



SAP Easy Access



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SAP ECC and S/4

Tables in SD and MM

Tables Relationships

Transparent Table and Structures



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1. **Transparent Tables vs Structures.**
2. Find Transparent Table from Structure Fields.
3. Table relationships (SD).
4. Table relationships (MM).



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Tables and Structures in ECC:

- **Transparent Tables.**
- **Cluster Tables.** (logical tables that combine information from several tables logically belonging together)
- **Pooled Tables.** (logical tables that combine information from several tables logically belonging together)
- **Structures.**

In **S/4HANA**, SAP has converted “all” Cluster and Pooled tables into Transparent Tables, (**BSEG** used to be a Cluster table in ECC and cannot be used in Join Tables in Query like SQVI or SQ01 but in S/4HANA, **BSEG** has been converted to Transparent table and can now be used in Join Tables for Query Report in SQVI or SQ01). BUT Structures remain in S/4 as the same purpose, and are still available in S/4HANA for ABAP programs to store data contents temporarily during program runtime.



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Transparent tables vs Structures in S/4HANA:

- **Transparent Table:** has a 1-1 relation to the database table and looks exactly as in the Data Dictionary. Its contained data is physically written in the database. Therefore in SE16, data can be listed for Transparent Tables.
- **Structure:** is a collection of fields from different (physical) tables and is temporary used in ABAP programs as a sort of variable to store data. Therefore in SE16N, no data can be found for Structures.

Standard PO 450000080

Document Overview On

NB Standard PO 450000080

S..	Itm	A	Material	Sho
	10		M01	Mat

Item 1 [10] M01 , Material M1

Material Data Quantities/Weights Delivery Screen

Material group 001 IUID-Relevant

Supplier Mat. No.

Supplier Subrange

Batch

Performance Assistant

Purchasing Document Number

Alphanumeric key uniquely identifying the document.

Technical Information

Dynpro Data	
Program Name	SAPLMEGUI
Screen Number	1105

GUI Data	
Program Name	SAPLMEGUI
Status	NORMAL_EXT

Field Data	
Table Name	MEPO_TOPLINE
Table Category	Structure
Field Name	EBELN
Data Element	EBELN
Parameter ID	BES

Field Description for Batch Input	
Dynpro Field	MEPO_TOPLINE-EBELN
Program Name	SAPLMEGUI
Screen Number	0014

MEPO_TOPLINE however is a STRUCTURE and not a Transparent table which the data is actually stored

S/4HANA still contain Structures

InfoUpdate

Navigate

General Table Display

Table

Text table

Layout

Maximum no. of hits

Purchase Order Header Lines

No texts

Maintain entries

Get Field



Selection Criteria

Fld name	O.	Fr.Value	To value	More	Output	Technical name
Order Type					<input checked="" type="checkbox"/>	BSART
Purchasing Doc.					<input checked="" type="checkbox"/>	EBELN
Medium Label					<input checked="" type="checkbox"/>	SCRTEXT
Supplier					<input checked="" type="checkbox"/>	SUPERFIELD
Supplier					<input checked="" type="checkbox"/>	LIFNR
Supplying Plant					<input checked="" type="checkbox"/>	RESWK
Document Date					<input checked="" type="checkbox"/>	BEDAT
Status					<input checked="" type="checkbox"/>	STATUSICON
Smart Number					<input checked="" type="checkbox"/>	LONGNUM

in SE16N, no contents found for Structure "MEPO_TOPLINE"

**SAP**

1. Transparent Tables vs Structures.
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Standard PO 4500000080

Document Overview On

NB Standard PO 4500000080

S..	Itm	A	Material	Shor	Mate
	10		M01		

Which table this Field can be found in Transparent Tables OR other Tables? click F1

Performance Assistant

Purchasing Document Number

Alphanumeric key uniquely identifying the document.

Technical Information

Dynpro Data

Program Name: SAPLMEGUI
Screen Number: 1105

GUI Data

Program Name: SAPLMEGUI
Status: NORMAL_EXT

Field Data

Table Name: MEPO_TOPLINE
Table Category: Structure
Field Name: EBELN
Data Element: EBELN
Parameter ID: BES

Field Description for Batch Input

Dynpro Field: MEPO_TOPLINE-EBELN
Program Name: SAPLMEGUI
Screen Number: 0014

InfoUpdate

Navigate

Double-click the Data Element "EBELN"



Dictionary: Display Data Element

68 Display Original | Documentation | Supplementary Documentation

Data element: Active
Short Description:

Attributes | **Data Type** | Further Characteristics | Field Label

Elementary Type

Domain

Built-in type

Reference Type

Referenced Type

Reference to built-in type

Purchasing document number

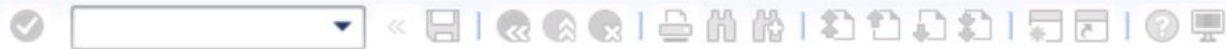
Data Type: Character String

Length:

Data Type: Length:

Data Type: Length:

click where-used list for the Structure-Field MEPO_TOPLINE-EBELN



Dictionary: Display Data Element

Data element EBELN

Short Description Purchasing Document

Attributes Data Type Further Char

Elementary Type

Domain

EBELN

Data Type

Length

Built-in type

Data Type

Length

Reference Type

Referenced Type

Data Type

Length

Data Element: EBELN

Data Element EBELN

Select a where-used range: 1 / 26

- Table fields
- Structure fields
- View Fields
- Table Types
- Search Helps
- Data Elements
- Entity Type Attributes
- DB Procedure Proxies
- Programs
- Classes
- Interfaces
- Web Dynpro Components
- BSP Applications
- Function Module Interfaces
- Service Definitions
- Package Interfaces
- Business Add-Ins (Definition)
- Data Definitions
- Test Scripts
- Test Data Container
- Behavior Definitions
- BOPF Business Objects
- Use Range: Object Type s

Search Range

Locate this Structure-Field can be found in where Transparent Table.



