

# OUTBOUND TRANSPORTATION PROCESS



## Applies to:

SAP R/3 Onwards

## Summary

The aim of this document is to provide an understanding of the Outbound Transportation Process from customization and transactional point of view in SAP R/3.

Transportation is an essential element in the logistics chain. It affects both incoming and outgoing goods. Effective transportation planning and processing ensure that shipments are dispatched without delay and arrive on schedule.

Transportation costs play an essential role in the calculation of the price of a product. It is important to keep these transportation costs to a minimum so that the price of a product remains competitive. Efficient transportation planning and processing helps to keep these costs down.

Effective Transportation can be used in all the industries where the shipment costs play a major role and are borne by the organization. Reducing the shipment cost in turn reduces the delivering cost of the product.

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## TABLE OF CONTENTS

1.	Overview .....	3
2.	Purpose .....	3
3.	Terminology:.....	4
4.	Prerequisites: .....	5
4.1	Graphical Representation.....	5
5.	Customization.....	6
5.1	Maintain Transportation Planning Point .....	7
5.2	Define Routes.....	8
5.3	Maintain Route Determination:.....	9
5.4	Maintain Transportation Relevance.....	10
5.5	Define Shipment Types: .....	11
5.6	<i>Define Shipment Cost types:</i> .....	12
5.6.1	Define Item Categories .....	12
5.6.2	Define Shipment Cost Type .....	13
5.6.3	Assign Shipment Cost Type and item categories.....	14
5.6.4	Maintain Shipment cost relevance and default for shipment cost type.....	15
5.6.5	Define shipment cost relevance for shipment type.....	16
5.7	Pricing.....	17
5.7.1	Define and assign shipping type procedure group .....	17
5.7.2	Define and assign item procedure group .....	18
5.7.3	Define Service Agent Procedure Group .....	19
5.7.4	Maintain Condition Type .....	20
5.7.5	Maintain Pricing Procedure .....	21
5.7.6	Define Pricing Procedure Determination for Shipment Costs.....	22
5.8	Settlement .....	23
5.8.1	Assign Purchasing Data .....	23
5.8.2	Automatic G/L account Determination.....	24
6.	Transaction flow .....	26
6.1	Create Purchase order with the forwarding agent.....	26
6.2	<i>Create Condition record.</i> .....	27
6.3	<i>Create Shipment Document</i> .....	28
6.3.1	Assign Deliveries to shipment document.....	29
6.4	Create Shipment Cost Document.....	31
6.5	<i>Transfer Shipment Cost</i> .....	33
6.6	Enter Vendor's Invoice (Invoice receipt and verification) .....	34
6.7	Display Sales Order Document Flow Details .....	35
7.	Updating Info structures: .....	36
7.1	Maintain Statistics Groups for Transportation Service Agent .....	36
7.2	Maintain Statistics Groups for Shipment Types .....	36
7.3	Assign Statistics Groups for each Transportation Planning Loc. ....	37
7.4	Maintain Statistics for each Transportation Planning Point.....	38
	Disclaimer and Liability Notice .....	39

## 1. Overview

Transportation is an essential element in the logistics chain. It affects both incoming and outgoing goods. Effective transportation planning and processing ensure that shipments are dispatched without delay and arrive on schedule.

Transportation costs play an essential role in the calculation of the price of a product. It is important to keep these transportation costs to a minimum so that the price of a product remains competitive. Efficient transportation planning and processing helps to keep these costs down.

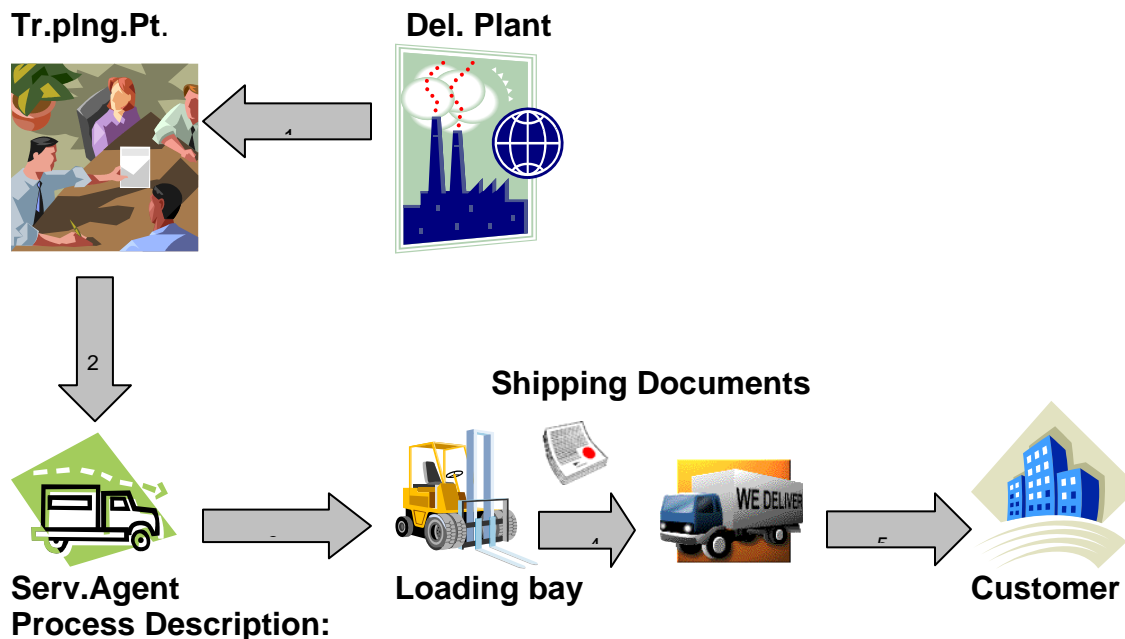
Effective Transportation can be used in all the industries where the shipment costs play a major role and are borne by the organization. Reducing the shipment cost in turn reduces the delivering cost of the product.

## 2. Purpose

The aim of this document is to provide an understanding of the Outbound Transportation Process from customization and transactional point of view in SAP R/3.

### Business Process:

An Organization has already implemented SAP and is now willing to implement the Transportation Module in order to ensure the timely delivery to the customer and reduce shipment costs. The business process to be implemented is as shown in the figure below.



Step No	Description
1	Delivering Plant requests for the arrangement of transport
2	Transportation planning Point Plans for the movement of goods with the service vendor
3	Transport Vendor supplies the requested mode of transport
4	Based on the shipping document the material is loaded
5	The material is delivered to the customer

This process of arrangement of transportation for the timely delivery of the goods to the customer is termed as Transportation process.

### 3. Terminology:

Mentioned below are some important terms used in Transportation:

<b>SAP Terminology</b>	<b>Description</b>
Forwarding Agent	Agent who provides the transportation
Transportation Planning Point	Org. unit responsible for planning shipments with particular features. E.g.: A company has different groups of shipping personnel responsible for organizing shipments by train or ship
Shipment Document	The document containing the details of the deliveries, service agents, routes, stages, planning and execution times.
Shipment Type	Shipment types contain all the essential control features for the shipment document such as number ranges, service level, and output and partner determination.
Routes	The route determines the itinerary and the means of transport in shipping, and influences transportation scheduling.
Shipment Cost Document	The shipment cost document is the used for shipment cost processing. It contains the details related to accounting and the cost calculations.
Shipment cost type and item categories	Shipment cost types and item categories contain all the important control features for the shipment cost document, such as number range, status requirements for the shipment documents, and parameters for shipment costing, parameters for shipment settlement.

