

MIS 5121:Enterprise Resource Planning Systems
Week 6: *General Computer vs. SAP System*
Controls, Order to Cash Process,



Control Failure: Wipro

- Background:

- ❖ 2014: \$7+ Billion sales, \$1.3 Billion profit
- ❖ India based IT Services company – to many large customers

- Control Failures: 2006 - 2009

- ❖ Employee is believed to have embezzled about \$4 million by stealing a password and transferring money from one of Wipro's bank accounts
- ❖ Weaknesses in sharing of online banking access passwords and Wipro's internal accounting system password
- ❖ independent legal counsel: lack of internal controls led to embezzlement
- ❖ Company admitted poor controls in recording journal entries, including:
 - ❖ Inadequate documentation, controls over bank reconciliations, exchange rate changes, liabilities
 - ❖ Lack of timely and adequate reconciliation of period end reinstatement of foreign currency balances including recording of appropriate adjustments.
- ❖ Insufficient segregation of duties in recording and initiating banking payments.

Control Failure: Wipro

- Results:

- ❖ Delay in publishing 2010 results
- ❖ The 26-year-old employee committed suicide when the crime was discovered
- ❖ Wipro Audit Committee probe -> Overhaul of the finance controller division
- ❖ KPMG India concluded that it did not lack independence with respect to Wipro (rumored)
- ❖ SEC probe into audits started in 2014

- Reference:

- ❖ Moneylife: [Link](#)

