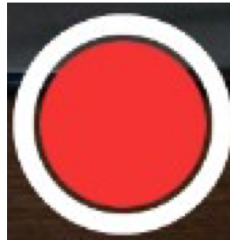


MIS 5121: Business Processes, ERP Systems & Controls
Week 5: *Inventory Control, OTC Process: Shipping*

Video: Record the Class



Exam 1: October 9

First exam conducted by **Blackboard**. Some specifics:

- Available to take during the first hour of class on Monday October 9. (Remainder of class will start at 6:30 pm EST)
- Questions relate to course content (on-line and from class) through Week 5 (October 2)
- Maximum of 40 minutes time to complete exam
- Exam is **21** questions (variety of formats i.e. Fill in blank, multiple choice)
- Some of the questions relate to a real-world like small business **case** (see blog post for link). You are invited to pre-read, print, etc. prior to exam.

Exam 1: October 9

First exam conducted by **Blackboard**. Other specifics:

- I plan to have the exam graded by end of day Wednesday October 12
- You can view details of the graded exam by end of day Monday October 17



Discussion

❖ Something really new, different you learned in this course in last week

**YOU LEARN
SOMETHING NEW
EVERY DAY**

❖ Questions you have about this week's content (readings, videos, links, ...)?



❖ Question still in your mind, something not adequately answered in prior readings or classes?

External Financial Reporting regulations

Other
Reg's

Organization's
Objectives & Policies

Balance
Sheet

P & L

Notes

FDA etc.

Performance & Policies

Arise through

Must be observed / achieved in

Business Processes

Procurement

Production

Order to \$\$

Finance

IT

Quality

Logistics

HR

...

Contain

Assertions

- Completeness
- Existence, rights
- Accuracy
- Valuation
- Presentation

Risks

- Product quality
- Delivery (OTD)
- Unused capacity
- Excess Costs
- Lower Sales

Errors & Fraud

Minimized by

ISC framework in the ERP environment

- Entity level controls
- Automated application controls
- Manual and semi-automated business process controls
- Authorizations and access protection (confidentiality, integrity)
- IT General controls (change management, operation, security)
- Automated testing and monitoring of business processes, KPIs, etc.

Inventory: Not all the same

- Bulk vs. Packaged (liquid vs. dry)
- Produced vs. Purchased
- Finished vs. Intermediates vs. Supplies
- Trading Goods (purchased to be resold)
- Valued vs. non-valued
- Owned vs. not (e.g. leased, responsible for)



Impacts

- Valuation
- Handling (e.g. related configuration)
- How Counted



Inventory: Quantities

Inventory Record Accuracy (IRA): Does Physical inventory match system records

- Material / Batch
- Quantity
- Location



Methods: Physical Counting

- Periodic (e.g. yearly, quarterly, ...) Frequency can depend on risk (e.g. value)
- Complete Count?
- If 'miss' someone else Adjusts Records based on Count

Inventory: Quantities



Inventory Record Accuracy (IRA): Does Physical inventory match system records

Methods: Cycle Counting

- **Continuous** counting of sections of inventory
- Hit or Miss based on tolerances (e.g. zero for package, +/- for bulk)
- If 'miss' someone else Adjusts Records based on Count
- Root cause analysis of reason and correction for 'miss'
- Track IRA % (# Hits / # checks)
- Acceptable alternative for full physical counts

Common Issue: timing of physical moves vs. system recording

Inventory: Values

SAP: Valuation Control

- Controlled by Material Master
- Non-Split Valuation
 - One (1) value by:
 - Material
 - Company or plant (depending on configuration)
 - Valuation Methods
 - Not- valued (e.g. not owned, value is expenses vs. asset)
 - Standard Price (constant based on how procured / produced)
 - Moving Average (changes based on delivered price)



Inventory: Material Movements

Configuration (movement type) in **SAP** that controls:

- Account (G/L) determination of transactions (Key control)
- How value changes are calculated
- How quantity changes are calculated
- How transacted (inside other transaction or stand-alone)
- Transaction: OMJJ, Table: T156