## 4. Prerequisites:

### Master Data:

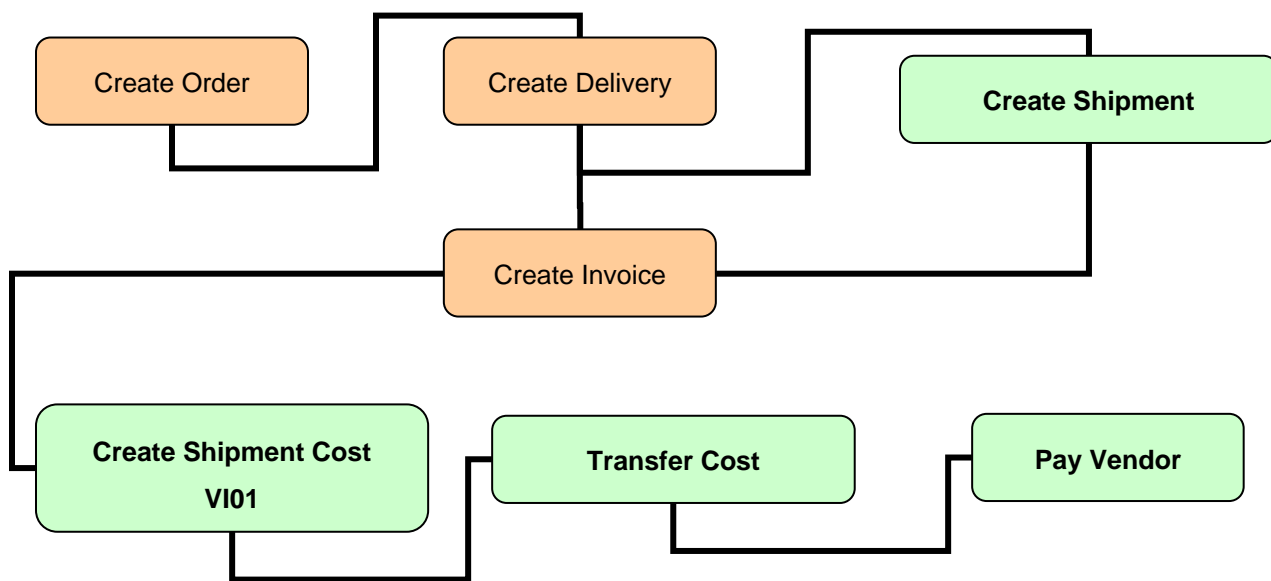
Purchase Order is created for Vendor if the weekly or monthly orders are not created during the transaction by the system.

Relevant pricing conditions are maintained.

### Customization:

1. Transportation Relevance is marked for Delivery type, Delivery Item Type, Route.
2. Route Determination is active.
3. Route is determined in the delivery document.
4. Shipment types are created as desired.
5. Shipment pricing procedure is in place.
6. Shipment cost types are created and assigned to shipment types.
7. Purchasing Data is assigned.
8. G/L Account assignments are done.

### 4.1 Graphical Representation



Color Legend:

	Standard Sales Process
	Outbound Transportation Process

## 5. Customization

### **Business case:**

An organization has already implemented SAP SD module and now also needs to use the shipment processing of SAP R/3 in order to arrange for transportation and settle the costs with the service agent.

The organization has one transportation office where the employees are involved in managing the transportation process and co-ordinate with the delivering plant and the service agent for the daily requirement of transportation.

Each lorry can carry a group of deliveries or it can be for a single delivery.

The organization intends to calculate the shipment costs based on the gross weight (i.e. the shipment cost is fixed at Rs/Kg) for a full load truck and the prices are negotiated with the service agent individually.

SAP is to be configured for creation of shipment documents and such that when creating the shipment cost document, the cost should be calculated based on the gross weight of the goods in the shipment document.

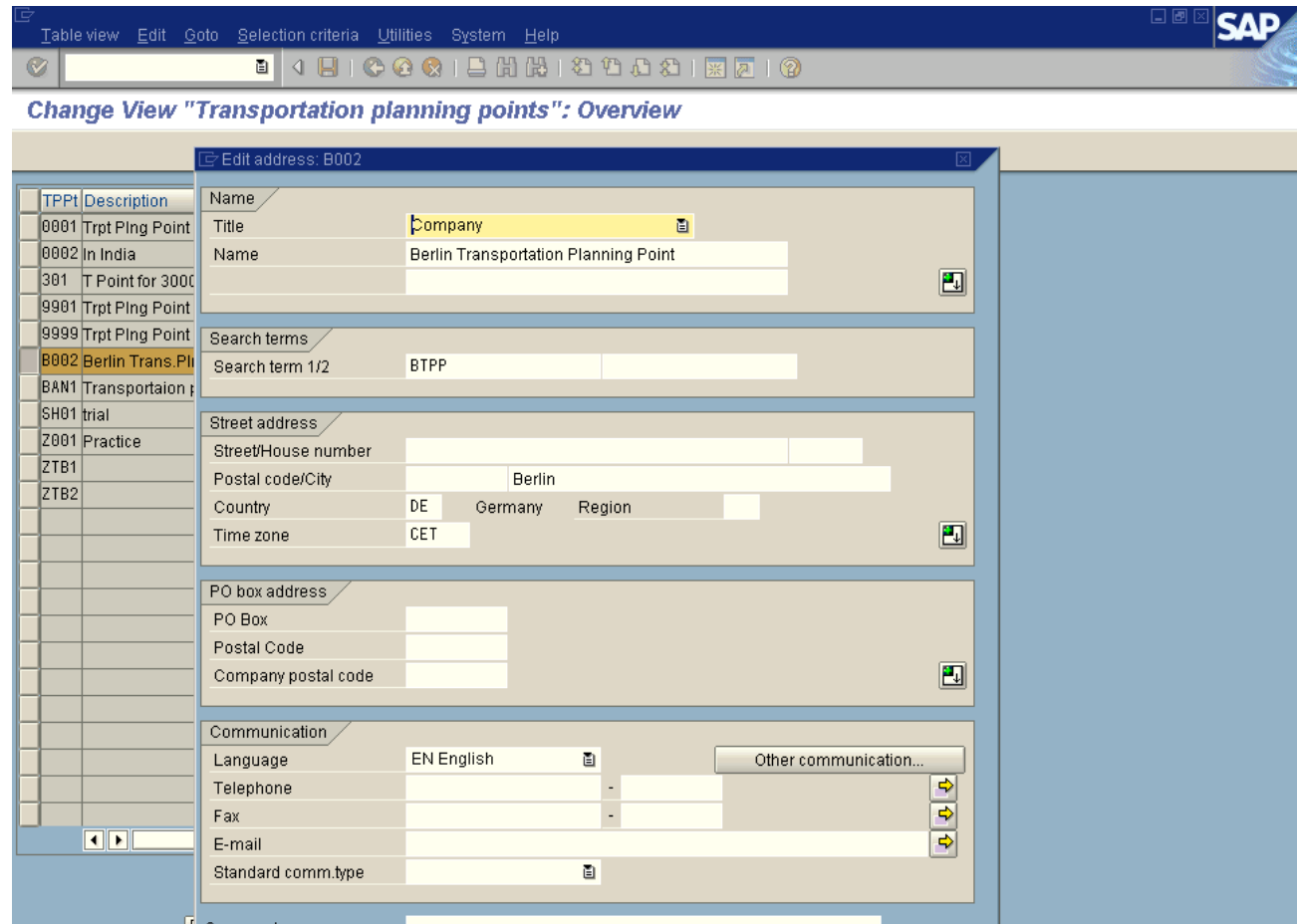
### 5.1 Maintain Transportation Planning Point

The transportation planning point represents a group of employees responsible for organizing transportation activities. Each shipment is assigned to a specific transportation planning point for transportation planning and shipment completion

The transportation planning point is assigned at Co-Code level.

Menu Path: Enterprise Settings > Definition > Logistics Execution > Maintain transportation planning point

