

SESSION 6

Testing of Business Process Automated Controls (OtC, PtP, Inventory)

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6. Business Process

- Order to Cash
- Procure to Pay
- Inventory

6.1 Order to Cash

Key Sub-Processes

- Organization Structure :

Client → Company Code → Sales Area → Plant

- Master data :
 - Customer Master Data at Client, Co Code and Sales Area level
 - Pricing master data at Sales Area level
 - Credit Limits

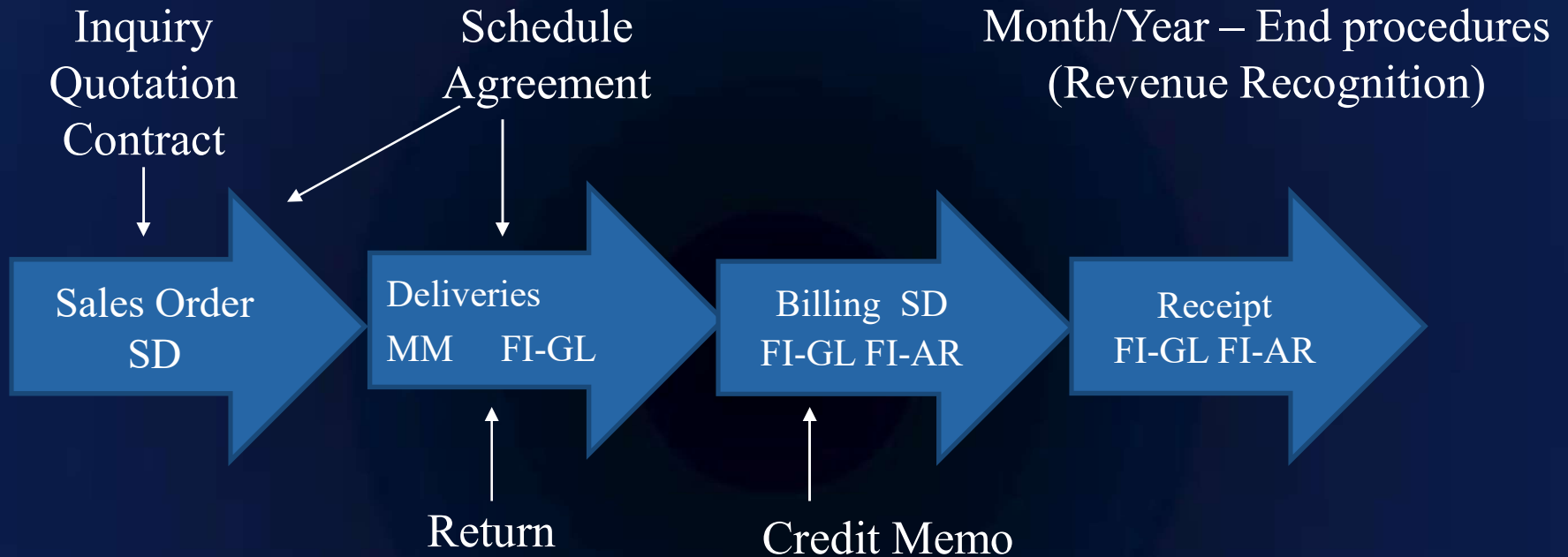
- Sales Orders processing
- Delivery and Post Goods Issue processing
- Sales Invoice processing
- Credit Block and release
- Release of Sales Invoice for accounting
- Receipt of Money
- Ageing of Receivables Review

Key T-Codes

XD01 – Customer master
MM01 – Material Masters
VA01 – Sales Order
VL01 – Delivery
VF01 – Customer Invoice
FD32- Credit limit
F-28- Receipts