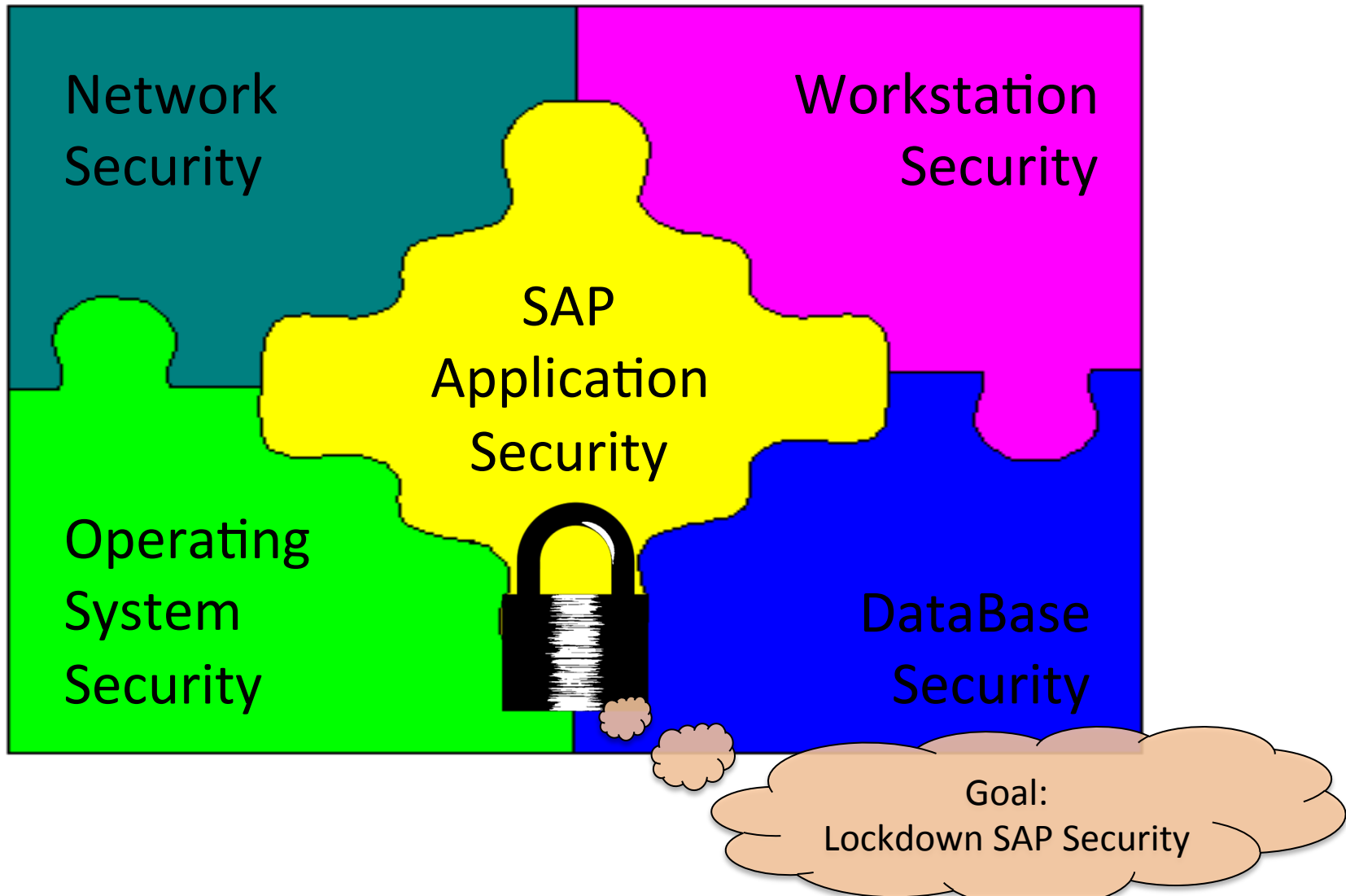


General Computer vs. SAP System Controls

Key Information Technology Risks

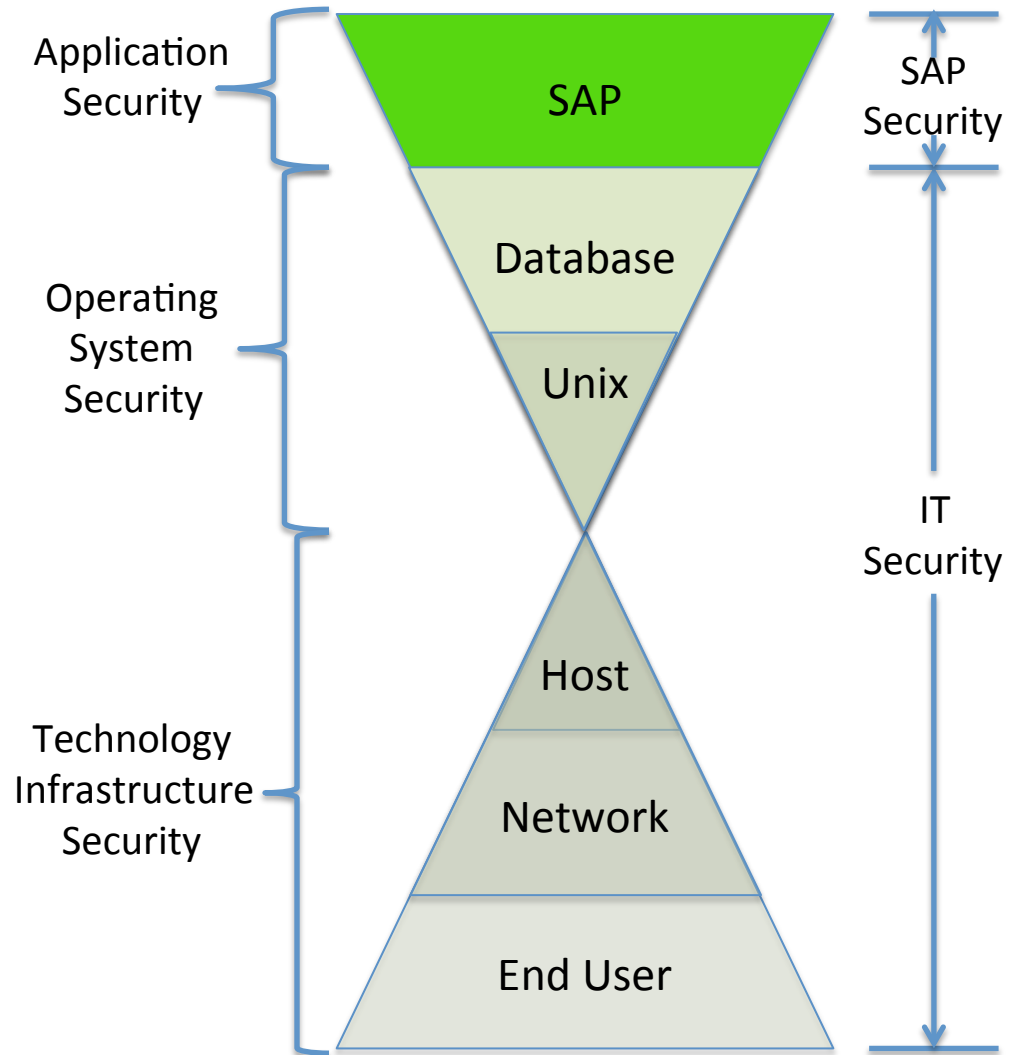
- **System Security**
- **Information Security Administration**
- Background Processing (Batch vs. foreground: real-time)
- Powerful User ID's and Profiles
- Instance Profile Security
- Change Management (including Logs and Traces)
- Table Security
- Data Dictionary, Program and Development Security
- Transport Security
- Change Control
- Data Migration
- Data Interface
- Firefighter access