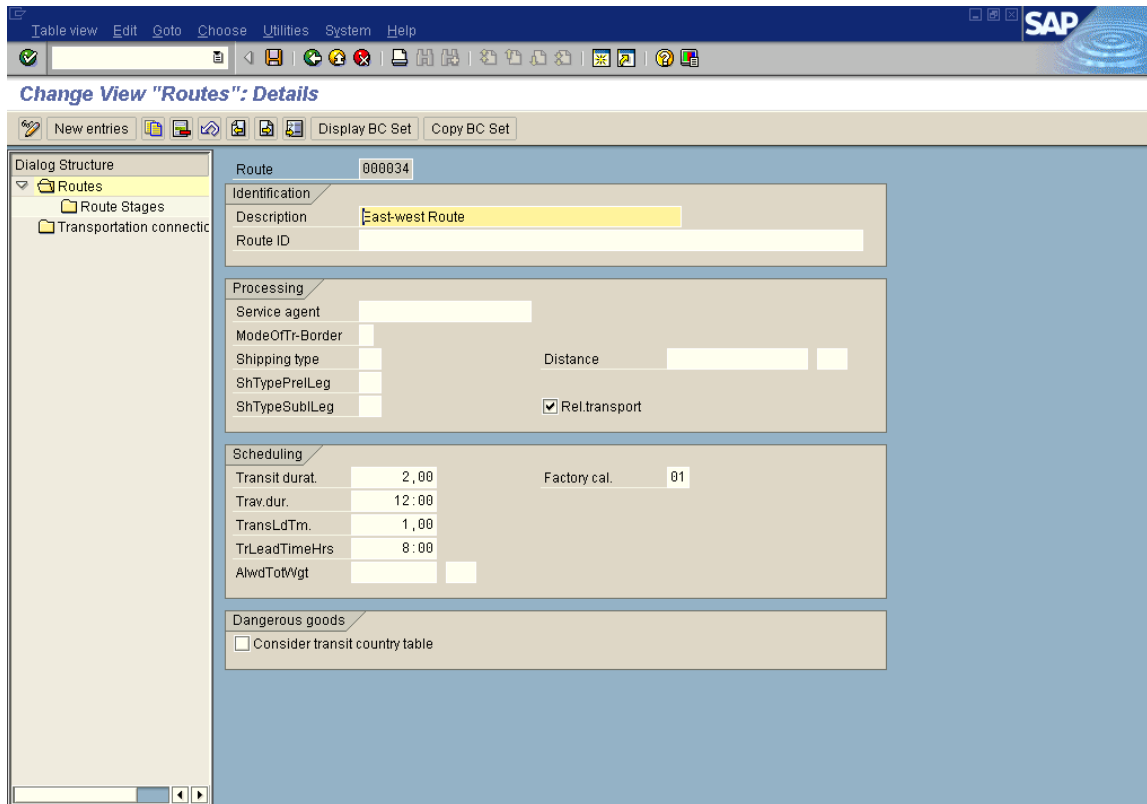
Transaction Code: SPRO



## 5.2 Define Routes

The route determines the itinerary and the means of transport in shipping, and influences transportation scheduling. The description of routes, service agent, distance and lead times are defined in routes.

Menu Path: Logistics Execution > Transport > Basic Transportation Functions > Routes > Define Routes > Define Routes And Stages
Transaction Code: 0VTC





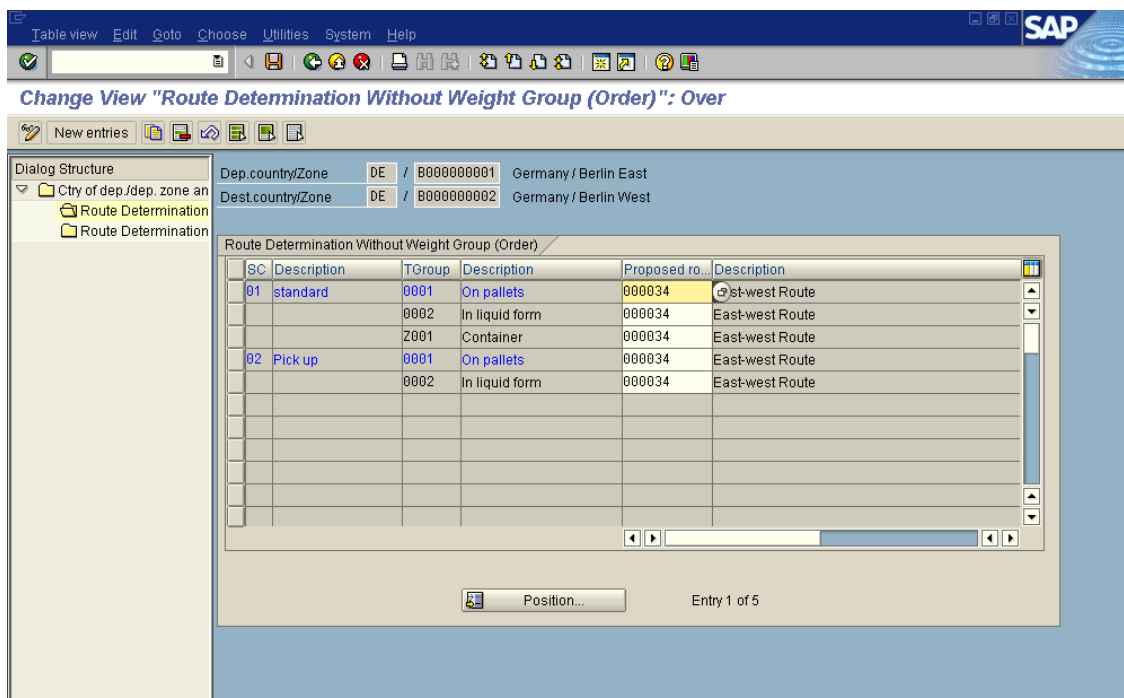
### 5.3 Maintain Route Determination:

Routes are determined depending on the following criteria:

1. Country and departure zone (departure zone of the shipping point)
2. Shipping conditions agreed in the sales order.  
The shipping condition is defined in shipping point determination.
3. Transportation group of the material
4. Country and transportation zone (receiving zone) of the ship-to party

Menu Path: Logistics Execution > Transport > Basic Transportation Functions > Routes > Define Routes > Route Determination > Maintain Route Determination

Transaction Code: SPRO



### 5.4 Maintain Transportation Relevance

Delivery types and delivery item categories for which transportation processing is to be carried out must be characterized as relevant for transportation.

All routes that are to be used for the shipment must also be set as relevant for transportation.

Menu Path: Logistics Execution > Transport > Shipments > Maintain Transportation Relevance

Transaction Code: SPRO

The screenshot displays the SAP SPRO (System Parameters) transaction interface. A 'Choose Activity' dialog box is open, allowing the user to select an activity to maintain transportation relevance. The dialog lists three options: 'Maintain transportation relevance for delivery types', 'Maintain transportation relevance for delivery item types', and 'Maintain transportation relevance for routes'. Below the list, there is a 'Perform the activities in the specified order' section and a 'Choose' button. The background shows the SPRO navigation tree with various categories such as 'Shipment Cost Types and Item Categories', 'Pricing', 'Settlement', 'Define Profiles for Shipment Cost Information', 'Interfaces', 'Kundenerweiterungen im Transport', 'Mobile Data Entry', and 'Archiving'.

## 5.5 Define Shipment Types:

The shipment types represent the different forms of transportation processing in sales and distribution.

The following forms of transportation processing are distinguished:

- 1) Individual shipment, one or more deliveries are transported by a single mode of transport from one point of departure to one final destination.
- 2) Collective shipment, one or more deliveries are transported by a single mode of transport from one or more points of departure to one or more final destinations.
- 3) Multimodal shipment, deliveries are transported by several modes of transport between one or more points of departure and one or more final destinations.

Menu Path: Logistics Execution > Transport > Shipments > Define Shipment Types

Transaction Code: SPRO

The screenshot displays the SAP SPRO transaction 'Define Shipment Types' for shipment type 0001. The interface is divided into several sections:

- Header:** Shipment type: 0001, Individ. Shipment - Road; Document cat.: 8, Shipment.
- Number systems:** NR int. assgt.: 01, No. range ext.: ; Scr. seq. group: T.
- Document content:**
  - ShpmtCompType: 1 Loaded outbound ship., Shipping type: 01 Truck
  - Service level: 1 Load, ShTypePrelimLeg
  - ProcessControl: 1 Individual shipment us., SubseqLegShType
  - Leg indicator: 4 Direct leg
  - Adopt route: Adopt all stages
  - Determine legs: 1 1: Legs determined according to departure point & itinerary
- Control:**
  - Application: V7, TextDetermProc.: 03, Partner det.prc: TR
  - OutputDetProc.: V7STRA, Deadlines: WS STANDARD TRA
  - Pick check: Shipment completion only for full picking
  - SplProfBeforePkg, SplProfAfterPkg
  - HUs relevant for DI generation
- Proposal:**
  - Weight unit: KG
  - Volume unit: CD3
  - Output type: CMR1
  - Selection var., Shipping prof.

## 5.6 Define Shipment Cost types:

### 5.6.1 Define Item Categories

Item Categories characterizes the control parameters for calculation and settlement for the shipment item.

Menu Path: Logistics Execution > Transport > Shipment Costs > Shipment Cost Document > Shipment Cost Types and Item Categories

Transaction Code: SPRO

The screenshot shows the SAP SPRO transaction 'Define item categories' in 'Details' view. The 'Item category' is '0001' and the 'Transportation costs' are highlighted. The 'Calculation' section includes: Pricing date (0002), Stage end (actual)/Current date; Partrn.function (CR), Forwarding agent; and Item det. group (0001), Shipment leg - general. The 'Settlement' section includes: Cost dist. (C), Delivery item; Acct.assign.cat. (K), Cost center; Settlement date (0002), Stage end (actual)/Current date; Origin CO (A), General ledger account; Settlement rel. (X), relevant for settlement (G/L account); and Generate PO (B), Generate purchase order for validity period of 1 week. A callout box points to the 'Generate PO' field with the text: 'Select the appropriate value as per the business'.