Where-used Data Element EBELN in Table Fields (593 Hits)

Table Fields	Short Description	Package		
EKETH	Scheduling Agreement Schedules: History Tables			
<input type="checkbox"/> EBELN	Purchasing Document Number	ME		
EKKN	Account Assignment in Purchasing Document			
<input checked="" type="checkbox"/> EBELN	Purchasing Document Number	ME	A	X
EKKO	Purchasing Document Header			
<input type="checkbox"/> EBELN	Purchasing Document Number	ME	A	X
EKKO_T	Central O			
<input type="checkbox"/> EBELN	Purchasing	ME	A	X
EKPA	Partner P			
<input type="checkbox"/> EBELN	Purchasing	ME	A	X
EKPB	"Material	Document		
<input type="checkbox"/> EBELN	Purchasing Document Number	ME	A	X
EKPO	Purchasing Document Item			
<input type="checkbox"/> EBELN	Purchasing Document Number	ME	A	X
EKPO_DISTR	Purchasing Document Item Distribution			
<input type="checkbox"/> PURCHASINGDOCUMENT	Purchasing Document Number	ME	A	X
EKPO_WEIGHTS	Purchasing Document Weights			

The Package provides a hint to the module of the Table

Orange highlighted line is the Transparent table name

The Orange highlighted line is Description of the Transparent table (HINT of the Table purpose)

Package ME = Purchasing

General Table Display

Table Purchasing Document Header

Text table

Layout

Maximum no. of hits

Get Field

Selection Criteria	
Fld name	O. Fr.Value
Client	
Purchasing Doc.	4500000080
Company Code	
Doc. Category	
Document Type	
Control	
Deletion ind.	
Status	

Where-used Data Element EBELN in Table Fields (593 Hits)

Table Fields	Short Description	Package
EKEITH	Scheduling Agreement Schedules: History Tables	
<input type="checkbox"/> EBELN	Purchasing Document Number	ME
EKEN	Account Assignment in Purchasing Document	
<input checked="" type="checkbox"/> EBELN	Purchasing Document Number	ME
EKKO	Purchasing Document Header	
<input type="checkbox"/> EBELN	Purchasing Document Number	ME

SE16N on Transparent Table EKKO

EKKO: Display of Entries Found

Search in Table Purchasing Document Header

Number of hits

Runtime Maximum no. of hits

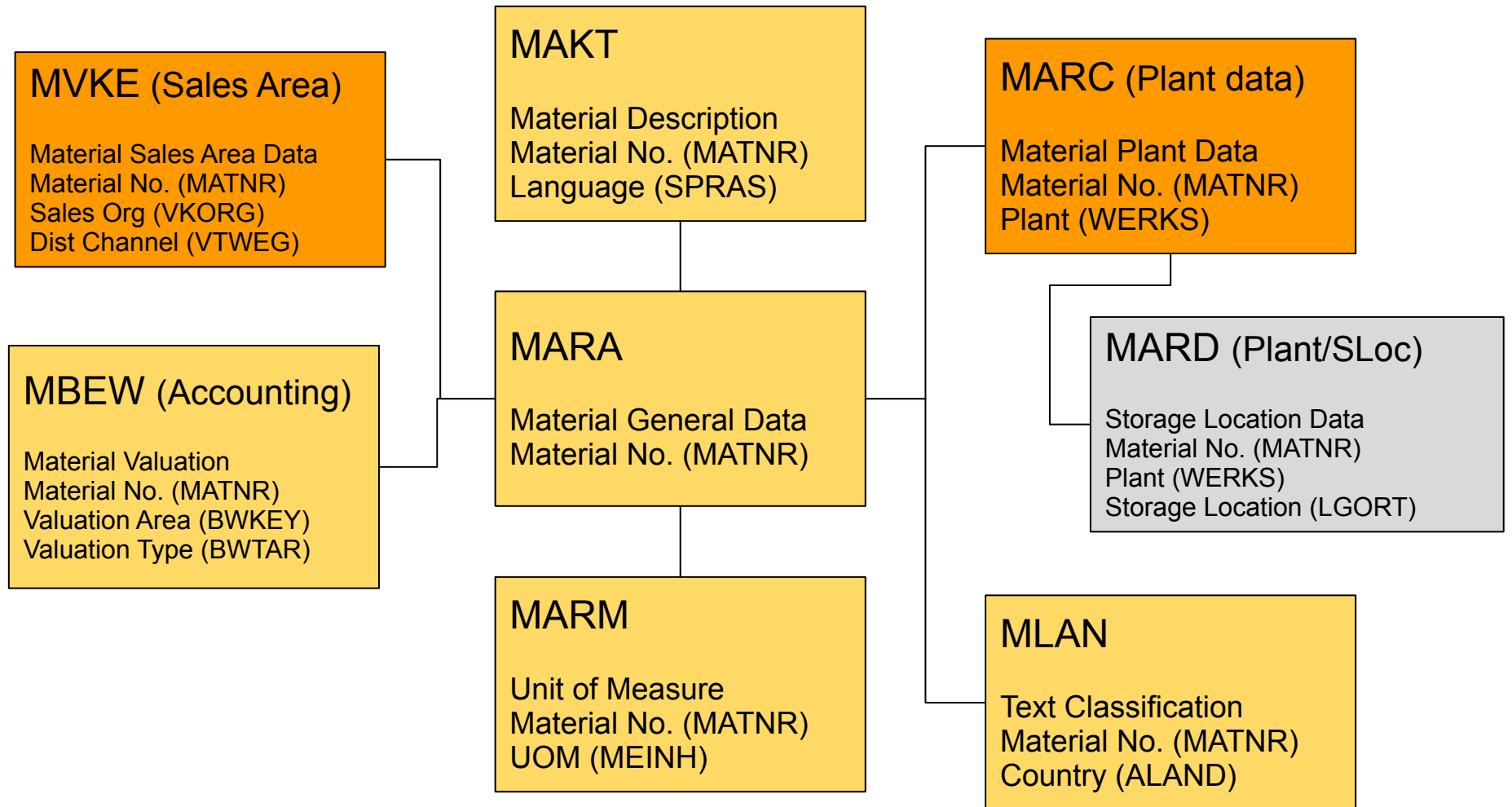
Insert Column

	Purchasing Doc.	CoCode	C	Type	Ctl	D	S	Created On	Created	Last Changed	ItInt	LItem	Supplier	Language	PayT	Payment in	Payment in
	4500000080	1010	F	NB			9	31.03.2023	TS410-20	20.230.331.013.405,6673050	10	10	V01	EN	0001	0	0

