

# Engineer-to-Order (ETO) of a Turbine



ADDON.IDESISE&C

Release 4.6C



## Copyright

© Copyright 2001 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft<sup>®</sup>, WINDOWS<sup>®</sup>, NT<sup>®</sup>, EXCEL<sup>®</sup>, Word<sup>®</sup>, PowerPoint<sup>®</sup> and SQL Server<sup>®</sup> are registered trademarks of Microsoft Corporation.

IBM<sup>®</sup>, DB2<sup>®</sup>, OS/2<sup>®</sup>, DB2/6000<sup>®</sup>, Parallel Sysplex<sup>®</sup>, MVS/ESA<sup>®</sup>, RS/6000<sup>®</sup>, AIX<sup>®</sup>, S/390<sup>®</sup>, AS/400<sup>®</sup>, OS/390<sup>®</sup>, and OS/400<sup>®</sup> are registered trademarks of IBM Corporation.

ORACLE<sup>®</sup> is a registered trademark of ORACLE Corporation.

INFORMIX<sup>®</sup>-OnLine for SAP and Informix<sup>®</sup> Dynamic Server<sup>™</sup> are registered trademarks of Informix Software Incorporated.

UNIX<sup>®</sup>, X/Open<sup>®</sup>, OSF/1<sup>®</sup>, and Motif<sup>®</sup> are registered trademarks of the Open Group.






HTML, DHTML, XML, XHTML are trademarks or registered trademarks of W3C<sup>®</sup>, World Wide Web Consortium, Massachusetts Institute of Technology.

JAVA<sup>®</sup> is a registered trademark of Sun Microsystems, Inc.

JAVASCRIPT<sup>®</sup> is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

SAP, SAP Logo, R/2, RIVA, R/3, ABAP, SAP ArchiveLink, SAP Business Workflow, WebFlow, SAP EarlyWatch, BAPI, SAPHIRE, Management Cockpit, mySAP.com Logo and mySAP.com are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other products mentioned are trademarks or registered trademarks of their respective companies.

## Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

## Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options.  Cross-references to other documentation
<b>Example text</b>	Emphasized words or phrases in body text, titles of graphics and tables
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools.
<b>Example text</b>	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key

## Contents

<b>Engineer-to Order (ETO) of a Turbine</b> .....	<b>6</b>
<b>Data Used in this IDES Process</b> .....	<b>8</b>
<b>Concept and Product Design</b> .....	<b>11</b>
<b>Displaying a Standard WBS</b> .....	<b>12</b>
<b>Displaying a Standard Network</b> .....	<b>13</b>
<b>Display the Turbine Product Structure</b> .....	<b>14</b>
<b>Inquiry and Quotation Processing</b> .....	<b>15</b>
<b>Creating the Inquiry</b> .....	<b>17</b>
<b>Creating the Project Structure</b> .....	<b>18</b>
<b>Determining Dates and Planned Costs</b> .....	<b>20</b>
Scheduling the Project.....	22
Recalculating Planned Costs.....	24
Planning Material Costs.....	26
Evaluating Costs in the Cost Element Report.....	28
<b>Sales Pricing, Revenue Planning, and Quotation Creation</b> .....	<b>29</b>
Account Assigning the Inquiry to the Project.....	30
Determining Sales Prices and Planning Revenues.....	31
Generating the Quotation from the Sales Pricing.....	34
<b>Order Entry Processing</b> .....	<b>35</b>
<b>Creating the Order</b> .....	<b>37</b>
<b>Evaluating Revenues in the Structure Overview</b> .....	<b>39</b>
<b>Deleting the Billing Plan for the WBS Element</b> .....	<b>40</b>
<b>Planning Revenues Using the Sales Order</b> .....	<b>41</b>
<b>Releasing the Overall Project</b> .....	<b>43</b>
<b>Confirming a Single Activity</b> .....	<b>44</b>
<b>Down Payment Processing</b> .....	<b>45</b>
Calling Up the Payment Report.....	46
Billing the Down Payment.....	47
Posting the Down Payment.....	48
<b>Project Processing</b> .....	<b>49</b>
<b>Assigning Material Components to the Project Activities</b> .....	<b>50</b>
<b>Executing Material Requirements Planning</b> .....	<b>53</b>
<b>Processing Purchasing, Example: Material Purchasing</b> .....	<b>55</b>
Checking the Stock/Requirements List.....	56
Assigning a Purchase Requisition to a Vendor.....	57
Making a Purchase Order.....	58
Evaluating Commitments in the Cost Element Report.....	60
Posting the Goods Receipt for the Purchase Order.....	62
Evaluating the Goods Receipt in the Cost Element Report.....	64
Network Assembly.....	65
Evaluating the Goods Issue in the Cost Element Report.....	67
<b>In-House Production of a Turbine Component</b> .....	<b>68</b>
Creating Production Orders.....	69
Posting Components Goods Issue for Production Order.....	70
Confirming the Production Order.....	71

Posting Goods Receipt for Material Produced In-House .....	73
Posting Goods Issue for Reservation of the Network .....	74
<b>Confirming the Activities .....</b>	<b>76</b>
<b>Billing Partial Invoices .....</b>	<b>78</b>
<b>Entering the Incoming Payment .....</b>	<b>80</b>
<b>Transferring Payment .....</b>	<b>81</b>
<b>Turbine Assembly .....</b>	<b>82</b>
<b>Entering a Construction Assembly Confirmation via the Internet .....</b>	<b>83</b>
Entering an Individual Confirmation .....	85
<b>Creating a Billing Document .....</b>	<b>86</b>
<b>Period-End Closing with the Schedule Manager .....</b>	<b>87</b>
<b>Calling Up the Schedule Manager .....</b>	<b>89</b>
<b>Checking the Period Settings .....</b>	<b>90</b>
<b>Maintaining Selection Variants for Collective Processing .....</b>	<b>91</b>
<b>Determining Settlement Rules .....</b>	<b>92</b>
<b>Executing Period-End Closing .....</b>	<b>93</b>

## Engineer-to Order (ETO) of a Turbine

### Purpose

One of your company's main tasks is the production of high-quality and technically complex turbines, which you manufacture on behalf of power plant construction companies, and so on. You purchase some of the turbine components from suppliers, the rest you manufacture yourself. Each process, from component assembly, to plant acceptance and delivery to the customer, is extremely time-consuming. Delays may lead to severe contractual penalties, and therefore, should be avoided at all costs, or possible delays should be recognized as such long before they arise.

You manage the manufacture of turbines as project business. This allows you to plan and monitor dates, costs, and revenue on a project-basis. Because of your long years of experience in this area, you already have standard project structures, such as project plans, and networks, as well as standard production data, such as task lists, prices, duration, and so on. You can use these templates at the start of a new project, and tailor them to the individual needs of each project.

### Process Flow

1. On the basis of an inquiry, you create an operational project. Because you are experienced in designing and manufacturing turbines, you can make reference to an existing standard work breakdown structure (WBS) and standard networks in the system. First, you check the feasibility of the project dates. So that you can quote a sales price, you perform sales pricing on the basis of the project planning data.

[Inquiry and Quotation Processing \[Page 15\]](#)

2. On acceptance you create a sales order and release the project. You plan revenue using a billing plan in the sales order. You control the different billing dates using project milestones. In accordance with the contractual negotiations with the customer, a down payment is made on conclusion of the contract.

[Order Entry Processing \[Page 35\]](#)

3. You procure one of the turbine components externally from a supplier, and run through purchase order handling for that part. You manufacture one of the components yourself. The decision on which components are to be externally procured, and which are to be manufactured in-house has already been made.

You place orders for long-lead items early to avoid delays to project progress. Your project controls the requirement for particular components in the manufacture of the turbine. As soon as all components are available, you assemble the turbine.

[Project Processing \[Page 49\]](#)

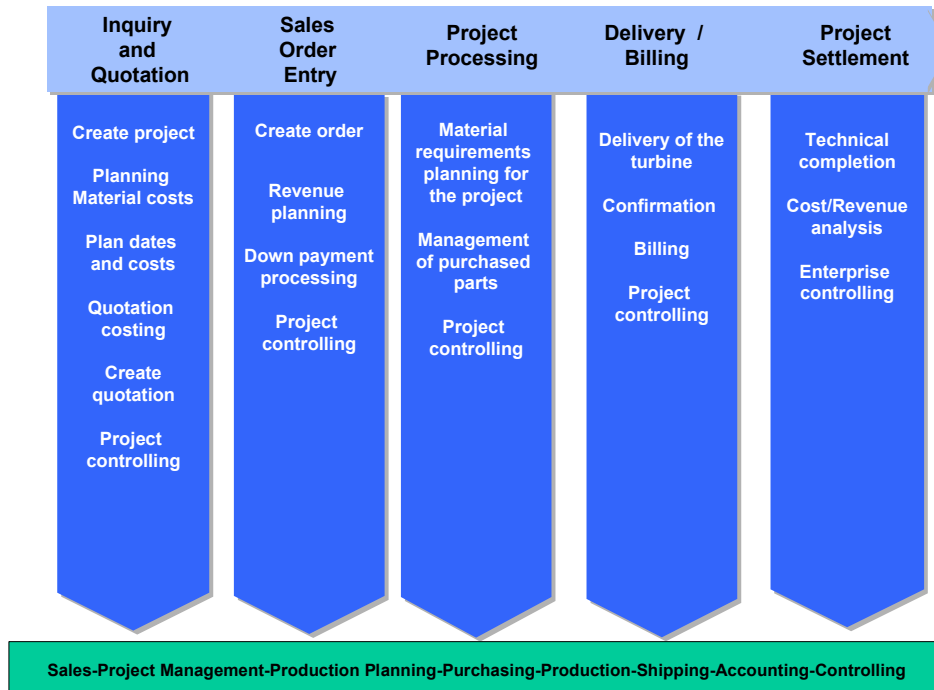
4. You deliver the finished product to your customer. Using confirmation, you create the customer acceptance and generate the final invoice.

[Turbine Assembly \[Page 82\]](#)

5. During project processing, you constantly control project earned value using confirmations and the cost/revenue situation, so that you can take any corrective action that may be required. You run several period-end closings, however only one is run as an example. On completion of the project you create the final invoice and close the project technically.

[Period-End Closing with the Schedule Manager \[Page 87\]](#)

The following graphic illustrates the different project phases, the activities in these phases, and the enterprise areas involved in each phase.



The process described in the example contains the most important aspects in project processing, and the possibilities of implementing them in the SAP System.

The processes are **not** intended to be complete. For example, project settlement is not described, because the most important activities are already described in the period-end closing.