Values of the field "Generate PO"

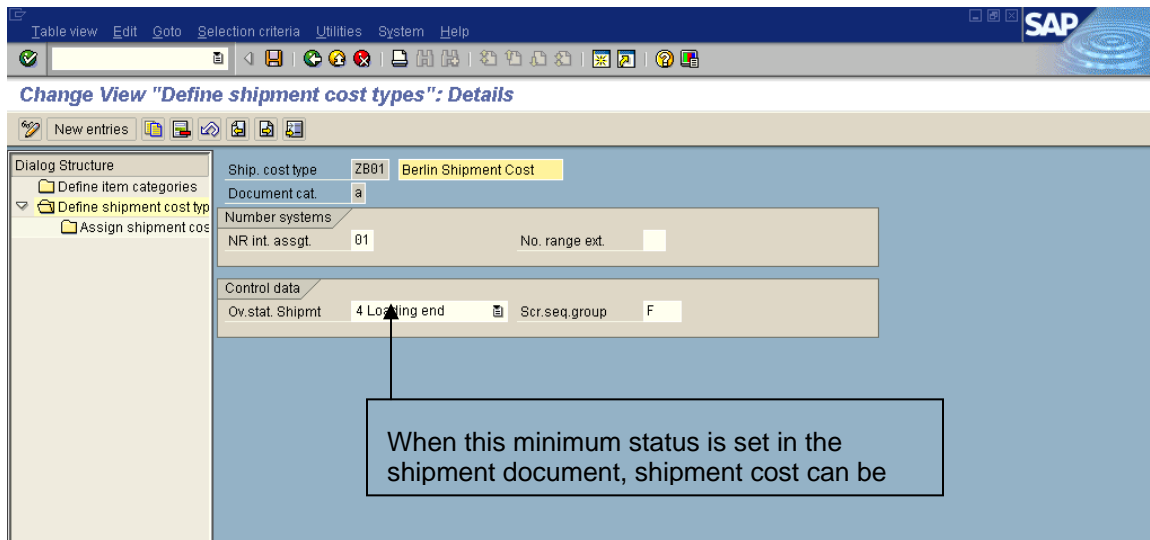
Value	Description
	Do not generate purchase order
A	Generate purchase order for validity period of 1 day
B	Generate purchase order for validity period of 1 week
C	Generate purchase order for validity period of 1 month

## 5.6.2 Define Shipment Cost Type

Shipment cost type defines the number ranges for the shipment cost documents and controls the minimum status after which the shipment cost can be calculated.

Menu Path: Logistics Execution > Transport > Shipment Costs > Shipment Cost Document > Shipment Cost Types and Item Categories

Transaction Code: SPRO



The screenshot displays the SAP SPRO transaction 'Define shipment cost types' in the 'Details' view. The interface includes a menu bar at the top with options like 'Table view', 'Edit', 'Goto', 'Selection criteria', 'Utilities', 'System', and 'Help'. Below the menu bar is a toolbar with various icons. The main area is titled 'Change View "Define shipment cost types": Details' and contains a 'Dialog Structure' pane on the left with a tree view showing 'Define item categories', 'Define shipment cost type', and 'Assign shipment cost'. The main content area shows the following fields:

Ship. cost type	ZB01	Berlin Shipment Cost
Document cat.	a	
Number systems		
NR int. assgt.	01	No. range ext. <input type="checkbox"/>
Control data		
Ov.stat. Shipmt	4 Loading end	Scr.seq.group F

A callout box with a black border and white background points to the 'Ov.stat. Shipmt' field, containing the text: 'When this minimum status is set in the shipment document, shipment cost can be'.



## 5.6.4 Maintain Shipment cost relevance and default for shipment cost type

Menu Path: Logistics Execution > Transport > Shipment Costs > Shipment Cost Document > Shipment Cost Relevance and Default for Shipment Cost Type

Transaction Code: SPRO

The screenshot shows the SAP SPRO transaction 'Assign shipment cost type to the shipment type'. The main window displays a table with the following data:

ShTy	Description	SCTy	Description
0001	Indiv.Shipmnt - Road	0001	Standard
0002	Collect.Shipmnt - Road	0001	Standard
0003	Collective Shipment	0001	Standard
0004	Prelim. leg by road	0001	Standard
0005	Main leg by sea	0001	Standard
0006	Subseq. leg by road	0001	Standard
0010	Inbound Shipment	0001	Standard
Z001	Prelim.-air cargo		
ZBSR	Shipment - Road	ZB01	Berlin Shipment Cost

The interface includes a 'Dialog Structure' pane on the left with nodes for 'Assign shipment cost by' and 'Define shipment cost rel'. The status bar at the bottom indicates 'Entry 1 of 9'.

In this node assign the shipment cost types to the shipment types and set an indicator to show whether the cost type is relevant to shipment costing. This needs to be done for every cost type.

### 5.6.5 Define shipment cost relevance for shipment type

Menu Path: Logistics Execution > Transport > Shipment Costs > Shipment Cost Document > Shipment Cost Relevance and Default for Shipment Cost Type

Transaction Code: SPRO

Change View "Define shipment cost relevance for shipment type": Over

ShTy	Description	Header	Leg	Load tr...	Bord.cr...
0001	Indiv. Shipment - Road	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0002	Collect. Shipment - Road	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0003	Collective Shipment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0004	Prelim. leg by road	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0005	Main leg by sea	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0006	Subseq. leg by road	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0010	Inbound Shipment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Z001	Prelim.-air cargo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ZBSR	Shipment - Road	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dialog Structure

- Assign shipment cost by...
- Define shipment cost rel...

Position... Entry 1 of 9

This indicates the level at which the shipment costing needs to be done.

E.g.: If "Header" is selected it indicates that shipment header is relevant for shipment costing.



## 5.7 Pricing

### 5.7.1 Define and assign shipping type procedure group

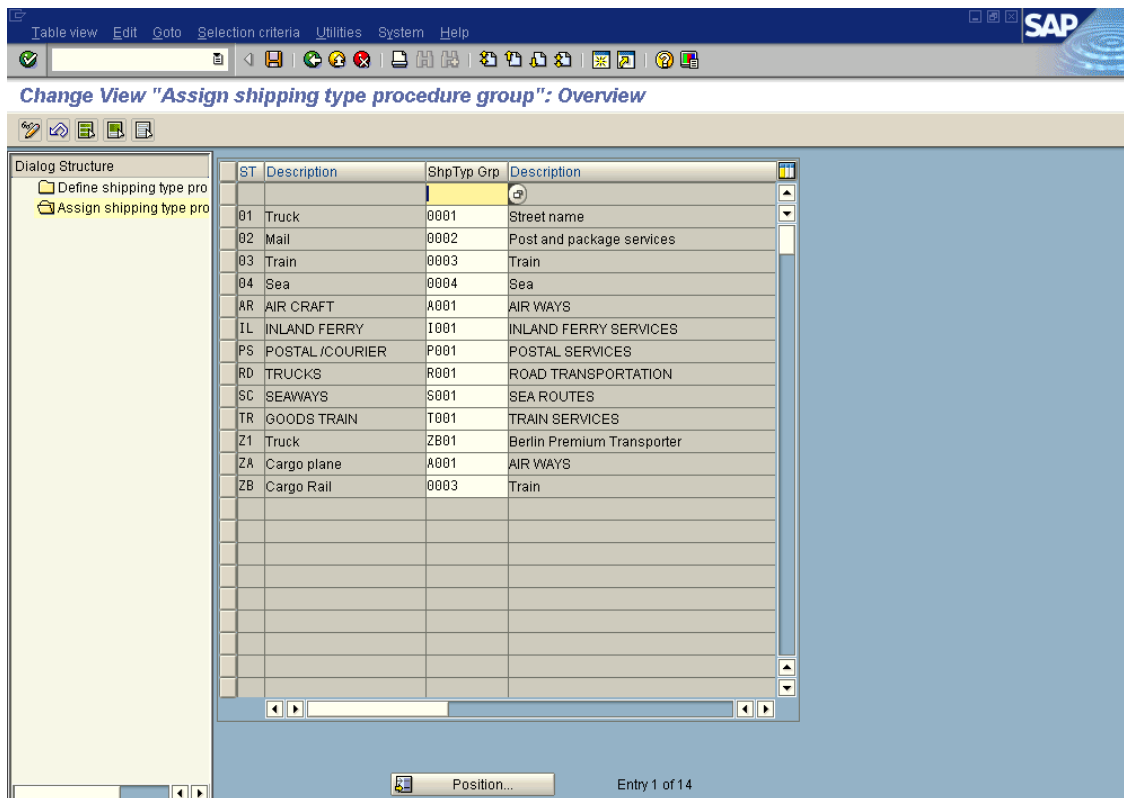
Shipping type procedure group is assigned to individual shipping type.

