Components of the Logistics Information System (LIS)

HELP.LOLIS

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Icons

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- Information structures
- Updating
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Purchasing Information System

Purchasing Information System: Information Structures

In the standard system, the following information structures are available in the Purchasing Information System:

- S011 “Purchasing group”

  This information structure forms the data basis for the purchasing group analysis.

- S012 “Purchasing”

  This information structure forms the data basis for the material groups, vendor and material analysis.

  The analyses for long-term planning are based on planning data which is updated to a separate planning version of the information structure S012 from *Long-term planning*.

- S013 “Vendor evaluation”

  This information structure provides the data basis for the standard analysis of vendor evaluation. The information structure is updated when the events goods receipt and purchase order take place.

- S015 “Subsequent settlement”

  This information structure forms the data basis for the standard analyses of subsequent settlement. The information structure S015 is updated when the events “invoice receipt for a purchase order” (vendor business volume) or “subsequent settlements of an arrangement (income) by credit memo/billing document” take place.

Updating: Purchasing Information System

Data analysis in the Purchasing Information System is based on the statistical data that is updated from Purchasing to the information structures.

The following section describes how and when updating occurs.

You can find further information about updating in the Implementation Guide for the Logistics Information System.

Events: Purchasing Information System

The key figures in the Purchasing Information System are updated when the following three types of events occur:

- Create/change purchasing document (purchasing documents are: purchase order, scheduling agreement, contract, RFQ/quotation)
- Goods receipt for a purchase order, scheduling agreement
- Invoice receipt for a purchase order, scheduling agreement
- Invoice receipt (volume-based rebate)
- Credit memo/billing document (volume-based rebate)

Data flows from the document structure to the information structures.

Information Structure S011

The following table shows the key figures that are updated to the information structure S011 at header, item and schedule line level when one of the following events occurs.

The following abbreviations are used:

- LC = Local currency
- BUn = Base unit of measure

Event	Header	Item	Schedule line
Purchase order	Number of orders	Number of order items	Effective order value
			Number of order schedule lines
Scheduling agreement	Number of scheduling agreements	Number of scheduling agreement items	Effective order value
			Number of delivery schedules
Goods receipt	Number of deliveries		

Invoice receipt			Invoiced amount in LC
Contract	Number of contracts	Number of contract items	
Request for Quotation	Number of requests for quotation	Number of requests for quotation	
		Number of quotation items	

Information Structure S012

The following table shows the key figures that are updated to the information structure S012 at header, item and schedule line level when one of the following events occurs.

The following abbreviations are used:

- LC = Local currency
- BUn = Base unit of measure

Event	Header	Item	Schedule line
Purchase order		Number of order items	Purchase order quantity
		Quantity delivered variance 1-5	Required delivery quantity
			Effective order value
Scheduling agreement			Purchase order quantity
			Required delivery quantity
			Effective order value
			Effective order value

Goods receipt		Number of deliveries	Quantity of goods receipt
		Quantity delivered variance 1-5	
		(Scheduled) delivery date variance 1-5	
		Arithmetic total delivery time	
		Weighted total delivery time	
Invoice receipt			Invoice receipt quantity
			Invoiced amount in LC
Contract		Number of contract items	
Request for Quotation		Number of request for quotation items	
		Number of quotation items	

Information Structure S013

The following table shows the key figures that are updated to the information structure S013 at header, item and schedule line level when one of the following events occurs.

Event	Header	Item	Schedule line
Purchase order		Points score quantity reliability	
Goods receipt		Points score quantity reliability	
		Points score date reliability	
		Shipping instructions	

Information Structure S015

The following table shows the key figures that are updated to the information structure S015 at header, item and schedule line level when one of the following events occurs.

Abbreviation used: SS = Subsequent settlement

Event	Header	Item	Schedule line
Invoice receipt (volume-based rebate)		Provision for income	
		Invoiced sales (SS)	
		Number of points (SS)	
		Invoiced sales quantity (SS)	
		Gross weight (SS)	
		Net weight (SS)	
		Volume (SS)	
Credit memo/Billing document (volume-based rebate)		Dissolved provision for income	
		Provision final settlement	
		Provision condition record	

Item Categories and Document Types: Purchasing Information System

You can control whether certain item categories (for example, normal, consignment) and document types (for example, a document type for purchase order is a stock transport order) are updated or not.

You can control this by allocating the item categories and/or the document types to a certain update group. An update group consists of a group of rules that determine the requirements for updating the key figures.

You can use the settings in Customizing under Purchasing. For more information, refer to the Implementation Guide.

Updating Standard Analyses for Long-Term Planning: Purchasing Information System

The data basis for the standard analyses in long-term-planning is provided by data which is updated from long-term planning to a planning version of information structure S012. Updating does not take place continually and must therefore be initialized via a report that you can find using the long-term planning menu. This report can also be carried out as a background job.

To initialize the updating for the analyses in long-term planning, proceed as follows:

1. From the R/3 system menu, select *Logistics* → *Production* → *Master planning* → *Long-term planning*.

   The long-term planning menu appears.

2. Select *Evaluations* → *Purch. Info System* → *Set up data.*

   The selection screen for the update report appears.

3. In the field *Planning scenario*, specify the planning scenario you require from long-term planning. In the field *Version*, enter the name of the version to which the data is to be saved in the Purchasing information structure S012. Each planning scenario is assigned exactly one version.

   In the standard analyses for long-term planning, you can calculate the order value in four different ways when evaluating a planning scenario:

– Calculation using info record

  If a vendor is assigned to the planned order, and if an info record exists, then the order value is calculated using the purchasing info record price. In the case of consignment materials, which do not have a info record price, the system takes the future consignment valuation price into account for the calculation, depending upon the final date of the planned order. If these conditions are not satisfied, no calculation is carried out.

– Calculation using the valuation price

  If the standard price is specified in the material master, then the system takes the standard price or the future standard price into account when calculating the order value. If the movable average price is specified as the price control, then this price is used for calculating the order value.

– Calculation using the new planned price from product costing

– Calculation using the planned price 1, 2, or 3 from product costing

  Only one order value can be saved at a time in a version of the information structure S012. If you need to find out how to evaluate a planning scenario for different types of order value calculation and how to compare the results, refer to Standard Analyses for Long-term Planning: Comparing Order Values [Page 28]

4. Select *Program* → *Execute,* or if you want to use background processing mode, select *Program* → *Exec. in background*

If you want to perform an ad hoc standard analysis for long-term planning, and do not want to initialize an update, select the field *Ad-hoc evaluation* from the selection screen of the standard analysis in question. The system then reads the data directly from the planned orders.

Type of Updating

In the LIS information systems, updating of statistical data can take place in two ways:

- As a synchronous update (U1)

  (Immediate start, i.e., when an event takes place that triggers an update)
- As an asynchronous update (U2)

  (Delayed start, i.e., updating is slightly delayed after an event that triggers an update).

You can also turn the updating process off.

If you choose the asynchronous update for the updating of statistical data, a termination of the statistics update has no effect on the accurate update of the application document.

If you choose the synchronous update, a termination of the statistics update results in failure to update the document.

You can find further information about the updating concept in the *System Administration Guide.*

You can specify the type of updating for each information structure in Customizing. You need to make the appropriate settings in Customizing for the Logistics Information System. You can find detailed information in the Implementation Guide for the Logistics Information System.

Period Units in Updating: Purchasing Information System

In addition to the type of update, you can also define the period unit to be used in the updating process.

The period unit specifies the intervals in which the statistical data is to be cumulated. You can choose from the following periods:

- Day
- Week
- Month
- Posting period (you may also need to specify a fiscal year variant)

You can determine the period unit of the update for every standard information structure.

In the SAP standard system, the default period unit for updating all the information structures in the Purchasing Information System is month. To update the information structure S012 for long-term planning, refer to Updating Standard Analyses for Long-Term Planning: Purchasing Information System [Page 19].

The prerequisite for changing the period unit is that no actual data has been updated to the information structure.
You can set the period unit for the standard information structures in Customizing for the Logistics Information System.

Update of Quantities and Currency Amounts: Purchasing Information System

Currency Amounts

Currency amounts are always updated in local currency. The local currency is assigned to the company code. You can make this assignment in Customizing under *Organization*.

Quantities

Quantities are updated in base unit of measure.
The base unit of measure is the unit of measure in which the system manages the material stocks. It is specified in the material master.

Updating Check

You can check updating by displaying an update log, or by simulating the updating. Both functions are available in Customizing for the Logistics Information System.

Update Log

You can monitor the update process by generating a log of the activities. This shows you the flow of data from the Purchasing processes to the information structures in terms of each specific user and event.

Please note that the update log is only generated for the last event which takes place. Old entries are therefore overwritten as soon as a new event is updated.

This is how you configure the update log:

1. From the R/3 system menu select *System* → *User profile* → *User parameters.*
2. In the *PID* field enter the parameter MCL and place an *X* in the *Parameter value.*
3. Save the entries.

The system load increases when you display an update log. For this reason you should deactivate the log generation process after successfully checking an update.

Simulation

If you wish to check the update of documents that have already been saved, due to changes you have made in Customizing, for instance, you can generate update logs from any sales and distribution documents, without causing an update of the information structures. In this way, you can check how a document would be updated, if the new settings in Customizing were taken into account. You can also use this type of updating check in the productive system without any problems.

Standard Analyses: Purchasing Information System

The following standard analyses are available in the Purchasing Information System:

Purchasing Group

This analysis enables direct access to information via the purchasing group. You might need an answer to the question: How large is the order value of a purchasing group in relation to a particular vendor? The analysis is based on data that is updated to information structure S011.

Vendor

A vendor analysis is useful if you need direct access to vendor-related data. You might wish to know, for example, which materials have been ordered from a particular vendor and in what quantity.

The analysis is based on data that is updated to the information structure S012.

Material Group

This analysis enables direct access via the material group. It helps you to answer questions such as: How great is the number of order items for a material group?
The analysis is based on data that is updated to the formation structure S012.

Material

Use this analysis if you want to access statistical data on a material or materials. For example, you may need to know how much of a certain material was ordered. A possible question on the material analysis might be: How much was ordered from which material?

The analysis is based on data that is updated to the information structure S012.

Vendor Evaluation

The vendor evaluation standard analysis enables you to evaluate the data from the vendor evaluation in Purchasing. The analysis is based on data that is updated to the information structure S013. This standard analysis allows you to find out whether a certain vendor delivers material on time and in the correct quantity required. The key figures that can be evaluated are the scores for the criteria: quantity reliability, on-time delivery performance, deviation from shipping notification (keeping the confirmation date), shipping instructions, quality audit (is currently not updated).

You can find information on the *Vendor Evaluation* component in the document *MM - Materials Management*, under the section on vendor evaluation.

Long-Term Planning

Three standard analyses are available for long-term planning: material, vendor and material group analysis. These standard analyses are based on planning data in long-term planning that is updated to the information structure S012.

in long-term planning, various planning scenarios can be planned based on independent requirements. Preliminary planning is thus conducted in order to assess the effects, for example, on the material, capacity or services requirements of the cost center.

The planned material requirement also enables Purchasing to conduct preliminary planning (for possible negotiations with vendors about outline agreements). If a vendor was also assigned to

the material, then the vendors and the assigned key figures ‘effective order value’ and ‘order price’ can also be displayed in the analyses in addition to the material requirement (order quantity).

In the standard analyses for long-term planning, you can calculate the order value in four different ways when evaluating a planning scenario:

- Calculation using info record

  If a vendor is assigned to the planned order, and if an info record exists, then the order value is calculated using the purchasing info record price. In the case of consignment materials, which do not have a info record price, the system takes the future consignment valuation price into account for the calculation, depending upon the final date of the planned order. If these conditions are not satisfied, no calculation is carried out.

- Calculation using the valuation price

  If the standard price is specified in the material master, then the system takes the standard price or the future standard price into account when calculating the order value. If the movable average price is specified as the price control, then this price is used for calculating the order value.

- Calculation using the new planned price from product costing
- Calculation using the planned price 1, 2, or 3 from product costing

Only one order value can be saved at a time in a version of the information structure S012. If you need to find out how to evaluate a planning scenario for different types of order value calculation and how to compare the results, refer to Standard Analyses for Long-term Planning: Comparing Order Values [Page 28]

No continuous updating takes place for the analyses of long-term planning. In the long-term planning menu, you can update data to the planned orders of long-term planning by using the menu sequence *Evaluations* → *Purch. Info System* → *Set up data.*

Here you can assign exactly one version to a planning scenario for the Purchasing Information System. The selected version is then retained in the planning scenario and can then be displayed (in the long-term planning menu under the menu sequence *Scenario* → *Display*).

If you only need one data selection for specific analysis criteria in a standard analysis, you can initiate this by placing a cross in the *Ad-hoc evaluation* field in the standard analysis selection screen. The data is then read directly from the planned orders. In addition, you need to specify the number of the required planning scenario in the selection screen. Also refer to Updating Standard Analyses for Long-Term Planning: Purchasing Information System [Page 19].

You can find detailed information on long-term planning in the WinHelp document *PP Long-term planning.*

Subsequent Settlement

You can use the standard analysis for subsequent settlement to optimize your business processes with regard to arrangements with vendors. You will be able to detect any

discrepancies between income from the current year and the previous year at an early stage. Final and intermediate settlement results can be compared with one another, thus enabling you to initiate optimization strategies before problems occur. You can gain an overview of the vendors with the highest bonus, for example, or check the distribution of income at plant level.

The data basis for the standard analysis is provided by data that is updated to the information structure S015 at the time of invoice receipt for an order (vendor business volume) or the subsequent settlement of an agreement (income) by credit memo/billing document.

You can find further information on the functionality of subsequent settlement in Purchasing in the document MM-Purchasing Guide (section “Subsequent Settlement with Respect to Conditions”).

Exception Analysis

In the exception analysis, you can display Exceptions [Ext.], which you have defined using the Early Warning System [Ext.]. The exception analysis acts as a filter, that is, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Purchasing Information System [Page 30]

Standard Analyses for Long-term Planning: Comparing Order Values

Only one order value can be stored in each version of the information structure S012, which is the basis for the long-term planning standard analyses. The following example explains how to evaluate a planning scenario for various types of order value calculations and how to compare the results with one another:

For the planning scenario 100, you would like to calculate and compare the order values in different ways.
In one version, you would like to calculate the order value using the purchasing info record and in another version, using the valuation price.

Proceed as follows:

1. Carry out the data setup report for the planning scenario 100.

   Proceed as follows:

   a) In the long-term planning menu, select Evaluations → Purchasing Info System → Set up data.

   b) Enter **100** in the Planing scenario field and press `Enter`. The system automatically supplies the name of the version with the same name as the planning scenario. The name of the version is also 100.

   c) Select Valuation price.

2. Copy the version 100 to version 10A.

   Version 10A contains the data for the order value calculation via the valuation price.

   Proceed as follows:

   a) From the long-term planning menu, select Evaluations Purchasing info system Copy version.
   The ‘Compare info structure version with planning scenario’ screen appears.

   b) In the Planning scenario field, enter 100. Since exactly one version is assigned to the planning scenario (in this case version 100), you do not need to specify the source version.

   c) In the field Version, specify the version to which the data is to be copied, i.e. 10A in this example. Enter an explanatory text in the field Version text.
   The data is copied from version 100 into version 10A

3. Perform an ad-hoc evaluation of the standard analysis and select Purchasing info record for calculating the order value. The data for the standard analysis shows the order value via the calculation type purchasing info record.

   Proceed as follows:

   a) From the Purchasing Information System, select Standard analyses Long-term planning the standard analysis you require. The selection screen for the standard analysis appears.

b) Select Ad-hoc evaluation and for calculating the order value Purchasing info record. Select Analysis Execute. The standard analysis list will appear.

Of course you can also carry out the data setup report instead of an ad-hoc evaluation (see step 1) and then execute the standard analysis.

4. Perform a planned/actual comparison in the standard analysis and specify the version 10A.

   Proceed as follows:

   a) Position the cursor on the key figure required for the comparison and select Edit Comparisons Planned/actual.
   A dialog box appears.

   b) In the Version field, specify 10A.
   A dialog box appears in which the data of version 100 will be compared to that of version 10A.

Characteristics and Key Figures: Purchasing Information System

See also:

How the Key Figures are Calculated: Purchasing Information System [Page 38]

Purchasing Group

The data basis for the purchasing group is data that are updated to the information structure S011.

Characteristics

- Purchasing organization
- Purchasing group
- Vendor

Key Figures

- Contract items
- Contracts
- Deliveries
- Invoiced amount
- Order item schedule lines
- Order items
- Order value
- Quotation items
- Request for quotation items
- Request for quotations
- Scheduling agreement items
- Scheduling agreements
- Scheduling agreements

Vendor, Material Group

The data basis for the standard analyses vendor and material group is the data that are updated in the information structure S012.

Characteristics

The following table gives you an overview on the characteristics that are available in the standard analyses vendor and material group of the Purchasing Information System.

	Standard analysis:	
	Vendor (Info struct. S012)	**Material group (Info struct. S012)**
Characteristics		
Purchasing organization	**X**	**X**
Purchasing group		
Country of vendor	**X**	
Vendor	**X**	
Material group		**X**
Material		**X**

Key Figures

- (Scheduled) delivery date deviation 1-5
- Average delivery time
- Contract items
- Deliveries
- Delivery quantities deviation 1-5
- Invoiced amount
- Invoiced price
- Invoiced quantity
- Order item schedule lines
- Order items
- Order price
- Order quantity
- Order value

- Quantity of goods received
- Quotation items
- Request for quotation
- Request for quotation items
- Required delivery quantity
- Scheduling agreement items
- Scheduling agreements
- Value of goods received
- Weighted average delivery time

Material

The material analysis is based on data that are updated in the information structure S012.

Characteristics

- Purchasing organization
- Material

Key Figures

- (Scheduled) delivery date deviation 1-5
- Average delivery time
- Contract items
- Deliveries
- Delivery quantity deviation 1-5
- Invoiced amount
- Invoiced price
- Invoiced quantity
- Order item schedule lines
- Order items
- Order price
- Order quantity
- Order value
- Order value
- Quantity of goods received
- Quotation items
- Request for quotation items
- Required delivery quantity
- Scheduling agreement items
- Scheduling agreements
- Value of goods received
- Weighted average delivery time

Vendor Evaluation

The standard analysis vendor evaluation is based on data that are updated in the information structure S013.

Characteristics

- Purchasing organization
- Vendor
- Material
- Plant
- Purchasing info type
- Purchasing info record

Key Figures

The key figures that can be evaluated in the standard analysis vendor evaluation, are scores for the following criterion:

- On-time delivery performance
- Quality audit (currently cannot be updated)
- Quantity reliability
- Shipping instructions
- Shipping notification deviation (keeping the confirmation date)

Subsequent Settlement

The data basis for the standard analysis for subsequent settlement is the data that are updated in the information structure S015.

Characteristics

- Purchasing organization
- Purchasing group
- Plant
- Material group
- Condition granter
- Creditor
- Agreement
- Settlement end

Key Figures

- Canceled provision for condition income
- Gross weight to the condition record (agreement) from the order items
- Income from the settlement of the condition record
- Invoiced sales quantity to the condition record (agreement) from the order items
- Invoiced sales to the condition record from the order items
- Net weight to the condition record (agreement) from the order items
- Number of points to the condition record (agreement) from the order items
- Provision for condition income
- Quotient income of the condition record from the final settlement
- Total income of the condition record
- Volume to the condition record (agreement) from the order items

Long-term Planning

The data basis for the standard analysis long-term planning is the data, that are updated in a special version of the information structure S012.

Characteristics

The following table provides an overview of which characteristics are available in the standard analyses for long-term planning.

	Standard analysis:		
	Vendor	**Material group**	**Material**
Characteristics			
Purchasing organization	X	X	X
Purchasing group			
Country of vendor	X		
Vendor	X		
Material group		X	
Material		X	X

Key Figures

- Order price
- Order quantity
- Order value
- Weighted average delivery time

How the Key Figures are Calculated: Purchasing Information System

The key figures in the Purchasing Information System are updated when the following three types of events occur:

- Purchasing document (purchase order, scheduling agreement, contract, inquiry/quotation) create/change
- Goods receipt for a purchase order, scheduling agreement
- Invoice receipt for a purchases order, scheduling agreement

The following are the different types of key figure groups:

Quantities/Values

Quantities

- Purchase order quantity
  The purchase order quantity is the quantity of ordered materials from purchase orders and scheduling agreements. The key figure is updated in base unit of measure when a purchase order or a scheduling agreement is created and changed for the purchase order date of the delivery scheduling (information structure S012).
  In the analyses of long-term planning, the purchase order quantity corresponds to the planned purchase order quantity from the planned order.
- Required delivery quantity
  The required delivery quantity is the quantity that is to be delivered in the current time period, that is, the purchase order quantity according to the statistically-relevant delivery date. The key figure is updated when a purchase order is created and changed to an order or a scheduling agreement in base unit of measure to the statistically-relevant delivery date (information structure S012).
- Quantity of invoice receipt
  The invoice receipt quantity is the quantity that is placed in the receipt when an invoice receipt occurs. The key figure is updated in base unit of measure with an invoice receipt with a time reference to the order date of the delivery scheduling. (information structure S012).
- Quantity of goods received
  The quantity of goods received is updated when a goods receipt for a purchase order of the delivery scheduling is made (information structure S012). Cancellations are taken into account.

Values

- Effective purchase order value
  The effective purchase order value is the value of the purchase order including discounts, surcharges, delivery costs and cash discounts.
  This key figure is updated when a purchase order or a scheduling agreement is created and changed for the purchase order date of the delivery scheduling in local currency (information structure S011, S012).
  In the analyses of long-term planning, the effective order value can only be determined when the vendor is known. The key figure is calculated via the purchase order price in the purchasing info record.
- Invoiced amount
  The invoiced amount is the amount that the vendor placed in the invoice. This key figure is updated in local currency with an invoice receipt for an order date of the delivery scheduling (information structures S011 and S012).

Frequency

The different types of purchasing documents inquiry/quotation, purchase order, contract and scheduling agreement are updated in the following frequencies:

Frequency Inquiry/Quotation

When an inquiry/quotation is created/changed, the following key figures are updated in the frequency. The update is done for the order date of the inquiry.

- Number of inquiries
  (information structure S011)
- Number of all items in the created inquiry
  (information structures S011 and S012)
- Number of items of the created quotations
  When a quotation for an inquiry is created, this key figure is also updated to the document date of the inquiry.
  (information structures S011 and S012).

Frequency Purchase Order

When a purchase order is created/changed, the following key figures are updated to the frequency:

- Number of created purchase orders
  The key figure is updated to the document date of the purchase order in information structure S011.
- Number of order item schedule lines
  The key figure is updated to the purchase order date of the delivery scheduling in information structures S011 and S012.
- Number of order items
  The key figure is updated to the document date of the purchase order information structures S011 and S012.

Frequency Contracts

When a contract is created/changed the following key figures are updated in the frequency. The update occurs to the document date of the contract.

- Number of contracts
- Number of items from all the created contracts

Frequency Scheduling Agreements

When a scheduling agreement is created/changed the following key figures are updated:

- Number of scheduling agreements
  The update occurs to the document date of the scheduling agreement in information structures S011 and S012.

- Number of delivery schedules
  The update occurs to the document date of the delivery schedule in information structures S011 and S012.
- Number of scheduling agreement items
  The update occurs to the document date of the scheduling agreement in information structures S011 and S012.

Number of Deliveries

The number of deliveries is updated with a goods receipt for a purchase order to the recorded date of the goods receipt.

Quantity Delivered/(Scheduled) Delivery Date Deviation, Delivery Time

Quantity to be Delivered Deviation 1-5

Included under the quantity to be delivered deviation 1-5 in the Purchasing Information System are the number of order items and scheduling agreements, which due to their percentile, quantity to be delivered deviation is assigned the intervals 1 to 5.

The quantity to be delivered deviation is the deviation between the purchase order quantity and the actual delivered quantity in percent.

The key figures quantity delivered deviation 1-5 are updated to the entry date of the goods receipt or the purchase order change in information structure S012 when an order item has been completed. An order item is considered complete if:

- The delivered indicator was set

or

- The quantity of goods receipt is larger or the same as the purchase order quantity

or

- The item was deleted.

The quantity to be delivered deviation is valuated by using a grid, whose interval limits can be set in the Customizing function in Logistics Controlling. You can determine a total of four intervals so that there are a total of five classes for valuation. The grid is determined in connection with the purchasing organization.

(Scheduled) Delivery Date Deviation 1-5

The (scheduled) delivery date deviation 1-5 is the number of deliveries that can be assigned the intervals 1-5, due to their delivery time deviation in days.

The key figures are updated with a goods receipt to the entry date in information structure S012.

The (scheduled) delivery date deviation is valuated by using a grid, whose intervals can be set in the Customizing function of Logistics Controlling. You can determine a total of four intervals so that there are a total of five classes for valuation. The grid is determined in connection with the purchasing organization.

Delivery Time

To calculate key figures for the delivery time (average delivery time and average weighted delivery time), use the following help key figures which cannot be given in the standard analyses in the standard:

- Total delivery time
  The total delivery time is the sum of the times in days between order and goods receipt. The key figure is updated with a goods receipt to the entry date of the goods receipt document (information structure S012).

- Weighted total delivery time
  The weighted delivery time is the difference in days between goods receipt and order

multiplied by the goods receipt quantity. The key figure is updated with a goods receipt to the entry date of the goods receipt document. (information structure S012).

Key Figures Calculated at Runtime

The key figures that are described below are calculated when executing the standard analyses and are therefore not saved in any information structure.

Please note that calculating these key figures on an aggregated level (for example, for material groups or purchasing organizations) can only occur if values with the same currency and quantities are cumulated.

Purchase Order Price

The average purchase order price is calculated by dividing the effective purchase order value (value of the purchase order including discounts, surcharges, delivery costs, cash discounts) by the order quantity (quantity of the order materials).

This key figure is calculated when performing the vendors, material groups and material analysis.

The effective purchase order value and the purchase order quantity are updated when an order or a scheduling agreement is created and changed.

Average Delivery Time

This key figure is calculated when the vendor, material and material group analysis is performed.

The average delivery time in days is calculated by dividing the total delivery time by the number of deliveries.

The total delivery time is the total number of times between order and goods receipt in days. It is updated with a goods receipt to the entry date (information structure S012).

The number of deliveries is updated with a goods receipt for an order to the entry date of the goods receipt.

Invoice Price

The average invoice price is calculated by dividing invoice value by invoice receipt quantity. The invoice value and the invoice receipt quantity are updated with an invoice receipt to the information structure S012.

Value of Goods Received

The value of goods received is calculated in two different ways:

- At data record level of information structure S012
- At aggregated level (totals line and aggregated list levels)

The goods receipt value at data record level is derived from the quantity of goods received valuated with the average order price.

The average order price is calculated by dividing the effective order value by the purchase order quantity. The effective order value is the value of the purchase order including the discounts, surcharges, delivery costs, and cancellations.

The goods receipt value at **aggregated level** (e.g. totals line or higher list level) is the total of the goods receipt values of the individual list lines.

Example: Calculating the Value of Goods Received [Page 47]

Influence of the Average Purchase Order Price on the Value of Goods Received

The table below shows how the value of goods received is calculated for two purchase orders. In *one* month and for one vendor, 2 purchase orders and the corresponding goods receipts are posted for one material with different purchase order prices. The value of goods received at *purchase order level* is derived from the goods receipt quantity valuated with the purchase order price.

PO date	PO quantity	PO value	PO price	GR quantity	GR value
01.97	10 PC	$100.00	$10.00	5 PC	$50.00
01.97	10 PC	$20.00	$12.00	10 PC	$120.00

PO = purchase order

GR = goods receipt

Once the purchase orders and the goods receipts have been posted, both purchase orders for 01.97 are written to information structure S012, into one data record. The value of goods received for the month 01.97 is derived by multiplying the average purchase order price by the goods receipt quantity of this one data record. In the vendor analysis, the following list is displayed in a drill-down by month.

Vendor analysis Vendor: Major Inc. Material: A Month					
Month	**PO quantity**	**PO value**	**(Average PO price)**	**GR quantity**	**GR value**
Total:	20 PC	$220.00	$11.00	15 PC	$170.00
01.97	20 PC	$220.00	$11.00	15 PC	$165.00

This example shows that the value of goods received in the standard analysis does not always correspond exactly to the value of goods received according to the purchase order price in the purchase orders. When the purchase orders are updated, multiple purchase orders are aggregated in one info structure data record, so that the value of goods received in the standard analysis is calculated on the basis of an average purchase order price of the individual purchase orders.

Weighted Average Delivery Time in Days

This is the delivery time that is weighted with the goods receipt quantity.
The delivery time weighted with the quantity is calculated from the cumulated product of delivery time and goods receipt quantity divided by the cumulated goods receipt quantities:

Total of (delivery time x quantity of goods received)

Total of (quantity of goods received)

The goods receipt quantity is cumulated without taking the cancellations into account (by using the help key figure *Total quantity of goods received*).

Delivery A: delivery time 5 days, goods receipt quantity 10 pieces
Delivery B: delivery time 8 days, goods receipt quantity 20 pieces

The quantity-weighted delivery time, which results from delivery A and B is calculated as follows:

$$\frac{(5 \times 10) + (8 \times 20)}{30} = 7$$

Example: Calculating the Value of Goods Received

The following example illustrates the how the value of goods received is calculated differently at data record level and at aggregated level.

In the case of material A, there is exactly one purchase order in the month 01.97 and one purchase order in 02.97 involving the vendor Major Inc.. This results in exactly 2 data records in the information structure for which the value of goods received is calculated.

You perform a vendor analysis and perform a drill-down for material A according to period. The following list is displayed in the standard analysis:

Vendor analysis Vendor: Major Inc. Material: A

Month	**PO quantity**	**PO value**	**PO price**	**GR quantity**	**GR value**
Total:	30 PC	$320.00	$10.66	10 PC	$105.00
01.97	10 PC	$100.00	$10.00	5 PC	$50.00
02.97	20 PC	$220.00	$11.00	5 PC	$55.00

In the totals line, the values of goods received of the lines below are added together. The value of goods received is consequently not identical to the product of the purchase order price and goods receipt quantity of the totals line (this means it is $105.00 and not $106.60).

The value of goods received of the lower-level list is written to respective higher-level lists. This results in the following list at material level.

Example: Calculating the Value of Goods Received

Vendor analysis Vendor: Major Inc.					
Material	**PO qty**	**PO value**	**PO price**	**GR quantity**	**GR value**
Total:	130 PC	$1,320.00	$10.15	100 PC	$1,005.00
A	30 PC	$320,00	$10.66	10 PC	$105.00
B	100 PC	$1,000.00	$10.00	90 PC	$900.00

In this list the value of goods received in the totals line is also derived from the goods receipt values of the lines below and *does not* correspond to the product of the purchase order price and the goods receipt quantity of the totals line (this means it is $1,005.00 and not $1,015.00).

Vendor Evaluation

The standard analysis key figures in vendor evaluation are updated in the information structure S013 with a goods receipt and purchase order event. The key figures are scores for the following criterion:

- Quantity reliability
- Date reliability
- Deviation shipping notification (keeping confirmation date)
- Shipping instructions
- Quality of service
- Date of service

The following key figures cannot be updated: Shipping notification, points score 1 and 2: Quality audit, points score 1 and 2.

For every key figure you will receive points scores 1 and 2, which are each calculated differently and are interpreted differently.

This subject will be illustrated with an example using the key figure delivery reliability.

You want to evaluate the key figure delivery reliability points score 1 and 2 for the vendors “Import and Export”.
The month January is used as the starting point. In this month, many goods receipts were made. The key figure value for on-time delivery performance points score 1 and 2 is 90.
In February a goods receipt is made that is valuated with 20 points. The key figure value for the key figure on-time delivery performance points score 1 in the standard analysis is 20. The key figure value for the key figure on-time delivery performance points score 2 is calculated by totaling the point scores for January, multiplied by the smoothing factor 0.8 and the points score for February, also multiplied by the smoothing factor (1 - smoothing factor). The smoothing factors are stored in Customizing of the vendor evaluation. For points score 2, the key figure value is 76.

	Points score 1 delivery reliability	Points score 2 delivery reliability
January	**90**	**90**
February	**20**	(90 *0.8) + (20 * (1 - 0.8) = **76**

Points score 1 shows the valuation for one month, in the example 20 points. The key figure shows that the vendor has problems this month with (scheduled) delivery dates. It is thus not taken into account that in January a higher points score was reached. Should new scores be determined within the current period, then they will be Smoothed [Page 51] and adopted in the score that was used until now.

Points score 2 shows the cumulated and Smoothed [Page 51] scores of all of the periods. In this example, the key figure value for points score 2 shows that the vendor reached an average points score over the two months.

Note that in the vendor evaluation, only the points scores 2 is taken into account for an evaluation. The points scores 1 can only be shown in the standard analysis.

Smoothed

Value, with which the user can control how much a current value, which is used in the calculation, influences the result.

A high smoothing factor causes a change in the result, a lower one results in a lesser change.

A smoothing factor is used in the vendor evaluation, for example, to calculate the new individual scores that a vendor receives for the goods receipts in the overall score, valid until now, for being on time. Since the overall score that was valid until now is used for many goods receipts, the new goods receipt only represents an individual score, the new goods receipt will be calculated with a lower value in the overall score, that is, smoothed.

Subsequent Settlement

This section contains information about how the key figures of the subsequent settlement analysis are calculated.

There are conditions that vendors grant in retail, for example, for:

- The purchase of goods
- Punctual payment of vendor invoices
- Running promotions
- Contribution to the costs incurred in retail (for example, disposal costs)

There are two different groups of conditions: conditions requiring immediate settlement and condition requiring subsequent settlement. Conditions requiring immediate settlement are taken into consideration directly with the vendor invoices or when these invoices are settled and are therefore not part of the subsequent settlement. Conditions requiring subsequent settlement (indicated as subsequent settlement) are to be subsequently settled with the vendor.

The key figures of the subsequent settlement standard analysis are updated to the information structure S015 when an invoice is received for a purchase order (vendor business volume) or when an arrangement is subsequently settled (income) by credit memo/billing document.

The key figures for subsequent settlement are divided into two groups as follows:

- Subsequent Settlement: Amounts [Page 53]
- Subsequent Settlement: Quantities [Page 58]

Subsequent Settlement: Amounts

Condition Record Income / Final Settlement Income / Total Condition Record Income

- **Condition record income**

  Amount resulting from the settlement of the cumulative business volume relevant to the condition record.

  The income from arrangements that are to be settled once only and the income from interim settlements of arrangements that are to be settled periodically are updated under this key figure.

- **Final settlement income**

  Income arising from the final settlement of an arrangement that is to be settled periodically.

  This income is based on the total business volume achieved over the validity period (e.g. annual business volume). Income already received from previous interim settlements are cleared in the process.

- **Total income from the condition record**

  The key figure “total income from the condition record” describes the total income derived from the settlements, i.e. the sum of the key figures “condition record income” and “final settlement income” (proportion of the income from the final settlement). If no final settlement is carried out, the “total income from the condition record” is equal to the “condition record income”.

The income derived from the settlements of an arrangement is updated to information structure S015 when the settlement document is updated in Financial Accounting.

Irrespective of the date of the document, the income is allocated proportionately to all data records in the information structure that belong to the condition record for which settlement is due. The income due on the basis of the final settlements is distributed proportionately between all condition records of the various periods. In the same way, the income is divided up between all the characteristics in question (purchasing organization, purchasing group, merchandise category, plant, month).

By using two income key figures (final settlement income and condition record income) you can always determine which proportion of the income originates from interim settlements and which amount is a result of the final settlement (e.g. due to a higher scale level or a business volume comparison and agreement). You can use this information to create optimization strategies.

In Customizing under the arrangement type, you can determine whether a final arrangement should be carried out or not. Note the settings that you can make in Customizing under the arrangement type:

1. If you have determined in Customizing under the arrangement type, that the settlements of the arrangement occur only once at the valid to date of the arrangement, no final settlement will occur. Only the key figure “Income condition record” will then be updated; the key figure “Income final settlement” will not be updated in this case.
2. If you have specified in Customizing under the arrangement type that an arrangement should be settled at regular intervals, then only the key figure “condition record income”

is updated with the interim settlements of the arrangement (settlements of the condition records for the various periods).

Examples [Page 56]

Provision for Accrued Condition Income / Dissolved Provision for Accrued Condition Income

Payments always occur once the validity period of the arrangement has ended. You therefore have the opportunity to post provisions for accrued income or for condition records. You first need to ensure that the *Provision* indicator is marked in Customizing for the condition type.

The provision for accrued income enables you to influence the article price valuation on the basis of income that is expected from a later settlement. The provision for accrued income reduces the effective price, thus affecting the article price valuation.

A purchase order of 10 articles with a unit price of $10 is activated.
The following was determined for an end-of-period refund:

- $1 per piece
- $1.50 for purchases of 1000 pieces

The article can only be valuated at $9 per piece, as a subsequent income of at least $1 per piece is expected.

When settlement takes place, the provision for accrued income is dissolved and updated to the information structure S015 under the key figure “dissolved provision for accrued income”.

Updating of the key figure “provision for accrued income” takes place during invoice verification and data is updated to the information structure S015.

Vendor Business Volume

Invoiced sales for the condition record (arrangement) from the purchase order items.

In order for invoiced sales to be updated to a purchase order item, this purchase order item must be relevant for the subsequent settlement. This is controlled by the corresponding indicator in the vendor master, in the purchasing info record or in the purchase order item.

In Customizing for the arrangement type, you can specify what is to be updated as vendor business volume:

- The business volume from the order item (in accordance with the condition basis for the step of the calculation schema)

  or

- The net value from invoice verification

In the standard system, the vendor business volume is updated upon invoice receipt to the document date. At the same time, the data is allocated to the respective condition record. This means that the data is both available for the condition record, and can also be analyzed on a monthly basis (e.g. in the case of arrangements settled on a quarterly basis).

Please note that in the case of arrangements that are settled periodically, data is determined for the respective condition record (period) that is valid on the document date of invoice verification. The condition record valid at the time of invoice verification can differ from the condition record valid during price determination (purchase order or goods receipt).

Examples: Income Final Settlement / Income Condition Record / Total Income Condition Record

An arrangement is valid from Jan 1, 1996 to Dec. 31, 1996.

Two different scenarios are possible:

- **The arrangement is settled once-only.**

  If the arrangement is subject to once-only settlement, you can, for example, agree on a condition stipulating a rebate of 3%. If the vendor business volume amounts to $100,000, this would result in an income of $3,000, which is updated to the key figure “condition record income”. There is no final settlement income in this case, therefore the key figure “final settlement income” is not updated.