## Data Used in this IDES Process

**Data Used in this IDES Process****Data in SD - Sales**

Field	Data	Description
Inquiry type	IN	RFQ
Order type	PS1	PS:Order
Sales organization	1000	Frankfurt, Germany
Distribution channel	10	Final customer sales
Division	00	Cross-divisional
Sold-to party	1600	TALPA GmbH, Hannover
DIP profile	13000000, Usage 11	Choose the Sales B tab page

**Data in FI - Incoming Payments**

Field	Data	Description
Type	DZ	Customer payment
Company code	1000	IDES AG
Currency/rate	UNI or DEM	DEM in client 800 only
Customer account	1600	TALPA GmbH
Spec. G/L indicator	A	Down payment
Bank account	113100	Receivables – Domestic customers

**Data in PS – Basic Data**

Field	Data	Description
Standard WBS	T-20000	Turbine
Standard network	T-20000	Turbine standard
Standard project definition	T-20000	Turbine standard
Operational project	T-100##	<own description>
Project profile	Turbine standard	--
Project definition operational project	T-100##	<own description>

Data Used in this IDES Process

Plan.board prf	Turbines	--
----------------	----------	----

Data in PS – Material (Bill of Material Transfer)

Field	Data	Description
Project definition	T-100##	<own description>
Profile	1300	Universal material BOM transfer
Material	T-20000	Turbine system
Plant	1300	Frankfurt
BOM usage	3	Universal

Data in PS – Controlling (Period-End Closing)

Field	Data	Description
Variant	GR##	<own description>
DB profile	130000000000	IDES: Structure with SD documents
Controlling area	1000	CO Europe
Task list	ZIDES	IDES: Period-end closing
Flow definition	Z-130	PS: Period-end closing (large)

Data in PS – Information System

Field	Data	Description
Data profile	130000000000	IDES: Structure with SD documents
Controlling area	1000	CO Europe
PS Info Profile	YIDES_130000	IDES: Dates and Costs (Planned/Actual)

Data in MM - Purchasing

Field	Data	Description
Purchasing organization	1000	IDES Germany
Vendor	1000	C.E.B. Berlin
Plant	1300	Frankfurt

**Data Used in this IDES Process**

WBS Element	T-100##	<own description>
-------------	---------	-------------------

**Data in MM - Goods Movements**

Field	Data	Description
Movement type	101	Goods receipt for purchase order/order in/to warehouse
Plant	1300	Frankfurt
Storage location	0001	Storage location 0001

**Data in PP - Shop Floor Control**

Field	Data	Description
WBS Element	T-100##	<own description>
Material	T-20600	Complete bearing box
Production plant	1300	Frankfurt
Order type	pp01	Standard production order

## Concept and Product Design

### Purpose

The turbine is fully developed and the required materials, BOMS, drawings, and so on are stored in the system as master data.

Project processing is also prepared, in that there are standard templates (WBS and networks) in the system.

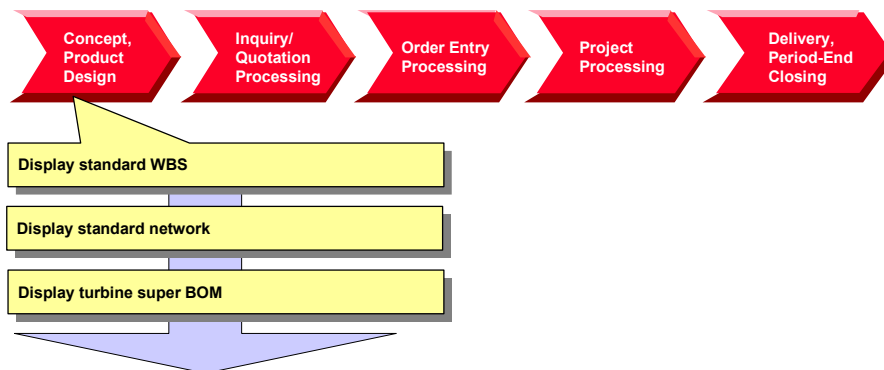
Independent from the operational business of manufacturing and project processing, the development, design and standardization departments constantly update the system data, so that the most up to date data is always available.

### Process Flow



The concept and product development phase is not a part of the project processing for the turbine manufacture. You do not have to perform the steps described here, because they do not affect the process of turbine manufacture. However, they help you become acquainted with the data and project used in the turbine manufacture.

You check different templates. The following graphic reflects each activity.



## Displaying a Standard WBS

## Displaying a Standard WBS

### Use

The manufacture and delivery of complex turbines is part of the day-to-day business of your company. You have reflected your experience in standard structures so that large projects can be processed quickly and in a standard way.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Project System → Basic Data → Templates → Standard WBS → Display</i>
<b>Transaction Code</b>	CJ93

2. Enter the following data:

<b>Field</b>	<b>Data</b>
Std. project def.	T-20000

3. Choose .
4. To display a hierarchy graphic of the project, select .

## Displaying a Standard Network

### Use

Standard networks are assigned to the standard project. When creating the operational project, the standard network is used as a template for the operational network that is created with the project. It contains internal and external processing, as well as primary costs, however it does not contain materials.

In the course of the project, materials are copied from the WBS BOM to the network and assigned to individual activities by using the BOM-PS interface. For the assignment, reference points to each activity have already been maintained in the standard network.

**You can find further information in the SAP Library under**

*Logistics → Project System (PS) → Structures → Standard Structures → Standard Networks*


### Procedure

1. Call up the transaction as follows:


<b>Menu Path</b>	From the node <i>Templates</i> , choose <i>Standard network → Display</i>
<b>Transaction Code</b>	CN03

2. Enter the following data:

Field	Data
Standard network	T-20000

3. Choose .

You see an overview of the activities. The internal and external processing, and primary costs are maintained on different tab pages.

4. To view the reference points for the assignment of materials over the BOM-PS interface, select the *Total* tab page.
5. If you want to display the individual activities and their relationship to each other, choose .

## Display the Turbine Product Structure

## Display the Turbine Product Structure

### Usage

The product structure displays the link between the different objects from PDM, such as material, BOMs, and so on.

**For more information on the *Product Structure Browser*, see the SAP Library under:**

*Cross-Application Components → Document Management → Product Structure Browser*


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Central Functions → Engineering → Environment → Product Structure</i>
<b>Transaction Code</b>	CC04

2. On the *Material* tab page, enter the following data:

<b>Field</b>	<b>Data</b>
Material	T-20000

3. Choose .

The product structure display of the T-20000 turbine appears.

4. Expand the product structure.

The system displays the BOM structure of the turbine, and the components and assemblies below it.

## Inquiry and Quotation Processing

### Purpose

The aim of inquiry and quotation processing is to quickly hand over a binding quotation that is attractive for the customer and justifiable from a business point of view. An initial specification of the product is created in line with the customer's requirements in the process.

On receipt, the inquiry is checked for completeness, and any queries are raised to the customer. The inquiry is then checked for its commercial and technical feasibility, and the importance of the customer for the company is evaluated. Taking order probability into consideration and on the basis of the information gained from the checks and evaluations, the company decides whether to create a quotation.

The next step is to process a technical solution. If required, the product can be configured with the help of existing variants and/or projects that have already been implemented. The technical solution is used in costing any manufacturer costs that might arise. Production and replenishment times are used to determine the delivery date. The quotation is completed by fixing the quotation price, which is determined on the basis of the price the company expects the customer will accept, or on estimated competitor prices. Legal terms and conditions are also part of the completed quotation. On completion of the quotation phase the quotation itself is created and sent to the customer. Quotation processing ends with either order placement or rejection of the quotation by the customer.

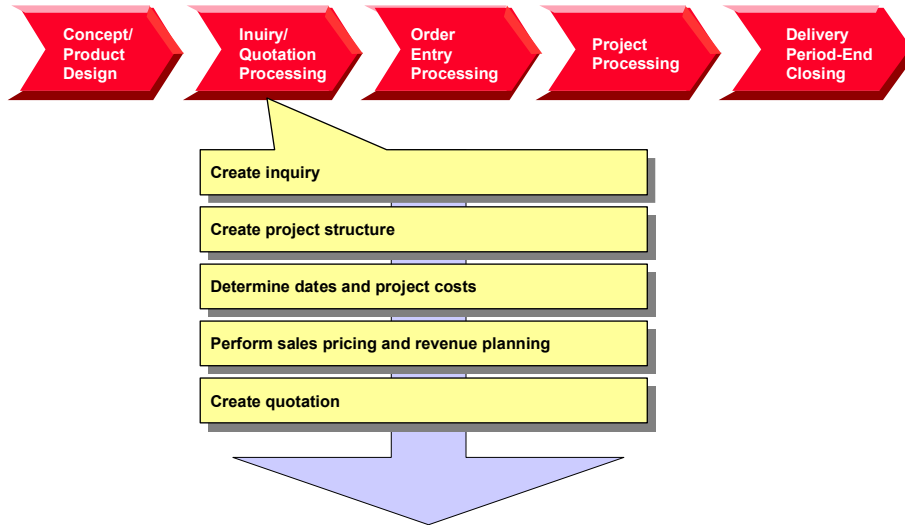
The scenario used here begins with a planning quotation. The quoted technical solution is based on estimated activity and function values, approximate measurements and weights, drawings, and brief descriptions of the main assemblies. The commercial contractual agreements indicate approximate delivery dates and general delivery terms. The quotation is created using a suggested retail price for the overall object, as well as assembly costs, and any services that might arise.

### Process Flow

1. The process begins when you receive an inquiry for a turbine. Customer documents specifying the customer's requirements in more detail may accompany this inquiry. You manage all of these documents together.
2. You expect costs to arise prior to quotation creation because of the complexity of the product and the special customer requirements. Therefore, you create an inquiry project, so that you can account assign the costs for inquiry processing.
3. You perform initial planning of dates and costs on project basis.
4. On the basis of the planned costs, you determine the sales price and transfer it to the quotation. Finally, you print the quotation and send it to the customer.

The flow of inquiry and quotation processing as explained in this example is shown in the following graphic:

## Inquiry and Quotation Processing



## Result

On completion of inquiry and quotation processing, the customer receives a quotation that may have been revised several times over. In reality, the quotation process (quotation – rejection – recosting – new quotation) is repeated several times over until both the customer and the tenderer reach a satisfactory compromise. This cyclical process is not illustrated in this example for reasons of simplicity.

## Creating the Inquiry

### Use

Before you can perform sales pricing in the project system you have to create an inquiry.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Sales and Distribution → Sales → Inquiry → Create</i>
<b>Transaction Code</b>	VA11

2. Enter the following data:


Field	Data
Inquiry type	IN (inquiry)
Sales organization	1000
Distribution channel	10
Division	00

3. Choose .

4. Enter the following data:

Field	Data
Sold-to party	1600
Valid from	<Today's date>
Valid to	<Today's date +1 month>
Req. deliv.date	<Today's date + 1.5 years>
Material	T-20000
Order quantity	1

5. Choose .

6. Choose  in the information window.

The inquiry number is displayed in the status bar.

7. Make a note of the inquiry number.

Creating the Project Structure

## Creating the Project Structure

### Usage

You create a project structure for the turbine in order to create the quotation. The structure of the turbine project comprises WBS elements and activities.

Since your company usually manages turbine manufacture in projects, a standard project structure already exists in the system. All you have to do is adapt this standard structure to suit the specific requirements of your current project. To do this, you copy the standard project into an operational project.

You use the *Project Builder* to create the project.

**For more information on the *Product Builder*, see the SAP Library under:**

*Logistics* → *Project System (PS)* → *Structures* → *Project Builder*


### Prerequisites

Standard project T-20000 already exists in the system.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics</i> → <i>Project System</i> → <i>Project</i> → <i>Project Builder</i>
<b>Transaction Code</b>	CJ20N

When you first call up the Project Builder, a dialog box appears containing the user-specific settings that you can select. To maintain the user-specific settings, choose .

