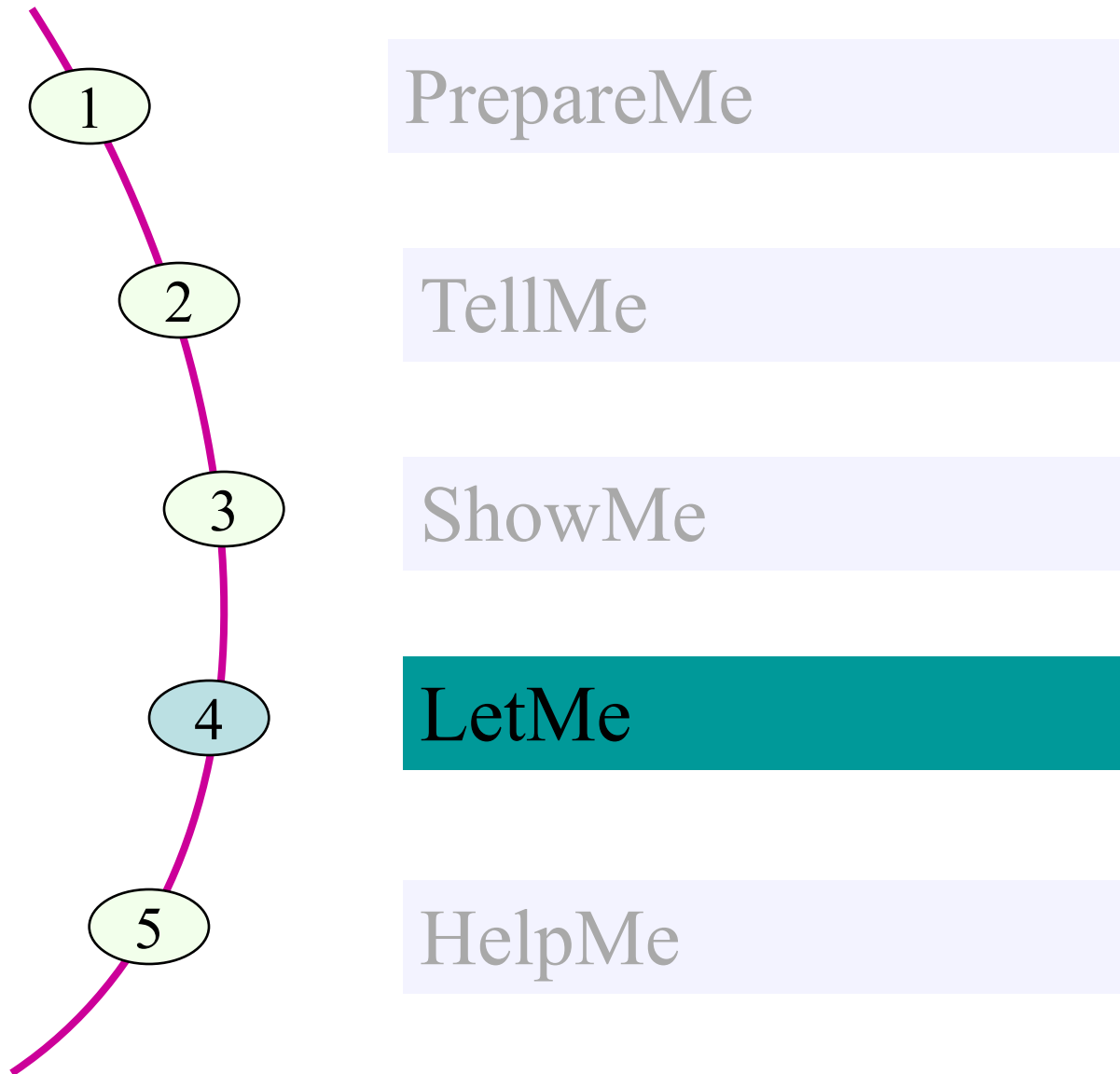
Demo: Notification of Absence

Business Workflow

