

# LO - General Logistics Workflow Scenarios



HELP.BCBMTWFMLO

Release 4.6C



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## LO - General Logistics Workflow Scenarios

See also:

[BC - Workflow Scenarios in Applications \[Ext.\]](#)

## Changes with Reference to a Change Number (LO-ECH)

### Purpose

You schedule the change numbers with this workflow. You determine the latest point in time on which the change number can be processed.

You can use this workflow not just for simple change master records but also for ECRs/ECOs. The use of this workflow enables you to use the entire functionality of the Business Workplace with few installation and management costs.

### Process Flow

The system starts the workflow as soon as you create a change number.

Then you can forward the change number in a workitem to a person responsible or to an organizational unit for it to be processed. This workitem can be forwarded any number of times and remains in the system either until the change number is deleted or until the workflow is manually closed.

---

**Technical Implementation (LO-ECH)**

## Technical Implementation (LO-ECH)

You keep the technical information about using the SAP Business Workflows for the simplified workflow of the Engineering Change Management in the standard system R/3 as follows.

### Object Types

The interface between Engineering Change Management and workflow is made possible by object technology.

The defined object types for Engineering Change Management can be found in the **Business Object Repository** under: *Logistics - general* → *Engineering Change Management*

The following object types are used for this workflow:

[Object Type ECM – Change Master \(LO-ECH\) \[Page 19\]](#)

### Standard Tasks

The [Standard tasks \[Page 11\]](#) are defined as single step tasks. The standard tasks for Engineering Change Management already exist as modules and can be used in all workflow scenarios without having to be changed.

### Recipient Determination

The system sends the first workitem to the user who created the change number. The workitems stay in the Business Workplace of that user until they are forwarded to another user or organizational unit

### Workflow Template

See: [Workflow Template \[Page 12\]](#)



## Object Type ECM – Change Master (LO-ECH)

### Definition

ECRs/ECOs are processed in Engineering Change Management scenarios. In the scenario provided, the ECR/ECO is an **ECM** (change master) type of business application object. At the definition time, the ECR to be processed is generated using this object type.

The necessary technical data is specified in the **Business Object Repository** (SWO1) (under *Logistics - General → Engineering Change Management → ECM - Engineering Change Management: Change Master*).

### Use

In the scenario an ECR/ECO is created and processed as this type of object.

### Structure

#### Key field

The key field *Change number* identifies an object of this type.



ECR that is identified by the change number **N01-12**.

### Attributes

An attribute describes the properties of the change master record.

#### Virtual Attributes

The following overview shows several virtual attributes that return a value that is only determined at runtime by evaluation of the database contents.

Name of the attribute	Description	Data type reference
StatusObjNumber	Status management: Object number	Dictionary field OBJNR
StatusObjType	Status management: Object type	Dictionary field OBTP
ChangeNoType_OrgUnit	Person responsible for changes	Object type TCC11

#### Database field attributes

The following overview shows several database field attributes that return a field value from the ABAP dictionary.

Name of the attribute	Description	Data type reference
ChangeNoStatus	Master: Header status of a change number	Dictionary field AENST

**Object Type ECM – Change Master (LO-ECH)**

<b>ChangeNoType</b>	Master: Change type	Dictionary field CCART
<b>ReasonForChange</b>	Master: Reason for change	AEGRU

**Reference to a System Status**

The following overview shows several attributes that return a reference to a change master record system status.

<b>Name of the attribute</b>	<b>Short description</b>	<b>Source</b>	<b>Data type reference</b>
<b>Status_to_be_proc</b>	Status: Request converted	Object status I0254 (ECO to be processed)	Dictionary field OBJSTATUS
<b>Status_approved</b>	Status: Request approved	Object status I0253 (ECO approved)	Dictionary field OBJSTATUS

**Methods**

The methods determine the operation to be carried out. All methods for the change master record are defined without results.

**Events**

The events publish status changes to objects system wide.

The following table shows selected events that were published for the object type **ECM** (change master) as triggering or terminating events.

<b>Event</b>	<b>Description</b>
<b>opened</b>	ECR opened
<b>checked</b>	ECR checked
<b>all_objects_checked</b>	ECR – all objects checked
<b>confirmed</b>	ECO – all objects completed
<b>approved</b>	ECO approved
<b>completed</b>	ECO completed
<b>released</b>	ECO released
<b>to_be_processed</b>	ECR converted
<b>deleted</b>	Change number deleted

## Standard Tasks (LO-ECH)

### Definition

Target directed activity description in respect of change processes.

### Structure

In the simple Engineering Change Management workflow, the following standard tasks are used:

Task	Abbreviation	Description
20000865	ECN_schedule	ECH: Schedule change number
20000863	ECN_edit	ECH: Maintain change number

## Workflow Template (LO-ECH)

## Workflow Template (LO-ECH)

### Definition

Workflow template for processing change master records of ECRs/ECOs.

### Structure

In the simple Engineering Change Management workflow, the workflow template is used:

Workflow Template	Abbreviation	Description
20000989	ECN Flow_01	ECH: Scheduling with change number

## Preparation (LO-ECH)

For the system to automatically start the workflow *20000989 (ECN Flow\_01)* you must simply activate event linking.

### Activate event linking


The event *CREATED* for object type *ECM* is a triggered event from workflow *ECN 20000989 (ECN Flow\_01 – ECH: Scheduling with change number)* and as such is entered as standard in the linkage table. To ensure that the workflow template is started, you must activate the linkage between the triggering event and the workflow template as the consumer of the event.

### Activities


You activate the workflow *20000989 (ECN Flow\_01)* in your system as follows:

1. In the SAP menu select *Tools → Business Workflow → Development → Definition tools → Tasks/Task groups → Change*.

The *Task: Display* screen appears.

2. Select the task type *Workflow template*, and enter the task *20000989*.
3. Click .

The *Workflow template: Change* screen appears.

4. Select the tab page  *Triggering events*.
5. Activate event linkage by setting the indicator *Data flow defined*.

**Bedienung und Anbindung an den Änderungsdienst****Bedienung und Anbindung an den Änderungsdienst**

1. Das System startet den Workflow, sobald Sie eine Änderungsnummer anlegen.
2. Sie erhalten in Ihrem Business Workplace ein Workitem mit der Aufforderung, die Änderungsnummer zu terminieren.

Hier legen Sie eine Frist fest, bis zu welchem Zeitpunkt die Änderungsnummer spätestens bearbeitet werden soll. Das System schlägt mehrere Alternativen zur Auswahl vor.




Wenn der Termin überschritten wird, erhält der Initiator der Änderungsnummer eine Informationsmail und das Workitem wird als terminüberschritten markiert.

Wenn Sie diese Entscheidung nicht selbst treffen können oder wollen, leiten Sie das Workitem an einen anderen Sachbearbeiter oder eine Organisationseinheit weiter. In diesem Fall wiederholt sich Schritt 2.

3. Sie erhalten in Ihrem Business Workplace ein Workitem mit der Aufforderung, die Änderungsnummer zu bearbeiten.

Dieses Workitem dient als Vehikel, um die Änderungsnummer weiterzuleiten und lebt so lange, bis Sie die Änderungsnummer löschen.



Solange die Bearbeitung der Änderungsnummer nicht abgeschlossen ist, sollten Sie das Workitem nicht beenden. Wählen Sie stattdessen  *Abbrechen*, um das Workitem in Ihrem Eingang zu behalten. Durch die Beendigung dieses Workitems wird der gesamte Workflow beendet.

4. Wenn Sie die Änderungsnummer löschen, beendet das System den Workflow.

## Changes with Reference to ECRs/ECOs (LO-ECH)

### Purpose

The Workflow templates described here demonstrate the processing of an ECR/ECO. An ECR/ECO is a change master record that you create with reference to a change type.

The Workflow management system uses the determined data flow to control that the work steps of a change process are carried out at the right time and by the person responsible.

These workflow templates are examples that demonstrate the functionality of the SAP Business Workflow.

### Process Flow

ECRs, which are converted to ECOs according to a specified procedure, give you more precise control over complex change processes and the processing sequence involved.

The change process tends to include the following phases:

- Creating an ECR  
You create the ECR and enter the change objects.
- Checking the ECR and converting it to an ECO  
The ECR and all its change objects must be checked as to whether the change is required and/or feasible. If at least one change object has to be changed, you must convert the ECR to an ECO.
- Changing objects and completing the ECO  
Once you have converted the ECR to an ECO, you can use the change number that identifies your ECO to process the change objects.

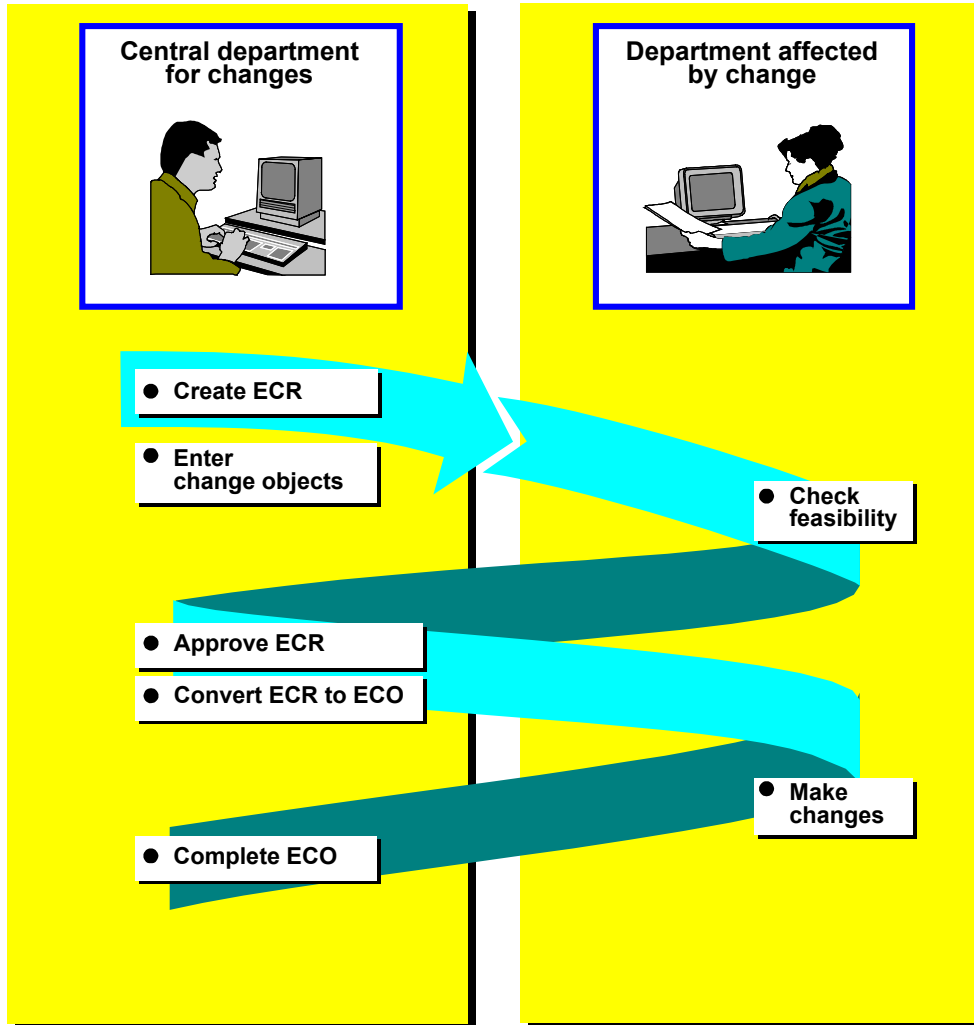
The standard SAP System provides you with a number of scenarios for Engineering Change Management. You can use these scenarios to process the following objects in Engineering Change Management:

- ECRs and ECOs  
[Example: Processing an Engineering Change Request \(ECR\) \[Page 16\]](#)
- Change objects  
[Example: Processing a Bill of Material \(BOM\) \[Page 17\]](#)

The standard SAP System provides workflow templates that organize and automate these steps in various ways. This lets you determine the extent to which users are involved in the change process or are informed of changes made.

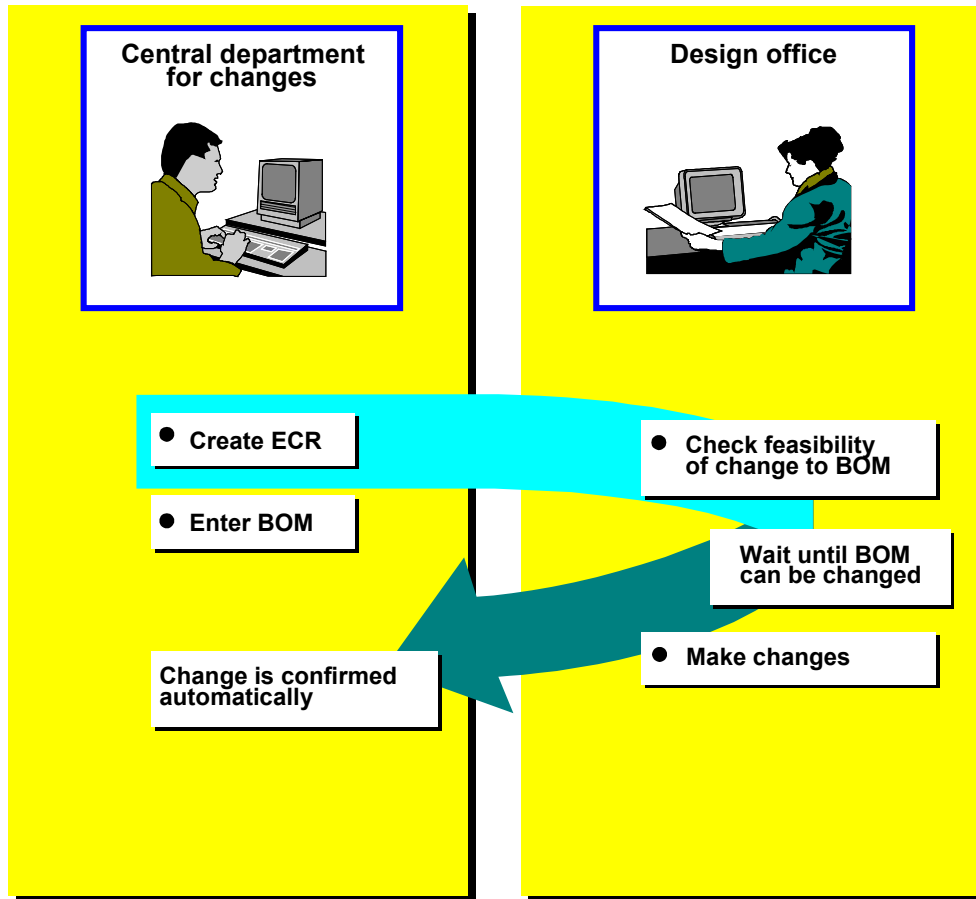
Example: Processing an Engineering Change Request (ECR)

## Example: Processing an Engineering Change Request (ECR)





## Example: Processing a Bill of Material (BOM)



---

## Technical Implementation (LO-ECH)

# Technical Implementation (LO-ECH)

Below, you will find the technical information that you need before you can use SAP Business Workflow for engineering change management in the standard R/3 System.

## Object Types

The object types form the interface between engineering change management and the workflow system.

Several processing steps are defined for engineering change management objects. They allow you to track the processing of an object from beginning to end.