- **The arrangement is settled periodically.**

  If the arrangement is settled periodically, (e.g. on a quarterly basis), you can, for example, agree on a condition stipulating a rebate of 3%. On the business volume achieved during a quarter. The income for the periods is updated to the key figure “condition record income”:

  – 1st quarter: vendor business volume $20,000 --> condition record income: $600

  – 2nd quarter: vendor business volume $30,000 --> condition record income: $900

  – 3rd quarter: vendor business volume $20,000 --> condition record income: $600

  – 4th quarter: vendor business volume $30,000 --> condition record income: $900

  For the final settlement, you agree on a condition stipulating a rebate of 5% on an annual income in excess of $75,000.
  A payment of $3,000 has already been made. The “final settlement income” therefore amounts to $2,000:

  Final settlement income: $100,000 * 0.05 = $5,000 - $3,000 = **$2,000**

  The first quarter yields a proportionate income of $400, which is updated to the key figure “final settlement income” and is allocated to the respective period. This proportionate income is calculated as follows:

  1st quarter “Final settlement income”:

  Final settlement income
  ---------- * Business volume for 1st quarter =
  Total business volume

  $2,000
  ---------- * $20,000 = $**400**
  $100,000

Examples: Income Final Settlement / Income Condition Record / Total Income Condition Record

The key figure "*Total income from the condition record*" for the first quarter is the sum of the condition record income (interim settlement) and the proportionate income from the final settlement (1st quarter final settlement income). Therefore, in the above example:

Total income from the condition record (1st quarter): $600 + $400 = $**1,000**

Here the key figures are also updated at the level of the months involved, so that you can analyze the key figures on a monthly basis. This means that all income for the first quarter is divided up further over the months January, February and March.

Subsequent Settlement: Quantities

The key figures described below refer to the condition record for the order item. The order item must be relevant to the subsequent settlement for these key figures to be updated. This is controlled by corresponding indicators in the vendor master, the purchasing info record or in the order item.

In the standard system, these key figures are updated to the information structure S015 upon invoice receipt on the document date. At the same time the data is allocated to the corresponding condition record. The data is then both available for the condition record, and can also be analyzed on a monthly basis (e.g. in the case of arrangements that are settled quarterly). In order for updating to take place, it must be possible to determine a condition record of the arrangement in Subsequent Settlement during price determination (purchase order or goods receipt).

Please note that in the case of arrangements that are settled periodically, data is determined for the respective condition record (period) that is valid on the document date of invoice verification. The condition record valid at the time of invoice verification can differ from the condition record valid during price determination (purchase order or goods receipt).

Weights

- Net weight

  Net weight for the condition record (arrangement) from the purchase order items.

- Gross weight

  Gross weight for the condition record (arrangement) from the purchase order items.

Gross/net weight is saved in the material master or in the purchasing info record, or can be entered manually in the order document.

Updating of both these key figures always takes place when the reference magnitude or the calculation rule refers to the gross or net weight. In the case of agreements settled periodically, this might also be the condition record calculation rule in the final settlement.

Quantity of Vendor Business Volume

Quantitative business volume to the condition record (arrangement) from the order items.

Updating of this key figure always takes place when the reference magnitude or the calculation rule refers to the quantity. In the case of agreements settled periodically, this might also be the condition record calculation rule in the final settlement. In order for updating to take place, it must be possible to convert the quantity into the units of measure in the condition record.

Volume

Volume for the condition record (arrangement) from the purchase order items.

The volume of the material is specified in the material master or in the purchasing info record, or can be manually entered in the order document.

In the case of condition records with no reference to volume, i.e. if the reference magnitude or the calculation rule in the condition record does not refer to the volume, then the volume is updated for purposes of information only.

Number of Points

Number of points for the condition record (arrangement) from the purchase order items.

The number of points of a material is saved in the material master or in the purchasing info record, or can be manually entered in the order document.

Updating of this key figure always takes place when the reference size or the calculation rule refers to points. In the case of agreements settled periodically, this might also be the condition record calculation rule in the final settlement. In order for updating to take place, it must be possible to convert the quantity into the units of measure in the condition record.

Inventory Controlling

Inventory Controlling: Information Structures

In the standard system, the following information structures are available in Inventory Controlling:

- **S031 Movements**

  All key figures relating to material movements involving current valuated stock and vendor consignment stock are updated to this information structure. In the standard system, the period unit in this information structure is ‘month’. You can define your own period unit for the updating of this information structure.

- **S032 Stocks**

  The current valuated and vendor consignment stocks are updated to this information structure when a goods movement takes place. The stock values are also updated to this info structure when a goods movement and invoice verification/revaluation take place. This information structure does not contain a period unit.

- **S033 Movements (individual records)**

  In order to gain specific results from your analysis, such as determining the date of last consumption, displaying informative receipts/issues diagrams, or obtaining reliable mean stock values, updating of the statistical data must take place on a daily basis. The information structure S033 satisfies this requirement, as it is supplied with data every day.

  Structurally, the information structure S033 is identical to the information structure S031, yet also includes the characteristic “document number”. Updating is carried out on a daily basis at document level. The period unit for the updating of this information structure cannot be changed in Customizing.

- **S034 Movements (Batches)**

  The key figures relating to material movements at plant, storage location, material and batch levels are updated to this information structure.

- **S035 Stocks (Batches)**

  The current valuated and vendor consignment stocks are updated to this information structure when a goods movement takes place. This information structure does not refer to any period and is set up in the same way as the information structure S032, yet also contains the additional characteristic ‘batch’.

- **S039 Planning**

  This information structure includes all of the key figures that are available in Inventory Controlling, including all of the extra key figures (range of coverage, inventory turnovers, key figures that are calculated using the mean value). No actual data is written to this information structure. This information structure provides the basis for **flexible planning**.

  If you wish to fill the information structure S039 with actual data, then you can use the report RMCBS039. It is always advisable to fill this information structure with actual data if you want to access actual data for the forecast during planning, or if you want use the flexible analyses to evaluate the extra key figures from Inventory Controlling.

- **S094 Stock/Requirements Analysis**

  The information structure S094 includes all of the key figures relating to the current stock and requirements situation and forms the data basis for the standard analyses of stock/requirements. Data relating to requirements and stock situation flows into this information structure from MRP (data basis for the standard analysis of the *current* stock/requirements situation), while at the same time data from long-term planning flows into a separate planning version (data basis for the standard analysis long-term planning). Future stock levels are derived from the requirements and future receipts.

  Updating of this information structure does not take place on a continual basis for reasons of performance. It can be initialized via a report. For further information, please refer to Updating for Standard Analyses: Requirement/Stock and Parameters Controlling [Page 66].

Information Structures for Warehouse Management

- **S090 Stock Placements/Removals**

  Key figures relating to the placement and removal of warehouse stocks are updated to this information structure. The key figures of stock placement and removal examine the internal and external warehouse movements from the perspective of a storage section.

  The information structure S090 provides the data basis for the standard analyses of stock placement/removal and stock placement/removal: material. You can activate the updating of this information structure in Customizing under Logistics Information System.

- **S091 Flow of Quantities**

  Key figures relating to the flow of quantities between two bin locations flow into this information structure. They form the data basis for the standard analyses of flow of quantities, material flows and movement types. You can activate updating for this analysis in Customizing under Logistics Information System.

Updating: Inventory Controlling

Data Analysis in Inventory Controlling is based on statistical data that is updated to the information structures from inventory management, invoice verification and revaluation.

The following sections tell you how and when data updating takes place.

Events: Inventory Controlling [Page 64]

Updating Quantities and Currencies: Inventory Controlling [Page 65]

Updating for Standard Analyses: Requirement/Stock and Parameters Controlling [Page 66]

Type of Updating [Page 21]

Period Units in Updating: Inventory Controlling [Page 68]

Updating Check [Page 24]

Events: Inventory Controlling

Data is written to the standard information structures S031, S032, and S033 when goods movements (also called material movements or stock movements) and invoice verification/revaluation take place.
The data flows from the document structure to the information structures.

Goods movements are divided into the following types:

- Goods receipt
- Goods issue
- Stock transfer
- Transfer posting
- Inventory differences

You can switch off the updating process for specific, individual movement types in inventory management or in one of the subsequent applications in the logistics chain.

Information Structures in Warehouse Management

In the analyses for Warehouse Management, the following events trigger updating of the information structures:

Event	Information structure
Goods movements in Inventory Management (external quantities), stock removal/placement	S090
Create transfer order (stock removal/ placement, return transfers)	S090
Confirm transfer order (reporting real and unreal differences)	S091

Only the physical movements are taken into account in the updating of the information structures, i.e., no inventory adjustment postings or transfer postings.

Updating Quantities and Currencies: Inventory Controlling

Currency Amounts

Currency amounts are always updated in the local currency. The local currency is assigned to the company code. You make this assignment in Customizing under *Organization*.

Quantities

Quantities are updated in base unit of measure.

The base unit of measure is the unit of measure in which the system manages the material stocks. It is determined in the material master.

Updating for Standard Analyses: *Requirement/Stock* and *Parameters Controlling*

Updating the key figures for the standard analyses of requirement/stock (current, long-term planning) and parameters controlling does not take place continually and must therefore be initialized via a report, which you can find using the menu. This report can also run in the background.

The information structure S094 provides the basis for the standard analyses requirement/stock. On the one hand, the data relating to the requirements and stock situation flows from MRP into this information structure (data basis for the standard analysis of the current stock/requirements situation) and on the other hand, data flows into a separate planning version from long-term planning (data basis for the standard analysis long-term planning).

The parameters controlling analysis is based on the data that is updated to the information structures S031 and S032. Updating of the information structure S031 must therefore reflect the current status for the key figures *Stock at receipt* and *Value of stock at receipt*.

You can activate the update of the standard analysis requirement/stock for long-term planning in the long-term planning menu. Use the information system menu to update the standard analyses of the current requirement/stock and of parameters controlling.

If you want to carry out an ad hoc standard analysis for requirement/stock or parameters controlling and do not want to initialize an update, select the field *Ad-hoc evaluation* from the selection screen of the standard analysis in question. The data is then read directly.

Activating the Update for Standard Analyses: Requirement/Stock - Current and Parameters Controlling

To activate the update for the analysis of stock/requirement - current and parameters controlling, proceed as follows:

1. From the Inventory Controlling menu, select *Standard analyses* → *Parameters controlling* → *Set up data.*

   or

   Stock/requirement → *Current* → *Set up data.*
2. The selection screen of the report for updating appears.
3. Specify the selection parameters you require. You can use the system help functions to help you.
4. Select *Program* → *Execute,* or if you require background processing, *Program* → *Execute in background.*

Activating the Update for Standard Analysis: Stock/Requirements - Long-Term Planning

1. From the R/3 system menu, select *Logistics* → *Production* → *Master planning* → *Long-term planning.*
   The long-term planning menu appears.

2. Select *Evaluations* → *Inventory Controlling* → *Set up data.*
   The selection screen of the report for updating appears.
3. Specify the desired selection parameters. You can use the system help functions to help you.
4. Select *Program* → *Execute* or if you want the program to run in the background, *Program* → *Execute in background.*

Period Units in Updating: Inventory Controlling

In addition to the type of update, you can also define the period units that are used in the updating process.

The period unit specifies the intervals in which the statistical data is to be cumulated. You can choose from the following periods:

- Day
- Week
- Month
- Posting period (you may also need to specify a fiscal year variant)

In Inventory Controlling, the standard SAP setting for the period unit is ‘month’ for updating to the information structures S031 and S034, and ‘day’ for the information structure S033. In the standard system, information structure S039 and information structure S031 both have the period unit ‘month’. No actual data is written to S039, as this information structure provides the basis for planning.

The standard setting for the information structure S033 cannot be altered. For information about updating the information structure S094, please refer to Updating for Standard Analyses: Requirement/Stock and Parameters Controlling [Page 66]

The standard setting for the Warehouse Management information structures S090 and S091 is ‘month’. For reasons of performance, updating does not take place continually and must be initialized in Customizing for the Logistics Information System.

The prerequisite for changing the period unit is that no actual data has been updated to the information structure.

You can set the period unit for the standard information structures in Customizing for the Logistics Information System (exception: information structure S033).

Standard Analyses: Inventory Controlling

In the standard system, the following standard analyses are available in Inventory Controlling:

Plant/Storage Location/Material

The information structures S031 and S032 form the data basis for this standard analysis. Data concerning goods movements and the current stocks at the time of a goods movement flows into these information structures.

Batches

The batch analysis is based on data that is updated from inventory management to the information structures S034 and S035. Stock key figures and movement key figures for batches can be evaluated (for example, goods issues and receipts).

Material Groups

The following standard analyses are found under the menu option ‘material group’:

- MRP controller
- Business area
- Material group
- Division
- Material type

The information structures S031 and S032 form the data basis for this standard analysis. Data concerning goods movements and the current stocks at the time of a goods movement flow into these information structures.

Parameters Controlling

In the standard analysis of parameter controlling, five predefined dual classifications are available. You can use these to carry out Inventory Controlling with specific reference to cause. Detailed information about the parameters controlling standard analysis can be found in Inventory Controlling: Parameters Controlling [Page 72].

Stock/Requirement

Two standard analyses are available for the stock/requirement situation:

- Standard Analysis: “Current”

  You can use this standard analysis to evaluate data for the current stock and requirement situation from MRP. The future stocks are derived from the requirements and future goods receipts. The standard analysis is based on data that is updated to the information structure S094. The updating process for this analysis is not continuous. You can use a report to activate updating. This report can be reached via the menu. For an ad hoc analysis, however, you can also read the data directly from MRP. Further information for updating this analysis can be found in Updating for Standard Analyses: Requirement/Stock and Parameters Controlling [Page 66].

- Standard Analysis “Long-Term Planning”

You can use this standard analysis to evaluate data from long-term planning. The future stocks are derived from the requirements and future goods receipts.

In long-term planning, dependent requirements (4000 bicycles) are created by a (simulated) MRP run from independent requirements (1000 cars, for example) by using a BOM explosion (again simulated). The adjustment with stocks creates virtual planned orders or purchase requisitions, and in turn virtual future stocks. These stocks can be evaluated using parameters controlling. Long-term planning can carry out several of these simulations in parallel in so-called scenarios. They can then be observed in several versions of the information structures.

This standard analysis is based on data that is updated to a planning version for the information structure S094. The updating process for this analysis is also not continuous for reasons of performance. It can be activated via a report which you can reach via the menu. For an ad hoc analysis, you can also read the data directly from long-term planning. Further information for updating this analysis can be found in Updating for Standard Analyses: Requirement/Stock and Parameters Controlling [Page 66].

In both of the standard analyses for the stock/requirement situation, you can use four predefined dual classifications (besides the dual classification *Slow-moving items*) in the same way as in the standard analysis for parameters controlling. You can find further information about these dual classifications and how to use them in Inventory Controlling: Parameters Controlling [Page 72].

Warehouse Management

The following five standard analyses are available for warehouse management:

- Stock placements/removals
- Flows of quantities
- Material placements/removals
- Material flows
- Movement types

The key figures that you can evaluate in the standard analyses for stock placement/removal and material placement/removal, provide information from the point of view of a storage area, and distinguish between internal and external warehouse movements. Both of these standard analyses are based on data that is updated to the information structure S090 when the events goods movement (external quantities), or stock removals/placements and transfer orders occur. The only difference between these analyses is the predefined standard drilldown path.

You can use the standard analyses ‘flow of quantities’, ‘material flows’ and ‘movement types’ to view the flow of quantities between two warehouse coordinates. These standard analyses are based on data that is updated to information structure S091. Both of these analyses differ in the standard drilldown path that was determined for them.

Exception Analysis

In the exception analysis, you can display Exceptions [Ext.], which you have defined using the Early Warning System [Ext.]. The exception analysis acts as a filter, that is, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Inventory Controlling [Page 76]

Inventory Controlling: Parameters Controlling

What is Parameters Controlling?

You can use the parameters controlling standard analysis to gain a quick an overview of the cause of high stock levels Parameters controlling gives you the opportunity to optimize material parameters on the basis of the statistical data in Inventory Controlling, thus enabling you to optimize stock levels. Graphics help you in the search for those materials with potential for optimization with regard to individual material parameters such as lot size and safety stock. In this way, you can reduce your stock levels in the long term and avoid stock shortfalls.
In a future Release level, parameters controlling will be enhanced to include deviation analyses in which a modification of the parameters can be used.

The parameters controlling standard analysis uses a cause-oriented approach to reaching the goal of inventory optimization, i.e., the reduction of capital lockup. Cause-oriented means you can target specific characteristic values which show weaknesses or certain parameters. This enables a differentiated view. The possible advantages of high stock levels is also taken into account.

Integration in Inventory Controlling

Parameters controlling is implemented in the form of 5 predefined dual classifications.

In these dual classifications, the characteristic values (materials) are classified with regard to two key figures. The segments that are thus created can then be inspected more precisely with regard to the characteristic values they contain. This makes interrelationships between key figures more apparent and allows possible problem areas can be quickly detected.

The dual classifications available in parameters controlling can also be carried out in the standard analyses for stock/requirement, except for the dual classification *Slow-moving items*.

Parameters controlling is based on data that is updated to information structures S031 and S032.

Updating of the key figures **Average stock at receipt** and **Value of the average stock at receipt** in information structure S031 is not continuous and must be activated.
For an Ad hoc analysis, data can be read directly by placing an ‘X’ in the field *Dynamic data selection* in the standard analysis selection screen.
To initiate the update, start from the Inventory Controlling menu and select: *Standard analyses* → *Param. controlling* → *Set up data.* A selection screen appears. Specify the characteristics and the period for which the data is to be updated in S031 and select *Program* → *Execute*. Also read Updating for Standard Analyses: Requirement/Stock and Parameters Controlling [Page 66]

Dual Classifications

The five predefined dual classifications in parameters controlling are described below.

You can find the dual classifications in any initial or drilldown list under the menu option *Edit*.

You can find information about dual classification in Dual Classification [Ext.], and information about displaying the results in Displaying the Results [Ext.].

The five following dual classifications are available

Lot Size

The key figures *range of coverage of the average receipt* and *value of the average receip*t are compared.

Background

If a material is ordered or produced in lot sizes that are too large, this leads to an excessive average stock level which incurs unnecessary costs. The lot size must, however, be seen in relation to the consumption. A high level of consumption justifies a large lot size. For this reason, you need a key figure that takes both the lot size and consumption into account: the range of coverage of the average receipt in days. If the range of coverage of the average receipt is large, then the lot size, and thus the average stock can be reduced.

Procedure

If you wish to perform this dual classification, start from an initial or drilldown list and select: *Edit* → *Check parameters* → *Lot size.*

Materials which are assigned to the upper class limits with regard to both key figures will be easily visible, i.e. these materials have a high range of coverage of the average receipt and display a high value of the average receipt. This means that a reduction of the lot size is recommended, as the current lot size has a high value at receipt, thus causing a high stock value and a high capital lockup.

Stock at Receipt

The key figures *range of coverage of the average stock at receipt* and *value of the average stock at receip*t are compared.

Background

If a receipt of a material takes place when a large quantity of this material is still available in the warehouse, this leads to a disproportionately high average stock, which incurs great costs.

The amount of stock at receipt can only be judged in relation to the consumption. The decisive key figure here is therefore ‘range of coverage of the average stock at receipt’.

An unnecessarily high stock level is the result of premature procurement or production.

You should check for the following in order to find the cause for excessively high stock at receipt:

- Does the lead time in the material master correspond to the actual lead time?
- If safety sock has been entered manually: can the safety stock be reduced?
- When the safety stock has been calculated: Is the preset service level justified? Do forecasting and planning provide realistic requirements?

Procedure

If you want to perform this dual classification, select from an initial or drilldown list *Edit* → *Check parameters* → *Stock at receipt.*

Materials which show both a large *range of coverage of average stock at receipt* and a high *value of the average receipt,* have high warehouse stocks at receipt, in relation to consumption, and should therefore be examined more closely.

The average stock at receipt cannot be updated automatically at plant level. You can activate the updating of these key figures yourself at regular intervals. You can find the report for setting up the average stock at receipt under *Standard analyses → Param. controlling → Set up data*.

Safety Stock

The key figures *value of the average stock at receip*t and *stock factor* are compared.

Background

The key figure stock factor is calculated by dividing the average stock at receipt by safety stock and should ideally be 1.

In order to optimize stock levels, and at the same time observe the safety factor, it is advisable to reduce the average stock at receipt to correspond with the safety stock. The optimum level is reached when the average stock at receipt and the safety stock are equal. If the average stock at receipt is larger than the safety stock, this leads to an unnecessarily high stock level, if it is smaller, then there is a danger of a shortage. If you wish to optimize the average stock at receipt, you should ask the following questions:

- Does the lead time in the material master correspond to the actual lead time?
- Do forecasting and planning provide realistic requirements?

In reorder point planning, a purchase order is always triggered when the reorder point has been exceeded. The reorder point consists of the safety stock and the consumption in the delivery time. If the average stock at receipt is always higher then the safety stock, for example, then this might indicate that the delivery times have been incorrectly estimated, orders have been placed prematurely, or that the safety stock level is too high.

Procedure

If you want to perform this dual classification, start from an initial or drilldown list and select *Edit → Check parameters → Safety stock.*

You need to look out for materials that deviate greatly with regard to both key figures and that show a stock factor which is clearly higher than 1.
There is potential for improvement in the consumption forecast or in the delivery time setting.

Safety Stock Buffer

The key figures *range of coverage of the average receipt* and *range of coverage of the average stock at receipt* are compared. Both of these key figures represent the safety stock buffer.

Background

Avoiding shortfalls is one of the key aims of inventory management. You can make use of two strategies to achieve this aim:

- A high safety stock and thus a high *average stock at receipt*
- A large lot size and thus a high *range of coverage at receipt*

If you decide on a high safety stock, you should check whether the lot size and thus the average stock at receipt can be reduced.

If you decide on a large lot size, for reasons of cost, then you should consider making a reduction to the safety stock and thus the average stock.

Procedure

If you want to execute this dual classification, start from an initial or drilldown list and select: *Edit → Check parameters → Safety stock buffer.*

You should pay particular attention to characteristic values that are in the upper class limits for both key figures. The combination of a high lot size (represented by the key figure range of coverage of the average receipt) *and* a high safety stock (range of coverage of the average stock at receipt) indicates that MRP has been conducted incorrectly. If you are aiming for a high lot size, then a small safety stock is sufficient as a rule. If, on the other hand, you are aiming for a high safety stock, the smaller lot sizes are sufficient. Therefore, you are recommended to use *one* strategy only, i.e. either a high lot size *or* a high safety stock.

The average stock at receipt cannot be automatically updated at plant level. You can activate the updating of this key figure yourself at regular intervals. You can find the report for setting up the average stock at receipt under *Standard analyses → Param. controlling → Set up data*

Slow-Moving Items

The key figures *value of the last consumption* and *days without consumption* are compared.

The key figure ‘days without consumption’ is derived from the time difference between the date of the last consumption and the current date.

Background

Slow-moving items are those materials whose last consumption was a long time ago. Slow-moving items incur costs without being of any use. Identification for these materials helps to cut costs.

Procedure

If you want to perform this dual classification, select from an initial or drilldown list, *Edit → Check parameters → Slow-moving item.*

You need to take action in the case of materials which show high values for both key figures.

Characteristics and Key Figures: Inventory Controlling

See also:

How the Key Figures are Calculated: Inventory Controlling [Page 91]

Plant/Storage Location/Material/Parameters Controlling

The data basis for the standard analyses plant, storage location, material and parameters controlling is the data that are updated in the information structure S031 and S032.

Characteristics

	Standard analysis:			
	Plant	**Storage location**	**Material**	**Parameters**
Characteristics				
Plant	X	X	X	X
Business area				
MRP controller				X
Material group				X
Material			X	X
Batches				
Storage location		X		

Key Figures

- Average consignment stock
- Average issue of consignment stock
- Average issue of valuated stock
- Average range of coverage quantity of consignment stock
- Average range of coverage quantity of total stock
- Average range of coverage quantity of valuated stock
- Average range of coverage value of total stock
- Average range of coverage value of valuated stock
- Average receipt of consignment stock
- Average receipt of valuated stock
- Average total stock
- Average turnover of total stock value
- Average turnover quantity of consignment stock
- Average turnover quantity of valuated stock
- Average turnover quantity of valuated stock

Plant/Storage Location/Material/Parameters Controlling

- Average turnover value of valuated stock
- Average unplanned usage
- Average unplanned usage value
- Average usage
- Average valuated stock
- Average value of total usage
- Average value of valuated stock
- Consignment stock
- Inventory turnover quantity of consignment
- Inventory turnover quantity of consignment stock per year
- Inventory turnover quantity of total stock per year
- Inventory turnover quantity of valuated stock per year
- Inventory turnover value of total stock
- Inventory turnover value of total stock per year
- Inventory turnover value of valuated stock
- Inventory turnover value of valuated stock
- Inventory turnover value of valuated stock per year
- Last issue
- Last receipt
- Last transaction
- Last usage
- Number of cancellations
- Number of consignment stocks at zero
- Number of issues of consignment stock
- Number of issues of valuated stock
- Number of material transactions
- Number of receipts of consignment stock
- Number of receipts of valuated stock
- Number of total stock at zero
- Number of total usage

- Number of unplanned usage
  - Number of valuated stock at zero
  - Output of consignment stock

  - Output of valuated stock
  - Output value of valuated stock
  - Range of coverage quantity of consignment stock
  - Range of coverage quantity of total stock
  - Range of coverage quantity of valuated stock
  - Range of coverage value of total stock
- Range of coverage value of valuated stock
  - Receipt consignment stock
  - Receipt valuated stock
  - Receipt value of valuated stock
  - Safety stock
  - Stock at receipt
- Total stock
  - Total usage
  - Total usage value
  - Unplanned usage quantity
  - Unplanned usage value
  - Valuated stock
  - Value of stock at receipt
  - Value of the average issue of valuated stock
  - Value of the average receipt of valuated stock
  - Value of valuated stock

Batches

The data basis for the batches analysis is the data that are updated in the information structure S038.

Characteristics

- Plant
- Storage location
- Material
- Batches

Key Figures

- Consignment stock
- Input of consignment stock
- Input of valuated stock
- Input value of valuated stock
- Number of inputs of valuated stock
- Number of cancellations
- Number of inputs of consignment stock
- Number of material transactions
- Number of outputs of consignment stock
- Number of outputs of valuated stock
- Number of total usage
- Number of unplanned usage
- Output of consignment stock
- Output of valuated stock
- Output value of valuated stock
- Total usage
- Total usage value
- Unplanned usage quantity
- Unplanned usage value
- Valuated stock
- Value of valuated stock

Standard Analyses to Material Groups

Characteristics

	Standard analyses: Material groups (Info struct. S031/32)				
	MRP controller	**Business area**	**Material group**	**Division**	**Material type**
Characteristics					
Plant	X	X	X	X	X
Business area		X			
MRP controller	X				
MRP type					
Material type					X
Division			X	X	
Material group					
Material					
Batches					
Storage location					

Key Figures

- Average consignment stock
- Average issue of consignment stock
- Average issue of valuated stock
- Average range of coverage quantity of consignment stock

Standard Analyses to Material Groups

- Average range of coverage quantity of total stock
- Average range of coverage quantity of valuated stock
- Average range of coverage value of total stock
- Average range of coverage value of valuated stock
- Average receipt of consignment stock
- Average receipt of valuated stock
- Average total stock
- Average turnover of total stock value
- Average turnover quantity of consignment stock
- Average turnover quantity of valuated stock
- Average turnover quantity of valuated stock
- Average turnover value of valuated stock
- Average unplanned usage
- Average unplanned usage value
- Average usage
- Average valuated stock
- Average value of total usage
- Average value of valuated stock
- Consignment stock
- Inventory turnover quantity of consignment
- Inventory turnover quantity of consignment stock per year
- Inventory turnover quantity of total stock per year
- Inventory turnover quantity of valuated stock per year
- Inventory turnover value of total stock
- Inventory turnover value of total stock per year
- Inventory turnover value of valuated stock
- Inventory turnover value of valuated stock
- Inventory turnover value of valuated stock per year
- Last issue
- Last receipt
- Last transaction
- Last usage
- Number of cancellations

  - Number of consignment stock at zero
  - Number of issues of consignment stock
  - Number of issues of valuated stock
  - Number of material transactions
  - Number of receipts of consignment stock
  - Number of receipts of valuated stock
  - Number of total stock at zero
  - Number of total usage
- Number of unplanned usage
  - Number of valuated stock at zero
  - Output of consignment stock
  - Output of valuated stock
  - Output value of valuated stock
  - Range of coverage quantity of consignment stock
  - Range of coverage quantity of total stock
  - Range of coverage quantity of valuated stock
  - Range of coverage value of total stock
- Range of coverage value of valuated stock
  - Receipt consignment stock
  - Receipt valuated stock
  - Receipt value of valuated stock
  - Safety stock
  - Stock at receipt
- Total stock
  - Total usage
  - Total usage value
  - Unplanned usage quantity
  - Unplanned usage value
  - Valuated stock
  - Value of stock at receipt
  - Value of the average issue of valuated stock
  - Value of the average receipt of valuated stock
  - Value of valuated stock

Standard Analyses on Warehouse Management

Characteristics

	Standard analyses on Warehouse Management				
	Stock placement/ removal (S090)	**Flow of quantities (S091)**	**Material place-ment/removal (S090)**	**Material flows (S091)**	**Types of transactions (S091)**
Characteristics					
Warehouse number	X	X	X	X	X
Warehouse type	X		X		
Warehouse area	X		X		
Remove from stock type		X		X	X
Remove from stock area		X		X	X
Place into stock type		X		X	X

Place into stock area		X		X	X
Material	X	X	X	X	X
Plant	X		X		
Type of transaction	X	X	X	X	X
Storage unit type	X	X	X	X	X
Storage class	X		X		

Key Figures

Standard analysis: Stock placement/removal, Material placement/removal (Information structure S090)

- Average external stock placement quantity
- Average external stock removal quantity
- Average return transfer quantity
- Average stock placement quantity TA item
- Average stock removal quantity TA item
- Average weight external stock placement
- Average weight external stock removal
- Average weight stock placement
- Average weight stock removal
- External stock placement quantity
- External stock removal quantity
- Number of external stock placement items
- Number of external stock removal items
- Return transfer in stock removal area
- Return transfer items
- Return transfer quantity

- Stock placement items
- Stock placement quantity
- Stock removal items
- Stock removal quantity
- Weight of external stock placement
- Weight of external stock removal
- Weight of return transfers
- Weight of stock placement
- Weight of stock removal

Standard analysis: Flow of quantities, Material flows, Types of transactions (Information structure S091)

- Average moving quantity
- Average moving weight
- Average time between creation of the transport order and confirmation of the transport order
- Average time between creation of the transport requirement and creation of the transport order
- Average time between the delivery date and creation of the transport order
- Average time between transport requirement planning schedule and creation of the transport order
- Moving quantity
- Moving quantity
- Number of real transport order items
- Number of transactions
- Number of transfer order items with calculation of time difference between creation and confirmation of the transport orders
- Number of transfer order items with calculation of time difference between creation of transport requirement and creation of transport orders
- Number of transfer order items with calculation of time difference between planning schedule of transport requirement and creation of transport orders
- Number of transfer order items with calculation of time difference between delivery note commission date and creation of the transport orders
- Number of transfer order items with difference, that was posted back to the source storage bin
- Number of transport order items where return transfers occurred in the source storage bin

Standard Analyses on Warehouse Management

- Number of transport order items with delivery note reference
- Number of transport order items with reference to material reservation
- Number of transport order items with reference to reference number
- Number of transport order items with reference to transport requirement

- Number of zero stock checks
  - Quantities transport order items with differences on source storage bin
  - Real difference quantity
  - Time between delivery note commissioning date and creation of transport order
  - Total time between creation and confirmation of the transport orders
  - Total time between creation of transport requirement and creation of transport order
  - Total time between planning schedule of the transport requirement and creation of the transport order

Stock/Requirements - Current and - Long-term Planning

The standard analyses stock/requirement - current and long-term planning is based on data that are updated in the information structure S094.

Characteristics

- Plant
- MRP
- MRP type
- Material

Key Figures

- ATP quantity
- Cumulated ATP quantity
- Issue (MRP)
- Issue value (MRP)
- Non available receipts
- Number of receipts
- Planning requirement
- Receipt quantity (MRP)
- Receipt value (MRP)
- Requirements
- Safety stock
- Stock at receipt
- Stock quantity (MRP)
- Stock value (MRP)
- Total issue quantity
- Total stock
- Value of ATP quantity
- Value of cumulated ATP quantity
- Value of safety stock
- Value of stock receipt
- Value total issue
- Value total receipt
- Value total stock

How the Key Figures are Calculated: Inventory Controlling

You will find out how to calculate and update the key figures in Inventory Controlling in the following topics. The key figures are grouped together.

Please note that key figures for quantities such as additional key figures (inventory turnover, range of coverage, average values) can only be correctly shown on an aggregated level (for example, on the plant or material group level), if the same units are cumulated. Otherwise, "***" is shown as the unit in the standard of Inventory Controlling.

Stocks

In Inventory Controlling you can evaluate key figures for the stock types, valuated stock and consignment stock (vendor consignment goods).

The entire valuated stock of a material is a result of the sum of:

- Stocks that can be used in any way
- Stock in quality inspection
- Stock in transfer on the storage location and plant level
- Blocked stocks
- Customer consignment stocks
- Customer returnable packaging
- Subcontracting

Total Stock

Total stock is the sum of valuated stock and consignment stock.

Quantities

The following key figures can be evaluated:

- Quantity of valuated stock
- Quantity of the consignment stock
- Safety stock
- Stock at receipt

Values

- Value of valuated stock
- Value of stock at receipt

Zero Stock

Zero stock shows how often the stock quantity reaches zero.

With regard to zero stock, here are key figures which you can evaluate:

- Number of valuated stocks at zero
- Number of total stocks at zero
- Number of consignment stocks at zero

Average Key Figures

The average values are calculated when the standard analysis for the designated time period is carried out.

With regard to the **quantities**, the following average key figures can be evaluated:

- Average valuated stock
- Average total stock
- Average consignment stock

The average stock is calculated from the sum of beginning stock and ending stock within the time frame of the analysis divided by two.

With regard to **values,** the key figure *Average stock value of valuated stock* can be evaluated. The average stock value of the valuated stock is the sum of beginning stock and ending stock within the time frame of the analysis divided by two.

Usage

There are two different types of usage in Inventory Management: unplanned and planned usage. The planned usage is updated when material is taken from the warehouse as a result of a reservation. Unplanned usage is updated when material is taken without a reservation being on hand.
Total usage is the sum of planned and unplanned usage.

The following key figures can be evaluated with regard to usage:

Frequency

- Total number of times used
- Number of times for unplanned usage

Quantities

- Total usage quantity
- Unplanned usage quantity

Values

- Unplanned usage value
- Total usage value

Average Key Figures

The average values are calculated when the standard analysis for the designated time period is carried out.

Quantities

- Average usage
  The average usage is calculated by dividing the total usage quantity by the total number of times used.
- Average unplanned usage quantity
  The average unplanned usage quantity is calculated by dividing the unplanned usage quantity and the number of times used.

Values

- Average total usage value
  The average total usage value is calculated by dividing the total usage value and the total number of times used.
- Average unplanned usage value
  The average unplanned usage value is calculated by dividing the unplanned usage value and the number of time for unplanned usage.

Others

- Last usage
  Date when last usage took place. This key figure is updated in the standard to the current status in information structure S032.

Receipts

Frequency

- Number of receipts of valuated stock
- Number of receipts of consignment stock

Updating these key figures occurs on the posting date.

Quantities

- Quantity of goods received of valuated stock
- Quantity of goods received of consignment stock

Updating these key figures occurs on the posting date.

Values

- Receipts value of valuated stock

  The receipts value of valuated stock is calculated from the delivery quantity of valuated stock valuated with the standard price or the average moving price. When a goods receipt for a purchase order is made it results in the receipt value, which is derived from the quantity of valuated stock that was valuated with the net order price. If an invoice was posted for a purchase order *before* the goods receipt, then the invoice price is taken into account for valuation.

Average Key Figures

These key figures are calculated when the standard analysis is carried out for the period to analyze, which is shown on the screen.

Quantities

- Average receipts of valuated stock
  The average receipts of the valuated stock is derived by dividing the quantity of goods received by the number of receipts of valuated stock.
- Average receipts of consignment stock
  The average receipts of consignment stock is derived by dividing the quantity of receipts consignment stock by the number of receipts of consignment stock.

Values

- Value of average receipts of valuated stock
  The value of the average receipts of valuated stock is calculated by dividing the receipts value by the number of receipts.

Others

- Last receipt
  Date of the last receipt.

Issues

Frequency

- Number of issues of valuated stock
- Number of issues of consignment stock

Updating these key figures is done on the posting date.

Quantities

- Issue quantity of valuated stock
- Issue quantity of consignment stock

Updating these key figures is done on the posting date.

Values

- Issue value of valuated stock
  The issue value of valuated stock is derived from the current price (purchase order price, invoice price or the price from the material master) of the valuated issues quantity of valuated stock. This also applies to materials with a standard price as for materials with a moving average price. This key figure is updated on the posting date.

Average Key Figures

These key figures are calculated for the time period that is designated for the analysis and is shown on the selection screen for the standard analysis when it is carried out.

Quantities

- Average issues of valuated stock
  This key figure is derived by dividing the issues values of valuated stock by the number of issues of valuated stock.
- Average issues of consignment stock
  This key figure is derived by dividing the quantity issued of consignment stock by the number of issues of consignment stock.

Values

- Value of average issues of valuated stock
  This key figure is calculated by dividing the issues values of valuated stock by the number of issues of valuated stock.

Others

- Last goods issued
  Date of the last goods issued. In the standard, this key figure is updated in information structure S032.

Range of Coverage

The range of coverage and average range of coverage are calculated when the standard analyses are carried out.

Range of Coverage

Quantities

The range of coverage of a particular stock is calculated as follows:

stock
---
average total usage/day

The average total usage is derived by dividing the total usage quantity and the number of periods that are used in the time period to be analyzed.

The following key figures can be evaluated:

- Range of coverage of valuated stock
- Range of coverage of total stock
- Range of coverage of consignment stock

Values

The range of coverage of a particular stock value is calculated as follows:

value of the stock
---
value of the average total usage/day

The average total usage value is calculated by dividing the total usage value by the number of days within the designated time period to analyze.

The following key figures can be evaluated.

- Range of coverage value of valuated stock
- Range of coverage of total stock value

Average Range of Coverage

Quantities

The average range of coverage of a stock is calculated as follows:

average stock
---
average total usage/day

Average stock is calculated by adding together the beginning and ending stock in the period to analyze divided by 2. The average total usage is calculated by dividing the total usage and the number of days in the time period to analyze.

The following key figures can be evaluated:

Range of Coverage

- Average range of coverage of valuated stock
- Average range of coverage of total stock
- Average range of coverage of consignment stock

Values

The average range of coverage of a stock value is calculated as follows:

Value of the stock

Value of the average total stock usage/day

The value of the average total usage is calculated by dividing the cumulated total usage value by the number of days in the period to analyze.

The following key figures can be evaluated:

- Average range of coverage value of valuated stock
- Average range of coverage of total stock value

Inventory Turnovers

The inventory turnovers and average inventory turnovers are calculated when the standard analyses are carried out.

Inventory Turnovers

Quantities

The inventory turnover of a particular stock is calculated as follows:

$$\frac{\text{Total usage}}{\text{Average stock}}$$

The average stock is calculated by adding the beginning stock and the ending stock in the period to analyze and dividing by two.

The following key figures can be evaluated:

- Inventory turnover of valuated stock
- Inventory turnover of consignment stock
- Inventory turnover of total stock

Values

The inventory turnover of a stock value is calculated as follows:

$$\frac{\text{Total usage value}}{\text{Value of the average stock}}$$

The value of the average stock is calculated by adding the beginning and ending stock in the period to analyze and dividing by two.

