

Auditing in ERP Environment

ICAI WIRC

12th Oct – 16th Oct, 2020

Agenda – Day 1

- Introduction to Controls based Audit
- Introduction to ERP
- Accessing and Navigating SAP
- SAP Org Structure

Speakers

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SESSION 1

Introduction to Controls based Audit

Evolution of Accounting

- Manual Accounting
- Accounting Software
- Enterprise Resource Planning (ERP) Software

Accounting in ERPs

- **All** entries are Journal Entries
- No Primary or Secondary Books of Account
 - only **data stored in Tables**
- No posting from Primary to Secondary Books of Account
- So called “Primary Books” such as Purchase Registers, Sales Registers, etc. are mere reports drawing data from tables which have already been populated.

Difficulty in Substantive Audit in ERPs

- Absence of Printouts
- Difficulty in Ledger Scrutiny
- Difficulty in audit of “manual” journal entries
- Increased use & complexity of Systems and Application software in Business
- IT Driven business
- Volume of transactions are high
- Systems distributed over different geographies
- Outsourced processes
- Need for efficiency and effectiveness of audit

Reporting on Internal Financial Controls over Financial Reporting (*ICFR*)

143 (3) of Companies Act 2013

The auditor's report shall also state -

(i) whether the company has adequate internal financial controls system in place and the operating effectiveness of such controls;

Standards on Auditing

SA 315 – Identifying and Assessing the Risk of Material Misstatement Through Understanding of the Entity and its Environment
- including controls and risk from Information systems

SA330 – The Auditor’s Responses to Assessed Risk

-In addition to other procedures, Consider effectiveness of General IT Controls

SA 701 – Communicating Key Audit Matters in the Independent Auditors Report

-In determining KAMs, the auditor is also expected to take into account the effect on the audit of significant events or transactions that occurred during that year, which include those relating to IT Systems and Controls.

Alternative to Substantive Audit?

A “CONTROLS-BASED AUDIT” approach can be followed.

Internal Controls :

- “The process **designed, implemented and maintained** by those charged with governance, management and other personnel **to provide reasonable assurance** about the achievement of an entity’s objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations, safeguarding of assets, and compliance with applicable laws and regulations.”

Types of Controls

- Indirect Entity Level Controls
 - Control Environment
 - Risk Assessment
 - Information and Communication
 - Control Activities
 - Monitoring of Controls

Types of Controls

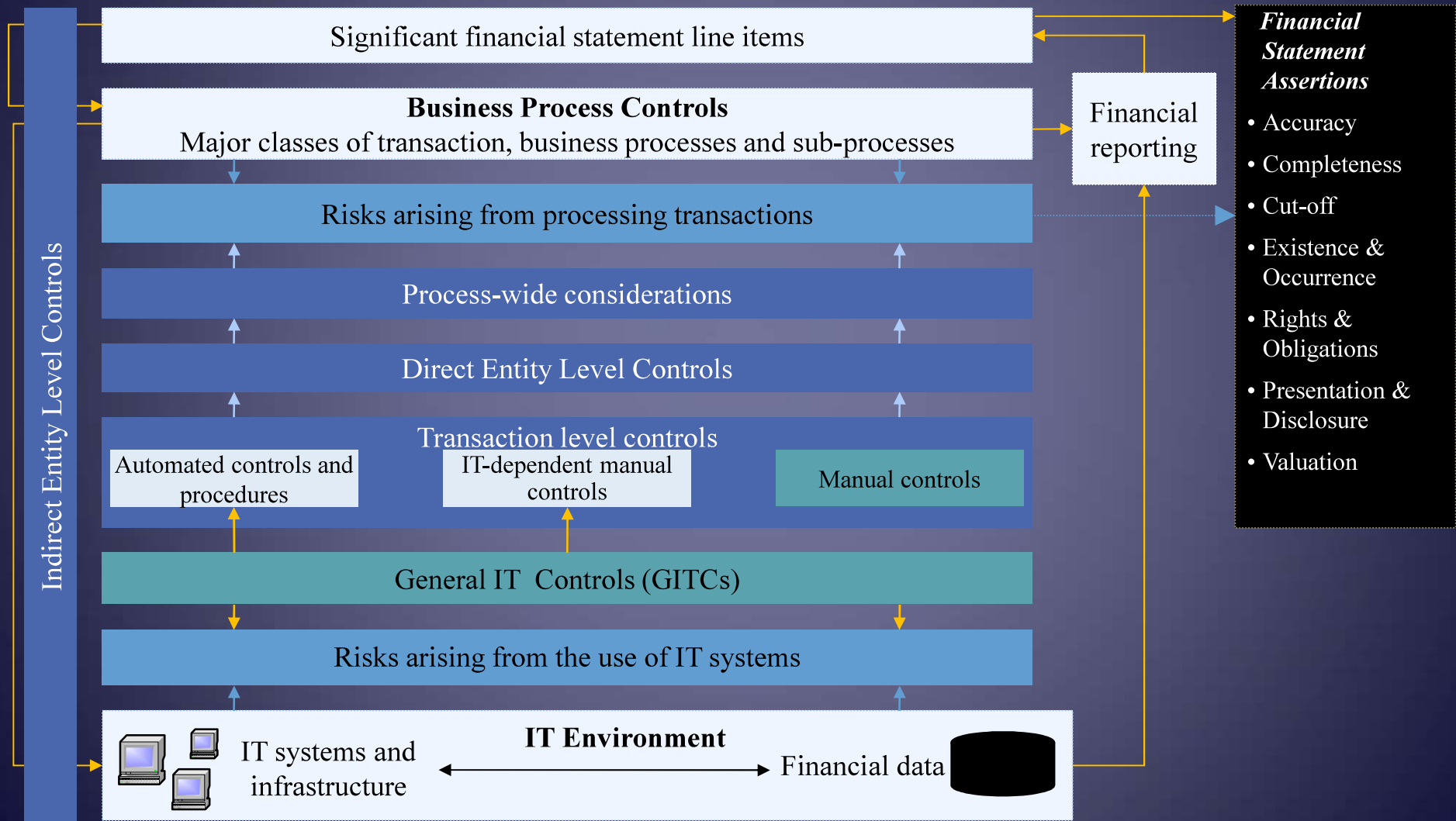
- Business Process Controls
 - Process wide Considerations
 - Direct Entity Level Controls
 - Automated Controls and Automated Accounting Procedures
 - System-Dependent Manual Controls (Manual Controls relying on IT Reports)
 - Manual Controls