In the **Business Object Repository**, the object types for engineering change management are defined under *Logistics – General* → Engineering Change Management

## Business Object Types

The following business object types are defined for engineering change management:

- [Object Type ECM – Change Master \(LO-ECH\) \[Page 19\]](#)
- [Object type ECO – Change Object \(LO-ECH\) \[Page 21\]](#)

## Organizational Object Types

Recipient determination uses [Organizational Object Types TCC11 and TCC13 \[Page 24\]](#). These object types are used to classify users according to the change tasks they perform.

## Standard Tasks

The [Standard Tasks \[Page 26\]](#) for engineering change management are single-step tasks. A single-step task describes an elementary business activity in engineering change management from the organizational point of view.

The standard tasks for engineering change management can be used as modules in all workflow scenarios without any modifications.

## Roles

The standard R/3 System provides standard role [Persons Responsible for Changes of a Change Type \[Page 30\]](#), which the system uses to determine the responsible persons in an organizational unit.

## Workflow Template

A business change process is implemented as a workflow definition in a workflow template. The standard R/3 System provides you with a number of [Workflow Templates for Engineering Change Management \[Page 32\]](#).

## Object Type ECM – Change Master (LO-ECH)

### Definition

ECRs/ECOs are processed in Engineering Change Management scenarios. In the scenario provided, the ECR/ECO is an **ECM** (change master) type of business application object. At the definition time, the ECR to be processed is generated using this object type.

The necessary technical data is specified in the **Business Object Repository** (SWO1) (under *Logistics - General* → *Engineering Change Management* → *ECM - Engineering Change Management: Change Master*).

### Use

In the scenario an ECR/ECO is created and processed as this type of object.

### Structure

#### Key field

The key field *Change number* identifies an object of this type.



ECR that is identified by the change number **N01-12**.

### Attributes

An attribute describes the properties of the change master record.

#### Virtual Attributes

The following overview shows several virtual attributes that return a value that is only determined at runtime by evaluation of the database contents.

Name of the attribute	Description	Data type reference
StatusObjNumber	Status management: Object number	Dictionary field OBJNR
StatusObjType	Status management: Object type	Dictionary field OBTP
ChangeNoType_OrgUnit	Person responsible for changes	Object type TCC11

#### Database field attributes

The following overview shows several database field attributes that return a field value from the ABAP dictionary.

Name of the attribute	Description	Data type reference
ChangeNoStatus	Master: Header status of a change number	Dictionary field AENST

**Object Type ECM – Change Master (LO-ECH)**

<b>ChangeNoType</b>	Master: Change type	Dictionary field CCART
<b>ReasonForChange</b>	Master: Reason for change	AEGRU

**Reference to a System Status**

The following overview shows several attributes that return a reference to a change master record system status.

<b>Name of the attribute</b>	<b>Short description</b>	<b>Source</b>	<b>Data type reference</b>
<b>Status_to_be_proc</b>	Status: Request converted	Object status I0254 (ECO to be processed)	Dictionary field OBJSTATUS
<b>Status_approved</b>	Status: Request approved	Object status I0253 (ECO approved)	Dictionary field OBJSTATUS

**Methods**

The methods determine the operation to be carried out. All methods for the change master record are defined without results.

**Events**

The events publish status changes to objects system wide.

The following table shows selected events that were published for the object type **ECM** (change master) as triggering or terminating events.

<b>Event</b>	<b>Description</b>
<b>opened</b>	ECR opened
<b>checked</b>	ECR checked
<b>all_objects_checked</b>	ECR – all objects checked
<b>confirmed</b>	ECO – all objects completed
<b>approved</b>	ECO approved
<b>completed</b>	ECO completed
<b>released</b>	ECO released
<b>to_be_processed</b>	ECR converted
<b>deleted</b>	Change number deleted

## Object Type ECO – Change Object (LO-ECH)

### Definition

In the established scenarios, the change object is a business application object of type **ECO** (change object). At the time of definition, a change object is generated using this object type.

The technical data is arranged in the **Business Object Repository** (Entry Logistics -general → *Engineering Change Management* → *ECO – Engineering Change Management: Change object*).

### Use

In the Engineering Change Management scenarios a change object is created and processed as an object of this type.

For BOMs, routings and documents, methods are planned with which you can create, change and display these objects. For all other change objects, general methods are planned.

You can arrange the scenarios in such a way that the activities carried out are either confirmed internally by the system, or so that the processor responsible has to confirm the changes.

### Structure

#### Key fields

An object of this type is identified by the following data:

- *Change number*
- *Object type* in the frame of Engineering Change Management, for example
  - BOMs
  - Task lists
  - Documents
- *Identification* of the objects to be changed, for example
  - Material BOM:  
Material, plant, usage
  - Routing:  
Task list type, task list group
  - Document:  
Document, document type, sub-document, version

#### Attributes

An attribute describes the properties of the change object.

#### Virtual Attributes

The following overview shows several virtual attributes that return a value that is only determined at runtime by evaluation of the database contents.

Name of the attribute	Description	Data type reference
-----------------------	-------------	---------------------

**Object Type ECO – Change Object (LO-ECH)**

<b>StatusObjNumber</b>	Status management: Object number	Dictionary field OBJNR
<b>StatusObjType</b>	Status management: Object type	Dictionary field OBTP
<b>ChangeType_OrgUnit</b>	Person responsible for changes	Object type TCC13

**Database field attributes**

The following overview shows several database field attributes the return a field value from the ABAP dictionary.

<b>Name of the attribute</b>	<b>Description</b>	<b>Data type reference</b>
<b>StatusKey</b>	Status management: Partial key	Dictionary field CCSTO
<b>ChangeType</b>	Object management record: Change type object	Dictionary field CCOAA

**Reference to a System Status**

The following overview shows several attributes that supply a reference to a change object system status.

<b>Name of the attribute</b>	<b>Description</b>	<b>Source</b>	<b>Data type reference</b>
<b>Status_to_check</b>	Status: Assign values to object changes	Object status I0259 (ECO to be processed)	Dictionary field OBJSTATUS
<b>Status_completed</b>	Status: Object changes completed	Object status I0265 (Object: change completed)	Dictionary field OBJSTATUS
<b>Status_released</b>	Status: Object change released	Object status I0266 (Object: change released)	Dictionary field OBJSTATUS

**Methods**

The methods determine the operation to be carried out. All methods for the change objects are defined without results.

**Events**

The events publish status changes to objects system wide.

The following table shows several events that were published for the object type **ECO** (change object) as triggering or terminating events.

<b>Event</b>	<b>Description</b>
--------------	--------------------

Object Type ECO – Change Object (LO-ECH)

possible	Object change is possible
opened	Object management record opened
to_do	Object changes have to be made
not_necessary	Object changes not necessary
not_possible	Object changes not possible
completed	Object changes completed
released	Object change released
to_check	Object management record contains check requirement
omr_deleted	Object management record deleted

## Organizational Object Types TCC11 and TCC13 (LO-ECH)

## Organizational Object Types TCC11 and TCC13 (LO-ECH)

### Definition

The following business object types are defined for Engineering Change Management: TCC11 and TCC13.

#### TCC11: Person responsible for changes of this type (change master)

The person responsible for changes of a particular change type (change master) is represented in SAP Business Workflow by organizational object type TCC11. At definition time, the system uses this object type to determine the persons responsible for the change type of the ECR.

#### TCC13: Person responsible for object changes of this type

The person responsible for changes of a particular object change type is represented in SAP Business Workflow by organizational object type TCC13.

At definition time, the system uses this object type to determine the persons responsible for the change type of the change object.

### Use

To define organizational responsibilities for change tasks clearly, you must assign possible agents to each single-step task. Before you can assign agents, you must have a company-specific organizational plan, which defines the organizational assignment of users.

An organizational plan describes the existing organizational units. To define the organizational units for Engineering Change Management, you assign the users to change types. Before you can enter a specific change type, you must link the organizational unit to an organizational object type.

This link allows the system to determine the recipient of a task from the change type. Organizational object types are also used to check whether a change type exists.



You define the change types in Customizing under *Logistics - General* → *Engineering Change Management*.

**See also:**

[Defining the Change Type \(LO-ECH\) \[Page 35\]](#)

### Key fields

Object types TCC11 and TCC13 are identified by the following key fields.

Object type	Key fields
TCC11	This object type is identified by a change type for the change number. You define the change type in Customizing step <i>Define change types for change master records</i> (table TCC11).



**Organizational Object Types TCC11 and TCC13 (LO-ECH)**

TCC13	This object type is identified by a change type for objects. You define the change type in Customizing step <i>Define change types for objects</i> (table TCC13).
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**Methods**

Object type	Method	Description
TCC11	<b>ChangeType.ExistenceCheck</b>	Check for the existence of the change type
TCC13	<b>Object.ExistenceCheck</b>	Check for the existence of the change type

**Events**

No local attributes are defined for these object types.

## Standard Tasks for Engineering Change Management (LO-ECH)

## Standard Tasks for Engineering Change Management (LO-ECH)

### Definition

Goal-directed activities for change processes.

### Use

Standard tasks are used for workflow templates.

In the standard R/3 System, tasks are defined for engineering change requests (ECRs) and engineering change orders (ECOs) as steps in a workflow definition, which trigger the required activities. You can also use these standard tasks as modules for other workflow scenarios.

Operative steps for the activities in these workflow templates refer exclusively to these standard tasks.

- Each standard task for Engineering Change Management is defined as a single-step task and describes a basic business transaction in Engineering Change Management from an organizational point of view.
- At the defined point in time, a standard task appears in the integrated inbox of the responsible person (automatic recipient determination) as a dialog work item, or is performed automatically by the system as a background work item.

### Structure

Change activities in the workflow scenarios for change processes use object type **ECM** (change master) or **ECO** (change object).

#### Standard tasks for object type ECM (change master)

Task	Abbreviation	Short text
00007791	ECM edit	ECH: Change change number
00007930	ECM Objects	ECH: Declare ECR objects
00007934	ECM possibty	ECH: Check ECR
00007935	ECM confirm	ECH: Approve ECR
00007936	ECM release	ECH: Release ECO
00008020	ECM Status	ECH: ECR/ECO status report
00008204	ECM confirm	ECH: Convert ECR to ECO
00300009	ECM m_reject	ECH: Notification – Request rejected (from 4.6C)
20000180	ECM opening	ECH: Set request as 'to check'
20000181	ECM takdist	ECH: Assign task to user manually
20000182	ECM add_obj	ECH: Select change object
20000183	ECM i_ObjChe	ECH: Info item (objects being checked)

**Standard Tasks for Engineering Change Management (LO-ECH)**

20000184	ECM i_ObjCom	ECH: Info item (object change to be completed)
20000185	ECM i_ObjRel	ECH: Info item (object change to be released)
20000186	ECM complete	ECH: Complete ECO (from 4.6C)
20000797	ECM_approve	ECH: Approve ECR (from 4.6C)
20000798	ECM_convert	ECH: Convert ECR into ECO (from 4.6C)
20000800	ECM set chk	ECH: Set status to 'check ECR' (from 4.6C)
20000801	ECM_Obj_che	ECH: Info objects being checked (from 4.6C)
20000802	ECM_check	ECH: Check ECR (from 4.6C)
20000822	ECM_decision	ECH: Decision after request rejection (from 4.6C)
20000823	ECM_decision	ECH: Decision after request rejection (from 4.6C)
20000862	ECM_Deadline	ECH: Deadline for determining a change number (from 4.6C)

**Standard tasks for object type ECO (change object)**

<b>Task</b>	<b>Abbreviation</b>	<b>Short text</b>
00007917	ECO edit	ECH: Edit change object
00007937	ECO check	ECH: Change object – check requirement
00007939	ECO complete	ECH: Complete change object
00008040	ECO release	ECH: Release change object
00008144	ECO conf aut	ECH: Confirm change automatically
00008145	ECO BOMmaint	ECH: Maintain BOM for change number
00008146	ECO BOMdisp	ECH: Display BOM for change number
00407926	ECO objctkey	ECH: Determine object ID
00407927	ECO objctref	ECH: Determine object reference from counter
20000808	ECO BOM edit	ECH: Maintain BOM (from 4.6C)
20000811	ECO Doc main	ECH: Maintain document (from 4.6C)
24500053	ECO edit syn	ECH: Edit change object (from 4.6C)
20000807	ECO Mat_edit	ECH: Maintain material (from 4.6C)
00408116	ECO RECmaint	Change receipt for ECR (from 4.6C)
20000869	ECO release	Decision: Release object change (from 4.6C)
20000812	ECO task edi	ECH: Maintain task list (from 4.6C)
03100021	ECO to_check	ECH: Check object change (from 4.6C)
20000870	ECO_abschl	ECH: Confirm object change (from 4.6C)
03100023	ECO_BOM_Mnt	ECH: Maintain BOM (from 4.6C)
03100038	ECO_ChgNotP	ECH: Object change 'not possible' (from 4.6C)

**Standard Tasks for Engineering Change Management (LO-ECH)**

03100022	ECO_Mat_Mnt	ECH: Maintain material (from 4.6C)
20000829	ECO_release	ECH: Release object change (from 4.6C)
03100025	ECO_release	Release object change – background (from 4.6C)
03100024	ECO_Task_Mnt	ECH: Maintain task list (from 4.6C)

**Agent assignment**

At definition time for a workflow, the recipients of standard tasks are determined automatically.

[Recipient Determination for Standard Tasks \(LO-ECH\) \[Page 29\]](#)

## Recipient Determination for Standard Tasks (LO-ECH)

At definition time for a workflow, the recipients of standard tasks are determined automatically.

For engineering change management, standard tasks have the following types of recipient determination:

- **General** tasks, which can be performed by any user

For this type of recipient determination, you must make settings in Customizing for *Workflow Management*.

**See also:**

[Classifying a Standard Task as a General Task \(LO-ECH\) \[Ext.\]](#)

- Tasks whose recipients are allocated **directly** to the standard task

For this type of recipient determination, you must make settings in Customizing for *Workflow Management*.

**See also:**

[Assigning a Standard Task to Agents \(LO-ECH\) \[Ext.\]](#)

- Tasks for which **standard roles** are defined

For this type of recipient determination, note the special points for engineering change management.

**See also:**

[Standard role: Persons Responsible for Changes of a Change Type \(LO-ECH\) \[Page 30\]](#)

Standard Role: Persons Responsible for Changes of a Change Type (LO-ECH)

## Standard Role: Persons Responsible for Changes of a Change Type (LO-ECH)

### Definition

Role for determining the person responsible for changes of a change type.

Since the organizational unit is linked to a particular change type, the task can be automatically assigned to the users that are responsible for the particular change.

### Structure

**Role:** 00000138

**Key:** sap\_org\_unit

**Description:** Agent of an organizational unit

### Role Parameters

The role parameter container contains the following element:

**org\_object\_id** (identification of organizational object)  
(data type reference: organizational object types TCC11 and TCC13)

### Integration

#### Preparations in the Organizational Plan

A company's organizational plan is read during role resolution.

In the standard R/3 System, the following organizational object types exist. These allow you to define organizational units with reference to a change type:

- **TCC11** – Person responsible for changes of this type (change master)
- **TCC13** – Person responsible for object changes of this type

**See also:**

[Maintaining the Organizational Plan for the Change Department \(LO-ECH\) \[Page 36\]](#)

#### Settings in the Standard Task

The standard task forms the link to an object type. For each object type, an attribute for the person responsible for the organizational unit is maintained.