SAP Environment Security Components



Enterprise Security Architecture

- Behind the scenes, end users navigate through layers of security to reach the SAP Application
- A Security Team generally handles all activities related to SAP Application Security
- SAP Security Team works with IT Team to ensure appropriate security is implemented at levels: Database, System (e.g. Unix), Host and Network



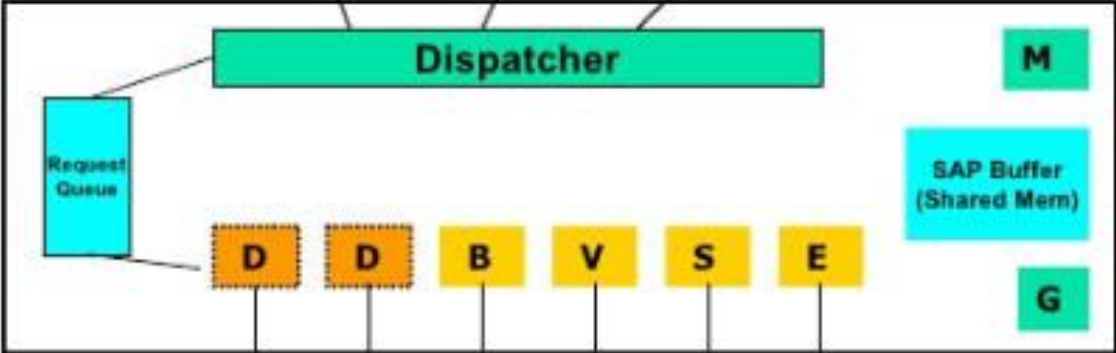
SAP Layer View

Presentation Layer
(Windows based)

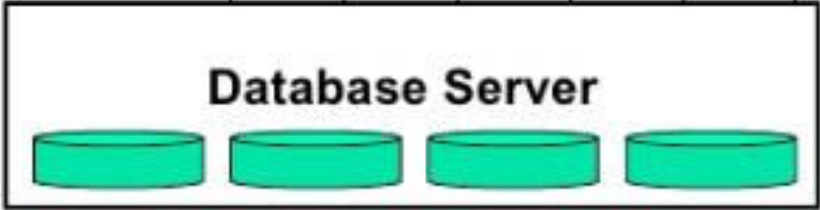


Application Layer
(Windows Server/UNIX)

SAP Instance



Database Layer
(Windows Server/UNIX)

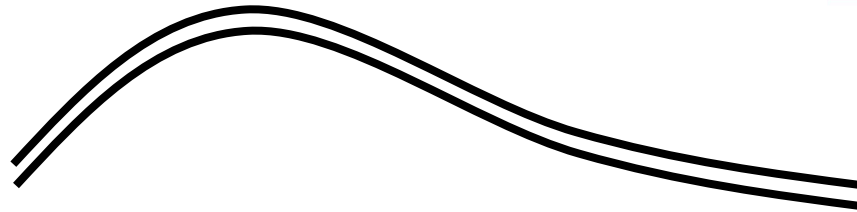


Oracle
Informix
DB2
MS SQL Server
MaxDB

Our Exercises: who's in Charge?