The following key figures can be evaluated:

- Inventory turnover of valuated stock
- Inventory turnover of total stock value

Average Inventory Turnovers

Quantities

The average inventory turnover of a particular stock is calculated as follows:

$$\frac{\text{Average total usage/day}}{\text{Average stock}}$$

The average total usage is derived by dividing the total usage by the number of days in the period to analyze.

The following key figures can be evaluated:

- Average inventory turnover of valuated stock
- Average inventory turnover of total stock

Inventory Turnovers

- Average inventory turnover of consignment stock

Values

The average inventory turnover of stock value is calculated as follows:

Average total usage value/day

Value of the average stock

The value of the average stock is derived by adding the beginning stock and the ending stock and dividing by two.

The following key figures can be evaluated:

- Average inventory turnover value of valuated stock
- Average inventory turnover of total stock value

Annual Inventory Turnover

Quantities

The inventory turnover of a particular stock per year is derived by dividing the total usage by the average stock over one year. The average stock is derived by adding the beginning stock and the ending stock in the time period to analyze divided by two.

The following key figures can be evaluated:

- Inventory turnover of valuated stock per year
- Inventory turnover of consignment stock per year
- Inventory turnover of total stock per year

Values

The inventory turnover of a particular stock value per year is calculated by dividing the total usage value by the value of the average stock over one year. The value of the average stock is calculated by adding the beginning stock value and the ending stock value in the time period to analyze divided by two.

The following key figures can be evaluated:

- Inventory turnover value of valuated stock per year
- Inventory turnover of total stock value per year

Key Figures for Movements

The following key figures can be evaluated:

- Number of material movements
  Number of events (goods receipt, goods issue, stock transfer, transfer posting), that result in a stock change.
- Number of cancellations
  Number of canceled goods movements with and without reference to a document. This key figure is updated to the posting date when a cancellation occurs.
- Last movement
  Date of the last material movement.

Key Figures From MRP and Long-Term Planning

The following key figures can be valuated from MRP and long-term planning.

These key figures are updated in information structure S094 and can be valuated in the standard analyses for requirements/stock (current and long-term planning). Future inventory, that is, the available quantities, is derived from the requirements and the future goods receipts.

Stocks

Quantities

- Future stock
  Planned warehouse stock by including all of the MRP valid receipts and issues. In Inventory Controlling, future inventory is the available quantity.
- Total stock
  The total stock is calculated by adding the available quantity and the safety stock.
- Stock at receipt
  Quantity of the total stock before a receipt arrives.
- Safety stock
  Quantity, which should always be in the warehouse in order to satisfactorily cover an unexpected high requirement in the stocking up period.

ATP Quantity

With the ATP quantity (ATP = Available to Promise) the MRP can determine whether all of the receipts are covered by the master plan and which part of the warehouse stock or master plan is still available for *new* receipts.

The value of the ATP quantity is the sum of the ATP quantity and current price.

The following key figures can be evaluated for the ATP quantity:

- Cumulated ATP quantity
- Value of the ATP quantity
- Value of cumulated ATP quantity

Values

- Value of future total stock
  Difference from the vendor-consignment stock and quantity of future stock valuated with the current price.
- Value of safety stock
  Safety stock valuated with the current price.
- Value of stock at receipt
  Quantity of the valuated stock before the receipt arrives, valuated with the current price.
- Value of future stock
  In Inventory Controlling, the future stock is derived from the total of available quantity (ATP quantity) and safety stock. This future stock is valuated with the current price.

Receipts

- Total quantity of future receipts
  Sum of all planned MRP-valid receipts for all MRP views (gross planning, net planning, separate and connected storage location) and non-available receipts.
- Future MRP-valid quantity of receipts
  Sum of all planned MRP-valid quantity of receipts for gross and net planning.
- Unavailable receipts
  Unavailable receipts are only shown in the MRP, but are not MRP-valid (for example, customer orders with anonymous production by lot size).
- Value of total quantity of receipts
  Sum of all planned MRP-valid quantities of receipts for the gross and net planning and all unavailable receipts, valuated with the current price.
- Value of future MRP-valid receipts
  Sum of all planned MRP-valid receipts quantities for the gross and net planning, valuated with the current price.
- Number of future receipts

Issues/Requirements

- Total quantity of future issues
  Sum taken from the planned independent requirements, dependent requirements for all MRP views (gross planning, net planning, independent storage location, adjoining storage location) and unavailable issues.
- Future quantity of MRP-valid issues
  Sum of all planned quantities of MRP-valid receipts for the gross and net planning.
- Future value of MRP-valid issues
  Sum of all planned MRP-valid issue quantities for the gross and net planning, valuated with the current price.
- Value of total issues quantity
  Total of future quantity of issues, valuated with the current price.
- Requirements
  Necessary quantity for reservations and customer orders.
- Planned independent requirements
  Quantity, which was determined by the forecast function or the demand program and is necessary for planning purposes.

Key Figures for Warehouse Management

The following section describes the information about the key figures that you can use in the standard analysis for Warehouse Management. The key figures for Warehouse Management can be divided up into two large groups:

- Key Figures for Stock Placement/Removal [Page 107]
- Key Figures for Flow of Quantities [Page 109]

Key Figures for Stock Placement/Removal

The key figures for stock placement and removal illustrate external and internal warehouse movements from the point of view of a storage section.

Key Figures from External Warehouse Movements

The key figures from this group are updated when an external warehouse movement takes place, caused by a goods receipt or issue in Inventory Management. Updating is done on the date of the material document.

The following key figures can be evaluated for **external stock removal**:

- Weight of the external stock removal
- Quantity of external stock removal
- Number of external stock removal items

When executing the standard analyses for stock placement/removal, the following key figures are calculated:

- Average weight of the external stock removal
  Product of dividing the *Weight of the external stock removal quantities* by the *Number of external stock removal items.*
- Average quantity of external stock removal
  Product of dividing the *Quantity of external stock removal* by the *Number of external stock removal items.*

The following key figures can be evaluated for **external stock placement**:

- Number of external stock placement items
- Weight of external stock placements
- Quantity of external stock placement

When executing the standard analyses for stock placement/removal, you can use the following key figures:

- Average weight of external stock placements
  Product of dividing *Weight of external stock placement quantities* by the *Number of external stock placement items.*
- Average quantity of external stock placements
  Product of dividing the *External stock removal quantities* by the *Number of external stock removal items.*

Key Figures from the Internal Warehouse Movements

Updating these key figures occurs with internal warehouse movements via transfer orders with reference to their date of creation either when the TO was created or when it was confirmed.

The following key figures for **internal warehouse stock removal** are available:

- Weight of the stock removal
- Quantity of stock removals of transfer order items

Key Figures for Stock Placement/Removal

- Number of stock removal items

The following key figures are calculated when executing the standard analyses for stock placement/removal:

- Average weight of stock removal
  (Product of dividing *Weight of the stock removals* by *Number of stock removal items*)
- Average stock removal quantity of the transfer order items
  (Product of dividing *Stock removal quantities of the transfer order items* by *Number of stock removal items*).

The following key figures for **internal warehouse stock placement** are available:

- Number of stock placement items
- Stock placement quantity of the transfer order items
- Weight of the stock placement item

The following key figures are calculated when the standard analyses for stock placement/removal are executed:

- Average weight of stock placement
  (Product of dividing *Weight of stock placement quantities* by the *Number of stock placement items*)
- Average stock placement quantity of the transfer order items
  (Product of dividing *Stock placement quantities of the transfer order items* by the *Number of stock placement items*)

The following key figures are available for **return transfers**:

- Number of return transfer items
- Number of return transfers that occurred in the issuing point
- Return transfer quantity of the transfer order items
- Weight of the return transfer

The following key figures are calculated when the standard analyses for stock placement/removal are carried out:

- Average weight of the return transfer
  (Product of dividing *Weight of return transfers* by the *Number of return transfer items*)
- Average return transfer quantity of the transfer order items
  (Product of dividing *Return transfer quantity of the transfer order items* by the *Number of return transfer items*)

Key Figures for Flow of Quantities

In contrast to the first group, which illustrated the stock placement and removal movement, the flow of quantities between two warehouse points will now be looked at.

Updating the key figures of this group is carried out when a transfer order is either created or confirmed to the creation date of the transfer order.

Frequency

- Number of transfer order items between stock placement type and stock removal type (number of transactions)
- Number of items with a zero stock check
- Number of transfer order items where the time difference between creating and confirming the transfer orders was calculated (number OCr-OCo)
- Number of transfer order items where the time difference between creating the transfer requirement and creating the transfer orders was calculated (number RCr-OCr)
- Number of transfer order items where the time difference between the planning date of the transfer requirement and creating the transfer order was calculated (number RP-OCr)
- Number of transfer order items where the time difference between the delivery note picking date and creating the transfer orders was calculated (number DP-OCr)
- Number of transfer order items with a difference, which was posted back to the source storage bin (number of diff.)
- Number of transfer order items, for which “real” differences occurred. Real differences are those which as a result of the difference indicator were not posted to the source storage bin.
- Number of transfer order items with a reference to a delivery note
- Number of transfer order items with a reference to a reference number
- Number of transfer order items with a reference to a material reservation
- Number of transfer order items with a reference to a transfer requirement
- Number of transfer order items, where the return transfer occurred in the source storage bin.

Quantities

- Moving quantity
  Quantity of material transactions between stock removal type and stock placement type.
- Quantity difference source storage bin
  Quantities of the transfer order items with differences on the source storage bin
- Quantities with real differences
  Real differences are those that as a result of the difference indicator were not posted back to the source storage bin.

Key Figures for Flow of Quantities

- Average moving quantity
  Average quantity of the material transaction of a transfer item between stock removal type and stock placement type (is calculated when standard analysis is executed)

Weights

- Transaction weight
  Quantity of the material transactions between stock removal type and stock placement type.
- Average transaction weight of the material transaction of a transfer order item between the stock removal type and the stock placement type (calculated when standard analysis is carried out).

Time

- Total time between creating and confirming the transfer order
- Total time between planning date of the transfer requirement and creating the transfer order
- Total time between creating the transfer requirement and creating the transfer order
- Total time between the delivery note picking date and creating the transfer order

The following key figures are calculated when the standard analysis is carried out for flow of quantities. They are obtained by dividing the total time by the total items for which this time period was calculated.

- Average time which expires between creating and confirming the transfer order
- Average time between creating the transfer requirement and the transfer order
- Average time, which expires between the transfer requirement-planning date and creating the transfer order
- Average time which expires between the delivery note picking date and creating the transfer order

Inventory Controlling: Detailed Information

From an initial or drilldown list in Inventory Controlling, you can call up detailed information on a day-to-day basis for a specific characteristic value for the following key figures:

- Total stock
- Stock quantity
- Consignment stock
- Stock value

The data basis for detailed information consists of data which is updated to information structure S033 on a daily basis with reference to the specific document number.

The detailed information can be displayed graphically or in a table. In addition, you can branch into the stock overview of inventory management.

- Graphical display

  You can display a **receipts diagram**, an **issues diagram** and a diagram of the **stock level** for one characteristic value with regard to the above key figures**.** The diagram shows the receipts and issues quantities or the warehouse stock for the selected key figure on the time axis.

  The receipts/issues diagram gives you a graphical overview of the stock level and the cumulated issues and receipts data for each material.

  In order to get a quick overview of the stock situation, these three diagrams (receipts, issues and stock level) can also be shown as a graphic.

  You can also display these three diagrams (receipts, issues and stock level) in *one* graphic in order to gain a quick overview of the stock situation.

- Display as a table

  you can display a table containing the **stock movements** for one characteristic value with regard to the above key figures. The table shows the movements that took place during the period to analyze of the standard analysis. By double clicking on a particular day you can get the individual movements which took place that day along with the corresponding document number. If you double click on the document number you can branch into the document.

  If you perform a detailed analysis of the above key figures, you can also display the following key figures in the form of a table:

  – Average range of coverage
  – Closing stock
  – Inventory turnover
  – Last consumption
  – Maximum
  – Mean value
  – Minimum
  – Opening stock

- Percentage of dead stock
- Zero stock

Displaying Receipts/Issues and Stock Level Diagrams

To display a receipts, issues or a stock level diagram, proceed as follows:

1. Position the cursor on the characteristic value in the initial or drilldown list for which you want a diagram.
2. Select *Extras* → *Detailed info* → *Receipts diagram*
   or *Extras* → *Detailed info* → *Issues diagram*
   or *Extras* → *Detailed info* → `Stock level`
   and then the key figure for which the diagram is to be shown (total stock, stock quantity, consignment stock, stock value).

   If you want to display a graphic in which all three diagrams (receipts, issues, stock level) are shown together, select *Extras* → *Detailed info* → *Receipts/issues diagr.* → the key figure for which the diagram is to be shown (total stock, stock quantity, consignment stock, stock value).

Displaying Stock Movements

To display the stock movements for the key figures total stock, stock quantity, consignment stock, stock value for one characteristic value, proceed as follows:

1. In the initial or drilldown list, position the cursor on the characteristic value for which you want to display the stock movements.
2. Select *Extras* → *Detailed info* → *Stock movements* and the key figure for which the stock movements are to be displayed (total stock, stock quantity, consignment stock, stock value).
   A dialog box appears with an up-to-date table of the stock movements.
3. If you want to display the individual movements for a specific day, position the cursor on the date you require and select the function *Daily movements*.
   A dialog box appears with the individual movements and the corresponding document number for the selected day.
   If you want to branch into the document, position the cursor on the document number and select the function *Display document*. This takes you to the document display.

Displaying Key Figures

If you want to display additional key figures for the key figures total stock, stock quantity, consignment stock, stock value, proceed as follows:

1. In the initial or drilldown list, position the cursor on the characteristic value for which you want to display the additional key figures.
2. Select *Extras* → *Detailed info* → *Key figures* and the key figure for which the additional key figures should be displayed (total stock, stock quantity, consignment stock, stock value).
   A dialog box appears with the additional key figure values.

Branching into the Stock Overview

In order to branch into the stock overview of inventory management, select *Edit* → *Detailed info* → *Stock overview.*

Sales Information System

Sales Information System: Information Structures

In the standard system, the following information structures are available in the Sales Information System:

- S001 “Customer”
- S002 “Sales office”
- S003 “Sales organization”
- S004 “Material”
- S005 “Shipping point”
- S006 “Sales employee ”

These information structures form the data basis for the respective standard analysis of the same name.

In addition to the above information structures, the standard shipment also includes information structures that are used internally (S066/67 Credit Management, S060 rebate processing and S009/14 sales support).

You can find information about the information structures for **Variant Configuration** in Updating for Configurable Materials [Page 130]

Updating: Sales Information System

Data analysis in the Sales Information System is based on statistical data that has been updated from Sales and Distribution to the information structures.

The following sections describe how and when the updating of data is performed.

Events: Sales Information System

The following data from the sales and distribution processes update the information structures:

- Sales documents (for example: orders, returns, requests for quotation, quotations)
- Deliveries
- Billing documents (debit memos, credit memos, cancellations)

The data flows from the document structure to the information structures.

The following tables show, for each information structure, the update group and the key figures that are updated when the events occur in the operative application. A distinction is made between header data and item data.

S001

Event: Order

Update group	Key Figure
000001	Net value incoming orders
000001	Gross incoming orders
000001	Net incoming orders 1
000001	Net incoming orders 2
000001	Incoming orders (freight)
000001	Incoming orders PrSub 5
000001	Incoming orders PrSub 6
000001	Number of order items
000001	Quantity of incoming orders
000001	Cost of incoming orders
000001	Net value of open orders
000001	Open orders quantity
000002	Net value of returns
000002	Gross returns
000002	Net returns 1
000002	Net returns 2
000002	Returns PrSub 5
000002	Returns PrSub 6
000002	Number of returns items
000002	Returns quantity

000002	Cost of returns

Event: Delivery

Update Group	Key Figure
Item:	
000001	Open orders quantity
000001	Net value of open orders

Event: Billing document

Update Group	Key Figure
Item:	
000001	Net invoiced sales value
000001	Gross invoiced sales
000001	Net invoiced sales 1
000001	Net invoiced sales 2
000001	Invoiced sales (freight)
000001	Invoiced sales PrSub 5
000001	Invoiced sales PrSub 6
000001	Invoiced sales quantity
000001	Cost of invoiced sales
000002	Net value of credit memos
000002	Gross credit memos
000002	Net credit memos 1
000002	Net credit memos 2
000002	Credit memos (freight)
000002	Credit memos PrSub 5
000002	Credit memos PrSub 6
000002	Credit memos quantity
000002	Cost of credit memos

S002

Event: Order

Update Group	Key Figure
Header:	
000001	Number of orders
000002	Number of returns and credit memo requests
Item:	
000001	Net value of incoming orders
000001	Gross incoming orders
000001	Net incoming orders 1
000001	Net incoming orders 2
000001	Incoming orders (freight)
000001	Incoming orders PrSub 5
000001	Incoming orders PrSub 6
000001	Cost of incoming orders
000001	Number of orders
000002	Net value of returns
000002	Gross returns
000002	Net returns 1
000002	Net returns 1
000002	Returns (freight)
000002	Returns PrSub 5
000002	Returns PrSub 6
000002	Cost of returns

Event: Delivery

Update Group	Key Figure

Events: Sales Information System

Item:	
000001	Net value of open orders

Event: Billing Document

Update Group	Key Figure
000001	Net invoiced sales value
000001	Gross invoiced sales
000001	Net invoiced sales 1
000001	Net invoiced sales 2
000001	Invoiced sales (freight)
000001	Invoiced sales PrSub 5
000001	Invoiced sales PrSub 6
000001	Cost of invoiced sales
000002	Net value of credit memos
000002	Gross credit memos
000002	Net credit memos 1
000002	Net credit memos 2
000002	Credit memos (freight)
000002	Credit memos PrSub 5
000002	Credit memos PrSub 5
000002	Cost of credit memos

S003

Event: Order

Update Group	Key Figure
Position:	Net value of incoming orders
000001	Gross incoming orders
000001	Net incoming orders 1
000001	Net incoming orders 2
000001	Incoming order (freight)

000001	Incoming orders PrSub 5
000001	Incoming orders PrSub 6
000001	Number of order items
000001	Incoming orders quantity
000001	Cost of incoming orders
000002	Net value of returns
000002	Gross returns
000002	Net returns 1
000002	Net returns 2
000002	Returns (freight)
000002	Returns PrSub 5
000002	Returns PrSub 6
000002	Number of returns items
000002	Returns quantity
000002	Cost of returns

Event: Billing Document

Update Group	Key Figure
Item:	Net invoiced sales value
000001	Gross invoiced sales
000001	Net invoiced sales 1
000001	Net invoiced sales 2
000001	Invoiced sales (freight)
000001	Invoiced sales PrSub 5
000001	Invoiced sales PrSub 6
000001	Invoiced sales quantity
000001	Cost of invoiced sales
000002	Net value of credit memos
000002	Gross credit memos
000002	Net credit memos 1
000002	Net credit memos 2

000002	Credit memos (freight)
000002	Credit memos PrSub 5
000002	Credit memos PrSub 6
000002	Credit memos quantity
000002	Cost of credit memos

S004

Event: Order

Update Group	Key Figure
Item:	Net value of incoming orders
000001	Gross incoming orders
000001	Net incoming orders 1
000001	Net incoming orders 2
000001	Incoming orders (freight)
000001	Incoming orders PrSub 5
000001	Incoming orders PrSub 6
000001	Number of order items
000001	Order quantity
000001	Cost of incoming orders
000001	Value of open orders
000001	Open orders quantity
000002	Net value of returns
000002	Gross returns
000002	Net returns 1
000002	Net returns 2
000002	Returns (freight)
000002	Returns PrSub 5
000002	Returns PrSub 6
000002	Number of returns items
000002	Returns quantity
000002	Cost of returns

Event: Delivery

Update Group	Key Figure
Item:	
000001	Cost of returns
000001	Value of open orders

Event: Billing Document

Update Group	Key Figure
Position:	Net invoiced sales value
000001	Gross invoiced sales
000001	Net invoiced sales 1
000001	Net invoiced sales 2
000001	Invoiced sales (freight)
000001	Invoiced sales PrSub 5
000001	Invoiced sales PrSub 6
000001	Invoiced sales quantity
000001	Cost of invoiced sales
000002	Net value of credit memos
000002	Gross credit memos
000002	Net credit memos 1
000002	Net credit memos 2
000002	Credit memos (freight)
000002	Credit memos PrSub 5
000002	Credit memos PrSub 6
000002	Credit memos quantity
000002	Cost of credit memos

S005

Event: Delivery

Update Group	Key Figure
Header:	
000001	Net weight of deliveries
000001	Gross weight of deliveries
000001	Volume of deliveries
000002	Net weight of returns
000002	Gross weight of returns
000002	Volume of returns
Item:	
000001	Deliveries on hand
000002	Returns on hand

S006

Event: Order

Update Group	Key Figure
Item:	Net value of incoming orders
000001	Gross incoming orders
000001	Net incoming orders 1
000001	Net incoming orders 2
000001	Incoming orders (freight)
000001	Incoming orders PrSub 5
000001	Incoming orders PrSub 6
000001	Number of order items
000001	Incoming orders quantity
000001	Cost of incoming orders
000002	Net value of returns
000002	Gross returns
000002	Net returns 1

000002	Net returns 2
000002	Returns (freight)
000002	Returns PrSub 5
000002	Returns PrSub 6
000002	Number of returns items
000002	Number of returns items
000002	Cost of returns

Event: Billing Document

Update Group	Key Figure
Position:	Net invoiced sales value
000001	Gross invoiced sales
000001	Net invoiced sales 1
000001	Net invoiced sales 2
000001	Invoiced sales (freight)
000001	Invoiced sales PrSub 5
000001	Invoiced sales PrSub 6
000001	Invoiced sales quantity
000001	Cost of invoiced sales
000001	Net value of credit memos
000002	Gross credit memos
000002	Net credit memos 1
000002	Net credit memos 2
000002	Credit memos (freight)
000002	Credit memos PrSub 5
000002	Credit memos PrSub 6
000002	Credit memos quantity
000002	Cost of credit memos

Updating in the Sales Information System

Currencies

Currency amounts are always updated in the statistics currency. The statistics currency is assigned to the sales organization. Thus, SIS allows you to analyze and compare the data of several sales organizations that do not belong to the same company code and could therefore have differing local currencies.

You specify the statistics currency of a sales organization in Customizing for Sales and Distribution.

Quantities

Quantities are updated in the base unit of measure. The base unit of measure is the unit of measure in which the system manages the material stocks. It is specified in the material master record.

Weights and Volumes

Weights are updated in kg, volumes in dm^3.

Cancellations

If a sales event is reversed (that is, canceled) the statistics are automatically adjusted to reflect this change.

Returns/credit memos

Returns and credit memos are updated in their own fields.

Factors That Influence Updating: Sales Information System

In addition to specifying the updating type (synchronous/asynchronous) and the period unit in which values are cumulated, you have other options for filtering and varying the updating the data from Sales and Distribution processes.

You might require further differentiation for the following reasons:

- You only want the system to update statistical data for a selected number of customers or products.
- You want the statistical update for certain types of sales documents to be different from others.

The factors which influence the filtering and variation of the statistical updates are explained below.

These factors relate to:

- Master data (material master record, customer master record)
- Sales and distribution document types
- Item categories

Statistics Groups

The "Statistics group" indicator appears in the material master record and customer master record and allows you to influence the statistics update with reference to your master data.

The statistics group is a freely definable group key. You can group together materials or customers to make a common statistics group for which the same type of updating applies. This grouping can be used, for example, to exclude certain customers or materials from the updating process completely, or to make a distinction between important customers and materials and less important customers and materials.

You can also define statistics groups at sales and distribution document level, by defining statistics groups for your sales and distribution documents and then assigning them to the document types and item categories in sales, shipping, and billing.

You define statistics groups in Customizing for the Logistics Information System.

For more details, please refer to the Implementation Guide for the Logistics Information System.

Update Group

You need to integrate the statistics group into the update control process by allocating it to an update group. The statistics groups for the master data and the sales documents are assigned to a specific update group on the basis of the sales organization, distribution channel, and division. A particular type of updating is therefore assigned to a particular business transaction.

When a transaction is updated, the statistical data is then updated in accordance with the requirements that have been assigned to it.

Factors That Influence Updating: Sales Information System

You can make these assignments to update groups in Customizing for the Logistics Information System.

For more details, please refer to the Implementation Guide for the Logistics Information System.

Period Units in Updating: Sales Information System

In addition to the type of update, you can also define the period unit to be used in the updating process.

The period unit specifies the intervals in which the statistical data is to be cumulated. You can choose from the following periods:

- Day
- Week
- Month
- Posting period (you may also need to specify a fiscal year variant)

You can determine the period unit for the updating of every standard information structure.

The SAP default setting for the period unit in all the SIS information structures is *posting period.*

The prerequisite for changing the period unit is that no actual data has been written to the information structure.

You can set the period unit for the standard information structures in Customizing for the Logistics Information System.

Updating for Configurable Materials

In the Sales Information System, the variant configuration standard analysis allows you to evaluate configurable materials. You need to observe certain special features in the statistics update in order to ensure that the updating of data is consistent and has a high level of performance. These are described below:

Basics

The configuration data of a material is not stored in the document, e.g. in the sales order, but rather in separate configuration tables. In the document, only a reference is made to the configuration for the order item.

The following problems arise during the statistics update:

- As the configuration data is not in the document, it has to be subsequently read or enhanced. This causes a sharp increase in the system load.
- All data that is additionally read by means of a statistical data enhancement endangers the consistency of the statistics update because the system cannot always determine the original data from the enhancement if changes have been made to the document. This data does need to be determined, however, in order to correct the original statistics update when creating the document.

For this reason, there is a specific logical procedure for updating. Refer to:

Variant Configuration: Information Structures [Ext.]

Special Features of Multi-Level Configurable Materials [Page 131]

The updating of configurable material was revised for different releases. Refer to the central composite note 173756.

Special Features of Multi-Level Configurable Materials

In sales order processing, it is possible to configure materials with more than one level, i.e. one component in a configuration is, in turn, a configurable material (please refer to the WinHelp document *LO - Variant Configuration*). These multi-level configurations are not taken into account in the methods described above.

In the sales order processes of SD, it is also possible to divide multi-level configurable materials up into additional order items. This results in new order items containing configurable materials that are subordinate in the configuration, in addition to the actual order item with the configurable material.

These new order items can now be updated in exactly the same way.

Updating of these additional order items containing the dependent materials takes place in the same way as for the normal items containing the basic material. Since the quantity correlation is taken into account when during sales order explosion, the system also writes a corresponding totals record here. The statistics then behave as if the dependent material has been included in the order independently of the basic material.

This leads to problems for those key figures that convey a value. Due to the fact that the values of the dependent materials are already included in the value of the basic material, the values are only correct on the drilldown level of the materials in this case.

For further information, please refer to Variant Configuration: Information Structures [Ext.]

Standard Analyses: Sales Information System

In the standard system, the following standard analyses are available in the Sales Information System:

Customer

A customer analysis is always useful if you want to access data directly from the customer statistics. Direct access via customer is possible and is not dependent on the sales organization.

Material

This analysis should be used if you want to access specific statistical data that is directly linked to a material. You can use this analysis to answer questions such as: What quantity of a particular material was sold?

Sales Organization

This analysis make it possible for you to view data from the perspective of sales organization.

Shipping Point

The shipping point analysis is based on data that has been updated from the creation of the delivery note. You can use this analysis to answer questions such as: Who delivers in what way (freight forwarding) and to where (route)?

Sales Employee

This analysis enables direct access via the sales employee. You can use this analysis to answer questions such as: What sales volume has a specific sales employee achieved with regard to a specific customer? You can use the information from this analysis as the basis for a commission settlement.

Sales Office

This analysis enables direct access via the sales office. You can use this analysis to answer questions such as: What sales volume has a certain sales group achieved in a certain division?

Variant Configuration

This analysis enables you to evaluate data for configurable materials. In the case of the configurable material car, for instance, you can analyze the following questions: How many cars with the color red were sold? How high is the number of incoming orders for cars with a particular engine power?

In order to ensure that data is updated consistently and with a high level of performance, you need to observe certain special features during the statistics update. Please refer to Updating for Configurable Materials [Page 130].

Exception Analysis

In the exception analysis, you can display Exceptions [Ext.], which you have defined using the Early Warning System [Ext.]. The exception analysis acts as a filter; this means, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Sales Information System [Page 134]

Characteristics and Key Figures: Sales Information System

See also:

How the Key Figures are Calculated: Sales Information System [Page 146]

Customer, Material

The customer analysis is based on data that are updated in the information structure S001; the material analysis is based on data that are updated in information structure S004.

Characteristics

	Standard analysis:	
	Customer	**Material**
Characteristics		
Sales organization	X	X
Distribution channel	X	X
Division	X	
Sales district		
Sold-to party	X	
Material	X	X

Key Figures

- Billing document (freight)
- Billing document PrSub 5
- Billing document PrSub 6
- Billing document quantity
- Credit memo
- Credit memo (cost)
- Credit memo (freight)
- Credit memo net 1
- Credit memo PrSub 5
- Credit memo PrSub 6
- Credit memo quantity
- Gross incoming orders
- Gross invoiced sales
- Gross returns
- Incoming order items
- Incoming orders

Customer, Material

- Incoming orders (freight)
- Incoming orders cost
- Incoming orders PrSub 5
- Incoming orders PrSub 6
- Invoice receipt PrSub 5
- Invoice receipt PrSub 6
- Invoiced sales
- Invoiced sales (cost)
- Invoiced sales net 2
- Net credit memo
- Net incoming orders 1
- Net incoming orders 2
- Net invoiced sales 1
- Net invoiced sales 2
- Net returns 1
- Net returns 2
- Open order quantity
- Open orders
- Quantity of incoming orders
- Returns
- Returns (cost)
- Returns (freight)
- Returns items
- Returns quantity

Sales Organization

The sales organization analysis is based on data that are updated in information structure S003.

Characteristics

- Sales organization
- Distribution channel
- Division
- Sales district
- Sold-to party
- Material

Key Figures

- Billing document (freight)
- Billing document PrSub 5
- Billing document PrSub 6
- Billing document quantity
- Credit memo quantity
- Credit memos
- Credit memos (cost)
- Credit memos (freight)
- Credit memos PrSub 5
- Credit memos PrSub 6
- Gross credit memos
- Gross incoming orders
- Gross invoiced sales
- Gross returns
- Incoming order items
- Incoming order quantity
- Incoming orders
- Incoming orders (freight)
- Incoming orders cost
- Incoming orders PrSub 5
- Incoming orders PrSub 6
- Invoice receipt PrSub 5

Sales Organization

- Invoice receipt PrSub 6
- Invoiced sales
- Invoiced sales (cost)
- Net credit memos 1
- Net credit memos 2
- Net incoming orders 1
- Net incoming orders 2
- Net invoiced sales 1
- Net invoiced sales 2
- Net returns 1
- Net returns 2
- Returns
- Returns (cost)
- Returns (freight)
- Returns items
- Returns quantity

Shipping Point

The standard analysis shipping point is based on data that are updated in information structure S005.

Characteristics

- Shipping point
- Route
- Carrier
- Destination country

Key Figures

- Delivery volume
- Delivery work load
- Gross weight delivery
- Gross weight returns delivery
- Net weight delivery
- Net weight returns delivery
- Returns delivery work load
- Unit of weight
- Volume returns delivery

Sales Employee

The standard analysis sales employee is based on data that are updated in the information structure S006.

Characteristics

- Sales organization
- Distribution channel
- Division
- Sales employee
- Sold-to party
- Material

Key Figures

- Billing document (freight)
- Billing document PrSub 5
- Billing document PrSub 6
- Billing document quantity
- Credit memo net 1
- Credit memo net 2
- Credit memo quantity
- Credit memos
- Credit memos (cost)
- Credit memos (freight)
- Credit memos PrSub 5
- Credit memos PrSub 6
- Gross credit memos
- Gross incoming orders
- Gross invoiced sales
- Gross returns
- Incoming order items
- Incoming order quantity
- Incoming orders
- Incoming orders (freight)
- Incoming orders cost

- Incoming orders PrSub 5
- Incoming orders PrSub 6
- Invoice receipt PrSub 5
- Invoice receipt PrSub 6
- Invoiced sales
- Invoiced sales (cost)
- Net incoming orders 1
- Net incoming orders 2
- Net invoiced sales 1
- Net invoiced sales 2
- Net returns 1
- Net returns 2
- Returns
- Returns (cost)
- Returns (freight)
- Returns items
- Returns quantity

Sales Office

The standard analysis sales office is based on data that are updated in the information structure S002.

Characteristics

- Sales organization
- Sales group
- Sales office
- Distribution channel
- Division

Key Figures

- Billing document PrSub 5
- Billing document PrSub 6
- Credit memos
- Credit memos (cost)
- Credit memos (freight)
- Credit memos PrSub 5
- Credit memos PrSub 6
- Gross credit memos
- Gross incoming orders
- Gross invoiced sales
- Gross returns
- Incoming orders
- Incoming orders (freight)
- Incoming orders cost
- Incoming orders PrSub 5
- Incoming orders PrSub 6
- Invoice receipt PrSub 5
- Invoice receipt PrSub 6
- Invoiced sales
- Invoiced sales (cost)
- Net credit memos 1
- Net credit memos 2

- Net incoming orders 1
- Net incoming orders 2
- Net invoiced sales 1
- Net invoiced sales 2
- Net returns 1
- Net returns 2
- Open orders
- Orders
- Returns
- Returns (cost)
- Returns (freight)
- Returns quantity

Variant Configuration

The variant configuration standard analysis is based on data that is updated to the information structure S128.

Characteristics

- Class type
- Material
- Int. characteristic
- Characteristic value
- Sales organization
- Distribution channel
- Division
- Sold-to party
- Plant

Key Figures

- Delivery quantity in base unit of measure
- Incoming orders (net 1, net 2)
- Incoming orders: freight
- Incoming orders: gross
- Incoming orders: net value
- Incoming orders: pricing subtotal 5 and 6
- Net value of invoiced sales
- Open order quantity based on confirmation date of schedule line
- Open order quantity based on requested delivery date of schedule line
- Open order value based on confirmation date of schedule line
- Open order value based on requested delivery date of schedule line
- Total order quantity based on confirmation date of schedule line
- Delivery frequency in base unit of measure
- Open incoming orders frequency based on requested delivery date of schedule line
- Open incoming orders frequency based on confirmation date of schedule line
- Incoming orders frequency based on confirmation date of schedule line
- Incoming orders frequency based on requested delivery date of schedule line
- Incoming order quantity based on requested delivery date of schedule line

How the Key Figures are Calculated: Sales Information System

You will find out how to calculate and update the key figures in the Sales Information System in the following topics. In some cases, the key figures could be grouped together.

Key Figures for Incoming Orders and Returns

In customer order processing a difference is made between "normal" orders and returns.

From a business standpoint, the returns reduce the incoming order figures, which have been set up by the "normal" orders.

In the Sales Information System, the values/quantities that are caused by the returns, are separately identified. As a result, the incoming order figures are not reduced by the returns. The information for the returns are cumulated in special fields and are shown as a key figure. In this way, there is always a group of key figures for the returns in addition to the group of key figures for incoming order information. The net value and the quantity are updated for both groups of key figures from the *Order item*.

Updating

In order to separate both of the key figure groups the updating process is controlled via various update groups. Update group 000001 is assigned to the key figure group for incoming order information and update group 000002 to the group of returns key figures.

Assigning the business transactions to a certain update of statistics data takes place in two steps.
In the first step, you compile certain characteristics of the business transactions such as customer, material, document type into statistics groups. In the second step, you assign the statistics groups to the various update groups.

In the special case incoming order/returns, all of the returns order types are assigned to statistics group 02 and all other order types to statistics group 01. These different statistics groups are assigned to different update groups and thus key figure groups.

You can assign an update group to certain business transactions using the Customizing function in Sales.

Key Figures for Invoiced Sales and Credit Memos

The two types of key figure groups used in the Sales Information System are invoice values and credit memo values. These key figure groups are differentiated by the different update groups (000001/000002).
Assigning certain types of invoices to the update group 000001 and types of credit memos to update group 000002 is done automatically by the types of orders belonging to them.

Key Figures for Gross/Net1/Net2/Freight/PrSub5/PrSub6

In addition to the net values for the key figure groups on incoming orders, returns, invoiced sales and credit memos, other information is also available as key figures.

These values are determined from the pricing procedure for the pricing function. It sets the conditions that are allowed per document and defines their sequence in the document.
With the definition of the pricing procedure, up to six different subtotals can be assigned, whose contents are saved in the document, which therefore makes the statistics update also available. All six subtotals are available in the information structures as key figures and can therefore be updated from the documents.

The following four subtotals are permanently assigned in the SAP standard version of the pricing procedure:

- Subtotal 1 - Gross
- Subtotal 2 - Net 1
- Subtotal 3 - Net 2
- Subtotal 4 - Freight

The subtotals 5 and 6 can be used individually by the customer.

If you have assigned new steps to the intermediate steps in the pricing procedure, the averaging of the subtotals, which were used in the standard, can change. In this case, the original texts and the documentation of the subtotals have also lost their validity. Texts and documentation of the subtotals must as a result be adapted. The same applies if you want to use the subtotal 5 and 6, which have not been assigned in the standard.
In order to change the texts and documentation for the subtotals, maintain the following data elements in the Data Dictionary according to the new averaging:

- Incoming orders - MC_AEKZWI1..6
- Returns - MC_REKZWI1..6
- Invoiced sales - MC_UMKZWI1..6
- Credit memos - MC_GUKZWI1..6

Cost

In addition to the subtotals 1-6 of the pricing procedure that were described in the above section, there is an additional subtotal B. The subtotal B includes the cost of one unit of the material, which was determined in the material master as a standard or moving average price. Valuating the cost of one unit of a particular order/invoice quantity gives it the value.

The cost can be taken into account when calculating a profit margin (DB I), in that it is subtracted from the invoiced sales (profit margin = invoiced sales - value).

Open Sales Order Value/Open Sales Order Quantity

The open sales order value is the value for which customer orders were recorded, but no delivery was yet made. Similarly, the quantity is the order quantity for which orders have been recorded, but again no delivery was yet made.

Updating the key figures for the open sales order value and open sales order quantity is influenced by two events:

- The open sales order value, i.e., the open sales order quantity increases when customer orders are recorded.
- The open sales order value, i.e., the open sales order quantity is reduced when deliveries are recorded which refer to the customer orders.

In an ideal case, the open sales order value, i.e., the open sales order quantity is always completely reduced through deliveries.

There are always two different update rules in the update definition for the open sales order values/open sales order quantity. An update rule describes the set up of the open sales order value, i.e., the open sales order quantity. The second update rule describes the reduction of open sales order value, i.e., the open sales order quantity by the corresponding deliveries.

Deliveries on Hand

The key figure deliveries on hand describes the setup time that is involved in the recorded delivery items for processing. The deliveries on hand is a result of adding the setup processing times of a particular material.

You can maintain the setup and processing times in the material master under the sales/plant data view.

Key Figures for Variant Configuration

In the standard system, the key figures for the variant configuration analysis sometimes have a different setup to those with the same names in the other standard analyses. The reason for this is due to a different view of the data. In variant configuration, the key figures for incoming orders, for instance, are to be viewed from the perspective of delivery.