**Object type:** ECM – change master record

**Attribute:** ChangeNoType\_OrgUnit – person responsible for an organizational unit that is defined with reference to a change type (change master)

**Object type:** ECO – linked change objects

**Attribute:** ChangeType\_OrgUnit – person responsible for an organizational unit that is defined with reference to a change type (change object)

**Standard role:** 00000138

Standard role 00000138 is the default role for standard tasks of object types TCC11 and TCC13. In the editor for data flow definition, the allocation of the organizational unit to the container

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**Standard Role: Persons Responsible for Changes of a Change Type (LO-ECH)**

element `org_object_id` is defined, with reference to either a change type for a master record or a change type for a change object.

## Workflow Template for Engineering Change Management (LO-ECH)

## Workflow Template for Engineering Change Management (LO-ECH)

### Definition

Workflow template for processing ECRs/ECOs (change master record) and change objects (such as BOMs).

### Structure

The standard R/3 System provides workflow templates that control complete change processes that use ECRs and ECOs.

All workflow templates of Engineering Change Management are based on the object types **ECM** (change master) or **ECO** (change object).

Workflow templates are defined in the following ways:

- Simpler change processes have several workflow templates, in which different standard tasks are processed.
- More complex change processes have one workflow template, which is made up of different workflow templates (subflows).
  - The main flow defines the triggering event.
  - Once the checks in one subflow are finished, the subflow ends and the next subflow starts.

### Object Type: ECM Change Master Record

The following overview shows the workflow templates for object type ECM (change master record).

WF template	Abbreviation	Description
00000039	ECM Flow old	<a href="#">Processing ECRs and ECOs &lt;Rel. 3.1 (LO-ECH) [Page 43]</a>
00600011	ECM Flow_old	<a href="#">Processing ECRs and ECOs &lt;Rel. 4.0 (LO-ECH) [Page 44]</a>
20000067	ECM Flow	<a href="#">Processing ECRs and ECOs =Rel. 4.0 (LO-ECH) [Page 45]</a>
20000754	ECM Flow_01	<a href="#">Processing ECRs and ECOs =Rel. 4.6C (LO-ECH) [Page 48]</a>

### Object Type: ECO Linked Object Changes

The following overview shows the workflow templates for object type ECO (change object).

WF template	Abbreviation	Description
00000042	ECO Flow	<a href="#">Processing BOMs (LO-ECH) [Page 53]</a>
00000044	ECO Flow BOM	<a href="#">Processing Change Objects (General) (LO-ECH) [Page 52]</a>
00400002	ECO Flow DOC	<a href="#">Processing Documents (LO-ECH) [Page 54]</a>
20000748	ECO Flow_01	<a href="#">Processing Change Objects =Rel. 4.6C (LO-ECH) [Page 55]</a>



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Workflow Template for Engineering Change Management (LO-ECH)

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**Preparation and Customizing (LO-ECH)**

## Preparation and Customizing (LO-ECH)

### Use

In addition to the general Customizing that ensures the smooth operation of the functions in the workflow system, special Customizing is required for the workflow templates.

### Prerequisites

You have defined the general settings for SAP Business Workflow.

### Activities

The following activities are necessary:

- [Defining the Change Type \(LO-ECH\) \[Page 35\]](#)
- [Define the Organizational Plan for the Change Department \(LO-ECH\) \[Page 36\]](#)
- [Task-Specific Customizing \(LO-ECH\) \[Page 38\]](#)

### Triggering events

Since the triggering events are controlled by the change type, you do not have to make any setting for this in Customizing Engineering Change Management.

## Defining the Change Type (LO-ECH)

### Use

The system uses the change type to determine the responsible organizational unit for the task in which the agent assignment takes place using the standard role 00000138.

### Activities

- In Customizing Engineering Change Management select *Change type* → *Define change types for master record*.

These change types are only relevant for the ECR/ECO. They are saved in table TCC11.

- In Customizing Engineering Change Management select *Change type* → *Define change types for objects*.

These change types are only relevant for change objects. They are saved in table TCC13.

In both work steps, you enter the following data:

- In the field *ChgTyp* a key for the change type
- In the field *WF Type* the object type for the Workflow (such as WS)
- In the field *WF Task* the key for the Workflow

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**Define the Organizational Plan for the Change Department (LO-ECH)**

## Define the Organizational Plan for the Change Department (LO-ECH)

### Use

If you define the organizational units for Engineering Change Management, you do this with reference to a change type. You assign an organizational unit to an organizational object type and a change type. This is the prerequisite for the automatic agent assignment via the standard role 00000138.

### Prerequisites

You have maintained the change types for the master record and the change objects in Customizing for Engineering Change Management.

### Procedure

1. From the SAP easy access menu select *Tools* → *Business Workflow* → *Development* → *Definition Tools* → *Organizational management* → *Organizational plan* → *Create*.

The *Organization and staffing (Workflow) Create* screen appears.

2. Create an organizational unit, or change an existing one.



If you create an organizational unit for a change department (such as Change-01), the system generates an object structure that only contains the newly created organizational unit (such as Change-01) at this processing time.

Create one or more positions for the organizational unit and assign them to this processor.

For further information about this, refer to [Organizational plan \[Ext.\]](#).

3. Save.

So that the reference to the change art will be defined for the organizational unit, you link the organizational unit with one of the organization object types for Engineering Change Management in steps 4 to 8.

4. Double click on the organizational unit to select it, and choose *Goto* → *Detail object* → *Enhanced object description*.

This takes you to the screen *Maintain object*. The system lists several info types.

5. Select the object type *SAP Organizational Object*, and click .

The *Add SAP Organizational Object* screen appears.

6. In the field SAP org. object type, enter one of the following organizational object types:

- **TCC11**  
Responsible for changes of this change type (master record)
- **TCC13**  
Responsible for object changes of this change type

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**Define the Organizational Plan for the Change Department (LO-ECH)**

7. Select the button *Enter key field* and enter the change type in the dialog box that appears.
8. Save.

## Task-Specific Customizing (LO-ECH)

## Task-Specific Customizing (LO-ECH)

### Use

Before you can use the Workflow tasks in Engineering Change Management, you have to assign the **possible** processors. This determines which user has the authorization to carry out a work item.

### Features

You have two options:

- You classify the tasks as general tasks.  
In this instance, practically every user in your company is authorized to carry out the work items.
- You assign each task to a specific user.  
In this instance, only that particular user is authorized to carry out the work item.

### Activities

- In Customizing Engineering Change Management select *Change type* → *Define Workflow for ECR/ECO*.
- Carry out the activity *Assigning a standard task to agents*.
- Classify the task as a general task or assign each task to a specific processor.
- Go back and carry out the work step *Define workflow for object management record*. Repeat steps 2 and 3.

This these tasks you have to make a setting:

Work step	Workflow	This these tasks you have to make settings:
<i>Define workflow for ECR/ECO</i>	20000754 (Processing ECRs and ECOs from Release 4.6C)	Work step <i>Define workflow for ECR/ECO</i> All tasks under the entry <i>ECH: Workflow ECR/ECO</i> that are not classified as background tasks with the exception of task 20000182.
<i>Define Workflow for object management record</i>	20000748 (Processing change objects from Release 4.6C)	Work step <i>Define Workflow for object management record</i> All tasks under the entry <i>ECH: Workflow Object Management Record</i> that are not classified as background tasks.



The standard task 20000182 (*Select change objects*) should **not** be classified as a general task. In the standard SAP system this task is used in the subflow 20000068 (request distribution for entering objects). The user of the task 20000182 is determined by the previous task 20000181 (*Assign task to user manually*).

See also:

[Maintain agent assignment \[Ext.\]](#)

## Triggering Events (LO-ECH)

## Triggering Events (LO-ECH)

### Use

For the standard tasks scheduled by SAP or for the workflow template for Engineering Change Management, the links between event and task are activated automatically. The triggering events for runtime are generated for all workflow templates (such as when creating an engineering change request).

In the SAP standard system, all triggering events for the workflow template are defined in the area *Engineering Change Management* and contained in the event linkage table.

**For the workflow template from Engineering Change Management, you must not activate the linkage between the triggering event and the workflow template as the consumer of the event.**

### Features

The following overview shows the events for individual workflow templates that you can display in Customizing *Basis*.

#### Triggering Events for Workflow Template

Workflow templates	Object type	Triggering Event	Release
00000039 ECM Flow old (Process ECR)	ECM	opened	<Rel. 3.0
00600011 ECM Flow_old (Process ECR)	ECM	opened	<Rel. 4,0
20000067 ECM Flow 4.0 (Process ECR)	ECM	opened	Rel. 4.0 to 4.6B
20000754 ECM Flow_01 (ECH: Workflow ECR/ECO)	ECM	opened	from Rel. 4.6C
00000042 ECO Flow (Process change object (general))	ECO	opened	Rel. 3.1 to 4.6B
00000044 ECO Flow BOM (Process BOM)	ECO	opened	Rel. 3.1 to 4.6B
00400002 ECM Flow DOC (Process document)	ECO	opened	Rel. 3.1 to 4.6B



Triggering Events (LO-ECH)

20000748 ECO Flow_01 (ECH: Workflow object management record)	ECO	opened	from Rel. 4.6C
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**Operation and Link to Engineering Change Management (LO-ECH)**

## **Operation and Link to Engineering Change Management (LO-ECH)**

The following documents describe the operation of the following workflow templates and their link to Engineering Change Management:

- Processing of an ECR and ECO
  - [Processing ECRs and ECOs <Rel. 3.1 \(LO-ECH\) \[Page 43\]](#)
  - [Processing ECRs and ECOs <Rel. 4.0 \(LO-ECH\) \[Page 44\]](#)
  - [Processing ECRs and ECOs =Rel. 4.0 \(LO-ECH\) \[Page 45\]](#)
  - [Processing ECRs and ECOs =Rel. 4.6C \(LO-ECH\) \[Page 48\]](#)
- Processing a change object
  - [Processing Change Objects \(General\) \(LO-ECH\) \[Page 52\]](#) (to Rel. 4.6B)
  - [Processing BOMs \(General\) \(LO-ECH\) \[Page 53\]](#) (to Rel. 4.6B)
  - [Processing Documents \(General\) \(LO-ECH\) \[Page 54\]](#) (to Rel. 4.6B)
  - [Processing Change Objects =Rel. 4.6C \(LO-ECH\) \[Page 55\]](#)

## Processing ECRs and ECOs <Rel. 3.1 (LO-ECH)

### Use

Only use this workflow template if you are using a release **before** Release 3.1. Later releases have different workflow templates that use new functions and display the tasks more clearly in the inbox.

### Features

The triggering event **opened** (ECR created) is generated automatically when you create an ECR with reference to a change type for the following workflow task:

**Workflow template:** 00000039

**Key:** ECM Flow old

### Scenario

This workflow template controls the following change process:

- Standard task 00007930  
You create an ECR. The system starts standard task *Create change objects* (00007930), so that you enter the objects affected by the change.
- Standard task 00007934  
Once you have set system status *Check ECR* for the change master record, the system starts standard task *Check feasibility of change* (00007934). You decide for each change object whether the change can be made (for example, you set system status *Change possible*).
- Standard task 00007935  
You check all change objects and set system status *ECR checked* for the ECR. The system starts standard task *Approve ECR* (00007935).
- Standard task 00008204  
Once the ECR is approved, the system starts standard task *Convert ECR* (00008204).
- Standard task 00007936  
You complete changes to the objects. The system starts standard task *Release ECO* (00007936).

The persons responsible for the different steps are determined automatically from standard role 00000138.

## Processing ECRs and ECOs &lt;Rel. 4.0 (LO-ECH)

## Processing ECRs and ECOs <Rel. 4.0 (LO-ECH)

### Use

Only use this workflow template if you are using a release **before** Release 4.0. Later releases have different workflow templates that use new functions and display the tasks more clearly in the inbox.

### Features

The triggering event **opened** (ECR created) is generated automatically when you create an ECR with reference to a change type for the following workflow task:

**Workflow template:** 00600011

**Key:** ECM Flow\_old

### Scenario

This workflow template controls the following change process:

- Standard task 00007930  
You create an ECR. The system starts standard task *Create change objects* (00007930), so that you enter the objects affected by the change.
- Standard task 00007934  
Once you have set system status *Check ECR* for the change master record, the system starts standard task *Check feasibility of change* (00007934). You decide for each change object whether the change can be made (for example, you set system status *Change possible*).
- Standard task 00007935  
You check all change objects and set system status *ECR checked* for the ECR. If the ECR is not approved in this step, the system starts standard task *Approve ECR* (00007935).
- Standard task 00008204  
If the ECR is not converted to an ECO automatically on approval, the system starts standard task *Convert ECR* (00008204).
- Standard task 00007936  
You complete changes to the objects. The system starts standard task *Release ECO* (00007936).

The persons responsible for the different steps are determined automatically from standard role 00000138.

## Process ECR/ECO =Rel. 4.0 (LO-ECH)

### Use

Use the workflow template when you install Release 4.0.

If you install this workflow template, you should create a copy and carry out the company-specific changes or enhancements.

### Features

This workflow template is made up of several workflow dummies (Subflows).

- The triggering event is defined in the main flow.
- As soon as the subflow checks are carried out, this subflow is automatically ended and the next subflow started.

The event **opened** (request opened) that explodes the workflow, is automatically generated when you create a change request with reference to a change type for which the following workflow task is scheduled:

**Workflow template:** 20000067

**Abbreviation:** ECM Flow

### Scenario

If you create a change request, you can enter the objects, that are affected by the change (such as BOM, document). In a later work step, it is possible for you to send the change request to other processor who can enhance other change objects.

After you have entered the change objects, you can set the system status of the change request to *check request*. Only with this status can you decide for each change object whether the change is feasible.

The following change process is controlled with this workflow template:

- Workflow template 00300011 (subflow)

If the change request does not yet have the system status *check request*, the system starts the subflow *Set the request to 'to check'* (00300011), with which you set the system status of the change request to *check request*.  
The subflow is completed if you set the system status of the change request to *check request*.
- Workflow template 20000068 (subflow)

After you have entered the change objects and set the system of the change request to *check request* you can forward the request to other processors, who if necessary add other change objects.

The system starts the subflow *Distribute ECR for entering objects* (20000068).  
The user query initiates the subflow. You can make one of the following decisions:

  - The request is to be forwarded to other processors.  
In this case, several processors can enhance the change objects.

**Process ECR/ECO =Rel. 4.0 (LO-ECH)**

Through the standard task TS 20000181 (*Manual user assignment*) the processors are entered who can enhance the change objects. The processors are the recipients of the following standard task (TS 20000182). Because of this, the task TS 20000181 can not be classified as a general task in Customizing.

The task is completed when the processors have been entered.

The system starts the standard task TS 20000182 (*Enter change objects*). The recipient is determined by task TS 20000181 (*Manual user assignment*).

When entering a change object you can immediately determine the feasibility of the change for each change object (system status of the change object).

The task is completed when all selected processors have processed the change request.

- The request check should follow directly after the order creation.  
In this case the subflow is left directly.

- Workflow template 20000069 (subflow)

After the processor has entered the change objects, you can check the feasibility of the change for each change object.

As long as you have not decided whether the change can be carried out for each change object or not (such as system status *change possible*) you have an information in the inbox (standard task 20000183). The task is automatically completed when all objects have the system status for the feasibility of the change.

Then you have to set the system status of the change request to *request checked*. If this status is not set immediately, the system starts the standard task *check ECR* (00007934).