Shipping type can be in the form of any means of transport.

**Shipping type procedure group is used in determining the shipment cost pricing procedure.**

Menu Path: Logistics Execution > Transport > Shipment Costs > Pricing > Pricing Control > Define And Assign Pricing Procedures

Transaction Code: SPRO



### 5.7.2 Define and assign item procedure group

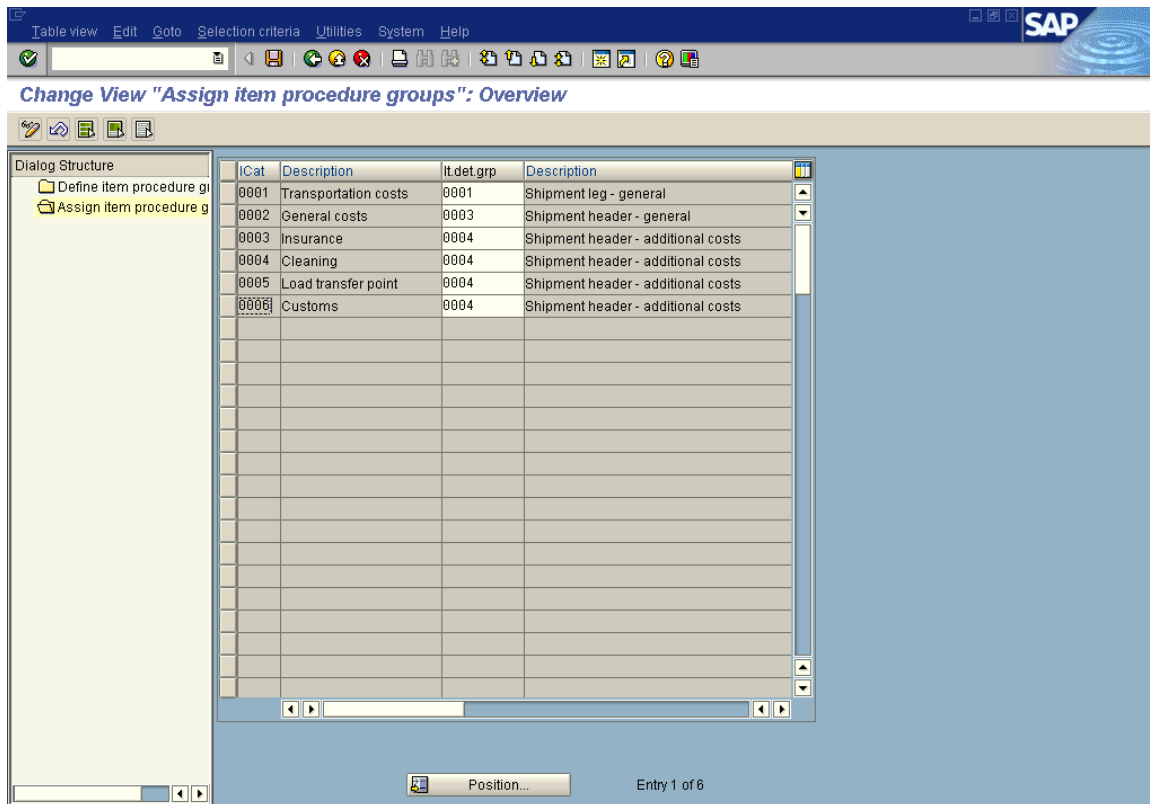
Item procedure group is assigned to individual shipment item categories.

Item categories can be the type of cost which needs to be calculated and it defines the different characteristics to be considered while distributing the cost...

**Item procedure group is used in determining the shipment cost pricing procedure.**

Menu Path: Logistics Execution > Transport > Shipment Costs > Pricing > Pricing Control > Define And Assign Pricing Procedures

Transaction Code: SPRO





## 5.7.4 Maintain Condition Type

Menu Path: Logistics Execution > Transport > Shipment Costs > Pricing > Pricing Control > Define Condition Type

Transaction Code: SPRO

### Change View "Condition Types": Details

The screenshot shows the SAP SPRO 'Change View Condition Types: Details' screen. The 'Control data 1' section is highlighted, showing the following fields:

- Condit. type: ZFLT Flat Rate
- Access seq.: DIEN Service Agent
- Cond. class: B Prices
- Calculat.type: D Gross weight
- Cond.category: (empty)
- Rounding rule: Commercial

The 'Freight costing' section shows:

- Calc. base: B Delivery item
- Matrix maint.: Standard maintenance

The 'Group condition' section shows:

- Group cond.:
- RoundDiffComp:

The 'Changes which can be made' section shows:

- Manual entries: C Manual entry has priority
- Header condit.:
- Item condition:
- Delete:
- Amount/percent:
- Value:
- Qty relation:
- Calculat.type:

The 'Master data' section is partially visible at the bottom.

The calculation type needs to be "D" in case for gross weight dependent, as required in this business case example.

Keeping the calculation type as "D" ensures that the prices will be calculated based on the gross weight specified in the deliveries in the shipment document.

Since the prices are service agent dependent the access sequence used is "DIEN" in this case.

### 5.7.5 Maintain Pricing Procedure

Menu Path: Logistics Execution > Transport > Shipment Costs > Pricing > Pricing Control > Define And Assign Pricing Procedures

Transaction Code: SPRO

The screenshot shows the SAP SPRO interface for maintaining pricing procedures. The title bar reads "Change View 'Control data': Overview". The main window displays a table of control data for procedure ZBETPP (Berlin Transport Pricing Proc). The table has columns for Step, Cntr, CTyp, Description, Fro, To, Man, Mdt, Stat, P, Sub..., Reqt, AltCTy, and AltCBV. The table contains 11 rows of pricing steps, with checkboxes for manual and automatic data transfer.

Step	Cntr	CTyp	Description	Fro	To	Man	Mdt	Stat	P	Sub...	Reqd	AltCTy	AltCBV
90	0	ZFLT	Flat Rate			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	S		51		
100	0	FB00	Freight Class/Weight			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51		
110	0	FS00	Container			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51		
190	0	FB20	Price from shipmt			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51	90	
200	0	FB10	Per diem/Flat rate			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51		
300	0		Gross freight			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
400	0	FD00	Spread			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51		
410	0	FD10	Absolute Margin			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51		
500	0		Net freight			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
600	0	FT00	Input tax			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S		51		51
950	0		Total amount			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Shipment pricing procedure is same as the standard pricing procedure and uses condition technique to retrieve the data from condition tables.



## 5.8 Settlement

### 5.8.1 Assign Purchasing Data

This assignment plays an important role because based on these criteria the purchase orders for service agents are searched and are used to create the service entry sheets with respect to PO.