In addition to the general settings, you can also define which project objects you would like to use as templates, for example standard templates.

2. In the *Structure Tree* screen area choose  → *Copy project*


The *Create Project* dialog box appears.

3. Enter the following data:

Field	Data
Project def.	T-10### ### equals any three figure number defined by you, for example 034.
Project profile	Turbine standard
Std proj. def.	T-20000

4. Choose .

You can see various objects in the structure tree on the left that have been copied from the standard project.


 Project definition


 WBS elements

## Creating the Project Structure

 Activities

 Milestones

The activities are grouped together in two networks  with provisional numbers.

5. Increase the screen area of the structure tree so that the *Identification* column is visible.
6. In *Identification and view selection* in the work area, overwrite the current entry (Turbine standard) with the name *Turbine ###*.
7. Choose  , and Yes if any warning messages appear.

**Determining Dates and Planned Costs**

## Determining Dates and Planned Costs

### Purpose

To get a realistic idea of project dates and costs, you determine them on the basis of the planned activities.

### Date planning

For a rough estimate you store basic dates in the WBS element. These dates represent the project deadlines. You determine the dates for the overall project using WBS scheduling. The system transfers the basic dates of the WBS elements to the basic dates for the activity scheduling. In the network, the scheduled dates (earliest start and end dates) of the individual activities are determined on the basis of the maintained duration and/or delivery dates and relationships.

### Cost planning

In the SAP R/3 Project System, cost planning takes place using the WBS and the network. You will use activities to plan costs for your turbine project. When the activities are assigned, the costs of the activities are displayed for the WBS elements.

In the network, you initially plan dates, staffing resources, and operating resources. The system calculates the costs automatically on the basis of the existing price/quantity structure. If your project processing is complex (that is, if dates, resources, and costs are relevant), you use network activities for cost planning.

In integrated project management, the planned costs are determined mainly from the valuation records, prices for internal and external activities, and the required operating resources. In the network you plan the internal and external activities as well as the required operating resources against the activities. The system calculates the planned costs in consideration of the dates. The price/quantity structure stored in the system is the basis for the cost determination.

The time-based distribution of the planned costs is the result of the time-based distribution of the planned services and the operating resources for the activity.

Planning using activities and assignments to WBS elements has important advantages:

- It can be copied to other projects and stored in standard networks.
- It is easy to shift in time, if, for example, you need to postpone project work packages.
- You plan costs, dates and capacity requirements, as well as trigger procurement processes using activities (integration of planning).

**You can find further information in the SAP Library under**

*Logistics* → *Project System (PS)* → *Costs*

### Process Flow

1. You schedule your project on the basis of the planned duration of activities and relationships.
2. Cost planning takes place using activities and the stored price/quantity structure. The material components are not planned yet, therefore you plan the material costs for the activities.
3. You evaluate the entire cost planning in the cost element report.



## Scheduling the Project

## Scheduling the Project

## Usage

To check whether you can deliver the turbines on the date agreed, you schedule your project according to that date.

## Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project</i> node, choose <i>Project Builder</i> .
<b>Transaction Code</b>	CJ20N

The system displays your project in the *Preview*, as set up for your user.

2. Double-click on your project.

The work area displays the detailed data for the project definition.

3. On the *Basic data* tab page, enter the following data:

Field	Data
Finish date	Today's date + 1.5 years

4. Choose .

The system expands the project structure.

5. Choose .


The project planning board appears. The project planning board offers you a graphical interface for the planning and monitoring of the dates of the WBS elements and activities.

6. Choose *Settings* → *Options*.

The *Change Standard Values in Project Planning Board* dialog box appears.

7. On the *Scheduling* tab page, enter the following data:

Field	Data
Schedul. method	WBS determines dates

8. Choose .

9. Choose .

The system selects all of the project objects.

10. Choose .


Starting with the final date for the project, the system determines the earliest and latest dates for the activities, and displays the schedule situation.

11. Choose .

12. Choose *Edit* → *Reconcile dates* → *Extrapolate dates*.

**Scheduling the Project**

The system transfers the maximum scheduled dates (earliest start and latest finish) for the activities to the WBS elements, and extrapolates the dates in the project structure.

13. Choose .

14. Remain in the Project Builder.



## Recalculating Planned Costs

## Recalculating Planned Costs



### Usage

You have already planned costs for the created activities by using the quantity structure for your turbine project. This quantity structure was costed automatically when you saved the project. Use the project planning board to find the origin of the activity costs.

### Procedure


1. Double-click on your project in the worklist.
2. Select your project, and choose .
3. Choose .

The project planning board appears. On the left, the system displays the structure and the selected data, on the right the scheduling data.

4. Choose , then .
5. Increase the left screen area until the field *Project costs* is displayed.

The system displays the activities costs aggregated for the activities (in other words, the highest WBS element shows the planned costs for the overall project).


### Controlling costing

1. Select any activity.
2. Choose .

You now see the header data of the network.

3. Choose the *Control* tab page.

Costing variants are stored for the network costing in **Planned** (*CstgVariantPlan* PS02) and **Actual** (*CstVariantActl* PS03). The *Plan cost calc.* indicator defines that the costs are costed automatically when saved.

4. To return to the project planning board, choose .

### Costs for internal processing activities




1. Double click on activity *Maßzeichnung/Berechnung/Entwurf* (1000).

Activity 1000 is an internal processing activity.



Look at the fields that have a direct affect on costing:

- Work center
- Work
- Activity type
- Control key
- DisKeyCapRqInt.
- Normal Duration



## Recalculating Planned Costs

- To call the costing report for the activity, choose *Costs planned/actual*.  
The overhead rates and the planned costs from the internal activity are planned in the activity.
- If necessary, choose .
- Choose .
- To display the project planning board, choose .

**Costs for external processing activity**

- Double click on the *Konstruktion Regelventile* (1300) activity.  
Activity 1300 is an external processing activity.
- Choose the *Extnl* tab page.  
Look at the fields that have a direct affect on costing:
  - Info record
  - Price
  - Cost element
  - Activity qty
  - Control keyThe *Res./Purc.req.* indicator defines that the system generates the purchase requisitions for the activity on release.
- To call the costing report for the activity, choose *Costs planned/actual*.  
The overhead rates and the planned costs from external procurement are planned in the activity.
- Choose .
- To display the project planning board, choose .

**Costs for the general costs activity**

- Double click on the activity *Zusatzkosten* (0200).  
This is a general costs activity. The planned costs are stored directly in the *Amount* field.  
On the tab page, look at the fields that have a direct affect on costing:
  - Amount
  - Distrib. Costs
  - Normal Duration
  - Control key
- To display the project planning board, choose .
- Choose .

Planning Material Costs

## Planning Material Costs

### Use

To get as complete a view as possible of project costs at an early stage, you plan the material costs for components before they are assigned to activities.



The planned values are reduced after assigning the components. This avoids planning material costs twice.


In the meantime you have defined the project owner, to whom you assign all of the WBS elements through mass change.

### Prerequisites

Your project T-10#### is open in the project builder.

### Procedure

#### Assignment of material planning values to activities

1. Expand the *Turbine* → *Einkauf* node.
2. In the *Structure tree* area click on the activity  *Vorabbestellungen* (3000).



The activity number is in the last column (*Identification*).

3. In the work area, select the *Assignments* tab page.
4. Enter the following data:




Field	Data
Mat.planning	100.000


5. Maintain the planning values for the following activities at the same time:

Activity	Field	Data
Materialbeschaffung für Fertigung (3100)	Mat.planning	150.000
Materialbeschaffung für Anlagenteile (3200)	Mat.planning	250.000

6. Choose .


#### Assignment of a project owner using mass change

1. On the tool bar, choose .
2. Choose the *WBS elements* tab page.
3. Choose .
4. Select *Person responsible* from the list on the right, and choose .


5. Choose .


6. Enter the following data:


Field	Data
New value	01

7. Choose .

The system assigns all WBS elements from your project to 01 Andreas Fischer.

8. Choose .

9. If a warning occurs, select .

10. Choose .

## Evaluating Costs in the Cost Element Report

## Evaluating Costs in the Cost Element Report

### Usage

For project controlling, you evaluate the costs by cost element in the Project Information System.



### Prerequisites

You update planned costs to your project.


### Procedure

1. Call up the transaction as follows:


<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Information System</i> → <i>Financials</i> → <i>Execute Report</i> → <i>Cost Element Report</i> .
<b>Transaction Code</b>	GR55

2. Enter report group **Z6P1** and choose .
3. If required, enter database profile *130000000000*, then choose .
4. Enter the following data:

Field	Data
Project	T-10###
Controlling area	1000
Plan version	0
From fiscal year	Current year
To fiscal year	Current year + 2
From period	1
To period	12
Additional selection criteria	Delete

5. Choose .

The aggregated costs of your project are displayed in the report.

6. To break down the planned costs according to each object, click on the different objects in the structure tree (wbs elements or activities).
7. Choose  until you reach the overview tree.
8. Choose Yes in the dialog box.

## Sales Pricing, Revenue Planning, and Quotation Creation

### Purpose

As a rule, you usually perform a one-off, customer-specific service in a customer project. This uniqueness means that you can rarely use standard prices to determine the sales price. You can determine a sales price on the basis of the planning data in the project and SD pricing.

The system compresses the planned costs in sales pricing into dynamic items by cost type. It then converts these into SD items by using material determination in the dynamic item processor profile (DIP profile). SD pricing is used to calculate the sales price.

**You can find further information in the SAP Library under**

*Logistics → Project System (PS) → Revenues and Earnings*

### Prerequisites

You have already planned costs by cost element for your project.

### Process Flow

1. You connect the project to the existing customer inquiry by account assigning the inquiry item to the highest WBS element (billing element) of your project T-10###.
2. To plan revenues for the project ahead of time, you create a billing plan for the billing element using sales pricing.
3. After you have checked your planning you generate a quotation from the sales pricing.

## Account Assigning the Inquiry to the Project

## Account Assigning the Inquiry to the Project

### Use

You account assign your customer's inquiry to the project you have already created to display the quotation costs in the project and to achieve the prerequisites for sales pricing. You store a Dynamic Item Processor Profile (DIP profile) for the sales pricing. In this profile, you define the way in which the system transfers planned costs to materials in the quotation.



### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Sales and Distribution → Sales → Inquiry → Change</i>
<b>Transaction Code</b>	VA12

2. Enter the following data:


Field	Data
Inquiry	Your inquiry number

3. Choose .
4. Select item 10, and choose .
5. On the *Account assignment* tab page, enter the following data:

Field	Data
WBS Element	T-10###

6. On the *Sales B* tab page, enter the following data:

Field	Data
DIP profile	13000000

7. Choose .

## Determining Sales Prices and Planning Revenues

### Usage

You determine the planned sales price of the turbine using sales pricing. Sales pricing offers you two views: In the *Sales Price Basis* (internal view) the system displays all of generated project costs converted to dynamic items. You determine dynamically which costs are used for the sales price. On the other hand, the sales price view is an external view and contains the determined sales price on the basis of the actually selected costs.

To identify the planned revenues from the project in sufficient time, you create a billing plan for the billing element directly from sales pricing. In the billing plan you plan the dates on which you send down payment requests or invoices relevant to customers. The billing plan in the WBS element is used purely for planning purposes, and provides you with a realistic view of revenue.