The subflow is completed if you set the system status of the change request to *request checked*.

- Workflow template 20000070 (subflow)

After the request has been checked, you can approve it.

If the change request has not yet been approved, the system starts the standard task *approve ECR* (00007935).

The subflow is completed if you set the system status of the change request to *request approved*.

- Workflow template 20000071 (subflow)

After the request has been approved, you can convert it into a change order.

If the change request has not yet been converted, the system starts the standard task *convert ECR* (00007935).

The subflow is completed if you set the system status of the change request to *request converted*.

- Workflow template 20000074 (subflow)

After the request has been converted into a change order, you can process the change objects.

The system sends information to all processors responsible, about who entered the change object in the change order and who last changed the object (standard task 20000184).

The order remains as information in the inbox until the changes to the objects are closed (system status *close change* for the object).

- Workflow template 20000072 (subflow)

After the system status for the objects concerned has been set to *closed*, you can close the change order and if necessary release the objects.

The system starts the standard task *close ECR* (00007939) if:

- Changes for the change request have not yet been closed and
- Objects have not yet been released

Then you can release each object.

As long as not every change object has been released (system status *released*), you have information in the inbox (standard task 20000185). The task is automatically completed when all objects have the system status *change released*.

The subflow is completed when one of the following steps is carried out:

- The change order is closed.
- All objects from the order are released.

- Workflow template 20000073 (subflow)

After the change order has been closed, you can release it.

If the change request has not yet been released, the system starts the standard task *release ECR* (00007935).

The subflow is completed if you set the system status of the change request to *request released*.

With the release of the change order, the complete workflow is closed

For the various work steps, the processors responsible are automatically determined by the standard role 00000138.



If in the change request, the system status *reject request* is set, or in one of the object management records the status *change not possible* is set, the workflow runs in a path in which the entire workflow is completed. If before completion, other activities need to be carried out, you can add them to the path behind the wait step work item.

## Processing ECRs and ECOs =Rel. 4.6C (LO-ECH)

### Use

Use this workflow when you install Release 4.6C.

If you install this workflow template, you should create a copy and carry out the company-specific changes or enhancements.

### Integration

This workflow is made up of the workflow for the processing of change objects (WS20000748).

**See:** [Processing Change Objects =Rel. 4.6C \(LO-ECH\) \[Page 55\]](#)

### Features

This workflow is made up of several subflows.

- The triggering event is defined in the main flow.
- Once the checks in one subflow are finished, this subflow ends and the next subflow starts.

The event **opened** (request opened) that explodes the workflow, is automatically generated when you create a change request with reference to a change type for which the following workflow task is scheduled:

**Workflow:** 20000754

**Abbreviation:** ECM Flow\_01

### Scenario

If you create a change request, you can enter the objects, that are affected by the change (such as BOM, document).



In a later work step, it is possible for you to send the ECR to other processors – such as from different departments - who can enhance other change objects .

After you have entered the change objects, you can set the system status of the ECR to *check request*. Only with this status can you decide for each change object whether the change is feasible.

The following change process is controlled with this workflow:

- Wait step work item 00138: Wait for deletion of the ECR/ECO
  - If the ECR/ECO has been deleted, the system automatically sends a mail to the processor who created the ECR as information. Then the workflow is completed.
- Workflow WS00300011 (Subflow): Set status to 'check request'
  - If the change request does not yet have the system status *check request*, the system starts the subflow *Set the request to 'to check'* (00300011), with which you set the system status of the change request to *check request*.



## Processing ECRs and ECOs =Rel. 4.6C (LO-ECH)

The subflow is completed if you set the system status of the change request to *check request*.

- Workflow WS20000068 (Subflow): Forward request to entering objects

After you have entered the object management records and set the system of the ECR to *check request* you can forward the request to other processors, who if necessary add other change management records.

The system starts the subflow *Distribute ECR for entering objects* (20000068). The user query initiates the subflow. You can make one of the following decisions:

- The request is to be forwarded to other processors.

In this case, several processors can enhance the change objects.

Through the standard task TS 20000181 (*Manual user assignment*) the processors are entered who can enhance the change objects. The processors are the recipients of the following standard task (TS 20000182).



Because of this, the task TS 20000181 can not be classified as a general task in Customizing.

The task is completed when the processors have been entered.

The system starts the standard task TS 20000182 (*Enter change objects*). The recipient is determined by task TS 20000181 (*Manual user assignment*).

When entering a change object you can immediately determine the feasibility of the change for each change object (system status of the change object).

The task is completed when all selected processors have processed the change request.

- The request check should follow directly after the order creation.

In this case the subflow is left directly.

- Workflow WS20000068 (Subflow): Check request

After the processor has entered the change objects, you can check the feasibility of the change for each change object.

As long as you have not decided whether the change can be carried out for each change object or not (such as system status *change possible*) you have an information in the inbox (standard task 20000801: Info: objects being checked). The task is automatically completed when all objects have the system status for the feasibility of the change.

Then you have to set the system status of the change request to *request checked*. If this status is not set immediately, the system starts the standard task *check ECR* (20000802).

The subflow is completed if you set the system status of the change request to *request checked*.

- Workflow WS20000743 (Subflow): Approve request

If the change request has not yet been approved, the system starts the standard task *approve ECR* (20000797).

**Processing ECRs and ECOs =Rel. 4.6C (LO-ECH)**

In this subflow, the system sets a flag if you set the system status *Reject request*. This flag determines the additional run of the main workflow.

The subflow is completed if you set the system status of the change request to *approve request* or *reject request*.

- User decision 00112: Determine run of the approval process

Is started, when, in the previous subflow (WS20000743: Approve request) you have set the system status to *Reject request*.

Decision options:

  - Resubmit ECR for approval

If you select this option, the system restarts the subflow WS20000743: Approve request. In this case, the approval of the ECR must be decided upon again.
  - End the approval process of the ECR

If you choose this option, the system generates the event *omr\_deleted*, in order to inform the object management records that the ECR has been deleted. Then the workflow is closed.
- Workflow WS20000744 (Subflow): Convert request

If the ECR was approved in the previous subflow (WS20000743) you can convert it into an ECO.

If the change request has not yet been converted, the system starts the standard task *Convert ECR into ECO* (20000798).

In this subflow, the system sets a flag each time you set the system status *Reject request* or *Remove approval*. This flag determines the additional run of the main workflow.

  - If you *remove the approval* then the ECR has to be rechecked. In this case, the system restarts the subflow WS20000069 (Check ECR).
  - If you *reject the request* then a user decision about the subsequent run is required (user decision 00117).

The subflow is completed if you set the system status of the change request to *Convert request*, *Reject request* or *Remove approval*.
- User decision 00117: User decision about subsequent run

Is started when, in the previous subflow (WS20000744, Convert request), the request has been rejected.

Decision options:

  - Resubmit ECR for approval

If you select this option, the system restarts the subflow WS20000743: Approve request.
  - End the approval process of the ECR

If you choose this option, the system generates the event *omr\_deleted*, in order to inform the object management records that the ECR has been deleted. Then the workflow is closed.

## Processing ECRs and ECOs =Rel. 4.6C (LO-ECH)

- Workflow WS20000074 (Subflow): Information mail about the object status

Once the request has been converted into an ECO you can process the change objects.

The system informs all responsible employees about who entered the change object in the ECO and who changed the object last (task 20000184).

The task remains as information in the inbox until the changes to the objects are completed (system status *Complete change* for the object).
- Workflow WS20000072 (Subflow): Complete order

As soon as all object management records have been completed, you can complete the ECO (task TS20000186).

Until all the object management records have been released (system status *Released*), you have an information mail in your inbox (task 20000185). This task is automatically completed when all object management records have the system status *Change released*.

The subflow is completed when the ECO is completed and all object management records are released.
- Workflow WS20000073 (Subflow): Release order

When you have completed the ECO and all object management records have been released, you can release the ECO.

If the change request has not yet been released, the system starts the standard task *release ECR* (00007936).

The subflow is completed if you set the system status of the change request to *release request*.

The release of the ECO marks the completion of the entire workflow.

The responsible employee for the various work steps is automatically determined using the standard role 00000138.

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**Processing Change Objects (General) (LO-ECH)**

## Processing Change Objects (General) (LO-ECH)

### Use

If you use this workflow template, we advise you to make a copy before you make changes and enhancements that are specific to your company.

### Features

The event **opened** (object management record created), which triggers the workflow, is created automatically when you create an object management record with reference to a change type for which the following workflow task is defined:

**Workflow template:** 00000042

**Key:** ECO flow

### Scenario

This workflow template controls the following change process:

- You create the ECR and enter the change objects that are affected
- Standard task 00007937  
Once you have set system status *Check ECR* for the change master record, the system starts standard task *Inspection request for change object* (00007937). You decide for each change object whether the change can be made (for example, you set system status *Change possible*).
- Standard task 00007939  
Once you have changed the objects with reference to the change number, the system starts standard task *Complete object change* (00007939).
- Once the change is complete for all change objects, the subflow ends.  
You can complete and release the engineering change order.

The persons responsible for the different steps are determined automatically from standard role 00000138.

## Processing BOMs (LO-ECH)

### Use

If you use this workflow template, we advise you to make a copy before you make changes and enhancements that are specific to your company.

### Features

The event **opened** (object management record created), which triggers the workflow, is created automatically when you create an object management record with reference to a change type for which the following workflow task is defined:

**Workflow template:** 00000044

**Key:** ECO Flow BOM

### Scenario

This workflow template controls the following change process:

- You create the ECR and enter the BOMs that are affected
- Standard task 00007937

Once you have set system status *Check ECR* for the change master record, the system starts standard task *Inspection request for change object* (00007937). You decide for each BOM whether the change is feasible (for example, you set system status *Change possible*).

- Standard task 00008145

Once the ECR has been approved and converted to an ECO, the system starts standard task *Maintain BOM for <change number>* (00008145).

A background task confirms the changes to each BOM and ends the subflow.

The persons responsible for the different steps are determined automatically from standard role 00000138.

## Processing Documents (LO-ECH)

## Processing Documents (LO-ECH)

### Use

If you use this workflow template, we advise you to make a copy before you make changes and enhancements that are specific to your company.

### Features

The event **opened** (object management record created), which triggers the workflow, is created automatically when you create an object management record with reference to a change type for which the following workflow task is defined:

**Workflow template:** 00400002

**Key:** ECO Flow Doc

### Scenario

This workflow template controls the following change process:

- You create the ECR and enter the documents affected by the change.
- Standard task 00007937

Once you have set system status *Check ECR* for the change master record, the system starts standard task *Inspection request for change object* (00007937). You decide for each document whether the change is feasible (for example, you set system status *Change possible*).

If the change is possible, you decide whether to create a new version of the document or change the existing version.

- Standard task 00007939

Once the ECR has been approved and converted to an ECO, you can make the change. The system starts standard task *Complete object change* (00007939).

You must set the following statuses for each document to be changed:

- *Complete change*
- *Release change*

The subflow ends when you release the document.

The persons responsible for the different steps are determined automatically from standard role 00000138.

## Processing Change Objects =Rel. 4.6C (LO-ECH)

### Use

You use this workflow for the following object types:

- Material
- Bill of material
- Routing
- Document

If you install this workflow template, you should create a copy and carry out the company-specific changes or enhancements.

### Integration

This workflow enhances the workflow for the processing of ECRs and ECOs (WS20000754).

**See:** [Processing ECRs and ECOs =Rel. 4.6C \(LO-ECH\) \[Page 48\]](#)

### Features

The event **opened** (object management record opened) that explodes the workflow, is automatically generated when you create a change object with reference to a change type for which the following workflow task is scheduled:

**Workflow:** 20000748

**Abbreviation:** ECO Flow\_01

### Scenario

The workflow contains the following steps:

- Wait step work item 00148: Object management record deleted  
This wait step work item waits for the event *omr\_deleted* (object management record deleted). When this occurs, the workflow is completed immediately.
- Wait step work item 00105: Change number deleted  
This wait step work item waits for the event *deleted* (change number deleted). When this occurs, the workflow is completed immediately.
- Workflow WS03100060 (Subflow): Object waiting for check requirement  
This subflow has the purpose of waiting for you to set the system status *Check request* in the workflow for the ECR ([Processing ECRs and ECOs =Rel. 4.6C \(LO-ECH\) \[Page 48\]](#)).  
  
The subflow contains the wait step work item 00014: Wait for check requirement. This waits for the event *to\_check* (Check object management record).
- Task TS03100021: Object change possible  
For each change object, you decide whether the change can be carried out or not. For each object you set one of the following statuses:

**Processing Change Objects =Rel. 4.6C (LO-ECH)**

- ‘Change possible’  
When you set this status, the system then starts the subflow 20000749: Carry out object change
- ‘Change not possible’  
When you set this status, the system then starts the user decision 00079: user decision about the subsequent run
- ‘Change not necessary’  
When you set this status, then in the subsequent run of the workflow, the system does not generate any work items for the processing of objects.
- User decision 00079: User decision about subsequent run  
Is started, when, in the previous task (TS03100021: Object change possible), the status ‘Change not possible’ has been set.  
Decision options:
  - Resubmit change objects for checking  
If you select this option, the system restarts task TS03100021: Object change possible. In this case, the possibility of the object change must be decided upon again.
  - Do not resubmit change object  
If you select this option, the workflow is completed immediately.
- Workflow WS20000749 (Subflow): Carry out object change  
The actual object changes are controlled with this subflow. A detailed description can be found under [Carry out and release object changes \(Subflow\) \[Page 57\]](#).

The responsible employee for the various work steps is automatically determined using the standard role 00000138.



## Carry Out and Release Object Changes (Subflow) (LO-ECH)

### Use

This subflow allows you to control the changes to the objects and the release of the object management records. It applies to all object types.

If you install this workflow template, you should create a copy and carry out the company-specific changes or enhancements.

### Integration

This subflow is called up from the main workflow for the processing of change objects (WS20000748).

See: [Processing Change Objects =Rel. 4.6C \(LO-ECH\) \[Page 55\]](#)

### Features

**Workflow:** WS20000749

**Abbreviation:** ECO maintain

### Scenario

The workflow contains the following steps:

- Wait step work item 00004: Waiting for processing requirement  
This wait step work item waits for the event *to\_do* (Object change to be entered). Only when this occurs does the workflow continue.

Depending on the object type, the system starts various tasks:

- Task TS20000807: Maintain material
- Task TS20000808: Maintain BOM
- Task TS20000812: Maintain routing  
The tasks for the object types (material, BOM, routing) are automatically completed when you save the object.
- Workflow WS20000735: Subflow for document status management  
When a document has the document status 'released', you can make no more changes to this document. In this case, you have to create a new document version. This is controlled in the subflow for the document status management.  
The system checks whether a new document version is necessary. If this is the case, the system asks you to create a new document version. For this task TS24500053 (maintain object) is started.  
On the other hand, if no new document version is necessary, the system asks you to process the current document version. For this, task TS20000811 (maintain document) is started immediately.

**Carry Out and Release Object Changes (Subflow) (LO-ECH)**

If the document has already been released, the system asks you to create a new document version.

- Task TS24500053: Maintain object

Is started if a new document version is required.

With this task, you are asked to create a new document version.

You end this task manually by clicking on  *Complete work item*.

- Task TS00407926: Determine object key
- Task TS00407927: Determine object reference

With both of these background tasks, the system determines the object key and the object reference of the document info record.