SAP transactions

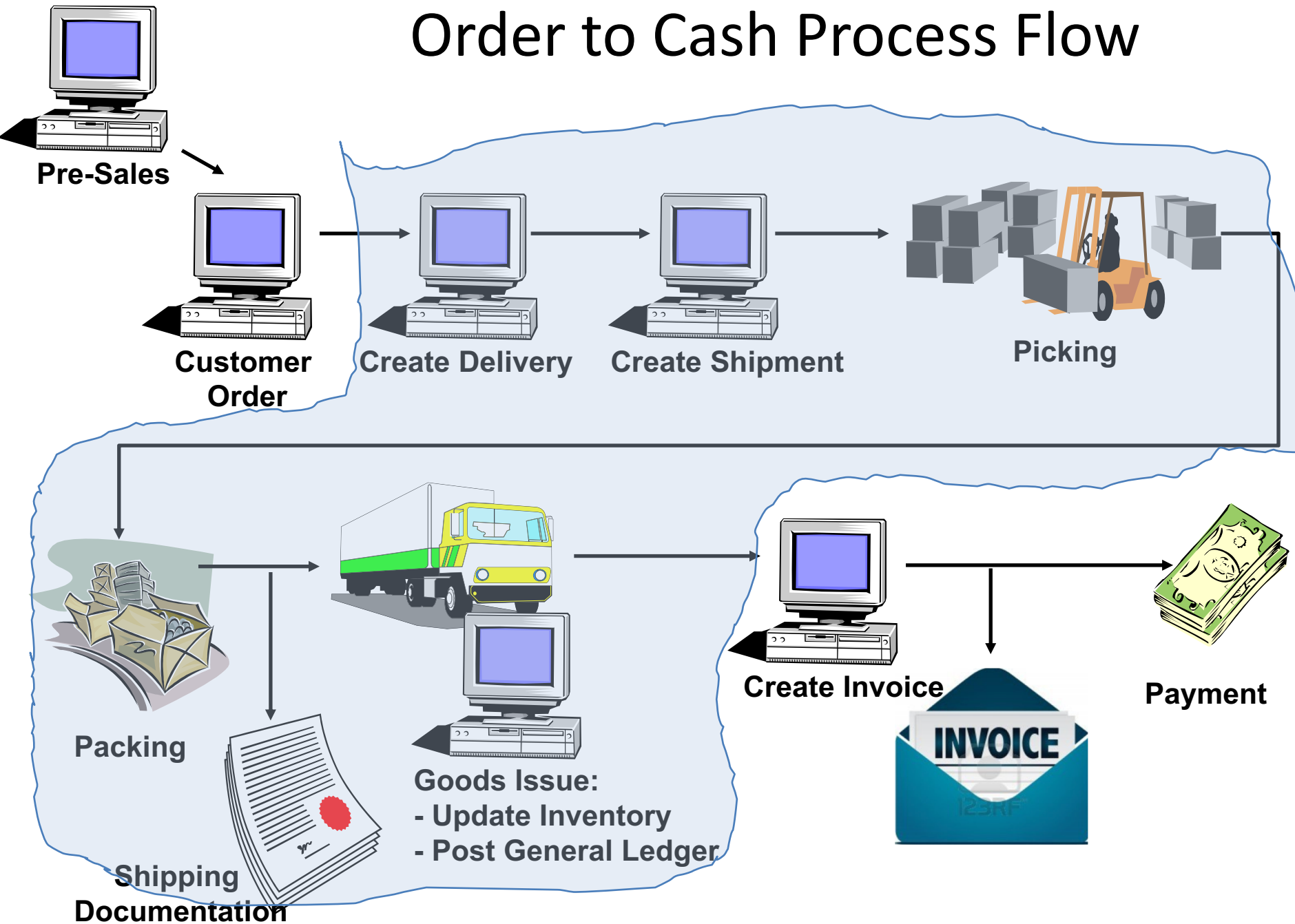
- Often imbedded in other transactions / activities
 - Goods receipt (e.g. PO Receipt, Production reporting)
 - Goods Issue (e.g. PGI in delivery processing)
 - Transfers