Types of Controls

General IT Controls (GITCs) may also be referred to as ITGCs or GCCs which are defined as:

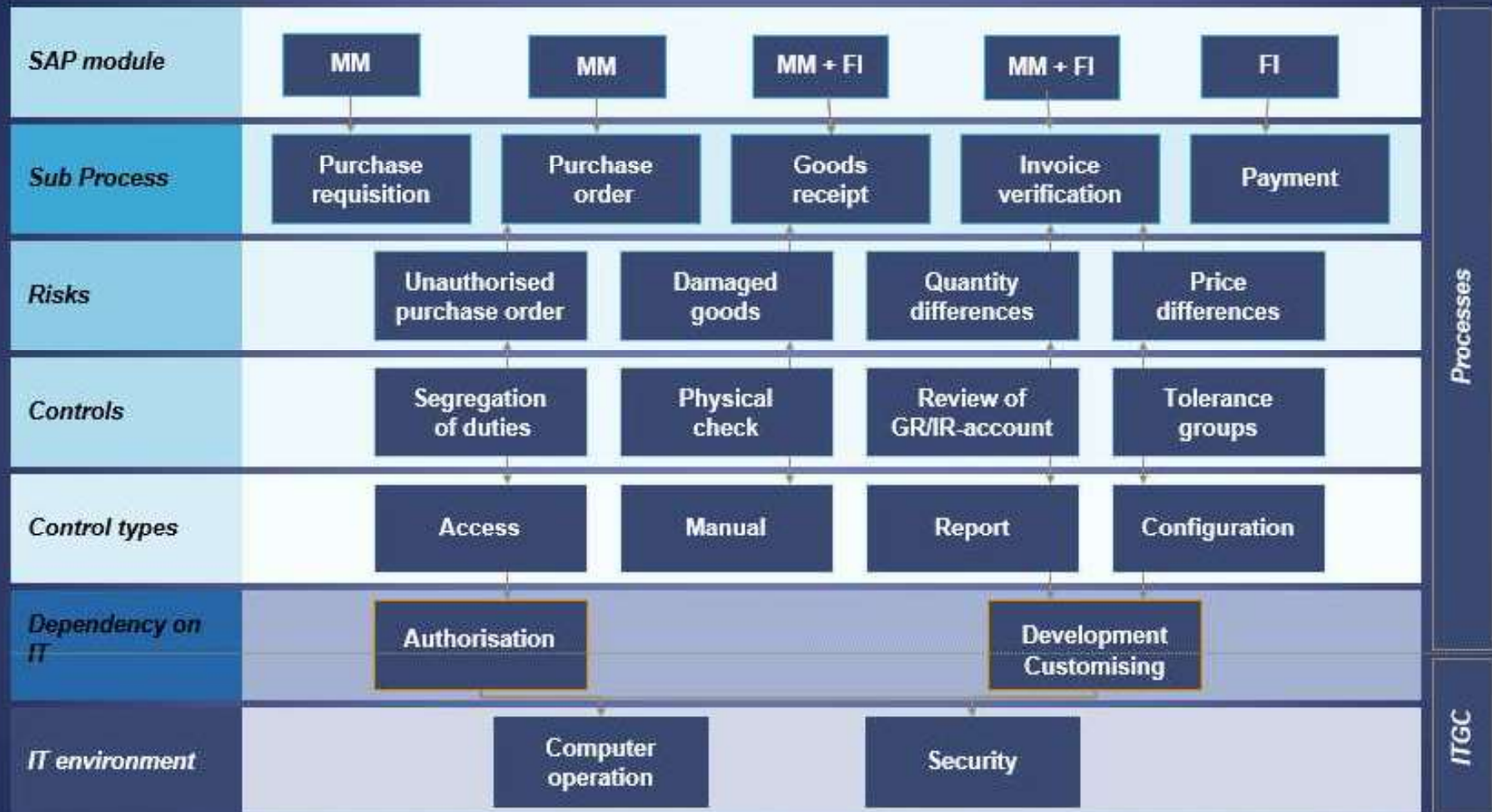
“Controls, other than application controls, which relate to the environment within which computer-based application systems are developed, maintained and operated, and which are therefore applicable to all applications”.

Contribution of controls to audit evidence



Controls in SAP Modules

Example - Purchase to payable process



Impact of Inadequate General IT Controls

In case there are inadequate GITCs, the auditor will not be able to rely on –

- Automated Controls and Automated Accounting Procedures
- System-Dependent Manual Controls
- Underlying Data

Hence, there can be reliance only on Manual Controls and Substantive Audit Procedures, which can be very challenging.

Other Challenges in ERPs

- Each ERP installation is unique
- Each ERP child installation is unique
- First-year audits are difficult
- Absence of parallel runs
- Management perception – ERP does it all
- Issues on Data Extraction
- Audit work-papers

SA 620 - Using the Work of an Auditor's Expert

You will come across several aspects of ERP environments that require more in-depth understanding and knowledge of the technical subjects.

Even best Financial Auditor may not know all technologies.