- Task TS20000811: Maintain document

This is started if no new document version is required or after a new document version has been created.

The task is automatically completed when you save the document.



Remember to first release the document info record.

- User decision 000516: Automatically confirm changes to object &1

After you have changed an object, the system starts the user decision. A work item appears in your inbox and directly from this work item you can select decision options without having to open the object management record.

Decision options:

- Complete changes to the object

You select this option, when the object change is correct and complete.

Consequently, the system automatically sets the status 'Complete change' (task TS00008144: Autom. confirmation of an object change) in the object management record.

- Continue changes to the object

You select this option, if additional changes to the object are necessary.

Consequently, the entire subflow is run again. The department receives the work item again and is required to change the object.

- Cancel and keep work item in inbox

You select this option if you want to make your decision at a later point in time. In this case, the work item remains in your inbox.

- Task TS00008144: Autom. confirmation of an object change

This is started when, in the previous user decision 000516 (automatically confirm changes to an object), you selected the option *Complete changes to object*.

This task sets the system status 'Complete change' in the background, and then closes automatically.

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**Carry Out and Release Object Changes (Subflow) (LO-ECH)**

- User decision 000649: Automatically release changes to the object

Once the status 'Complete change' has been set, the system starts this user decision. A work item appears in your inbox and directly from this work item you can select decision options without having to open the object management record.

Decision options:

  - Release changes to the object

You select this option if you want to release the object changes. Consequently, the system automatically sets the status 'Release change' (task TS20000829: Release object change) in the object management record.
  - Cancel and keep work item in inbox

You select this option if you want to make your decision at a later point in time. In this case, the work item remains in your inbox.
- Task TS20000829: Release change object

This is started when, in the previous user decision 000649 (automatically release changes to an object), you selected the option *Release changes to object*.

This task sets the system status 'Release change' in the background, and then closes automatically.

The responsible employee for the various work steps is automatically determined using the standard role 00000138.

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**Currency Conversion of Logistics Data (LO-MD)**

## Currency Conversion of Logistics Data (LO-MD)

### Purpose

The business background for currency conversion in Logistics data is described below.

As a result of European Monetary Union (EMU), the currencies of the countries which are participating in monetary union will be converted into a single European currency (the "Euro"). There will be an initial transition phase (dual currency phase), during which both currencies can be used, but ultimately only the Euro will be allowed.

As a result, it is necessary to convert the currency for general business data and arrangements in Logistics (e.g. the order currency for a vendor) if it is a currency of one of the participating countries. This conversion must take place within the dual currency period.

Extensive reports are available for various application areas for direct conversion. However, it may be advisable to first plan the conversion, and distribute the workload over a number of people responsible for initiating the changes.

### Process Flow

Coordinators plan the currency conversion by determining the object to be converted, the period for the conversion, and the person responsible. This information is recorded in a currency conversion plan. The people responsible carry out the currency conversion for their objects within the conversion period. The coordinators then release the currency conversions which they planned and which have been carried out.

A coordinator can use SAP Business Workflow to inform the agents concerned automatically of the planned currency conversions at the start of the conversion period. SAP Business Workflow monitors in particular the latest possible conversion date. After the currency is converted, the coordinator is informed by means of another work item, and can release the conversion.

### See also:

CA - European Monetary Union (Euro) [Currency Conversion in Logistics \[Ext.\]](#)

## Technical Realization (LO-MD)

### Object Types Used

Object technology is used to create the interface between the R/3 functions and the workflow system. The information given below is of a technical nature and is not necessary for an initial overview.

#### Object type **SAP85207** (currency conversion plan)

In the scenario, a business application object of type *SAP85207* is processed, i.e. a conversion is carried out and then released for a currency conversion plan. The currency conversion itself is always made to a business object in Logistics (see object types below).

Location in object repository: *Logistics - General* → *Logistics Basic Data*

#### Object type **SAP\_30304** (pricing)

In the scenario, a business application of type *SAP\_30304* may be processed, i.e. a pricing is converted to a target currency at a specific level.

Location in object repository: *Logistics - General* → *Logistics Basic Data* → *Pricing*

#### Object type **BUS1068** (promotion)

In the scenario, a business application object of type *BUS1068* may be processed, i.e. the currency of a promotion is converted to a target currency at a specific level.

Location in object repository: *Logistics - General* → *Logistics Basic Data* → *Promotion*

#### Object type **BUS1073** (price markdown plan)

In the scenario, a business application object of type *BUS1073* may be processed, i.e. the currency of a price markdown plan is converted to a target currency at a specific level.

Location in object repository: *Logistics - General* → *Logistics Basic Data* → *Season*

#### Object type **BUS3030** (volume rebate arrangement)

In the scenario, a business application object of type *BUS3017* may be processed, i.e. the currency of a volume rebate arrangement is converted to a target currency. This object type relates to volume rebate arrangements in Purchasing and Sales.

Location in object repository: *Logistics - General* → *Logistics Basic Data*

#### Object type **BUS1069** (retail site)

In the scenario, a business application object of type *BUS1069* may be processed, i.e. the currency of a retail site is converted to a target currency.

Location in object repository: *Logistics - General* → *Logistics Basic Data* → *Plant master*

#### Object type **LFM1** (purchasing organization vendor)

In the scenario, a business application object of type *LFM1* may be processed, i.e. the currency of the data for a vendor in a purchasing organization is converted to a target currency.

## Technical Realization (LO-MD)

Location in object repository: *Logistics - General* → *Logistics Basic Data* → *Business Partners*  
→ *Vendor*

### Object type *KNVV* (sales area customer)

In the scenario, a business application object of type *KNVV* may be processed, i.e. the currency of the data for a customer in a sales area is converted to a target currency.

Location in object repository: *Logistics - General* → *Logistics Basic Data* → *Business Partners*  
→ *Customer*

## Standard Tasks

The standard tasks provided by SAP as single steps describe the basic business activities from an organizational point of view. A single-step task relates to a single object method (= technical link to R/3 functionality), and is linked to the agents possible from an organizational point of view.

### Standard task *TS2000071* (currency conversion for promotion)

In this standard task, the currency of a promotion (currency in which the planned prices are entered, for example) can be converted into another currency.

Object method referenced: object type *BUS1068* (promotion), method: *ConvertCurrency*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

### Standard task *TS2000070* (currency conversion for markdown plan)

In this standard task, the currency of a price markdown plan (currency in which the planned prices are entered, for example) can be converted into another currency.

Object method referenced: object type *BUS1073* (price markdown plan), method: *ConvertCurrency*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

### Standard task *TS2000073* (currency conversion for pricing)

In this standard task, the currency of a pricing (currency in which the conditions are agreed, for example) can be converted into another currency.

Object method referenced: object type *SAP\_30304* (pricing), method: *ConvertCurrency*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

### Standard task *TS0030084* (currency conversion for volume rebate arrangements)

In this standard task, the currency of a volume rebate arrangement (currency in which the business volumes achieved are displayed, for example) can be converted into another currency.

Object method referenced: object type *BUS3017* (volume rebate arrangement), method: *ConvertCurrency*

## Technical Realization (LO-MD)

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard task TS00300085 (POS currency conversion - site)**

In this standard task, the POS currency of a retail site (currency in which the POS business volumes are displayed, for example) can be converted into another currency.

Object method referenced: Object type *BUS1069* (retail site), method *ConvertCurrency*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard task TS24500020 (currency conversion for vendor data)**

In this standard task, the currency of data for a vendor in a purchasing organization (up to transaction data) can be converted into another currency.

Object method referenced: object type *LFM1* (vendor purchasing organization), method: *ConvertCurrency*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard task TS24500019 (currency conversion for customer data)**

In this standard task, the currency of data for a customer in a sales area (up to transaction data) can be converted into another currency.

Object method referenced: Object type *KNVV* (sales area customer), method *ConvertCurrency*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard task TS20000160 (release currency conversion)**

In this standard task, a currency conversion can be checked and released.

Object method referenced: object type *SAP85207* (currency conversion plan), method: *Release*

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Workflow Template**

The actual operational procedure is implemented as a workflow template. You can find this workflow template in your R/3 system.

**Workflow template LOCurrConv (currency conversion of Logistics data)**

If currency-dependent Logistics data is to be converted to another currency, workflow is started from template *LOCurrConv*.

Workflow template: *20000036*, abbreviation: *LOCurrConv*, description: currency conversion (Logistics)

## Technical Realization (LO-MD)

### Triggering events of the workflow template

Event ToBeConverted is entered as the triggering event in the workflow template for object type *SAP85207* (currency conversion plan).

Note: This “linkage” between the event and the workflow template to be started is deactivated in the standard system. If you want to start the workflow template, the linkage must be activated in Customizing for SAP Business Workflow. (Link to Customizing below)

### Workflow container and binding

The most important pieces of information which must be available during the course of the workflow are the object references to the currency conversion plan (*\_Evt\_Object*) and the object to be converted. The information exists as event parameters in the container of the triggering event and must be transferred to the workflow container via data flow.

The following data flow definitions are therefore defined between the triggering event and workflow container:

Workflow container	Event parameter container
<i>CurrencyConversionPlan</i>	<i>_Evt_Object</i>

The elements *Promotion*, *PriceMarkdownPlan*, *RebateAgreement*, *MaterialGroup*, *DistributionChain*, *RetailSite*, *PriceListType* and *ObjectType* are implemented as virtual attributes of *CurrencyConversionPlan*, and are therefore indirectly available in the workflow container.

The elements material group, distribution chain, retail site, and price list type indicate the level at which a pricing should be converted. The element Retail site is also used for conversion of POS currency (site). The object type refers to the object type of the object to be converted.

### Steps in a Workflow

A coordinator plans currency conversions by determining the object to be converted, the target currency, an agent, a notification date and a latest possible conversion date. The status of the currency conversion plan is *New*.

When the notification date is reached, workflow for currency conversion is started. The status of the currency conversion plan is set to *Being processed*.

A separate workflow is started for each object to be converted and each conversion date. The workflow checks the object type of the object to be converted and creates a work item which the agent can use to carry out the currency conversion.

If the conversion is successful, the workflow changes the status of the currency conversion plan to *Processing completed*. A work item is then created, which the coordinator uses to check and release the currency conversion. At the same time, the status of the currency conversion plan is changed to *Released*.



## Preparation and Customizing (LO-MD)

In addition to the general Customizing procedures that must be performed to make sure workflow system functions properly, several other customizing steps are necessary for this workflow template.

### Processing the organizational structure

Only the coordinator and the agents he/she names may process the currency conversion plans. As a result, a separate organizational plan is not necessary for currency conversion.

### Performing task-specific Customizing

Classify the general tasks.

Assign tasks in the area of General Logistics as follows:

1. Execute Customizing activity *Basis Components* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing*.
2. Under *Logistics - General logistics* → *Basic Logistics Data* select *Assign tasks to agent*.
3. Classify standard tasks *TS20000071* (currency conversion for promotions), *TS20000070* (currency conversion for markdown plans), *TS20000073* (currency conversion for Pricing), *TS00300084* (currency conversion for volume- rebate arrangements), *TS00300085* (conversion of POS currency - sites), *TS24500019* (currency conversion for customer data), *TS24500020* (currency conversion for vendor data) and *TS20000160* (release currency conversion) as general tasks.

### Activating event-receiver linkage

The event *ToBeConverted* for object type *SAP85207* (currency conversion plan) is a triggering event for workflow template *20000036* (currency conversion in retail) and is entered as standard in the event coupling table. So that the workflow template can actually be started, the link between the triggering event and the workflow template, as the event receiver, must be activated in Customizing for SAP Business Workflow.

Activate the workflow template *LOCurrConv* in your system as follows:

1. Execute Customizing activity *Basis Components* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing*.
2. Activate event linking for the workflow template (*Logistics - General* → *Logistics Basic Data* → *Activate event linking*).

(Alternatively, you can activate event-receiver linking by processing the workflow template directly.)

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**Operation and Connection with Application Functionality (LO-MD)**

## Operation and Connection with Application Functionality (LO-MD)

Currency conversion plans can be transferred to Business Workflow for conversion at regular intervals. There are two possible ways of doing this, both of which must be carried out by the coordinator who plans the currency conversions.

1. The coordinator starts workflow manually at regular intervals by choosing *Infosystems/Planning* → *Currency conversion*. This starts all workflow for the coordinator's currency conversion plans which already contain a notification date.
2. As currency conversions can be planned a long time in advance, workflow can also be started automatically. You do this using a report which is started periodically in the background. This involves two steps:  
First you must define the individual variants of this report (report name: *RWEWU001*). Create e.g. a general variant for all possible currency conversion plans.  
Then plan for the report to be executed in the background at the intervals you require.  
Documentation on background processing: *BC Computing Center Management System*  
→ *Background processing* → *Plan and manage background jobs*

## Article Discontinuation (LO-MD-MM)

### Purpose

You can use the workflow described here to discontinue an article from the system as of a certain day.

You may want to do this in the following cases:

- The article is no longer required (removed from the assortment)
- The promotion or season has come to an end, and the article is not to be sold any more
- The article can no longer be delivered

Once an article has been discontinued, it is flagged for deletion, which means that it is logically deleted from the database. After this, certain functions cannot be performed for the article.

A workflow template is available for the following types of discontinuation:

- **Article/site discontinuation**

The article can no longer be procured from a distribution center or sold from a store (for example, after all stock has been sold).
- **Client-wide discontinuation**

In the whole company, the article cannot be procured from a distribution center or external vendor for inclusion in a store assortment.
- **Vendor/article discontinuation**

For all sites in a company, the article can no longer be procured from a particular vendor.
- **Vendor discontinuation for a purchasing organization**

For all sites in a company, the article can no longer be procured from any vendors assigned to a particular purchasing organization.

### Process Flow

If you start discontinuation for an article in the system, the system carries out various checks on the article concerned. You can run these checks in the background or online.

If the article is still used in operative processes, error messages are issued during the checks. Workflow is started for certain errors that cannot be corrected automatically or by using the *Follow-on functions*. In workflow, the person responsible for processing the error is determined. A work item for correcting the problem is sent to the integrated inbox of the person responsible.

Once all errors have been corrected, the system checks whether the date for discontinuation has been reached. If the date for discontinuation has not been reached, an event is triggered that starts workflow again on the date of discontinuation.

If no further error messages are issued during the checks carried out as part of workflow, a deletion flag is set and workflow is complete. The article can now be archived and therefore physically deleted from the database.

**Technical Implementation (LO-MD-MM)****Technical Implementation (LO-MD-MM)**

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

**Object Types**

Object technology is used to create the interface between the SAP functions and the Workflow system.

The methods and events for triggering workflow are provided by object types *BUS1001* (article) and *BUS3003* (purchasing information).

<b>Workflow Template</b>	<b>Business Object</b>
Article/site discontinuation	BUS1001
Client-wide article discontinuation	BUS1001
Vendor/article discontinuation	BUS3003
Vendor discontinuation for a purchasing organization	BUS3003

**Task Group**

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The aforementioned workflow templates are grouped together under task group *20000034*.

## Object Type BUS1001 - Article (LO-MD-MM)

### Definition

In retailing, the article is an object involved in business transactions. Retail sites can purchase an article, include it in their merchandise assortment, and sell it.