**SAP**

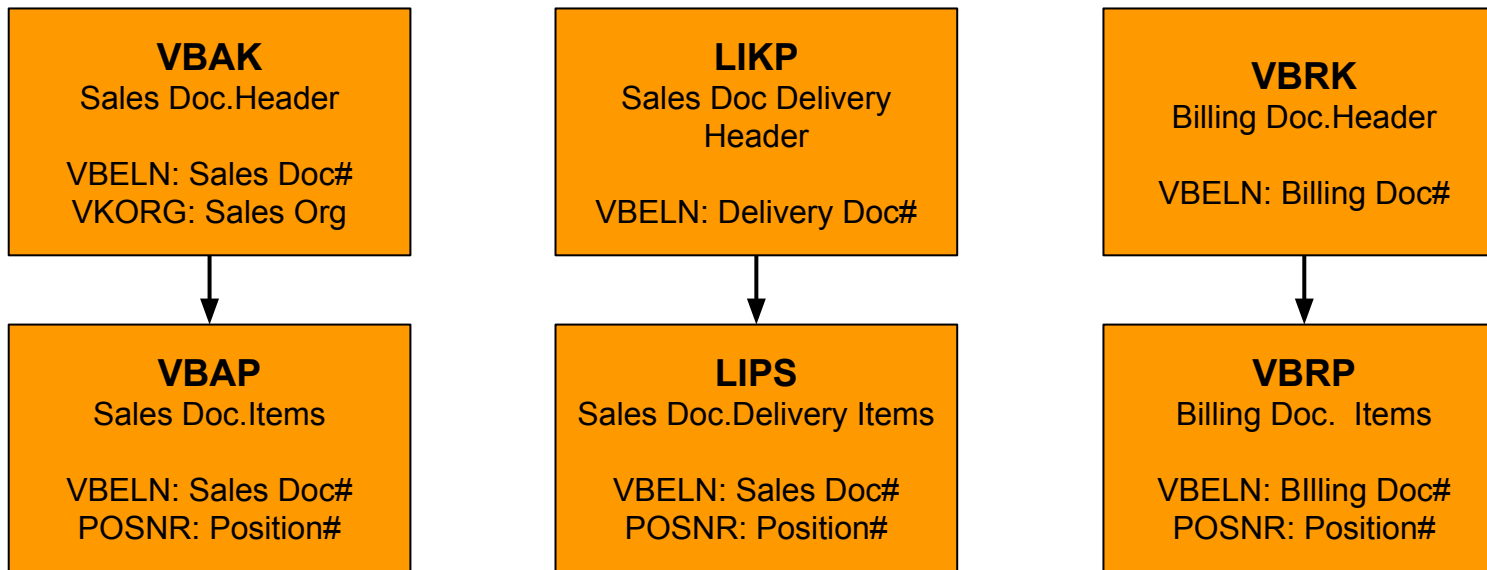
1. Transparent Tables vs Structures.
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Transparent Tables in MM



SAP MM tables: Material Master

Transparent Tables in SD



Tables that starts with certain letter are (but this cannot be used to generalized about all tables in the same modules):

L = Vendor (LFA1, LFB1)

L also for LE tables (LIKP, LIPS above)

K = Customer (KNA1, KONV)

V = Sales (VBAK, VBAP above)

T = Master Data eg: T001, T001W)

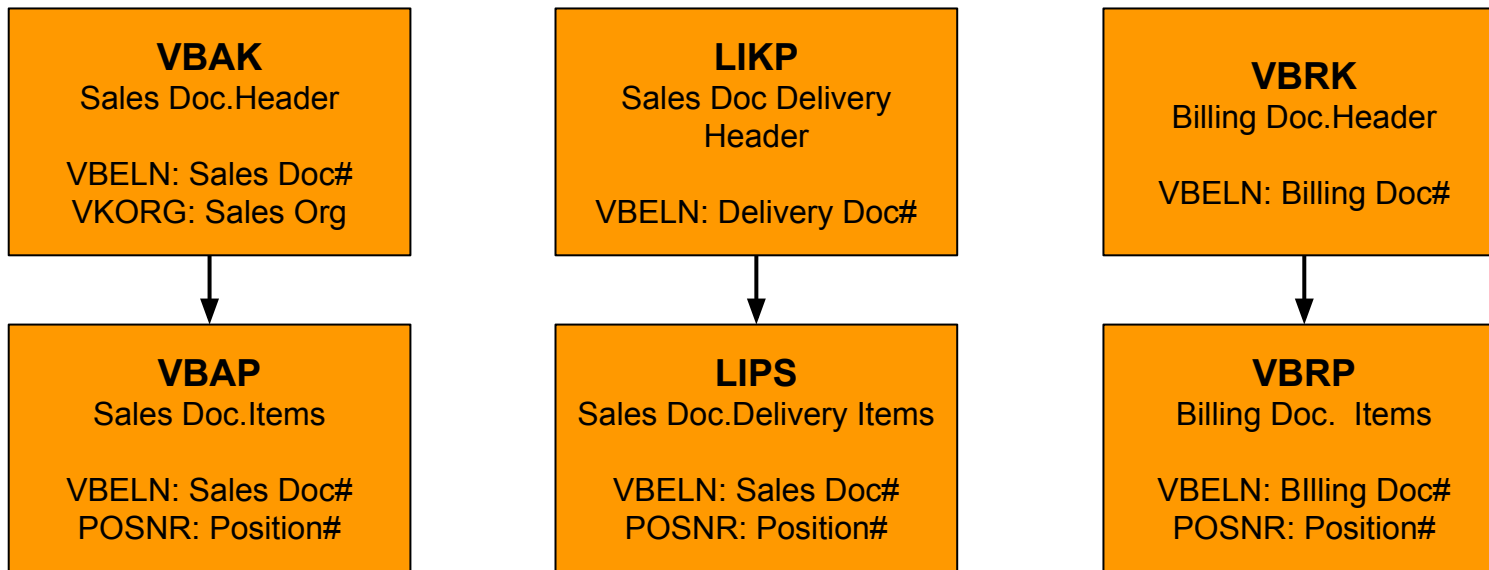
E = Purchasing (EKPO, EKKO)

M = Material Master (MARA, MARC)

B = Bank (BKNF, BKPF)