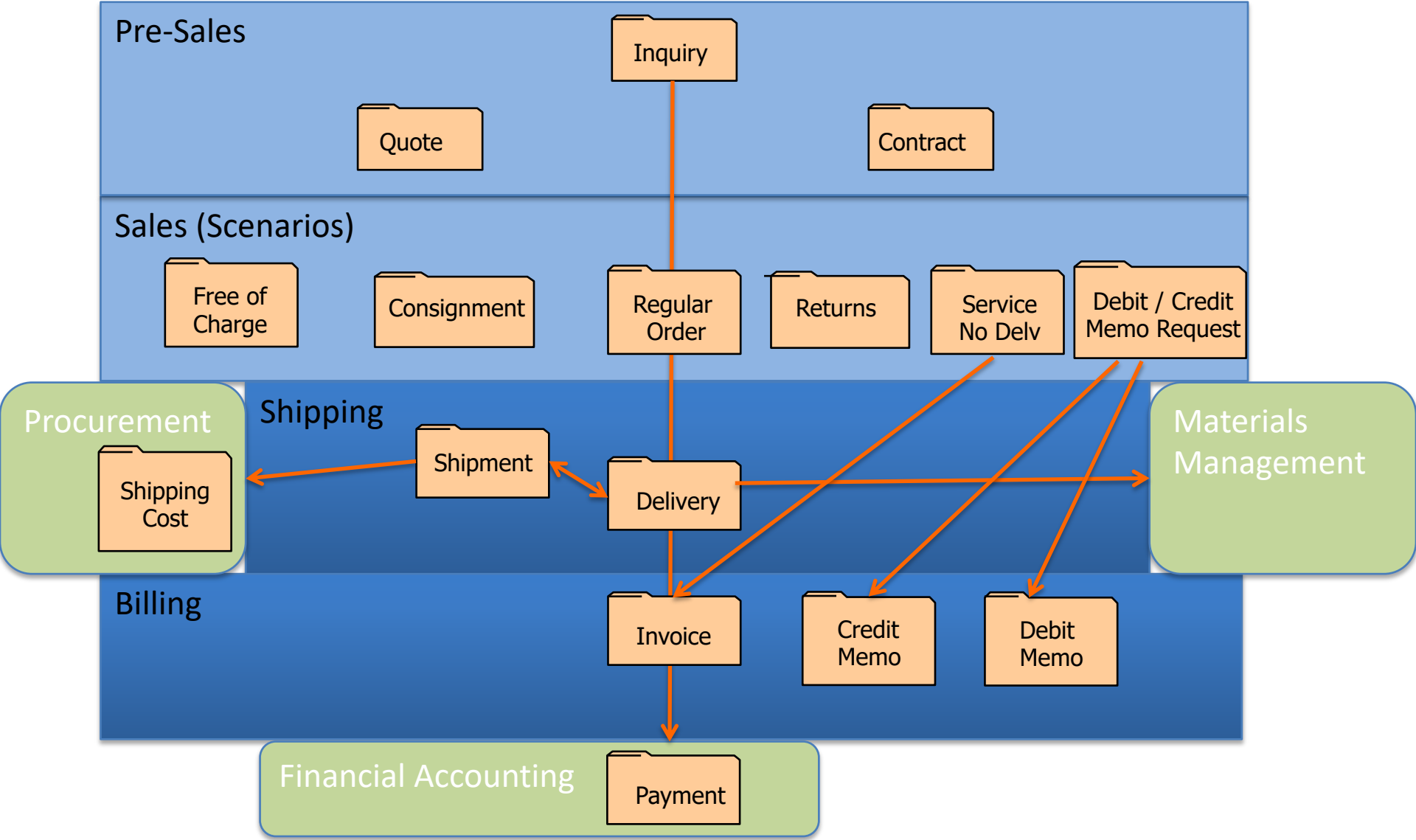
Business Process Controls

Order to Cash - Shipping
(OTC, O2C)

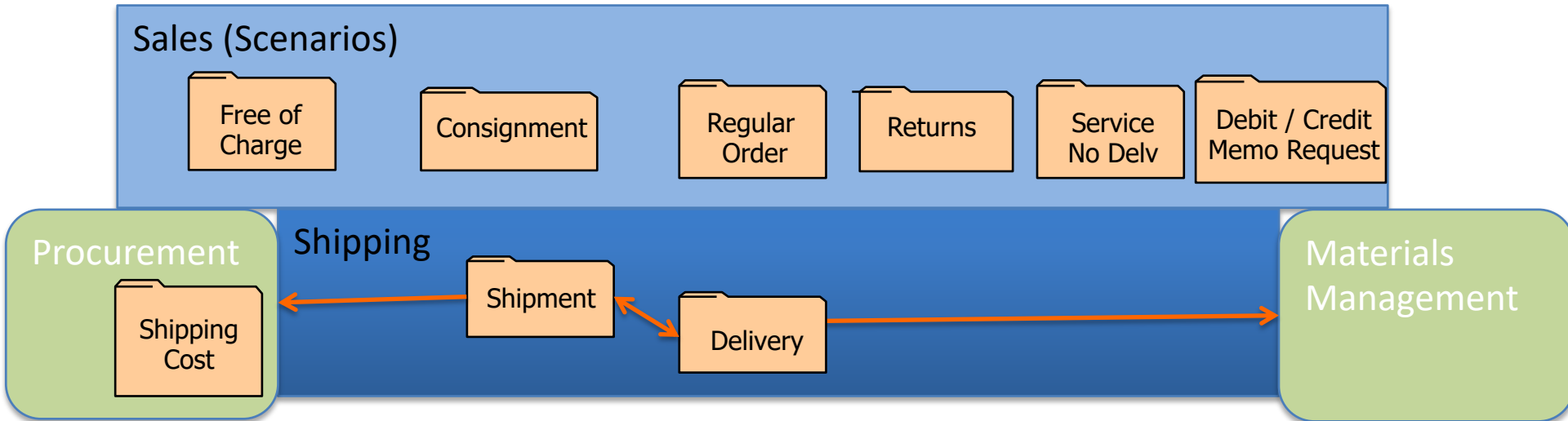
Order to Cash Process Flow



Order to Cash: Document Flow



Order to Cash: Shipping



- **Key Shipping Functions**

- Delivery (1 plant -> 1 ship-to -> 1 day)
- Shipment (truck Movement)
- Post Goods Issue (PGI)
- Shipping Cost (logistics Payable)

Delivery (Ready for the truck)