**You can find further information in the SAP Library under**

*Logistics → Project System → Revenues and Earnings → Sales Pricing and Quotation Creation or Billing Plans in WBS Elements*

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Financials → Planning → Sales Pricing</i>
<b>Transaction Code</b>	DP81



2. Enter the following data:

Field	Data
Project definition	T-10###

3. Choose  *Sales price basis*.

The internal view appears with the project-planned costs that have been converted into dynamic items.

The table in the lower screen area serves to transfer individual costs to pricing, to change the transfer amount, to block costs, and to revalue and devalue in percent. By double clicking in the structure tree, you can transfer individual structure elements to the next level below in the table and perform the required activities.

4. Select the top line and choose .
5. Double click on the description of the WBS element  T-10###.



If you click on the symbol, the detail data appears.

6. To increase the transfer amount, enter the following for the WBS element T-10###:

Field	Data
Transfer amount	1.600.000

**Determining Sales Prices and Planning Revenues**


7. Select  and confirm  the warning in the status bar.

The transfer amount of all lower hierarchy levels is also increased in percent.

**Increasing the sales price flat-rate by 10% transfer price surcharge**

1. Choose  *Sales price*.

The external view with the customer quotation structure appears. The lower part of the screen contains a table (pricing procedure).


2. Select the top line in the structure tree and choose .

The system displays the items from the sales price basis sorted and grouped by SD items. Pricing is performed in SD pricing.

3. Double-click on the top line of the *Project Quotation* structure tree to call the quotation conditions.


The system copies the transfer amount maintained in the sales price basis to condition EK01 in the pricing procedure.

To define a universal surcharge of 10%, enter an additional header condition.

4. Choose .

5. Enter the following data:

Field	Data
CnTy	RA01
Rate	10 (%)


6. Choose .

Because of the additional header condition RA01, you have increased the sales-price flat-rate by 10%.

**Creating a billing plan for the WBS element**

1. Choose  *Billing Plan*.

The system recommends the sales price as the target value for the billing plan.

2. Choose .

The billing plan for the billing element appears.


3. Enter the following data:

Field	Data
Billing date	<Today's date + one year>
%	100
BillRule	1

4. Choose .

5. Choose .

Determining Sales Prices and Planning Revenues


6. Choose .

The Save dialog box appears.


7. In the dialog box, enter the following data:

Field	Data
SPc. short text	Sales price 01: T-10###

If you maintain several alternatives for sales pricing you require the short text for identification purposes.

8. Choose .

The PS billing plan is saved automatically when you save the sales pricing.

9. Choose . Do not exit sales pricing.

## Generating the Quotation from the Sales Pricing

## Generating the Quotation from the Sales Pricing

### Usage

You have checked the sales pricing and now generate a SD quotation.



### Prerequisites

You are in sales pricing.

### Procedure

1. Enter the following data:


Field	Data
Project definition	T-10###

2. Choose .
3. Choose  *Sales Price*, and double click on *Project Quotation*.

The system displays the sales pricing previously created.

4. Choose  *Quotation*.

The *Create Quotation* dialog box appears.

5. Choose  Yes.

The system generates a SD quotation and transfers the items and sales prices from sales pricing.

6. Enter the following data:

Field	Data
Valid from	<Today's date>
Valid to	<Today's date + one month>

7. Choose .

## Order Entry Processing

### Purpose

Incoming orders and order entry processing are important for the value-added in the MTO process. On receipt of an order, a significant amount of money may already be due. At the same time a series of activities are triggered in the enterprise, which unlike during quotation creation are binding.

In the quotation phase, documents and data that are created can be included in the order, or are the order basis. On receipt of an order however, you have to specify and define in detail the inexact and/or rough details from the quotation. The main phases of quotation processing are repeated here.

The incoming order phase finishes externally when the order confirmation is sent to the customer. Internally, this phase is complete when the requirements are finally communicated to production and procurement or assembly.

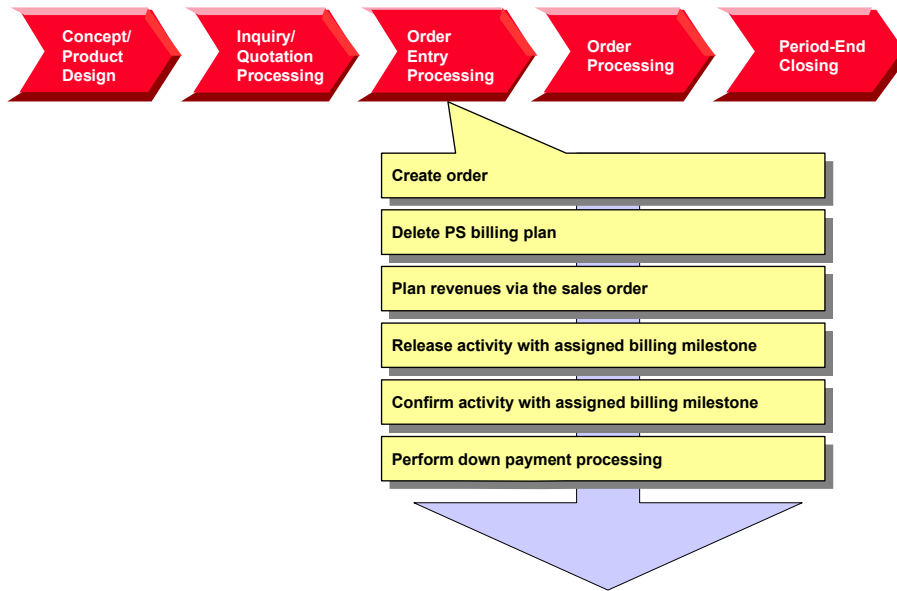
### Process Flow

1. The customer has accepted your offer for the turbine project. Now you create a sales order in the system and assign it to the project.  

When you create the sales order you can use the quotation as a reference. In this case, you receive different order items reflecting the services to be provided. If you create the order without reference, you can create a **single** item that describes the overall product.
2. During the contractual negotiations, you agreed on terms of payment with the customer. You store a billing plan in the sales order. You delete the billing plan for the WBS element to enable the billing dates to be transferred from the sales order to revenue planning for the project.
3. When the customer accepts the offer, you release your project and confirm the first activities. When you confirm the activities, the customer's down payment automatically becomes due through the milestone linkage. A down payment request to the customer is created.
4. You bill the down payment to the customer.
5. When the customer makes the down payment, you post the incoming payment.

The following graphic explains the steps you follow in this example:

Order Entry Processing



## Creating the Order

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Sales and Distribution → Sales → Order → Create</i>
<b>Transaction Code</b>	VA01



2. Enter the following data:


Field	Data
Order type	PS1 (PS order)
Sales organization	1000
Distribution channel	10
Division	00

3. Choose .

4. Enter the following data:

Field	Data
Sold-to party	1600
Purch. order no.	Any number
Req. deliv.date	Today's date + 1.5 years
Material	T-20000
Order quantity	1

5. Choose . In the dialog box, choose .

6. Select the sales items and choose .

7. Choose the *Account assignment* tab page.

8. Enter the following data:

Field	Data
WBS Element	T-10###

The request for quotation is assigned to the billing element for the turbine project.

9. Choose the *Conditions* tab page.


10. Overwrite the amount for condition PR00 as follows:

Field	Data
CnTy	PR00
Amount	1.760.000

You agreed this price with the customer on the basis of the quotation.

11. Choose .

**Creating the Order**

12. Make a note of the order number.
13. Choose  to exit order processing.  
In the dialog box, choose *No*.

## Evaluating Revenues in the Structure Overview


### Use

In the structure overview for the project information system you evaluate the project data according to the structure.



### Procedure


1. Call up the transaction as follows:





<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Information System</i> → <i>Structures</i> → <i>Structure Overview</i>
<b>Transaction Code</b>	CN41

2. If required, enter PS information profile **YIDES\_130000**, then choose .
3. Enter the following data:

Field	Data
Project	T-10####
Additional selection criteria	Delete

4. Choose .
5. Select project definition T-10####, and choose .
 

In the *PrRevPI000* column, the system displays the planned revenues for the WBS element.
6. To transfer additional functions to the standard toolbar, choose  *Choose functions*.
 

The system shows a list of possible functions (left hand column). You can select functions from the left-hand column, and transfer them to the right-hand column using Drag & Drop.
7. Use Drag & Drop to select the following functions:
  -  *Set Filter: Object names*
  -  *Verify: Indiv. confirmation, collective confirmation*
  -  *Object: Create, change, display*
8. Choose  *Copy*.
 

These additional symbols are transferred to the standard toolbar.
9. Remain in the report.

---

**Deleting the Billing Plan for the WBS Element**

## Deleting the Billing Plan for the WBS Element

### Usage





Within sales pricing you have planned the revenues in a billing plan for WBS element T-10###. Because you have now received a sales order and you want to plan the billing data, you delete the billing plan for the WBS element.

### Prerequisites

You have called up the structure overview for your project in the project information system.

[Evaluating Revenues in the Structure Overview \[Page 39\]](#)

### Procedure

1. Select the row for the  Turbines T-10### WBS element in the structure.
2. Use the right mouse button to choose *Object* → *Change*.  
The *Change WBS Element: Basic Data* screen appears.
3. Choose *Details* → *Billing plan*.  
This takes you to the billing plan that you maintained in sales pricing.
4. Choose  *Billing Plan*.
5. Choose Yes from the dialog box.
6. Choose .
7. Choose .  
No planned revenues are displayed on the project.
8. Remain in the report.

### Result

You have deleted the billing plan and thus the planned revenues on the billing element.

## Planning Revenues Using the Sales Order

### Usage


You plan the expected revenues using a billing plan for the sales order. This refers to the billing milestones in the project.

### Prerequisites

You have called up the structure overview for your project in the project information system.




[Evaluating Revenues in the Structure Overview \[Page 39\]](#)

### Procedure

1. Select the row for your sales document item  *Turbinenanlage* in the structure, click the right mouse button and choose *Object* → *Change*.




This is the first sales document item in the structure below the top WBS element (T-10### with ID ##### 000010).


2. Select the item number and choose .
3. Choose the *Billing plan* tab page.  
The *Selection Criteria* dialog box appears.
4. Select WBS element T-10###, and choose .
5. Select all the milestones with  and choose *Copy*.


The billing milestones for the projects are transferred as dates into the billing plan.

Your billing plan contains three dates:

- The first of these is a down payment date (billing rule 4). The billing document for this date triggers a down payment request to the customer. This date is unlocked when you confirm the assigned activity (0100).
- Dates two and three are for the partial and final invoices. After you have confirmed the plant assembly and the trial run, the customer is invoiced for 40% of the net value. The remainder is invoiced after confirmation of site assembly.

6. Choose .
- The item overview for the sales order appears.

7. Choose .
- The structure overview for the project information system appears.

8. Choose .
- The project displays the planned revenues from the billing plan for the sales order.

9. Choose  to exit the report.

---

**Planning Revenues Using the Sales Order****Result**

You have created a billing plan for the sales order by referring to existing billing milestones on the turbine project structure. The project displays the planned revenues.