If you DON'T KNOW, **use Experts**

SESSION 2

Introduction to ERP

Introduction to ERP's

- ERP- Enterprise resource planning
- Meaning : All the core processes needed to run a company integrated into one system as against multiple systems for each core process.
- Scenario : Finance and Accounting, HR-Payroll , Procurement /Manufacturing/Material Management, Sales/Supply chain, Fixed Assets Management etc all into one system
- Why companies use ERP (few pointers):
 - A) Quick reporting and insights for faster decision making with near real time data.
 - B) Integrations/Data integrity ensures single source of data without basic reconciliation errors.
 - C) Simplified management of one system bringing in efficiency and avoiding redundancy.

Some Popular ERP's

- **SAP**
 - S/4HANA
 - ECC6
 - Business One (B1)
- **Oracle**
 - Oracle E-Business Suite
 - PeopleSoft
 - JD Edwards
- **MS Dynamics**
 - Axapta (AX)
 - Navision (NAV)
 - Great Plains (GP)

Differences between ERP's and Accounting Software

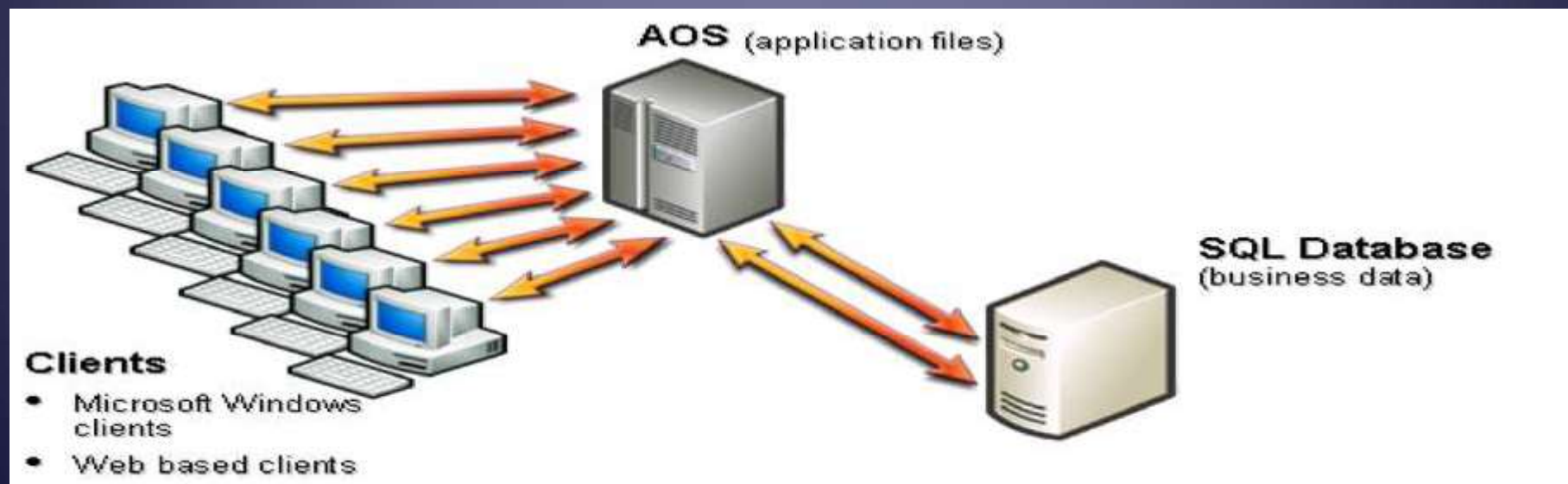
<u>Accounting Software</u>	<u>ERP</u>
Accounting software manages only a specific area of a business which is maintaining books of accounts.	ERP software on the other hand, will always include the functionality of accounting software, plus real-time integration with other functionality of business operations.
Generally used by Startups/small scale businesses	Generally used by mid/large scale businesses
Not easily scalable	Can be scaled up easily as per business needs
Generally not integrable with other systems nor flexible.	Modern ERP's integrate with other systems easily to suite unique business needs and are flexible.

SAP — What is it?

- SAP is a German multinational software corporation that makes ERP with regional offices in almost 140+ countries and has over approx. 437,000 customers in 180+ countries.
- In German:
 - Systeme, Anwendungen und Produkte in der Datenverarbeitung
- In English:
 - Systems, Applications and Products in Data Processing
- Founded in Walldorf, Deutschland (Germany), 1972
- Not "Sap" — It is "S - A - P"