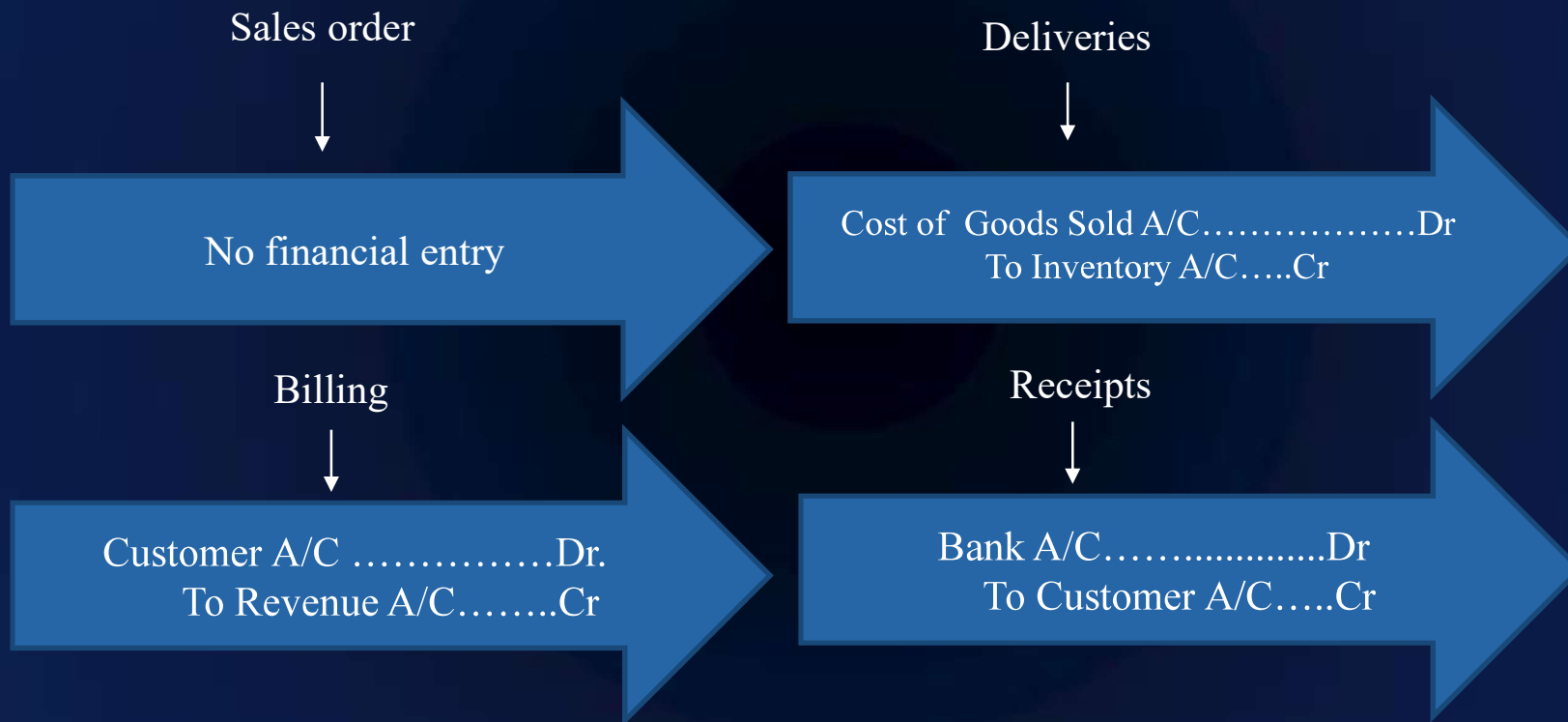
6.1 Order to Cash

Business process to SAP Modules



Master Data –Material , Customer, Pricing, Credit Limits

6.1 Order to Cash Accounting entries



6.1 Order to Cash

Key Risks

- Sales price is inaccurate and not valid
- Sales quantity is inaccurate
- Delivery done without a valid sales order
- Delivery documents are recorded in duplicate
- Goods issue /sales not recorded at correct amount and to correct account
- Billing is done without a valid delivery document
- Invoices are raised in duplicate
- Invoice price is inaccurate and not valid
- Billing is not complete (FI accounting has not been triggered)