Incoming Orders

- Values (gross, net, pricing subtotals)

In variant configuration, updating of the total order value takes place on the delivery date requested by the customer from the schedule line.

Due to the fact that values are only available at item level, and not at schedule line level, formulas are used to distribute the item values across the schedule lines.

- Quantity

The total order quantity is determined in two different ways and appears as two different key figures:

  – Updating based on the delivery date requested by the customer from the schedule line

  – Updating based on the confirmation date from the schedule line

Open Orders

The quantity and value of the open orders are determined in two different ways and appear as two different key figures.
Updating takes place first on the confirmation date of the schedule line and second on the requested delivery date of the schedule line.

Delivery Quantity

Updating of the delivery quantity takes place on the date of goods issue and only when a goods issue has been posted.

Key figures that represent values and quantities are only available at material level. They are therefore expressed in terms of totals. The contents of these key figures correspond to the information that is also available in the sales and distribution documents.

Selection Frequencies

In the Copy Management method where characteristics and characteristic values from the configuration are added to the data, quantity/value correlation is not available. For this reason, it is not possible to supply quantity or value key figures with data at individual record level. The information on quantities can, however, be copied from the totals record to the individual record

and can there be interpreted as a frequency. These frequencies are expressed in separate key figures and should only be displayed as individual information.

Shop Floor Information System

Shop Floor Information System: Information Structures

In the standard system, the following information structures are available in the Shop Floor Information System:

Information Structures for Production and Process Orders

The information structures S021 through S024 are only updated when production and process orders take place.

- **S021 Production Order**

  This information structure contains the item data from the production order for material. It forms the data basis for the standard analysis of production order.

- **S022 Operation**

  The operation data from the production order for work center is updated to this information structure. This information structure provides the data basis for the standard analysis of operation.

- **S023 Material**

  The information structure S023 contains the totals records for material and forms the data basis for the standard analysis of material.

- **S024 Work Center**

  This information structure contains the totals records for work center and provides the data basis for the standard analysis of work center.

Information Structures for Run Schedule Headers

Updating of the information structures S025 and S028 is only triggered by repetitive manufacturing.

- **S025 Run Schedule Header**

  The key figures for run schedule header are updated to this information structure. This information structure also provides goods receipt statistics in repetitive manufacturing. The system updates all goods receipts to this information structure. It is also possible to update planned quantities to this info structure.

  S025 forms the data basis for the standard analysis of run schedule header.

- **S028 Reporting Point Statistics**

  The key figures for reporting point statistics from the run schedule header are updated to this information structure. This provides the data basis for the standard analysis of reporting point statistics.

Information Structures for All Orders

Updating of the information structures S026 and S027 is triggered by production and process orders and by run schedule headers.

- **S026 Material Usage**

This information structure includes key figures for material usage and provides the data basis for the standard analysis of material usage. You can use the information structure to gain an overview of the components used.

- **S027 Product Costs**

  This Information structure forms the basis for the standard analysis of product costs. In the case of production and process orders, the system updates both planned and actual costs for the product costs. The planned costs are updated at exactly the same time as the release of the order; the actual costs are updated when completion confirmations and goods issues take place.

Information Structure for Kanban

- **S029 Kanban**

  Important key figures from the Kanban system are updated to this information structure. This structure forms the data basis for the Kanban standard analysis.

Updating: Shop Floor Information System

Data analysis in the Shop Floor Information System is based on statistical data that is updated to the information structures from shop floor control.

The following sections tell you how and when data updating takes place.

Events: Shop Floor Information System

The following table shows which events from the operative application trigger the update of which information structures.

Events and their Update

Event	Update
Production order (Create, Change, Release)	S022 (Operation), S021 (Production order)
Confirm operation: - Partial confirmation - Final confirmation	 S022 (Operation), S024 (Work center), S027 (Product costs) S022 (Operation), S024 (Work center), S027 (Product costs)
Confirm production order: - Partial confirmation (for first confirmed operation) - Final confirmation (for last operation final confirmation)	 S021 (Production order) S021 (Production order), S021 (Material), S026 (Material usage), S027 (Product costs)
Goods receipt posting for order: - Partial delivery - Final delivery	 S021 (Production order), S027 (Product costs) S021 (Production order) S023 (Material), S026 (Material usage), S027 (Product costs)
Goods issue	S026 (Material usage), S027 (Product costs)
Run schedule header	S025 (Run schedule header), S026 (Material usage), S027 (Product costs)
Recording point notification	S028 (Recording point statistics)
Kanban	S029 (Kanban)

Views: Shop Floor Information System

The system needs to take two views of the production order during the calculation of the key figures. This means that a key figure can have two different values, depending on the view.

A distinction is made between the following two views:

- Order view or material-specific view

  The whole order is used to calculate the key figures. The data is taken from header and item level of the production order (see the diagram below).

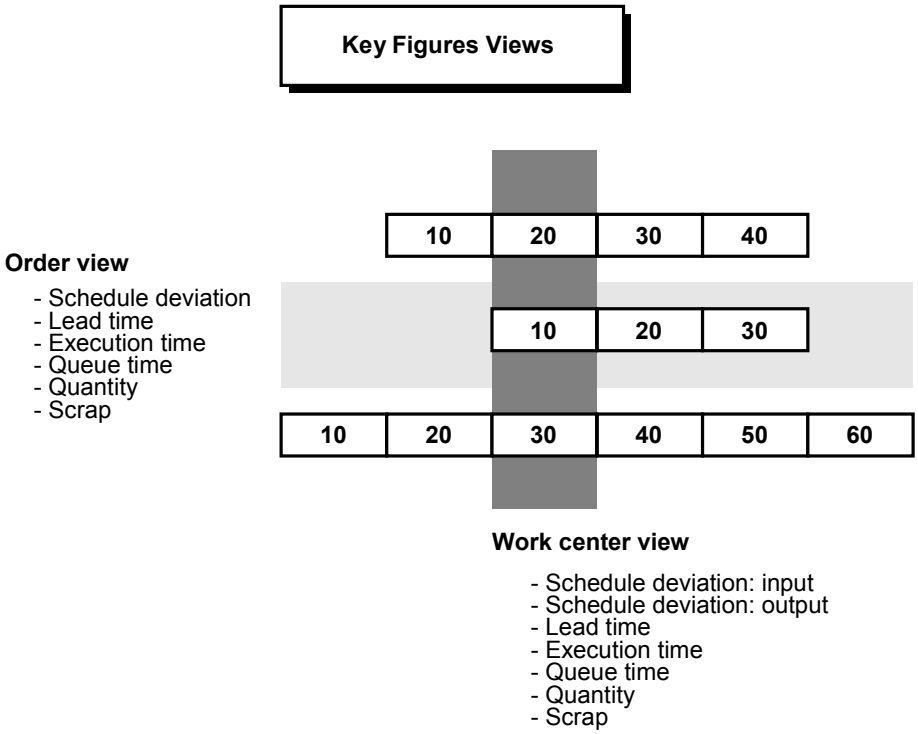
  The key figures are calculated from this view in **Order analysis** and **Material analysis**.

- Work center view

  The key figures are calculated from the operation data (see the figure below).

  The key figures are calculated from this view in **Operation analysis** and **Work center analysis**.

The following illustration shows the views on the production order in the Shop Floor Information.



Conditions: Shop Floor Information System

Depending on the order type, you can determine whether data should be updated. You can maintain this setting in Customizing. (under: *Updating control → Settings: Production → Activate update and release version for each order).*

Updating for Repetitive Manufacturing Analysis: Shop Floor Information System

In order to ensure that planning data is also evaluated in repetitive manufacturing, you must initiate the update of the planned quantity before you carry out the standard analysis. This function should be scheduled to run at regular intervals as a background job. The time interval in which the data is to be updated can be determined in Customizing for repetitive manufacturing under *Global settings.*

You can updating of the planned quantities from the Shop Floor Information System menu. Proceed as follows:

1. From the menu of the Shop Floor Information System, select *Repetitive manufacturing* → *Run schedule header* → `Update planned quantities`

   The selection screen appears.

2. Specify a plant and the production lines, and if necessary, also the planning IDs, to which planning quantities are to be updated, and press `EXECUTE`.

   The system will update the planning quantities in the background.

Updating Quantities and Currencies: Shop Floor Information System

Quantities

Quantities are posted in base unit of measure.

The base unit of measure is the unit of measure in which the system manages the material stocks. It is determined in the material master.

Currency Amounts

Currency amounts are always updated in the local currency. The local currency is assigned to the company code. You can set this allocation in Customizing under *Organization*.

Period Units in Updating: Shop Floor Information System

In addition to the type of update, you can also define the period unit to be used in the updating process.

The period unit specifies the intervals at which the statistical data is cumulated. You can choose from the following:

- Day
- Week
- Month
- Posting period (you may also need to specify a fiscal year variant)

You can define a period unit for every standard information structure. Only in information structures S021 and S022 is the period unchangeable and fixed to ‘day’.

The standard SAP time period setting in the Shop Floor Information System is ‘day’ for information structures S021, S022, S025, S026, S027, S028 and S029, and ‘month’ for information structures S023 and S024.

The prerequisite for changing the period unit is that no actual data has been updated in the information structure.

You make settings for the period unit for the standard information structures in Customizing for the Logistics Information System.

Standard Analyses: Shop Floor Information System

In the standard system, the following standard analyses are available in the Shop Floor Information System:

Work Center

You can use the work center standard analysis to evaluate data from the area of work centers. The information structure S024 provides the data basis.

Operation

In the standard analysis ‘operation’ you can evaluate the data from the operation. The data basis is provided by data updated to information structure S022.

Material

The material standard analysis allows you to evaluate the data for material. The data basis is formed by data that is updated to information structure S023.

Production Order

In this analysis you can evaluate the data for production orders. The data basis is the data updated to information structure S021.

Material Usage

In the material usage analysis, you can analyze data from the **production orders, run schedule headers** and **process orders**. You can use the material usage analysis to answer the following questions: What components were used for a material in total? Which individual components were affected by the material usage? What was the original requirements quantity and what was actually taken? The basis of this analysis is provided by data that is updated to information structure S026.

Run Schedule Header

The run schedule header analysis enables you to evaluate the key figures from the run schedule header. The data basis for this analysis is provided by the information structure S025.

Product Costs

Data from production orders, run schedule headers and process orders can be evaluated in the product cost analysis. Both planned and actual costs for production and process orders are updated to product costs. The planned costs are updated at the exact time of release, the actual costs are updated at the point of completion confirmations and goods issues. The data basis of this analysis is provided by data that is updated to information structure S027.

Reporting Point Statistics

The standard analysis ‘reporting point statistics’ is used to evaluate the data from repetitive planning. Here, the number of units for so-called reporting points (comparable with events in the production order) are determined and updated. The data basis of the analysis is provided by the confirmed quantities and the confirmed scrap for the reporting point, which are updated in information structure S028.

Kanban

The Kanban standard analysis is based on the data from the Kanban component, that is updated to the information structure S029.

Kanban is a procedure for production control whereby the material flow control is event-driven. The advantages of Kanban is that processes are simple and production-specific. The goal of Kanban is that the production itself controls the production process and that accounting expenses are kept to a minimum. Self regulation demands a reduction in lead time and the reduction of stocks.

Further information on Kanban can be found in the documentation on how to use Kanban.

Exception Analysis

In the exception analysis, you can display Exceptions [Ext.], which you have defined using the Early Warning System [Ext.]. The exception analysis acts as a filter, that is, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Shop Floor Information System [Page 170]

Shop Floor Information System: Gantt Diagram

You can also use a Gantt diagram to evaluate the results of your **operation analysis** and **production order analysis**.

The Gantt diagram shows you the production orders for a selected characteristic value and graphically compares the target and the actual lead times on the time axis.

In the work center view, you can illustrate the production orders according to target and actual dates, earliest and latest dates and schedule deviations. The Gantt diagram can only be used in analyses of the information structures S021 and S022.

To call up a Gantt diagram, proceed as follows:

1. Position the cursor on one of the characteristic values in the list.
2. Select *Edit* → Gantt diagram.

   In the case of production orders that have not yet been confirmed, the bars for the target and the actual lead times are identical and are displayed in the same color.

Shop Floor Information System: Input/Output Diagram

In addition to the Gantt diagram, you also can use an input/output diagram in the **operation analysis** and a **production order analysis**. The input/output diagram is only possible for the very detailed information structures S021 and S022.

You can use the input/output diagram to gain a quick overview of the production process of a particular work center.

In the input/output diagram, the actual input curve and the actual output curve are compared with the target input curve and the target output curve. The input and output curves consist of a cumulation of the capacity requirements of incoming and outgoing production orders and are shown on the time axis.

The input/output diagram gives you a clear view of the supply and delivery process of a work center for production. If the difference between input and output is very large, this points to ineffective control of the work center. The closer the logistical frequencies are to each other, the more effective the order flow.

For a more detailed analysis, you can drill down on the input/output diagram according to capacity.

You can also branch from the input/output diagram to the Gantt diagram. The Gantt diagram shows the production orders for the selected work center and compares the target and actual flow times on the time axis.

You can only call up the input/output diagram if you have already selected a work center, i.e. this graphic can only be called up for one characteristic value of the characteristic ‘work center’.

Procedure

If you want to call up an input/output diagram, proceed as follows:

1. In an initial or drilldown list, position the cursor on the characteristic value for which you want to display an input/output diagram.
2. Select *Edit* → Input/output diagram.

   The input/output diagram appears for the work center on which the selected characteristic value is based.

   From the input/output diagram you can:

   – Drill down according to the capacity

     To do this, select from the menu of the graphic *View* → *Capacity*.
     In order to scroll between the individual capacity types, click on the arrow button in the toolbar of the graphic.

   – Branch into the Gantt diagram

     The Gantt diagram appears when you double-click on one of the curves that is shown in the input/output diagram.

Characteristics and Key Figures: Shop Floor Information System

See also:

How the Key Figures are Calculated: Shop Floor Information System [Page 185]

Work Center

The data basis for the work center analysis is the data that are updated in the information structure S024.

Characteristics

- Plant
- Planning group
- Work center

Key Figures

- Actual execution time
- Actual execution time
- Actual lead time
- Actual lead time
- Actual queue time
- Actual queue time
- Capacity quotation
- Capacity quotation
- Capacity requirement
- Capacity requirement
- Capacity utilization
- Capacity utilization
- Event quantity
- Lead time deviation
- Lead time deviation
- Lot size delivered
- Lot size delivered
- Number of production orders
- Number of production orders
- Queue time deviation
- Scrap deviation
- Scrap deviation

Operation

The data basis for the operation analysis is the data that is updated to the information structure S022.

Characteristics

- Plant
- Work center
- Material
- Order
- Operation

Key Figures

- Actual execution time
- Actual lead time
- Actual queue time
- Capacity quotation
- Capacity requirement
- Capacity utilization
- Confirmed quantity
- Confirmed scrap
- Event quantity
- Lead time deviation
- Lot size delivered
- Move time
- Processing time
- Quantity deviation
- Queue time
- Queue time deviation
- Relative scheduling deviation
- Schedule deviation issue
- Schedule deviation receipt
- Schedule deviation receipt/issue
- Scrap deviation

Operation

- Scrap quantity
- Setup time
- Target execution time
- Target lead time
- Target processing time
- Target queue time
- Target setup time
- Target tear down
- Tear down
- Wait time

Material

The data basis for the material analysis is the data that are updated in the information structure S023.

Characteristics

- Plant
- MRP controller
- Material

Key Figures

- Actual execution time
- Actual lead time
- Actual queue time
- Actual scrap quantity
- Fixed scrap quantity
- Item quantity
- Item scrap
- Number of production orders
- Planned/actual scrap deviation
- Planned/actual lead time deviation
- Planned/actual quantity deviation
- Planned/actual release date deviation
- Planned/actual start date deviation
- Planned/target delivery date deviation
- Planned/target quantity deviation
- Planned/target release date deviation
- Planned/target scrap deviation
- Planned/target start date deviation
- Planned lead time
- Planned order quantity
- Processing time
- Quantity of goods received
- Queue time deviation

Material

- Target/actual delivery date deviation
- Target/actual lead time deviation
- Target/actual quantity deviation
- Target/actual release date deviation
- Target/actual scrap deviation
- Target/actual start date deviation
- Target execution time
- Target queue time

Production Order

The data basis for the production order standard analysis is the data that are updated in the information structure S021.

Characteristics

- Plant
- Material
- Order

Key Figures

- Actual execution time
- Actual lead time
- Actual queue time
- Actual scrap quantity
- Capacity requirement
- Fixed scrap quantity
- Item scrap
- Planned lead time
- Planned order quantity
- Planned/actual delivery date deviation
- Planned/actual lead time deviation
- Planned/actual quantity deviation
- Planned/actual release date deviation
- Planned/actual scrap deviation
- Planned/actual start date deviation
- Planned/target delivery date deviation
- Planned/target quantity deviation
- Planned/target release date deviation
- Planned/target scrap deviation
- Planned/target start date deviation
- Quantity item
- Quantity of goods received
- Queue time deviation

Production Order

- Target execution time
- Target lead time
- Target queue time
- Target/actual delivery date deviation
- Target/actual lead time deviation
- Target/actual quantity deviation
- Target/actual scrap deviation
- Target/actual start date deviation

Material Usage

The data basis for the material usage standard analysis is the data that are updated in the information structure S026.

Characteristics

- Plant
- Material number
- Components
- Order

Key Figures

- Removed quantity
- Removed value
- Requirements quantity

Product Costs

The data basis for the standard analysis for product costs is the data that are updated in the information structure.

Characteristics

- Plant
- Material number
- Components
- Service type
- Order

Key Figures

- Fixed planned value in controlling area currency
- Fixed value in controlling area currency
- Total planned value in controlling area currency
- Total value controlling area currency
- Variable planned value in controlling area currency
- Variable value controlling area currency

Run Schedule Header

The data basis for the standard analysis run schedule header is the data that are updated in the information structure S025.

Characteristics

- Plant
- MRP controller
- Material
- Production version
- Production line
- Run schedule header

Key Figures

- Actual scrap quantity
- Planned quantity
- Planned scrap quantity
- Quantity of goods received

Reporting Point Statistics

The data basis for the standard analysis reporting point statistics is the data that are updated in information structure S028.

Characteristics

- Plant
- MRP controller group
- Material number
- Production version
- Production line
- Run schedule header
- Reporting point

Key Figures

- Confirmed quantity
- Confirmed scrap
- Event quantity
- Scrap quantity

Kanban

The data basis for the standard analysis Kanban is the data that are updated in the information structure S029.

Characteristics

- Plant
- Supply area
- Storage location
- Material
- Responsible

Key Figures

- Average error time
- Average refilling time
- Average replenishment time
- Average transport time
- Average triggering time
- Average wait time
- Number of containers
- Number of errors
- Number of external procurement operations
- Number of in-house production operations
- Number of refilling operations
- Number of replenishment operations
- Number of replenishment operations on the same day
- Number of stock transfer operations
- Number of transports
- Number of triggering operations
- Number of wait operations
- Quantity of each container
- Total actual quantity
- Total error time
- Total refilling times

Kanban

- Total replenishment time
- Total target quantity
- Total transport time
- Total wait time

How the Key Figures are Calculated: Shop Floor Information System

The following section discusses the key figures in the Shop Floor Information System.

Calculating Material-Based Key Figures (S021, S023)

The following topic describes how the Shop Floor Information System calculates the key figures used in material-based analyses (production order analysis, material analysis). The key figures are taken from the information structures S021 (Production order) and S023 (Material).

The majority of the key figures in the Shop Floor Information System are average values.

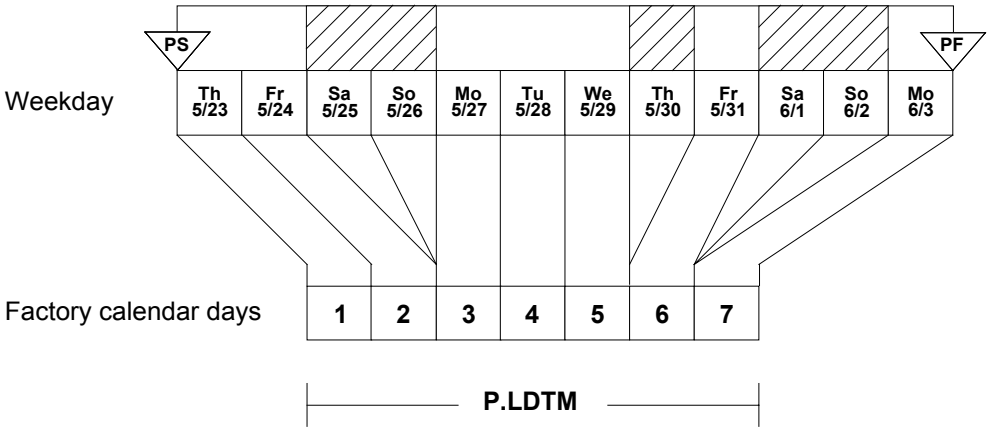
In a material-based analysis, the objects are classified in a period according to delivery date. If a goods receipt has not been posted or if a final completion confirmation has been entered, the delivery date is automatically set to '00000000'. It is therefore possible to include these types of orders in the production order analysis.

Lead Time

The lead time for an order begins with the start date and finishes with the delivery date.

The planned lead time is the difference in factory calendar days between the start and finish dates. The start and delivery dates are included in this time.

The following diagram demonstrates how weekdays are converted into factory calendar days. The planned lead time is calculated as 7 factory calendar days.



A production order analysis (S021) includes orders that do not have a goods receipt posting, but have the status "Completely confirmed". The final confirmation date of the last operation is used as the delivery date.

Lead Time Deviation

Lead time deviation is the average value of the differences between, for example, planned lead time and actual lead time.

Planned/actual lead time deviation = Planned lead time - Actual lead time

A negative lead time deviation indicates that the actual process took longer than expected, while a positive lead time deviation indicates that the actual lead time was shorter than the planned lead time.

Execution Time

The execution time of an operation is calculated by adding together the setup time, processing time, and teardown time and then dividing the total by the operating time of the work center. The execution time of the production order is calculated by totaling the execution times of all operations.

Queue Time

The queue time is the difference between the lead time and the execution time. Any other times in the lead time that are not classed as execution time are called queue time.

Queue Time Deviation

The queue time deviation is the difference between the target queue time and the actual queue time.

Queue time deviation = Target queue time - Actual queue time

Schedule Deviation

The schedule deviation analysis compares the dates from basic date planning, lead time scheduling, and goods receipt posting. A comparison is made for release dates, start dates, and delivery dates.

For example, the planned/actual start date deviation is the average value of the differences between the start dates in the planned orders and the actual start dates.

Quantities and Scrap

In a production order, a distinction is made between quantities and scrap from the planned order, the production order, and the goods receipt posting. A quantity deviation analysis compares these quantities. The key figures for quantity deviations, quantities, and scrap are all average values.

In the case of production orders that are created without a planned order, the planned quantity is the same as the quantity in the production order.

Capacity Requirements

The key figure "Capacity requirements" is calculated from the total capacity requirements of all operations for setup, processing, and teardown for capacities that are used as the basis for scheduling.

Calculating Work-Center-Based Key Figures (S022, S024)

The following will describe how to calculate the key figures for the work center- based analyses (operation analysis, work center analysis) in the Shop Floor Information System. These key figures originate from the information structures (S022 (operation) and S024 (work center). The key figures are for the most part arithmetic average values.

With the work center-based analyses, arranging into a period is done according to the confirmation schedule.

Lead Time

The lead time of an operation begins with the input date at the work center and ends with the output date, that is, the completion confirmation date. The input date is determined from the completion confirmation date for the preceding work center minus the minimum wait time for the preceding operation.

Lead Time Deviation

The lead time deviation is the average value of the differences between the target lead time and the actual lead time.

Lead time deviation = Target lead time - Actual lead time deviation

A negative lead time deviation indicates that the actual process took longer than expected, whereas a positive lead time indicates that the actual lead time was shorter than the target lead time.

Execution Time

The execution time is calculated by adding together the setup time, processing time, and teardown time. The result is then divided by the operating time of the work center. This gives the execution time in days.

Queue Time

Queue time is the difference between the lead time and the execution time. Any other times in the lead time that are not classed as execution time are called queue time.

Queue Time Deviation

Queue time deviation is the difference between the target queue time and the actual queue time.

Queue time deviation = Target queue time - Actual queue time

In an operation analysis, you can evaluate other scheduled times:

- Queue time
- Setup time
- Processing time
- Teardown time
- Move time

Schedule Deviation

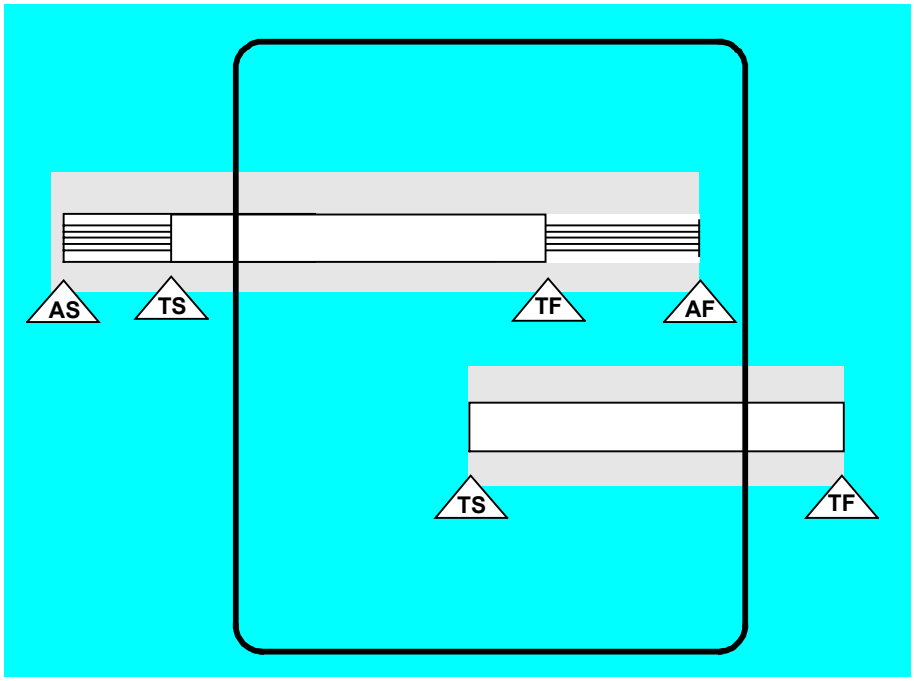
An analysis of the schedule date deviation for output compares the actual finish date and the scheduled finish date.

An analysis of the schedule date deviation for input compares the actual finish date and scheduled finish date of the preceding work center. Input date deviation is calculated from the schedule deviations for orders received at the work center in the period to analyze.

You must also consider whether an order was received in the period under analysis or beforehand. The key figure “input/output schedule deviation” represents the input schedule deviation of the orders during the period under analysis.

The difference between input/output schedule deviation and input schedule deviation in a period is shown in the following illustration. The upper production order in the illustration is in the period under consideration with the confirmation schedule, but the input schedule is not. If you want to see whether a work center has contributed to the acceleration or slow down of the processing of an order by comparing schedule deviations in output and input, then the exact schedule deviation in output/input must be used even if the input schedule is in the distant past.

Conversely, the schedule deviation in input in the period would then be calculated using the second production order in the illustration. This would occur if no confirmation was yet made, as the question here is about the input schedule. The input schedule is, however, in the noted period.



AS = Actual Start, TS = Target Start, AF = Actual Finish, TF = Target Finish

Relative Schedule Deviation

The key figure "Relative schedule deviation" determines whether a work center has processed an order quickly or slowly.

Relative schedule deviation = Deviation from scheduled input date - Schedule deviation "input/output"

A negative result indicates that the work center was slow in processing the order.

The schedule deviation from the scheduled input date of an event amounts to 2 days, i.e. the target input date (scheduled finish date) was exceeded by 2 days. The schedule deviation “input/output” amounts to - 1 day, i.e. the target input date of the previous work center was exceeded by one day.
Relative schedule deviation = - 2 - (-1) = - 1

Quantities and Scrap

The Shop Floor Information System also allows you to calculate average values and average deviations for quantities and scrap.

Capacity Requirements

The key figure "Capacity requirements" is calculated by adding together the capacity requirements for setup, processing, and teardown.

Capacity utilization in % = Capacity requirements / Available capacity x 100

The schedule deviation for output of a transaction is -2 days, that is, the target output (schedule finish) was exceeded by 2 days. The schedule deviation input for output is -1 day, that is, the target output of the previous work center was exceeded by one day.
relative schedule deviation = -2 - (-1) = -1

Key Figures for Repetitive Manufacturing (S025/S028)

Key Figures for Run Schedule Header

The following key figures are updated for the run schedule header (information structure S025):

- Quantity of goods received
  The quantity of goods received is updated when creating the actual data within the scope of the repetitive manufacturing.
- Actual scrap quantity order item
- Planned quantity, planned scrap quantity
  Both of these key figures are updated from the run schedule quantity of repetitive manufacturing.

Key Figures for Reporting Point Statistics

The following key figures are updated for the reporting point statistics of the run schedule header (S028):

- Transaction quantity
- Scrap quantity transaction
- Confirmed lot size
- Confirmed scrap

Key Figures for Material Usage (S026)

The key figures for S026 (Material usage) can be created for production orders and for repetitive manufacturing.

When creating/changing a production order material reservations are produced for the material components from the bill of materials, that is, a requirements quantity is determined.

When creating actual data in repetitive manufacturing, the bill of material parts are updated as a requirement quantity before making a change.

With a goods issue for a production order or creating actual data in repetitive manufacturing, the material usage is updated for the components.

Key Figures for Product Costs (S027)

When a production order is released, the planning costs for the activity types and material parts (fixed, total, variable costs) are determined. The actual costs are updated with a goods issue and the confirmation.

In repetitive manufacturing, the standard costs for the activity types and material components (fixed, total, variable costs) are determined by creating a standard cost estimate. When the actual data are created the standard costs are updated.

Key Figures for Kanban (S029)

The following section covers information about how to calculated the key figures for KANBAN. The key figures for KANBAN are updated to information structure S029, that is they are calculated from the key figures that are updated to the information structure S029.

Information on how to use KANBAN is in the document *PP -KANBAN*.

The key figures for using KANBAN are compiled into the following groups:

- Number of Status Messages in KANBAN [Page 195]
- Time Sequence of the Process [Page 198]
- Master Data [Page 200]
- Quantity Control [Page 201]

Number of Status Messages in KANBAN

The illustration to Sequence of the Status Changes in KANBAN [Page 197] provides you with an overview of the status changes and will help you in understanding the key figures for the status messages.

Further information about the meaning of the status in KANBAN is in the document *PP - KANBAN* in the section “Status changes”.

The following key figures can be evaluated for the number of status messages in the run:

- Number of refilling operations
  Number of status changes whereby the status of a Kanban container was changed from EMPTY to IN TRANSIT.
- Number of triggering operations
  Number of replenishment operations that were triggered after the status for a container was changed from WAIT to EMPTY.

  This key figure is only needed if the container status is EMPTY and the trigger to replenish by using the indicator *Independent source,* are not linked to one another in the control cycle.
- Number of transports
  Number of status changes whereby the status of a Kanban container was changed from IN TRANSIT to FULL.
- Number of replenishment operations
  Number of completed replenishment operations for Kanban containers, that is, the number of status changes whereby the status of a Kanban container changes from EMPTY to FULL, regardless of whether or not a different status was set in the meantime.
- Number of errors
  Number of errors that occur while processing the Kanban container.
  Example for an error: a particular material was saved for a vendor, who was blocked in the meantime. Because of this, an order cannot be created and the container is given the ERROR status.
- Number of wait operations
  Number of status changes, whereby the status of a Kanban container was changed from FULL or IN USE to a different status.

The following key figures are only useful when aggregating over more than one control cycle:

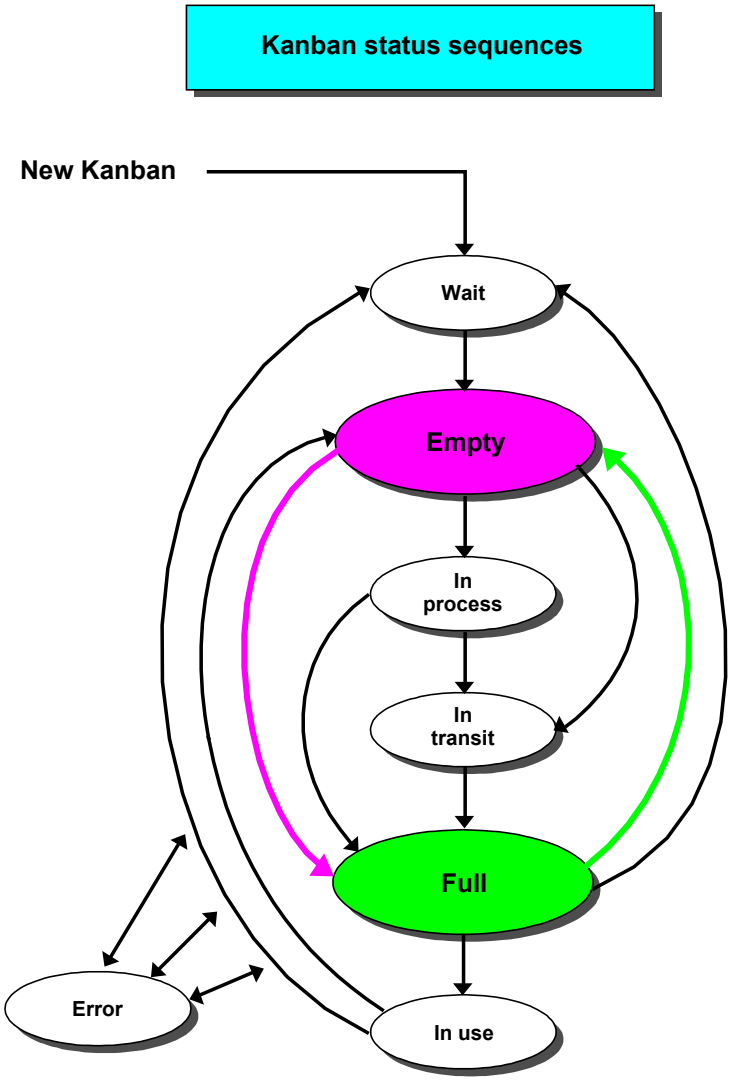
- Number of external procurement operations
  Number of external procurement operations that have been triggered.
- Number of in-house production operations
  Number of in-house production operations that have been triggered.

Number of Status Messages in KANBAN

- Number of stock transfer operations
  Number of stock transfer operations that have been triggered.

Sequence of the Status Changes in KANBAN

This illustration gives you an overview of the sequence of the status changes in KANBAN.



Time Sequence of the Process

The key figures for the time sequence of the process are determined per control cycle for a Kanban container and can therefore be aggregated upwards. The average value can be determined for each key figure.

The illustration Sequence of the Status Changes in KANBAN [Page 197] gives you an overview of the status changes.

Refill time

The refill time is the time that the Kanban container spends in between the EMPTY and IN TRANSIT status, that is, the time needed to refill the container.

The average refill time is calculated by dividing the *Total refill times* by the *Number of refill operations.*

Trigger time

The trigger time is the time between the WAIT and EMPTY status, that is, the time in which the replenishment is triggered. The trigger time can only be calculated if the WAIT status is used.

The average trigger time is calculated by dividing the *Total trigger times* by the *Number of trigger times.*

In transit time

The in transit time is the time that the Kanban container spends in between the IN TRANSIT and FULL status, that is, the time needed for transit.

The in transit time can only be calculated if the IN TRANSIT status is used.

The average in transit time is calculated by dividing the *Total in transit times* by the *Number of in transits.*

(Total) Replenishment lead time

The replenishment lead time is the time spent between the EMPTY and FULL status, that is, the time needed to replenish the container. The replenishment lead time is calculated by adding the total refill and in transit time.

The average wait time is calculated by dividing the *Total replenishment lead times* by the *Number of replenishment lead operations.*

Error time

The error time is the time that the Kanban container spends in the error status.

The average error time is calculated from the *Total error times* and the *Number of errors.*

Wait time

The wait time is the time that the Kanban container spends with the user, that is the total time the container spends in FULL, then IN USE and finally WAIT or EMPTY.

The average wait time is calculated by dividing the *Total wait time* by the *Number of wait operations.*

Number of replenishment operations on the same day

The key figure *No. repl. ops. same day* is also used for evaluating the time, because in KANBAN, the time is measured on a daily basis, that is, a status change on the same day is not taken into account.

The key figure *No. repl. ops. same day* supplies the number of replenishment operations that take place on the same day, on which the container status was set on EMPTY.

Master Data

The following key figures for master data can be evaluated:

- Number of containers
  Number of containers that are determined for the control cycle.
- Quantity per container
  Material quantity (target quantity) that has been determined for a container.

Quantity Control

The following key figures can be evaluated for quantity control:

- Total target quantity
  Total material quantities that would be created in KANBAN if with every goods receipt the target quantity had been posted for a container in the control cycle.
- Total actual quantity
  Total quantity of materials that were actually acquired in KANBAN, that is, for which a goods receipt was recorded.

Plant Maintenance Information System

Plant Maintenance Information System: Information Structures

In the standard system, the following information structures are available in the Plant Maintenance Information System:

- S061 Location and Planning
- S062 Object Class and Manufacturer
- S063 Damage Analysis
- S065 Object Statistics
- S070 Breakdown Statistics
- S115 Cost Evaluation
- S116 Sales Notification Analysis

They each provide the data basis for the respective standard analysis of the same name.

Updating: Plant Maintenance Information System

Data analysis in the Plant Maintenance Information System is based on statistical data that has been updated from Plant Maintenance into the information structures.

You can read about how and when data updating is carried out in the following sections.

Events: Plant Maintenance Information System

The following events are defined in the Plant Maintenance Information System:

- Create/change notification
- Create/change equipment
- Create/change functional location
- Create/change/confirm PM orders

The following table displays which events in the operative application update which information structures.

Event	Update
Notification: Create, change	S061, S062, S063, S065, S070, S116
Equipment: Create, change	S065
Functional location: Create, change	S065
PM orders: Create, change, confirm	S061, S062, S065, S115

The following table displays the date on which the individual key figures are updated.

Key Figure	Date
Notification information:	
Number of notifications created	Notification date
Number of notifications completed	Date of completion
Number of processing days	Date of completion
Number of breakdowns recorded	Start of malfunction
Downtime	Start of malfunction
Mean Time To Repair (downtime reported/ number of breakdowns recorded)	Start of malfunction
Error statistics:	
Number of damages	Reference date
Number of causes of damage	Reference date
Number of activities	Reference date
Error information:	
Number of damage codes	Reference date
Number of causes of damage	Reference date
Number of activities	Reference date

Events: Plant Maintenance Information System

Object information:	
Number of funct.locations w/o installation	No period unit
Number of funct.locations w. coll.installation	No period unit
Number of funct.locations w. ind.installation	No period unit
Number of pieces of equipment	No period unit
Equipment acquisition costs	No period unit
Breakdown statistics:	
Number of actual breakdowns	Start of malfunction
Actual downtime	Start of malfunction
Mean Time To Repair (actual downtime/number of actual breakdowns)	Start of malfunction
Time between Repair	Start of malfunction
Mean Time between Repair	Start of malfunction
Order management:	
Number of PM orders	Entry date (When creating with histor.order: Reference date)
Number of completed PM orders	Reference date
Number of PM orders to be executed immediately	Reference date
Number of planned PM orders	Reference date
Number of unplanned PM orders	Reference date
Order costs:	
Total planned costs for PM measures	Start date of the posting period in which the costs were created
Total of the actual costs for PM measures	with the historic orders with a time reference to the start date of the posting period, which was determined at the reference date of the order
Total of actual revenues for PM measures	
Total of actual revenues for external services of PM measures	
Total of actual costs for company's own material for PM measures	
Total of actual costs for external material for PM measures	
Total of actual costs for services for PM measures	

Update Group: Plant Maintenance Information System

The update group determines the rules for updating the statistical data.