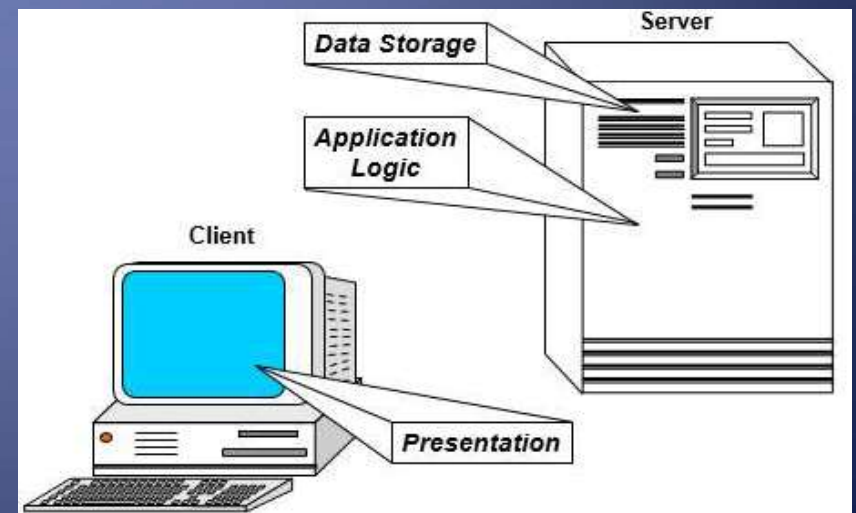
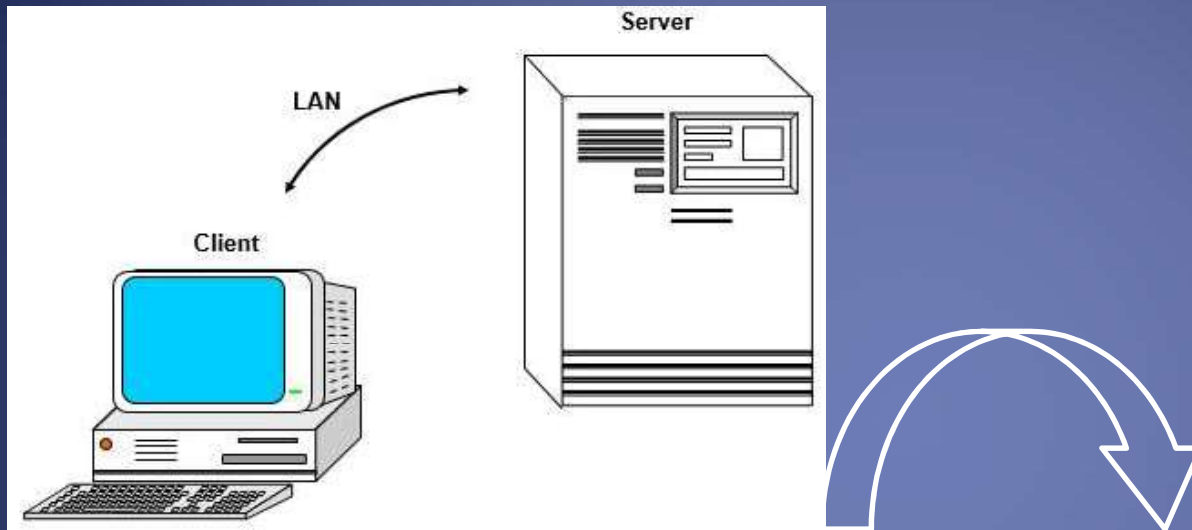
SAP - The Product

- R/3 and ERP
 - Three tier architecture — Front end (GUI), Application Server, Database Server

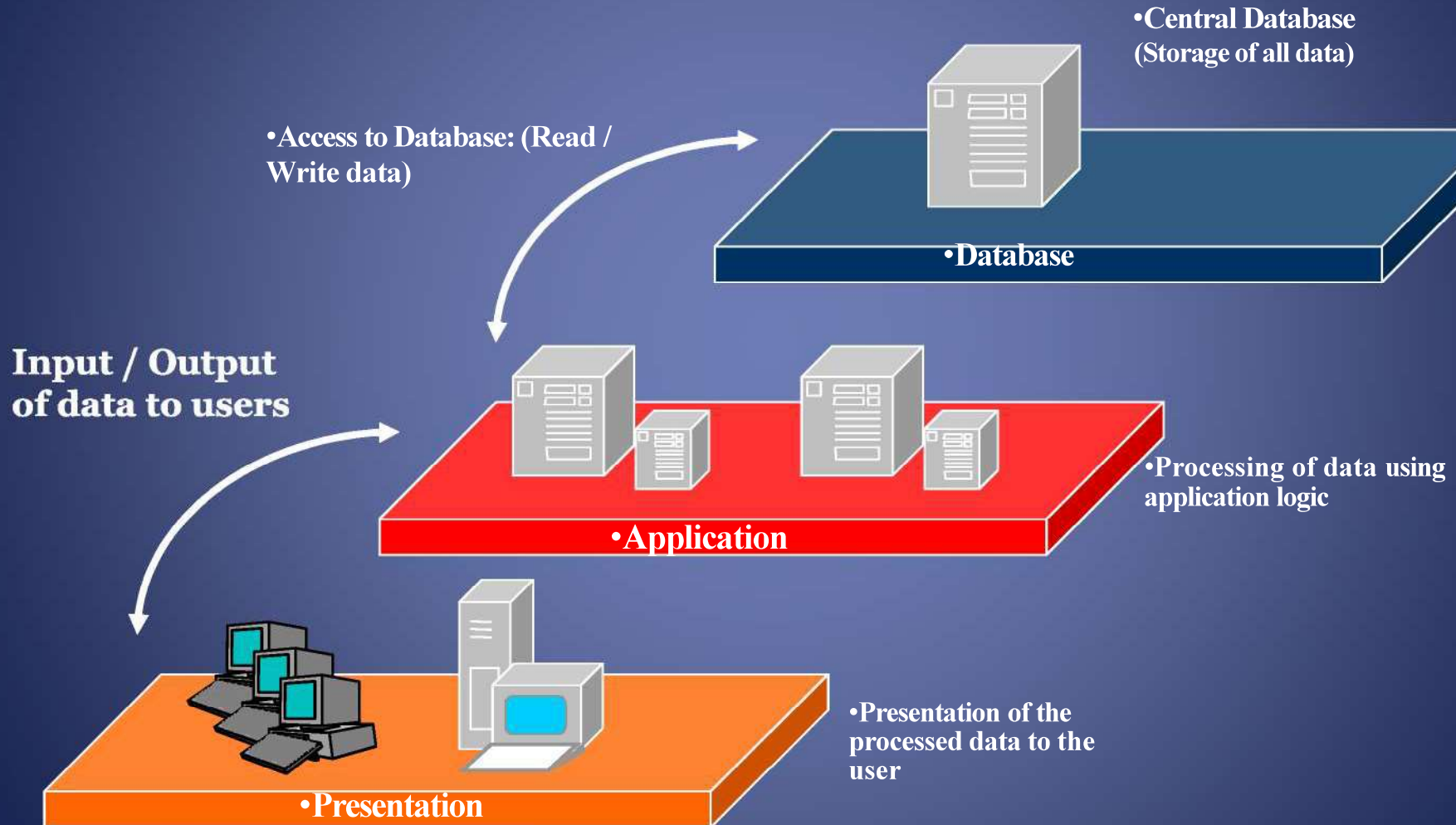


SAP — The Product [Contd.]