1 — PrepareMe

2 — TellMe

3 — ShowMe

4 — LetMe

5 — HelpMe
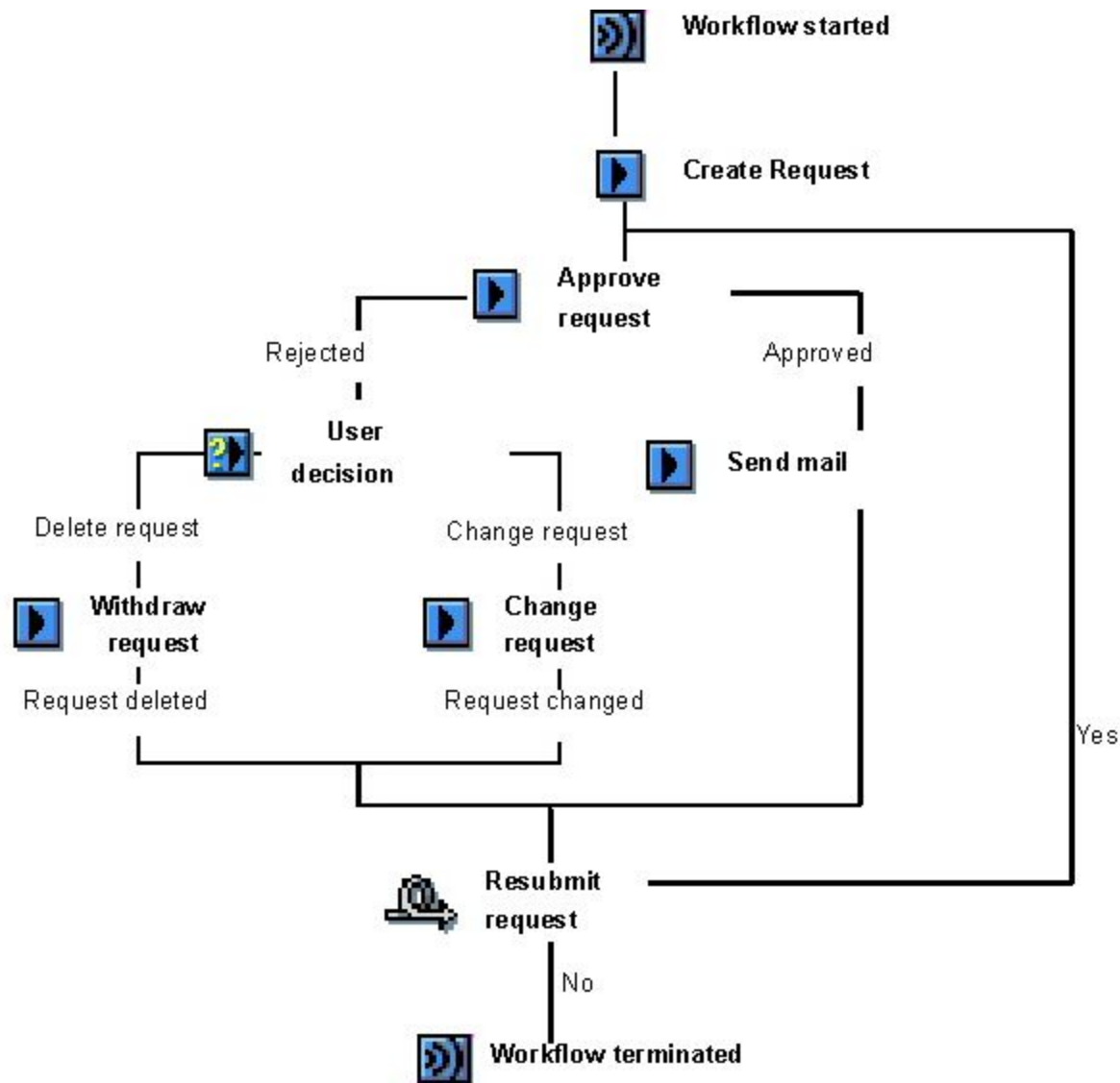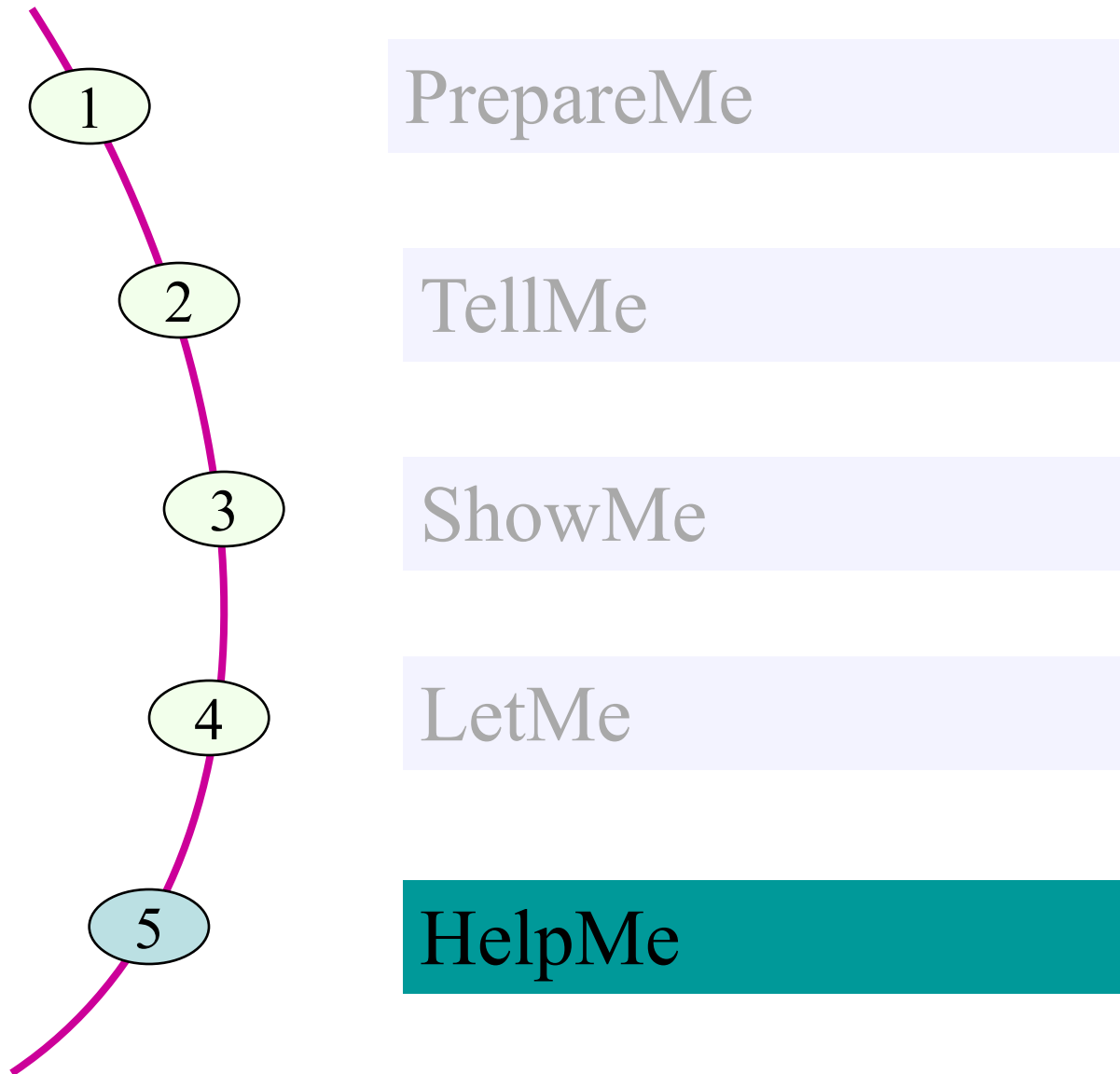
MONITORING & ANALYSIS