6.1 Order to Cash

Key Automated Controls

Configurable controls (examples)

- All Customer Masters are assigned Recon GL Accounts
- Pricing procedures appropriately configured
- Prices not changeable in Sales Orders and defaults from Price Masters
- Delivery requires a preceding Sales Order
- Deliveries cannot be processed in excess of Sales Order quantity
- Sales Invoice cannot be processed in excess of Deliveries
- Appropriate Revenue Recognition
- Prices in Sales Invoice not changeable and defaults from Price master/sales order
- Automated GL determination for Deliveries and Sales invoices
- Automated Rebate processing

6.1 Order to Cash

Key Automated Controls

Inherent Controls (Examples)

- The SAP system automatically calculates the sales amount based on price multiplied by quantity.
- SAP prevents direct posting to general ledger accounts classified as reconciliation accounts.

6.1 Order to Cash

Access controls- Sensitive access and SoDs

Sensitive access (Examples)

- Access to maintain Price Masters is restricted
- Access to Customer master is restricted
- Access to Sales order creation is restricted

Segregation of Duties (SoD) (Examples)

- SoD between Price Masters and Sales orders processing
- SoD between Sales Order and Delivery and Invoicing

6.1 Order to Cash

Automated Controls testing method

Few Examples

- Sales Account Determination (T Code VKOA)

Cust.Grp/MaterialGrp/AcctKey								
App	CndTy.	ChAc	SOrg.	AAG	AAG	ActKy	G/L Account	
V	KOFI	MFG	1010	DO	AS	ERL	6410003	
V	KOFI	MFG	1010	DO	R3	ERL	6000055	

App	ActKy	Name
V	ERL	Revenue

- Ageing of Debtors – settings for “Payment Terms from Invoice” (T Code OBA3)

Specifications for Posting Residual Items from Payment Differences	
<input checked="" type="checkbox"/> Payment Term from Invoice	Fixed payment term

- Price Masters changeability (Table T685A)

Condit. type	PR00	Price
Changes which can be made		
Manual entries	C	Manual entry has priority

Manual entries	Short Descript.
	No limitations
A	Free
B	Automatic entry has priority
C	Manual entry has priority
D	Not possible to process manually

6.1 Order to Cash

Automated Controls testing method

Delivery requires a preceding Sales Order(Table TVLK)

Delivery Type	Order required
<input type="checkbox"/> CBG5	
<input type="checkbox"/> CEM	
<input type="checkbox"/> ECR	B
<input type="checkbox"/> EL	B
<input type="checkbox"/> ELR	B
<input type="checkbox"/> ELST	B
<input type="checkbox"/> GPLF	X

Sales order required	Short Descript.
	No preceding documents required
X	Sales order required
B	Purchase order required

- Sales order – Delivery – Invoice linking (Table TVCPF)

Target		Source	
Target Bill. Type	CBF2	From Delivery Type	CBLF
	BEV Invoice		BEVStandard Delivery
		Item Category	TAX
			Non-stock Item

Copy				
Copying requirements	004	<input type="checkbox"/> deliv-related item	Billing quantity	B
Data VBRK/VBRP	001	Inv. Split (sample)	Pos./neg. quantity	+
			Pricing type	G
			PricingExchRate type	
			<input type="checkbox"/> Cumulate cost	
			Price source	

Delivery qty less invoiced qty

Quantity calculated positively

Copy pricing elements unchanged and redetermine taxes

Sales Order

6.1 Order to Cash

T Codes and Tables (Examples)

Transaction	T Code	Table
Material Master	MM01	MARA/MARC
Customer Master	XD01	KNA1 /KNB1
Sales Order	VA01	VBAK/VBAP
Delivery	VL01N	LIKP/LIPS
Customer Invoice	VF01	VBRK/VBRP
Credit Limits	FD-32	KNKA/KNKK
Incoming payments(Receipt)	F-28	BKPF/BSEG