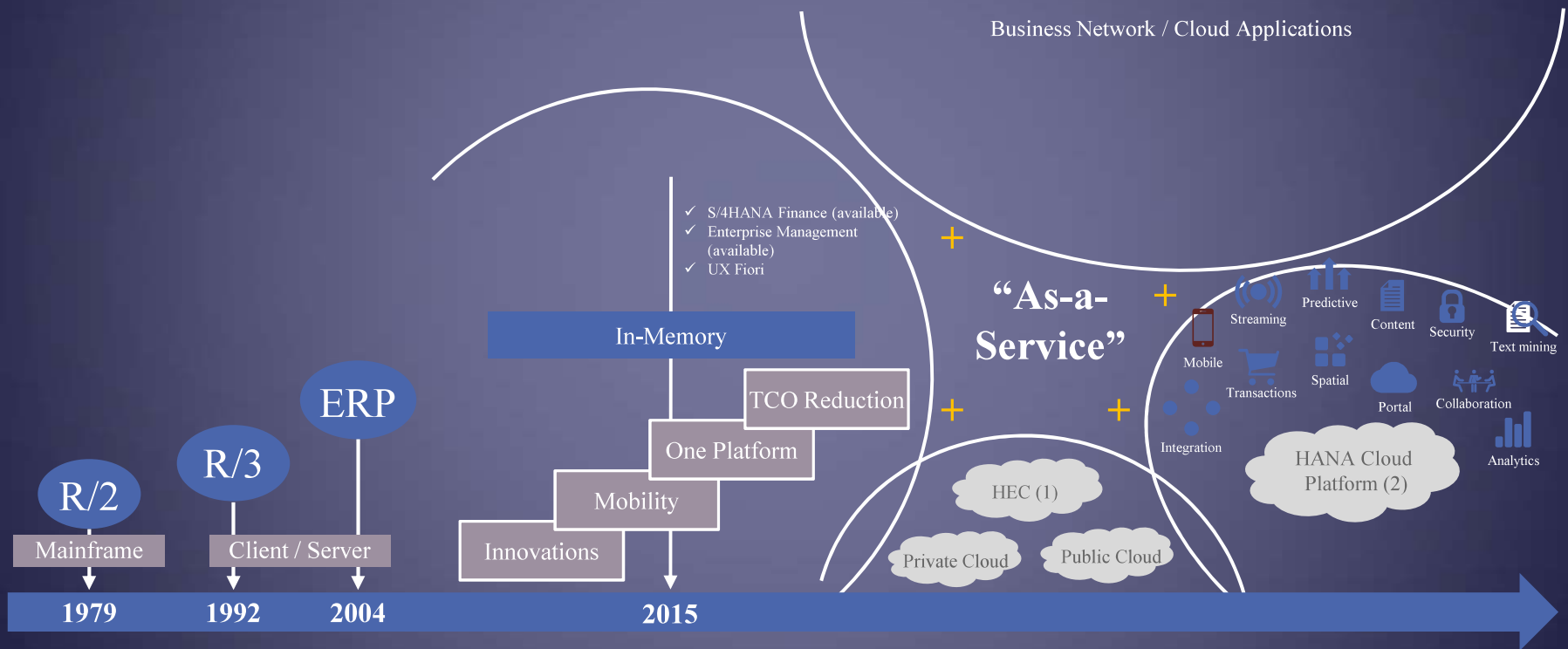
- Client — Server Architecture



R/3 and ERP: Three-Tier Computer



Evolution of SAP S/4 HANA – Next



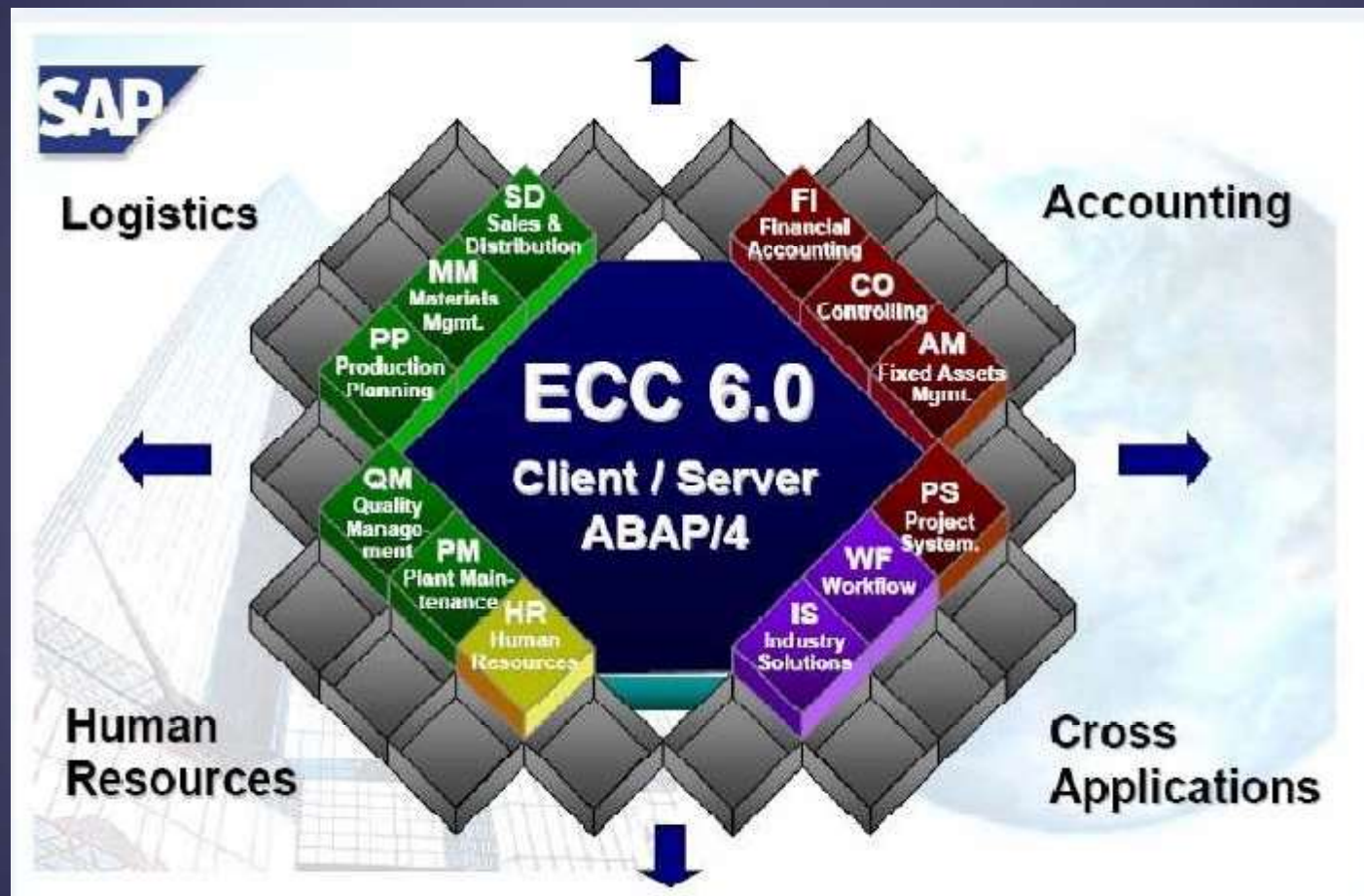
SAP S/4 HANA Enhancements and Implementation

1. Enhanced Speed and innovation
2. Business On-the-go with Fiori Mobility solutions
3. Single Source of Truth -> SAP S/4 HANA Universal Journal - Unison of CO and FI -> Reconciliation (as in case of CO to FI) is not needed in SAP S/4 HANA
4. Efficiency in Financial Period Closing turnaround time and accuracy
5. Enhanced Credit Management - with advanced features like Credit rule engine for automatic risk scoring & credit limit calculations ; Automatic update to master data on approval of credit limit etc. ; Work flow for credit events
6. Business Partner Approach for Customer and Vendor Masters
7. Business Decision support

Greenfield approach is a new implementation of an S/4HANA system starting from scratch

The Brownfield approach consists of a Conversion (software upgrade and data transformation) of the existing and complete SAP ECC system into an S/4HANA

Modules in SAP



SAP Industry Solutions

- To provide enhanced industry vertical-specific functionality over and above its inherent core functionality, SAP offers a number of specialized add-on components called 'Industry Solution'. SAP's current industry Solution verticals are broadly classified under 3 main groups as below:

Financial and Public Services

- **Banking**
- **Defense & Security**
- **Insurance**
- **Healthcare**
- **Higher Education & Research**
- **Public Sector**

Service

- **Media**
- **Professional Services**
- **Retail**
- **Telecommunications**
- **Utilities**
- **Wholesale Distribution**
- **Transportation and Logistics**

Manufacturing

- **Aerospace & Defence**