### Use

This object type is used in connection with the following workflow templates:

- Article/site discontinuation
- Client-wide discontinuation

### Structure

For this workflow, object type *BUS1001* provides the following methods:

- Carry out checks for client-wide and site-specific article discontinuation
- Display error messages
- Set deletion flag for article

The triggering events for workflow are:

- *STARTMATNRDEL* for client-wide article discontinuation
- *STARTPLANTMATNRDEL* for site-specific article discontinuation

The defined attributes, methods and events can be found in the object type definition in the Business Object Repository.

---

**Object Type BUS3003 - Purchasing Information (LO-MD-MM)**

## Object Type BUS3003 - Purchasing Information (LO-MD-MM)

### Definition

Business object "Purchasing information" provides information relating to the procurement of a particular article from a particular vendor.

### Use

This object type is used in connection with the following workflow:

- Vendor/article discontinuation
- Vendor discontinuation for a purchasing organization

### Structure

For this workflow, object type *BUS3003* provides the following methods:

- Carry out checks for vendor/article discontinuation
- Display error messages

In addition, events are provided that trigger the logical deletion of vendor articles from the database:

- STARTVENDORMATNRDEL
- STARTVEEKPLAMATNRDEL

The defined attributes, methods and events can be found in the object type definition in the Business Object Repository.

## Preparation and Customizing (LO-MD-MM)

### Use

Several other specific customizing steps are necessary for this workflow template in addition to the general customizing that is necessary to make sure that the workflow system functions properly.

### Prerequisites

You have carried out the general customizing for SAP Business Workflow.

### Features

You must assign the people responsible for processing the error messages that are issued during the article discontinuation checks. Depending on the operative processes the article is used in, errors may be created as messages (message class W4) in the system. So that the system can determine the correct person responsible, you must assign one of the following organizational objects to a message number in Customizing for *Assign Retail Tasks to PD Organization*:

- Work center
- Job
- Organizational unit
- Person
- Position
- User

The organizational plan is used to determine the person responsible in relation to the organizational types.

Alternatively, you can use user exit *EXIT\_SAPLWSO7\_001* to have the system determine the person responsible in other ways; for example, you can define that certain people are responsible for certain merchandise categories.

In addition, you must make the task-specific settings in Customizing for *SAP Workflow*. Under *Assign Agents to Tasks*, you assign the agents or organizational objects that you defined for processing messages (see above) to the single-step tasks.

---

**Operation and Link to Application Functions (LO-MD-MM)**

## Operation and Link to Application Functions (LO-MD-MM)

### Use

Before an article can be listed or a deletion flag can be set, the system must check whether the article is still used in operative processes. You can run these checks in the background or online.

If, during these checks, the system finds that the article concerned is still used in operative processes, error messages are issued. You can correct some of these errors (such as deleting valid listing conditions) using the *Follow-on functions*.

The workflow described here can be used to correct errors that cannot be corrected automatically or by using the *Follow-on functions* (such as deleting a PO item).

In workflow, the person (or people) responsible is determined for each error for which a message was created. For further information, see [Preparation and Customizing \(LO-MD-MM\) \[Page 71\]](#).

All messages assigned to a person responsible or group of people responsible for processing the error are grouped together in an error list. This list is displayed as a work item in the integrated inbox of the person responsible. This work item is used to correct the error. If the list contains errors that are not the responsibility of the person determined by the system, the error list can be forwarded to someone else. The errors that have already been dealt with are no longer displayed.

You can double click on an error message to display the long text and a suggestion for correcting the error. In addition, you can go from the error list directly to the transaction for correcting the error.

Once all the errors in the list have been corrected, the work item must be marked as "complete". Once all people responsible for the errors have completed processing them, that is, all work items are set to "complete", the system carries out the checks again.

Once all errors have been corrected successfully, the system checks whether the discontinuation date has been reached. If it has, the article is flagged for deletion and therefore logically deleted from the database.

If the date for discontinuation has not been reached, an event is triggered that starts workflow again on the date of discontinuation. All the checks are carried out again. If no error messages are issued, the article is logically deleted from the database.



## Logistics Information System: Trigger Workflow from an Exception in the Early Warning System (LO-LIS)

[Business Background \(LO-LIS\) \[Page 74\]](#)

[Technical Implementation \(LO-LIS\) \[Page 77\]](#)

## Business Background (LO-LIS)

# Business Background (LO-LIS)

## What is the Early Warning System?

The Early Warning System is based on the key figures of the Logistics Information System (LIS) and can be used for all applications in Logistics.

It is integrated in all menus of the information systems of LIS as a separate menu option.

Decision-makers can use the Early Warning System to make specific selections in accordance with their own information needs, and also to monitor weak points in the area of Logistics.

The Early Warning System enables you to search for exceptional situations and in this way helps you to detect and rectify potential problem areas at a very early stage.

You can define these exceptional situations yourself in the form of **Exceptions**.

An exception consists of various specifications, which include characteristics and/or characteristic values (such as vendor, customer, material) and requirements. Requirements can be created in the form of a threshold value (for example, materials/vendors with an order value greater than \$5000), a trend (for example, a positive trend in the order value) or a planned/actual comparison. Please refer to [Exceptions: Examples \[Page 76\]](#). You can also use the Early Warning System to check the data available in LIS with regard to the exceptional situations defined in the exceptions and the display the results of the check in a list.

You can also define the conditions for the follow-up processing of these exceptions. For instance, you can define how often the system searches the data for the exceptional situation and you can also specify that a particular group of people are automatically informed via mail or fax when exceptional situations occur. It is also possible to trigger a workflow when an exception is found.



You can find more information about the Early Warning System in the documentation for the Early Warning System in the section on the [Early Warning System \[Ext.\]](#).

## Integration of SAP Business Workflow

You can use an event to trigger a workflow which you have defined yourself for an exception from the LIS Early Warning System. In other words, the event in the check can then be processed further.



### Examples for Using Workflow:

#### Example 1:

You have defined an exception which checks the data in the Shop Floor Information System. The exception is designed to find all materials with a target/actual lead time deviation of more than one day. You can now use workflow to help you to define a process which automatically aligns the target lead times.

#### Example 2:

You would like monitor your stocks. You define an exception which shows all materials with a stock of more than 100,000 pieces. With the aid of a workflow, you can now define a process to inform the MRP controllers responsible.

**Business Background (LO-LIS)****Example 3:**

An exception checks the range of coverage of the stocks. It is designed to find all materials with a range of coverage of less than 20 days. You can then define a workflow that automatically creates a planned order for the materials in question.

---

**Exceptions: Examples****Exceptions: Examples****Example 1:** Checking a trend with an exception

You wish to check whether the key figure 'invoiced sales' follows a positive trend, or you wish to find out if there is a negative trend upon order receipt.

**Example 2:** Exception with planned/actual comparison

You want to find all customers for which the actual incoming orders account for less than 80% of the planned incoming orders, or in other words where less than 80% of the plan is fulfilled.

**Example 3:** Checking a threshold value with an exception

You want to find out which materials which have a range of coverage greater than 14 days in the next three periods.

## Technical Implementation (LO-LIS)

If an event is triggered, then the object type (**MCYA**), the object key and the event itself are transferred to Workflow.

The following elements have been defined for the object type **MCYA**:

<b>Object key:</b>	Number of the exception
<b>Event:</b>	<b>fulfilled</b> This event is always triggered when the exceptional situation defined in the exception occurs, and if the indicator <i>Transfer to workflow</i> was selected when the exception was created.

An **event parameter container** is transferred along with the event to the workflow that has been started. In the element **TextFieldLngh255**, this container includes all characteristic values to which the exceptional situation applies and the key figure(s) which were checked, in the form of a character string. The information in the container is therefore relatively unstructured, yet corresponds exactly to the information that can be sent as a mail in the Early Warning System, if an exceptional situation arises. In a mail, you can therefore view the exact structure of the information transferred to workflow (the separators used, etc.). In order to define a workflow, you need to know the exact structure of the information in this element of the event parameter container. You then need to use self-defined methods to identify and extract the individual characteristic values from the character string, in order to be able to define the appropriate subsequent steps for specific characteristic values in the workflow.

**Releasing blocked vendor data (LO-MD-BP)**

## Releasing blocked vendor data (LO-MD-BP)

### Definition

When you create and change vendor data, you can set a block on this data, which prevents merchandise being procured from the vendor. This may be necessary as the result of a poor vendor evaluation, for example. The block can then be checked and released by an experienced employee.

### Use

This function enables you to have relatively untrained employees enter the vendor data. It can then be checked if and when required.

Vendor data can be entered, checked, and released at various organizational levels.

Organizational level	Purpose
Client	Central vendor data
Purchasing organization	Data for the purchasing organization
Vendor sub-range/plant	Data for the purchasing organization and vendor sub-range and/or plant

### Integration

If vendor data is created with a purchasing block, the people responsible for releasing this data can be informed automatically via workflow. This means that they receive a work item in their inbox which can be used to call the change transaction for the data relating to the relevant vendor. They then receive another work item which is used to release the data.

## Technical Background (LO-MD-BP)

### Object Types Used

Object technology is used to create the interface between the R/3 functions and the Workflow system. The information given below is primarily of a technical nature and is not necessary for an initial overview.

#### Object Type *LFA1* (Vendor)

In the scenario, a business application object of type *LFA1* is processed, that is, central data is changed (if necessary) and then released for a vendor.

- Location in object repository:  
Cross-application components as sub-type of *BUS1006* (business partner)

#### Object Type *LFM1* (Purchasing Organization - Vendor)

In the scenario, a business application of type *LFM1* is processed if a block is set within a purchasing organization, that is, data is changed at purchasing organization or vendor sub-range/plant level (if necessary) and then released for a vendor.

- Location in object repository:  
Cross-application components as sub-type of *LFA1* (vendor)

### Standard Tasks

The standard tasks provided by SAP as single-step tasks describe basic business activities from an organizational point of view. A single-step task relates to a single object method (= technical link to R/3 functionality) in each case, and is linked to its organizationally possible processors.

#### Standard Task *TS00300025* (Decision to Check Vendor Data)

In this standard task, a decision can be made as to whether vendor data is to be checked and changed.

- Object method referenced:  
Object type *DECISION*, method: *Process*
- Processor assignment:  
Assign to this task the organizational units or positions that contain the agents responsible for releasing the data.

#### Standard Task *TS20000002* (Check General Vendor Data)

In this standard task, central vendor data can be checked and changed.

- Object method referenced:  
Object type *LFA1* (vendor), method *Display*
- Processor assignment:

**Technical Background (LO-MD-BP)**

This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard Task TS20000034 (Check Purchasing Organization Data for a Vendor)**

In this standard task, vendor data can be checked and changed at purchasing organization level.

- Object method referenced:  
Object type *LFM1* (purchasing organization - vendor), method: Display

- Processor assignment:  
This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard Task TS00300028 (Check Vendor Sub-Range/Plant Data for a Vendor)**

In this standard task, vendor data can be checked and changed at purchasing organization or plant/vendor sub-range level.

- Object method referenced:  
Object type *LFM1* (purchasing organization - vendor), method: Display

- Processor assignment:  
This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard Task TS20000003 (Release Central Purchasing Block)**

In this standard task, a central purchasing block on a vendor can be released.

- Object method referenced:  
Object type *LFA1* (vendor), method *ReleasePurchBlock*

- Processor assignment:  
This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

**Standard Task TS00300029 (Release Detailed Purchasing Block on Vendor)**

In this standard task, a purchasing block on a vendor at purchasing organization or plant/vendor sub-range level can be released.

- Object method referenced:  
Object type *LFM1* (vendor), method: ReleasePurchBlock

- Processor assignment:



This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

## Workflow Template

The actual operational procedure is implemented as a workflow template. You will find this workflow template in your SAP System.

### Workflow Template *MMReIVenData* (Release Vendor Data)

If vendor data is create (at any organizational level) and a purchasing block is set, workflow is started with template *MMReIVenData*.

Workflow template: 20000001, identifier: *MMReIVenData*, description: Release vendor data

### Triggering Events for Workflow Template

Triggering Events for Workflow Template are

- *BlockedForPurchasing* for object type *LFA1* (vendor)
- *BlockedForPurchOrg*
- *BlockedForVSROrPlant* for object type *LFM1* (purchasing organization for vendor).



This “linkage” between the event and the workflow template to be triggered is deactivated in the standard system and must first be activated in Customizing for SAP Business Workflow if the workflow template is actually to be started. (See [Preparation and Customizing\(LO-MD-BP\) \[Page 83\]](#)).

### Workflow Container and Data Flow

The important information that must be available during the course of the workflow is the object reference to the vendor or purchasing organization (for the vendor) to be processed (*\_Evt\_Object*). The information is available as an event parameter in the container of the triggering events, and must be passed on from there to the workflow container via data flow. When data is processed at plant/vendor sub-range level, the plant and vendor sub-range are also included in the container as event parameters. The plant is implemented as an object reference and the vendor sub-range as a dictionary reference.

Therefore, the following data flow definitions between the triggering events and the workflow container are defined in the standard system:

#### Event *BlockedForPurchasing*

Workflow container	Event parameter container
<i>Vendor</i>	<i>_Evt_Object</i>

#### Event *BlockedForPurchOrg*

Workflow container	Event parameter container
<i>PurchasingOrganizationVendor</i>	<i>_Evt_Object</i>
<i>Vendor</i>	<i>_Evt_Object.Aggregate</i>

## Technical Background (LO-MD-BP)

### Event *BlockedForVSRorPlant*

Workflow container	Event parameter container
<i>PurchasingOrganizationVendor</i>	<i>_Evt_Object</i>
<i>Vendor</i>	<i>_Evt_Object.Aggregate</i>
<i>Plant</i>	<i>Plant</i>
<i>VendorSubRange</i>	<i>VendorSubRange</i>

The elements *Vendor*, *PurchasingOrganizationVendor*, *Plant*, and *VendorSubRange* have been created in addition to the elements available as standard.

### Steps in a Workflow

1. If vendor data is created with a purchasing block, a workflow is started for checking and releasing data.  
An individual workflow is started for each organizational level of each vendor.
2. First, a work item is created, on the basis of which the user can decide whether the data should be checked.
3. If the data is to be checked, a work item is created, which can be used to change the data at the relevant level.
4. If a check is not necessary, or after it has been carried out, a work item is created, on the basis of which the user can decide whether the data should be released.
5. If data is to be released, a further work item is created for this.

## Preparation and Customizing (LO-MD-BP)

Several other specific customizing steps are necessary for this workflow template in addition to the general customizing that is necessary to make sure that the workflow system functions properly.

### Defining the Organizational Structure

Vendor data can be checked and released by various users, who must all be identified in Customizing for SAP Business Workflow. They can also be assigned to various organizational units. Organizational units are a means of subdividing an enterprise according to various business criteria (for example, most enterprises are made up of different departments).

Define your organizational structure via the Customizing activity (*Basis Components* → *Workflow Management*) → *Edit Organizational Plan*.

### Performing Task-Specific Customizing

Here you list all organization management objects that are generally allowed to check and release vendor data (such as jobs or positions) and classify the general tasks.

