SAP
LIS SIS Training Documentation

Developed by consultant Roderick Collins
# Table of Contents

Introduction ................................................................................................................. 4  
Requirements Definition .......................................................................................... 5  
Step 1 Creating Field Catalogues, Transaction Code MC18 ........................................ 6  
Step 2 Creating Info Structures, Transaction Code MC21 ........................................... 7  
Changing Characteristics and Key Figure Names .................................................... 13  
Creating A Data Element ....................................................................................... 15  
Finding Tables and Data Elements ........................................................................ 15  
Step 3 Create Update Rules, Transaction Code MC24 ............................................ 16  
Step 4 Activate Update Rules, Transaction Code OMOZ ........................................ 19  
Testing .................................................................................................................... 21  
Copying Info Structure Versions ............................................................................ 21  
Copying Key Figures between Info Structures ...................................................... 22  
Setup Mass Processing Job to Copy Key Figure data .............................................. 23  
Copying From one Info Structure to Another, Transaction MCSZ .......................... 25  
Master Data Statistics Updates .............................................................................. 28  
IMG Configuration Areas ...................................................................................... 28  
Material Master Statistics Update Field ................................................................. 29  
Making Fields ‘Required’ on the Material Master ................................................... 30  
Customer Master Statistics Update Field ............................................................... 31  
Making Fields ‘Required’ on the Customer Master ................................................ 31  
Loading Historical Data into the Info Structure: Statistical setup – Sales ............... 32  
Running Historical Data Upload Programs from the IMG ...................................... 40  
Creating and Choosing Requirements and Formulas for Info Structures ................. 40  
Info Structure S675 Inventory Balances at Storage Location Level ......................... 41  
Formula Routine Number 932, GR Blocked Stock ................................................ 41  
Formula Routine Number 934, Intransit Stock ...................................................... 43  
Info Structure S6xx Goods Movements ................................................................ 46  
Requirement Routine Number 942, Material Type and Movement Type Requirements .......................................................... 46  
Formula Routine Number 935, Formula Value * (-1) ............................................ 46  
Info Structure S678 Sales Orders and Deliveries .................................................... 48  
Requirement Routine Number 904, Delivery not GI ............................................. 48  
Formula Routine Number 919, ‘GDT’ Delivery Qty ............................................... 49  
Formula Routine Number 920, GDT Open Order Quantity ..................................... 51  
Info Structure S679 Purchase Requisitions and Purchase Orders ............................ 53  
Requirement Routine Number 902, Purchase Organization and Material Type Requirements .......................................................... 53  
Formula Routine Number 904 Open Purchase Order Quantity ................................ 53
Introduction

This document describes the comprehensive process for creating Logistics Information System and Sales Information System Info Structures. This document is written for a trainee that already has SAP R/3 configuration knowledge as well as business transactional experience in the system.

This training document was developed by consultant Roderick Collins.
Requirements Definition

The first step in building the Information Structure is to determine the business requirements, the specific purpose for collecting the data.

1. What data and/or activities do we want to capture?
   
   For example:
   All Sales Orders, Purchase Orders, Inventory Movements, Storage Bin balances, etc.
   Are there any specific order types to include or exclude?

2. a. Identify the reporting hierarchy?
   For example, see Chart 1 and Chart 2 below

   Chart 1

<table>
<thead>
<tr>
<th>Info Structure Hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant</td>
</tr>
<tr>
<td>Division</td>
</tr>
<tr>
<td>Product Hierarchy</td>
</tr>
<tr>
<td>Material Type</td>
</tr>
<tr>
<td>Material</td>
</tr>
<tr>
<td>Storage Location</td>
</tr>
</tbody>
</table>

   b. Do you want to exclude any Plants, Divisions, Material Types, etc. from the hierarchy?

3. Does the data need to be captured in specific time periods?
   For example: Monthly, Weekly, Daily, or Financial Posting period

Chart 2: Demand Info Structures Layout

<table>
<thead>
<tr>
<th>Characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plant</td>
<td>All</td>
</tr>
<tr>
<td>2. Div</td>
<td>All</td>
</tr>
<tr>
<td>3. Movement type</td>
<td>All</td>
</tr>
<tr>
<td>4. Hierarchy (18 characters)</td>
<td>All</td>
</tr>
<tr>
<td>5. Material Type</td>
<td>FERT, HALB, HAWA, UNBW</td>
</tr>
</tbody>
</table>
6. **Material** | All
7. **Transaction time** | From transaction

### Key Figures

1. **Quantity**
2. **Standard price**

### Comments

1. Because the transactional demand data required for this Info Structure is unique at the plant level, storage location will not be a characteristic.
2. Inventory for material types FERT, HALB, HAWA, UNBW will be collected. All other material type inventory will be filtered out and not collected.
3. This info structure will use a periodicity of 'daily' where the day is defined as the posting date (BUDAT).
4. Determine the number of days/months to retain data.
5. Determine archiving procedure.