Search Procedure for the PO:

TPPt: Transportation planning point is taken from the shipment document

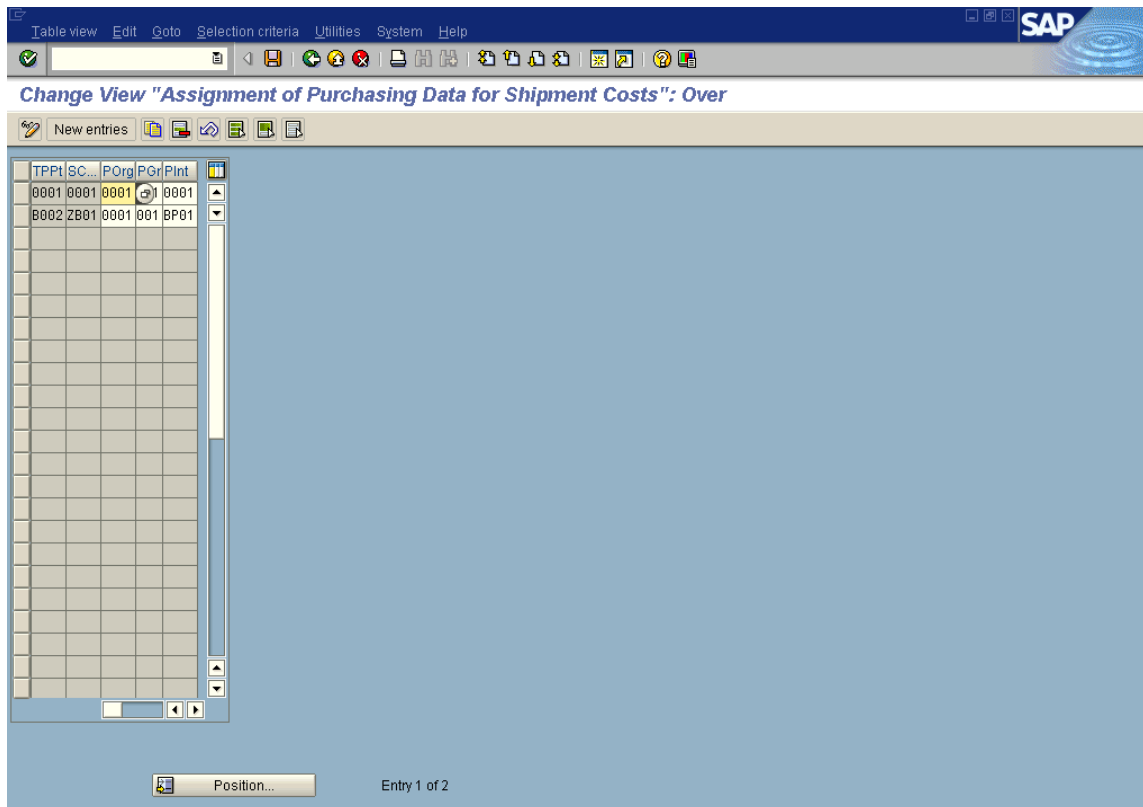
SCTy: Shipment Cost type is taken from the shipment cost document

POrg: /Pgr/Plant: Purchasing Organization, Purchasing group and Plant is assigned to the combination of TPPt & SCTy.

On these values the purchase order is searched for the Vendor mentioned in the shipment document

Menu Path: Logistics Execution > Transport > Shipment Costs > Settlement > Assign Purchasing Data

Transaction Code: SPRO



### 5.8.2 Automatic G/L account Determination

From the Transaction "GBB" and combination of General Modification key "VBR" and valuation class the G/L account is determined for the posting to the freight accounts.

Menu Path: Logistics Execution > Transport > Shipment Costs > Settlement > Automatic G/L Account Determination

Transaction Code: SPRO

The screenshot shows the SAP SPRO configuration screen for 'Maintain FI Configuration: Automatic Posting - Accounts'. The 'Transaction' field is set to 'GBB' and 'Posting keys' is set to 'VBR'. The 'Account assignment' table is displayed with the following data:

Valuation ...	General m...	Valuation c...	Debit	Credit
0001	VBR	3000	400000	400000
0001	VBR	3001	400010	400010
0001	VBR	3002	400000	400000
0001	VBR	3003	400000	400000
0001	VBR	3030	403000	403000
0001	VBR	3031	403500	403500
0001	VBR	3040	404000	404000
0001	VBR	3050	405000	405000
0001	VBR	3100	410000	410000
0001	VBR	3200	472000	472000
0001	VBR	3300	400000	400000
0001	VBR	555	400000	400000
0001	VBR	7900	891000	891000
0001	VBR	7920	892000	892000
0001	VBR	9999	400000	400000
0001	VBR	BK01	400000	400000
0001	VBR	BLNK	400000	400000
0001	VBR	CYLN	400000	400000



From the Transaction "WRX" and value of valuation class as " " the G/L account is picked for GR/IR accounts.

The screenshot shows the SAP 'Maintain FI Configuration: Automatic Posting - Accounts' window. The 'Transaction' field is set to 'WRX' (GR/IR clearing account). Below, the 'Account assignment' table lists various valuation classes and their corresponding credit accounts. The first row, where the valuation class is blank and the credit is '191198', is circled in red.

Valuation ...	Valuation c...	Credit
0001		191198
0001	0710	191198
0001	0720	191198
0001	1210	191198
0001	3000	191198
0001	3001	191198
0001	3002	191198
0001	3003	191198
0001	3030	191198
0001	3031	191198
0001	3040	191198
0001	3050	191198
0001	3100	191198
0001	3200	191198
0001	3300	191198
0001	555	191198
0001	7900	191198
0001	7920	191198

## 6. Transaction flow

Once the delivery document is created the creation of shipment document can be done.

All the prerequisites mentioned above should have been achieved.

### 6.1 Create Purchase order with the forwarding agent (if automatic creation at the time of creating shipment cost document is not activated)

Menu Path: Logistics > Materials Management > Purchasing > Purchase Order > Create > Vendor/Supplying Plant Known

Transaction Code: ME21N

The screenshot displays the SAP 'Create Purchase Order' (ME21N) interface. At the top, the menu path is visible: Purchase order > Edit > Goto > Environment > System > Help. The main window title is 'Create Purchase Order'. Below this, there are buttons for 'Document overview on', 'Print preview', 'Messages', 'Help', and 'Personal setting'. The header section shows 'NB Standard PO' and 'Vendor V01 abc' with a document date of '31.05.2004'. A table lists the items, with the first item being 'Transportation Charges' (Line 10) with a quantity of 1 and a net price of 10.00 EUR. Below the header, there are tabs for 'Services', 'Limits', 'Material data', 'Quantities/weights', 'Delivery schedule', 'Delivery', 'Invoice', and 'Conditions'. The 'Services' tab is active, showing a detailed table for the selected item (Line 10):

Line	D.	Service numb...	Short text	Quantity	U...	Gross price	Overfluf. t
10			Transportation Charges	1	AU	10,00 EUR	
20						EUR	
30						EUR	
40						EUR	
50						EUR	
60						EUR	
70						EUR	
80						EUR	
90						EUR	
100						EUR	

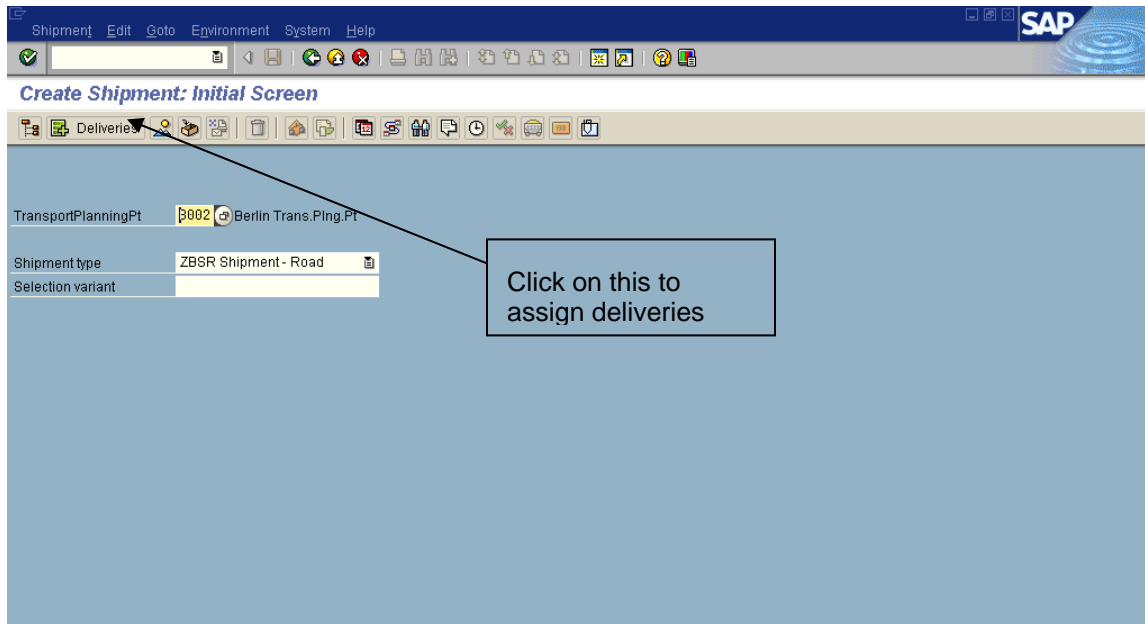
At the bottom of the item details view, there are buttons for 'Serv. selection' and 'Line 10'.