B = Accounting (BKPF, BSEG) although now combined to ACDOCA

Transparent Tables in SD



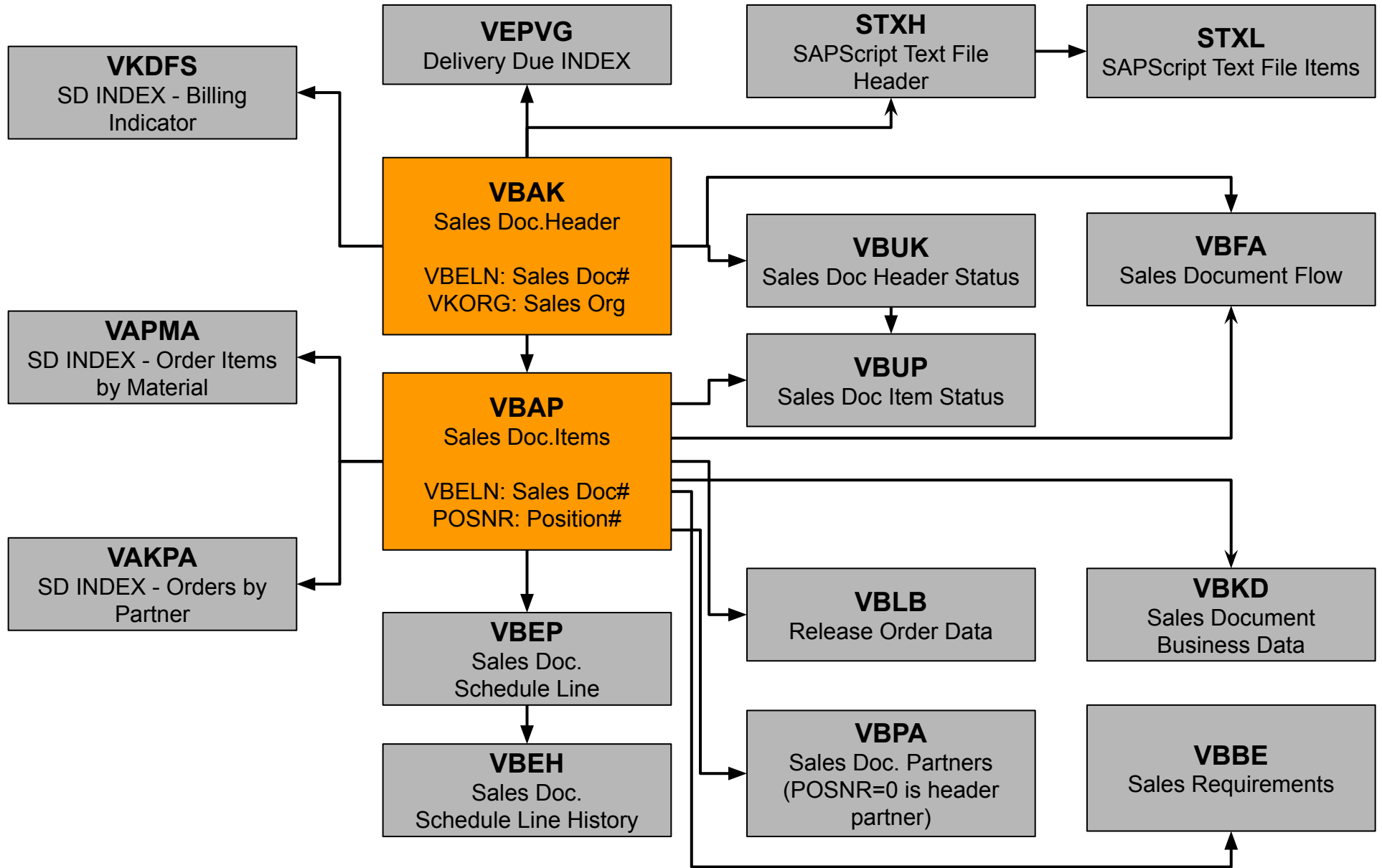
Tables contain the letters:

K are Header tables (VBAK, LIKP, VBRK)

P are Item tables (VBAP, LIPS, VBRP)

but that also does not seem to good way to memorize tables types for Header but remain a good hint. (whether it is header or item table can be easily determined via SE11 anyway)