### Step 1 Creating Field Catalogues, Transaction Code MC18

The Field Catalogue is a collection of fields from the SAP system. This catalogue is then used when creating the Info Structure. Therefore a Field Catalogue must exist, or be created, and contain the fields that you will need when building the Info Structure. (For your Info Structure a suitable Field Catalogue may already exist and this step can be skipped.)

Transaction SPRO
Press Enterprise IMG
>Logistics – General
>>Logistics Information System
>>>Logistics Data Warehouse
>>>>Data Basis
>>>>>Field catalogues
>>>>>>Maintain self-defined field catalogues

You can create a catalogue of the individual key figures that you want inside it. The Key figures that you select are from predefined lists.
Also, after completing the update rules you may determine that a field needs to be added directly to a SAP table. This requires a Access Key. Access Key is a code generated by SAP to track enhancements and modifications to tables and programs per installation.

To modify the table go to SE11
Enter Table Name
Select the change button
Add the field that you need in this table. You may also need a reference field and reference table. If these are needed you can use the same reference field and reference table that this field uses in another table. Find out where else this field is used.

To find where fields are used, go to
Transaction SE80
Select radio button Dictionary Objects
Select radio button Edit
Select radio button Data Element
Enter the field or data element name
Select the where-Used Icon button from the menu bar
A Where-Used List Data Element pop-up box will appear
Select the Table, Structures, Fields, Programs, Interfaces, etc. that you want the system to search throughout and find where this Data Element is used.
Click Enter or Execute in the background

Step 2 Creating Info Structures, Transaction Code MC21
Transaction SPRO
Press Enterprise IMG
>Logistics – General
>>Logistics Information System
>>>Logistics Data Warehouse
>>>>Data Basis
>>>>>Information Structures
>>>>>>Maintain self-defined information structures
Implementation Guide for R/3 Customizing (IMG)

- Global Settings
- Enterprise Structure
- Gross-Application Components
- Financial Accounting
- Treasury
- Controlling
- Investment Management
- Enterprise Controlling
- Real Estate Management
- Logistics - General
  - Logistics Basic Data: Material Master
  - Assortment
  - Retail Pricing
  - Logistics Basic Data: Business Partners
  - Batch Management
  - Logistics Basic Data: Product Catalog
  - IMG Product Catalog and Online Store
  - Variant Configuration
  - Engineering Change Management
  - Logistics Information System (LIS)
  - Logistics Data Warehouse
  - Data Basis

- Data Basis
  - Applications
  - LIS Inbound Interface for External Data
  - Field Catalogs
  - Information Structures
    - Maintain self-defined information structures
    - Display generating log for information structures
Enter an available Info Structure number (number range is from S500 thru S999).
Enter the application that this Info Structure will use.

Attributes section
Enter the type of Info Structure
Standard (most common, flexible planning can be utilized with this type)
Without Period Unit (flexible planning is not possible with this type because data is not categorized into periods)
Without Updating
Notes:
1-After creating the Info Structure save it and press the Generate button (this will make the info structure active).

2-The ‘Plng. Possible’ check box is an Indicator that determines if an information structure is relevant in flexible planning.

3-The number of Characteristics that you can assign is limited to nine (9). The Characteristics will make up your hierarchy, your structure for reporting or forecasting.

4-Assign the key figures. The key figures will be the headers for the data that you are collecting. If using the Info Structure for Sales & Operations Planning, the Key Figures will also be the Row Label Headers in the Planning Table. When you view data in the
Planning Table it will be listed by Key Figure in a row format. The Key Figure will be the header of that row.

5-The **Unit** field after the key figure is used for determining in which units it will be updated. For example, base unit or sales unit of measure, etc.

6-The **Sum** field, when checked will enable the records for this key figure to be aggregated.

7-The **Fix** field, when checked will enable you to fix the values in the flexible planning, planning table.

You may want to change the listed name of the characteristics in your hierarchy and can do so. For example, one of your characteristic names may be Material, but you want to re-label it SKU. In order to make this change you will need to create a custom reference table in transaction SE11.