6.2 Procure to Pay

Key sub-processes

- Organization Structure :

Client \longrightarrow Company Code \longrightarrow Purchase Org \longrightarrow Plant

- Master data :
 - Vendor Master Data at Client, Co Code and Purchase Org level
 - Purchase Info records for Vendor and Materials
 - Material masters
- Purchase Orders (PO) processing
- Purchase Order Release
- Goods Receipts processing
- Vendor Invoice processing
- Release of Blocked Vendor Invoices for payments
- Payments

Key T-Codes

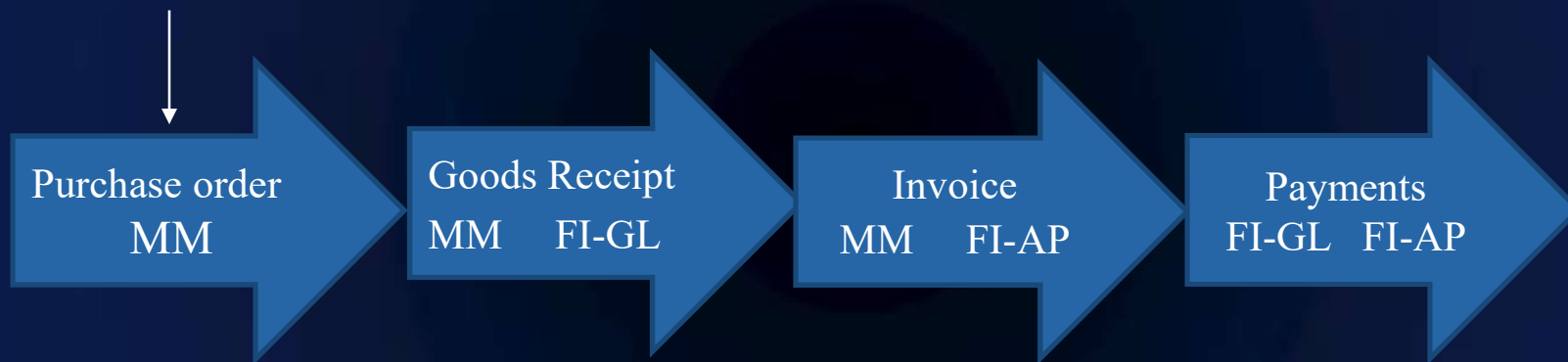
XK01 – Vendor Masters
MM01 – Material Masters
ME21N – Purchase Order
ME28/29N-PO Release
MIGO – Goods Receipt
MIRO – Vendor Invoice
F110 - Automated Payment