### 6.3 Create Shipment Document

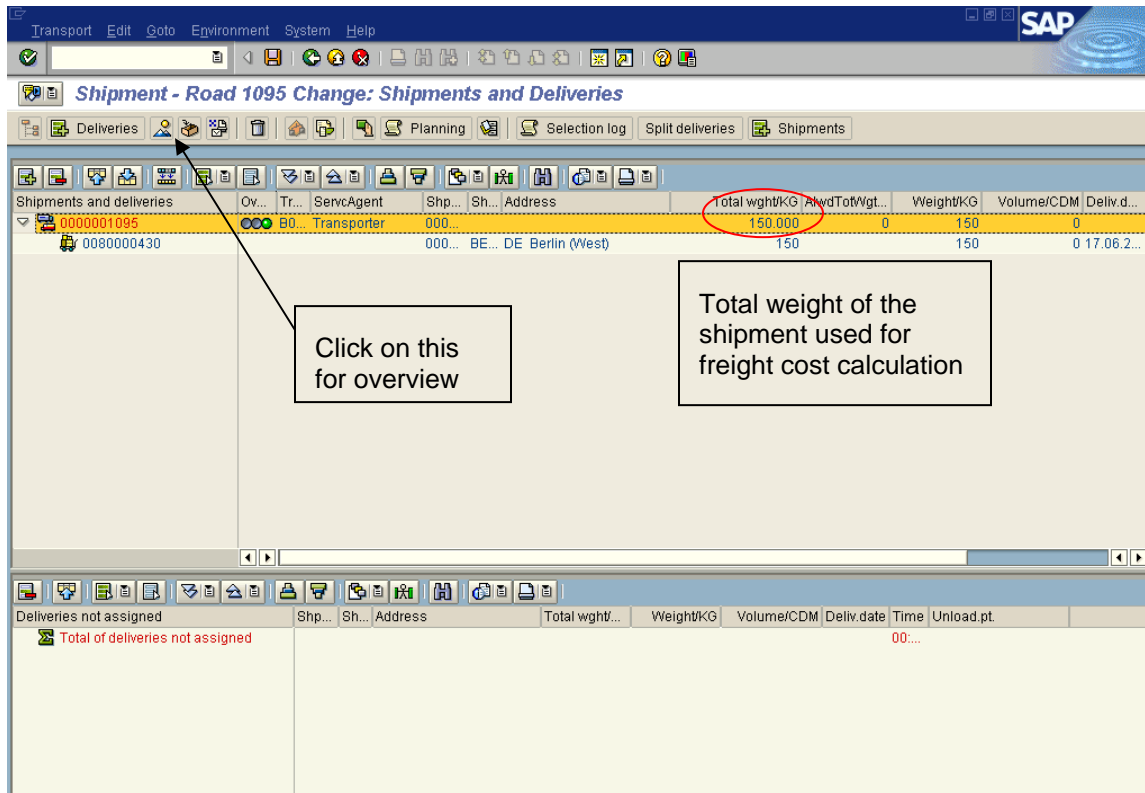
Menu Path: Logistics > Logistics Execution > Transportation > Transportation Planning > Create

Transaction Code: VT01N



Mention the transportation planning point and the shipment type accordingly.

### 6.3.1 Assign Deliveries to shipment document



The deliveries can be selected using the selection criteria based on shipping point, Route, Delivery numbers and many more.

Only the deliveries (can be for different ship to party) with the same route can be selected in a single delivery.

On the overview screen the different planning / check in / loading timings can be captured.

The screenshot shows the SAP 'Shipment - Road 1095 Change: Overview' screen. It features a top menu bar with 'Shipment', 'Edit', 'Goto', 'Environment', 'System', and 'Help'. Below the menu is a toolbar with various icons. The main content area is divided into several sections:

- Processing** (selected): Identification, Shipment cst cal, Control, Administr.
- Shipment Details:**
  - Shipment type: ZBSR Shipment - Road
  - TransportPlanPt: 8002 Berlin Trans.Plng.Pt
  - Overall status: 7 Shipment end
  - Tender status: Not offered to forwarding age...
  - FwdAgent: 52
  - Transporter / Hinjewadi / IN - 411027 Pune
  - Shipment route: 000034 East-west Route
  - Shipping type: Z1 Truck
  - Shp.Cond.:
  - Service level: 1 Load
  - Spec. process.:
  - Container ID:
  - External ID 1:
  - AlwdTotWgt: K6
- Deadl. Further dates Stages Partner Texts Duration and distnce Status Tender Addit. data Dng.goods**
- Timing Table:**

	Planning	Execution	
Check-in	00:00	14.06.2004 11:00	✓
Loading start	00:00	14.06.2004 11:00	✓
Loading end	00:00	14.06.2004 11:00	✓
Shpmt completion	00:00	14.06.2004 11:00	✓
Shipment start	00:00	14.06.2004 11:00	✓
Shipment end	00:00	14.06.2004 11:00	✓
- Control Panel:** A vertical list of buttons: Planning, Check-in, Loading start, Loading end, Shpmt completion, Shipment start, Shipment end. Each button has a green checkmark to its left.
- Annotation:** A box labeled 'Different Timings can be captured' with arrows pointing to the 'Check-in' and 'Shipment start' buttons.

## 6.4 Create Shipment Cost Document

Menu Path: Logistics > Logistics Execution > Transportation > Shipment Costs > Create

Transaction Code: VI01

The screenshot shows the SAP 'Create Shipment Costs' transaction interface. The title bar includes 'Shipment costs', 'Edit', 'Goto', 'Item', 'Environment', 'System', and 'Help'. The main window title is 'Create Shipment Costs' with a 'Freight item' icon. The input fields are as follows:

Shipment number	1095
Ship. cost type	
Pricing date	
Settlement date	

Shipment cost document is created with reference to the shipment document.

Carry out the account assignment if required to do manually.

The figure below shows the calculation done:

Freight rate: Rs15/Kg

Gross weight as per the delivery document: 150 Kg

Total Freight charged  $15 * 150 = \text{Rs.}2250$

**Berlin Shipment Cost Create Create: Item - Conditions**

Item	1	Application	F
Condition type	ZFLT Flat Rate	CondPricingDate	14.06.2004

Condition values			
Rate	15.00	INR	/ 1 KG
Cond.base value	150.000	KG	
Condition value	2,250.00	INR	
Currency	INR	Exchange rate	
Doc. currency	INR	Exchange rate	
		Local currency	EUR

Control data	
Condition class	B Prices
Calculat.type	D Gross weight
Condit.category	
Cond.control	A Adjust for quantity variance
Condit.origin	A Automatic pricing

Account Assignment in shipment cost document:

**Berlin Shipment Cost Create - Freight Cost Item:Account Assignment**

Shpmt cost no.	\$0001	Item	1
Currency	INR	Item category	0001 Transportation costs
Net value	2,250.00	Acct.assig.cat.	K Cost center
Cost dist.	C Delivery item	Company Code	0001 SAP A.G.
Origin CO	A General ledger accou	Assigned	A Account assignment not completed

All acct assgnmt lines					
Se...	Ref.doc.no.	Ref.it...	Net value	G/L accou...	Cost center
1	J 80000430	10	2,250.00	472000	1000



### 6.5 Transfer Shipment Cost

Menu Path: Logistics Execution > Transportation > Shipment Costs > Change

Transaction Code: VI02

Once the shipment costs are transferred accounting document is generated as follows:

**Note:** To transfer the shipment cost the status of these 3 fields should be 'C'

Item	ICat	Desc. ref.	Service ag...	Net value	Tax amount	Curr...	T. Transfer	CA	Prng date	Ex...	Sett. date	Jurisdic. code
10001		0000001095Berlin Berl...	52	2,250.00		0.00 INR	<input checked="" type="checkbox"/>	C	14.06.2004		14.06.2004	

Select this to transfer cost

The G/L

accounts shown below are the same which are defined in customization.