**Formula Routine Number 919, ‘GDT’ Delivery Qty**

```plaintext
FORM MCV2_919.
*{   INSERT
DATA: ZZ_VBELN LIKE VBAK-VBELN.
DATA: ZZ_POSNR LIKE VBAP-POSNR.
DATA: ZZ_OAUME LIKE S678-OAUME.
DATA: ZZ_VBAP LIKE VBAP.
FORMULA_VALUE = MCLIPS-LFIMG.

CHECK MCLIPS-SUPKZ = '2'.
CHECK MCINF EQ 'S678'.
IF ( MCLIKP-VBTYP EQ 'J'
    OR MCLIKP-VBTYP EQ 'T' )
    AND MCVBUP-WBSTA EQ 'C'.
SELECT SINGLE AUART INTO MCVBAK-AUART
    FROM VBAK
    WHERE VBELN EQ MCLIPS-VGBEL.
SELECT SINGLE * FROM VBAP
    INTO ZZ_VBAP
    WHERE VBELN EQ MCLIPS-VGBEL
    AND POSNR EQ MCLIPS-VGPOS.
MCVBAP-ERDAT = ZZ_VBAP-ERDAT.
IF MCLIPS-KCMENG IS INITIAL.
    FORMULA_VALUE = MCLIPS-LFIMG.
ELSE.
```

IF ZZ_VBAP-VRKME EQ ZZ_VBAP-MEINS.
  FORMULA_VALUE = MCLIPS-KCMENG.
ELSE.
  FORMULA_VALUE = MCLIPS-KCMENG * ZZ_VBAP-UMVKN / ZZ_VBAP-UMVKZ.
ENDIF.
ENDIF.
SELECT SINGLE OAUME FROM S678 INTO ZZ_OAUME
WHERE SSOUR EQ SPACE
  AND VRSIO EQ MCCONTROL-VRSIO
  AND SPMON EQ '000000'
  AND SPTAG EQ MCVBAP-ERDAT
  AND SPWOC EQ '000000'
  AND SPBUP EQ '000000'
  AND VKORG EQ MCLIKP-VKORG
  AND SPART EQ MCLIPS-SPART
  AND PRODH EQ MCLIPS-PRODH
  AND KUNNR EQ MCLIKP-KUNAG
  AND WERKS EQ MCLIPS-WERKS
  AND AUART EQ MCVBAK-AUART
  AND VBELN EQ MCLIPS-VGPOS
  AND MATNR EQ MCLIPS-MATNR.
IF SY-SUBRC EQ 0.
  ZZ_OAUME = ZZ_OAUME - FORMULA_VALUE.
IF ZZ_OAUME LT 0.
  ZZ_OAUME = 0.
ENDIF.
ENDIF.
UPDATE S678 SET OAUME = ZZ_OAUME
  LFIMG = LFIMG + FORMULA_VALUE
WHERE SSOUR EQ SPACE
  AND VRSIO EQ MCCONTROL-VRSIO
  AND SPMON EQ '000000'
  AND SPTAG EQ MCVBAP-ERDAT
  AND SPWOC EQ '000000'
  AND SPBUP EQ '000000'
  AND VKORG EQ MCLIKP-VKORG
  AND SPART EQ MCLIPS-SPART
  AND PRODH EQ MCLIPS-PRODH
  AND KUNNR EQ MCLIKP-KUNAG
  AND WERKS EQ MCLIPS-WERKS
  AND AUART EQ MCVBAK-AUART
  AND VBELN EQ MCLIPS-VGPOS
  AND MATNR EQ MCLIPS-MATNR.
AND POSNR EQ MCLIPS-VGPOS
AND MATNR EQ MCLIPS-MATNR.
ENDIF.
RETURNCODE = 4.

*} INSERT
ENDFORM.

**Formula Routine Number 920, GDT Open Order Quantity**

FORM MCV2_920.
*{ INSERT 1
IF MCVBAP-UPDKZ CA 'DL'.
  FORMULA_VALUE = 0.
  RETURNCODE = 0.
  EXIT.
ENDIF.
FORMULA_VALUE = MCVBAP-KWMENG.
CHECK MCINF EQ 'S678'.
SELECT SINGLE LFIMG INTO MCLIPS-LFIMG
  FROM S678
  WHERE SSOUR EQ SPACE
  AND VRSIO EQ MCCONTROL-VRSIO
  AND SPMON EQ '000000'
  AND SPTAG EQ MCVBAP-ERDAT
  AND SPWOC EQ '000000'
  AND SPBUP EQ '000000'
  AND VKORG EQ MCVBAK-VKORG
  AND SPART EQ MCVBAP-SPART
  AND PRODH EQ MCVBAP-PRODH
  AND KUNNR EQ MCVBAK-KUNNR
  AND WERKS EQ MCVBAP-WERKS
  AND AUART EQ MCVBAK-AUART
  AND VBELN EQ MCVBAP-VBELN
  AND POSNR EQ MCVBAP-POSNR
  AND MATNR EQ MCVBAP-MATNR.
  IF SY-SUBRC EQ 0 AND MCLIPS-LFIMG GT 0.
    FORMULA_VALUE = MCVBAP-KWMENG - MCLIPS-LFIMG.
  ENDF.
  IF FORMULA_VALUE LT 0.
    FORMULA_VALUE = 0.
  ENDF.
RETURNCODE = 0.
*} INSERT
ENDFORM.
Info Structure S679 Purchase Requisitions and Purchase Orders