6.2 Procure to Pay

Business Process to SAP Modules

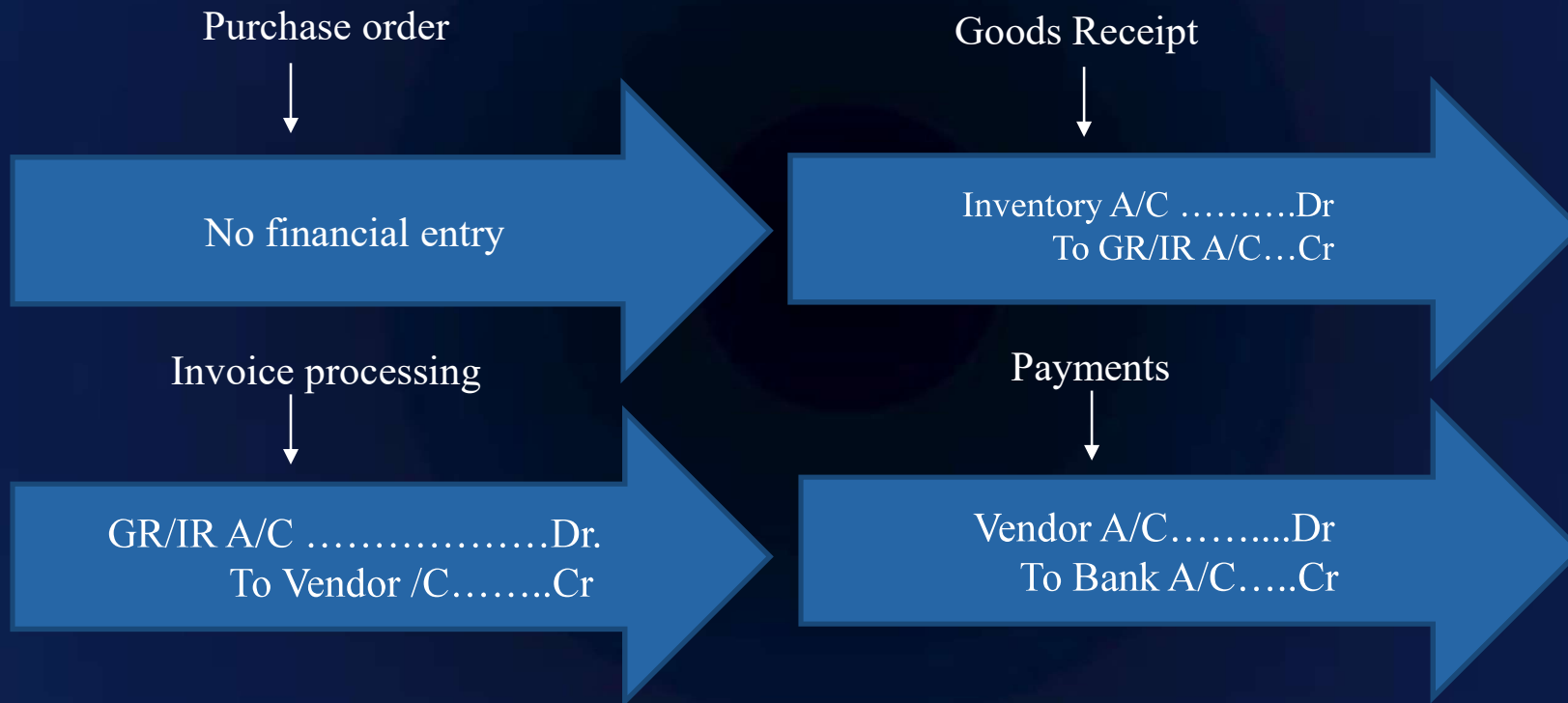
Purchase Requisition
Quotation
Contract
Work order

Month/Year – End procedures



Master data- vendor master, Material master, purchase info record

6.2 Procure to Pay Accounting Entries



6.2 Procure to Pay Key Risks

- Purchase orders are not authorised
- Inventory receipts are not recorded
- Inventory receipts are recorded in duplicate
- Inventory receipts not recorded to correct account
- Invoices are not recorded
- Invoice price is inaccurate
- Invoice quantity exceeds Goods receipt quantity and Invoice Price exceeds the Purchase order price
- Duplicate invoices are booked
- Payment is made to wrong vendor

6.2 Procure to Pay

Key Automated Controls

Configurable Controls (Examples)

- All Vendor Masters are assigned Reconciliation GL Accounts
- All Purchase Orders subject to release in SAP
- 3 way match indicators are appropriately set in Purchase Orders
- Vendor Invoice cannot be processed in excess of Goods receipt
- Prices in Vendor Invoice not changeable and defaults from Purchase Order
- Tabs in invoice for differential amount posting should be inactive
- Automated GL determination for Goods Receipts and Vendor invoices
- Duplicate Invoice check
- Payments to Alternate Payees

6.2 Procure to Pay

Key Automated Controls

Inherent Controls (Examples)

- SAP prevents the goods receipt quantity to exceed the purchase order quantity (adjusted with delivery tolerances).
- SAP automatically calculates and posts the amount calculated on the Goods Receipt document.
- SAP prevents direct posting to general ledger accounts classified as reconciliation accounts.
- SAP automatically calculates and posts the amount calculated on the Invoice document.
- SAP automatically updates the general ledger when generating the payment processing file.