In Customizing for the Project System, the planner profile specifies that the planned revenues from the sales order are updated on the project using cost element 800000.

## Releasing the Overall Project

### Usage


You release the overall project when the customer places the order. Once you have released the project, you can start working on it. You can only start posting actual costs and actual revenues to the individual WBS elements once the project has been released.

### Procedure


1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project</i> node, choose <i>Project Builder</i> .
<b>Transaction Code</b>	CJ20N

The Project Builder appears. The system displays your project in the tree structure as a preview.

2. Double-click on project T-10####.
3. Select the project definition  *Turbine* ####.




Note the system status (CRTD). This is displayed in the *Identification and View Selection* screen area, on the *Basic data* tab page. For more information on the system status, choose . The *Business processes* tab page shows the activities that are allowed or not allowed in the current system status for the object.

For example, the *Incoming invoice* activity is not allowed for WBS elements, nor is *Confirm activity* allowed for activities.

4. Choose Edit → *Status* → Release.

The value in the *System status* field changes from CRTD to REL. Releasing the project definition releases all of its lower-level objects.

5. Choose .
6. Remain on this screen.

## Confirming a Single Activity

## Confirming a Single Activity

### Usage

The project has been released, and you start working on it. You record the service provided and the project progress by confirming each activity. You start by confirming activity 0100 *Internal sales documents*. A billing milestone is assigned to this activity. When you confirm the activity, the down payment date in the sales order is released, and a down payment of 20% of the total invoice amount becomes due.



### Prerequisites

You have already released the activity.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project</i> node, choose <i>Project Builder</i> .
<b>Transaction Code</b>	CJ20N

2. Double-click on project T-10### in the preview.
3. Expand the node  *Turbine* →  *Turbine*.
4. Click on activity 100 *Interne Bestellunterlagen (Verkauf)*.

The activity is highlighted and the system displays the details in the work area.

5. Choose Edit → Activity → *Confirm*

The confirmation data for the activity appears. Accept the defaulted plan data for the confirmation.




In Customizing for the Project System, the *Final conf.* indicator is set in the confirmation parameter for the network type.

6. Choose .

The Project Builder screen appears. The system sets the extra status *CNF MCNF REL*.



For more information on the system status, choose .

7. Choose  and  if any messages appear.

## Down Payment Processing

### Purpose

In the turbine project, you perform milestone billing for the sales order. Single billing milestones are maintained in the project. When these milestones are confirmed, the down payment date or billing document date is unlocked in the sales order.

Project Cash Management is activated in company code 1000. Payments are updated on the project. You evaluate down payment requests, down payments, and payments in the *Payments* information system.

**For more information on processing down payments, see the SAP Library under:**

*Logistics → Sales & Distribution → Billing → Down Payments for Sales Orders.*

**For more information on Project Cash Management, see the SAP Library under:**

*Logistics → Project System → Payments*

### Prerequisites

Project Cash Management is activated in the company code.

A billing plan with a down payment date is maintained for the sales order.

The down payment date for the billing plan is linked to activity 0100 by a milestone.

You have confirmed activity 0100 *Internal sales documents*.

To evaluate the payment data, call up another session in the report (from now on: Session two).

### Process Flow


1. The billing run selects all the unlocked dates from the sales order. The system creates a down payment request for the down payment date.
2. When you receive the payment, you enter the down payment in Accounts Receivable Accounting for the down payment request.

## Calling Up the Payment Report

## Calling Up the Payment Report

### Usage


You evaluate payment data in the project information system.

You repeatedly check the payment data on the project during the process, therefore call up the payment report in a separate session (from now on: Session two *Payment report*). You do this by choosing . To evaluate the current data, you need to exit the report and rerun it.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics</i> → <i>Project System</i> → <i>Information System</i> → <i>Financials</i> → <i>Payments</i> → <i>Receipts</i>
<b>Transaction Code</b>	S_ALR_87013575

2. If required, enter 130000000000, for the database profile then choose .
3. Enter the following data:

Field name	Value
Project	T-10###
Additional selection criteria	Delete
Plan version	0

4. Choose .

The payment data overview for the project appears. Under *Receipts*, for example, the *Customer fin. budget* row displays revenue plan data from the billing plan for the sales order.

5. To continue processing, switch to another session.

## Billing the Down Payment

### Use

In the sales order, the down payment date in the billing plan is unlocked when activity 0100 *Internal sales documents* is confirmed. During the billing document run, the system selects this date and creates a down payment request.

### Prerequisites

The down payment date must be unlocked in the sales order.

The billing element (the WBS element to which the revenues are posted) must be released. Otherwise, the system creates the down payment request without a corresponding accounting document. The payment data is not updated to the project.

### Procedure


1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Sales → Billing → Billing Document → Create</i>
<b>Transaction Code</b>	VF01

2. Enter the following data:

Field	Data
Document	<Your sales order number>



You can search for the order number by entering WBS element T-10### under *Search criteria* and then choosing  *Search*.

Normally a billing document for many sales documents is executed using the *Process billing due list* mass transaction

3. Choose .

The system selects only one item as a down payment request.

4. Choose .

### Result

The down payment request has been created, and the data on the project has been updated. To evaluate the data, switch to session two (*Payment report*). To evaluate the current data, you need to exit the report and rerun it.

The system displays the down payment request in the *Customer down payt. req.* row.

## Posting the Down Payment

## Posting the Down Payment

### Usage

The customer has made the down payment, and you post the down payment receipt.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Accounting → Financial Accounting → Accounts Receivable → Document Entry → Down Payment → Down Payment</i>
<b>Transaction Code</b>	F-29

2. Enter the following data:



Field	Data
Document date	Today's date
Type	DZ
Company code	1000
Posting date	Today's date
Currency/rate	EUR
Customer account	1600
Special G/L ind	A
Bank account	113100
Amount	408.320

3. Choose *Requests*.

The system selects the corresponding down payment request.

4. Select the down payment request and choose *Create down payments*.

The document overview appears.

5. Choose  and  if any warning messages appear.

### Result

In FI and accounting, the down payment document is posted and the data on the project is updated.

To evaluate the data, switch to session two (*Payment report*). To evaluate the current data, you need to exit the report and rerun it.

The system displays the down payment in the *Cust. down payments* row. The down payment request is reduced to zero with the down payment. The net amounts are displayed on the project.

## Project Processing

### Purpose

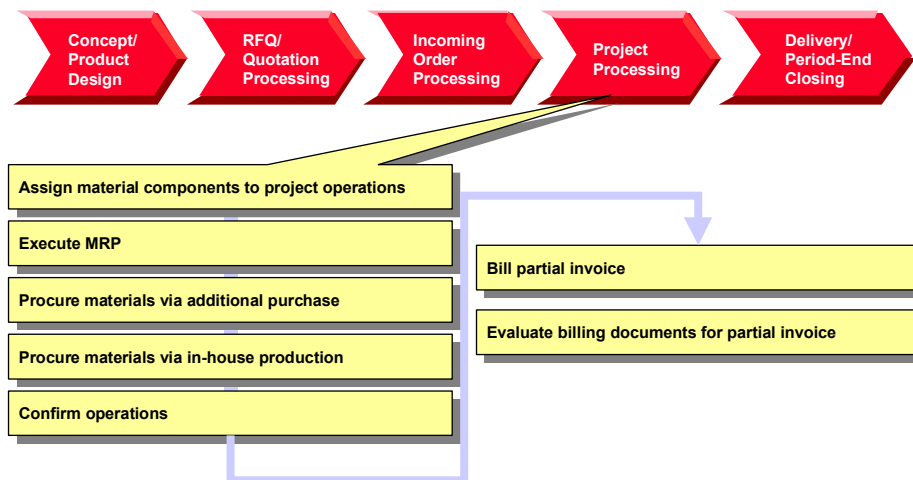
Once you have received your customer's down payment, you begin processing the project. If the construction department has released the bill of materials (BOM), you assign the components on the BOM for the turbine to the network activities of the project.

You explode the turbine assembly BOMs using material requirements planning (MRP). You order some of the turbine components from a vendor, and produce the rest in-house.

You confirm each activity, and once a certain milestone has been reached you bill a partial invoice.

### Process Flow

The following shows each step in order processing:



## Assigning Material Components to the Project Activities

## Assigning Material Components to the Project Activities

### Use

For your turbine project, the construction department has created project bills of material (BOM) and material masters using CAD systems. To plan material costs in detail and to trigger component procurement, you assign the components to the activities for your project, using the *BOM-PS Interface*.



You can either handle materials in the network or you can assign them dynamically using the BOM PS interface. The latter has the advantage that you can process the project and the BOM separately. If, due to order-specific adjustments, for example, the engineering/design department needs to update the BOM, you can copy these changes to your project by using BOM transfer functionality.

**For more information on BOM transfer, see the SAP Library under:**

*Logistics → Project System → Material → BOM Transfer*

### Prerequisites

The system contains a BOM for material T-20000.

Identical reference points are maintained in the BOM and for the network activities.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Material → Planning → BOM Transfer</i>
<b>Transaction Code</b>	CN33

2. Enter the following data:

Field	Data
Project definition	T-10###
Profile	1300
Material	T-20000
Plant	1300
BOM usage	3

3. Choose .

The results overview displays the components in the multilevel BOM that are assigned to your project activities because they have the same reference points. The components are assigned when you save your data.

4. Choose .

---

**Assigning Material Components to the Project Activities****Result**

You have assigned material components to different activities in your turbine project. The system automatically creates reservations for the material components.




## Executing Material Requirements Planning

### Use

You use MRP planning for the turbine project, to schedule procurement tasks for the material requirements. The system creates planned orders for materials produced in-house, and purchase requisitions for externally procured components.



The procurement type in the material master controls the decision as to whether materials are to be produced in-house, or externally procured. You can check the procurement type for each material component in the Project Builder as follows:  
In the structure area, choose a material component  and switch to the *Identification and View Selection* screen area to the *Procurement Parameters* tab page. In the *Material Master Data*, the *Procurement* field displays the procurement type specified for this material.

Until the *Purchasing* phase of the project, you only plan the independent requirements for the turbine components via the material components for the activity.

A bill of materials (BOM) and a routing is created for the bearing box. During a project-related MRP run, planned orders are created for the assembly purchase. The T-20600 assembly BOM is exploded in the planning run, and dependent requirements for the components are created.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Material</i> → <i>Planning</i> → <i>MRP</i> → <i>Project</i>
<b>Transaction Code</b>	MD51

2. Enter the following data:

Field	Data
Project def.	T-10###
Create purch.req.	1
Also plan unchanged components	Select
Display material list	Select

Via the parameters in the *Create Purchase Order* field, you have specified that the system creates a purchase order for the externally procured materials.

3. Choose .

The system asks you to check the input parameters.

4. Choose .

The system plans the material requirements and displays statistics. Purchase requisitions were created for the externally procured materials, and planned orders were created for the in-house materials.

Executing Material Requirements Planning

## Processing Purchasing, Example: Material Purchasing

### Purpose

Material components required for processing the project are purchased from vendors. You take on the role of the purchasing department and also execute the goods receipt for the purchase order.

For the sake of simplicity, it is assumed that all materials to be externally procured are obtained from one vendor. This is not advertised in the purchasing department.