The update group 000026 is used for the Plant Maintenance Information System.

An update group can be defined for each type of notification in Customizing. If no update group has been defined for a type of notification, the notification will not be updated.

Updating Currencies: Plant Maintenance Information System

You can define a **statistics currency** for the Plant Maintenance Information System in Customizing. When you have decided on the statistics currency, the currencies in the document will be converted and updated to the statistics currency. The statistics currency is defined in Customizing for Plant Maintenance.

Period Units in Updating: Plant Maintenance Information System

In addition to the type of update, you can also define the period units for the updating process.

The period unit specifies the intervals at which the statistical data is cumulated. You can choose from the following:

- Day
- Week
- Month
- Posting period (you may also need to specify a fiscal year variant)

You can define a period unit for every standard information structure.

The information structures S061, S062, S063 and S070 are updated on a monthly basis in the Plant Maintenance Information System. The information structure S065 (Object statistics) does not have a period unit. The period unit of updating for the information structures which contain the cost key figures should not be changed.

The prerequisite for changing the period unit is that no actual data has been updated to the information structure.

You can set the period unit for the standard information structures in Customizing for the Logistics Information System.

Standard Analyses: Plant Maintenance Information System

In the standard system, the following standard analyses are available in the Plant Maintenance Information System:

- Object class
- Manufacturer
- Location
- Planner group
- Damage analysis
- Object statistics
- Breakdown
- Costs
- Customer notifications

These analyses are based on the information structures with the same name (S061 “Location and Planning”; S062 “Object class and Manufacturer”; S063 “Damage Analysis”; S065 “Object Statistics”, S015 “Costs evaluation”, S070 “Breakdown Statistics” and S116 “Customer notification analysis”).

Exception Analysis

In the exception analysis, you can display Exceptions [Ext.], which you have defined using the Early Warning System [Ext.]. The exception analysis acts as a filter, that is, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Plant Maintenance Information System [Page 211]

Characteristics and Key Figures: Plant Maintenance Information System

See also:

How the Key Figures are Calculated: Plant Maintenance Information System [Page 227]

Object Class and Manufacturer

The basis for the standard analyses object class and manufacturer is the data that are updated in the information structure S062.

Characteristics

- Object class
- Material
- Manufacturer
- Year of production
- Assembly group

Key Figures

- Activities
- Cause of damage
- Completed notifications
- Completed orders
- Damage
- Entered breakdown duration
- Entered breakdowns
- Entered notifications
- Entered orders
- External material costs
- External material rate
- External personnel rate
- External wages costs
- Immediacy rate
- Immediate orders
- Internal material costs
- Internal material rate
- Internal personnel rate
- Internal wages costs
- Mean Time To Repair
- Other costs

- Planned orders
- Planning degree
- Processing days
- Service costs
- Service rate
- Total costs actual
- Total costs planned
- Total revenues actual
- Unplanned orders

Location

The basis for the location is the data that are updated in the information structure S061.

Characteristics

- Maintenance plant
- Plant section
- Location
- PM planning plant
- PM planning group
- Functional location
- Equipment
- Assembly group

Key Figures

- Activities
- Cause of damage
- Completed notifications
- Completed orders
- Damage
- Entered breakdown duration
- Entered breakdowns
- Entered notifications
- Entered orders
- External material costs
- External material rate
- External personnel rate
- External wages costs
- Immediacy rate
- Immediate orders
- Internal material costs
- Internal material rate
- Internal personnel rate
- Internal wages costs

- Mean Time To Repair
- Other costs
- Planned orders
- Planning degree
- Processing days
- Service costs
- Service rate
- Total costs actual
- Total costs planned
- Total revenues actual
- Unplanned orders

Planning Group

The basis for the planning group analysis is the data that are updated in the information structure S061.

Characteristics

- PM planning plant
- PM planning group
- Location plant
- Plant section
- Location
- Functional location
- Equipment
- Assembly group

Key Figures

- Activities
- Cause of damage
- Completed notifications
- Completed orders
- Damage
- Entered breakdown duration
- Entered breakdowns
- Entered notifications
- Entered orders
- External material costs
- External material rate
- External personnel rate
- External wages costs
- Immediacy rate
- Immediate orders
- Internal material costs
- Internal material rate
- Internal personnel rate

- Internal wages costs
- Mean Time To Repair
- Other costs
- Planned orders
- Planning degree
- Processing days
- Service costs
- Service rate
- Total costs actual
- Total costs planned
- Total revenues actual
- Unplanned orders

Damage Analysis

The basis for damage analysis is the data that are updated in information structure S063.

Characteristics

- Type of notification
- Functional location
- Equipment
- Code group damage
  - Damage
- Code group cause of damage
- Code group activity
- Activity

Key Figures

- Cause of damage
- Damage
- Activities

Object Statistics

The basis for the standard analysis object statistics is the data that are updated in the information structure S065.

Characteristics

- Object class
- Material
- Manufacturer
- Assembly year

Key Figures

- Acquisition value
- Number of pieces of equipment
- Number of functional locations
- Number of functional locations with collective installation
- Number of functional locations with separate installation
- Number of functional locations without equipment installation

Breakdown Analysis

The basis for the breakdown analysis is the data that are updated in the information structure S070.

Characteristics

- Object class
- Functional location
- Equipment

Key Figures

- Effective breakdowns
- Mean Time between Repair
- Mean Time to Repair
- Time between Repair
- Time to Repair

Cost Analysis

The basis for the cost analysis is the data that are updated in the information structure S115.

Characteristics

- Object class
- Material
- Manufacturer
- Assembly year
    - Assembly group

Key Figures

    - Completed orders
    - External costs for wages
    - External material costs
    - External material rate
    - External personnel rate
    - Immediacy rate
    - In-house costs for wages
    - In-house material costs
    - In-house material rate
- In-house personnel rate
    - Other costs
    - Planned orders
    - Planning degree for immediate orders
    - Recorded orders
    - Service costs
- Service rate
    - Total costs actual
    - Total revenues actual

Customer Notifications

Data that is updated to information structure S116 forms the basis for the customer notification analysis.

Characteristics

- Sales organization
- Distribution channel
- Division
- PM planning plant
- Type of notification
- Customer
- Functional location
- Equipment
- Assembly

Key Figures

- Activities
- Completed notifications
- Damage
- Days for processing
- Number of cause of damage codes
- Recorded breakdown duration
- Recorded notifications

Additional Evaluations: Overview

You use the *Environment* menu in the Plant Maintenance Information System to find maintenance information such as master data and document information regarding pieces of equipment/functional locations, as well as information on notifications, orders, and regular maintenance.

This means that you can branch directly from the PMIS menu into important maintenance transactions and reports, which for the most part are documented in the other PM guides.

Using the Environment menu, you can also display evaluations for the key figures "Mean Time To Repair" and "Mean Time Between Repair" for both equipment and functional locations. From here you can also regenerate the statistics for information structure S070.

This section tells you

- Which guides contain information on the options in the *Environment* menu
- How to carry out an evaluation on the key figures "Mean Time To Repair" and "Mean Time Between Repair" for pieces of equipment and functional locations, and what further detailed information you can display within the evaluation.

Additional Documentation for Menu Option Environment

The following topic describes where you can find documentation on the options in the *Environment* menu:

Documentation on Technical Objects

The guide *PM Structuring Technical Systems* contains information on the following menu entries:

Environment → Technical objects → Equipment → Display/Equipment list/Structural display

and

Environment → Technical objects → Functional location → Display/Funct.location list/Structural display

The guide *PM Object Networks* contains information on the following menu entries:

Environment → Technical objects → Equipment → Object link

and

Environment → Technical objects → Functional location → Object link.

Documentation on Maintenance Tasks

The guide PM Maintenance Notifications contains information on the following menu entries:

Environment → Maintenance tasks → PM notification → Display/PM notification list

– The guide PM Maintenance Orders contains information on the following menu entries:

Environment → Maintenance tasks → PM order → Display/PM order list/Compl. confirmation

Documentation on Planned Maintenance

The guide *PM Maintenance Plans* contains information on all the menu entries contained in *Environment → Planned maintenance*.

MTTR/MTBR Evaluation

Using the *Environment* menu, you can carry out an evaluation for pieces of equipment and functional locations regarding the key figures "Mean Time to Repair" and "Mean Time between Repair". This is useful if, for example, statistical updating of information structure S070, which contains these key figures, has been switched off for performance reasons. You can also update information structure S070 within this evaluation.

The key figure values are read directly from the notification database. In this way it is possible to obtain detailed information on a breakdown for each period, for example, the notification number or the start/end of the malfunction. In addition, the key figures "number of breakdowns reported'" and "total downtime" are displayed; these cannot be evaluated using the standard breakdown statistics analysis (information structure S070). In the standard analyses, the "number of actual breakdowns" is displayed, which is for example not the same as the "number of breakdowns reported" where two breakdowns overlap (see also How the Key Figures are Calculated: Plant Maintenance Information System [Page 227]).

You can also branch to the corresponding notification in a further step within the evaluation.

What To Do

If you want to carry out an evaluation for pieces of equipment or functional locations, proceed as follows:

1. From the Plant Maintenance Information System, select

   Environment → Technical objects → Equipment → MTTR/MTBR Equipment

   or

   Environment → Technical objects → Functional location → MTTR/MTBR Funct Loc.

   A selection screen appears.

2. Enter the required selection criteria and select *Program → Execute.*

   For each technical object entered in the selection screen, you obtain the

   - Number of breakdowns
   - Length of downtime
   - Mean Time To Repair
   - Mean Time Between Repair

   Furthermore, the sum of the key figure values over the periods is displayed.

   Using this list as a starting point, you can perform the following functions:

   - Carry out an update of information structure S070.
     To do this, select the pushbutton *Update Info structure*.
   - Call up further detailed information on a period.

     To do this, place the cursor on the desired period of the technical object and select the pushbutton *Choose*.

   You obtain a list with the notification number for the breakdown, date and time of the malfunction start/end, and the downtime.

MTTR/MTBR Evaluation

The second part of the list comprises a monthly statistic for the following key figures:

- First/last start of malfunction that month
- Number of breakdowns recorded
- Time Between Repair
- Number of actual breakdowns
- Mean Time Between Repair
- Total downtime that month
- Mean Time To Repair that month

Select the *Disp.notification* pushbutton to branch to the notification.

How the Key Figures are Calculated: Plant Maintenance Information System

The following topics cover the description of the key figures in the Plant Maintenance Information System.

Key Figures for Notifications

The following key figures exist for notifications:

- Number of maintenance notifications created
- Number of completed maintenance notifications
- Number of processing days (creation to completion)

This group of key figures refers to the maintenance notifications to be processed. A maintenance notification is the averages by which you can perform the following functions in the PM System:

- Describe the condition of a technical object
- Request the maintenance department to carry out a required task
- Document an activity that has been carried out

Key Figures for Object Statistics

This group of key figures refers to the technical objects in Plant Maintenance:

- Functional locations
  System areas, at which a piece of equipment can be installed
- Equipment
  Physical objects which need to be maintained individually

Key Figures for Functional Locations

Pieces of equipment can be installed at functional locations on a 1:1 basis (individual installation) or on a 1:n basis (collective installation). This results in the following key figures:

- Total number of functional locations
- Number of functional locations with no equipment installed
- Number of functional locations with a single piece of equipment installed
- Number of functional locations with collective installation

Key Figures for Pieces of Equipment

The standard PMIS comes with the following key figures:

- Total pieces of equipment
- Acquisition value of the pieces of equipment

On the basis of these key figures you can obtain further information on the maintenance process (with respect to maintenance notifications, maintenance costs incurred, equipment downtimes, and so on).

When you analyze the object statistics, you should remember to set the "Statistics currency" conversion in Customizing. You can find further information on this function in "Updating Statistical Data" under Updating Currencies: Plant Maintenance Information System [Page 208].

Key Figures for Error Statistics

A maintenance notification contains items which describe the damage or the activity to be performed in greater detail. The information listed here forms the basis of the following key figures:

- Number of damages
- Number of causes of damage
- Number of activities

Key Figures for Damage Description

The various damages, causes, and activities listed in a notification are broken down in this group of key figures at the level of the individual codes and code groups. This results in the following key figures:

- Number of damage codes
- Number of cause of damage codes
- Number of activity codes

The damage description refers to the values of the damage or malfunction in the maintenance notification, in other words, to the damage, cause of damage, and activity. These values are identified by particular codes, which in turn are grouped from various views in code groups. The codes ensure that one and the same content is always entered in the same format, and can be usefully evaluated.

You can find further information on the damage description in the guide *PM Maintenance Notifications*.

Key Figures for Breakdown Statistics

By using the breakdown statistics you can analyze the causes of a particular breakdown more closely. The focus in this case is on the distribution of duration of the various breakdowns or repairs, and on how these were caused. The aim of these analyses is to find out the cause behind a short or long breakdown period, or the period between two consecutive breakdowns. An indicator in the first screen of the notification indicates that a malfunction report or a maintenance request contains a machine breakdown.

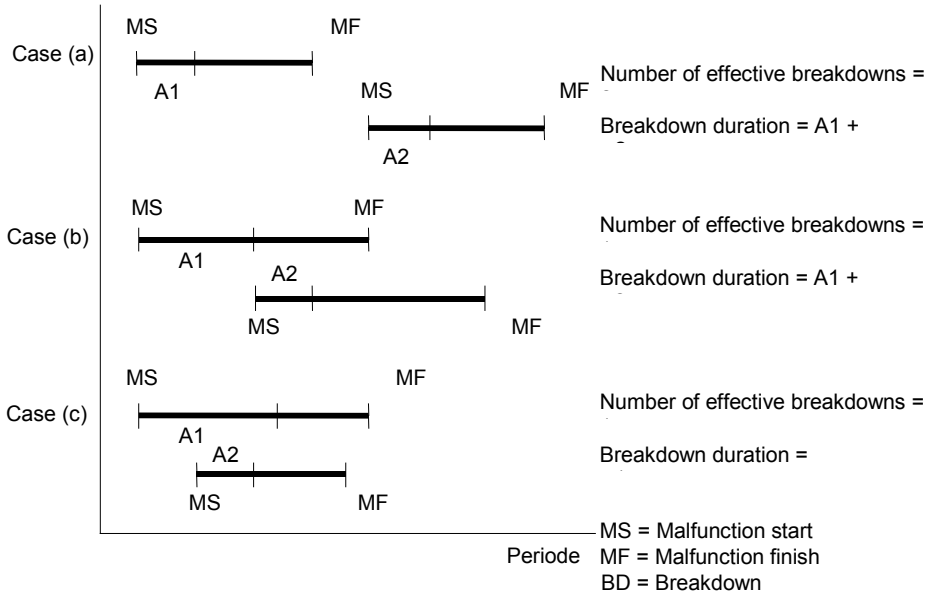
Key Figures for Machine Breakdowns

We distinguish between the following:

- Number of machine breakdowns **reported**
- Number of **actual** machine breakdowns

The reported breakdowns are important from a business point of view, whereas the actual breakdowns are of interest from a technical viewpoint.

There are three cases which are important for the breakdown analysis. These are represented in the following diagram, which displays two reported breakdowns in each case.



Key Figures for Downtime

The key figures for downtime comprise the following figures:

- Downtime entered/Time To Repair
- Mean Time To Repair

The average duration of a machine breakdown, MTTR (Mean Time To Repair), is calculated from the individual history of a piece of equipment. This gives us the following formula:

MTTR = Duration of the (1+...+n)th
/ Number of

The key figure MTTR is calculated in hours.

First breakdown	10 hours
Second breakdown	05 hours
Number of breakdowns	02
MTTR = 10 + 5 / 2	= 7.5 hours

To calculate the key figure Mean Time To Repair, in the breakdown analysis (information structure S070) the effective breakdowns and the number of effective breakdowns are taken into account. In all other analyses (and the underlying information structures) the noted breakdown duration and the number of noted breakdowns are taken into account.

Key Figures for Duration Between Machine Breakdowns

The key figures for the duration between machine breakdowns comprise the following ratios:

- Time Between Repair
- Average Time Between Repair

The average duration between two machine breakdowns, MTBR for short (Average Time between Repair), is calculated from the individual history of the equipment. This gives the following formula:

MTBR = (Time of the nth
- Time of the (n-1)th
- Breakdown duration of the (n-1)th
/ Number of

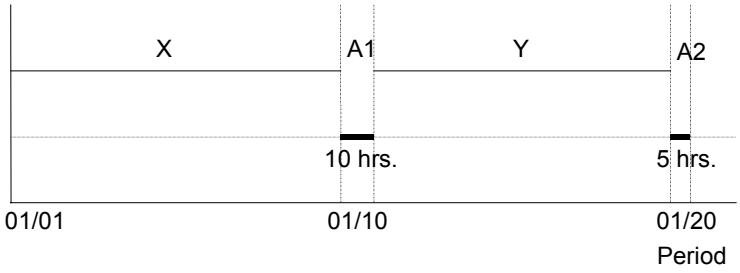
The key figure MTBR is calculated in hours.

The following example shows how the MTBR is calculated:

Acquisition date of pump A	01/01/94
First breakdown	01/10/94
Downtime	10 hours
Second breakdown	01/20/94
Downtime	5 hours
Number of breakdowns	2

Key Figures for Breakdown Statistics

MTBR	= (19 * 24 - 10) / 2	or X + Y (St) / 2
	= (456 - 10) / 2	or (216 + 240 - 10) / 2
		= 223 hours



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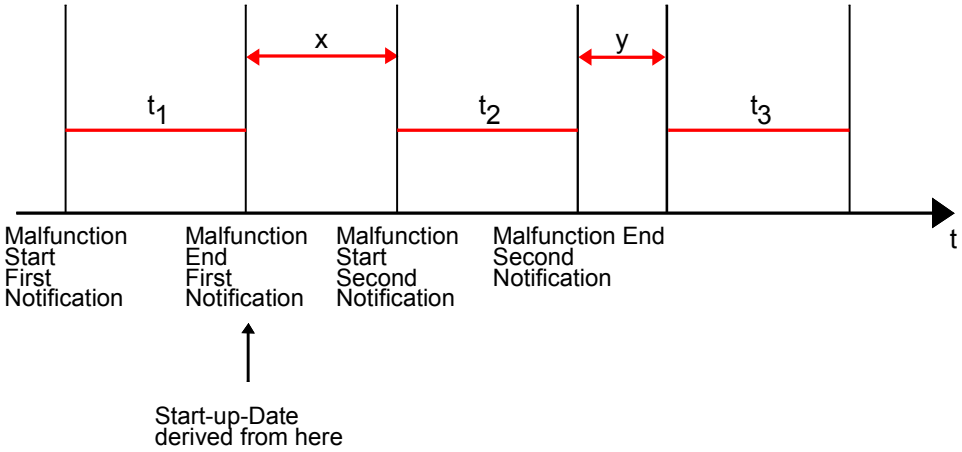
When calculating the key figure Mean Time between Repair, only the start-up date can be taken into account if the indicator Start-up was set in the master data for equipment or functional locations. If the indicator was not set then the end date of the first malfunction message will be taken into account. In this case, the first malfunction message will not be used when calculating the key figure MTBR (refer to the following illustration).

$$MTBR = \frac{x + y}{2}$$

$$MTTR = \frac{t_2 + t_3}{2}$$



Key Figures for Order Management

Key Figures that are updated

The following key figures for order management are updated:

- Number of created Plant Maintenance orders (sum of all created PM orders)
- Number of completed PM orders (sum of PM orders that have been completed)
- Number of PM orders that are to be immediately carried out (sum of PM orders that are characterized as immediate orders)
- Number of planned PM orders (sum of PM orders that were characterized as planned)
- Number of unplanned PM orders (sum of PM orders that are characterized as unplanned)

The key figure *Number of created PM orders* is updated when creating a PM order with a time reference to the entry date and when creating a historical order with time reference to the reference date.

The *Number of completed PM orders* is updated to the reference date when a PM order with time reference has been completed.

The key figures *Number of PM orders to be immediately carried out, Number of planned PM orders* and *Number of unplanned PM orders* are updated to the reference date when a PM order and a historical order with time reference are created and changed.
The following should be noted: a PM order can only take on one of the characteristics planned, unplanned or immediately. A suggestion can be stored for each order type in Customizing, so that orders of this type are characterized as immediate, unplanned or planned. This suggestion can be changed at any time up during order processing (creating, changing) up to order completion. When a PM order is complete, the planning indicator can no longer be changed.

Key Figures that are determined for the runtime

The following key figures are determined when the analysis is run:

- PM order urgency rate

  The urgency rate shows the ratio of the immediate orders to the total number of PM orders in percent.

  Formula:

  $$\frac{\textbf{Number of PM orders to be immediately executed}}{\textbf{Number of created PM orders}} * 100$$

- PM order planning rate

  This key figure shows the ratio of the planned orders to the total number of PM orders in percent.

  Formula:

  $$\frac{\textbf{Number of planned PM orders}}{\textbf{Number of created PM orders}} * 100$$

Key Figures for Order Costs

Key Figures that are updated

The following key figures are updated for order costs:

- Sum of planning costs for PM measures
  This key figure will be updated when a PM order with a time reference is created and changed at the starting date of the posting period, in which the costs were created.
- Sum of the actual costs for PM measures
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal) for the beginning date of the posting period, in which the costs were created. For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period which was determined for the reference date of the order. The key figure update is important for business reasons only when a completion confirmation is made.
- Sum of the actual revenues of the PM measures
  This key figure is updated with every revenue posting (for example billing document) for a PM order to the starting date of the posting period, in which the costs were created. For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period which was determined for the reference date of the order.
- Sum of the actual costs for internal activities of PM measures
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal) for the beginning date of the posting period, in which the costs were created. For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period, which was determined for the reference date of the order.
  The key figure update is important from a business point of view only when a completion confirmation is made.
- Sum of the actual costs for external activities of the PM measures
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal) for the beginning date of the posting period, in which the costs were created. For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period which was determined for the reference date of the order.
  The key figure update is important from a business point of view only when completion confirmation of an external activity (goods/invoice receipt), which was given based on wage hours, was made.
- Sum of the actual costs for the company's own material of the PM measures
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal).
  For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period which was determined for the reference date of the order. The key figure update is important from a business point of view only when a material removal is made.

- Sum of the actual costs for external material of the PM measures
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal) for the beginning date of the posting period, in which the costs were created.
  For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period which was determined for the reference date of the order. The key figure update is important from a business point of view only goods/invoice receipt for purchased parts (non-warehouse components).
- Sum of the actual costs for services of the PM measures
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal,...)for a PM order to the beginning date of the posting period, in which the costs were created.
  For historical orders, the key figure is updated when creating and changing a historical order with a time reference to the starting date of the posting period which was determined for the reference date of the order.
  The key figure update is important from a business point of view only with completion confirmation of an external activity (goods/invoice receipt), which was given based on total service.
- Sum of other actual costs of the PM measures
  The key figure shows the sum of other actual costs for PM orders, which do not fall under internal personnel, company's own material, external personnel, external material or services.
  This key figure is updated with every cost-relevant transaction for a PM order (for example, completion confirmation, material withdrawal) for the beginning date of the posting period, in which the costs were created. The key figure update is important from a business point of view when there are possible surcharges.

For the key figures *Sum of the actual costs for internal activities, external activities, the company's own material, external material, actual costs for services and sum of the other actual costs from PM measures,* please note the following:

The allocation of the actual costs from a cost-relevant transaction for a PM order (completion confirmation, material removal) is carried out in two steps. The costs are fundamentally shown in the CO under a cost type (for example, -400000- material usage, -615000- internal activities).
In the first step, allocation of the cost types to value categories are carried out in Customizing of the project system.

Value category	Cost type (from-to)
400 Warehouse issue	400000-499999
600 Internal activity	600000-615000

The value categories are allocated to the cost key figures of the PM order in Customizing under Plant Maintenance.

Key Figure	Value category

Sum of actual costs for internal material	400
Sum of actual costs for internal activities	600

With the setting from the second example, the actual costs from the completion confirmation for a PM order would enter the value category 600 and the key figure *Sum of the actual costs for internal activities* are updated. The actual costs from the material removal would be entered into the value category 400 and the key figure *Sum of the actual costs for internal material* is updated. With a historical order the costs are manually created on the level of value categories. Even here, the cost key figures that are to be updated are determined via the above-described allocation to the value categories.

Key Figures Calculate at Runtime

When the analysis is run, the following key figures are calculated:

- The in-house personnel cost rate for PM orders
  This key figure shows the ratio of costs for in-house services and the total costs for PM orders in percentage

  Formula: **Sum of actual costs for in-house services**
  ---------- * **100**
  Sum of actual costs for PM orders

- External personnel cost rate for PM orders
  This key figure shows the ratio of costs for external services and the total costs for PM orders in percent.

  Formula: **Sum of actual costs for external services**
  ---------- * **100**
  Sum of actual costs for PM orders

- In-house material cost rate for PM orders
  The key figure shows the ratio of costs for in-house material and the total costs for PM orders in percent.

  Formula: **Sum of actual costs for in-house material**
  ---------- * **100**
  Sum of actual costs for PM orders

- External material cost rate for PM orders
  The key figure shows the ratio of the costs for external material and the total costs for PM orders in percent.

  Formula: **Sum of actual costs for external material**
  ---------- * **100**
  Sum of actual costs for PM orders

- Services cost rate for PM orders
  The key figure shows the ratio of costs for services and the total costs for PM orders.

  Formula:
  Sum of actual costs for external personnel + Sum of the actual costs for services
  ----------* 100
  Sum of actual costs for PM orders

Quality Management Information System

Quality Management Information System: Information Structures

In the standard system, the following ten information structures are available in the Quality Management Information System:

Reference to Inspection Lot:

- S068 "Vendor"

  This information structure contains the aggregated data from inspection lot and usage decision for the vendor analysis.

- S069 "Material"

  This information structure contains the aggregated data from inspection lot and usage decision for the material analysis. The information structure S069 is identical in structure to the information structure S068, but does **not,** however, include the characteristic "Vendor" and the key figure "Quantity returned to vendor".

- S104 “Customer”

  This information structure contains the aggregated data from inspection lot and usage decision for the customer analysis. The information structure S104 is identical in structure to the information structure S068, but does **not,** however, include the key figure "Quantity returned to vendor". It also contains the characteristic “Customer” instead of the characteristic “Vendor”,

- S072 "Inspection Lot Individual Records"

  This information structure is available in the standard system, but is for internal use only.

Reference to Quality Notifications:

- S098 “QM Notifications: Vendor Analysis”

  This information structure contains the aggregated data from the quality notifications (notification headers and measures) for the vendor analysis.

- S097 “QM Notifications: Material Analysis

  This information structure contains the aggregated data from the quality notifications (notification headers and measures) for the material analysis. The information structure S097 is structurally identical to the information structure S098, but does **not,** however, contain the characteristic "Vendor".

- S099 “QM Notifications: Customer Analysis”

  This information structure includes the aggregated data from the quality notifications (notification headers and measures) for the customer analysis. The information structure S099 is structurally identical to the information structure S098, but it contains the characteristic “Customer” instead of the characteristic “Vendor”.

Reference to Problems/Errors:

- S102 “Problems/Errors: Vendor Analysis”

  This information structure contains the aggregated data from the problem level (i.e., error level) of the quality notifications for the vendor analysis.

- S100 “Problems/Errors: Material Analysis”

  This information structure Contains the aggregated data from the problem level (i.e., error level) for the quality notifications for the material analysis. The information structure S100 is structurally identical to the information structure S102, but does **not** contain the characteristic "Vendor".

- S103 “Problems/Errors: Customer Analysis”

  This information structure contains the aggregated data from the problem level (i.e., error level) of the quality notifications for the customer analysis. The information structure S103 is structurally identical to the information structure S102, yet contains the characteristic “Customer” instead of the characteristic “Vendor”.

  Please note that a period unit is assigned to each information structure. You can choose from day, week and month.

  A period unit is allocated during the material-, vendor- and customer analyses:

  – When a reference is made to inspection lots after the lot date of origin
  – When a reference is made to notifications and problems/errors after the notification date of origin.

Updating: Quality Management Information System

The data basis in the Quality Management Information System is the statistical data that is updated from the inspection and notification processing in the information structures.

The following sections will tell you how and when the data update occurs.

Time of the Update: Quality Management Information System [Page 243]

Factors That Influence Updating the Information Structures: Quality Management Information System [Page 244]

Updating Quantities: Quality Management Information System [Page 246]

Type of Updating [Page 21]

Period Units in Updating: Quality Management Information System [Page 247]

Updating Check [Page 24]

Time of the Update

Data from inspection processing is updated when the usage decision is made in QMIS. Then, when the usage decision is changed, for example when stocks are posted, the update occurs automatically.

The data from notification processing is updated whenever it is saved. Since data from defects recording is saved as a notification, any defects that arise can be statistically evaluated immediately after the recording.

The data from the following movement data is aggregated to make the following key figures:

- Inspection lot
- Usage decision
- Notification
- Problems and defects
- Results for inspection characteristics

Factors That Influence Updating the Information Structures: Quality Management Information System

In addition to the type of updating (immediate or delayed) and the period unit in which the values are cumulated, there are other options for filtering and varying the updating of data from the inspection processes.

Inspection Processing

Classification of Quality Scores

Inspection lots are valuated according to the quality score and the usage decision. Generally, an analysis of quality scores over a specific period is based on classed values. For this reason you can reduce classed quality scores.

You can define quality score classes that meet your specific requirements in Customizing for the Quality Management system. You can define up to five quality score classes.

Assigning Quality Score Classes to an Information Structure

In Customizing for the Quality Management system, you can then assign the quality score classes that you have defined (see previous topic) to the individual information structures used in the QMIS.

Assigning an Update Group to an Inspection Lot Origin

During inspection processing, you can use the **Inspection Lot Origin** to distinguish between the inspection lots. The inspection lot origin helps you to determine whether an inspection lot is from production or goods receipt.

Since the inspection lot origin works in conjunction with various key figures, the inspection lot origin must be integrated in updating control. You can do this by the assigning an update group to the inspection lot origin. If no assignment is made, no data is updated to the QMIS for the inspection lot origin.

You can assign an update group to an inspection lot origin in Customizing for Quality Management. In the standard SAP System, the appropriate update groups are already assigned to all the inspection lot origins in question.

Notification Processing

In notification processing, there are different of notification types. The notification type helps you to differentiate between a notification from defects recording or a notification from the customer.

Assigning an Update Group to a Type of Notification

You can assign an update group to a notification type in the Customizing for the Quality Management Information System. In the standard SAP System, the appropriate update groups are already assigned to all the notification types in question.

Update Group

The **update group** determines which information structures will be updated. The following standard update groups are available:

Factors That Influence Updating the Information Structures: Quality Management Information System

- 00020: Inspection lot aggregation for vendor analysis
- 00021: Inspection lot aggregation for material analysis
- 00022: Inspection lot aggregation for vendor- and material analysis
- 00035: Inspection lot aggregation for customer analysis
- 00032: Notification aggregation for customer analysis
- 00033: Notification aggregation for vendor analysis
- 00034: Notification aggregation for material analysis

For example: if you have assigned the update group 20 to an inspection lot origin, the data from the inspection lot and the usage decision will be aggregated to the information structure for the vendor analysis.

Updating Quantities: Quality Management Information System

Quantities are updated in base unit of measure.

The base unit of measure is the unit of measure in which the system manages the material stocks. It is determined in the material master.

Period Units in Updating: Quality Management Information System

You can also define the period units that are used in the updating process.

The period unit specifies the intervals at which the statistical data is cumulated. You can choose from the following:

- Day
- Week
- Month
- Posting period (you may also need to specify a fiscal year variant)

You can define a period unit for every standard information structure.

In the Quality Management Information System the standard time interval of the update for information structures S068, S069, S097, S098, S099, S100, S102, S103 and S104 is ‘month’. The inspection lot origin date is used to assign the inspection lot to the period unit in the information structure. You use the notification date to assign the notifications, problems and defects.

The prerequisite for changing the period unit is that no actual data has been updated to the information structure.

You can set the period unit for the standard information structures in Customizing for the Logistics Information System.

Standard Analyses: Quality Management Information System

The following standard analyses are available in the standard Quality Management Information System. These analyses allow you to evaluate data from the inspection lot process and the QM notifications:

- Lots
- Inspection result
- Notification overview
- Notification problems
- Defects

These analyses can be carried out from three views: from the **vendor view,** from the **material view,** and from the **customer view.**

In the exception analysis, you can display Exceptions [Ext.], which you have defined using the Early Warning System [Ext.]. The exception analysis acts as a filter, that is, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Quality Management Information System [Page 249]

Characteristics and Key Figures: Quality Management Information System

Standardanalysen zu Losen

See also:

How the Key Figures are Calculated: Quality Management Information System [Page 258]

Standard Analyses for Lots

Characteristics

The following table gives you an overview on the characteristics that are available to you in the standard analyses for lots with regard to the three views material, vendor and customer in the QM Information System.

	Views:		
	Material (Info struct. S069)	**Vendor (Info struct. S068)**	**Customer (Info struct. S104)**
Characteristics			
Vendor		**X**	
Customer			**X**
Material	**X**	**X**	**X**
Inspection type	**X**	**X**	**X**
Plant	**X**	**X**	**X**

Key Figures

The following table provides you with an overview of the key figures that you can evaluate for lots with regard to the three views of material, vendor, and customer in the QM Information System.

	Views:		
	Material (Info struct. S069)	**Vendor (Info struct. S068)**	**Customer (Info struct. S104)**
Key Figures			X
Number of faulty units	**X**	**X**	**X**
Lots w/ Q-key figure in Cl. A	**X**	**X**	**X**
Lots w/ Q-key figure in Cl. B	**X**	**X**	**X**
Lots w/ Q-key figure in Cl. C	**X**	**X**	**X**
Lots w/ Q-key figure in Cl. D	**X**	**X**	**X**
Lots w/ Q-key figure in Cl. E	**X**	**X**	**X**
Lots usage decision in order	**X**	**X**	**X**

Lots usage decision not in order	X	X	X
Total lots	X	X	X
Skipped lots	X	X	X
Lots w/check for abnormal termination	X	X	X
Lots w/open long-term characteristics	X	X	X
Quantities of all lots	X	X	X
Quantity of accepted lots	X	X	X
Quantity of skipped lots	X	X	X
Quantity of returned lots	X	X	X
Average lead time	X	X	X
Average value quality key figure	X	X	X
Quantity appropriations	X	X	
Quantity of scrap	X	X	
Quantity of inspection sample	X	X	
Quantity that was posted to another material	X	X	
Quantity that was posted to free stock	X	X	
Quantity of blocked stock	X	X	
Quantity returned to vendor		X	
Sample quantity actual	X	X	X
Sample quantity target	X	X	X
Quota sample quantity	X	X	X
Quota rejected quantity	X	X	X
Quota skipped lots	X	X	X
Quota skipped quantity	X	X	X
Quota returned lots	X	X	X
Quota returned quantity	X	X	X
Rejected quantity	X	X	X
Standard deviation lead time	X	X	X
Standard deviation Q-key figure	X	X	X
Standard deviation of the portion of faulty units	X	X	X
Total lead time	X	X	X

Standard Analyses for Errors

Characteristics

The following table provides you with an overview of the characteristics that you can evaluate for errors with regard to the three views of material, vendor, and customer in the QM Information System.

	Views:		
	Material (Info struct. S100	**Vendor (Info struct. S102**	**Customer (Info struct. S103)**
Characteristics			
Vendor		X	
Customer			X
Material	X	X	X
Notification type	X	X	X
Catalog type/ code group	X	X	X
Problem	X	X	X
Report type	X	X	X
Plant for material	X	X	X

Key Figures (all views)

- Average value of the error evaluation
- Problem frequency
- Problem items
- Total error evaluation

Standard Analyses for Notifications

Characteristics

The following table provides you with an overview of the characteristics that are available to you for notifications with regard to the three views of material, vendor, and customer in the QM Information System.

	Views:		
	Material (Info struct. S097)	**Vendor (Info struct. S098**	**Customer (Info struct. S099)**
Characteristics			
Vendor		X	
Customer			X
Material	X	X	X
Notification type	X	X	X
Plant for material	X	X	X

Key Figures (all views)

- Measures successful
- Measures completed
- Measures total
- Measures open
- Notifications returned
- Notifications completed
- Notifications total
- Notifications in process
- Notifications open
- Total quantity quotient of faulty recorded quantities (recognized)
- Total quantity quotient of faulty recorded quantities (not recognized)
- Reclaimed quantity
- Returned quantity

Standard Analyses for Notification Problems

Characteristics

The following table provides you with an overview of the characteristics that are available to you in the standard analyses for notification problems with regard to the three views of material, vendor, and customer in the QM Information System.

	Views:		
	Material (Info struct. S100)	**Vendor (Info struct. S102)**	**Customer (Info struct. S103)**
Characteristics			
Vendor		X	X
Customer			
Material	X	X	X
Notification type	X	X	X
Catalog type/ code group	X	X	X
Problem	X	X	X
Report type	X	X	X
Plant for material	X	X	X

Key Figure (all views)

- Problem frequency

Standard Analyses for Inspection Results

Characteristics

The following table provides you with an overview of the characteristics available in the QM Information System standard analyses for inspection results with regard to the three views material, vendor and customer.

	Views:		
	Material (info structures S161 and S162)	**Vendor (info structures S163 and S164)**	**Customer (info structures S165 and S166)**
Characteristics			
Vendor		X	
Customer			X
Material	X	X	X
Work center	X	X	X
Master inspection characteristic	X	X	X
Task list group	X	X	X
Task list node	X	X	X
Inspection characteristic	X	X	X
Plant	X	X	X

Key Figures for Master Inspection Characteristic / Planned Inspection Characteristic (S161, S163, S165)

- **n** No. of checked and completed samples
- n_A No. of accepted samples
- n_R No. of rejected samples
- n_F No. of defects
- n_{FEh} No. of nonconforming units
- n_{tolu} No. of values under tolerance
- n_{tolo} No. of values over tolerance
- n_{Stpf} Sample size (no. of valid values in sample)

Key Figures for Quantitative Characteristics (S162, S164, S166)

Statistical values (additional key figures):

- $\bar{s}$ Standard deviation (1)
- $\bar{x}$ Mean value (1)
- c_p Process capability index (1)
- c_{pk} Process capability index (1)

How the Key Figures are Calculated: Quality Management Information System

The following topics will show you How to Calculate the key figures in the Quality Management Information System.

Auxiliary and Supplementary Key Figures

In addition to the key figures that can be directly called up, the information structures S068, S069, S104, S100, S102 and S103 use technical **auxiliary key figures.** These auxiliary key figures are part of the information structures and are physically located in the database. They are listed in the following tables together with the other key figures of the information structures.