You assign tasks in Materials Management as follows:

1. Call up the Implementation Guide, choose *Basis Components* → *Business Management* → *SAP Business Workflow*, and perform the *Perform task-specific Customizing* step.
2. Then, under *Logistics - General* → *Logistics Basic Data* → *Business Partner* → *Vendor Master*, choose the activity *Assign tasks to agent (processor)*.
3. Assign standard task *TS00300025* (decision to check vendor data) to the processors ("agents") who release vendor data via workflow in your enterprise.
4. Classify the following standard tasks as general tasks:
  - *TS20000002* (check general vendor data)
  - *TS20000034* (check purchasing organization data for the vendor)
  - *TS00300028* (check vendor sub-range/plant data for a vendor)
  - *TS00300034* (decision to release vendor data)
  - *TS20000003* (release central purchasing block)
  - *TS00300029* (release detailed purchasing block on vendor)

### Activating Event-Receiver Linkage

Event *LockedForPurchasing* for object type *LFA1* (vendor), and *LockedForPurchOrg* and *LockedForVSROrPlant* for object type *LFM1* (purchasing organization for vendor) are entered as triggering events of workflow template *20000001* (release vendor data) and are entered as standard in the linkage table. For the workflow template to actually be started, you must activate the linkage between the triggering events and the workflow template as receiver of the events in Customizing for SAP Business Workflow.

Activate the workflow template *MMRe/VenData* in your system as follows:

**Preparation and Customizing (LO-MD-BP)**

1. Call up the Implementation Guide, choose *Basis Components* → *Business Management* → *SAP Business Workflow*, and perform the *Perform task-specific Customizing* step.
2. Activate event linkage for the workflow template (*Logistics - General* → *Logistics Basic Data* → *Business Partner* → *Vendor Master* → *Activate event linking*).

Alternatively, you can activate event-receiver linkage by processing the workflow template directly.

## Using and Linking to Functions (LO-MD-BP)

If all the settings have been made, the system starts a workflow if vendor data is created and a purchasing block is simultaneously assigned.

You enter vendor data as follows:

- Client/purchasing organization level: From the Purchasing screen, choose *Master data* → *Vendor* → *Central* → *Create* or *Master data* → *Vendor* → *Purchasing* → *Create*
- Vendor sub-range/plant level in Purchasing: *Master data* → *Vendor* → *Purchasing* → *Change*

You assign the purchasing block by choosing *Extras* → *Block data*



If a purchasing block is set when vendor data is changed, or if a workflow for releasing vendor data is completed without the data being released, a workflow is not started.

---

**Selecting a Vendor for Additional (LO-ADM)**

## Selecting a Vendor for Additional (LO-ADM)

### Purpose

Additional (s) are the “extras” which you require to present your merchandise for sale. Examples of additional (s) are tickets, packaging or tags containing product information.

Additional (s) are also articles in themselves. A retailer can have the system automatically generate purchase orders for additional (s). The data required for an additional (such as the current retail price) can also be requested externally by a BAPI. In both cases, the system must be able to find the vendor of an additional.

The system can find more than one vendor for an additional. If it does, a workflow can be triggered from an application. An associate then processes the work item created and selects one of the possible vendors of the additional.

### Process Flow

The workflow can be generated from purchase orders, goods movements or deliveries.

## Technical Implementation (LO-ADM)

### Object Types Used

Object technology is used to create the interface between the R/3 functions and the workflow system. The information given below is of a technical nature and is not necessary for an initial overview.

### Standard Tasks

The standard tasks provided by SAP as single steps describe the basic business activities from an organizational point of view. A single-step task relates to a single object method (= technical link to R/3 functionality), and is linked to the agents possible from an organizational point of view.

### Workflow Template

The actual operational procedure is implemented as a workflow template. You can find this workflow template in your R/3 system.

---

Object Additional Request (LO-ADM)

## Object Additional Request (LO-ADM)

### Definition

### Use

A business object of the type *BUS2106* (additional request) is processed in this scenario. A unique vendor is selected for an additional via Workflow.

Position in object repository: → *Logistics general* → *Additional management*



## Standard Task for Vendor Selection (LO-ADM)

### Use

In this standard task, a vendor is selected from a list of vendors for an additional.

The object method referenced is *BUS2106* (additional request), and the method is *SelectVendor* (select vendor for VKHM)

Agent assignment: At runtime, this standard task is sent to the agents found as a result of role resolution for role 20000039 (additional buyers).

## Workflow Template: Vendor Selection for Additional (LO-ADM)

## Workflow Template: Vendor Selection for Additional (LO-ADM)

### Use

If the system finds more than one vendor for an additional, and the Customizing settings for the merchandise category for the additional define that workflow is to be used, a workflow with template *LOAddiVendor* is triggered.

### Triggering events of the workflow template

The triggering event of the workflow template is event *CREATEDWITHMULTIPLEVENDORS* (additional request created (vendor > 1)) for object type *BUS2106* (additional request).



This "link" between the event and the workflow template to be triggered is deactivated in the standard system and must first be activated in Customizing for SAP Business Workflow, before the workflow template is actually triggered.

A further prerequisite for creating the event is that Additional Customizing for the merchandise category of the additional contains a setting indicating that the vendor is to be selected by workflow. The system can also be configured so that the first vendor in the list is selected, and workflow is not created.

### Workflow container and binding

The most important information required for workflow is the object reference to the triggering additional request (*\_Evt\_Object*). The information is available as an even parameter in the container of the triggering event, and must be transferred from there to the workflow container by binding.

As a result, the following binding definition between the triggering event and the workflow container is defined in the standard system:

Workflow container	Event parameter container
<i>SalesAdditionalReq</i>	<i>_Evt_Object</i>
<i>SalesAdditional</i>	<i>SalesAdditional</i>
<i>VendorList</i>	<i>VendorList</i>

The elements *SalesAdditional* and *VendorList* are included in addition to the elements available as standard.

## Preparations and Customizing (LO-ADM)

### Use

In addition to general Customizing, which ensures proper functioning of the workflow system, special Customizing is required for this workflow template.

### Activities

#### Determining role responsibilities

The vendor of an additional is always determined from a group of buyers responsible for this. All the employees who are to use workflow for vendor selection must first be assigned role 20000039 (additional buyer).

#### Performing task-specific Customizing

You assign tasks in Materials Management as follows:

1. Choose *Basis Services* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing* in Customizing.
2. Then choose *Assign task to agent* under *Logistics - General* → *Additional management*.
3. Assign standard task TS20000293 (vendor selection) as a general task.

#### Activating event-consumer linking

Event CREATEDWITHMULTIPLEVENDORS (VKHM request created (vend. > 1)) for object type *BUS2106* (additional request) is the triggering event for workflow template 20000132 (vendor selection for additional) and as such is entered as standard in the event linking table. For the workflow template to be actually started, the link between the events to be triggered and the workflow template, as receiver of the events, must be set in Customizing for SAP Business Workflow.

You activate workflow template *LOAddiVendor* in your system as follows:

1. Choose *Basis Services* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing* in Customizing.
2. Activate event linking for the workflow template (*Logistics - General* → *Additional Management* → *Activate event linking*)

---

**Operating and Linking to the Application (LO-ADM)**

## Operating and Linking to the Application (LO-ADM)

### Use

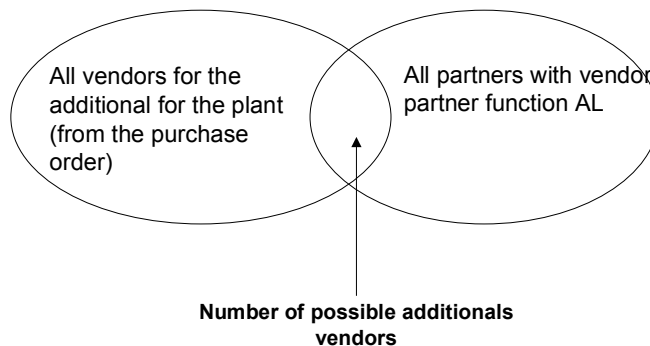
Each workflow for selection of a vendor is sent to the inbox of the employee responsible when the reference document (purchase order, goods movement, delivery) is posted. There is a slight difference in the way additional vendors are determined for a purchase order and goods movement or vendor.

In the additional monitor, the indicator for vendor selection (status for additional vendor determination) is changed from 2 to 5 once a vendor has been selected.

### Determining the additional vendor in purchase orders

It is assumed that an additional has been assigned to the material to be ordered. A follow-on activity is to be triggered for this additional on the basis of the purchase order, and an additional vendor is required for this.

The system groups the possible vendors together.



Workflow can be triggered if there is more than one vendor that is a vendor for the additional for the plant and also a partner assigned partner function "AL". The vendor selection indicator must also be set to 2 in the properties for the additional merchandise category.

### Determining the additional vendor in goods movements and deliveries

In the case of goods movements and deliveries, the possible additional vendors are determined from the purchasing info records determined for the plant in question.

## Display Agency Documents (LO-AB)

### Purpose

You can use the workflow described here to define that agency documents are to be forwarded to certain employees, who can display them to process customer messages, for example.

### Process Flow

A customer informs you that a particular agency document they received contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee.

You can use the *Workflow Workbench: Agency Business* transaction to enter an explanatory text for the problem and trigger a workflow to automatically determine people responsible.

The system determines the people responsible using the role (user assignment) defined for the workflow scenario and sends a work item to their integrated inbox. You can use this work item to display but not change the agency document in question.

As the person responsible, you can display the agency document, check it, and contact the customer if required.

For more information, see:

[Technical Implementation \(LO-AB\) \[Page 94\]](#)

[Operation and Link to Application Functions \(LO-AB\) \[Page 95\]](#)

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**Technical Implementation (LO-AB)**

## Technical Implementation (LO-AB)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

The method *display* and event *tobedisplayed* for triggering the workflow are provided via the following business objects:

- *BUS21001*: [Settlement Request List \[Ext.\]](#)
- *BUS21001*: [Single Settlement Request \[Ext.\]](#)
- *BUS21001*: [Posting List \[Ext.\]](#)
- *BUS21001*: [Vendor Billing Document \[Ext.\]](#)
- *BUS21001*: [Remuneration List \[Ext.\]](#)

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The workflow templates for the following workflows are grouped together under task group *20000041 (display agency documents)*:

- *Display single settlement request*
- *Display settlement request list*
- *Display vendor billing document*
- *Display posting list*
- *Display remuneration list*

### Role

In the standard system, the Purchasing group role (*90001*) is defined for the determination of the person responsible. However, you can also assign other roles or specific users.

## Operation and Link to Application Functions (LO-AB)

### Use

A customer informs you that a particular agency document they received contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee.

### Features

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible. You can enter the following information in this transaction:

- Agency document category that is to be processed (single settlement request, vendor billing document, and so on).
- Method: The document should not be changeable.
- Document number
- Explanatory text

This could be a short description of the customer's complaint relating to the agency document.

The system determines the person responsible using the role (user assignment) defined for the workflow scenario and sends a work item to his/her integrated inbox. The work item contains this explanatory text. If you execute the work item, the agency document is displayed in display mode.

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**Change Agency Documents (LO-AB)**

## Change Agency Documents (LO-AB)

### Purpose

You can use the workflow described here to define that agency documents are to be forwarded to certain employees, who can change them to process customer messages, for example.

### Process Flow

A customer informs you that a particular agency document they received contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee.

You can use the *Workflow Workbench: Agency Business* transaction to enter an explanatory text for the problem and trigger a workflow to automatically determine the people responsible.

The system determines the people responsible using the role (user assignment) defined for the workflow scenario and sends a work item to their integrated inbox. This work item can be used to display and change the agency document in question.

The person determined by the system as responsible for the work item displays the agency document, checks it, and makes any changes that are necessary.

For more information, see:

[Technical Implementation \(LO-AB\) \[Page 97\]](#)

[Operation and Link to Application Functions \(LO-AB\) \[Page 98\]](#)



## Technical Implementation (LO-AB)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

The method *change* and event *tobechanged* for triggering the workflow are provided via the following business objects:

- *BUS21001*: [Settlement Request List \[Ext.\]](#)
- *BUS21001*: [Single Settlement Request \[Ext.\]](#)
- *BUS21001*: [Posting List \[Ext.\]](#)
- *BUS21001*: [Vendor Billing Document \[Ext.\]](#)
- *BUS21001*: [Remuneration List \[Ext.\]](#)

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The workflow templates for the following workflows are grouped together under task group *20000046 (change agency documents)*:

- *Change single settlement request*
- *Change settlement request list*
- *Change vendor billing document*
- *Change posting list*
- *Change remuneration list*

### Role

In the standard system, the Purchasing Group role (*90001*) is defined for the determination of the person responsible. However, you can also assign other roles or specific users.

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**Operation and Link to Application Functions (LO-AB)**

## Operation and Link to Application Functions (LO-AB)

### Use

A customer informs you that a particular agency document they received contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee.

### Features

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible. You can enter the following information in this transaction:

- Agency document category that is to be processed (single settlement request, vendor billing document, and so on).
- Method: The document should be changeable.
- Document number
- Explanatory text

This could be a short description of the customer's complaint relating to the agency document.

The system determines the person responsible using the role (user assignment) defined for the workflow scenario and sends a work item to his/her integrated inbox. The work item contains this explanatory text.

As the person responsible, you can now:

- Reject the work item.

If you reject the work item, the workflow ends at this point.

- Execute the work item.

If you execute the work item, the agency document is displayed in change mode. You can then check the document, and make and save any changes.

In addition, you can cancel processing. If you do this, you can choose whether to terminate processing or return the work item to your inbox for processing at a later date.

If no errors occur when the work item is saved, the workflow ends at this point. If errors occur, a message containing an error log is sent to your integrated inbox.

## Copy Agency Documents (LO-AB)

### Purpose

You can use the workflow described here to define that certain employees are to create a new single settlement request with reference to another document.

### Process Flow

You can use the *Workflow Workbench: Agency Business* transaction to enter an explanatory text for the activity and trigger a workflow to automatically determine the people responsible.

The system determines the people responsible using the role (user assignment) defined for the workflow scenario and sends a work item to their integrated inbox. This workflow is used to create a single settlement request with reference to another document.

For more information, see:

[Technical Implementation \(LO-AB\) \[Page 100\]](#)

[Operation and Link to Application Functionality \(LO-AB\) \[Page 101\]](#)

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**Technical Implementation (LO-AB)**

## Technical Implementation (LO-AB)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

The method *copy* and event *tobecopied* for triggering the workflow are provided via business object *BUS21002* ([Single Settlement Request \[Ext.\]](#)).

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The workflow templates for the *Copy single settlement request* workflow are grouped together under task group *20000045* (*Copy agency documents*).

### Role

In the standard system, the Purchasing group role (*90001*) is defined for the determination of the person responsible. However, you can also assign other roles or specific users.

## Operation and Link to Application Functions (LO-AB)

### Use

You want to inform a particular employee that he/she should create a new settlement request with reference to another document.

### Features

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible. You can enter the following information in this transaction:

- Agency document category that is to be processed (single settlement request, vendor billing document, and so on).
- Method: The document is to be copied.
- Document number
- Explanatory text

This could be a short description of the activity, for example.

The system determines the person responsible using the role (user assignment) defined for the workflow scenario and sends a work item to his/her integrated inbox. The work item contains the explanatory text.

As the person responsible, you can now:

- Reject the work item.  
If you reject the work item, the workflow ends at this point.
- Execute the work item.  
If you execute the work item, a new single settlement request is created with reference to another document. You can make any changes that are required to the new document, and then save it.  
In addition, you can cancel processing. If you do this, you can choose whether to terminate processing or return the work item to your inbox for processing at a later date.  
If no errors occur when the work item is saved, the workflow ends at this point. If errors occur, a message containing an error log is sent to your integrated inbox.