- Delivery Document (1 plant -> 1 ship-to -> 1 day)
- Basis for Shipment, PGI
- Create: manually, automatically, batch
- Picking
 - Assign batch, get from storage location / bin
- Packing (optional)
 - Add weight for packing materials used to ship



Shipment (Logistics Movement)

- Linked to 1 or more deliveries
- Transportation Planning & Shipment completion
- Contains logistics Info: provider, equipment, dates, ...
- Can have multiple 'legs'
- Integrated form of work flow: Shipment stages
 - Trigger outputs
 - Trigger PGI
 - Status Tracking



Post Goods Issue (PGI)

- When: Truck / shipment leaves (no longer in possession)
- Goods Issue posted only when these conditions met
 - Delivery Data is complete (config: Completion Rules)
 - Picking is complete
 - If Warehouse Management (WM): item status is complete
- What: is Posted
 - Inventory movement (remove)
 - Cost of Goods Sold (using values in material master, etc.)
- Updates following:
 - Delivery (VL03N)
 - Linked order document (VA03)
 - Requirements (MD04)
 - Billing Due List (VF04) – via Delivery status (Does not post revenue: Billing Does)

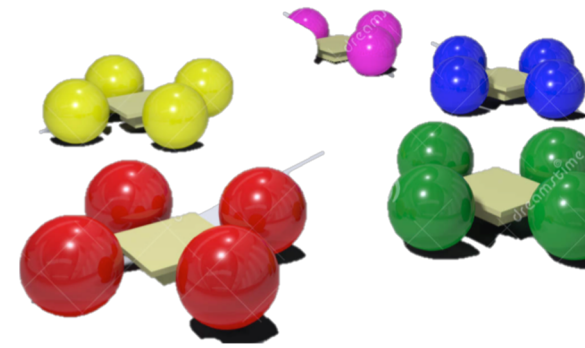


Shipping Cost

- Logistics process equivalent of Goods/Service Receipt in the Procure to Pay process
- Creates accrual for freights payable process
- Can support accurate delivered cost data for analysis
 - Because calculated at detailed shipment transaction level
 - If costs are accurate



Breakout Activity – Rules



- Break into teams – max of 5 people / team
 - Diversity a must.
- Assignment – return via WebEx Notes or Word Document
- How: WebEx breakout?
- Time: assigned today 20 min (including break)
 - Start back **on-time**

Breakout Question

Order to Cash Process: Shipping



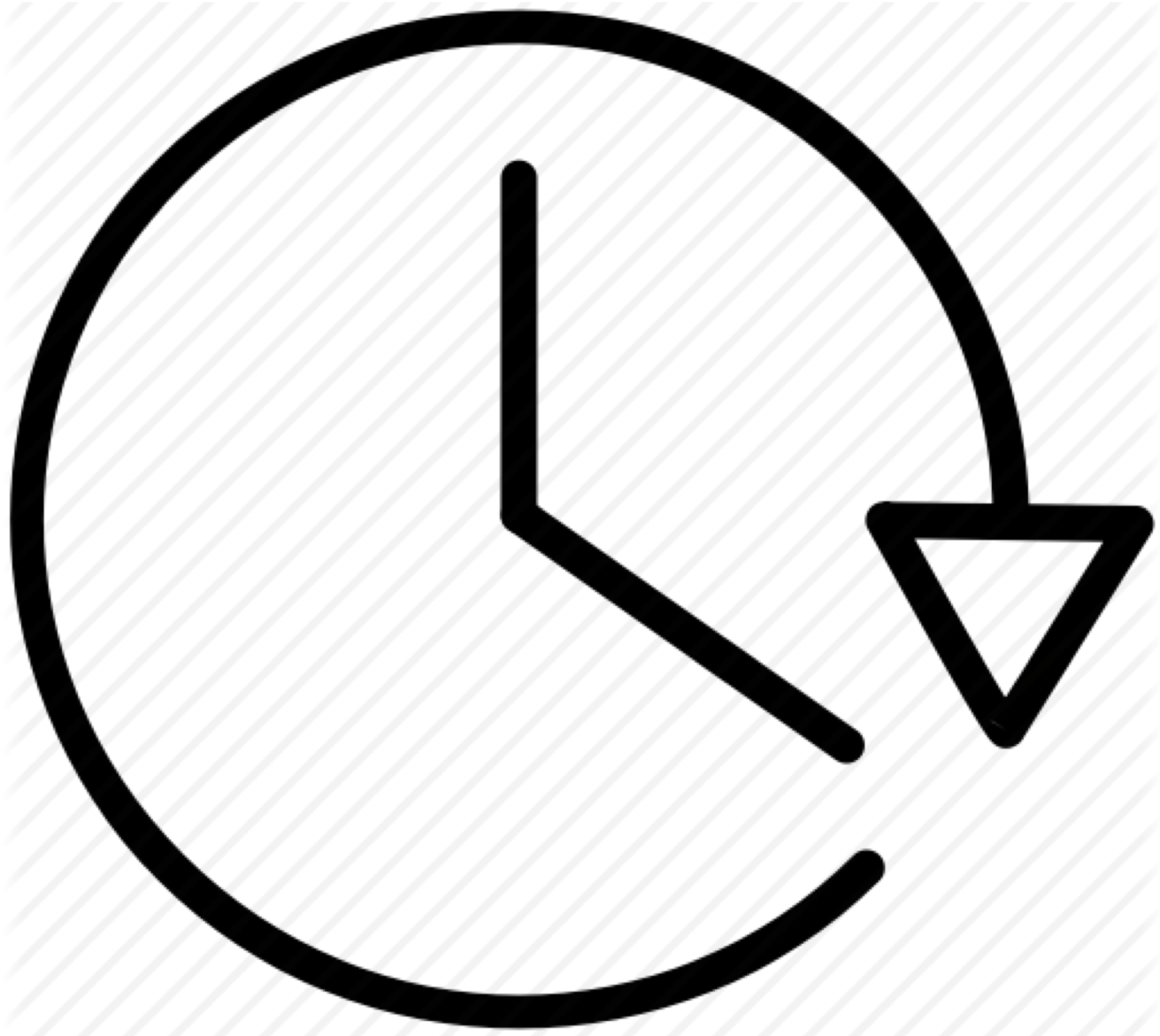
What Could go Wrong?