By using the auxiliary key figures, dynamic **supplementary key figures** (such as averages value and standard deviation for lead time, quality key figures and part of nonconforming units). These supplementary key figures are **not physically** located in the database. They are calculated dynamically during runtime from data in both information structures with the help of internal conversion programs. The supplementary key figures are listed separately and their calculation will be described in greater detail.

Calculating the Supplementary Key Figures for Information Structures S068, S069 and S104 [Page 260]

Calculating the Supplementary Key Figures for Information Structures S100, S102 and S103 [Page 262]

Calculating the Supplementary Key Figures for Information Structures S161, S162, S163, S164, S165, S166 [Page 263]

Calculating the Supplementary Key Figures for Information Structures S068, S069 and S104

The following information shows you how to dynamically calculate the supplementary key figures of the vendor, customer and material analysis with a reference to inspection lot in the Quality Management Information System during runtime. The key figures originate from the information structures S068 (Vendor) and S069 (Material) and S104 (Customer).

Lead Time

The lead time of an inspection begins with the date on which the inspection lot was created and ends with the date on which the usage decision is made. The lead time is also the difference in factory calendar days between these two basic dates (inspection lot creation and the usage decision) while taking the time into account.

If the usage decision is made on the same day that the inspection lot is created (a skipped lot, for example), then the lead time is > 1.

In QMIS the average and standard deviation are calculated for the lead time (**LT**).

- Average lead time

  The average lead time is the quotient from the sum of the lead time and the number of inspection lots.

  $$\textbf{Average LT} = \Sigma\ \textbf{LT / Number of inspection lots}$$

- Standard deviation of the lead time

  $$\textbf{StdDev. LT} = \sqrt{\left(\Sigma\ LT^2 - (\Sigma\ LT)^2/n\right) / (n-1)}$$

Share of Non-Conforming Units

The share of non-conforming units and the number of defects per 100 units are used in the sampling system for an inspection based on qualitative characteristics and for formulation of sampling plans as the quality level.

In QMIS the average and standard deviation are calculated for the share of non-conforming units in the inspection lot (**SHR**).

- Average share of non-conforming units

  $$\textbf{Average SHR} = \textbf{SHR / Number of inspection lots} * 100$$

- Standard deviation of the share of non-conforming units

  $$\textbf{StdDev. SHR} = \sqrt{\left(\Sigma\ SHR^2 - (\Sigma\ SHR)^2/n\right) / (n-1)} * 100$$

Quality Key Figures

The quality score is a relative or standardized statistical value that describes the valuation of the quality.

In QMIS the average and the standard deviation are calculated for the quality score (**QSc**).

Calculating the Supplementary Key Figures for Information Structures S068, S069 and S104

- Average quality score

  Average QSC = Σ QSC / number of inspection lots

- Standard deviation of the quality score

  StdDev. QSc = $\sqrt{(\Sigma QSc^2 - (\Sigma QSc)^2/n)} / (n-1)$

Rates

In QMIS, a rate refers to a quantity-related or a number-related ratio expressed as a percent.

- The rate of rejected lots represents the ratio of the number of rejected lots to the total number of lots.

  Rate of rejected lots =
  (Lots not OK / Total lots) * 100

- The rate of skipped lots represents the ratio of the number of skipped lots to the total number of lots.

  Rate of skipped lots =
  (Lots skipped / total lots) * 100

  - The rate of the rejected quantity represents the ratio of the rejected quantity to the total lot quantity.

  Rate of rejected qty =
  (Rejected qty / all lots qty) * 100

  - The rate of the skipped quantity represents the ratio of the skipped quantity to the total lot quantity.

  Rate of skipped qty =
  (Skipped qty / all lots qty) * 100

  - The rate of the sample quantity represents the ratio of the sample quantity to the total lot quantity.

  Rate of sample qty =
  (Smpl qty (trgt) / All lots qty) * 100

  The quantity of all lots and the total number of lots include the skipped inspections.

Calculating the Supplementary Key Figures for Information Structures S100, S102 and S103

The following information shows you how to dynamically calculate during runtime the supplementary key figures of the vendor, customer and material analysis with a reference to **errors** in the Quality Management Information System. The supplementary key figure originates from the information structures S100 (problems/errors material analysis) S102 (problems/errors, vendor analysis) and S103 (problems/errors, customer analysis).

The supplementary key figure is only available in the standard analyses with reference to **errors** and **not** in the standard analyses with reference to notification problems.

Average Error Valuation

In the QM system you can individually determine the type of error valuation. You therefore quantitatively calculate the errors by using the error results. In addition, you can determine a scale for the error calculation such as a scale for the damage effects. This scale can be provided with a unit of measurement.

Whether an error calculation should be carried out, which scale and which unit should be used can be determined in Customizing for each type of report.

The average value of error evaluation is used as the supplementary key figure for analyses in the QM Information System. The average error valuation is the product of dividing the sum of the error valuation and the number of problem items:

Average error valuation = Σ error valuation / Number of problem items

Calculating the Supplementary Key Figures for Information Structures S162, S164, S166

The statistics $\bar{x}$, $\bar{s}$, c_p, c_{pk} are each contained once only in the information structure. The algorithm for calculating $\bar{x}$, $\bar{s}$, c_p, c_{pk} is dependent on the respective process model.

The possible process models and the calculation procedure are as follows:

- Model 1:

  Mean value is derived from the mean value of the individual values.

  Standard deviation is derived from inner dispersion.

- Model 2:

  Mean value is derived from the mean value of the individual values.

  Standard deviation is derived from average dispersion.

- Model 3:

  Mean value is derived from the mean value of the mean values.

  Standard deviation is derived from mean quadratic dispersion.

Depending on the model on which the calculation is based, the mean value $\bar{x}$ contains either the total mean value $\bar{x}_{gesamt}$ or the mean value of the mean values $\bar{\bar{x}}$.

The corresponding values for dispersion are the inner dispersion $\bar{s}_{in}$, the mean dispersion $\bar{s}$ or the mean quadratic dispersion $\bar{s}_q$. These values are included in the subsequent calculation of c_p, c_{pk}.

The default calculation algorithm for the statistics comprises the inner dispersion $\bar{s}_{in}$ and the total mean value $\bar{x}_{gesamt}$. The process model can be switched at runtime and saved as a user parameter.

Calculation algorithms and source key figures:

- n_{Stat} No. of valid single values (2)
- **n** No. of samples

Mean values:

- $\bar{x}_{gesamt}$ Mean value of single values $\sum n_i x_i / n_{Stat}$
- $\bar{\bar{x}}$ Mean value of mean values $\sum x_i / n$
- $\sum n_i x_i$ Total of single values (2)
- $\sum_{i=1}^{n} \bar{x}_i$ Total of mean values (2)

Calculating the Supplementary Key Figures for Information Structures S162, S164, S166

Standard deviation:

– $\bar{s}_{in}$ $\sqrt{\frac{\sum Var_{in}}{n_{Stat} - n}}$ Inner dispersion

– $\bar{s}$ Mean dispersion
$\sum s_i / n$

– $\bar{s}_q$ Mean quadratic dispersion

$$\frac{\sqrt{\sum Var}}{n}$$

Source key figures:

– **$\sum Var_{in}$** Total variance of single values
$$\sum (Var_i * (n_{stat} - 1))$$

– **$\sum s_i$** Total dispersions of samples

– **$\sum Var$** Total variances of samples

Process capability values:

– **tol_{un}** Last tolerance below

– **tol_{ob}** Last tolerance above

– c_p Process capability index (1)
$(tol_{ob} - tol_{un}) / 6 \bar{s}$

– c_{pk} Process capability index (1)
$(tol_{ob} - \bar{x}) / 3 \bar{s}$
or
$(\bar{x} - tol_{un}) / 3 \bar{s}$

Key: (1) Key figures calculated at runtime

(2) Technical key figures (only used to calculate key figures at runtime)

Retail Information System (RIS)

This section contains information on the following topics in the Retail Information System:

RIS Information Structures

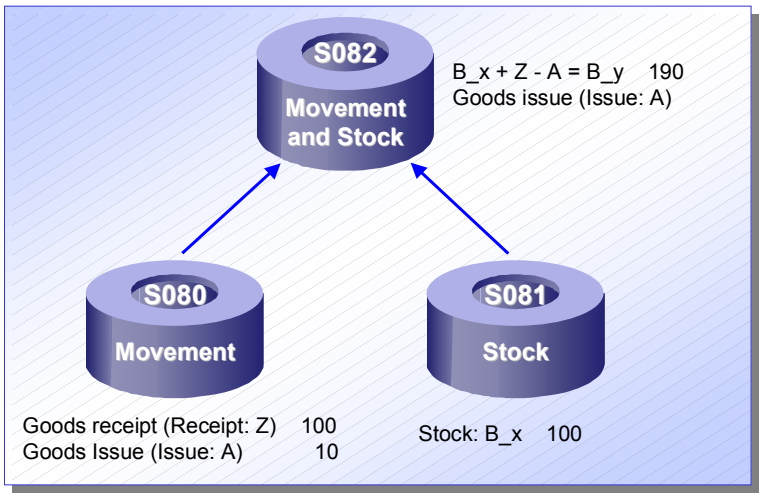
Data from the operational applications in SAP Retail is updated to the RIS Information Structures [Ext.].

The RIS occasionally uses information structures that serve only as auxiliary structures for the purposes of adjustment between movement and stock data and in which data cannot be updated. When standard analyses that access an auxiliary structure are executed, data is read from an information structure containing movement data and one containing stock data. The system performs a back calculation for stock, and thus determines the calculated key figures. The data from the auxiliary structure forms the basis for planning.

This procedure applies to the following information structures:

Auxiliary Structure	Movement Data	Stock Data
S079 (STRPS)	S077	S078
S082 (Purchasing)	S080	S081
S085 (Article)	S083	S084
S107 (Article)	S105	S106

The conversion of the corresponding update rules could look like this for information structure S082:



The standard R/3 System provides the following information structures in the Retail Information System:

- **S079 STRPS** (Short-term retail profitability statement)

  This information structure contains the data basis for creating short-term retail profitability statements and thus also forms the basis for the STRPS standard analysis.

The information structure S079 is the central information structure of the Retail Information System and represents the sales view.

The lowest data aggregation level is the merchandise category. The information structures for the article provide more detailed data.

- **S082 Purchasing**

  This information structure provides data relevant to Purchasing. It therefore provides the data basis for the Purchasing standard analysis. The lowest data aggregation level is the merchandise category. The information structures for the article provide more detailed data.

- **S085 Article**

  This information structure provides data, which enables you to analyze data right down to article level from the perspective of Sales and of Purchasing, and also to determine cause and effect. It provides the data basis for the article standard analysis.

- **S086 Promotion**

  The information structure S086 provides the data basis for the promotion standard analysis. It provides data concerning the logistics processes and the sale of promotional merchandise and thus forms the basis for analyzing promotion transactions.

- **S087 Article/Add-on**

  This information structure provides the data basis for the article/add-on standard analysis. It contains additional, detailed information that is not available in the information structure S085. S087 provides the basis for analyzing inventory differences or increased goods clearing.

- **S107 Season**

  The information structure S107 provides the data basis for the season standard analysis, and supplies information that supports the purchase/sale of fashionable articles. This information structure only provides data concerning articles that are either seasonally fashionable or limited by season. The purpose of this information structure is to concentrate on supporting the area of textiles (size and color evaluations). For this reason, key figures and characteristic criteria are added to the characteristics section of the information structure as additional selection and drill-down parameters. In this way, you can obtain additional information about the characteristics of the information structure. This also enables you to select articles which have a specific color, size, or fashion ID.

- **S108 Additionals**

  The information structure S108 is used for updating articles that have been provided with additionals. In this way, it is possible to analyze the costs incurred due to the fixing of these additionals.

- **S110 Open-to-Buy**

  The information structure S110 is chiefly used in LIS Flexible Planning (planning of open-to-buy) and can be used for the planning of seasonal articles and fast-moving articles. It helps you to determine the open volume of the purchasing budget (open-to-buy).

  This information structure contains key figures which are planned with the help of flexible planning, as well as key figures which are updated from the operative application. You can use the information structure S110 to create Exceptions [Ext.] with the help of the

Early Warning System. In this way you can accurately check for weak points between the planned seasonal budget and the actual seasonal budget.

Information about how to use the Early Warning System can be found in the general LIS documentation under Early Warning System [Ext.]

Additional information about open-to-buy can be found in the *R/3 Retail Documentation* in the section on the planning system under Open-To-Buy (OTB) [Ext.]

- **S015 Subsequent Settlement**

  This information structure forms the data basis for the standard analyses of subsequent settlement. The information structure S015 is updated when the events “invoice receipt for a purchase order” (vendor business volume) or “subsequent settlements of an arrangement (income) by credit memo/billing document” take place.

- **S123 Customer/Merchandise Category and S124 Customer/Article**

  The main characteristic of these information structures is the customer. Both information structures are therefore particularly relevant to the wholesale trade and also the retail sector, if the customer is known (in the furniture sector, for example). The key figures are derived from sales and distribution processes, and include key figures such as sales (absolute) and key figures referring to third-party orders.

  S123 is filled with data up to the aggregation level merchandise category. S124 enables detailed analyses and provides data up to the aggregation level article.

- **S150 Rough Workload Estimate - Overall Structure**

  This information structure is used by the standard analyses of the rough workload preview. It contains the data basis for performing workload considerations for all warehouse processes.

  The overall structure for rough workload estimate constitutes the upper level of the dual-level design of rough workload estimate.

  This is a general structure that comprises all warehouse processes and only contains those characteristics that can be interpreted in the same way for all warehouse processes.

  The period unit of this information structure is *Day* and cannot be changed. If required, you can copy this information structure to create a self-defined information structure.

- **S152 Rough Workload Estimate - Goods Issue Structure**

  This information structure is used by the standard analyses of the rough workload estimate. It contains the data basis for performing workload considerations for the warehouse processes *picking/goods issue* and *returns to vendor*.

  The goods issue structure for rough workload estimate constitutes the lower level of the dual-level design of rough workload estimate.

  This is a general structure that only contains data from the warehouse processes *picking/goods issue* and *returns to vendor*. All characteristics and key figures from the overall structure are also contained in this information structure. It also contains characteristics that are only of relevance for the two warehouse processes *picking/goods issue* and *returns to vendor*.

  The period unit of this information structure is *Day* and cannot be changed. If required, you can copy this information structure to create a self-defined information structure.

- **S160 Perishables**

  Information structure S160 serves as the basis for the operative application component ***Perishables Planning***. This supplementary component of the standard system enables you to control the process flow for perishables. It covers the requirements of both the retail sector and of wholesale trade.

  The period unit of this information structure is *Day* and cannot be changed. If required, you can copy this information structure to create a self-defined information structure.

- **S200 Physical Inventory in Stores**

  This information structure enables you to build up a collection of key figures which provide you with the following two options for analyzing physical inventories with respect counting results and difference results for articles and merchandise categories:

  – The analysis can take place directly after the transfer of the counting results.

    For the time **before** posting of the physical inventories, information structure S200 acts as a tool which you can use to search the perpetual inventory procedures up to article level to ascertain the differences that may be expected. This is possible from the initial counts onwards.

    The Early Warning System can also be used to analyze this information structure. This means that you can detect and avert possible errors in the logistical process before the inventory differences finally defined.

    The list of inventory differences that already exists is not replaced by information structure S200!

    If differences do occur for physical inventory items, you can branch to the list of inventory differences from the standard analysis of S200. This will provide you with more detailed information on the differences.

  – The analysis can take place after the inventory differences have been posted.

    After the inventory differences have been posted, you can use information structure S200 to create evaluations on recurring inventory differences and the reason why they occur. You can create periodic evaluations for articles, merchandise categories or sites.

Information Structures for the Sales Audit

The following information structures allow you to analyze POS data. They are all updated on a daily basis in the standard system and provide the data basis for the standard analysis of the same name.

- **S120 Sales As Per Receipts**

  The information structure S120 provides data relating to sales at the POS which can be used as the basis for performing shopping basket analyses and for planning shifts for cashiers. This structure enables analysis of the average sales per transaction or of price reductions, via a variety of characteristics such as cashier, article, store, customer, or hour of sale. This information structure therefore provides detailed data on the lowest aggregation level and contains an immense volume of data.

  S120 also enables you to perform detailed analyses, based on the data provided by the two information structures S121 and S122.

- **S121 Article Aggregation: POS**

This information structure provides aggregated POS data at the aggregation level of article and store. It allows you to access the sales analysis at POS level. This means that you can compare articles and merchandise categories store-by-store and then branch directly to information structure S120 to perform a detailed analysis if you find deviations, for example.

- **S122 Cashier**

  The POS-specific information structure S122 concentrates on the POS and the cashier. S122 therefore contains data concerning POS differences, void transactions and cancellations throughout the different stores.

  This information structure has two purposes:

  – It enables you to compare stores according to the POS data such as POS differences, void transactions or cancellations, in order to identify deviations.

  – It provides you with aggregated sales data for each cashier/POS and store. This data enables you to perform a sales analysis. If you find deviations, you can then branch directly to information structure S120 (sales as per receipts) to perform a detailed analysis.

  In order to minimize the system load for information structures S121 and S122, you should create an index for the data selection of the characteristics you require for your specific situation.

You can find further information about updating these information structures and about the POS interface in RIS under POS Interface [Page 284].

Information Structures for Market-Basket Analysis

You can use information structures S117 and S119 to evaluate transaction data.

Both information structures are supplied with data via Copy Management from the POS information structure S120.

The information structure S117 is generated from S120 in an initial Copy Management (CM) run. S117 supplies the information structure S119 with data.

Use the following SAP methods to supply the information structures S117 and S119 with data:

- R001 (S117 from S120)
- R002 (S119 from S117)

- **S117 Receipt/Article**

  The information structure S117 delivers data on the market-basket level, that is, on the level of the receipt or article. It enables you to analyze the composition of shopping baskets. For example, this could involve the analysis of companion sales or a check on the effectiveness of advertising.

- **S119 Receipt**

S119 delivers data on the cumulated shopping basket level, in other words, a data record represents a complete transaction or purchasing activity of a customer . This information structure enables you to analyze the purchasing behavior of customers.

Exception reporting enables you to perform a self-defined grouping of customers, for example, based on master data or customers who prefer special offers.

You can perform a more detailed analysis of this customer group by switching to the detailed shopping basket level (S117) using *Change info structure*.

In addition, the "key figure matrix" function enables you to perform a meaningful customer frequency analysis.

A full list of the characteristics and key figures of the standard analyses in the Retail Information System can be found in Characteristics and Key Figures: Retail Information System [Page 290].

You can find notes relating to the calculation of key figures in How Key Figures Are Calculated [Page 335].

Updating - Overview

Analysis of data in the Retail Information System is based on statistical data which is updated from the operative application to the RIS information structures.

This section deals with the way the flow of data from the operative application to the information structures is defined and subsequently controlled.

You can find detailed information about the definition and control of updating in the Implementation Guide for the Logistics Information System. You can find the relevant chapter under *Logistics General → Logistics Information System → Logistics Data Warehouse → Updating.*

Events

The following table shows which events in the operative application update which information structures.

Note that information structures S079, S082, S085 and S107 are not updated. They act as auxiliary structures. During the respective standard analysis, data is read from the following information structures, stock levels are calculated back to a certain point and the values of the calculated key figures are determined:

S079: S077 and S078

S082: S080 and S081

S085: S083 and S084

S107: S105 and S106

Application Area	Event	Information Structures
Purchasing	Purchase order	S077, S080, S083, S086, S105, S106, S108, S110
	Goods receipt	S105, S106, S108, S110, S160, S150, S152
	Invoice verification (rebate)	S015
	Billing document / Credit memo (rebate)	S015
Inventory Management	Inventory Management (changes involving stocks)	S077, S078, S080, S081, S083, S084, S086, S087, S105, S106, S108, S110, S160
	Revaluation (at cost)	S077, S078, S080, S081, S083, S084 S087, S105, S106, S110
	Physical Inventory	S200
Sales and Distribution	Order/Returns order	S123, S124, S160, S150, S152
	Delivery/Return delivery	S123, S124, S160, S150, S152
	Billing document/Credit memo	S077, S080, S083, S086, S105, S110, S123, S124, S160
Retailing	External POS data	S120, S121, S122
Special	Revaluation (at retail)	S077, S078, S080, S081, S083, S084 S087, S105, S106, S110

Updating Definition

To control the flow of statistic data from the application to the information system, you must maintain an *updating definition* in Customizing. In this updating definition, you create *update groups* and *update rules*.

You will find further information on updating definition in the IMG for the Logistics Information System under *Logistics Information System → Logistics Data Warehouse → Updating → Updating Definition.*

Update Groups

An update group is a collection of rules which determine whether, and in what way, key figures are updated.

Key figures for the Retail Information System are determined from several operative applications in the SAP System. This means that updating groups that control updating in the Purchasing and Sales Information System and in Inventory Controlling are also used for the Retail Information System.

The following table illustrates the respective update groups for each application.

Application Area	Update Group	Use
Purchasing	SAP	Order volume-/order stock key figures, volume-based rebate key figures
	29	Subsequent settlement
Inventory Management	9	Stock key figures
Sales and Distribution	1	Billing documents, debit memos, sales order, delivery
	2	Credit memo, returns order, return delivery
Retailing	800	Key figures for the POS interface
	401	Third-party orders, third party sales volume
	402	Third-party order, credit memo
	403	Delivery due to purchase orders
	404	Return delivery due to purchase orders
	810	Revaluation at retail
	820	Incoming invoice verification

You can find more details about update groups and their structure in the Implementation guide for the Logistics Information System under *Logistics - General → Logistics Information System → Logistics Data Warehouse → Updating → Updating Definition → General Definition Using Update Groups*

Update Rules

The update rules define **whether** and **how** each key figure is to be updated to the Retail Information System.

The update rules define:

- to which characteristics combination a key figure is updated, if one of the events that trigger updating occurs,
- from which source data fields in the application documents the information should be taken,

You can use requirements to define whether or not a key figure is updated at all. You can also define a formula for calculating the key figure.

You will find a detailed description of the significance of update rules and their maintenance in the IMG for the Logistics Information System under *Logistics - General → Logistics Information System → Logistics Data Warehouse → Updating → Updating Definition → Specific Definition Using Update Rules.*

Updating Control

Updating Control in Customizing is used to activate updating, to maintain specific settings for updating in the Retail Information System (for Data Enhancement, for example), and to control updating of statistical data using the update log.

You will find further information on updating control in the IMG for the Logistics Information System under *Logistics - General → Logistics Information System → Logistics Data Warehouse → Updating → Updating Control.*

Type of Updating

In the LIS information systems, updating of statistical data can take place in two ways:

- As a U1 update (immediate start, i.e. when an event takes place that triggers an update)
- As a U2 update (delayed start, i.e. updating is delayed and takes place slightly after an event that triggers an update)
- As a U3 update (start must be triggered manually via Customizing, data will be saved in the clipboard until the update has started)

You can also turn the updating process off; this means that statistical data is no longer written to the information structure.

You can find further information about the updating concept in the *System Administration Guide.*

You can specify the type of updating for each information structure in Customizing. You need to make the appropriate settings in Customizing for the Logistics Information System. You can find detailed information in the Implementation Guide for the Logistics Information System.

In the standard Retail Information System, updating is **always** deactivated, because it could have a negative effect on performance in the case of the standard modules. You first have to activate updating in order to ensure that information is written to the retail-specific information structures, so that you can use the respective analyses.

Period Unit

As well as the type of updating required, you can also define the period unit.

The period unit defines the time level at which the statistical data is to be cumulated. You can select the following period units:

- Day
- Week
- Month
- Posting period (with business year variants if necessary)

You can define the period unit for updating for each information structure that is supplied in the standard system.

The following table gives you an overview of the period units used for updating those information structures of the Retail Information System that are supplied as standard.

Information structure	Period unit used in updating
S077	Month
S078	None
S080	Month
S081	None
S083	Month
S084	None
S086	Week
S087	Month
S105	Week
S106	None
S108	Month
S110	Month
S115	Month
S117	Day
S119	Day
S121	Day
S120	Day
S122	Day
S123	Month
S124	Month

Period Unit

S150	Day (fixed)
S152	Day (fixed)
S160	Day (fixed)
S200	Month

Note:

No data is updated to information structures S079, S082, S085 and S107. Standard analyses read data from the following information structures:

S079: S077 (movement), S078 (stock)

S082: S080 (movement), S081 (stock)

S085: S083 (movement), S084 (stock)

S107: S105 (movement), S106 (stock)

Information structures S079, S082, S085 and S107 always have the same period unit as the corresponding information structure containing the movement data. If the period unit for the information structure containing the movement data changes, the period unit of the information structures named above will also change.

No data is written to information structures S117 and S119 either. These information structures are supplied with data from S120 using Copy Management. The period unit for these information structures is Day.

The period unit can only be changed if no actual data has been updated to the information structure.

You set the period unit for the information structures that are supplied as standard in Customizing for the Logistics Information System.

Update Check

You can perform an update check in two ways: have the system generate an update log or carry out an update simulation. Both functions are available in Customizing for the Logistics Information System.

Update Log

You can have the system log all updating activities so that you can monitor them. This update log shows you the data flow from Purchasing to the information structures, irrespective of the process or user involved.

Note that the update log is created only for the last process performed. The old entries in the update log are thus overwritten as soon as a new process is updated.

To make the settings for update logs, proceed as follows:

1. Choose *System → User defaults → User parameters* from the system menu.
2. Enter *MCL* in the *PID* field and put an *X* in the *Parameter value* field.
3. Save your entries.
4. To display the update log, choose *Logistics Information System → Logistics Data Warehouse → Data Basis → Updating → Updating Control → Update Check → Display Update Log.*

Generating an update log increases the load on the system. You should therefore deactivate the log settings once you have performed an update check.

Simulation

To check the updating of documents that have already been posted (in cases where changes have been made in Customizing, for example), you can generate update logs from any sales and distribution document without triggering updating for information structures. This method allows you to check how a document would be updated taking the new Customizing settings into account. This type of update log can also be used in productive systems without any problems.

Cancellations

It may sometimes be necessary to cancel an existing posting (due to errors entering data, for example). In RIS, this results in a reduction in the key figure affected.

The following processes reduce the original key figure:

- Cancellation of article document
- Cancellation of movement type

A good receipt is without a previous purchase order is posted with an external vendor (movement type 501). If the article document is cancelled or a goods receipt is posted with the cancellation movement type 502, the key figure "Goods receipt (external vendor)" in RIS is reduced.

Any changes to conditions that are made while you are using the cancellation movement type will result in incorrect value reductions in RIS. In cases such as this, you must cancel the material document.

Physical return deliveries must never be performed using a cancellation movement type, as this reduces key figures (such as Goods Receipt) without updating the complementary key figures (such as Returns).

Posting Quantities and Currencies

Quantities

Quantities are posted in the base unit of measure (this enables key figures to be compared).

The base unit of measure is the unit of measure that the system uses to manage the article stocks. This unit of measure is defined in the article master record.

- Sales quantities are generally converted to the base unit of measure.
- Different base units of measure can occur within a merchandise category. For information structures that have Merchandise Category as the lowest characteristic level, then, the last access determines the content of the base unit of measure field.
- If key figures that all have the same unit of measure are to be modeled (for example, sales in sales unit), this can be done using self-defined information structures

  In such cases, you must include the unit of measure concerned in the characteristics part (key) of the information structure.

Currencies

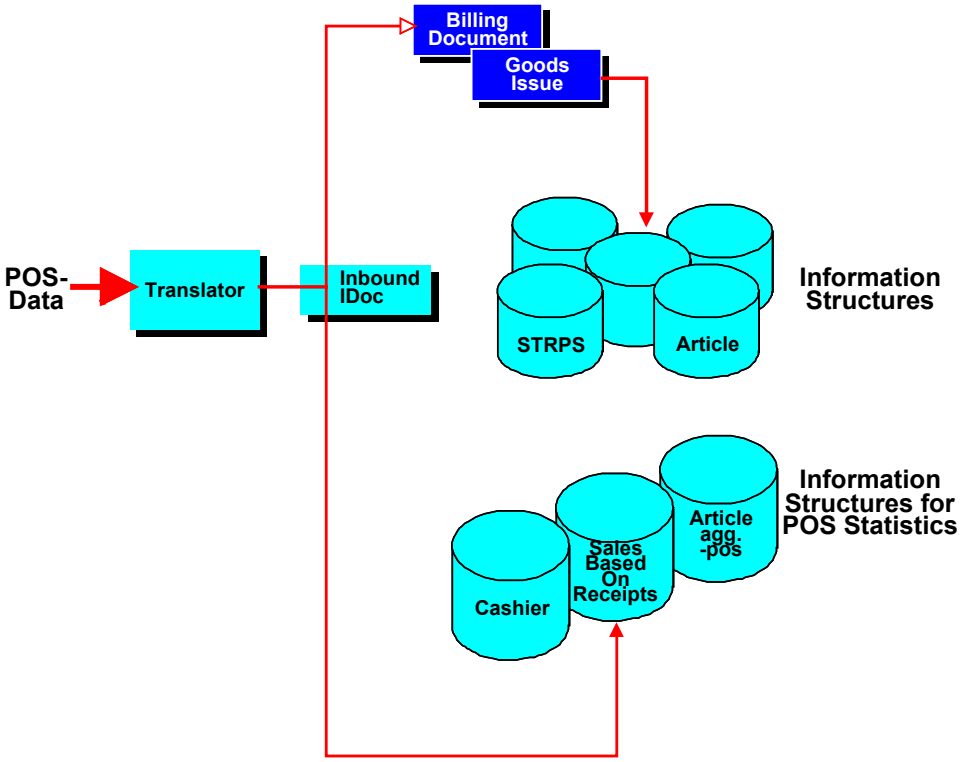
Currencies are always posted in the local currency. The local currency is stored in the company code. You make this setting in the Customizing menu under *Organization.*

POS Interface

The POS (Point of Sale interface) transfers POS data to the R/3 System. The POS data from the POS upload is posted to the operative system using billing. The communication structures are used to transfer this data to the information structures of the Retail Information System.

This data is generally aggregated at store/article level in order to keep the operational documents as small as possible. Data in this form is not suitable for detail analyses. You can use them for target/actual variances, but more detailed data is required for more precise analyses. For this reason, the POS interface can be used to transfer detailed data (either per transaction or aggregated) and cashier data to the information structures of the POS interface.

POS data is thus transferred in aggregated form to information structures S077-S087, S107 and S110 using the documents (billing, goods issue, and so on), while POS data per transaction is transferred to the information structures of the POS statistics (S120, S121, S122). This is shown by the following graphic.



Statistical setup cannot be performed for data that is transferred to the information structures of the POS statistics using the POS interface, as no documents are generated.

Standard Analyses in RIS

The Retail Information System contains a number of Standard Analyses [Ext.] to evaluate data from different perspectives. You can usually evaluate data at the merchandise category aggregation level in SAP Retail.

Information Structures [Page 266] form the basis for the standard analyses. During a standard analysis, data from the information structures is read, stock levels are calculated and the calculated key figures are determined.

You can use the Switch Information Structure [Ext.] function to execute a detail analysis at other levels. You can, for example, display all the articles for a merchandise category and use this function to change to the *Article* information structure (S085) or to *Article/Add-On* (S087), thus performing evaluations at a lower aggregation level.

You can use the Early Warning System for all standard analyses to set an Exception [Page 289] and display this in the exception analysis. The exception analysis acts as a filter; this means, *only* the exceptional situations are displayed. These can be highlighted in color. More information about the Early Warning System [Ext.] and other tools of the Logistics Information System can be found in the SAP Menu under *Info Systems* → *Logistics* → *Retail* → *Tools* in the documentation for LIS.

You can use the following standard analyses in the Retail Information System:

Retail-specific standard analyses

Business area	Standard analysis
Purchasing	Purchasing [Ext.]
	Open to Buy (Open-to-Buy) [Ext.]
	Subsequent Settlement [Ext.]
Sales	STRPS (Short-Term Retail Profitability Statement) [Ext.]
	Customer/Merchandise Category [Ext.]
Article	Article [Ext.]
	Article/Add-On [Ext.]
	Customer/Article [Ext.]
Special Processes	Promotion [Ext.]
	Season [Ext.]
	Perishables [Ext.]
	Physical Inventory [Ext.]
	Additionals [Ext.]
Sales Audit	Cashier [Ext.]
	Sales as per Receipts [Ext.]

Standard Analyses in RIS

	POS Balancing [Ext.]
	Article Aggregation at POS [Ext.]
Market-Basket Analysis	Sales as per Receipts [Ext.]
	Receipt [Ext.]
	Receipt/Article [Ext.]
	Companion Sales [Ext.]
Rough Workload Estimate	Overview [Ext.]

See also:

Procedures in Limit Planning [Page 287]

Exceptions [Page 289]

Retail Information System: Information Structures [Page 266]

Characteristics and Key Figures: Retail Information System [Page 290]

Procedures in Limit Planning

The open-to-buy function can be divided into three phases:

- Planning phase
- Purchasing phase
- Business phase

Planning phase

The season budget and the budget already released are calculated on the basis of monthly planning figures, sales, closing stock, markdowns and physical inventory differences.

If stock needs to be built up prior to the start of the actual selling period, then the planning period should also include the relevant periods prior to the start of the season. For these periods, you only plan the key figure “Closing stock.”

Purchasing phase

Long before the start of the actual planning period, you can enter purchase orders that have a delivery date during the planning period. The planned released budget is available for this. All purchase orders reduce the open-to-buy so that it always corresponds to the portion of the released budget which has not yet been spent.

Business phase

The updated actual figures for sales, stock and so on can now be compared with the planned figures. OTB in this phase is calculated using the planned and actual figures available. This helps to prevent strong planned/actual variances occurring. The goal is always to achieve the planned closing stock for the current period, so that discrepancies between planned and actual values do not affect the following periods.

If the actual sales for a period are more than the planned sales, then you will need to purchase more stock to reach the planned opening stock for the following period. If, on the other hand, the planned sales volume is not reached, you need to block further buying and stockpiling, and, if necessary, reduce the existing stock by creating a sales promotion or an inventory clearance.

Note the following:

- If the total quantity of goods actually received deviates from the total quantity contained in the purchase orders creating during the purchasing phase, then the OTB will be adjusted by the difference between these amounts.
  - If the good receipt time differs from the planned delivery time, the goods receipt quantity is posted to the corresponding period. As a result, only the outstanding purchase orders are taken into account for the delivery date, while goods receipts are included in the OTB calculation for the posting date.

    If goods receipt occurs earlier than planned, part of the OTB becomes available in the planned period and the goods receipt period is debited.

    If goods receipt occurs later than planned, OTB becomes available in the planned delivery period, which has already passed. This is not transferred into the subsequent

period because the amount has already been cleared by the lower opening stock at the start of the subsequent period (caused by the missed delivery).

- Whether and by what amount the actual sales volume deviates from the planned sales volume during the current period, can only be determined at the end of the period. For this reason, the sales volume at the end of the period is extrapolated for the OTB calculation of the current period. Also, the differences between the planned and actual values caused by the change in opening stock take effect, at the latest, in the subsequent period.
- Markdowns and physical inventory differences:

  If actual markdowns and inventory differences exceed the planned values, the differences are taken into account in the OTB calculation in the current period.

  If actual markdowns and inventory differences are less than planned, then the resulting differences in the planned and actual values only become effective in the subsequent period, in the form of higher opening stock.
- All actual goods movements that were not planned and were therefore not included in the budget calculation (for example, inventory clearances) affect OTB in the current period. For example, if merchandise is transferred to another store, then the OTB in the issuing store is increased so that the stock that is now lacking can be replaced.

With the above considerations, the unused OTB of completed periods is transferred to periods as far in the future as possible to prevent the planned and actual amounts from drifting apart over several periods.

Exceptions

This function allows you to define an exception in the Early Warning System. An exception consists of characteristics (or characteristic values), such as vendor or article, and requirements. Requirements can be created as threshold values (for example, article/vendor with an order value of more than 5000 euros), as trends (for example, positive trends in order values) or as planned/actual comparisons.

Characteristics and Key Figures

The following section lists in detail the characteristics and key figures of all standard analyses in the Retail Information System.

Note that virtually all key figures in the Retail Information System have more than one version. For example, the key figure Sales can appear in the following versions:

- Sales at cost without tax (cost)
- Sales at retail with tax (rtlT)
- Sales at retail without tax (rtl)
- Sales quantity

Those additional values that are exclusive to the Retail Information System can be found in brackets after the respective key figure.

For more information on the abbreviations used, see Abbreviations [Page 334].

STRPS

The STRPS analysis (short-term retail profitability statement) is based on data that is updated to the information structures S077 (movement data) and S078 (stock data). When a standard analysis is carried out, the data from both of these information structures is read, stock levels are calculated back to a certain point and the values of various key figures are calculated (information structure S079).

Characteristics

- Purchasing organization
- Sales organization
- Distribution channel
- Sales district
- Site category
- Site
- Merchandise category 2
- Merchandise category 1
- Merchandise category

Key Figures

- Issues (cost, quantity, cost with tax, rtl)
- Promotion sales (cost, quantity, cost with tax, rtl)
- Promotion sales margin (with tax, without tax)
- Article transfer posting: issues (number, cost, quantity, rtlT, rtl)
- Article transfer posting: receipts (number, cost, quantity, rtlT, rtl)
- Stock (at cost, quantity, rtlT, rtl)
- Stock adjustment: inventory difference - (number, cost, quantity, rtlT, rtl)
- Stock adjustment: inventory difference + (number, cost, quantity, rtlT, rtl)
- Stock adjustment: miscellaneous - (number, cost, quantity, rtlT, rtl)
- Stock adjustment: miscellaneous + (number, cost, quantity, rtlT, rtl)
- Stock margin (with tax, without tax)
- Purchase order margin (with tax, without tax)
- Purchase order volume (number, cost, quantity, rtlT, rtl)
- Revaluation at cost - (number, cost, quantity)
- Revaluation at cost + (number, cost, quantity)

STRPS

- GMROI (with tax, without tax)
- Annual inventory turn (quantity/value)
- Price reduction
- Range of coverage (quantity/value)
- Returns (number, cost, quantity, rtlT, rtl)
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Sales (at cost, quantity, rtlT, rtl)
- Sales margin (with tax, without tax)
- Inventory turn (quantity/value)
- Goods issue: distribution center (number, cost, quantity, rtlT, rtl)
- Goods clearing: issue (number, quantity, rtlT, rtl)
- Goods clearing: receipt (number, quantity, rtlT, rtl)
- Goods receipt: vendor (number, cost, quantity, rtlT, rtl)
- Goods receipt: distribution center (quantity, number, cost, rtlT, rtl)
- Goods receipt margin (with tax, without tax)
- Receipts (at cost, quantity, rtlT, rtl)

Purchasing

The purchasing analysis is based on data that is updated to the information structures S080 (movement data) and S081 (stock data). When a standard analysis is carried out, the data from both of these information structures is read, stock levels are calculated back to a certain point and the values of various key figures are calculated (information structure S082).