Monitoring & Analysis

- Reporting
  - Work Item Monitoring
  - Work Item Analysis
  - Work load Analysis
- Workflow Diagnostic Tool

Reporting

- Reporting on Workflow Progress
- Work Items by Processing Duration
- Work Items with Monitored Deadlines
- Work Items per Task
- Reporting on Agent Behavior

Reporting on Workflow Progress

- Transaction code: SWI1
  - This report shows all the work items of the particular task in a particular time period.
  - This report is also used for monitoring the Workitem

Reporting on Workflow Progress

- Workflows for Object
  - Transaction code: SWI6.
    - This report shows all workflow instances linked to a particular object instance.
    - Example: Particular Purchase Order

Reporting on Workflow Progress

- Workflows for Object type
  - Transaction code SWI14
    - This report shows all the work items and workflow instances for all object instances of a business object type.
    - Example: Workflows related to all Purchase Orders

Display Workflows: Please Select an Object Type

Object Type Category	BOR Object Type
Object Type	
Selection variant	Active Instances (Running, Ready, Committed,...)
Task	
Task group	
Component	
Selection Period	Last 7 days

Work Items by Processing Duration

- Transaction code: SWI2_DURA
  - This report gives list of work items based on their processing duration for specified type or for a specified tasks.
  - This report is also used to analyze a Work item.

Work Items with Monitored Deadlines

- Transaction Code: SWI2_DEAD
  - This report displays work items with their deadline information, if they are set.
  - For each missed deadline, the current status of the work item is shown.
  - This report is also used to analyze a Work item.

Work Items per Task

- Transaction code: SWI2_FREQ
  - This report shows the number of work items created in the specified period.
  - This report is also used to analyze a Work item.

Reporting on Agent Behavior

- Transaction Code: SWI5
  - With the help of this report , you can monitor how quickly agent act on their work items
  - This report is useful for assessing workload over particular time period.
  - This report is useful for reporting on the type and frequency of tasks being sent to an agent.
  - This report is also used to analyze a Work load.

Workflow Diagnostic Tool

- Transaction Code: SWUD
  - A primary diagnostic tool.
  - Analyze workflow definition.
  - Following are the options available:
    - Verify workflow customizing
      - Perform Workflow Customizing
    - Problem: Task does not start
      - To track down the exact cause of an error
    - Problem: Workflow is hanging
      - Choose this option when workflow starts but stops before completion, due to some error.
    - Test Environment
      - Choose this option when you want to access the complete suite of test tools from one place.
      - This option will also display all the components (subworkflow, tasks, business objects, delegated business objects)

Workflow Diagnosis

Workflow Diagnosis

Task type: WS
Task: 99900260 travel expenses

Verify Automatic Customizing

Problem: Task not started
Problem: Workflow is hanging

Test environment ☑ Including parts

List of most recently used tasks

| WS99900260 | travel expenses | Ztrp_exp |
| WS30100051 | Workflow system verification | Verify |

Section 1: The current workflow definition to be analyzed.