- **Automotive**
- **Chemicals**
- **Consumer Products**
- **Engineering, Construction & Operations**
- **High Tech**
- **Industrial Machinery & Components**
- **Life Sciences**
- **Mill Products**
- **Mining**
- **Oil & Gas**

SAP Product – features

- SAP Supports
 - Multiple Languages
 - Multiple Currencies
- Proprietary (High-level) Programming Language — ABAP (Advanced Business Application Programming)
- Can execute on any Operating System — UNIX, Windows, Linux etc.
- Can use any Database — Oracle, MS SQL, SAP Hana
- Currently, no Support for versions other than SAP R/3 ECC (ERP Central Component) 6.0 and SAP HANA

SAP – Points to Ponder

- Highly integrated
- On-line, Real-time
- Complex Data Structures
- Causes business process changes
- Causes organizational changes
- Very sophisticated testing of functionality / reports
- In-Built Controls -
 - Debit Credit tally
 - Trail of all transactions entered

SESSION 3

Accessing and Navigating SAP

Accessing ERPs

- NEVER access Production (Live) Environments with INSERT/EDIT/DELETE RIGHTS
- Log-on only with “**READ-ONLY**” Access
- If access is not provided to Production Environments, testing can be on Test Environments, provided it is assessed that the application code version of the Production and Test Environments are the same.
(e.g. through cloning in presence of auditor)
- Superuser, privileged or administrative access is not required for auditors.

Accessing ERPs

- The auditor should request for temporary access for the duration of audit only.
- To obtain data from core technology components of an ERP environment, viz. operating systems, databases, networks, the auditor should take help from the respective systems administrators.
- The auditor should not even inadvertently violate the company's policies or compromise IT security.