- _____
- _____
- _____
- _____



What Controls would you Implement to address?

- _____
- _____
- _____
- _____



Report Back



Inventory Control: Common Risks

- Theft
- Lost Inventory / Damage
- Transaction Errors
 - Human Errors
 - System caused (e.g. BOM accuracy)
- Material Life Cycle (e.g. obsolete / scrapping) and Shelf Life
- Segregation of Duties (physical custodians vs. accounting record custodians)



Inventory Control: Common Controls

- Segregation of Duties (physical vs. record custodian)
- Inventory policies (Written, taught, monitored)
- Test inventory transactions (shipping, production, procurement, transfers, etc.)
- Inventory Record Accuracy: physical or cycle count
- Timing
- Match control / methods to size of risk (high value)



Order to Cash (b) : Common Risks

Shipping

- Manipulate client names and addresses on shipping documents
- Service/good Issue
- Shipping Poor quality stock vs. 1st quality issued
- Shipment of unfinished product
- Shipment of product before customers desire or agreed to delivery
- Shipment to customers that did not place an order
- Shipment of more product than the customer ordered
- Recording shipments to the company's own warehouse as sales
- Shipping often done by 3rd party Logistics personnel



Order to Cash (b) : Common Controls

Shipping

- On-going review of shipping / delivery status
- Backlog of shipping monitored and controlled
- Inventory accuracy vs. shipping
- Use pre-numbered shipping documents





Order to Cash Exercise



- Primary learning objectives are:
 - Experience the steps in a typical sales transaction
 - See how an ERP system handles a typical sales transaction
 - Work through the procedures involved in a test of transactions
 - Look at a special feature of the sales and distribution (SD) module of SAP
 - See the integration between Sales and Distribution (SD) and financial accounting (FI) modules of SAP



Exercise 2: Order to Cash



- Agenda
 - Last Class (*September 26*): Steps 1 – 8
 - **This Class (*October 3*): Steps 9 – 15**
 - Next Class (*October 10*): Steps 16 – 23
 - *Due October 13 11:59 PM*: Assignment Submission



Exercise 2: Order to Cash



- Task 6 – Create a Sales Order
 - Menu: *Logistics* ► *Sales and Distribution* ► *Sales* ► *Order* ► *Create*
 - Transaction: **VA01**
- Task 7 – Display the Sales Order
 - Menu: *Logistics* ► *Sales and Distribution* ► *Sales* ► *Order* ► *Display*
 - Transaction: **VA03**
- Task 8 – Display the Document Flow for the Sales Order
 - Within transaction use menu: *Environment* ► *Display Document Flow*
 - Transaction: **VA03**
- Task 9 - Check Status of Various Accounts
 - See details of Task 5

Exercise 2: Order to Cash



- Task 10 – Create the Delivery for the Sales Order
 - Menu: *Logistics* ► *Sales and Distribution* ► *Shipping & Transportation* ► *Outbound Delivery* ► *Create* ► *Single Document* ► *With Reference to Sales Order*
 - Transaction: **VL01N**
- Task 11 - Check Status of Various Accounts
 - See details of Task 5
- Task 12 – Display the Document Flow for the Sales Order
 - Within transaction use menu: *Environment* ► *Display Document Flow*
 - Transaction: **VA03**