Account on SAP UCC



Internet Connection



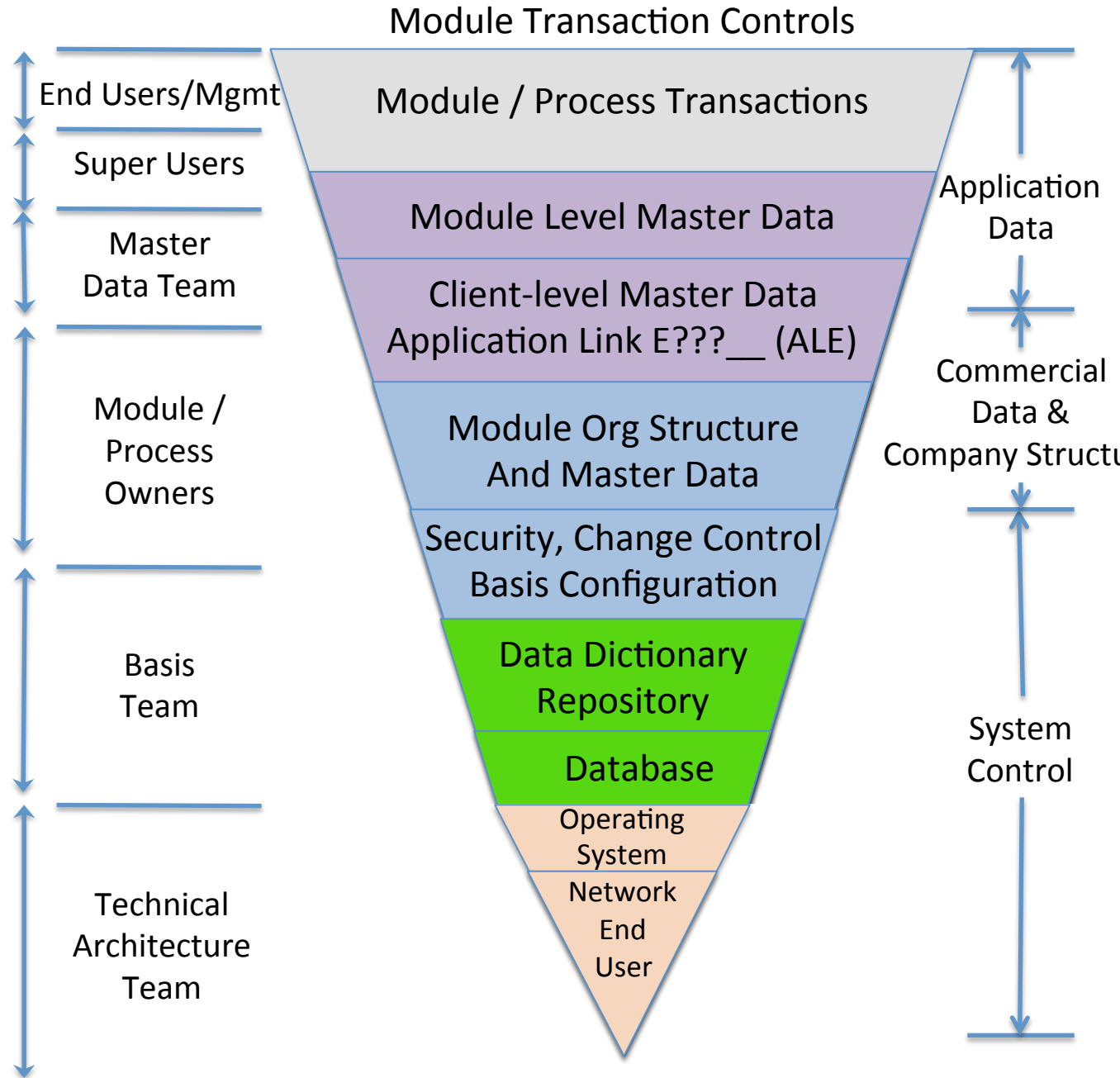
Temple PC with SAP Gui



Security Layer	Owner
End User (sign-on)	
Network	
Host	
Operating System	
Database	
SAP	

Enterprise Security Architecture

- Security is necessary at all levels of SAP Architecture
- Different teams often responsible for each layer e.g. basis team handles the database, data dictionary & repository