6.2 Procure to Pay

Access controls- Sensitive access and SoDs

Sensitive Access (Examples)

- Access to create Vendor master is restricted
- Access to release Purchase Orders is restricted
- Access to release blocked invoices is restricted

Segregation of Duties (Examples)

- PO Maintain and PO release
- Vendor Masters and Payments processing /passing accounting entry to vendor
- Maintain PO , Release PO, Process Goods receipt and process Vendor invoice

6.2 Procure to Pay Automated Controls testing method

Few Examples-

- Purchase Order Approval (T16FS ,T16FC,AUSP)

Release group	OP	
Release Strategy	S1	OP release strategy
Release indicator	1	Released

Code	Description	Stat
10	Release code 1	✓
20	Release code 2	✓

- 3 way match indicators in PO (T163k)

Material Data	Quantities/Weights	Delivery Schedule	Delivery	Invoice	Conditions	Account Assignm
Overdeliv. Tol.	0.0 %	<input type="checkbox"/> Unlimited	1st Rem./Exped.	0	<input checked="" type="checkbox"/> Goods Receipt	
Underdel. Tol.	0.0 %	<input type="checkbox"/> Origin Accept.	2nd Rem./Exped.	0	<input type="checkbox"/> GR Non-Valuated	
Shipping Instr.			3rd Rem./Exped.	0	<input checked="" type="checkbox"/> Deliv. Compl.	

Acct Assignment Cat. A Asset

Detailed information		
<input type="checkbox"/> Acct. assg. changeable	Consumption posting	A
<input checked="" type="checkbox"/> AA Chgable at IR	Acct modification	
<input type="checkbox"/> Derive acct. assgt.	ID: AcctAssgt Scrn	2
<input type="checkbox"/> Del.CstsSep.	Special Stock	
<input type="checkbox"/> Goods Receipt	<input type="checkbox"/> GR non-valuated	<input checked="" type="checkbox"/> Invoice Receipt
<input checked="" type="checkbox"/> GR Ind. Firm	<input checked="" type="checkbox"/> GR NonVal. Firm	<input checked="" type="checkbox"/> IR Ind. Firm

6.2 Procure to Pay

Automated Controls testing method

- Invoice tolerances for 3 way match(T169G)

Tolerance key	DQ	Exceed amount: quantity variance
Company Code	1000	Subsidiary Germany
Amounts in	EUR	Euro (EMU currency as of 01/01/1999)

Upper Limit	
Absolute	Percentage
<input type="radio"/> Do not check	<input type="radio"/> Do not check
<input checked="" type="radio"/> Check limit	<input checked="" type="radio"/> Check limit
Val. 3.00	Tolerance limit % 4.00

DQ – Quantity Tolerance
(GR qty - Invoice qty)

PP – Price Tolerance
(PO Price - Invoice Price)

Tolerance key	PP	Price variance
Company Code	TR01	Company 01
Amounts in	EUR	Euro (EMU currency as of 01/01/1999)

Upper Limit	
Absolute	Percentage
<input type="radio"/> Do not check	<input type="radio"/> Do not check
<input checked="" type="radio"/> Check limit	<input checked="" type="radio"/> Check limit
Val. 5.00	Tolerance limit % 5.00

6.2 Procure to Pay Automated Controls testing method

- Duplicate invoice Check (T code OMRM, Vendor Master)

Vendor: 1000 C.E.B. BERLIN Berlin
 Company Code: CPFO Good Food

Payment data

Payt Terms: Tolerance group:
 Cr memo terms: Chk double inv.:
 Chk cashng time: 0

Area: F5

Message Control by User

Msg...	Message Text	User Name	Online	BatchI
117	Check whether document has already been entered un		E	E