The materials are recorded in the valuated project stock. When you receive the goods, you post the materials to the project stock. These materials are only withdrawn when required for the reservation for the network activities. You can check the effects of the different activities in the cost element report and the stock/requirements list.

### Process Flow



1. For the components that are to be externally procured for the turbine, you assign the purchase requisitions to a vendor.
2. In Purchasing, you create a purchase order.
3. You post the goods receipt for the ordered components to the project stock.
4. You post the goods issue for the reservation of the components using the network of your turbine project.

## Checking the Stock/Requirements List

## Checking the Stock/Requirements List

### Usage

The materials are recorded in the valuated project stock. You check each stock situation in the stock/requirements list, for example, for material T-20100.

As you repeatedly check the stock situation during the process, call up the stock/requirements list in a separate session (from now on: Session three *Stock/Requirements*). You do this by choosing . To evaluate the current data, you can use  to update the report at any time.

### Procedure

1. Call up the transaction as follows:


<b>Menu Path</b>	<i>Logistics → Project System → Information System → Material → Stock/Requirements</i>
<b>Transaction Code</b>	MD04

2. Enter the following data:

Field	Data
Material	T-20100
Plant	1300

3. Choose .

The stock/requirements list appears.

4. For more information on an MRP element, choose .

## Assigning a Purchase Requisition to a Vendor

### Usage

For the sake of simplicity, you order all your materials from the same vendor. You use existing purchasing info records to assign the purchase orders to the vendor.



### Prerequisites

A purchase requisition has been created for external procured components.


### Procedure

1. Call up the transaction as follows:


<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Information System</i> → <i>Material</i> → <i>Purchase Requisitions</i> → <i>For Project</i>
<b>Transaction Code</b>	ME5J


2. If required, enter database profile 130000000000, then choose .
3. If required, enter controlling area 1000, then choose .
4. Enter the following data:

Field	Data
Project	T-10###
Scope of list	A
Plant	1300

5. Choose .
 

The top of the list displays the purchase requisition for the externally processed activity (*Construction of control valves*).
6. Choose *Edit* → *Select* → *Select all* followed by *Assign Automatically*.
 

The *Source of Supply Overview* dialog box appears.
7. Place your cursor on info record 5500000093, then choose .
 

The system assigns vendor 1000 with info record 5500000093 to all purchase requisitions.
8. Choose .
 

The purchase requisitions are changed accordingly.

## Making a Purchase Order

## Making a Purchase Order

### Use

In purchasing, you create a purchase order for the vendor, by selecting the assigned purchase requisitions.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Materials Management</i> node, choose <i>Purchasing</i> → <i>Purchase Order</i> → <i>Create</i> → <i>Via PReq Assignment List</i>
<b>Transaction Code</b>	ME58

2. Enter the following data:

Field	Data
Purchasing organization	1000
Vendor	1000
Plant	1300
WBS Element	T-10####

3. Choose .

The system selects the assignment list for vendor 1000.


4. Select the line *1000 NB 1000* and choose *Process assignment*.

The *Create Purchase Order* screen appears. In the standard, the middle part of the screen shows explanatory documentation.

5. To close the documentation, choose .

The left part of the screen now shows a document overview. If it does not, choose *Document Overview On*. Adapt the screen area as necessary.

On the right-hand side of the screen, you see the work area for the activity.

6. Select your purchase requisitions in the document overview, then choose .



If you want to select more than one object at the same time, keep the control key pressed whilst you make your selection.


The system transfers the items from the purchase requisition to the purchase order.

7. Choose .

The system confirms the posting and displays a purchase order number. Make a note of this number.

## Result

You have created a purchase order. The purchase order (BS-EIN) is now displayed as a receipt element in the stock/requirements list.

Switch to session three *Stock/Requirements* or call up the current [Stock/Requirements List \[Page 56\]](#) again. To evaluate the current data, choose .

The purchase order causes a purchase order commitment on the project. As the purchase order items are assigned to WBS element T-10###, the commitment is also displayed for this WBS element only.

[Evaluating Commitments in the Cost Element Report \[Page 60\]](#)

Evaluating Commitments in the Cost Element Report

## Evaluating Commitments in the Cost Element Report

### Usage



You switch to a different session and call up the cost element report.

### Procedure

#### Calling up the cost element report

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Project System → Information System → Controlling → Execute Report → Cost Element Report</i>
<b>Transaction Code</b>	GR55

2. Enter report group *Z6P1* and choose .
3. If required, enter database profile *130000000000*, then choose .
4. Enter the following data:



Field	Data
Project	T-10###
Controlling area	1000
Plan version	0
From fiscal year	Current year
To fiscal year	Current year + 2
From period	1
To period	12
Additional selection criteria	Delete

5. Choose .

In the *Unfinished Products* row, the system displays a purchase order commitment for WBS element T-10###.


To check this, select another element in the structure display other than the top WBS element. The system does not display any commitment values.

#### Evaluating costs in detail

1. To call up the line item report, select the value in the *Commitments* column, and choose .  
The line item report displays each purchase order item separately.
2. To display the document, select a row and choose  *Document*.  
The purchase requisition document appears.
3. Make a note of the number for the purchase requisition document.

---

Evaluating Commitments in the Cost Element Report

4. Choose , until the *Cost Element Report* appears.
5. Change session.

## Posting the Goods Receipt for the Purchase Order

## Posting the Goods Receipt for the Purchase Order

### Usage

The ordered materials are delivered and you enter the goods receipt.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Purchase order</i> node, choose <i>Follow-on functions</i> → <i>Goods receipt</i> .
<b>Transaction Code</b>	MIGO

2. Enter the following data:

Field	Data
Purch.order	Your purchase order number
Document date	Today's date
Posting date	Today's date

3. Choose .

The system transfers the purchase order data to the item overview of the goods receipt document.

4. In the *Item Overview* section, enter the following data for each item:

Field	Data	Description
Storage location	0001	Material storage

5. Set the *OK* indicator for your items in the *Item Overview* section.




If the *OK* indicator is not active in the item overview, close the item detail area or set the *Item OK* in the lower area of the item detail.

6. Choose *Post*.
7. Note the goods receipt document number.

### Result

The material is posted to the project stock during goods receipt. The following applies for the current stock/requirements list:

- The material is available in the project stock
- A receipt is not expected
- The reservation via the activity is not changed

Switch to session three *Stock/Requirements* or call up the current [Stock/Requirements List \[Page 56\]](#) again. To evaluate the current data, choose .

---

**Posting the Goods Receipt for the Purchase Order**

The delivered materials are posted to the project stock. As the goods receipt is assigned to WBS element T-10###, the stock is also displayed for this WBS element only.

[Evaluating Goods Receipt in the Cost Element Report \[Page 64\]](#)

---




**Evaluating the Goods Receipt in the Cost Element Report**

## Evaluating the Goods Receipt in the Cost Element Report

1. Switch to session two or call up the cost element report.

[Evaluating Costs in the Cost Element Report \[Page 28\]](#)

In the *Unfinished Products* row, the system displays a stock value for WBS element T-10###. The commitment is reduced to zero.

2. To call up the line item report, select the value in the *Stock* column, and choose .
3. To display the document, select a row and choose  *Document*.  
The material document appears.
4. Choose , until the *Cost Element Report* appears.
5. Change session.

## Network Assembly

### Usage

The purchased components were posted to the project stock. Reservations were automatically created for the components when the bill of materials (BOM) was assigned to the activity. You now require the components for the assembly. When you withdraw the components from the project stock, goods are automatically withdrawn for the reservation.

### Procedure

1. Call up the transaction as follows:


<b>Menu Path</b>	From the <i>Materials Management</i> node, choose <i>Inventory Management</i> → <i>Goods Movement</i> → <i>Goods Issue</i>
<b>Transaction Code</b>	MB1A

2. Enter the following data:

Field	Data
Plant	1300
Storage location	0001

3. Choose *To Reservation*.
4. Enter the following data in the dialog box:

Field	Data
Network	First network for your project T-10## (Search using F4 Help for the <i>Network</i> field.)

5. Choose .
6. Select all the components except components P-100 and T-20600.


These components are produced in-house.

7. Choose *Copy*.  
An overview of the collected components appears.

8. Choose .

### Result

The goods issue is posted. This leads to a credit of WBS element T-10### and of the activity. The project stock is reduced and the reservation is reduced to zero by the activity.

Switch to session three *Stock/Requirements* or call up the current [Stock/Requirements List \[Page 56\]](#) again. To evaluate the current data, choose .

The components are taken from the project stock via the goods issue for the reservation. On the network activity, the actual costs are posted using consumption cost element 890000. The stock

**Network Assembly**

value of the WBS element under cost element 790000 *Unfinished Products* is reduced accordingly.



[Evaluating Goods Issue in the Cost Element Report \[Page 67\]](#)

## Evaluating the Goods Issue in the Cost Element Report

6. Go to session 2 *Cost Report*.
7. To evaluate the current data, call the cost element report again.

[Evaluating Costs in the Cost Element Report \[Page 28\]](#)

The consumption causes actual costs on activities 3000, 3100, and 3200 under cost element 890000 (*consumption of Semifinished products*). The stock value for WBS element T-10### is reduced accordingly.

8. To display the actual costs separately for each activity, select activities 3000, 3100 and 3200 one after the other in the structure display.
9. To call up the line item report, select the value in the *Actual* column, and choose .
10. To display the material document, select a row and choose  *Document*.

There is only one material document as the goods issue took place for all items simultaneously.

11. Choose , until the *Cost Element Report* appears.

---

**In-House Production of a Turbine Component**

## In-House Production of a Turbine Component

### Purpose

The T-20600 assembly is produced in-house. Production begins with purchasing the components. Later in the process a production order is created and confirmed. The assembly is then delivered to the project stock where it is taken for use in the final assembly of the turbine via the network.

### Process Flow

1. A planned order was already created via the MRP run for the T-20600 component (bearing boxes). You now convert this to a production order.
2. You post the goods issue for the *bearing box* components and then assemble the bearing box. You have already purchased the components and posted them to the project stock.
3. You post the goods receipt for the completed bearing box to the project stock.
4. You use the activity to post the goods issue for the reservation for the date that the components are required.

## Creating Production Orders

### Usage

You produce assembly T-20600 (bearing boxes). You have already purchased the components for this assembly (T-20610, T-20620 and T-20630) via the collective purchase order for the project.

Via the order report, you select the plan order created by material requirements planning.


### Procedure

1. Call up the transaction as follows:


<b>Menu Path</b>	From the <i>Information System</i> node, choose <i>Material</i> → <i>Order Report</i>
<b>Transaction Code</b>	MD4C

2. Enter the following data:

Field	Data
WBS Element	Select
WBS element field	T-10###
With hierarchy	Select

3. Choose .

The system displays the existing reservations for the project.

4. Select Material T-20600, then choose .

The order report appears with an overview of the reservation and the planned order for the material.

5. Choose  All.

The system displays the secondary requirements for the T-20600 component and the current procurement situation.

6. Place the cursor on the row for the planned order and choose *Detail* → *Plnd Ord.* → *Prod. Ord.*

7. To display the component overview, choose .

8. Choose .

You have already released the production order.

9. Choose .

The order report appears. In the status row, the system displays the number of the production order.