Section 2: The list of test options

Section 3: A list of last tem workflow definitions.
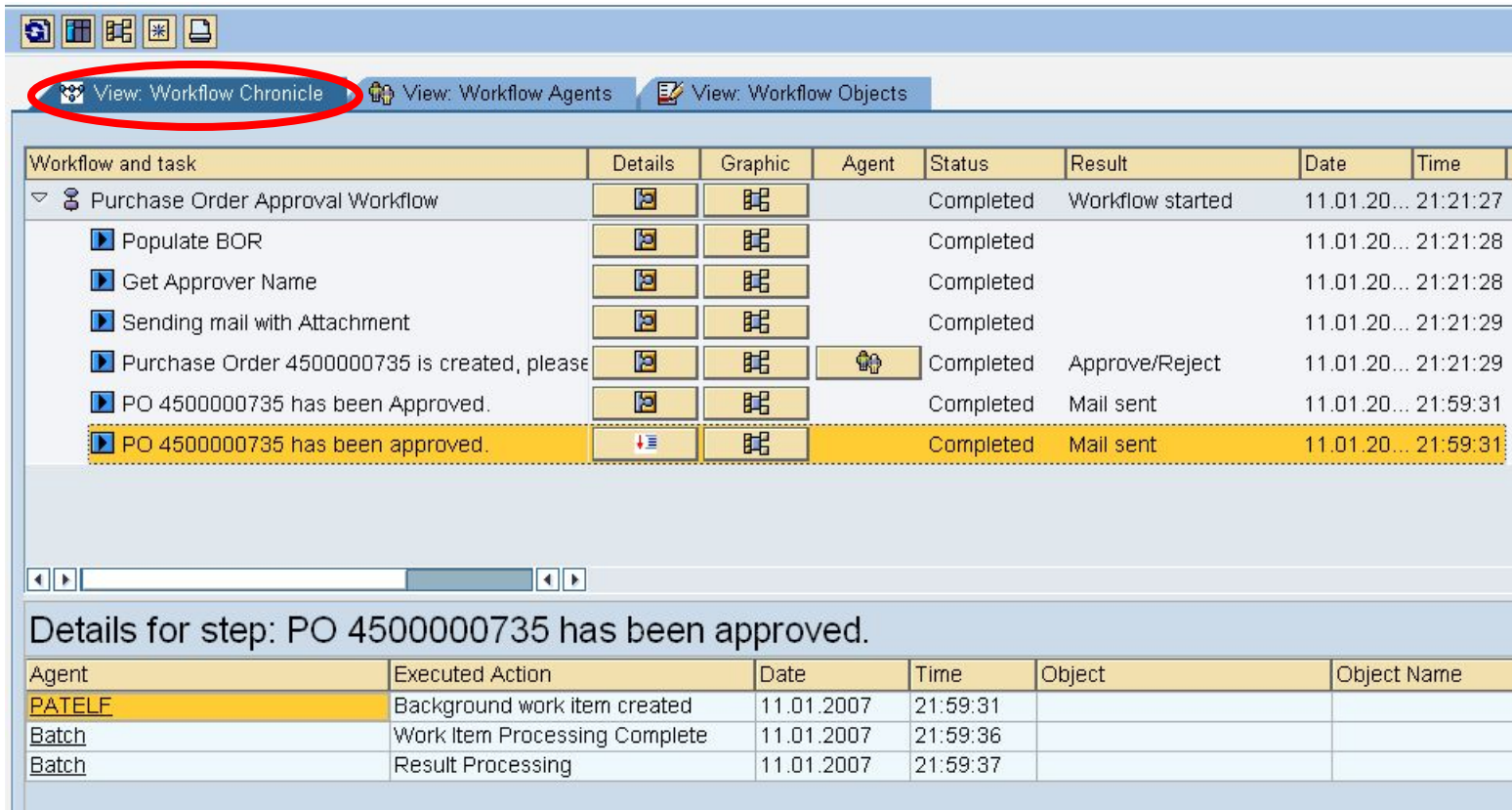
Working with the Workflow Log

- At runtime, a workflow has its own work item (type F) that represents the workflow instance.
- The workflow log formats all the information created during the execution of the business process
  - Standard view
    - Intended for agents and process owners who want to get an overview of the steps processed.
  - Technical view
    - Intended for developers and workflow administrator

Standard View

- Workflow Chronicle (What processed when?
- Workflow Agents (Who Processed what?)
- Workflow Objects (What was processed?)

Workflow Chronicle

The tab page Workflow Chronicle shows a hierarchical display of all the steps in the workflow. If workflow has a subworkflow structure, the subworkflow are also displayed.

Workflow Agents

The Tab page Workflow Agents shows the agents involved in the workflow.

    Following options are displayed for each agent:
- **What action was carried out in what step**
- **When this action was carried out**
- **The objects involved**

Workflow Objects

The tab page Workflow Objects lists the objects related to the workflow. This view shows what objects were created and processed.

Technical View

- The technical view shows technical nodes and control structures, container elements, agent data and workflow data.

Workflow Status

Ready	In Progress	Executed
The work item has been released for execution and appears in the workflow inbox of all recipients.	The work item is currently being processed by a different recipient or in a different mode.	The work item is waiting explicit confirmation of its completion.
Completed	Logically Deleted	Error
The execution of the work item is completed.	Execution of the work item is no longer meaningful or required by the workflow logic.	Execution of the work item was terminated with an error.

Workflow Log

List of Transaction Code

- **SWO1**: Business Object Builder
- **SWDD**: Workflow Builder
- **SWUD**: Workflow Diagnosis
- **SBWP**: Business Workplace
- **SWU3**: Automatic Workflow Customizing
- **PFTC**: Maintain Task
- **SWO3**: Business Object Repository Browser
- **SWE2**: Event Linkage
- **SWI1:** Report for Work items
- **SWI2_FREQ**: Work Items per Task
- **SWI2_DEAD**: Work Items with monitored Deadlines