Characteristics

- Purchasing organization
- Purchasing area
- Purchasing group
- Vendor
- Site category
- Site
- Merchandise category 2
- Merchandise category 1
- Merchandise category

Key Figures

- Issues (cost, quantity, cost with tax, rtl)
- Promotion sales (cost, quantity, cost with tax, rtl)
- Promotion sales margin (with tax, without tax)
- Stock (at cost, quantity, rtlT, rtl)
- Stock margin (with tax, without tax)
- Purchase order volume (number, cost, quantity, rtlT, rtl)
- Purchase order margin (with tax, without tax)
- GMROI (with tax, without tax)
- Annual inventory turn (quantity/value)
- Range of coverage (quantity/value)
- Sales (at cost, quantity, rtlT, rtl)
- Sales margin (with tax, without tax)
- Sales deviation
- Inventory turn (quantity/value)
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Revaluation at retail - (number, quantity, rtlT, rtl)

Purchasing

- Goods issue: distribution center (number, cost, quantity, rtlT, rtl)
- Goods receipt: vendor (number, cost, quantity, rtlT, rtl)
- Goods receipt: distribution center (quantity, number, cost, rtlT, rtl)
- Goods receipt margin (with tax, without tax)
- Receipts (at cost, quantity, rtlT, rtl)

Subsequent Settlement

The data basis for the standard analysis for Subsequent Settlement is the data that is updated to information structure S015.

Characteristics

- Purchasing organization
- Purchasing group
- Site
- Merchandise category
- Condition granter
- Creditor
- Arrangement
- Settlement end

Key Figures

- Number of points to the condition record (arrangement) from the order items
- Gross weight to the condition record (arrangement) from the order items
- Quotient income of the condition record from the final settlement
- Income from the settlement of the condition record
- Total income of the condition record
- Net weight to the condition record (arrangement) from the order items
- Provision for condition income
- Sales to the condition record from the order items
- Sales quantity to the condition record (arrangement) from the order items
- Volume to the condition record (arrangement) from the order items
- Canceled provision for condition income

Article

The article analysis is based on data that is updated to the information structures S083 (movement data) and S084 (stock data). When a standard analysis is carried out, the data from both of these information structures is read, stock levels are calculated back to a certain point and the values of various key figures are calculated (information structure S085).

Characteristics

- Site
- Site category
- Vendor
- Merchandise category 2
- Merchandise category 1
- Merchandise category
- Season
- Price band category
- Article

Key Figures

- Issues (cost, quantity, cost with tax, rtl)
- Stock (at cost, quantity, rtlT, rtl)
- Stock margin (with tax, without tax)
- Purchase order volume (number, cost, quantity, rtlT, rtl)
- Purchase order margin (with tax, without tax)
- GMROI (with tax, without tax)
- Annual inventory turn (quantity/value)
- Range of coverage (quantity/value)
- Sales (at cost, quantity, rtlT, rtl)
- Sales margin (with tax, without tax)
- Sales deviation
- Inventory turn (quantity/value)
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Goods issue: distribution center (number, cost, quantity, rtlT, rtl)
- Goods receipt: vendor (number, cost, quantity, rtlT, rtl)

- Goods receipt: distribution center (quantity, number, cost, rtlT, rtl)
- Goods receipt margin (with tax, without tax)
- Receipts (at cost, quantity, rtlT, rtl)

Article/Add-On

The article/add-on standard analysis is based on data that is updated to the information structure S087.

Characteristics

- Site
- Site category
- Vendor
- Merchandise category
- Article

Key Figures

- Stock adjustment: inventory difference + (number, cost, quantity, rtlT, rtl)
- Stock adjustment: inventory difference + (number, cost, quantity, rtlT, rtl)
- Stock adjustment: miscellaneous + (number, cost, quantity, rtlT, rtl)
- Stock adjustment: miscellaneous - (number, cost, quantity, rtlT, rtl)
- Revaluation at cost + (number, cost, quantity)
- Revaluation at cost - (number, cost, quantity)
- Article transfer posting: receipts (number, cost, quantity, rtlT, rtl)
- Article transfer posting: issues (number, cost, quantity, rtlT, rtl)
- Returns (number, cost, quantity, rtlT, rtl)
- Goods clearing: issue (number, cost, quantity, rtlT, rtl)
- Goods clearing: receipt (number, cost, quantity, rtlT, rtl)

Promotion

The Promotion standard analysis is based on data that is updated to the information structure S086.

Characteristics

- Promotion
- Site
- Site category
- Merchandise category 2
- Merchandise category 1
- Merchandise category
- Article
- Promotion category
- Theme

Key Figures

- Purchase order volume (number, cost, quantity, rtlT, rtl)
- Purchase order margin (with tax, without tax)
- Sales (at cost, quantity, rtlT, rtl)
- Sales margin (with tax, without tax)
- Sales deviation
- Goods issue: distribution center (number, cost, quantity, rtlT, rtl)
- Goods receipt: vendor (number, cost, quantity, rtlT, rtl)
- Goods receipt: distribution center (quantity, number, cost, rtlT, rtl)
- Goods receipt margin (with tax, without tax)

Season

The *Season* analysis is based on data that is updated to information structures S105 (movement data) and S106 (stock data). When a standard analysis is carried out, the data from both of these information structures is read, stock levels are calculated back to a certain point and the values of various key figures are calculated (information structure S107).

Characteristics

- Purchasing group
- Site
- Vendor
- Merchandise category
  - General configurable article
  - Article
  - Season year
  - Season
  - Price band category

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

- Characteristic 1
- Characteristic 2
- Characteristic 3
- Merchandise category 1
- Merchandise category 2

Key Figures

- Issues Open Purchase Order Quantity (at cost, quantity, rtlT, rtl)
- Issues (cost, quantity, cost with tax, rtl)
- Sales quota (quantity, value)
- Promotion sales (cost, quantity, cost with tax, rtl)
- Promotion sales margin (with tax, without tax)
- Stock (at cost, quantity, rtlT, rtl)
- Stock margin (with tax, without tax)

  - First receipt
  - Fictitious stock
  - Fictitious sales
  - GMROI (with tax, without tax)
  - Annual inventory turn (quantity/value)
  - Characteristic (1, 2, 3)
  - Open on-order stock (at cost, rtlT, rtl)
  - Open on-order stock margin (with tax, without tax)
- Range of coverage (quantity/value)
- End of season stock (at cost, quantity, rtlT, rtl)
- Number of days on sale
- Sales (at cost, quantity, rtlT, rtl)
- Sales deviation
- Sales margin (with tax, without tax)
- Inventory turn (quantity, cost, rtl, rtlT)
- Original retail price
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Revaluation at retail - (number, quantity, rtlT, rtl)
- Goods issue: distribution center (number, at cost, quantity, rtlT)
- Goods clearing: issue (number, cost, quantity, rtlT, rtl)
- Goods clearing: receipt (number, cost, quantity, rtlT, rtl)
- Merchandise category 1, 2
- Receipt on-order stock (cost, quantity, rtlT, rtl)
- Receipts (at cost, quantity, rtlT, rtl)

Customer/Merchandise Category

The customer/merchandise category analysis is based on data that is updated to the information structure S123.

Characteristics

- Purchasing organization
- Sales organization
- Sales district
- Site
- Sold-to party
- Merchandise category 2
- Merchandise category 1
- Merchandise category

Further Selection Criteria

- Payer
- Customer group

Key Figures

- Promotion sales (cost, rtlT, rtl, margin with tax, margin)
- Credit memos (cost price, quantity, rtlT, rtl)
- Credit memo deviation
- Sales orders (quantity, number, cost, rtlT, rtl, margin with tax, margin)
- Deliveries (number, quantity)
- Open sales orders (quantity, value)
- Return orders (number, cost, quantity, rtlT, rtl
- Return orders (number, cost, quantity, rtl, rtlT)
- Return deliveries (number, quantity)
- Third-party orders (number, cost, quantity, rtlT, rtl, margin with tax, margin)
- Third-party sales (cost, quantity, rtlT, rtl)
- Third-party sales deviation
- Sales absolute (cost, quantity, rtlT, rtl)
- Sales deviation

Customer/Article

The customer/article analysis is based on data that is updated to the information structure S124.

Characteristics

- Site
- Sold-to party
- Merchandise category 2
- Merchandise category 1
- Merchandise category
- Season
- Price band category
- Article

Further Selection Criteria

- Vendor
- Payer
- Customer group
- Assortment owner

Key Figures

- Promotion sales (quantity, cost, rtlT, rtl, margin with tax, margin)
- Credit memos (cost, quantity, rtlT, rtl)
- Credit memo deviation
- Sales orders (quantity, number, cost, rtlT, rtl, margin with tax, margin)
- Deliveries (number, quantity)
- Open sales orders (quantity, value)
- Return orders (number, cost, quantity, rtl, rtlT)
- Return deliveries (number, quantity)
- Third-party orders (number, cost, quantity, rtlT, rtl, margin with tax, margin)
- Third-party sales (cost, quantity, rtlT, rtl)
- Third-party sales deviation
- Sales absolute (cost, quantity, rtlT, rtl)
- Sales deviation (absolute)

Article Aggregation - POS

The article aggregation - POS standard analysis is based on data that is updated to the information structure S121.

Characteristics

- Merchandise category
- Article
- Site
- Promotion
- Condition type

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

- Sales district

Key Figures

- Price difference SAP System --> POS
- Price reduction
- Sales (cost, rtlT, rtl, quantity)
- Sales margin without tax

Cashier

The cashier analysis is based on data that is updated to the information structure S122.

Characteristics

- Site
- Cashier number
- POS number
- POS group
- Condition type
- Operation

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

- Cashier name
- Condition type ID
- Sales district
- Sales organization
- Distribution channel

Key Figures

- Number of scanned articles
- Number of terminations
- Number of transactions
- Number of cancelled transactions
- Number of immediate cancellations
- Number of line cancellations
- Number of merchandise category article sales
- Actual POS amount
- Target POS amount
- POS difference negative
- POS difference positive
- Price difference POS
- Price reduction

Cashier

- Transaction cancellation quota
- Line cancellation quota
- Immediate cancellation quota
- Scanning rate
- Value of transaction cancellations
- Value of immediate cancellations
- Value of line cancellations
- Value of terminations
- Value of scan articles
- Value check > limit
- Value of merchandise group sales
- Value of terminations
- Logon time
- Number of times cash drawer was opened
- Number of conditions
- Number of incorrect logons
- Number of items
- Sales rtlT
- Sales rtl
- Register time
- Bank sales
- Sales removed
- Number of reports

Sales As Per Receipts

The standard analysis of sales based on receipts is based on data that is updated to the information structure S120.

Characteristics

- Site
- POS group
- POS number
- Transaction number
- Article
- EAN/UPC code
- Condition type
- Operation
- Condition number

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

- Promotion number
- Merchandise category
- Hour of sale
- Payment method
- Customer
- Sales organization
- Distribution channel
- Sales district
- Payment card number
- Payment card type
- Cashier name
- Cashier number
- Sales group
- Vendor number

Sales As Per Receipts

Key Figures

- Number of transaction items
- Number of transactions
- Average sales per transaction
- Average number of items per transaction
- Price difference POS
- Price reduction (total)
- Sales (cost, quantity, rtlT, rtl)
- Sales margin (with/without tax)
- Number of conditions
- Commission amount
- Sales per means of payment

POS Balancing

The *POS Balancing* standard analysis is based on data in the information structure S122.

Characteristics

- Site
- Cashier number
- POS number
- POS group
- Condition type
- Operation

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

- Cashier name
- Condition type ID
- Sales district
- Sales organization
- Distribution channel

Key Figures

- Cashier:
  - Sales (rtlT, rtl)
  - Number of receipts
  - Number of items
  - Number of conditions
  - Price difference POS
  - Price reduction (total)
- Receipt:
  - Sales (rtlT, rtl)
  - Number of receipts
  - Number of items
  - Number of conditions
  - Price difference POS

POS Balancing

  - Price reduction (total)
- Difference:
  - Sales (rtlT, rtl)
  - Number of receipts
  - Number of items
  - Number of conditions
  - Price difference POS
  - Price reduction (total)
- Actual POS amount
- Absolute POS difference
- POS difference negative
- POS difference positive
- Sales by means of payment

Receipt

Characteristics

- Transaction number
- Site
- Sales promotion ID
- Calendar week
- Weekday
- Time of day class
- Hour of sale

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

- Customer ID
- Customer
- Card number
- Time
- Month
- Quarter
- Year

Key Figures

- Sales (quantity/value)
- Total value of sales
- Price reduction (total)
- Number of transactions
- Number of items
- Number of merchandise categories
- Number of sales promotion items
- Number of known customers
- Number of anonymous customers (with card)
- Number of anonymous customers (without card)
- Average price

Receipt

- Average price reduction
- Average number of items
- Average number of merchandise categories
- Proportion of promotion sales
- Usage intensity
- Average transaction sales
- Scanning rate
- Proportion of known customers
- Proportion of anonymous customers (with card)
- Proportion of anonymous customers (without card)

Receipt/Article

The standard analysis is based on the information structure S117.

Characteristics

Transaction number

Site

Merchandise category

Article

Sales promotion ID

Calendar week

Weekday

Time of day class

Hour of sale

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

Article category

Article type

Price band

Season category

Season year

General configurable article

Article short text

Promotion

Promotion category

Promotion theme

Catalog

Customer ID

Customer

Credit card number

Month

Quarter

Year

Time

Key Figures

Sales (quantity/value)

Price reduction (total)

Number of items

Number of sales promotion items

Average price

Average price reduction

Proportion of promotion sales

Open-To-Buy

The open-to-buy analysis is based on data in information structure S110. In addition to updated actual figures, planning figures from flexible planning can also be included in this standard analysis

Characteristics

Season

Purchasing organization

Sales organization

Distribution channel

Merchandise category 2

Merchandise category 1

Merchandise category

Price band category

Site

The information structure S110 contains the characteristics *Season* and *Price band* in the characteristics section. The system writes ‘dummy values’ to the information structure for those articles that are not assigned to a season or price band in the article master.

Key Figures

Key Figure	Comment
Sales volume	As a planned figure and updated actual figure
Price reduction	As an updated actual figure
Closing stock	As a planned figure and a calculated actual figure
Inventory difference	As a planned figure and an updated actual figure
Markdown	As a planned figure and an updated actual figure
Total budget	Calculated from the planned figures
Pre-order quota	As a planned figure
Pre-order budget	Calculated from the planned figures
Reserve budget	Calculated from the planned figures

Open-To-Buy

Outstanding order volume (vendor)	As an updated actual figure
Outstanding stock transfer order volume (receiving site)	As an updated actual figure
Outstanding stock transfer order volume (delivering site)	As an updated actual figure
Receipts	As an updated actual figure
Issues	As an updated actual figure
OTB relating to the total budget (OTB_T)	Calculated from planned and actual figures
OTB relating to the pre-order budget (OTB_P)	Calculated from planned and actual figures
Average price band price	Imported from an external table

Perishables

This standard analysis is based on data that is updated to information structure S160.

Characteristics

Purchasing group

Site

Site category

Vendor

Merchandise category

General configurable article

Article

Further Selection Criteria

Sales department

Characteristic 1

Characteristic 2

Characteristic 3

Key Figures

Order volume (cost, quantity, rtlT, rtl)

Goods receipt (cost, quantity, rtlT, rtl)

Returns (cost, quantity, rtlT, rtl)

Stock transport order (cost, quantity, rtlT, rtl)

Stock transport order 2 (cost, quantity, rtlT, rtl)

Goods issue: distribution center (cost, quantity, rtlT, rtl)

Goods receipt: distribution center (cost, quantity, rtlT, rtl)

Goods clearing: issue (cost, quantity, rtlT, rtl)

Goods clearing: receipt (cost, quantity, rtlT, rtl)

Stock adjustment: miscellaneous (cost, quantity, rtlT, rtl)

Sales orders (cost, quantity, rtlT, rtl)

Deliveries (quantity)

Sales (cost, quantity, rtlT, rtl)

Sales deviation

Purchase order margin (with tax, without tax)

Perishables

Stock transport order margin (with tax, without tax)

Goods receipt margin (with tax, without tax)

Sales margin (with tax, without tax)

Sales order margin (with tax, without tax)

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Physical Inventory

This standard analysis is based on data that is updated to information structure S200.

Characteristics

Physical inventory number

Site

Storage location

Merchandise category

Article

Batch

Special stock

Stock type

Status of inventory

Further Selection Criteria

General configurable article

Site category

Sales department

Value-only article - key figure

Key Figures

Book inventory balance (cost, quantity, rtlT, rtl)

Counted stock (cost, quantity, rtlT, rtl)

Inventory difference - (cost, quantity, rtlT, rtl)

Inventory difference + (cost, quantity, rtlT, rtl)

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Additionals

The *Additionals* standard analysis is based on data in information structure S108.

Characteristics

Site

Site ID

Vendor

Customer

Merchandise category

General configurable material

Article

Application

Further Selection Criteria

For more information, see Further Selection Criteria [Page 333]

Additional 1

Additional 2

Additional 3

Key Figures

Additional (quantity, number, cost, rtlT, rtl)

Processing time

Base costs (material costs)

Labor costs

Proportion of additionals costs in cost

Average number of additionals

Total cost of additionals

Margin with regard to additionals

Margin without regard to additionals

Rough Workload Preview: General Overview

This standard analysis is based on data that is updated to information structure S150.

Characteristics

Day on which workload is expected

Warehouse number

Warehouse process

Goods category (normal or promotional merchandise)

Document category (purchase order, sales order, delivery, stock transport order and corresponding returns)

Unit of measure load category

Shipping material type (only when customer enhancement exists)

Time slot (only when customer enhancement exists)

Key Figures

Quantity

Increase

Reduction

Delta

Weight

Increase

Reduction

Delta

Volume

Increase

Reduction

Delta

Processing time

Increase

Reduction

Delta

Number of Document Items/Schedule Lines

Increase

Reduction

Rough Workload Preview: General Overview

Delta

Shipping Material

Increase

Reduction

Delta

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Rough Workload Estimate: Goods Receipt/Put Away

This standard analysis is based on data that is updated to information structure S150.

Characteristics

Day on which workload is expected

Warehouse number

Warehouse process

Goods category (normal or promotional merchandise)

Document category (purchase order, sales order, delivery, stock transport order and corresponding returns)

Unit of measure load category

Shipping material type (only when customer enhancement exists)

Time slot (only when customer enhancement exists)

Key Figures

Quantity - increase

- Quantity - reduction
- Quantity - delta

Weight - increase

- Weight - reduction
- Weight - delta

Volume - increase

- Volume - reduction
- Volume - delta

Processing time - increase

- Processing time - reduction
- Processing time - delta

Number of document items/schedule lines - increase

- Number of document items/schedule lines - reduction
- Number of document items/schedule lines - delta

Shipping material - increase

- Shipping material - reduction
- Shipping material - delta

Rough Workload Estimate: Goods Receipt/Put Away

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Rough Workload Estimate: Customer/Store Returns

This standard analysis is based on data that is updated to information structure S150.

Characteristics

Day on which workload is expected

Warehouse number

Warehouse process

Goods category (normal or promotional merchandise)

Document category (purchase order, sales order, delivery, stock transport order and corresponding returns)

Unit of measure load category

Shipping material type (only when customer enhancement exists)

Time slot (only when customer enhancement exists)

Key Figures

Quantity

Increase

Reduction

Delta

Weight

Increase

Reduction

Delta

Volume

Increase

Reduction

Delta

Processing time

Increase

Reduction

Delta

Number of Document Items/Schedule Lines

Increase

Reduction

Rough Workload Estimate: Customer/Store Returns

Delta

Shipping Material

Increase

Reduction

Delta

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Rough Workload Preview: Picking/Goods Issue

This standard analysis is based on data that is updated to information structure S152.

Characteristics

Day on which workload is expected

Warehouse number

Warehouse process

Goods category (normal or promotional merchandise)

Document category (purchase order, sales order, delivery, stock transport order and corresponding returns)

Unit of measure load category

Shipping material type (only when customer enhancement exists)

Time slot (only when customer enhancement exists)

Planned storage type

Planned picking area

Delivery priority

Key Figures

Quantity

Increase

Reduction

Delta

Weight

Increase

Reduction

Delta

Volume

Increase

Reduction

Delta

Processing time

Increase

Reduction

Delta

Number of Document Items/Schedule Lines

Rough Workload Preview: Picking/Goods Issue

Increase

Reduction

Delta

Shipping Material

Increase

Reduction

Delta

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Rough Workload Preview: Vendor Returns

This standard analysis is based on data that is updated to information structure S152.

Characteristics

Day on which workload is expected

Warehouse number

Warehouse process

Goods category (normal or promotional merchandise)

Document category (purchase order, sales order, delivery, stock transport order and corresponding returns)

Unit of measure load category

Shipping material type (only when customer enhancement exists)

Time slot (only when customer enhancement exists)

Planned storage type

Planned picking area

Delivery priority

Key Figures

Quantity

Increase

Reduction

Delta

Weight

Increase

Reduction

Delta

Volume

Increase

Reduction

Delta

Processing time

Increase

Reduction

Delta

Rough Workload Preview: Vendor Returns

Number of Document Items/Schedule Lines

Increase

Reduction

Delta

Shipping Material

Increase

Reduction

Delta

See also:

Characteristics and Key Figures: Retail Information System [Page 290]

Further Selection Criteria

In LIS it is possible to add additional selection and drill-down parameters to the characteristic section of the information structures (a maximum of nine characteristics). If a standard analysis is based on an information structure that makes use of this function, you will see additional selection criteria in the standard analysis selection screen.

This allows you to gain additional information about the characteristics in the information structure during the standard analysis. For example, you restrict your selection to characteristics with specific criteria, such as articles with the color red, or articles with a specific fashion indicator.

Abbreviations

Abbreviation	Definition
No.Tr.	Number of transactions
BUn	Base unit of measure
CP	Cost price
Cost with tax	Cost price with tax
Cost	Cost price without tax
MAP	Moving average price
GMROI	Gross margin return on inventory investment
ID	Inventory difference
STRPS	Short-term retail profitability statement
Margin with tax	Margin with tax
Margin	Margin without tax
Tax	Tax
OTB	Open-To-Buy
POS	Point of sale (POS)
RIS	**R**etail **I**nformation **S**ystem
Rtl	Retail price
RtlT	Retail price with tax
Rtl	Retail price without tax
DC	Distribution center
GI	Goods issue
GR	Goods receipt

See also:

How Key Figures Are Calculated [Page 335]

How Key Figures are Calculated

This section contains information about how key figures are calculated in the Retail Information System. In this section, the key figures are divided into the following categories:

Information on the key figures is also available via the F1 Help key, directly in the system. You can call up the F1 Help in the standard analyses in all of the key figures in the initial or drill-down lists. You can also call up the F1 Help for key figures in the screens *All key figures* or *Select key figures* for each key figure.

For more information on the abbreviations used, see Abbreviations [Page 334].

Key Figures: Purchasing

Order Volume

Order volume comprises all orders in Purchasing involving external vendors. The period allocation is usually based on the purchase order date.

This key figure is displayed in a variety of versions (quantity, cost, rtlT, rtl, number of transactions).

Stock transport orders (internal orders) are not included in the key figure. In the case of cross-company code stock transport orders, the site that issues the stock is updated as the vendor.

Order Stock: Issues

This key figure basically shows the goods receipts resulting from purchase orders involving external vendors.

Updating takes place on the delivery date of the respective purchase order.

This key figure is displayed in a variety of versions (number, quantity, cost, rtlT, rtl).

The issue of order stock causes the open order stock to be reduced. Internal goods receipts due to stock transfers are not taken into account.

Order Stock: Receipts

Receipts of purchase orders from external vendors.

This key figure is displayed in a variety of versions (number, quantity, cost, rtlT, rtl).

Updating takes place in accordance with the delivery date.

The receipt of order stock causes the open order stock to increase.
Internal orders (for example, stock transfer orders) are not taken into account.

Original Retail Price

The original retail price is the retail price of an article (including tax) at the time of the first purchase order or the first receipt/issue in the respective store. This retail price does not change again.

The original sales price is calculated from the sales price of the goods received or the purchase order divided by the quantity. The key figure value for the retail price always includes tax.

Note that in the standard analyses, a store and an article need to be specified for this key figure.

This key figure is included in the calculation of the key figures “fictitious stock” and “fictitious sales”.

Stock Transport Order

This key figure represents the order volume that consists of all the purchase orders of one site (usually a store) at other sites.

Updating of this key figure is based on a stock transport order.

Here, the ordering site and the supplying site (usually a distribution center) are both sites in the same company code.

This key figure is expressed on terms of the following: number of transactions, cost, quantity in BUn, rtl, rtlT, volume, weight.

The key figure “stock transport order 2” is, as a rule (see information structure S160 "Perishables"), updated in parallel to this key figure and represents the transaction from the perspective of the supplying site.

Stock Transport Order 2 (Supplying Site View)

This key figure represents the order volume that consists of all the purchase orders of sites at one site (usually a distribution center).

Updating of this key figure is based on a stock transport order. Here, the ordering sites (distribution center, store) and the supplying site are all sites in one company code.

This key figure is expressed in terms of the following: number of transactions, cost, quantity in BUn, rtl, rtlT, volume, weight.

The key figure “stock transport order” is, as a rule (see information structure S160 "Perishables"), updated in parallel to this key figure and represents the transaction from the perspective of the ordering site.

See also:

How Key Figures Are Calculated [Page 335]

Key Figures: Subsequent Settlement

This section contains information about how the key figures of the subsequent settlement analysis are calculated.

There are conditions that vendors grant retailers, for example, for:

The purchase of goods

Punctual payment of vendor invoices

Running promotions

Contribution to the costs incurred in retail (for example, disposal costs)

There are two types of conditions: conditions requiring immediate settlement and conditions requiring subsequent settlement. Conditions requiring immediate settlement are taken into consideration directly with the vendor invoices or when these invoices are settled and are therefore not part of the subsequent settlement. Conditions requiring subsequent settlement (indicated as subsequent settlement) are to be subsequently settled with the vendor.

The key figures of the subsequent settlement standard analysis are updated to the information structure S015 when an invoice is received for a purchase order (vendor business volume) or when an arrangement is subsequently settled (income) by credit memo/billing document.

The key figures for subsequent settlement are divided into two groups as follows:

Subsequent Settlement: Amounts [Page 343]

Quantities [Page 341]

See also:

How Key Figures Are Calculated [Page 335]

Income Fin. Settlemt / Cond. Rec'd / Totl Income Cond. Rec'd

An arrangement is valid from 01.01 to 31.12.

Two different scenarios are possible:

The arrangement is settled once only.

If the arrangement is subject to once-only settlement, you can, for example, agree on a condition stipulating a rebate of 3%. If the vendor business volume amounts to $100,000, this would result in an income of $3,000, which is updated to the key figure “condition record income”. There is no final settlement income in this case, therefore the key figure “final settlement income” is not updated.

The arrangement is settled periodically.

If the arrangement is settled periodically, (e.g. on a quarterly basis), you can, for example, agree on a condition stipulating a rebate of 3%. The income for the periods is updated to the key figure “condition record income”:

1. quarter: vendor business volume $20,000 --> condition record income: $600

2. quarter: vendor business volume $30,000 --> condition record income: $900

3. quarter: vendor business volume $20,000 --> condition record income: $600

4. quarter: vendor business volume $30,000 --> condition record income: $900

For final settlement, you agree a condition of 5% as of $75,000 annual sales.

$3 000 have already been paid out. The “final settlement income” therefore amounts to $2,000:

Final settlement income: $100 000 * 0,05 = $5 000 - $3 000 = $**2 000**

The first quarter yields a proportionate income of $400, which is updated to the key figure “final settlement income” and is allocated to the respective period. This proportionate income is calculated as follows:

1. 1st quarter “Final settlement income”:

Final Settlement Income

---------- * Business volume for 1st quarter =

Total business volume

$2,000

---------- * $20,000 = **$400**

$100,000

The key figure *“Total income from the condition record*” for the first quarter is the sum of the condition record income (interim settlement) and the proportionate income from the final settlement (1st quarter final settlement income). Therefore, in the above example:

Total income condition record (1st quarter): $600 + $400 = $**1000**

Income Fin. Settlemt / Cond. Rec'd / Totl Income Cond. Rec'd

Here the key figures are also updated at the level of the months involved, so that you can analyze the key figures on a monthly basis. This means that all income for the first quarter is divided up further over the months January, February, and March.

Subsequent Settlement: Quantities

The key figures described below refer to the condition record for the order item. The order item must be relevant for subsequent settlement for these key figures to be updated. This is controlled by the corresponding indicator in the vendor master, in the purchasing info record or in the purchase order item.

In the standard system, these key figures are updated to the information structure S015 upon invoice receipt on the document date. At the same time, the data is allocated to the respective condition record. This means that the data is available for the condition record, and can also be analyzed on a monthly basis (for arrangements settled on a quarterly basis, for example). In order for updating to take place, it must be possible to determine a condition record of the arrangement in Subsequent Settlement during price determination (purchase order or goods receipt).

Note that for arrangements that are settled periodically, data is determined for the respective condition record (period) that is valid on the document date of invoice verification. The condition record valid at the time of invoice verification can differ from the condition record valid during price determination (purchase order or goods receipt).

Weights

Net weight

Net weight for the condition record (arrangement) from the purchase order items.

Gross weight

Gross weight for the condition record (arrangement) from the purchase order items.

Gross/net weight is saved in the article master or in the purchasing info record, or can be entered manually in the order document.

Updating of both these key figures always takes place when the reference magnitude or the calculation rule refers to the gross or net weight. In the case of arrangements that require periodic settlement, the calculation rule concerned may be the calculation rule defined for final settlement.

Quantity of Vendor Business Volume

Quantitative business volume to the condition record (arrangement) from the order items.

This key figure is always updated when the reference magnitude or the calculation rule refers to the quantity. In order for updating to take place, it must be possible to convert the quantity into the units of measure in the condition record. In order for updating to take place, it must be possible to convert the quantity into the units of measure in the condition record.

Volume

Volume for the condition record (arrangement) from the purchase order items.

The volume of the material is specified in the material master or in the purchasing info record, or can be manually entered in the order document.

Subsequent Settlement: Quantities

If the reference magnitude or the calculation rule in a condition record does not refer to the volume, then the volume is updated for purposes of information only.

Number of Points

Number of points for the condition record (arrangement) from the purchase order items.

The number of points of an article is saved in the purchasing info record, or can be manually entered in the order document.

This key figure is always updated when the reference magnitude or the calculation rule refers to the points. For arrangements that are settled periodically, this can also be the calculation rule of the condition record in final settlement.

Subsequent Settlement: Amounts

Condition Record Income

Amount resulting from the settlement of the cumulative business volume relevant to the condition record.

The income from arrangements that are to be settled once only and the income from interim settlements of arrangements that are to be settled periodically are updated under this key figure.

Final Settlement Income

Income arising from the final settlement of an arrangement that is to be settled periodically.

This income is based on the total business volume achieved over the validity period (for example, annual business volume). Income already received from previous interim settlements are cleared in the process.

Total Income from the Condition Record

The key figure “total income from the condition record” describes the total income derived from the settlements, i.e. the sum of the key figures “condition record income” and “final settlement income” (proportion of the income from the final settlement). If no final settlement is carried out, the “total income from the condition record” is equal to the “condition record income”.

Settlement Documents and Arrangements

The income derived from the settlements of an arrangement is updated to information structure S015 when the settlement document is updated in Financial Accounting.

Irrespective of the date of the document, the income is allocated proportionately to all data records in the information structure that belong to the condition record for which settlement is due. The income due on the basis of the final settlements is distributed proportionately between all condition records of the various periods. In the same way, the income is divided up between all the characteristics in question (purchasing organization, purchasing group, merchandise category, plant, month).

By using two income key figures (final settlement income and condition record income) you can always determine which proportion of the income originates from interim settlements and which amount is a result of the final settlement (e.g. due to a higher scale level or a business volume comparison and arrangement). You can use this information to create optimization strategies.

In Customizing under the arrangement type, you can determine whether final settlement accounting should be carried out or not. Note the settings that you can make in Customizing under the arrangement type:

If you have determined in Customizing under the arrangement type that the settlements of the arrangement occur only once the 'valid to' date of the arrangement has been reached, no final settlement will occur. Only the key figure “Income condition record” will then be updated; the key figure “Income final settlement” will not be updated in this case.

If you have specified in Customizing under the arrangement type that an arrangement should be settled periodically, then only the key figure “condition record income” is updated using the interim settlement data of the arrangement (settlement accounting of the condition records for the various periods).

Examples [Page 339]

Provision for Accrued Condition Income / Dissolved Provision for Accrued Condition Income

As payments always occur once the validity period of the arrangement has ended, you have the option of posting provisions for accrued condition income for condition records. You first need to ensure that the *Provision* indicator is marked in Customizing for the condition type.
The provision for accrued income enables you to influence price valuation on the basis of income that is expected from a later settlement. The provision for accrued income reduces the effective price, thus affecting the price valuation.

A purchase order of 10 articles with a unit price of 10 USD is activated.

The following has been determined for an end-of-period refund:

1 USD per piece

1.50 USD for purchases of 1000 pieces

The article can only be valuated at 9 USD per piece, as a subsequent income of at least 1 USD per piece is expected.

When settlement takes place, the provision for accrued income is dissolved and updated to the information structure S015 under the key figure “dissolved provision for accrued income”.

Updating of the key figure “provision for accrued income” takes place during invoice verification and data is updated to the information structure S015.

Vendor Business Volume

Sales for the condition record (arrangement) from the purchase order items.

In order for sales to be updated to a purchase order item, this purchase order item must be relevant for Subsequent Settlement. This is controlled by the corresponding indicator in the vendor master, in the purchasing info record or in the purchase order item.

In Customizing for the arrangement type, you can specify what is to be updated as vendor business volume:

The business volume from the order item (in accordance with the condition basis for the level of the calculation schema)

or

The net value from invoice verification

In the standard system, the vendor business volume is updated to the document date upon invoice receipt. At the same time, the data is allocated to the respective condition record. This means that the data is available for the condition record, and can also be analyzed on a monthly basis (for arrangements settled on a quarterly basis, for example).

Note that in the case of arrangements that are settled periodically, data is determined for the respective condition record (period) that is valid on the document date of invoice verification. The condition record valid at the time of invoice verification can differ from the condition record valid during price determination (purchase order or goods receipt).

Key Figures: Inventory Management

Stock

The stock that is available on a particular key date.

The valuated stock is established, that is, stock categories such as the vendor consignment stock are not contained in this key figure.

The stock is balanced on a higher aggregation level.

This key figure is displayed in a variety of versions (cost, rtlT, rtl, number of transactions).

Goods Receipt from External Vendors

Goods receipt that refers to a purchase order for an external vendor.

The system automatically proposes this key figure for goods receipts for which no purchase order exists, but which are posted under Goods receipts *Miscellaneous* and for which a vendor has been entered. This is also valid when transferring stock from vendor consignment stock to unrestricted-use stock.

The system also proposes this key figure for goods receipt posting of cross-company code purchase orders.

Updating is performed on the basis of the posting date.

This key figure is displayed in a variety of versions in the standard analyses (quantity, cost, rtlT, rtl, number of transactions).

This key figure is calculated in differently in the RIS and Purchasing Information System (PURCHIS). In PURCHIS, only goods receipts based on purchase orders from the Purchasing application are updated as goods receipts.

If the vendor is known at the time of goods receipt, this goods receipt is automatically proposed for this vendor during updating. In order to ensure consistent inventory management, receipt of stock is automatically attributed to the regular vendor.

Returns (to External Vendors)

Returns from a store or a distribution center to an external vendor. Updating is performed on the posting date in the standard system.

This key figure is displayed in a variety of versions (quantity, cost, rtlT, rtl, number of transactions).

Returns are updated in the standard system for the vendor, and the resulting issues or inventory update is performed for the regular vendor in order to ensure consistent inventory management.

Stock Transfers

Goods Issue/Receipt from Distribution Center

This key figure contains all goods receipts and issues originating from a distribution center. No distinction is made between the different types of goods movement (sorting of storage section, assignment to distribution center, transit goods receipts). In contrast to the merchandising clearing, this refers to planned stock transfers between sites.

Goods receipts and issues are caused by the following business transactions:

Receipt of transit goods intended for another site

Regular requirements from sites (for example, automatic subsequent buying)

Special requirements from sites (for example, MDE subsequent claims)

Assignments to sites from the distribution center (planned and unplanned)

Goods receipts in a store differ from the goods receipts of external vendors in that the supplying plant is a distribution center.

Goods issues and goods receipts postings from the distribution center automatically trigger a goods receipt and goods issue posting. Updating is performed on the basis of the posting date. The key figure is displayed in a variety of ways: number of transactions, cost, rtlT, rtl, quantity.

Merchandise Clearing (Goods Receipt/Issue)

Merchandise clearing is the unplanned moving of articles from one store to another, or to a distribution center. The key figure offers a overview of logistical "incorrect estimates" within an area of responsibility.

This movement causes two stock changes:

Reduction in the stores returning goods (merchandise clearing: goods issue)

Increase in the sites receiving goods (merchandise clearing: goods receipt)

This key figure is displayed in a variety of versions (quantity, cost, rtlT, rtl, number of transactions) and updated at the posting date.

Article Transfer Posting

Transfer posting refers to the unplanned movement of merchandise within a site. Two articles are always affected by a transfer posting. Article transfer postings may be necessary when assortment transfer postings are performed. For example, a six-pack of beer may be opened, because the articles are to be sold separately.

Article transfer postings are divided into two categories according to whether they are:

Receipt (inward movement of an article)

Issue (outward movement of an article)

This key figure is displayed in a variety of versions (quantity, cost, rtlT, rtl, number) and updated for the posting date.

An article transfer posting always results in a receipt and an issue posting.

Stock Adjustment

Stock adjustments are adjustments within a site with reference to an article. There are two types of stock adjustments:

Key Figures: Inventory Management

Inventory difference

Quantity and value-related adjustment of the existing stock, where the reason for this adjustment is unknown and it is therefore viewed as an inventory difference. The adjustment can be either upwards (+) or downwards (-).

Inventory differences are updated for the posting date during physical inventory management.

This key figure exists in different forms in the RIS for both positive and negative inventory differences (sales, rtl, rtlT, quantity, number of items).

Others

Quantity and value-related adjustment of the existing stock, where the reason for this adjustment is known. A possible reason for such an adjustment is the breakage, spoilage, or scrapping of an article. The adjustment can be either upwards (+) or downwards (-).

This key figure exists in different forms in the RIS for both positive and negative miscellaneous stock adjustments (cost, rtl, rtlT, quantity, number of items).

Miscellaneous stock adjustments are updated for the posting date when you enter the goods issue via scrapping. Note that the field *Reason for adjustment* must be filled with a value, otherwise the system assigns either receipts or issues.

At the moment, it is not possible to enter values for the key figure *Upward stock adjustment (miscellaneous)*, as a corresponding stock adjustment processing does not exist.

Revaluation at Cost

A revaluation based on a change in the cost price of an article. There are two reasons for a cost price revaluation:

Manual cost price adjustments

The cost price of the stock is revalued when a cost price is changed manually. This in turn leads to a change in the stock margin.

Caution:

The article must be valuated according to the principle of the moving average price.

If several storage locations are affected, each revaluation per storage location counts as a transaction.

Subsequent changes in cost price from invoice verification

An adjustment of the goods receipt cost price entered may take place during invoice verification. In this way, the system determines whether the initial stock receipts and issues were too high or too low. The stock cost price, and consequently the stock margin, are adjusted as a result of the invoice verification process. Adjustments are also updated to the key figure PP revaluation.

Caution:

The article must be valuated according to the principle of the moving average price.