Requirement Routine Number 902, Purchase Organization and Material Type Requirements
FORM MCE1_902.
*{ INSERT 1

RETURNCODE = 4.
CHECK MCEKKO-EKORG NE 'PO04'.
CHECK MCEKPO-MTART = 'FERT' OR
   MCEKPO-MTART = 'HALB' OR
   MCEKPO-MTART = 'UNBW' OR
   MCEKPO-MTART = 'HAWA'.
RETURNCODE = 0.

*} INSERT
ENDFORM.

Formula Routine Number 904 Open Purchase Order Quantity
FORM MCE2_904.
*{ INSERT 1
   IF MCEKET-WAMNG GT 0.
      FORMULA_VALUE = MCEKET-MENGE - MCEKET-WAMNG.
      * FORMULA_VALUE = order quantity – Issued Quantity.
   ELSE.
      FORMULA_VALUE = MCEKET-MENGE - MCEKET-WEMNG.
      * FORMULA_VALUE = order quantity – Quantity of goods received
   ENDIF.
RETURNCODE = 0.
*} INSERT
ENDFORM.

Formula Routine Number 905, Goods Receipts Open Calculations
FORM MCE2_905.
*{ INSERT 1
DATA: ZZ_OBMNG LIKE S679-OBMNG.  "open

FORMULA_VALUE = MCEKET-WEMNG.  "received
CHECK MCEKET-SUPKZ EQ '2'.
CHECK MCINF   EQ 'S679'.
IF MCEKET-WAMNG  GT 0.
   ZZ_OBMNG = MCEKET-MENGE - MCEKET-WAMNG.
ELSE.
   ZZ_OBMNG = MCEKET-MENGE - MCEKET-WEMNG.
ENDIF.
IF ZZ_OBMNG LT 0.
   ZZ_OBMNG = 0.
ENDIF.
UPDATE S679
   SET OBMNG = ZZ_OBMNG
WHERE SSOUR EQ SPACE
   AND VRSIO EQ McCONTROL-VRSIO
   AND SPMON EQ '000000'
   AND SPTAG EQ MCEKKO-BEDAT
   AND SPWOC EQ '000000'
   AND SPBUP EQ '000000'
   AND SPART EQ MCEKPO-SPART
   AND PRDHA EQ MCEKPO-PRDHA
   AND WERKS EQ MCEKPO-WERKS
   AND LIFNR EQ MCEKKO-LIFNR
   AND BSART EQ MCEKKO-BSART
   AND EBELN EQ MCEKPO-EBELN
   AND EBELP EQ MCEKPO-EBELP
   AND MATNR EQ MCEKPO-MATNR.
RETURNCODE = 0.
*} INSERT
ENDFORM.
Formula Routine Number 906, Goods Issue Open Calculations
FORM MCE2_906.
*{

DATA: ZZ_OBMNG LIKE S679-OBMNG. "open

FORMULA_VALUE = MCEKET-WAMNG. "Issued
CHECK MCEKET-SUPKZ EQ '2'.
CHECK MCINF EQ 'S679'.
IF MCEKET-WAMNG GT 0.
  ZZ_OBMNG = MCEKET-MENGE - MCEKET-WAMNG.
ELSE.
  ZZ_OBMNG = MCEKET-MENGE - MCEKET-WEMNG.
ENDIF.
IF ZZ_OBMNG LT 0.
  ZZ_OBMNG = 0.
ENDIF.
UPDATE S679
  SET OBMNG = ZZ_OBMNG
WHERE SSOUR EQ SPACE
  AND VRSIO EQ MCCONTROL-VRSIO
  AND SPMON EQ '000000'
  AND SPTAG EQ MCEKKO-BEDAT
  AND SPWOC EQ '000000'
  AND SPBUP EQ '000000'
  AND SPART EQ MCEKPO-SPART
  AND PRDHA EQ MCEKPO-PRDHA
  AND WERKS EQ MCEKPO-WERKS
  AND LIFNR EQ MCEKKO-LIFNR
  AND BSART EQ MCEKKO-BSART
  AND EBELN EQ MCEKPO-EBELN
  AND EBELP EQ MCEKPO-EBELP
  AND MATNR EQ MCEKPO-MATNR.
RETURNCODE = 0.
}
INSERT
ENDFORM.