Exercise 2: Order to Cash

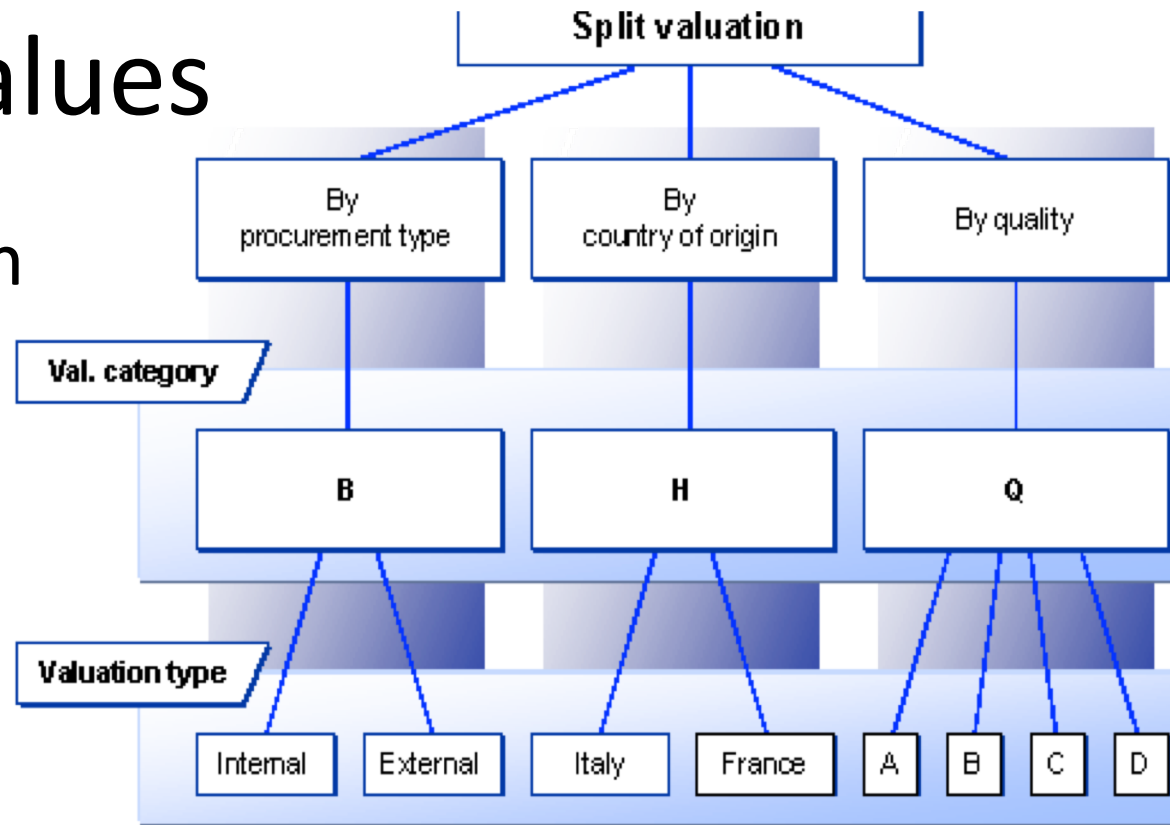


- Task 13 – Post the Goods Issue
 - Menu: *Logistics* ► *Sales and Distribution* ► *Shipping & Transportation* ► *Outbound Delivery* ► *Change* ► *Single Document (VL02N)*
 - Transaction: **VL02N**
- Task 14 - Check Status of Various Accounts
 - See details of Task 5
- Task 15 – Display the Document Flow for the Sales Order
 - Within transaction use menu: *Environment* ► *Display Document Flow*
 - Transaction: **VA03**