- Account determination (Table T030)

Organization

Plant: 1000 > Company Code: 1000 -> Chart of Accounts: INT
 -> Valuation Area: 1000 -> Valuation Grpg Code: 0001

Valuation

Material: R-B304 -> Valuation Class: 7900
 Material Type: HALB -> Value Update:

Movement

Movement Type: 101 GR goods receipt

Posting Lines

Posting Lines Text	VIGCd	AGC	VC1	PK	Acct Deb.	PK	Acct Cr.
Gain/loss from revaluation	-e-	-e-	7900	83	232500	93	232500
Inventory posting	-e-	-e-	7900	89	790000	99	790000
Incidental costs of external a	-e-	-e-	-e-	86	415000	96	415000
External activity	-e-	-e-	7900	86	417002	96	417002
Change in stock account	-e-	-e-	7900	81	893010	91	893010
Purchase offsetting account	0001	-e-	7900	40	--Missing-	50	--Missing-
Purchase account	0001	-e-	7900	40	--Missing-	50	--Missing-
Materials management exch.rate	-e-	-e-	-e-	40	230000	50	280000
Cost (price) differences	-e-		7900	83	231500	93	281500
GR/IR clearing account	-e-	-e-	-e-	40	191100	50	191100
Inventory posting	-e-	-e-	7900	89	790000		

6.2 Procure to Pay

T Codes and Tables (Examples)

Transaction	T Code	Table
Material Master	MM01	MARA/MARC
Vendor Master	XK01	LFA1/LFB1
Purchase Order Create	ME21N	EKKO/EKPO
Purchase Order Release	ME28/ME29N	EKKO/EKPO
Goods Receipt	MIGO	EKBE
Vendor Invoice	MIRO	RBKP/RSEG
Payments	F110	BKPF/BSEG

6.3 Inventory

Key Sub-Processes

- Organization Structure :

Client  Company Code  Plant  Storage Location

- Master data :

- Material Master Data – Basic, Accounting, Costing, Plant, Sales Views
- Bill of Material
- Routing

- Consumption processing
- Production order processing
- Other goods movements
- Inventory valuation

Key T-Codes

MM01 – Material Masters

CS01 – BOM

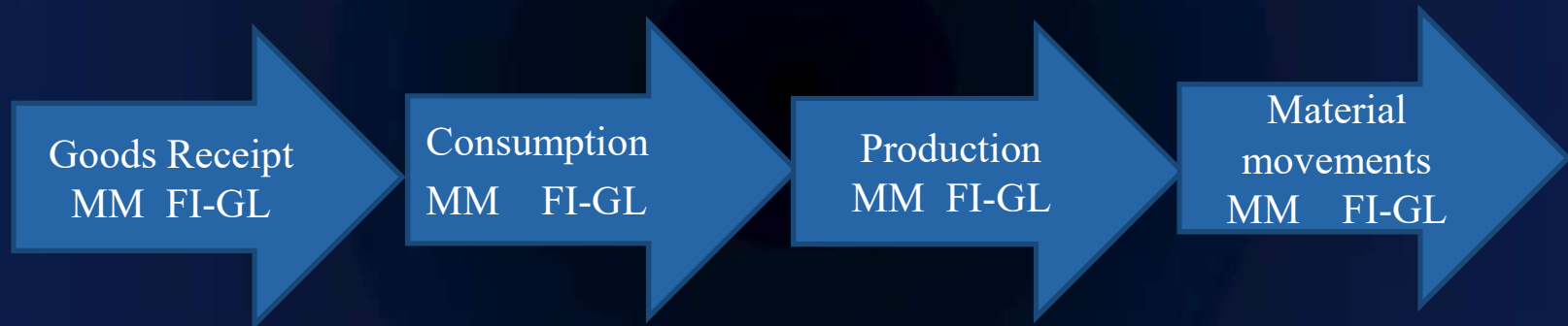
CO01 – Production Order

MB01 – Goods Movements

6.3 Inventory

Business process to SAP Modules

Scrapping
Stock transfer
Posting inventory differences
Material to material transfer