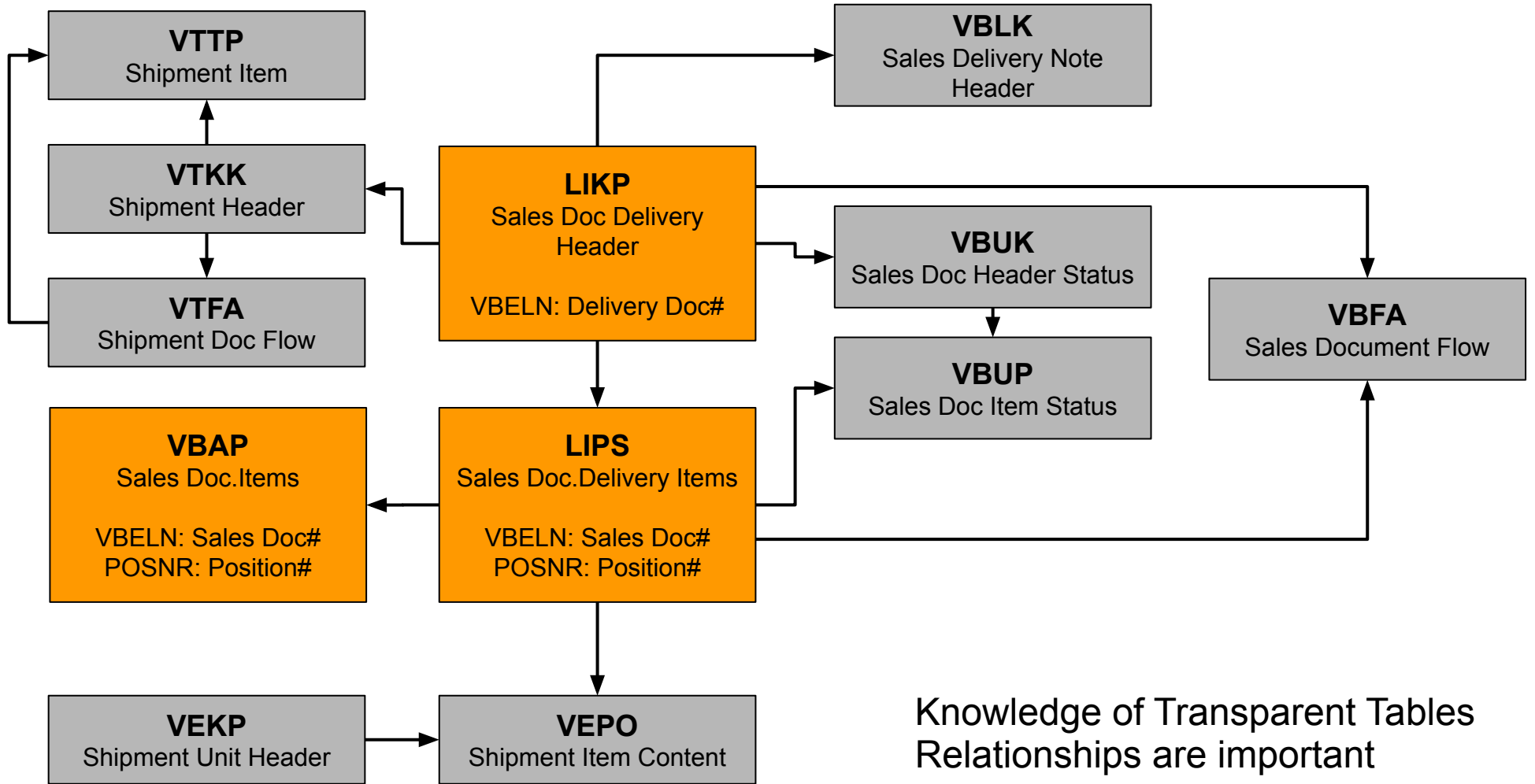
Transparent Tables in SD



SAP SD tables: Sales

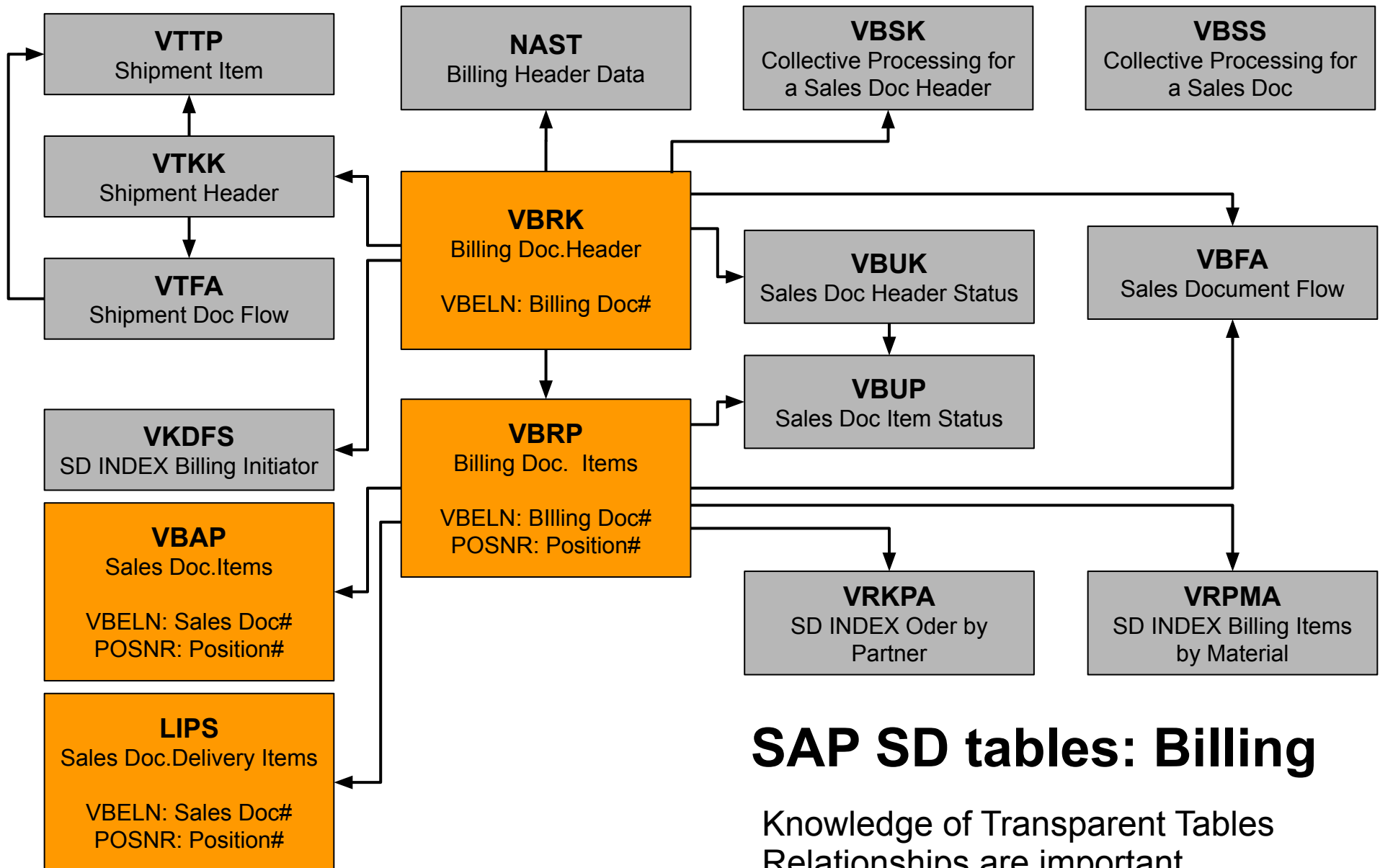
Knowledge of Transparent Tables Relationships are important