If several storage locations are affected, each revaluation per storage location counts as a transaction.

The goods receipt cost price is not adjusted, as the system cannot differentiate between manual revaluation and revaluation from invoice verification.

Information regarding quantities is currently not possible.

If the invoice is entered before the goods receipt, neither the stocks nor the cost price revaluation are updated, as the goods receipt is then updated with the invoice conditions.

A cost price can be revalued upwards (+) or downwards (-). The cost price revaluation is issued in different forms in the RIS for both positive and negative revaluations (number of transactions, quantity, cost, rtl, rtlT). The key figures are updated for the posting date.

Revaluation at Retail

A revaluation based on changes to the retail price of an article (markdown/markup). The revaluation is caused by manual adjustment to the retail price at the end of the season or for marketing reasons. Retail price revaluations are important control variables in retail, and influence both the sales margin and profit margin. This automatically leads to a change in the stock margin.

Caution:

Partial stocks can also be revalued.

A retail price revaluation can be performed so that it does not affect margins. In other words, the cost price is also adjusted accordingly.

A retail price can be revalued upwards (+) or downwards (-). The retail price revaluations can have different values in the RIS for both positive and negative revaluations (number of transactions, quantity, cost, rtl, rtlT). The key figures are updated for the validity date.

Stock Changes

Stock changes are postings for which no particular key figure is proposed. Only the stock is affected by this change. The key figure receipt and/or issue may be filled with a value (for example, for a posting from unrestricted-use stock in the vendor consignment stock).

Caution:

Postings within the valuated stock do not have any effect on the stock (for example, a posting of unrestricted-use stock to stock in quality inspection) and is not represented in the RIS.

Values are assigned to the key figures *Receipt* and *Issue* in the case of ineffective stock postings within the valuated stock.

If you do not wish to falsify these key figures, you must exclude the corresponding movement type from the statistics update.

The key figures *Receipt* and *Issue* are updated for the posting date. In the standard analyses, the key figures are expressed in terms of the following: cost, rtlT, rtl, quantity.

See also:

How Key Figures Are Calculated [Page 335]

Key Figures: Sales and Distribution

Sales Volume

There are a number of ways in which data relating to sales is written to the information structures of the Retail Information System. (For more information, see POS Interface [Page 284].)

Information structures S077-S086, S105-S106, S110, S123, S124

> Sales data is written to these information structures either in aggregated form via the POS interface by means of the billing document, or via the normal Sales and Distribution processes (order, delivery, billing).

Information structures for the POS interface

> Sales data is written to these information structures by means of the POS interface. No documents are generated here.

Sales in the Information Structures S077-S086, S105-S106, S110, S123, S124

Note that the use of billing documents via the POS interface causes a stock reduction in the Inventory Management interface in the SAP System.

You need to keep to an appropriate pricing schema in order for sales figures to be updated correctly.

This key figure can have a number of different values (quantity, cost, rtlT, rtl).

Sales in the Information Structures for the POS Interface

Sales quantity

> Quantities sold at the POS. In RIS, values for this key figure are displayed in terms of the sales unit and the base unit of measure. Here the quantity is transferred without changing the POS. The quantity is always posted for a transaction item.

Sales: rtlT, rtl

> Net sales including/excluding tax. The sales value without tax is calculated on the basis of the sales including tax. The sales volume is always posted for a transaction item.

Sales: cost

> Sales at cost price excluding tax. The sales value is determined by the billing process.
>
> *Prerequisite* :
>
> The condition type VPRS (transfer price) must be set in the pricing procedure.

> The following is true for this sales audit key figure:
>
> If an information structure has the characteristic condition and a transaction item with two or more conditions, then the following special feature applies:
>
> When drilling down the characteristic condition, the quantity is distributed proportionately between the respective conditions.
>
> The distribution rule is as follows:

Proportional quantity = (Condition price reduction / Total price reduction) * Quantity

Average sales/transaction

Averages sales per POS transaction. The key figure is calculated by dividing the sales at cost price including tax by the number of transactions.

This key figure cannot be calculated if an article-dependent drill-down (for example, merchandise category, article, condition) or an article-dependent selection has taken place. If you, for instance, drill down by article, the POS transaction is distributed among the articles. This changes the view of the data, which means that the system is unable to calculate the key figure.

Promotion Sales

Promotion sales means those sales that are linked to a promotion. In RIS, the promotion sales is expressed in terms of the following: cost, rtl, rtlT, quantity.

Sales (Absolute)

The absolute sales comprises all sales to customers.

Sales are a result of POS sales or from Sales and Distribution processes. This key figure expresses the absolute sales, that is, POS returns or credit memos from Sales and Distribution do not reduce this key figure.

Internal sales (for example, when the distribution center delivers goods to a site) are not taken into account.

In RIS, the absolute sales is expressed in terms of the following: cost, rtlT, rtl, quantity.

Third-Party Sales

Third-party sales refer to sales resulting from third-party order processing.

This key figure expresses the balanced sales, that is, credit memos from third-party order processing reduce this key figure. This key figure is expressed as a separate entity and does not increase the actual sales involving the customer, as no delivery of goods takes place. This key figure has particular significance for the wholesale trade.

The third-party sales is expressed in terms of the following: cost, rtlT, rtl, quantity.

The customer orders directly from the vendor and the invoice goes to the wholesaler. The wholesaler then bills the customer. The sales from these third-party transactions are written to the key figure ‘third-party sales’.

Sales Deviation

Sales deviation means the deviation in price between the price charged at the POS including discounts and the price designated in the R/3 System. The price deviation is determined by the billing process.

This key figure can only be supplied with values, if the total price deviation has been transferred to the field KZW13 in the pricing procedure. In the SAP standard system, the sales deviation can

be found in the information structures article/add-on and STRPS, and is the sum of the key figures ‘price reduction’ and ‘price difference’ from the information structures for the sales audit.

Third-Party Orders

Order volumes resulting from customer orders in Sales and Distribution sales order processing that should be processed per third-party. A third-party order exists when the customer places an order directly with the vendor, and settlement is performed by the assigned wholesaler.

Third-party orders are expressed as a separate entity from sales orders. The allocation of period units is based on the entry date.

In RIS, the third-party orders are expressed in terms of the following: number of transactions, cost, rtlT, rtl, quantity.

Sales Orders

Total sales orders resulting from purchase orders made by customers in Sales and Distribution order processing.

Updating is performed on the basis of the entry date.

In RIS, the sales orders are expressed in terms of the following: number of transactions, cost, rtlT, rtl, quantity.

Open Orders

The volume of sales orders is determined at regular intervals, that is, the volume of open orders is calculated and displayed for each period.

The volume of open orders increases when a sales order is created in Sales and Distribution and is then reduced accordingly when the delivery is created.
Updating takes place on the entry date.

In the standard analyses, the open orders are expressed in terms of quantity and value.

Return Orders

Total volume of orders resulting from customer return orders from Sales and Distribution processing.

Updating is performed on the basis of the entry date.

In the standard analyses, the return orders are expressed in terms of the following: number of transactions, cost, rtlT, rtl, quantity.

Credit Memos

Credit memos given to the customer due to the return of goods to the point of sale or from Sales and Distribution processing.

The billing document needs to be used to carry out pricing, so that this key figure is updated correctly in all its various forms. Updating takes place on the billing date.

In the standard analyses, the credit memos are expressed in terms of the following: cost, rtlT, rtl, quantity.

Credit memo deviation

The credit memo deviation shows the difference between the potential credit memos and those credit memos granted.

Deliveries

Volume of deliveries to the customer resulting from sales orders from Sales and Distribution processing.

Updating takes place on the date of goods issue. Value determination is not performed for the delivery.

In the standard analyses, the deliveries are expressed in terms of quantity and value.

Return Deliveries

Volume of deliveries returned by customers resulting from sales orders from Sales and Distribution processing.

Updating takes place on the date of goods issue. The volume of return deliveries is expressed in base unit of measure or as the number of delivery items. Value determination is not performed for the return delivery.

In the standard analyses, the return deliveries are expressed in terms of quantity and value.

See also:

How Key Figures Are Calculated [Page 335]

Key Figures: Sales Audit

Sales volume

Information about how the sales data in the POS interface is calculated can be found in Key Figures: Sales and Distribution [Page 350].

Number of Transactions

Number of transactions generated for a characteristic.

Depending on the characteristic, this key figure has varying degrees of importance:

The characteristic is article-independent

This is the case, for instance, if you display the key figure for sites or cashiers. In this case, the key figure represents the number of transactions generated for each store or for each cashier.

The characteristic is material-dependent

This is the case, for instance, if you display the key figure for articles, merchandise categories or conditions. In this case, the key figure represents the number of transactions that contain the article, the merchandise category or the condition.

Number of Article Items per Transaction

Number of generated transaction items. Depending on the characteristics for which this key figure is displayed, the key figure has varying degrees of importance:

The characteristic is article-independent

This is the case, for instance, if you display the key figure for sites or transactions. The key figure shows the number of transaction items generated for each site or receipt.

The characteristic is article-dependent

This is the case, for instance, if you display the key figure for articles, merchandise categories or conditions. In this case, the key figure represents the number of transaction items in which the article, the merchandise category or the condition appear.

Average Number of Items per Transaction

Average number of items per POS transaction. This key figure is calculated during the standard analysis.

The key figure is calculated by dividing the number of transaction items by the number of transactions.

The system can only calculate this key figure in standard analyses which have not included article-dependent drill-downs or article-dependent selections.

If you drill down according to article, merchandise category or condition, then the transaction is distributed over the articles. This changes the view of the data, which means that the system is unable to calculate the key figure.

Average Sales per Transaction

This key figure is calculated during the standard analysis. It is derived by dividing the sales by the number of transactions.

The system can only calculate this key figure in standard analyses which have not included article-dependent drill-downs or article-dependent selections.

If you drill down according to article, merchandise category or condition, the transaction is distributed over the articles. This changes the view of the data, which means that the system is unable to calculate the key figure.

Price Difference

Difference in price between the price charged at the POS without discount and the price stated in the SAP System. The price difference is determined by the billing procedure.

The key figure is only calculated if:

The total price difference in the pricing schema is transferred to the field *KZWI6*.

The retail price revaluation profile is set to *No revaluation* at this site.

The billing document is saved at the same time.

Number of Scanned Articles

Number of article items that are created via the scanner. The value is transferred to the POS.

Number of Terminations

Number of transactions ended by the cashier pressing the CANCEL button.

Number of Transaction Cancellations

Number of transactions canceled by the cashier. The value is transferred to the POS.

Number of Immediate Cancellations

Number of items that are canceled by the cashier using an immediate cancellation. The value is transferred to the POS.

Number of Line Cancellations

Number of lines in the transaction that are canceled by the cashier. The value is transferred unchanged to the POS.

Number of Merchandise Category Article Sales

Number of transaction items that are activated at the POS by pressing the merchandise category button. The value is transferred unchanged to the POS.

POS Difference Negative

Sales deficit at the POS, that is, the amount in the POS (actual POS amount) is less than the amount expected (target POS amount). The value is transferred to the POS.

POS Difference Positive

Sales surplus, that is, the amount in the POS (actual POS amount) exceeds the expected amount (target POS amount). The value is transferred to the POS.

Actual POS Amount

Actual amount in POS after it has been counted.

Target POS Amount

Amount in POS according to the POS information.

Transaction Cancellation Quota

The transaction cancellation quota shows the relationship between the number of transaction cancellations and the number of transactions.

This key figure is calculated as follows:

Transaction cancellation quota = Number of transaction cancellations / Number of transactions

The best case scenario is when the key figure equals 0.

Immediate Cancellation Quota

This key figure shows the relationship between the number of immediate cancellations and the number of transaction items.

The line cancellation quota is calculated as follows:

Immediate cancellation quota = Number of immediate cancellations / Number of transaction items

The best case scenario is when the key figure equals 0.

Line Cancellation Quota

Number of line cancellations compared to the number of transaction items.

This key figure is calculated as follows:

Line cancellation quota = Number of line cancellations / Number of transaction items

The best case scenario is when the key figure value equals zero.

Scanning Rate

Proportion of the articles scanned to the sum total of articles

The key figure is calculated as follows:

Scanning rate = Number of scanned articles / Total number of articles

The best case scenario is when the scanning rate equals 100.

Value of Transaction Cancellations

Value of transaction cancellations.

The value is the sum of the canceled sales at retail price. The value is transferred unchanged to the POS.

Value of Immediate Cancellations

Value of the sales transactions canceled immediately at the POS.

This value is the sum of those sales which did not take place at retail price.

The value is transferred unchanged to the POS.

Value of Line Cancellations

Value of the lines canceled in the transaction.

The value is the sum of the canceled sales at retail price.

The value is transferred unchanged to the POS.

Value of Terminations

Value of the sales transactions terminated at the POS.

The value, which is transferred unchanged to the POS, is the sum of those sales that did not take place at the retail price.

See also:

How Key Figures Are Calculated [Page 335]

Key Figures: Market-Basket Analysis

Sales quantity

Quantity sold in sales and base unit of measure

Sales value

Retail value in local currency

In the standard system, this field is the sales with tax. Should this field contain the sales without tax, you should adjust the copying method accordingly.

Price reduction (total)

Difference between the target price and the actual retail price

Number of transactions

Number of sales documents at POS

Number of items

Number of items (articles) in transaction

Number of sales promotion items

Number of items in transaction that relate to a sales promotion

Number of merchandise categories

Number of merchandise categories in the transaction

Number of known customers

Number of customers available for a customer master

Number of anonymous customers (with card)

Number of anonymous customers who have paid by credit card and for whom no customer master exists

Number of anonymous customers

Number of customers who cannot be identified

Average price

Calculated on the base value of the sales unit and base unit of measure

Formula: Sales (value) / Sales (quantity)

Average number of items

Formula: Number of transaction items / Number of transactions

Average number of merchandise categories

Formula: Number of merchandise categories / Number of transactions

Proportion of promotion sales

Formula: Number of promotion items / Total number of items

Usage intensity

Is determined according to the base value of the sales unit and base unit of measure

Formula: Quantity / Number of transactions

Average transaction sales

Formula: Sales (value) / Number of transactions

Scanning rate

Formula: 100 x Number of known customers / Number of transactions

Proportion of anonymous customers (with card)

Formula: 100 x Number of anonymous customers (with card) / Number of transactions

Proportion of anonymous customers

Formula: 100 x Number of anonymous customers / Number of transactions

See also:

How Key Figures Are Calculated: Retail Information System [Page 335]

Key Figures Calculated at Runtime

The key figures that are described below are calculated when executing the standard analyses and are therefore not saved in any information structure.

Margins

A margin is the percentage difference between the retail and cost prices, in relation to the sales value.

The margin is calculated as follows:

Margin in % = 100 *(Sales value - purchasing value)/ Sales value

The following margins can be evaluated in the Retail Information System:

Order margin

On-order stock margin

Goods receipt margin

Sales margin

Promotion sales margin

Stock margin

Sales order margin

Third-party order margin

Third-party sales margin

Stock transfer margin

Transport order margin

The margin always has two values:

Margin with tax

The retail price with tax is used to calculate this margin.

Margin without tax

The retail price without tax is used to calculate this margin.

Range of Coverage

The range of coverage shows the stock left at the end of the period selected compared to the average issues in that period. It is calculated as follows:

Range of coverage in days = stock at end of period selected/ average issues in period selected

The average issues are calculated as follows:

Average issues = (Sales + DC goods receipt) / Number of days in period selected

In RIS, the range of coverage is calculated on the basis of the quantity and value (retail price with tax).

Inventory Turn

The inventory turn is calculated from the quotient of the sum of the issues in the period selected and the average stock in the period selected.

Inventory turn = sum of issues in period selected / average stock in period selected

The issues are calculated as follows:

Issues = Sales + Goods issues from DC

The average stock is calculated as follows:

Average stock = Total of closing stocks / Number of selection periods

In RIS, the inventory turn is calculated on the basis of the quantity and value (retail price with tax).

Annual Inventory Turn

The annual inventory turn is calculated as follows:

Annual inventory turn = (Inventory turn x Number of periods in calendar year) / Number of selected periods

If you choose a year as your selection period, then the inventory turn is identical to the annual inventory turn.

The annual inventory turn is calculated on the basis of the quantity and value (retail price with tax).

GMROI (Gross Margin Return on Investment)

The GMROI key figure represents the relationship between the value-based annual inventory turn and the issue margin achieved:

GMROI = (Annual inventory turn on a value basis x Issues margin) / 100

The issues are calculated as follows:

Issues = Sales + Goods issues from DC

This key figure aids the weighting of the inventory turn and margin of an article and helps you to ascertain that the article is not necessarily successful, despite the high margin achieved, if only a minimal annual inventory turn is reached.

Key Figures Calculated at Runtime

The retail price with tax forms the basis for calculating the value-based annual inventory turn.

Number of days on sale

Key figure that shows how many days an article has already been in the valuated stock of a store.

The key figure is calculated as follows:

Days on sale = Day of valuation - Date of first receipt

The receipt date is recorded when the article is first issued/received in the respective store and remains unchanged.

The highest value of the key figure “Days on sale” is displayed on aggregation levels above that of article.

Fictitious Sales/Stock

This key figure shows what sales/stocks would have been reached if the original retail price with tax had been adhered to.

This key figure is calculated by multiplying the sales quantity/valuated stock quantity by the original retail price.

The original retail price is the retail price of the first purchase order or change involving stocks in the store in question.

Sales Quota

This key figure is calculated as follows:

Sales quota = 100 * Issues / (Issues + Stock)

The sales quota can be displayed in terms of quantity and value (retail price with tax).

The sales quota for seasonal articles is between 0% and 100%.

End of Season Stock

Key figure that shows what stock is available at the end of the season. The end of the season is determined by the end of the selection period at the start of the analysis.

Note that in analyses of the current season, the end date lies in the future.

This key figure is displayed in a variety of versions (volume, quantity, weight, cost, rtlT, rtl).

The end of season stock is calculated as follows:

End of season stock = (Stock + on-order stock) - (Issues up to end of selection period)

The on-order stock is the sum of all open purchase orders involving external vendors.

The issues up to the end of the selection period are calculated as follows:

Issues to end of selection period = (Today's date - End of selection period date) x Average issue

The issues (Sales, GI DC) from the start of the selection period up until the evaluation date are used in the calculation of the average issue.

You can find information on other key figures that are also calculated at runtime, such as average **number of transaction items per transaction, transaction cancellation quota, line cancellation quota** and **scanning rate** in Key Figures: Sales Audit (POS Statistics) [Page 354].

See also:

How Key Figures Are Calculated [Page 335]

Key Figures: Physical Inventory

Book Inventory Balance

This is the stock that exists in the system at the start of the physical inventory.

This key figure is displayed in terms of the following: quantity (in base unit of measure), cost, rtlT, rtl.

Counted Stock

This key figure expresses the stock that was counted during the physical inventory.

This key figure is displayed in terms of the following: quantity (in base unit of measure), cost, rtlT, rtl.

Inventory Difference -

This key figure expresses the difference between the counted stock and the book inventory balance.

A negative inventory difference occurs when the counted stock is smaller than the book inventory balance.

This key figure is displayed in terms of the following: quantity (in base unit of measure), cost, rtlT, rtl.

Inventory Difference +

This key figure expresses the difference between the book inventory balance and the counted stock.

A positive inventory difference occurs when the counted stock is larger than the book inventory balance.

See also:

How Key Figures Are Calculated [Page 335]

Key Figures: Additionals

Article with additionals, quantity

Article with additionals, in base unit of measure

Article with additionals, cost

Article with additionals, rtl

Article with additionals, rtlT

Article with additionals, rtl

Number of additionals

Number of additionals in base unit of measure

Processing Time

Processing time for fixing additionals

Base costs

Material costs of additionals

Labor costs

Labor costs for fixing additionals

Total costs

Formula: Base costs + labor costs

Average number of additionals

Formula: Number of additionals / Article with additional quantity

Proportion of additionals costs in costs price

Formula: 100 * total costs / Article with additionals, cost

Margin with regard to additionals

Formula: 100 * (Article with additionals, cost – Article with additionals, rtl) / Article with additionals, rtl

Margin without regard to additionals

Formula: 100 * (Article with additionals, cost – Article with additionals, rtl - total costs) / Article with additionals, rtl

See also:

How Key Figures Are Calculated: Retail Information System [Page 335]

Key Figures: Rough Workload Estimate

The key figures used to analyze the workload are mostly updated from the application components *Purchasing* and *Sales and Distribution*.

The expected workload during workload processing (for example, from goods issue up to goods receipt) is the key feature of this procedure.

All key figures that refer to the workload are contained in the information structures for rough workload estimate and are expressed in terms of the following:

Increase

Creation of a purchase order

Creation of a sales order

Reduction

Goods receipt posting

Goods issue posting

Delta (calculated key figure)

Difference between increase and reduction of workload

This key figure is not updated!

Quantity

Workload in terms of quantity (increase / reduction / delta).

This key figure is to be viewed in connection with the unit-of-measure load category.

Weight

Workload in terms of weight (increase / reduction / delta).

You can set the weight unit in Customizing for rough workload estimate.

Volume

Workload in terms of volume (increase / reduction / delta).

You can set the volume unit in Customizing for rough workload estimate.

Processing Time

Workload in terms of processing time (increase / reduction / delta)

The processing unit is *Hour.* The processing time is always stored in this unit.

You can use this key figure to plan staffing levels, for example.

Number of Document Items/Schedule Lines

Workload in terms of the number of transactions (increase / reduction / delta)

Shipping Material

Workload in terms of numbers (increase / reduction / delta)

This key figure (increase, reduction) needs to be updated by means of a customer exit. You can set the unit in Customizing for rough workload estimate.

See also:

How Key Figures are Calculated: Retail Information System [Page 335]

Key Figures: Open to Buy

In addition to updated actual figures, planned figures from flexible planning can also be included in the open-to-buy standard analysis.

Actual Figures

Opening Stock

This key figure is calculated as follows during execution of the standard analysis :

Opening stock = Opening stock of previous period + Actual receipts - Actual issues

The opening stock for the first planning period is calculated using what is known as stock initialization. Stock initialization is performed by a report which helps to determine and establish the opening stocks for a specific key date.

The planned opening stock is used as the initial stock at the start of planning. When the opening stock is calculated, all receipts and issues which have occurred from the start of planning up to the current period are added to the planned opening stock.

Issues/Receipts

For more information on how to calculate the key figures *Receipts* and *Issue*s, refer to the section on changes involving stocks in Key Figures: Inventory Management [Page 346].

Stock Adjustment: Inventory Difference

For more information on how to calculate the key figures for stock adjustment, see Key Figures: Inventory Management [Page 346].

Open Order Stock

For more information on how to calculate this key figure, see Key Figures Calculated at Runtime [Page 360].

Sales/Sales Deviation

For more information on how to calculate this key figure, see Key Figures: Sales and Distribution [Page 350].

Revaluation at Retail

For more information on how to calculate this key figure, see Key Figures: Inventory Management [Page 346].

Open Stock Transport Orders

Open order volume in stock transport orders.

This key figure refers to the supplying plant and with reference to the ordering plant. It is updated on the delivery date.

Planning Figures

Planned Opening Stock

The planned opening stock for each period corresponds to planned closing stock of the previous period. The so-called ‘stock initialization’ is used to determine the planned opening stock for the

first planning period. The ‘stock initialization’ is a report which helps to determine and establish the opening stocks for a specific key date.

You can find additional information about setting stocks for Planning in the R/3 library documentation in *PP Sales and Operations Planning* under Mass Processing → How to Set Opening Stock Levels with Mass Processing*)*.

Planned Stock

Planned closing stock per period.

Initial Purchasing Quota as %

Percentage of the seasonal budget already released for purchasing. The rest of the budget is reserved for later purchases.

The seasonal budget (purchasing budget) is calculated from the following elements:

Planned sales volume

Planned stock

Planned markdowns

Planned inventory differences

This budget is subdivided into a budget already released and a reserve budget. This subdivision is controlled by the initial purchasing quota. On the basis of the purchasing or seasonal budget and the budget already released, the key figure ‘open-to-buy’ is calculated and expressed in terms of two values (see below). In the standard analysis, the initial purchasing quota is required to calculate the OTB for the budget already released.

Open-To-Buy

This key figure represents the main scope of the standard analysis of the same name. It tells you whether it is still possible to make further purchases or whether the stipulated purchasing volume has already been reached for the respective period. The system also calculates the budget still available as the difference between the planned budget and the expenditure that has already been reached.

The entire purchasing budget is made up from the partial budgets of more detailed planning levels. It is therefore possible to specify, for example, which budget is available for each merchandise category, price band, store, and so on.

The total budget defined for a planning level is split into a *budget that has already been released* and a *reserve budget.*

The budget already released is available to buyers for future periods, while the reserve budget is withheld to enable the organization to react to unforeseen trends in the short term.

Calculating Budgets per Period

Seasonal budget = Planned closing stock - Planned opening stock + Planned sales + Planned markdowns + Planned inventory differences

Pre-order budget = Seasonal budget * Pre-order quota

Reserve budget = Seasonal budget - Pre-order budget

Calculating the Actual Closing Stock per Period

Actual closing stock = Actual opening stock + Actual receipts - Actual issues

You can define deviating formulas for sales projections using a customer exit.

The opening stock for the first planning column is determined by mass processing (stock initialization).

Extrapolating the Sales in the Current Period

Extrapolated sales = Actual sales * (Number of sales days / Number of past sales days)

The number of sales days is determined for each site according to the assigned factory calendar.

Calculating OTB per Period

The key figure 'open-to-buy' is calculated for the budget already released and for the seasonal budget that is still available for purchases, and is displayed in the standard analyses. The key figure 'open-to-buy' is always zero for a period in the past.

OTB for Seasonal Budget

Past period: **OTB** = 0

Current period:

OTB =	(Planned closing stock - Actual opening stock
	+ Planned sales + Planned inventory differences + Planned markdowns)
	- Actual open purchase orders
	- Actual open stock transfer orders (receiving site)
	+ Actual open stock transfer orders (supplying site)
	+ (Extrapolated sales at end of period - Planned sales)
	+ Maximum (actual inventory differences - Planned inventory differences, 0)
	+ Maximum (actual markdowns - Planned markdowns, 0)
	+ (Actual goods issues - Actual sales - Actual price reduction - Actual inventory differences - Actual markdowns)
	- Actual goods receipts

Future period:

OTB =	(Planned closing stock - Planned opening stock
	+ Planned sales + Planned inventory differences + Planned markdowns
	- Actual open purchase orders
	- Actual open stock transfer orders (receiving site)
	+ Actual open stock transfer orders (supplying site)

OTB for Budget Already Released

Past period: **OTB** = 0

Current period:

OTB =	(Planned closing stock - Actual opening stock
	+ Planned sales + Planned inventory differences + Planned markdowns) * Initial purchasing quota
	- Actual open purchase orders
	- Actual open stock transfer orders (receiving site)
	+ Actual open stock transfer orders (supplying site)
	+ (Extrapolated sales at end of period - Planned sales)
	+ Maximum (actual inventory differences - Planned inventory differences, 0)
	+ Maximum (actual markdowns - Planned markdowns, 0)
	+ (Actual goods issues - Actual sales - Actual price reduction - Actual inventory differences - Actual markdowns)
	- Actual goods receipts

Future period:

OTB =	(Planned closing stock - Planned opening stock
	+ Planned sales + Planned inventory differences + Planned markdowns)* Initial purchasing quota
	- Actual open purchase orders
	- Actual open stock transfer orders (receiving site)
	+ Actual open stock transfer orders (supplying site)

Key Figures: Open to Buy

The key figure OTB is calculated from planned and actual figures during the standard analysis.

You can find further information about open-to-buy in the *R/3 Retail Documentation* in the section on the planning system under Open-To-Buy (OTB) [Ext.]

See also:

How Key Figures Are Calculated [Page 335]

Transport Information System (TIS)

Documentation not Available in Release 4.6B

Updating: TIS

Data analysis in the Transport Information System is based on the statistical data that is updated from Transport and delivery documents to the information structures.

You can read about how and when data updating is carried out in the following sections.

Events: TIS

Use

The key figures in the Transport Information System are updated during transport processing.

Data flows from the document structure to the information structures.

The transport data and delivery data are transferred to the information structures dependent on the completion status:

The delivery data and information structures are transferred when the transport is completed. The delivery data is cleared if the completion status is reset.

Updating: TIS

Use

Quantities

Quantities are updated in the base unit of measure. The base unit of measure is the unit of measure in which the system manages the material stocks. It is determined in the material master.

Weights, volumes and distances

Statistical units must be set up in Customizing for each transportation planning point for weights, volumes, and distances.

Time period

Time period is updated in minutes and can therefore be added to easily.

Canceling/deleting documents

If transport procedures are reversed (that is, canceled) the statistics are automatically adjusted to reflect this change.

Function Enhancements: TIS

Use

You can use two function enhancements for key figure and customer-specific data that allow you to add to update and communication structures for the transport header (structure *MCVTTKUSR*) and transport sections (structure *MCVTTSUSR*).

The function enhancement is defined in the enhancement *MCST0001*.

Delivery element data for the transport are in the transport header in a compressed form (summarized information for the most important delivery elements of the transport such as “Main delivery element”). Further key figures for delivery elements can be derived in the customer functions because this data is now available.

You access the function enhancements using *Tools → Business Engineer → Customizing → Implem. projects → SADisplay SAP Refer. IMG → Logistics general → Logistic Information System → Develop Function Enhancements → Function Enhancements - Logistics Data Warehouse → TIS: Statistics update transport documents*

Factors That Influence Updating: TIS

Use

In addition to specifying the updating type (synchronous/asynchronous/collective update) and the period unit in which values are cumulated, you have other options for filtering and varying the updating the data from transport processes.

You might require further differentiation for the following reasons:

You only want to update specific MRP statistic data or you want to update statistics in different ways dependent on the MRP.

You only want to update specific transport data statistic data or you want to update statistics in different ways dependent on the transport type.

You only want to update certain service agents.

The factors that influence the filtering and variation of the statistical updates are explained below.

These factors relate to:

Transport MRP

Transport type

Transport service agent

Statistics Groups: TIS

Use

The "Statistics group service agents" indicator appears in the vendor master record and allows you to influence the statistics update with reference to master data.

The statistics group is a freely definable group key. You can group together service agents to make a common statistics group for which the same type of updating applies. This grouping can be used, for example, to exclude certain service agents from the updating process completely, or to make a distinction between important service agents and less important service agents.

This grouping can be done at the transport document level. You define statistics groups and assign transport types to the statistics groups.

You define statistics groups in Customizing for the Logistics Information System.

For more details, please refer to the Implementation Guide for the Logistics Information System.

Update Groups: TIS

Use

You need to integrate the statistics group into the update control process. You can do this by the assigning an update group to the inspection lot origin. A particular type of updating is therefore assigned to a particular business transaction.

When a transaction is updated, the statistical data is then updated in accordance with the requirements that have been assigned to it.

You can make these assignments to update groups in Customizing for the Logistics Information System.

For more details, please refer to the Implementation Guide for the Logistics Information System.

Update Type: TIS

In the LIS information systems, updating of statistical data can take place in three ways:

As a synchronous update (U1)

(Immediate start, that is when an event takes place that triggers an update)

As an asynchronous update (U2)

(Delayed start, i.e., updating is slightly delayed after an event that triggers an update).

As collective update (V3)

(Start delayed that means the update is done at done at any point after the event that triggers the update)

You can also turn the updating process off.

If you choose the asynchronous update for the updating of statistical data, a termination of the statistics update has no effect on the accurate update of the application document.

If you choose the synchronous update, a termination of the statistics update results in failure to update the document.

With **Collective updates** the update of the statistic data can take place anytime after the document update. The update of the statistics data can also be done outside of the dialog times.

A termination of the statistics update has no effect on the accurate update of the application document.

You can find further information about the updating concept in the *System Administration Guide.*

You can specify the type of updating for each information structure in Customizing. You need to make the appropriate settings in Customizing for the Logistics Information System. You can find detailed information in the Implementation Guide for the Logistics Information System.

Period Units in Updating: TIS

In addition to the Types for Updates [Page 382] you can also define the period units that are used in the updating process.

The period unit specifies the intervals at which the statistical data is cumulated. You can choose from the following:

Day

Week

Month

Posting period (you may also need to specify a fiscal year variant)

You can define a period unit for every standard information structure.

The SAP default setting for the period unit in all the SIS information structures in the transport information system in *Month.*

You can now change the time period when no Is-data has been updated in the information structure.

You can set the period unit for the standard information structures in Customizing for the Logistics Information System. You can set the period unit for the standard information structures in Customizing for the Logistics Information System.

Special Features: TIS

Updating delivery data

To avoid changing delivery data without notice by the transport information system the delivery data is only updated when the transport has the status *completed*.

When this status is set the delivery can no longer be changed. This ensures that TIS is using the most up-to-date delivery data.

Updating fields that are calculated in the standard analysis

Some fields of the information structure are not updated. These fields are necessary to make the key figures available at the analysis point in time. These fields are listed under Characteristics and Key Figures [Page 389].

Real and virtual transport legs

A virtual transport leg was necessary for correct processing of delivery and leg data during updating. Because deliveries (hierarchy level F) is linked over (hierarchy level E) on the transport header, header related updates (updates that influence the whole transport) required a “0” that does not exist in the transport document but represents the entire transport.

The leg “0” must be included when updating deliveries for the whole transport or on a leg by leg basis. Also the leg “0” must not be counted when cumulating the leg data at the header level. Under the following conditions:

Condition 200:

Delivery at the complete transport level:

The delivery data is now calculated for the whole transport. That is once for each transport. Example: Total weight of all deliveries in the transport.

Condition 201:

Delivery at the leg level:

The delivery data are not calculated for the whole transport that is only for all legs but not for the virtual leg “0” (complete transport).

Example: Total weight of all deliveries on one leg.

Condition 202:

Real transport leg:

The virtual leg “0” (complete transport) is not processed.

Example: Number of legs for each transport.

Updating Check: TIS

For updating checks you can:

Having an update log displayed

Simulating the updating.

Both functions are available in Customizing for the Logistics Information System.

Update Log

You can monitor the update process by generating a log of the activities. This shows you the flow of data from the transport processes to the information structures in terms of each specific user and event.

Note that the update log is only generated for the last event that takes place. Old entries are therefore overwritten as soon as a new event is updated.

Procedure

This is how you configure the update log:

In the R/3 System menu, select *System* → *User profile* → *User parameters.*

In the *PID* field enter the parameter MCL and highlight *Parameter value.*

Save the entries.

To display the update log, go to the Customizing menu and select: Logistics Information System → Logistics Data Warehouse → Data Basis → Updating → Updating Control → Update Log → Display update log.

The system load increases when you display an update log. For this reason you should deactivate the log generation process after successfully checking an update.

Simulation

If you wish to check the update of documents that have already been saved, due to changes you have made in Customizing, for instance, you can generate update logs from any sales and distribution documents, without causing an update of the information structures.

In this way, you can check how a document would be updated, if the new settings in Customizing were taken into account. You can also use this type of updating check in the productive system without any problems.

Standard Analysis: TIS

In the transport information system, the following standard analyses are available in the Sales Information System:

Transport

The transport analysis displays information from the transport header and delivery header. The key figures for the complete transport (such as distance, delivery time, weight) are updated in relation to the transport MRP, transport type, service agent, starting point, and target point.

Transport routes

Use this analysis to display information about transport routes. The key figures for the complete transport are updated in relation to the transport MRP, transport type, and service agent.

Transport method

This analyzes the transport processes based on the main transport MRP. Key figures for dimensions and utilization of MRPs are displayed.

Transport Send

The send analysis makes evaluation of data for deliveries of transport s possible from (transport MRP, delivery type, and sending point).

Transport Sections

This analysis allows for evaluations ate the transport leg level. The key figures for the transport sections (such as distance, delivery time, weight) are updated in relation to the transport MRP, transport type, service agent, starting point, and target point.

Transport Material

This analysis gives you information for the transport of certain materials.

Exception analysis

You can use the Early Warning System [Ext.] defined Displaying Exceptions [Ext.] in the exception analysis. The exception analysis acts as a filter; this means, *only* the exceptional situations are displayed. The exceptional situations can be highlighted in color.

See also:

Characteristics and Key Figures: Transport Information System [Page 389]

Documentation not Available in Release 4.6B

Transport

Characteristics

Transport MRP

Transport type

Service agents

Land transport start

Zone transport start

Land transport end

Zone transport end

Key Figures

Transport distance

Sum of delivery gross weight

Sum of delivery net weight

Sum of delivery volume

Number of transports

Number of transport sections

Number of same main send elements

Gross weight of the main send element

Net weight of the main send element

Net volume of the main send element

Maximum weight of the main send element

Maximum volume of the main send element

Number of deliveries

Number of packages

Sum of volume utilization of the main send element in %

Sum of weight utilization of the main send element in %

Planned loading time

Current loading time

Timed-out for the planned loading time

Planned transport duration

Current transport duration

Timed-out for the planned transport duration

Late registration

Late loading start

Late transport start

Late transport end

Planned delivery time

Delivery duration

Planned total duration

Total duration

Further key figures that are calculated during the standard analysis:

Average delay in late loading start

Average current loading duration

Average planned loading duration

Average timed-out for the planned loading time

Average delay in late registration

Average delay in late transport start

Average delay in late transport end

Average current transport duration

Average planned transport duration

Average timed-out for the planned transport duration

Average planned total duration

Average total duration

Average planned delivery time

Average delivery time

Average weight utilization in %

Average volume utilization in %

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Transport method

Characteristics

Transport MRP

Transport type

Main send utilities

Transport route

Key Figures

Number of same main send elements

Number of transports

Number of deliveries

Gross weight of the main send element

Net weight of the main send element

Start weight of the main send element

Maximum weight of the main send element

Gross volume of the main send element

Net volume of the main send element

Start volume of the main send element

Maximum volume of the main send element

Sum of weight utilization of the main send element in %

Sum of volume utilization of the main send element in %

Sum of delivery gross weight

Sum of delivery net weight

Sum of delivery volume

Transport distance

Planned loading time

Current loading time

Timed-out for the planned loading time

Planned transport length

Current transport duration

Timed-out for the planned transport duration

Further key figures that are calculated during the standard analysis:

Average current loading duration

Transport method

Average planned loading duration

Average timed-out for the planned loading time

Average current transport duration

Average planned transport duration

Average timed-out for the planned transport duration

Average weight utilization in %

Average volume utilization in %

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Documentation not Available in Release 4.6B

Documentation not Available in Release 4.6B

Note on Calculating Key Figures

You will find out how to calculate and update the key figures in the Sales Information System in the following sections. In some cases, the key figures could be grouped together.

Key Figures for Transports

You want to differentiate between incoming and outgoing transports. Only key figures from outgoing transports were updated.

Key Figures for Deliveries

Delivery key figures are updated when the transport is completed.

Entry-dependent Key Figures

Note that unit-dependent key figures are updated with the same units.

Key Figure	Unit
Quantities	Base unit of measure
Weights	Statistics weight unit
Distance	Statistics distance unit
Volume	Statistics volume unit
Duration	Minutes

The statistics weight unit, distance unit and volume unit can be specified in Customizing for each MRP.

Average Key Figures

The average key figures are calculated during the standard analysis. This means that the average key figures are always in *ZERO* value in the information structure.

In addition the average key figures is calculated by **dividing** the number of items in the standard analysis.