Logging On -SAP GUI

- To log on to an R/3 system with the SAP GUI, one need the proprietary SAP GUI (Graphical User Interface) software loaded on your system and an internet /network/VPN connection



•Internet / Network, VPN Connection

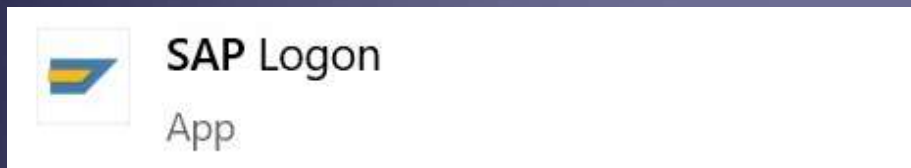


•Account on SAP R/3 System
at Data Centre or hosting site

•PC with SAP GUI

SAP GUI Configuration

- First, you need to tell the SAP GUI which system you want to log into:

The screenshot displays the SAP Logon 750 application window. The title bar reads "SAP Logon 750". The main menu includes "Log On", "Variable Logon", "New Item", "Change Item", and "More". A "Filter Items" search box is present. On the left, a navigation pane shows "Favorites", "Shortcuts", and "Connections". The "Connections" table is active, showing three entries: Test1, Test2, and Test3. The "Test3" row is selected and highlighted with a blue border.

Name	System Description	SID	In...	Message Server	Router(s)
Test1		E5D	00		
Test2		E1T	00		
Test3		ABC	00		

System Definition

Create New System Entry ✕

Choose the connection type and set the system parameters as required. Leave the description field empty if you want the system to propose a description. Buttons 'Next >' and 'Finish' are only active when all required input data has been entered.

Connection Type: Custom Application Server ▾

System Connection Parameters

Description: Test3

Application Server: serveraddress

Instance Number: 00

System ID: ABC

SAProuter String:

Use this page as the first page for subsequent entry creations; setting takes effect immediately

Help Cancel < Back Next > Finish

•Text description (free)

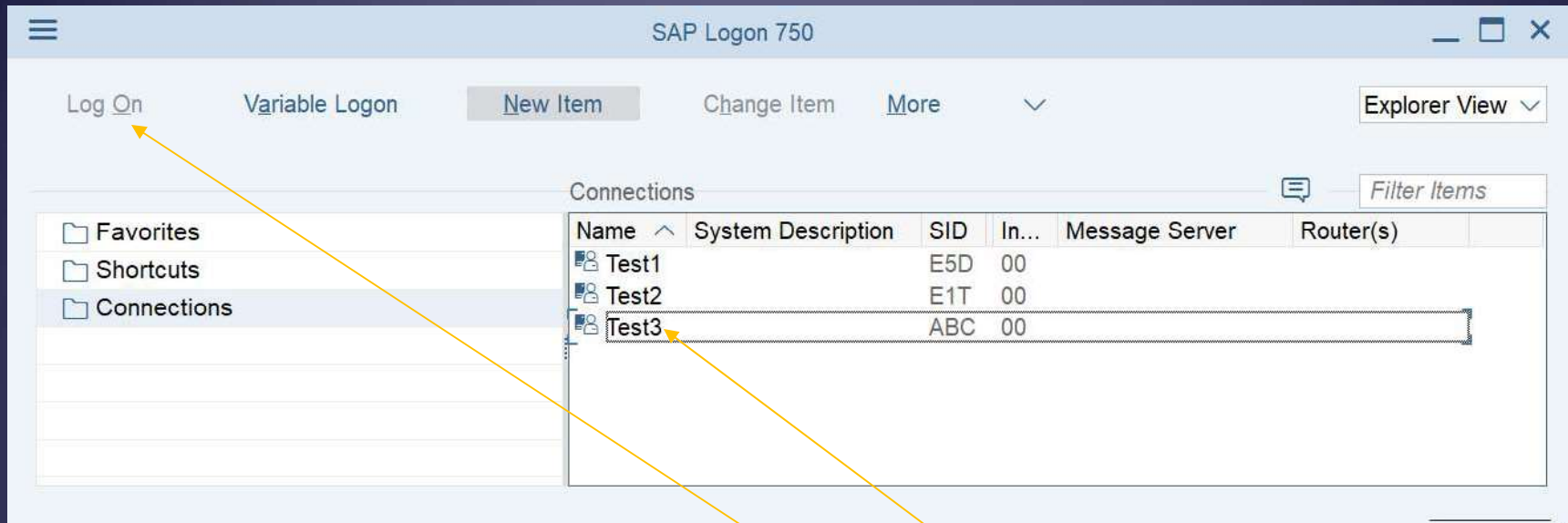
•Address of system (e.g.
•sapd.umsystem.edu)

•System Number

•System ID
Logical name of system

•SAP Router (usually not required)

Configured SAP GUI



- Select System: double-click or
- Logon button

Logging On

The screenshot shows the SAP login dialog box with the following fields and annotations:

- Client:** A text box containing the value "500". A yellow arrow points to this field with the annotation "•Enter Client".
- User:** A text box containing a redacted user name. A yellow arrow points to this field with the annotation "•Enter User".
- Password:** A text box containing a redacted password. A yellow arrow points to this field with the annotation "•Enter Password".
- Language:** A dropdown menu. A yellow arrow points to this field with the annotation "•Don't worry about language—English will default in".