Transparent Tables in SD



SAP SD tables: Shipping Delivery

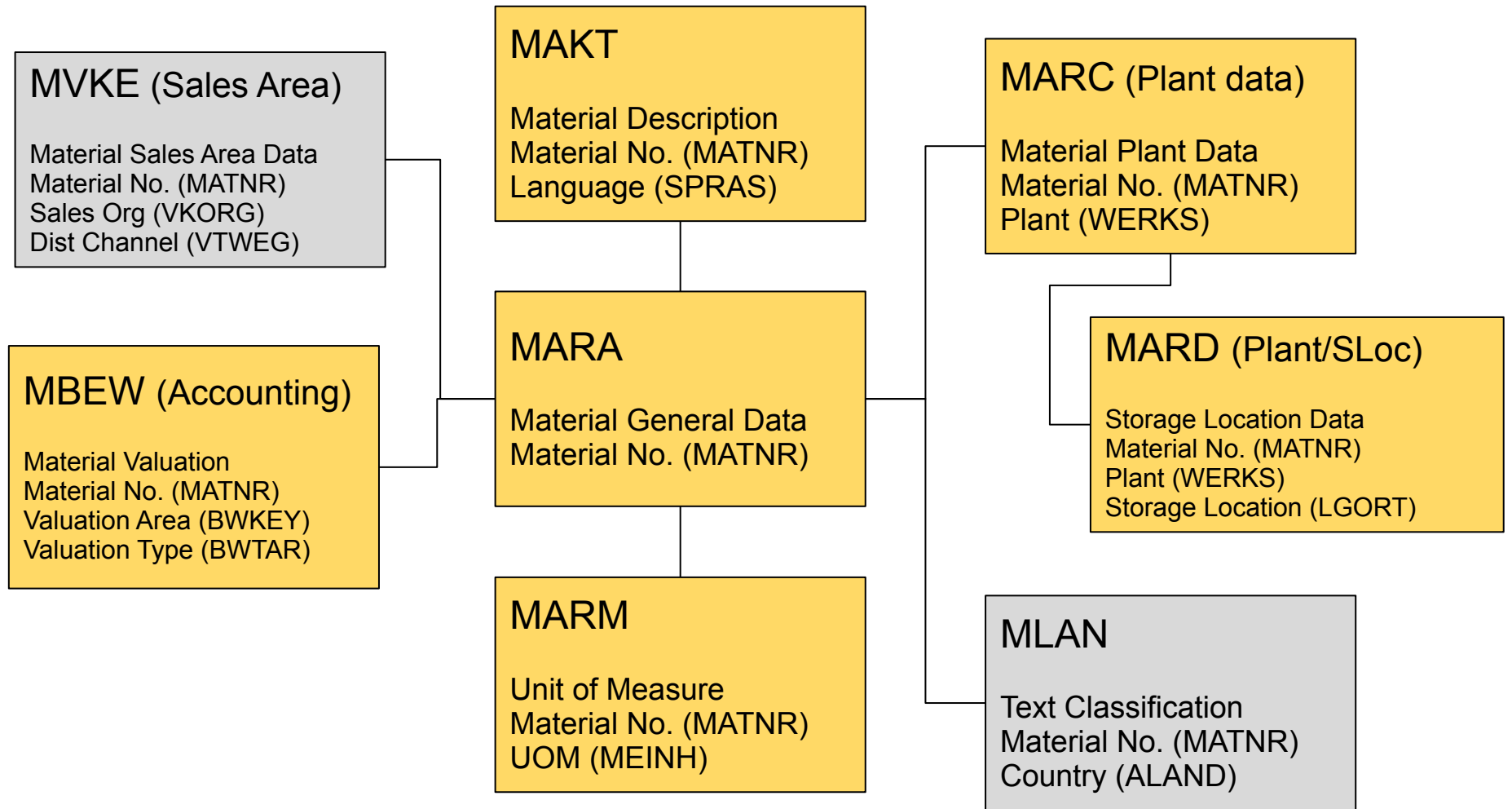
Transparent Tables in SD



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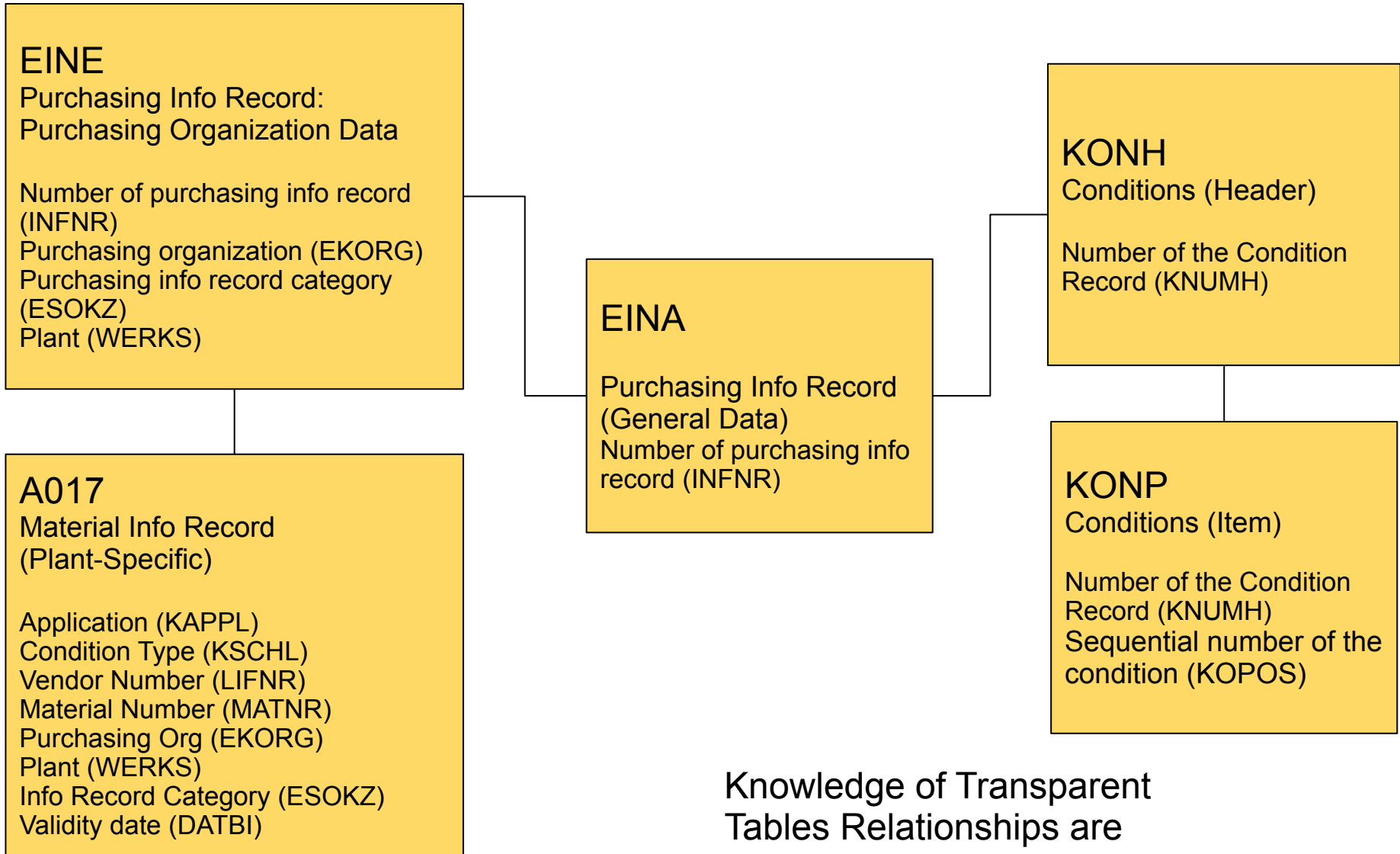
Transparent Tables in MM