10. Make a note of the order number.

## Posting Components Goods Issue for Production Order

## Posting Components Goods Issue for Production Order

### Use

You need three components to produce bearing box T-20600. You post this from the project stock for the production order

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Production</i> node, choose <i>Shop Floor Control</i> → <i>Goods Movement</i> → <i>Goods Issue</i> .
<b>Transaction Code</b>	MB1A


2. Enter the following data:

Field	Data
Plant	1300
Storage location	0001

3. Choose *To Order...*

4. Enter the following data:

Field	Data
Order	<Your production order number>


5. Choose .

6. Choose .

The goods issue for the three components required to produce T-20600 is posted.

### Result

The goods issue is posted. This leads to the WBS element T-10## being credited. The project stock is now reduced to zero.

Switch to session three *Stock/Requirements* or call up the current [Stock/Requirements List \[Page 56\]](#) again. To evaluate the current data, choose .

The components are taken from the project stock via the goods issue for the order. At the same time, the production order is debited using a consumption cost element, and the stock value of the WBS element is reduced accordingly using cost element 79000 *Unfinished Products*. As the production order is assigned to the WBS element, the actual costs from the production order are displayed on the WBS element.

Go to session 2 *Cost Report*. To evaluate the current data, call the [Cost Element Report \[Page 28\]](#) again.

## Confirming the Production Order

### Use

The system automatically posts the following when an order is finally confirmed:

- The services rendered in the individual activities
- The goods receipt in the project stock for the produced assembly


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Shop Floor Control</i> node, choose <i>Confirmation</i> → <i>Enter</i> → <i>To Order</i>
<b>Transaction Code</b>	CO15


2. Enter the following data:

Field	Data
Order	The number of your production order

3. Choose .

4. Enter the following data:

Field	Data
Final conf.	Select
Conf. Yield	2
Un.	PC

5. Choose .



Posting Goods Receipt for Material Produced In-House

## Posting Goods Receipt for Material Produced In-House

### Use

Production of the T-20600 component for the turbine is complete. In the following, you post the goods receipt for the production order to project stock.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Shop Floor Control</i> node, choose <i>Goods Movement</i> → <i>Goods Receipt</i>
<b>Transaction Code</b>	MB31

2. Enter the following data:

Field	Data
Movement type	101
Order	<Number of your production order>
Plant	1300
Storage location	0001

3. Choose .


4. Choose .

The goods receipt of the completed component (T-20600) is posted to the warehouse.

### Result

The component produced is posted to the project stock during goods receipt. The following applies for the current stock/requirements list:

- The material is available in the project stock
- A receipt is not expected
- The reservation via the activity is not changed

Switch to session three *Stock/Requirements* or call up the current [Stock/Requirements List \[Page 56\]](#) again. To evaluate the current data, choose .

The component produced is posted to the project stock. The stock is displayed only for WBS element T-10##. The production order is credited accordingly.

## Posting Goods Issue for Reservation of the Network

## Posting Goods Issue for Reservation of the Network

### Usage

The component produced was posted automatically to the project stock when the production order was finally confirmed. When the bill of materials (BOM) was assigned, a corresponding reservation for the activity was created. If the component is required, goods are withdrawn for the reservation.

### Procedure

5. Call up the transaction as follows:

<b>Menu Path</b>	<i>Logistics → Materials Management → Inventory Management → Goods Movement → Goods Issue</i>
<b>Transaction Code</b>	MB1A

6. Enter the following data:

Field	Data
Movement type	101
Plant	1300
Storage location	0001

7. Choose *To Reservation*.

8. Enter the following data:

Field	Data
Network	First network for your project T-10## (Search using F4 Help for the <i>Network</i> field)

9. Choose .

10. Select component T-20600.

11. Choose *Copy*.


12. Choose .

The component is posted to the goods issue document.

13. Choose .

### Result


The goods issue is posted. The project stock is reduced and the reservation is reduced to zero by the activity.

Switch to session three *Stock/Requirements* or call up the current [Stock/Requirements List \[Page 56\]](#) again. To evaluate the current data, choose .

---

**Posting Goods Issue for Reservation of the Network**

The components are taken from the project stock via the goods issue for the reservation. This leads to a credit of WBS element T-10### and of the activity. On network activity 4100 "Production of runners/rotors and bearing boxes, (cum.)", the actual costs are posted using consumption cost element 890000. The stock value of the WBS element under cost element 790000 *Unfinished Products* is reduced accordingly.

Switch to session two *Cost Report*, or call up the [cost element report \[Page 28\]](#) again. To evaluate the current data, choose .

Confirming the Activities

## Confirming the Activities

### Usage

The processing of several activities in your turbine project T-10### is complete, and you now confirm the activities. An efficient way to do so is to enter confirmation in the PS Information System (Structure/Dates). There you can evaluate the data (actual dates, actual costs) entered immediately.


### Prerequisites

You have transferred the additional functions  and  Confirmation via  to the standard toolbar.




### Procedure

1. Call up the transaction as follows:




<b>Menu Path</b>	<i>Logistics → Project System → Information System → Structures → Structure Overview</i>
<b>Transaction Code</b>	CN41

2. If required, enter PS information profile **YIDES\_130000**, then choose .
3. Enter the following data:

Field	Data
Project	T-10###
Additional selection criteria	Delete



4. Choose .
5. Select project definition T-10###, and choose .
6. Choose  → *Object Name*.
7. Enter the following data:

Field	Data
Network	First network of your project T-10###

8. Choose  for the *Activity* field.
9. On the *Intervals* tab page, enter the following values:
  - 1000 to 1300
  - 2000 to 2200
  - 3000 to 5000
10. Choose .
11. Choose .


## Confirming the Activities

The system selects all activities that meet the filter requirements. The structure overview also displays the hierarchy upwards, and the components.

12. Choose  and then  → *Collective Confirmation*.
13. For all activities, select the *F* indicator (Final confirmation)



For the sake of simplicity, use today's date for the confirmation, as real dates are not relevant for this example. In a real situation, you might expect cost changes due to price markups if there were, for example, time delays.

14. Choose .

The structure overview appears.

15. Choose  to display the current data.

## Result

The confirmation resulted in the actual dates and actual costs for the network activities being updated. The actual costs are displayed in aggregated form for the WBS elements.

A billing milestone is assigned to activity 5000. Once you have confirmed the activity, the milestone is exploded and this unlocks the billing date in the sales order.

## Billing Partial Invoices

## Billing Partial Invoices

### Usage

The "partial invoice" billing date was unlocked in the billing plan after activity 5000 was confirmed. The system generates a billing document for the customer using billing. During this process, the down payments are cleared.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Sales and Distribution</i> node, choose <i>Billing → Billing Document → Create</i>
<b>Transaction Code</b>	VF01


2. Enter the following data:



Field	Data
Document	Your sales order number, generally defaulted by the system

3. Select your order number, then choose .

In the overview for the billing items, the screen title shows that an invoice is being created. The invoice contains two items, one for the partial invoice (item 10), and one for the allocation of the down payment (item 11). In our process, the down payment is completely allocated with the first partial invoice.



You can manually reduce the amount to be cleared by using the condition schema. Select your item 11 and choose .

4. Choose .
5. Choose *Billing Document → Change*.
6. Choose .
7. Note this accounting document number.

### Result

The billing request has been created, and the data have been updated in Financial Accounting and on the project.

Unlike the down payment, the data from the billing document is updated in the form of actual revenues on the project.

To evaluate the data, change the session and call up the payment report again.

[Call Up Payment Report \[Page 46\]](#).

Once the down payment has been cleared, the down payment amount is reduced to zero and displayed in the *Cust. Payments* row. The system displays the remaining amount from the billing request in the *Cust. payt obl. inv.* row.

**Billing Partial Invoices**

Note that due to the purchase order for the material components, the commitments on the credit side are also updated on the project.

Entering the Incoming Payment

## Entering the Incoming Payment

### Prerequisites

The open items should automatically be assigned to the accounting document (actively). To check this, choose *Settings* → *Processing Options* → *Open Items*. The *Selected Items Inactive* should not be selected.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	<i>Accounting</i> → <i>Financial Accounting</i> → <i>Accounts Receivable</i> → <i>Document entry</i> → <i>Incoming payment</i>
<b>Transaction Code</b>	F-28

2. Enter the following data:

Field	Data
Document date	Today's date
Bank data Account	113100
Amount	396070,40
Open item selection: Account	1600
Further selection Document number	Select

3. Choose .



4. Enter the following data:

Field	Data
Document number from	Accounting document number you noted

5. Choose *Process open items*.

Two open items are displayed for your document: The invoice amount and the down payment clearing. The items and the cash discount amounts are already assigned to the open amount according to the user settings.



To assign an amount, place the cursor on the amount and choose  *Items* or  *Cash Discount*.

6. Choose .

## Transferring Payment

### Usage

When you enter the invoice, a document with value type "Invoice" is created in Project Cash Management. This value type is not changed, even if the invoice is cleared. The cleared invoice is only displayed with the "Payment" value type once the payment has been transferred.


### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Controlling</i> → <i>Period-End Closing</i> → <i>Single Functions</i> → <i>Payment Transfer</i>
<b>Transaction Code</b>	CJFN

2. Enter the following data:

Field	Data
Fiscal year	Current year
FI document number (invoice) from	Accounting document number you noted
To	Accounting document number you noted
Test run	Deselect

3. Choose .

The log for the payment transfer appears.

### Result

As a result of the payment transfer, the incoming payment is also displayed correctly in the *Cust. Payments* row in Project Cash Management.

Call up the [Payment Report \[Page 46\]](#) again.

---

**Turbine Assembly**

## **Turbine Assembly**

### **Purpose**

In this process it is presumed that the turbine is assembled in the plant. Delivery to the customer takes place as a whole and is not entered explicitly in the system. After the turbine has been successfully assembled and inspected, the last activities are confirmed and the final invoice is created.

### **Process Flow**

1. You enter confirmation of the activities.
2. This confirmation causes the last billing milestone to be triggered and you create the final invoice.

## Entering a Construction Assembly Confirmation via the Internet

### Usage

The turbine has been successfully installed at the customer site. As you are still on the construction site, you confirm the activities via Internet.

You have conducted an on-site check, to ensure that the prerequisites have been met for starting the assembly of the turbine - for example, that it has been delivered undamaged. You confirm the result of activity 5100 *First progress check* via Internet.

### Prerequisites

You can only confirm work over the Internet if you are working in an IDES system that is connected to an Internet Transaction Server (ITS).

If you do not have such a system, you should enter an individual confirmation for the assembly of the construction site.

[Entering an Individual Confirmation \[Page 85\]](#)

### Procedure

1. Switch to your Internet Browser (for example, Netscape Navigator or Microsoft Internet Explorer).
2. Call up the IDES home page and select the language you require.



If you do not know the Internet address of the IDES home page, ask your system administrator.

3. Choose *Internal Service*.
4. Choose *Management Service*.
5. Choose *Projects* → *Project Data Confirmation*.
6. Log on to the R/3 system as follows:

Field name	Value
Login	WF-PS-1
Password	WELCOME
Language	English

7. Choose *Logon*.

The *Project Data Confirmation* screen appears.

8. Choose *Individual Confirmation*.
9. To find the network for activity 5100, enter "Turbine" in the *Short text* field.
10. Choose *Find*.