Master data Material master, Bill of material, Routing

6.3 Inventory Accounting Entries

Goods Receipt

Inventory A/CDr
To GR/IR A/C...Cr

Consumption

Consumption A/C.....Dr
To Raw material Inventory...Cr

Production Booking

Finished Goods A/C...Dr.
To Cost of goods produced A/C.Cr

Material Price change

Inventory A/C..... Dr/Cr
To Revaluation A/C.....Dr/Cr

6.3 Inventory

Key Risks

Examples

- Inaccurate material price set in the material master data
- Inaccurate valuation method defined in material master
- Inaccurate valuation strategy set in the Costing Variant
- Inventory or material consumption postings are not recorded in the correct G/L account
- Quantity and value not updated with the material movements
- Goods can be issued more than available stock

6.3 Inventory

Key Automated controls

Configurable Controls (Examples)

- Inventory valuation method appropriate
- Automated Accounting of goods movement
- All transactions result in value and quantity update
- Negative stock not configured
- No direct changes to material cost
- No use of sensitive movement types like 501/309/561

6.3 Inventory

Inherent controls and Access controls

Inherent Controls (Examples)

- The mathematical formula to calculate inventory values are hard coded in SAP and are inherent.
- The SAP system inherently records inventory transactions in the inventory subledger.

Sensitive access and SoDs (Examples)

- SOD between Inventory count and posting Inventory count results
- Access to direct changes to Material cost is restricted
- Access to sensitive movements is restricted
- Example – Goods movement without a reference document

6.3 Inventory Automated Controls testing method

Few Examples

Moving Average Inventory Valuation (Table MBEW, T code MM03)

Valuation	
Price control	V Moving average price/periodic unit price
Acct cat. reference	0005 <input checked="" type="checkbox"/> Price ctrl mandatory

Current valuation	
Valuation Class	3000
VC: Sales order stk	
Price control	V
Moving price	11,773.96
Total Stock	169

Standard Cost Inventory Valuation (Table MBEW, T code MM03)

Valuation Class	7920
VC: Sales order stk	
Price control	S <input checked="" type="checkbox"/>
Moving price	611.00
Total Stock	200

Priority	Strategy Sequence	Incl. Additive Costs
1	Valuation Price According to Price Control in Ma...	<input checked="" type="checkbox"/>
2	Standard Price	<input checked="" type="checkbox"/>
3	Current Planned Price	<input checked="" type="checkbox"/>
4	Moving Average Price	<input checked="" type="checkbox"/>
5		<input type="checkbox"/>

6.3 Inventory

Automated Controls testing method

All transactions result in value and quantity update Table T134M

Client	Valuation area	Material type	Qty updating	Value updating
500	1010	FERT	X	X
500	1010	HALB	X	X
500	1010	ROH	X	X
500	1110	FERT	X	X
500	1110	HALB	X	X
500	1110	ROH	X	X

Quantity Updating in Material Master Reco...

Quantity updating Short Descript.

X	Yes
	No

Value Updating in Material Master Record ...

Value updating Short Descript.

X	Yes
	No

Negative stock not allowed T001L

Client	Valuation area	Company Code	Negative stocks
500	1010	1010	
500	1110	1110	
500	1210	1210	
500	1310	1310	
500	1510	1510	
500	1710	1710	X

Negative stocks in valuation area allowed ...

Neg. stocks allowed Short Descript.

X	Yes
	No

6.3 Inventory

T Codes and Tables (Examples)

Transaction	T Code	Table
Material Master	MM01	MARA/MARC/MBEW
Bill of Material (BoM)	CS01	MAST/STKO
Production order	CO01	AUFG
Material Movements	MB01/MIGO	MKPF/MSEG