**Doc. type :** WE ( Goods receipt ) Normal document

Doc. number 5000000438 Company code 0001 Fiscal year 2004  
 Doc. date 14.06.2004 Posting date 14.06.2004 Period 06  
 Ref. doc. 0000001095  
 Doc. currency INR  
 Doc. head. text 0000001095Berlin Berlin(W)

Itm	PK	Account	Account short text	Assignment	Tx	Amount	Text
1	81	472000	Shipping costs	0000001000		2,250.00	0000001095Berlin Berlin(West)
2	96	191198	GR/IR c lrg.ext.proc.			2,250.00-	0000001095Berlin Berlin(West)

### 6.6 Enter Vendor's Invoice (Invoice receipt and verification)

Menu Path: Logistics Execution > Transportation > Shipment Costs > Freight Invoice Check > Logistics Invoice Verification > Document Entry > Enter Invoice

Transaction Code: MIRO

**Enter Invoice: Company Code 0001**

Transaction: 1 Invoice      Balance: 0.00 INR

Vendor 0000000052

Transporter: 2 Hinjewadi, 411027 PUNE

Invoice date: 14.06.2004  
 Posting date: 14.06.2004  
 Amount: 2,250.00 INR  
 Tax amount: V1 V1 (15% domestic in...)

Payment terms: 5 Days 2 %  
 Baseline date: 14.06.2004

PO reference: 4 Service entry sheet      1000000290

Item	Amount	Quantity	Un	Purchase ...	PO it...	PO text	Tax code
1	2,250.00			4500001191	1	0000001095Berlin Berlin(West)	V1 V1

Once the service entry sheet is generated after the shipment cost is transferred, vendor's invoice can be settled as per the above transaction.

### 6.7 Display Sales Order Document Flow Details

Menu Path: Logistics – Sales and Distribution – Sales – Order- Display  
 Transaction Code: VA03

#### Document Flow

Status overview
Display document
Service documents
Additional links

Standard Order 790  
 Business partner 767 ABC Computers Inc

Document	Date	Overall processing status
Standard Order 790	14.06.04	Completed
. Outbound delivery 80000430	14.06.04	Being processed
.. Picking request 20040614	14.06.04	Completed
.. Confirmation of service	14.06.04	Completed
.. GD goods issue:delvy 4900001859	14.06.04	complete
.. Shipment 1095	14.06.04	Shipment ended

#### Shipment Cost Document Flow:

## 7. Updating Info structures:

In order to update the info structures for reporting purposes the following customization settings needs to be done:

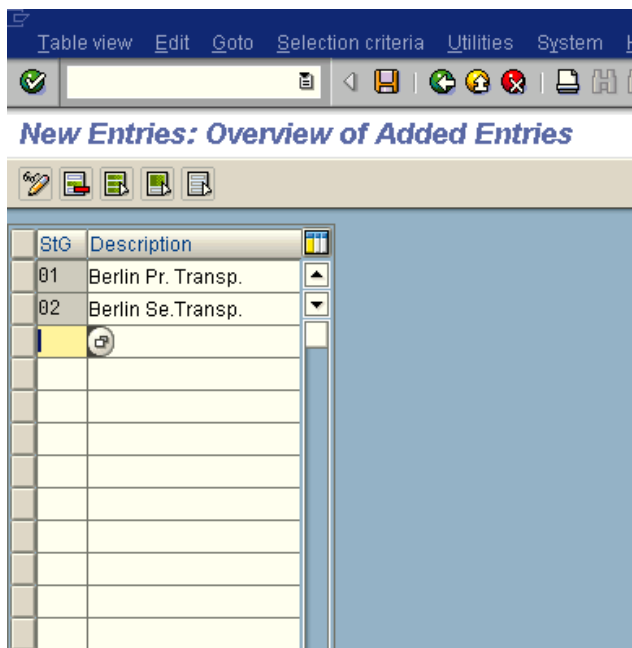
The statistics groups that can be used for the assignment of individual transportation service agents.

The assignment of statistics groups to transportation service agents is carried out in the maintenance of the transportation service agent master record (screen "Control").

### 7.1 Maintain Statistics Groups for Transportation Service Agent

Menu Path: Logistics Information System (LIS) > Logistics Data Warehouse > Updating > Updating Control > Settings: Transportation > Statistics Groups > Maintain Statistics Groups for Transportation Service Agent

Transaction Code: SPRO



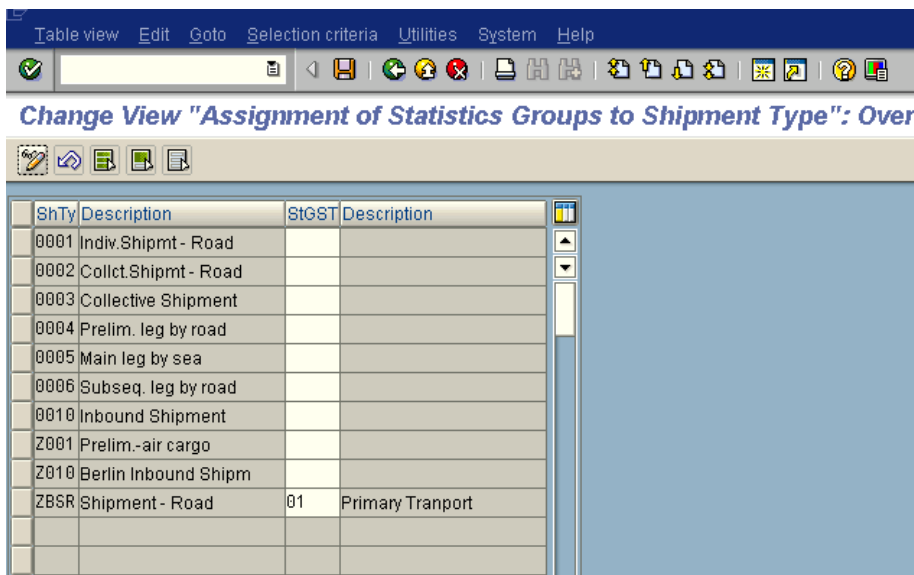
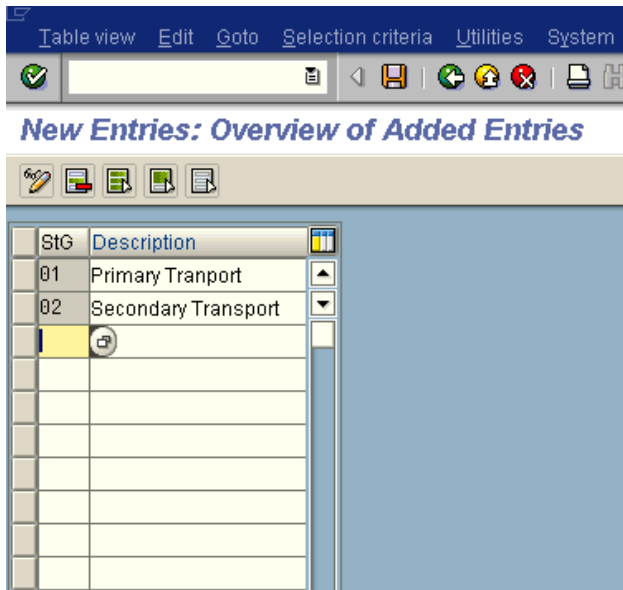
These statistics groups that can be used for the assignment of individual shipment types.

These statistics groups are assigned to shipment types.

### 7.2 Maintain Statistics Groups for Shipment Types

Menu Path: Logistics Information System (LIS) > Logistics Data Warehouse > Updating > Updating Control > Settings: Transportation > Statistics Groups > Maintain Statistics Groups for Shipment Types

Transaction Code: SPRO



### 7.3 Assign Statistics Groups for each Transportation Planning Loc.

Menu Path: Logistics Information System (LIS) > Logistics Data Warehouse > Updating > Updating Control > Settings: Transportation > Update Groups > Assign Statistics Groups for each Transportation Planning Loc.

Transaction Code: SPRO

TPPt	StGST	Description	StGSA	Description	UpdG...	Description
B002	01	Primary Transport	01	Berlin Pr. Transp.	40	Shipment: Outgoing shipment
B002	02	Secondary Transport	01	Berlin Pr. Transp.	40	Shipment: Outgoing shipment

### 7.4 Maintain Statistics for each Transportation Planning Point

Menu Path: Logistics Information System (LIS) > Logistics Data Warehouse > Updating > Updating Control > Settings: Transportation > Maintain Statistics for each Transportation Planning Point

Transaction Code: SPRO

At this node specify the statistical weight, volume, distance and currency units.

Trs...	Descriptn	Stat.wt un	Stat.vol.u	StatDst...	StatCurrUn
B002	Berlin Trans.Ping.Pt	KG	M3	KM	INR
BAN1	Transportaion point				
SH01	trial				

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