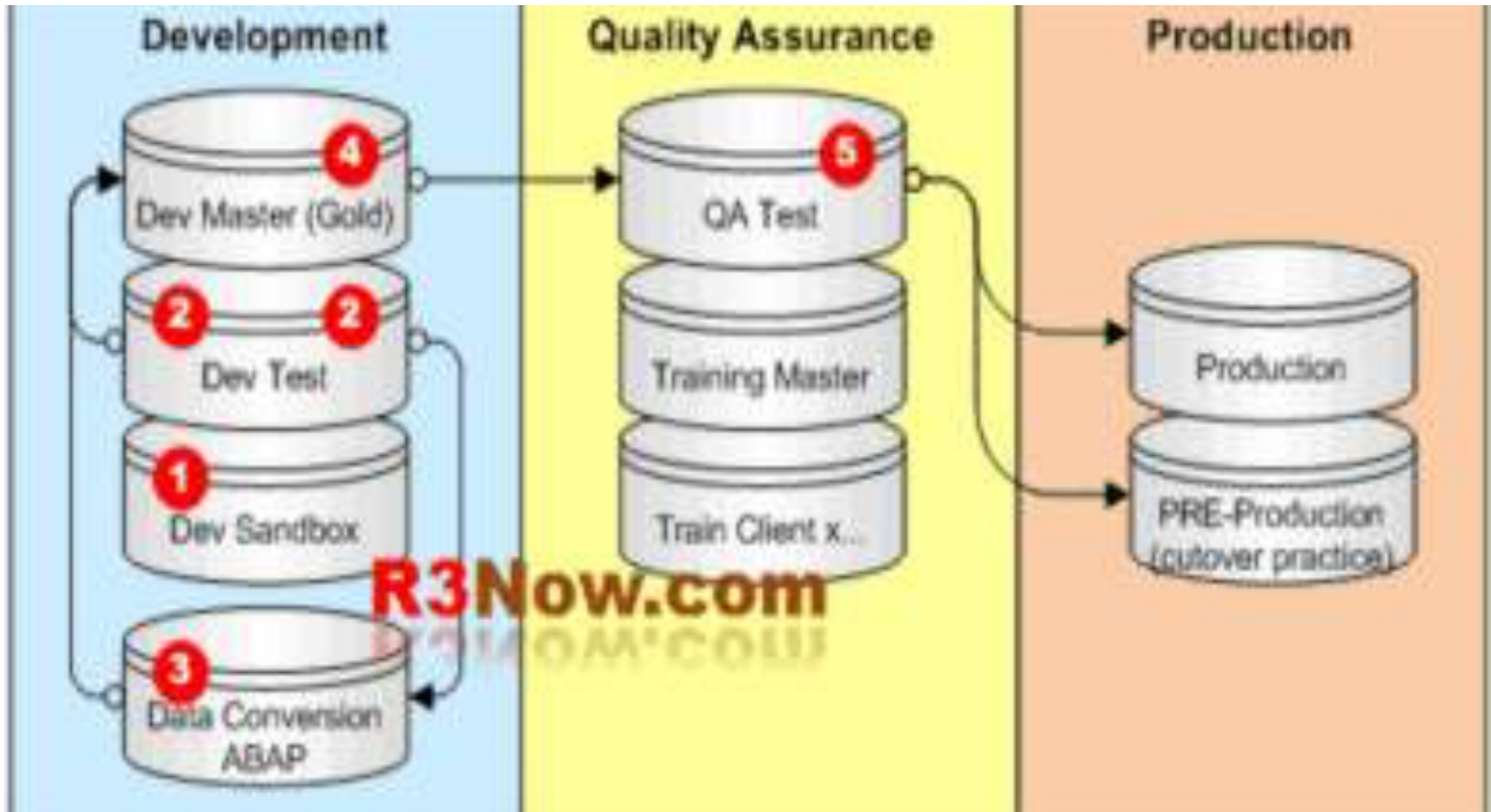


SAP Landscape: Instance and Clients

- **SAP Instance**

- Instance also referred to as a system
- An Instance has a dedicated physical database
- One installation of SAP software (source code / modules) and related logical database is an instance
- Instance shares SAP and developed software 'code' base
- No delivered integration of data or functionality between systems (possible with Application Linking and Enabling – ALE)
- Documentation of instances (systems) and clients often called: **'Client / System Landscape'**

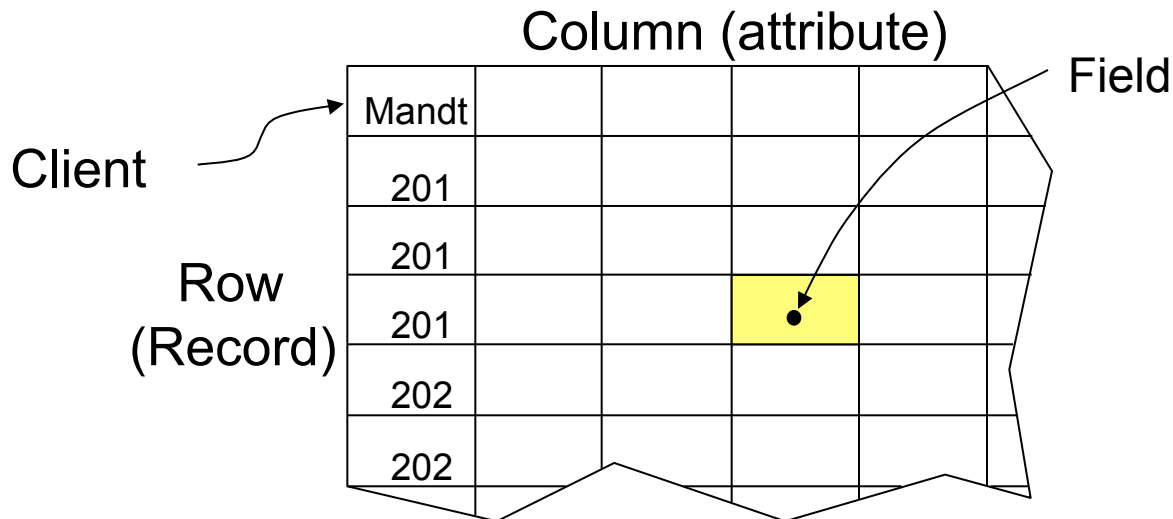
Minimum Rec'd SAP Landscape



SAP Landscape: Instance and Clients

- **SAP Clients**

- Client is highest organization level with SAP System
- At least one client per system (e.g. '100')
- Business transactions occur within a client
- Data Table view:

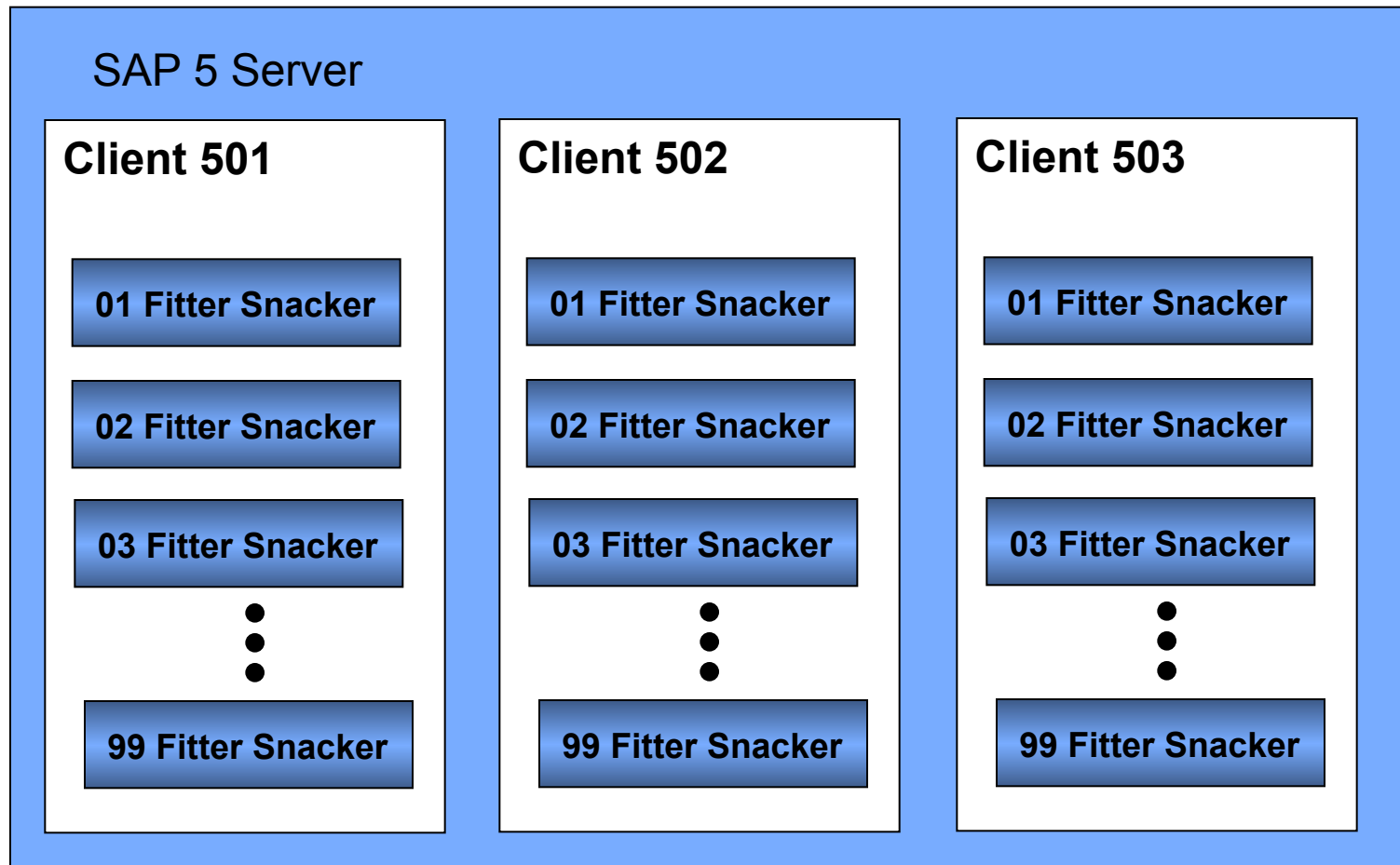


SAP Landscape: Instance and Clients

- **SAP Clients**

- Clients have two types of data:
 - Client dependent – separate and unrelated
 - Client independent – same for all clients in system (e.g. currency, units of measure, system parameters)
- Single logical database (linked to system / instance) may contain several clients
- Client typically represents a logical grouping of multiple companies

Client setup for a hypothetical company



Typical SAP Landscape

Development System

Type of users:
Developers,
Consultants,
Key Users

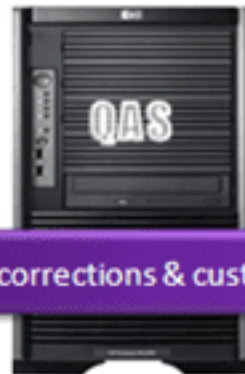
Type of work:
Customizing,
Development,
Unit Testing