Extra Slides

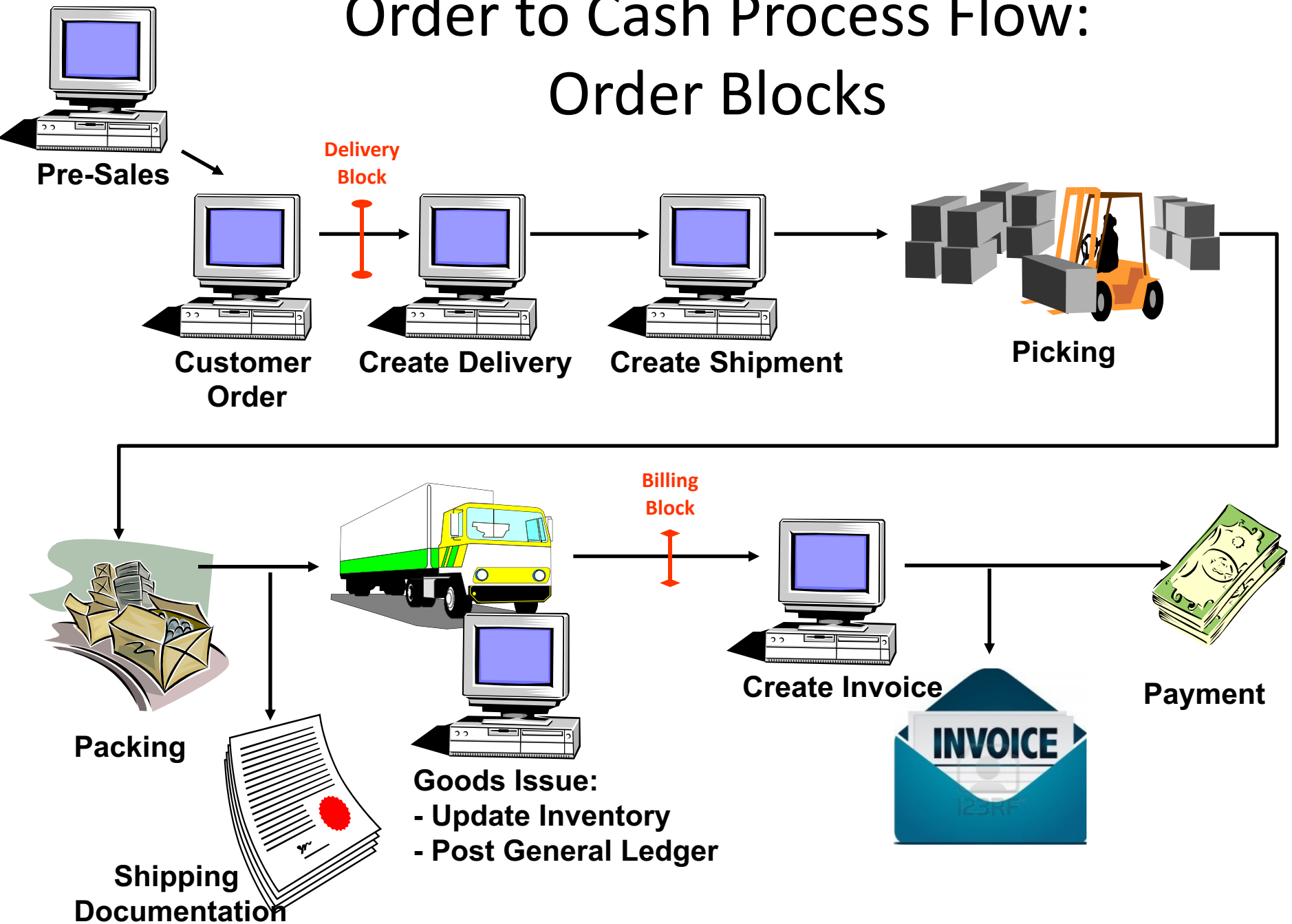
Inventory: Values

SAP: Split Valuation

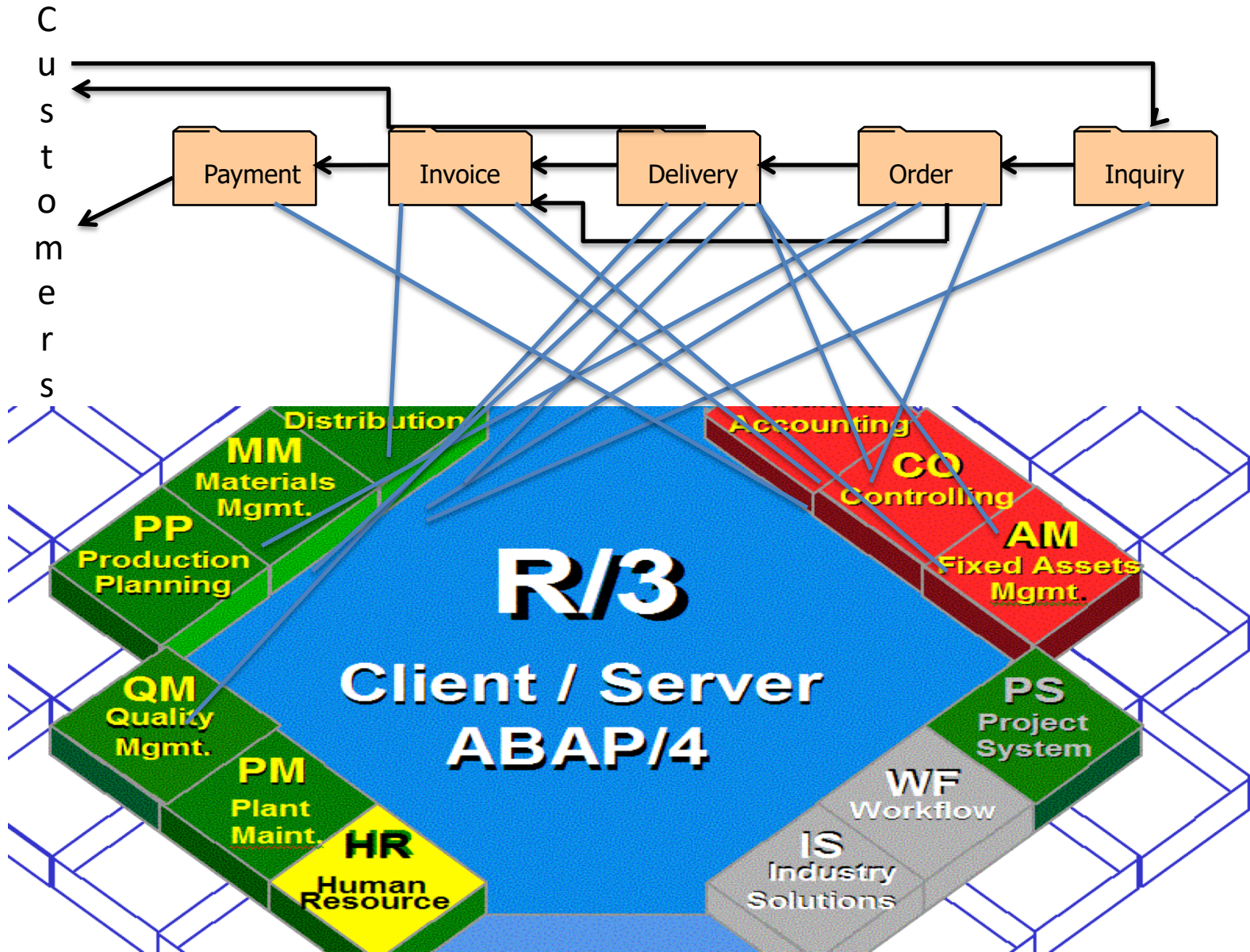


- Material master for each Material / Valuation Type
 - Header record for each Material / Valuation Category created
 - Moving Average Price only calculation method allowed
 - Stock records managed separately for each valuation type

Order to Cash Process Flow: Order Blocks



Order to Cash Functions in SAP



Order to Cash Functions in SAP

Task	SD	MM	QM	FI	CO
Inquiry	<input checked="" type="checkbox"/>				
Order	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Delivery	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Invoice	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Payment				<input checked="" type="checkbox"/>	

Exercise 2: Order to Cash



- Task 1 – Extend the Material Master Record for Sales
 - Menu: *Logistics* ► *Materials Management* ► *Material Master* ► *Material* ► *Create (Special)* ► *Trading Goods*
 - Transaction: **MMH1**
- Task 2 – Extend the Material Master Record for Sales
 - Menu: *Logistics* ► *Sales and Distribution* ► *Master Data* ► *Business Partners* ► *Customer* ► *Create* ► *Complete*
 - Transaction: **XD01**
- Task 3 – Set up Credit Limits for the Customer
 - Menu: *Logistics* ► *Sales and Distribution* ► *Credit Management* ► *Master Data* ► *Change*
 - Transaction: **FD32**



Exercise 2: Order to Cash



- Task 4 – Check Inventory Availability
 - Quantity:
 - Transaction: **MMBE**
 - Value:
 - Menu: *Accounting* ▶ *Financial Accounting* ▶ *General Ledger* ▶ *Account* ▶ *Display Balances*