SAP MM tables: Material Master

Knowledge of Transparent Tables Relationships are important

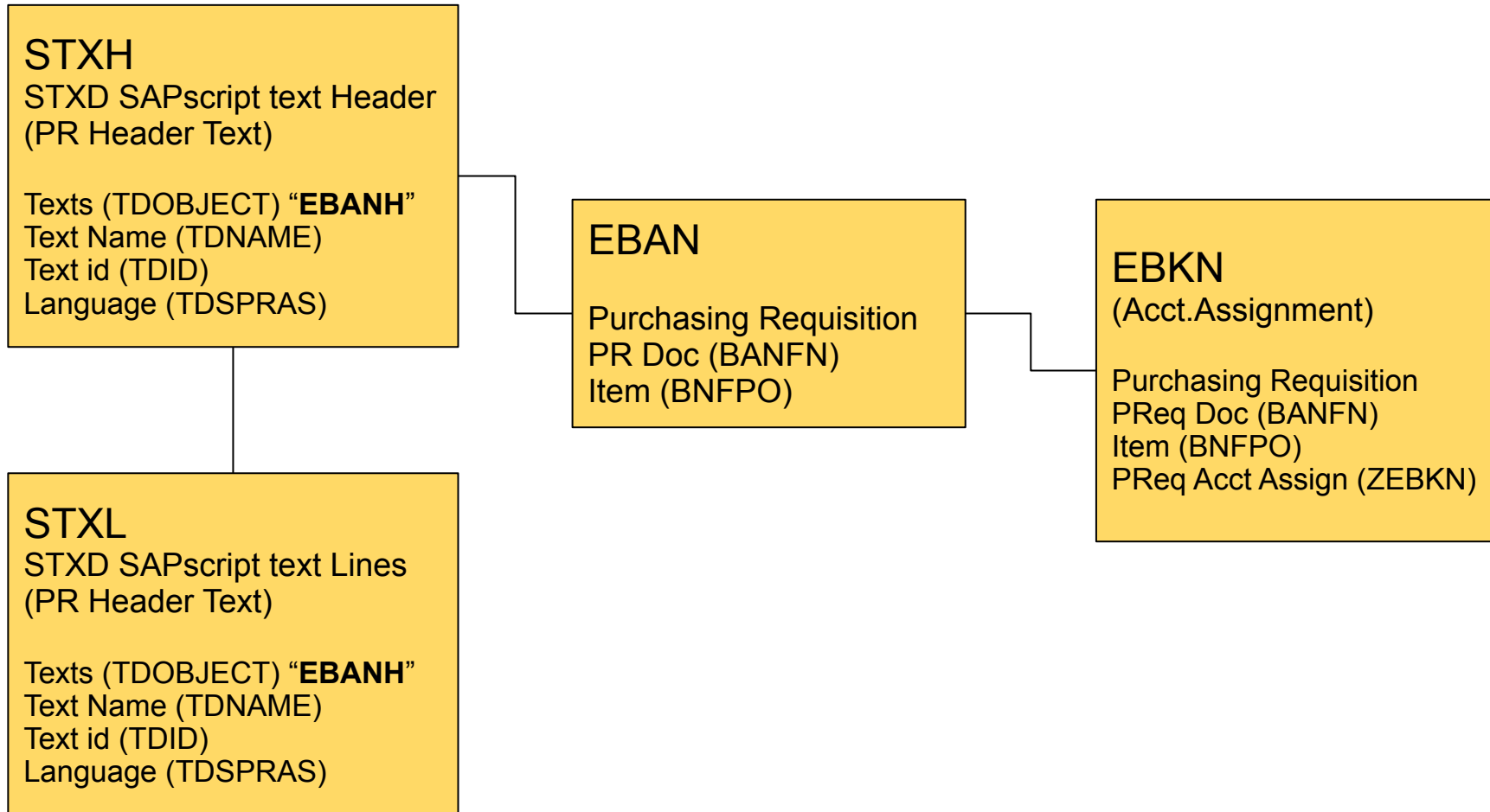
Transparent Tables in MM



Knowledge of Transparent
Tables Relationships are
important

SAP MM tables: Purchasing Info Record

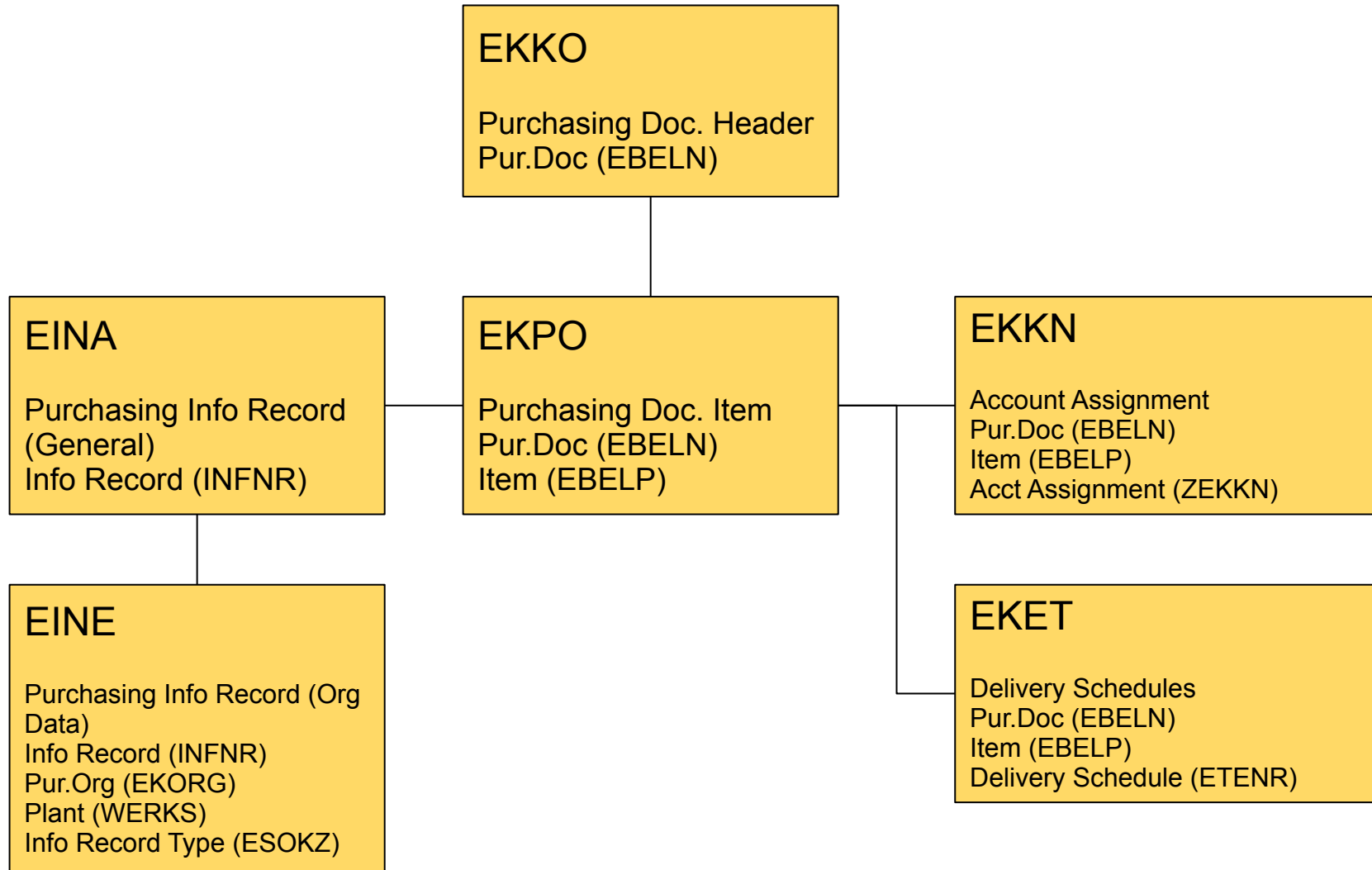
Transparent Tables in MM



SAP MM tables: Purchase Requisition

Knowledge of Transparent Tables
Relationships are important

Transparent Tables in MM



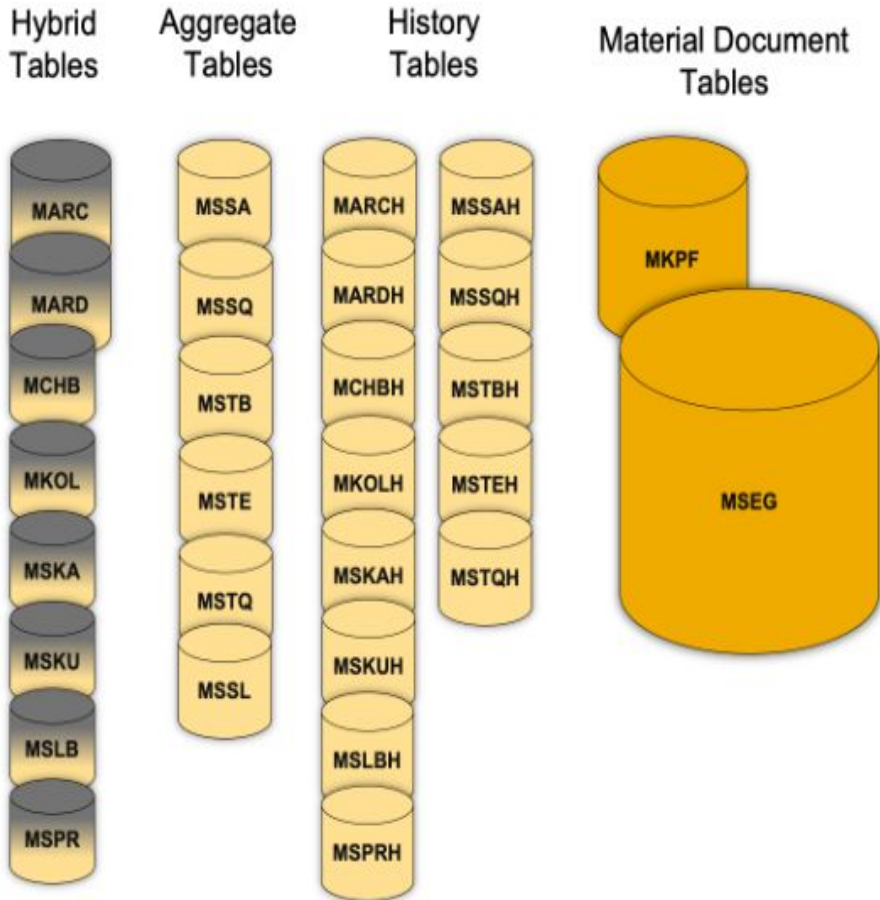
SAP MM tables: Purchasing Documents

Knowledge of Transparent Tables
Relationships are important