**Entering a Construction Assembly Confirmation via the Internet**

The system lists all the networks whose names begin with the word *Turbine* on the left-hand side of the screen.

11. Select the network you want to process from the network list.

The system lists all the activities in the network.

12. Choose activity *5100 Construction site assembly*.

The system copies the network and activity numbers into the appropriate fields in the individual confirmation area.

13. Choose *Display*.


The R/3 System checks the activity status and displays an appropriate message.

14. Enter the following data in the *Confirmation* section of the screen:

Field	Data
Confirmation text	Assembly carried out
Complete	Select

15. Choose *Save*.

The system displays a message confirming that your confirmation has been saved.

16. Choose  *Exit* to return to the *Ides* Home Page.


## Entering an Individual Confirmation


10. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Progress</i> → <i>Confirmation</i> → <i>Individual Confirmation</i> → <i>Enter</i>
<b>Transaction Code</b>	CN25

11. Enter the following data:

Field	Data
Network	First network of your project T-10###
Activity	5100

12. Choose .

13. Choose .

## Creating a Billing Document

## Creating a Billing Document

### Usage

When you confirm the assembly of the construction site, you trigger the activation of the milestone for the final invoice. You can now bill the final invoice.


### Procedure


8. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Sales and Distribution</i> node, choose <i>Billing</i> → <i>Billing Document</i> → <i>Create</i>
<b>Transaction Code</b>	VF01

9. Enter the following data:

Field	Data
Document	Your sales order number, generally defaulted by the system

10. Select your order number, then choose .

11. Choose .

### Result

The billing request has been created, and the data have been updated in Financial Accounting and on the project. In the payment report, the system display the billing document in the line: *Cust. payt obl. Inv. row.*

To evaluate the data, change sessions and call up the [Payment Report \[Page 46\]](#) again.

## Period-End Closing with the Schedule Manager

### Purpose

Periodic processing, such as overhead application, interest calculation, results analysis, incoming orders, and settlement are executed on the basis of fiscal year periods. This is generally at the start of a given period for the preceding period.

*Schedule Manager* enables you to automatically schedule and execute period-end closing tasks across modules. *Schedule Manager* lets you analyze results, correct any errors, and repeat period-end closing for all incorrect data records.

**You can find further information about the Schedule Manager in the SAP Library under**

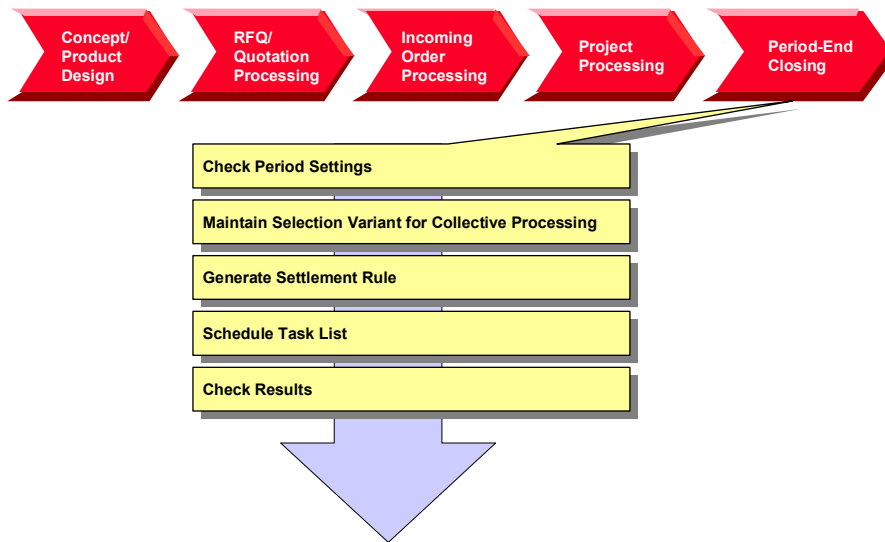
*Financials* → *CO Controlling* → *General Controlling* → *Schedule Manager*

### Process Flow

1. You first check the period settings in the Schedule Manager and specify the objects for which you wish to execute period-end closing.
2. As no settlement rule has been maintained for your project, you schedule the task Generate Settlement Rule.
3. You then schedule the flow definition Z\_130. This contains the following periodic tasks:
  - Overhead
  - Interest calculation
  - Cost forecasts
  - Results analysis
  - Incoming orders
  - Settlement
4. You monitor the results of the periodic task in the Job Monitor.
5. The person responsible receives a mail containing all information relevant to the period-end closing.

The following graphic illustrates the sequence of the necessary tasks:

Period-End Closing with the Schedule Manager



## Calling Up the Schedule Manager

### Use

The individual tasks for the period-end closing are defined in a task list in the Schedule Manager. The task list contains different flow definitions, notes and individual activities. The activities that run automatically are defined in the flow definition.

### Prerequisites

In IDES, we have maintained the cross-module task list ZIDES. Different individual activities and flow definition Z\_130 have been defined in this task list for the Project System.

### Procedure

1. Call up the transaction as follows:

<b>Menu Path</b>	From the <i>Project System</i> node, choose <i>Financials</i> → <i>Period-End Closing</i> → <i>Schedule Manager</i>
<b>Transaction Code</b>	SCMA

The Schedule Manager appears.

2. After you have read the instructions that the system displays for the Scheduler, choose *User notes off*.
3. Choose *Task list* → *Other task list*.
4. Enter the following data:

Field	Data
Task list	ZIDES

5. Choose .
6. Choose *Period-End Closing PS*.

The various tasks for the Project System are summarized under this node. You will process the individual tasks sequentially.

7. Remain on this screen.





## Checking the Period Settings

## Checking the Period Settings

### Usage

As period-end closing is largely automated, you first check the variables that have been used, such as the current period and the fiscal year.

### Procedure

1. Select the task for checking the period settings under the node *Period-End Closing PS*.
2. Choose .
3. Choose . In the dialog box, choose .
4. Select the entry PS\_BUDAT.
5. Choose .

The field is ready for input.

6. Enter the following data:

Field	Data
PS_BUDAT	Today's date; MMDDYYYY

7. Choose .
8. Change the following entries:

Field	Data
PS_PERIOD	Current period
PS_YEAR	Current year

9. Choose .

The Schedule Manager appears.

## Maintaining Selection Variants for Collective Processing

### Usage

You generally execute periodic tasks (such as, overhead calculation, results analysis, settlement) using collective processing - for many projects, and in the background. With collective processing, the system selects the projects using a selection variant. You now make changes to the selection variant for your turbine project.

### Prerequisites

You have created collective variant Z13.

### Procedure

10. Select the task for determining the scope of the selection under the node *Period-End Closing PS*.

11. Choose .

The *ABAP Variants: Initial Screen* appears.

12. Enter the following data:

Field	Data
Variant	Z13

13. Choose  *Change*.

14. If required, enter database profile 130000000000, then choose .

15. If required, enter controlling area 1000, then choose .

16. Enter the following data:

Field	Data
Project	T-10###

17. Choose .

18. Choose  until the Schedule Manager appears.

## Determining Settlement Rules

# Determining Settlement Rules


## Usage

You require results analysis keys or settlement rules for results analysis, incoming orders or settlement of your project. You can enter these master data either manually in the WBS elements or activities, or generate them automatically. In this case, you generate the settlement rules automatically for your turbine project.

## Prerequisites


In Customizing, you have defined strategy *10* for the generation of the settlement rule, and assigned this to project profile *2000 Standard Turbine*.

## Procedure


1. Use the drag and drop function to move the task *Autom. Generation of the Settlement Rule* into the daily overview. Select a time earlier than the current time.
2. To start the task immediately, select *Immediate Start*, then choose .

The task has now been scheduled and activated for the current time in the daily overview. In the monthly overview, the day of the process flow has been selected.

## Monitoring the Period-End Closing in the Job Monitor

1. Choose .
2. Double-click on the processing step *Automatic Generation of the Settlement Rule* to call up detailed information and any messages.

The messages refer to WBS element T-10###.1.2, which is not used in this process.

3. Reduce the size of the message dialog box, until you can see the selection buttons for the detailed information.
4. Choose  *Spool*.

You now see the log with the detailed list. A settlement rule has been generated for billing elements T-10### and T-10###.12 to the relevant profitability segments. These WBS elements have also been assigned to results analysis key 130001. No settlement rule has been generated for any of the other WBS elements. Instead they have been assigned to settlement profile 130002 "Not for settlement" (Column *SProf*). Results analysis at billing element level includes all plan and actual values for lower-level WBS elements or orders/activities. For this reason, you settle only the billing elements.


5. To return to the Schedule Manager, choose .

## Executing Period-End Closing

### Use


Now that you have completed all of the preparations, you can plan the period-end closing. You can check the periodic tasks for errors in the Job Monitor.

### Procedure

1. Select the flow definition *PS Period-End Closing (Large)* and use Drag & Drop to move it into the daily overview. Select a time earlier than the current time.
2. To confirm both of the dialog boxes, choose .

The process flow *PS Period-End Closing (Large)* has now been scheduled and activated for the current time in the daily overview. The day of this process flow has been selected in the monthly overview.

### Monitoring the Period-End Closing in the Job Monitor

1. Choose .
2. If required, confirm the message that you have received an express mail.

In the monitor, you see all of the activated and completed tasks. On the left side of the screen, you see the executed tasks and the current processing status. To display the object list and check the processing status, double-click on a processing step.

3. Choose , until you see the processing step *Check objects in worklist*.

The last processing step has been defined in flow definition Z-130 to the effect that user WF\_PS\_1 receives a message with a workflow item.

### Processing the Workflow Items

1. Call up the IDES R/3 System again.
2. Enter the following data:


Field	Data
User	WF-PS-1
Password	Welcome

3. Call up the transaction as follows:

<b>Menu Path</b>	<i>Office → Workplace</i>
<b>Transaction Code</b>	SBWP


4. Choose *Inbox → Workflow → Grouped according to task*.
5. Click on *Generic Decision Task*.

The workflow item is opened.

6. Select the workflow item, then choose .
7. In the *Job Monitor*, select *End Processing of the Worklist*.

## Executing Period-End Closing

### Checking the Results in the Schedule Manager

1. Switch to the IDES System, in which you have logged on with your user ID.
2. If required, call up the Schedule Manager again.
3. To refresh the calendar, choose .

Period-end closing now has the status  (*completed without errors*).

## Result

You have executed period-end closing for your turbine project. To evaluate the results, you can use various reports:

- In the Project System
  - Cost element report Z6P1 (actual / stock / commt / plan)
  - Cost element report 6PPW (project result)  
Choose *Logistics* → *Project System* → *Information System* → *Financials* → *Execute Report* → *Cost Element Report* to call the reports.
  - Hierarchy report 11ERL1F (incoming order)  
Choose *Logistics* → *Project System* → *Information System* → *Financials* → *Execute Report* → *Hierarchy Report* to call the report.
- In the profitability analysis
  - Profitability report IDES-100 (planned/actual comparison according to divisions)
  - Profitability report IDES-085 (incoming order)  
Choose *Accounting* → *Controlling* → *Profitability Analysis* → *Information System* → *Execute Report* to call the reports.