 - Transaction: **FS10N or FAGLB03**



Exercise 2: Order to Cash



- Task 5 - Check Status of Various Accounts
 - Check Inventory: MM Inventory Quantity
Transaction: **MMBE** (*Stock Overview*)
 - Check Account Values: GL Inventory, GL Cash, Sales Revenue, Cost of Goods Sold (COGS), GL A/Receivable :
Transaction: **S_ALR_87012291** (*Line Item Journal*)
 - Check A/P Vendor sub-ledger:
Transaction: **FBL5N** (*Customer line item display*)

Exercise 2: Order to Cash



- Task 16 – Create an Invoice for the Delivery
 - Menu: *Logistics* ► *Sales and Distribution* ► *Billing* ► *Billing Document* ► *Create*
 - Transaction: **VF01**
- Task 17 - Check Status of Various Accounts
 - See details of Task 5
- Task 18 – Display the Document Flow for the Sales Order
 - Within transaction use menu: *Environment* ► *Display Document Flow*
 - Transaction: **VA03**

Exercise 2: Order to Cash



- Task 19 – Locate the Accounting Document Number
 - Menu: *Logistics* ► *Sales and Distribution* ► *Billing* ► *Billing Document* ► *Display*
 - Transaction: **VF03**
- Task 20 – Post the Customer’s Payment on Account
 - Menu: *Accounting* ► *Financial Accounting* ► *Accounts Receivable* ► *Document Entry* ► *Incoming Payment*
 - Transaction: **F-28**



Exercise 2: Order to Cash



- Task 21 - Check Status of Various Accounts
 - See details of Task 5
- Task 22 – Display the Document Flow for the Sales Order
 - Within transaction use menu: *Environment* ► *Display Document Flow*
 - Transaction: **VA03**
- Task 23 – Write Down the Journal Entries the System Made
 - Non-SAP Task