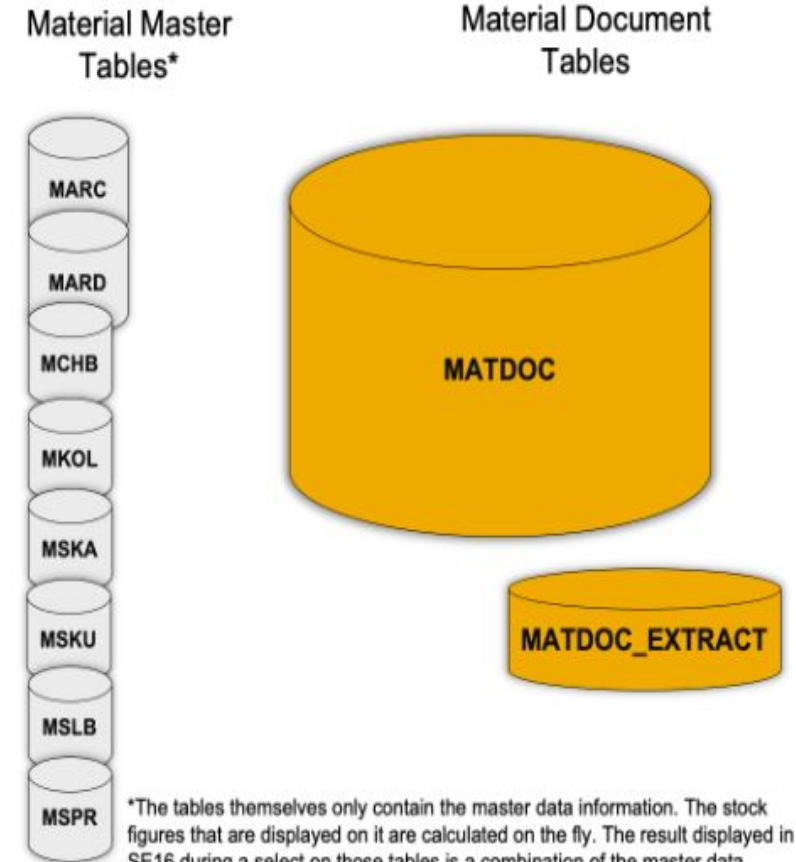
Transparent Tables in MM

The **MATDOC** is a line item Transparent Table. There is no concept of aggregates in S/4 HANA and many Tables for Material Documents are now in ONE table.

SAP ECC



SAP S/4HANA



*The tables themselves only contain the master data information. The stock figures that are displayed on it are calculated on the fly. The result displayed in SE16 during a select on those tables is a combination of the master data information (e.g. MARC data) and the stock figures calculated (e.g. NSDM_V_MARC).

SAP MM tables: Material Documents (revamped as MATDOC Transparent Table)