Quality-Assurance System

Type of users:
Developers,
Consultants,
Key Users

Type of work:
Integration and
Quality testing



Production System

Type of users:
End users

Type of work:
Productive
execution of
transactions
with real
business data



Developments, corrections & customizing settings

SAP Landscape: Development System

- **Dev 100: Golden Configuration Client**

- Final approved configuration (by Business Process Mgrs)
- Linked to development system in other landscapes (BW, CRM, etc.)
- Development work done in this client
- No master data or transaction data

- **Dev 110: Unit Test Client**

- Refreshed from Dev 130 as-needed
- Unreleased changes moved here to be tested
- Configuration transported from client 100 for testing

SAP Landscape: Development System

- **Dev 120: Data Load Client**
 - Refreshed from DEV 100 as-needed
 - Owned by Data team for testing data loads, data transformation
- **Dev 130: Clean Master Data Client**
 - ‘Clean’ master data created by data management and
 - Unreleased changes moved here to be tested
 - Configuration transported from client 100 for testing

Key Information Technology Risks

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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.

Break Time





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
 - Prior Classes (*Feb 9 & 16*): Steps 1 – 15
 - This Class (*Feb 23*): Steps 16 – 23
 - *Due Feb 26 11:59 PM*: Assignment Submission

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**

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***



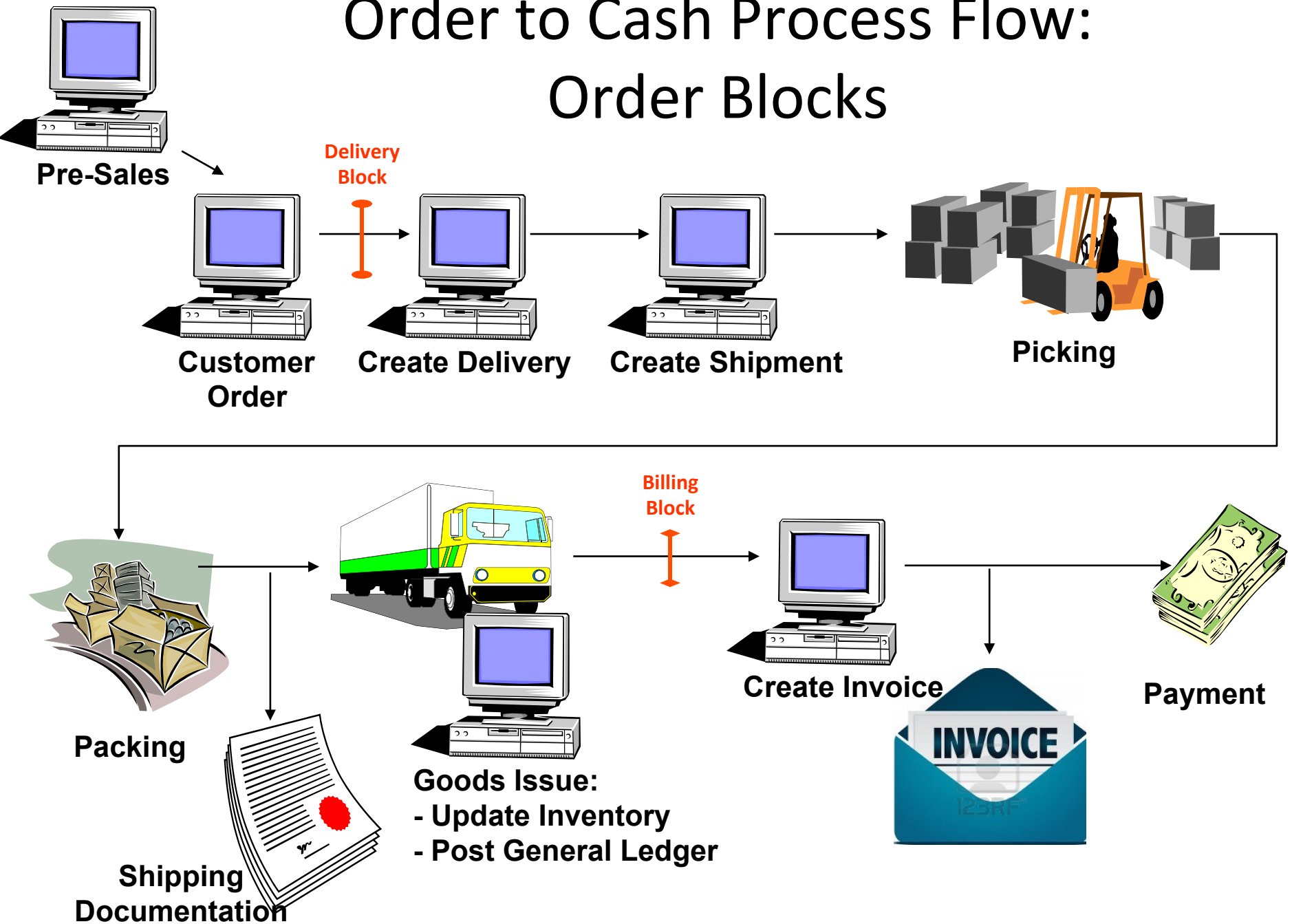
Exercise 2: Order to Cash



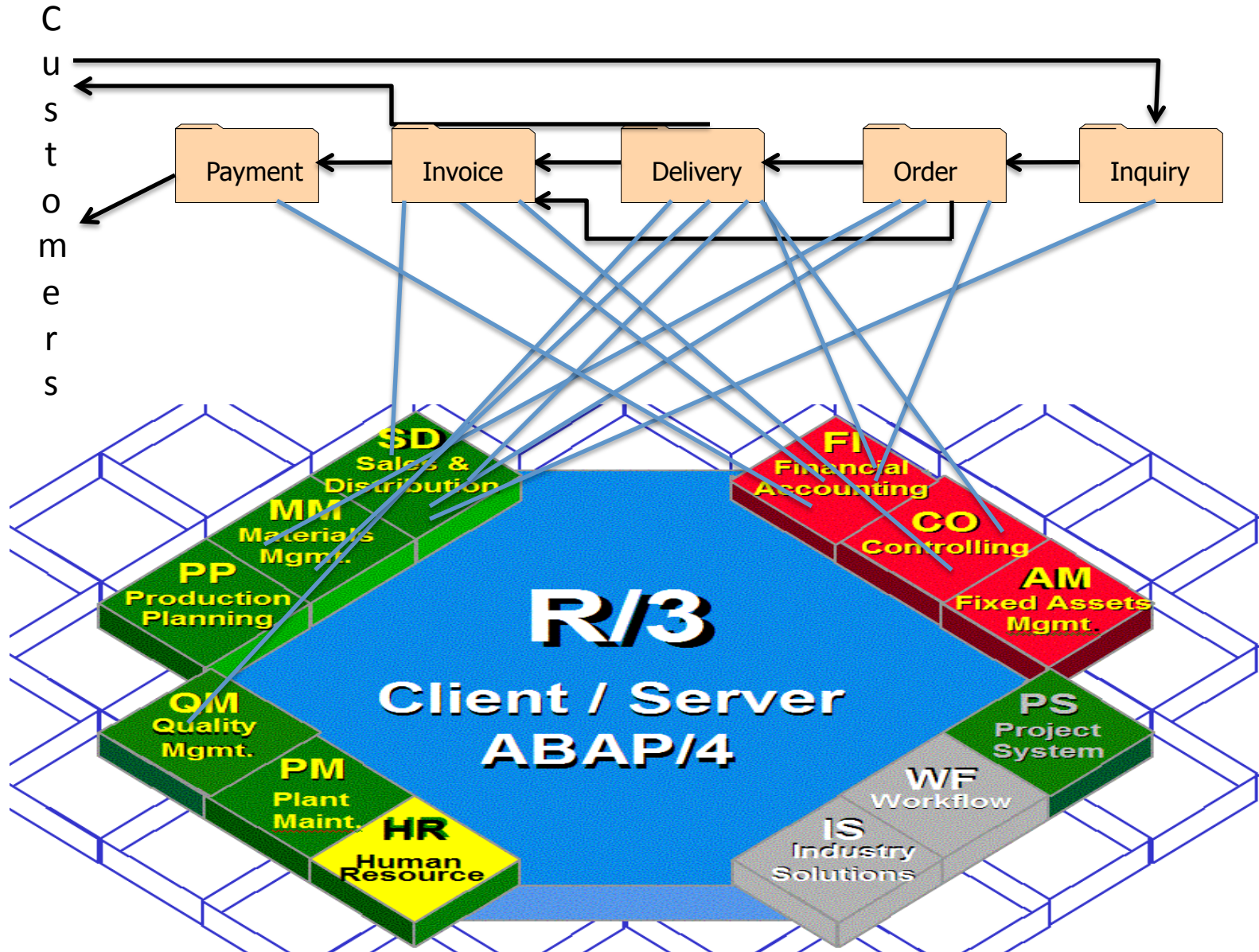
- Task 21 - Check Status of Various Accounts
 - See details of Task 5
- Task 22 – Display the Document Flow for the Sales Order
 - Within transaction use menu: *Environment* ▶ *Display Document Flow*
 - Transaction: **VA03**
- Task 23 – Write Down the Journal Entries the System Made
 - Non-SAP Task

Extra Slides

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 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