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**Correct Agency Documents (LO-AB)**

## Correct Agency Documents (LO-AB)

### Purpose

You can use the workflow described here to define that a single settlement request is to be forwarded to a certain employee, who is to make corrections, for example. It may be necessary to correct the document if it has already been forwarded to Accounting, and is therefore no longer changeable, for example.

### Process Flow

A customer informs you that a particular document they received contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee.

You can use the *Workflow Workbench: Agency Business* transaction to enter an explanatory text for the activity and trigger a workflow to automatically determine the people responsible.

The system determines the people responsible using the role (user assignment) defined for the workflow scenario and sends a work item to their integrated inbox.

If the person responsible executes the work item and the single settlement request is still changeable (that is, it has not yet been forwarded to Accounting), the document is displayed in change mode. If the document has already been forwarded to Accounting, when the work item is executed the document that was forwarded is automatically reversed and a new document is created with reference.

For more information, see:

[Technical Implementation \(LO-AB\) \[Page 103\]](#)

[Operation and Link to Application Functions \(LO-AB\) \[Page 104\]](#)

## Technical Implementation (LO-AB)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

The methods *change* and *copy* and event *tobecorrected* for triggering the workflow are provided via business object *BUS21002* ([Single Settlement Request \[Ext.\]](#)):

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The workflow template for the *Correct single settlement request* workflow are grouped together under task group *20000044* (*Correct agency documents*).

### Role

In the standard system, the Purchasing group role (*90001*) is defined for the determination of the person responsible. However, you can also assign other roles or specific users.

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**Operation and Link to Application Functions (LO-AB)**

## Operation and Link to Application Functions (LO-AB)

### Use

A customer informs you that a particular single settlement request contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee.

### Features

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible. You can enter the following information in this transaction:

- Agency document category that is to be processed (single settlement request, vendor billing document, and so on).
- Method: The document is to be corrected.
- Document number
- Explanatory text

This could be a short description of the customer's complaint relating to the document.

The system determines the person responsible using the role (user assignment) defined for the workflow scenario and sends a work item to his/her integrated inbox. The work item contains the explanatory text.

If it is still possible to correct the document, you have the following options when you execute the work item:

- Reject the work item.
  - If you reject the work item, the workflow ends at this point.
- Execute the work item.
  - If you execute the work item, the system checks whether it is still possible to change the document:
    - If you can still change the document (that is, it has not yet been forwarded to Accounting), it is displayed in change mode.
    - If you can no longer change the document (that is, it has already been forwarded to Accounting), the document that was forwarded is automatically reversed and a new document is created with reference.

You can then check the document, and make and save any changes.

In addition, you can cancel processing. If you do this, you can choose whether to terminate processing or return the work item to your inbox for processing at a later date.

If no errors occur when the work item is saved, the workflow ends at this point. If errors occur, a message containing an error log is sent to your integrated inbox.

If the document cannot be corrected (for example, if it has already been reversed), you have the following options when you execute the work item:

- Terminate the workflow.



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Operation and Link to Application Functions (LO-AB)

- Start another workflow that enables a new single settlement request to be created with reference to the reversed document (see [Copy Agency Documents \[Page 99\]](#)).

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**Reverse Agency Documents (LO-AB)**

## Reverse Agency Documents (LO-AB)

### Purpose

You can use the workflow described here to define that agency documents are to be forwarded to certain employees, who can reverse them to process customer messages, for example.

### Process Flow

A customer informs you that a particular agency document they received contains incorrect amounts, and must be reversed, for example. As you are not responsible for this, you want to forward the message to another employee.

You can use the *Workflow Workbench: Agency Business* transaction to enter an explanatory text for the problem and trigger a workflow to automatically determine the people responsible.

The system determines the people responsible using the role (user assignment) defined for the workflow scenario and sends a work item to their integrated inbox.

If the person responsible executes the item, the document is reversed.

For more information, see:

[Technical Implementation \(LO-AB\) \[Page 107\]](#)

[Operation and Link to Application Functions \(LO-AB\) \[Page 108\]](#)

## Technical Implementation (LO-AB)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

The method *cancel* and event *tobecanceled* for triggering the workflow are provided via the following business objects:

- *BUS21001*: [Single Settlement Request \[Ext.\]](#)
- *BUS21001*: [Vendor Billing Document \[Ext.\]](#)

The method *close* and the event *tobeclosed* are provided via business object *BUS21001* ([Settlement Request List \[Ext.\]](#)).

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The workflow templates for the following workflows are grouped together under task group *20000042* (*reverse agency documents*):

- *Reverse single settlement request*
- *Close settlement request list*
- *Reverse vendor billing document*

### Role

In the standard system, the Purchasing group role (*90001*) is defined for the determination of the person responsible. However, you can also assign other roles or specific users.

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**Operation and Link to Application Functions (LO-AB)**

## Operation and Link to Application Functions (LO-AB)

### Use

A customer informs you that a particular agency document they received contains incorrect amounts, for example. As you are not responsible for this, you want to forward the message to another employee to reverse the document.

### Features

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible. You can enter the following information in this transaction:

- Agency document category that is to be processed (single settlement request, vendor billing document, and so on).
- Method: The document is to be reversed.
- Document number
- Explanatory text

This could be a short description of the customer's complaint relating to the document.

The system determines the person responsible using the role (user assignment) defined for the workflow scenario and sends a work item to his/her integrated inbox. The work item contains the explanatory text.

As the person responsible, you can now:

- Reject the work item.

If you reject the work item, the workflow ends at this point.

- Execute the work item.

If you execute the item, the document is reversed.

If no errors occur when the work item is reversed, the workflow ends at this point. If errors occur, a message containing an error log is sent to your integrated inbox.

## Release Agency Documents (LO-AB)

### Purpose

You can use the workflow described here to define that certain employees are to release agency documents to Accounting.

In Customizing for *Agency Business*, you can set a posting block for various agency document categories, and by doing so define that documents are to be transferred collectively to Accounting in a subsequent release procedure. If you do not set a posting block, the documents are released to Accounting automatically when they are saved.

For further information, see [Releasing Blocked Documents \[Ext.\]](#).

### Process Flow

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible for releasing the documents to Accounting.

The system determines the people responsible using the role (user assignment) defined for the workflow scenario and sends a work item to their integrated inbox. The work item contains the explanatory text.

If you execute the work item, the agency document is released.

For more information, see:

[Technical Implementation \(LO-AB\) \[Page 110\]](#)

[Operation and Link to Application Functions \(LO-AB\) \[Page 111\]](#)

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**Technical Implementation (LO-AB)**

## Technical Implementation (LO-AB)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

The method *release* and event *toberleased* for triggering the workflow are provided via the following business objects:

- *BUS21001*: [Settlement Request List \[Ext.\]](#)
- *BUS21001*: [Single Settlement Request \[Ext.\]](#)
- *BUS21001*: [Posting List \[Ext.\]](#)
- *BUS21001*: [Vendor Billing Document \[Ext.\]](#)
- *BUS21001*: [Remuneration List \[Ext.\]](#)

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

The workflow templates for the following workflows are grouped together under task group *20000043 (release agency documents)*:

- *Release single settlement request*
- *Release settlement request list*
- *Release vendor billing document*
- *Release posting list*
- *Release remuneration list*

### Role

In the standard system, the Purchasing Group role (*90001*) is defined for the determination of the person responsible. However, you can also assign other roles or specific users.

## Operation and Link to Application Functions (LO-AB)

### Use

You want to inform a particular employee that he/she is to release agency documents to Accounting.

### Process Flow

You can use the *Workflow Workbench: Agency Business* transaction to trigger a workflow to automatically determine the person responsible for releasing the documents to Accounting. You can enter the following information in this transaction:

- Agency document category that is to be processed (single settlement request, vendor billing document, and so on).
- Method: The document is to be released to Accounting.
- Document number
- Explanatory text

This could be a short description of the activity, for example.

The system determines the person responsible using the role (user assignment) defined for the workflow scenario and sends a work item to his/her integrated inbox. The work item contains the explanatory text.

As the person responsible, you can now:

- Reject the work item.

If you reject the work item, the workflow ends at this point.

- Execute the work item.

If you execute the work item, the agency document is released to Accounting.

If no errors occur when the work item is released, the workflow ends at this point. If errors occur, a message containing an error log is sent to your integrated inbox.

**Space Management (LO-MD-PL)****Space Management (LO-MD-PL)****Purpose**

In the SAP System you can design the layout of articles in retailing and customer sites using site layouts. Site layouts contain layout modules that represent, for example, a typical shelf in a store and the articles sold.

Articles are given definite placings in the retailing sites, a process that is supported by a local space management program. This type of program is PC-based and is supplied with layout data from the SAP System.

If changes are made to the structure of a site layout module or to the articles it contains, the changes are sent to the space management program so that a new space management run can be started using the new data.

Program *RWREGPRO* is used to provide the space management programs with data so that the site layout module data can be displayed before it is transported to the space management program.

**Process Flow**

It is not always useful to examine site layout modules manually for changes on a regular basis and then export data to the space management program.

It is preferable to use the system to define changes automatically and assign space management to suitable employees using a workflow.

An individual workflow is not started for each change in the site layout module when you use the SAP Business Workflow. Changes are analyzed when a new assortment list is generated for a retailing site and when the retailing site receives new assortment data.



The assortment list only triggers workitems for the workflow if the assortment list is generated for the reference store in the relevant layout module.

Assortment lists are created regularly to provide stores with data. Only changed assortment list versions are sent to the stores.

If the system finds changes to the last version when an assortment list is generated, space management workflows are started for site layout modules that appear in assortment lists and contain changes.

An individual workflow is started for every assortment list, assortment list version, and change site layout module. The workflow generates a workitem used by the relevant employee to decide if space management is to be run directly or if the layout data is to be displayed before doing so.



The reference store data that is entered in the site layout module forms the basis for space management.

An additional workitem is generated for those employees who decide to use an alternative. The new workitem is then used to run space management for the selected alternative.



**Space Management (LO-MD-PL)**

An additional workitem is generated and used by employees to decide if they want to run an additional space management run.

If the employee decides to run space management again, the relevant workflow is called. If the employee decides *not* to run space management again, the workflow is completed.

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**Technical Implementation (LO-MD-PL)**

## Technical Implementation (LO-MD-PL)

### Object Types Used

Object technology is used to create the interface between the R/3 functions and the workflow system. The information given below is of a technical nature and is not necessary for an initial overview.

### Standard Tasks

The standard tasks provided by SAP as single steps describe the basic business activities from an organizational point of view. A single-step task relates to a single object method (= technical link to R/3 functionality), and is linked to the agents possible from an organizational point of view.

### Workflow Template

The actual operational procedure is implemented as a workflow template. You can find this workflow template in your R/3 system.

## Object Assortment List (LO-MD-ASS-ASL)

### Definition

The business object assortment list is a list of materials selected according to specific criteria and belonging to an assortment within a certain period.

### Use

Assortment lists can be arranged by site layout modules. If the data in an assortment list changes, the changes are grouped by the site layout modules in the assortment list and an event created.

Position in object repository: → *Logistics basic data* → *Assortment* → *Assortment list*

---

Object: Site Layout Module (LO-MD-PL)

## Object: Site Layout Module (LO-MD-PL)

### Definition

The object "Site layout module" is a group of materials that are placed in the same part of the site layout.

### Use

Location in object repository: *General logistics* → *Logistics basic data* → *Plant master*

## Standard Task TS00300032: Space Management Decision (LO-MD-PL)

### Use

In this standard task, you can decide whether you carry out space management directly or whether you display the data beforehand.

Object method referenced: object type *DECISION*, method: Process,

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

---

Standard Task TS20000147: Direct Space Management (LO-MD-PL)

## Standard Task TS20000147: Direct Space Management (LO-MD-PL)

### Use

In this standard task, you can export site layout module data and optimize this externally.

Object method referenced: object type *BUS1083* (site layout module), method: Export

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

---

**Standard Task TS20000155: Space Management with Data Display(LO-MD-PL)**

## **Standard Task TS20000155: Space Management with Data Display(LO-MD-PL)**

### **Use**

In this standard task, you can display and export site layout module data and optimize this externally.

Object method referenced: object type *BUS1083* (site layout module), method: DisplayAndExport

Agent assignment: This task should be classified as a general task. General tasks do not have to be assigned to an agent as any agent may execute them. The agent is determined from the context of the workflow.

---

Standard Role 2000036: Space Manager (LO-MD-PL)

## Standard Role 2000036: Space Manager (LO-MD-PL)

### Use

This standard role determines the people responsible for space management (space managers). The basis for role resolution is a site layout module for which space management is to be carried out. The role is of the type Responsibilities, which means that any responsibilities can be defined for areas of site layout modules.



## Workflow Template 2000053: Space Management (LO-MD-PL)

### Use

If data for a site layout module is to be optimized, because changes have been made, a workflow is started based on the template *LOLayoutChng*.

Workflow template: *2000053*, abbreviation: *LOLayoutChng*, description: Space management

### Triggering events of the workflow template

The event *LayoutModuleChanged* is the triggering event for object type *BUS3032* (assortment list) in this workflow template.



This “linkage” between the event and the workflow template to be started is deactivated in the standard system. If you want to start the workflow template, the linkage must be activated in Customizing for SAP Business Workflow.

### Workflow container and binding

The most important pieces of information which must be available during the course of the workflow are the object references to the site layout module (*SiteLayoutModule*) to be processed. The information is available as an even parameter in the container of the triggering event, and must be transferred from there to the workflow container via a binding.

Workflow container	Event parameter container
<i>SiteLayoutModule</i>	<i>SiteLayoutModule</i>

Element *SiteLayoutModule* has been created in addition to the elements available in the standard system.

---

**Preparation and Customizing (LO-MD-PL)**

## Preparation and Customizing (LO-MD-PL)

### Use

In addition to the general Customizing procedures that must be performed to make sure workflow system functions properly, several other customizing steps are necessary for this workflow template.

### Activities

#### Processing the organizational structure

Space management is carried out only by agents that are found via resolution of role 20000036 (space manager). The role is of the type Responsibilities, which means that any organizational objects can be defined.

If you want to use new organizational objects for this role, you must first define these in Organizational Management.

#### Performing task-specific Customizing

Classify the general tasks.

Assign tasks in the Plant Master as follows:

1. Execute the Customizing activity *Basis Components* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing*.
2. Under *Logistics - General* → *Logistics Basic Data* → *Plant master* select *Assign tasks to agent*.
3. Classify the standard tasks *TS00300032* (space management decision), *TS20000147* (direct space management) and *TS20000155* (space management with data display) as general tasks.

#### Activating event-receiver linkage

The event *LayoutModuleChanged* for object type *BUS3032* (assortment list) is the triggering event for workflow template *20000053* (space management), and as such, it is entered in the event linkage table in the standard system. So that the workflow template can actually be started, the link between the triggering event and the workflow template, as the event receiver, must be activated in Customizing for SAP Business Workflow.

1. Choose *Basis Services* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing* in Customizing.
2. Activate event linking for the workflow template (*General Logistics* → *Logistics Basic Data* → *Activate event linking*).

(Alternatively, you can activate event-receiver linking by processing the workflow template directly.)

## Operation and Connection with Application Functionality (LO-MD)

### Use

Assortment lists can be created at regular intervals. Each time a new version of an assortment list is created, events are also created automatically which refer to the changes made to the individual site layout modules of an assortment list.

If you have made the necessary settings in Customizing for this workflow template, the workflow template is ready for use and is started automatically from the application.