•Enter Client

•Enter User

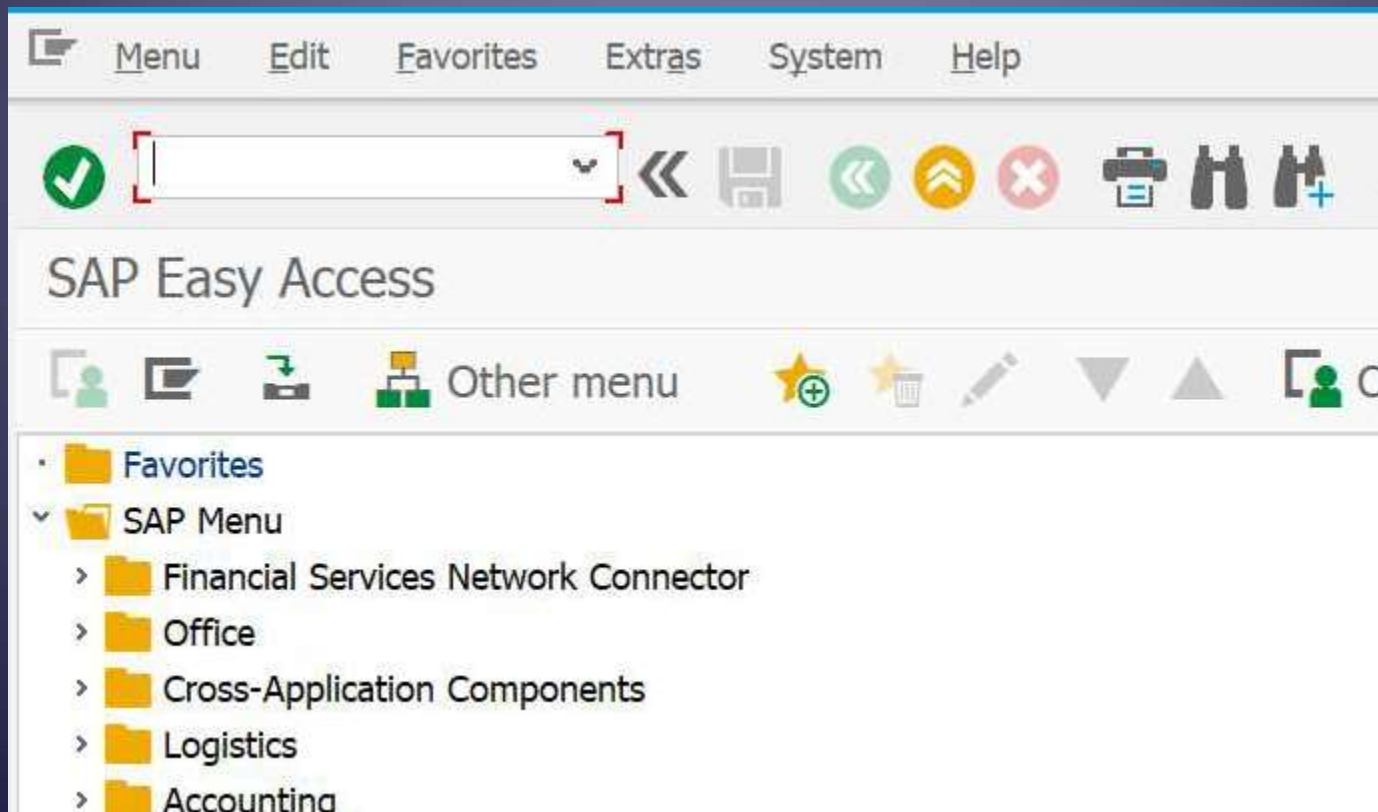
•Enter Password

•Don't worry about language—
English will default in

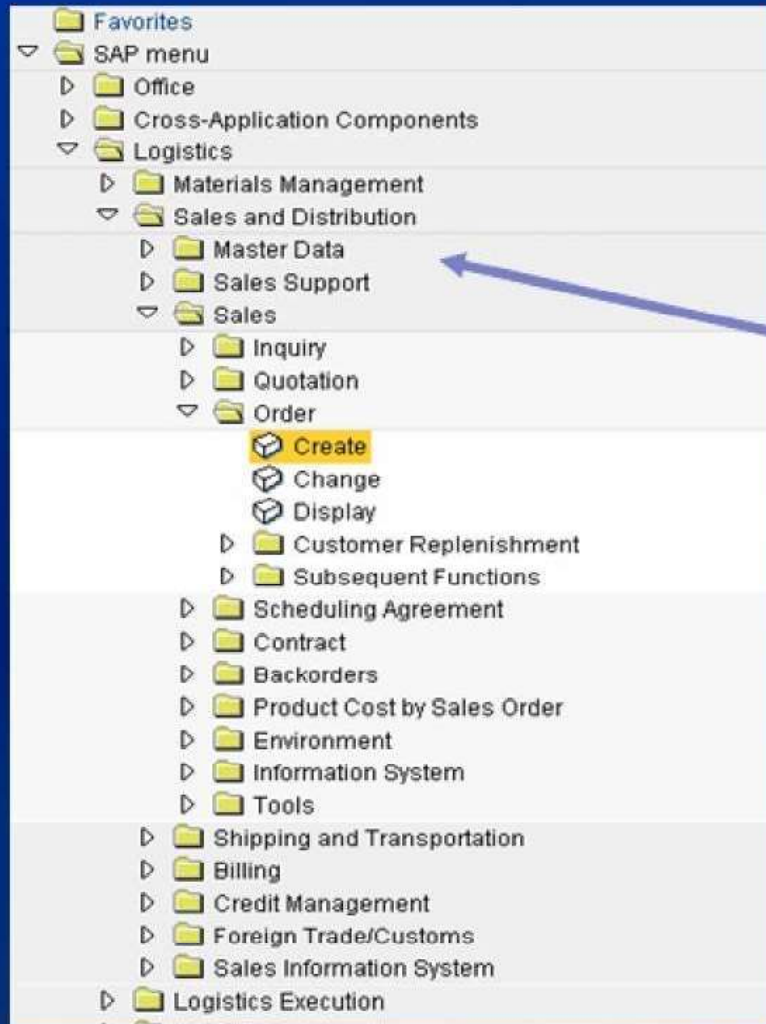
SAP Menu

The default screen is called the *SAP Easy Access* Screen.

- You can switch from one menu to the other by selecting the appropriate icon
- When you log on, you will see either your user menu (specific to your role), or the SAP standard menu (lists all transactions)



SAP Navigation: Using the System

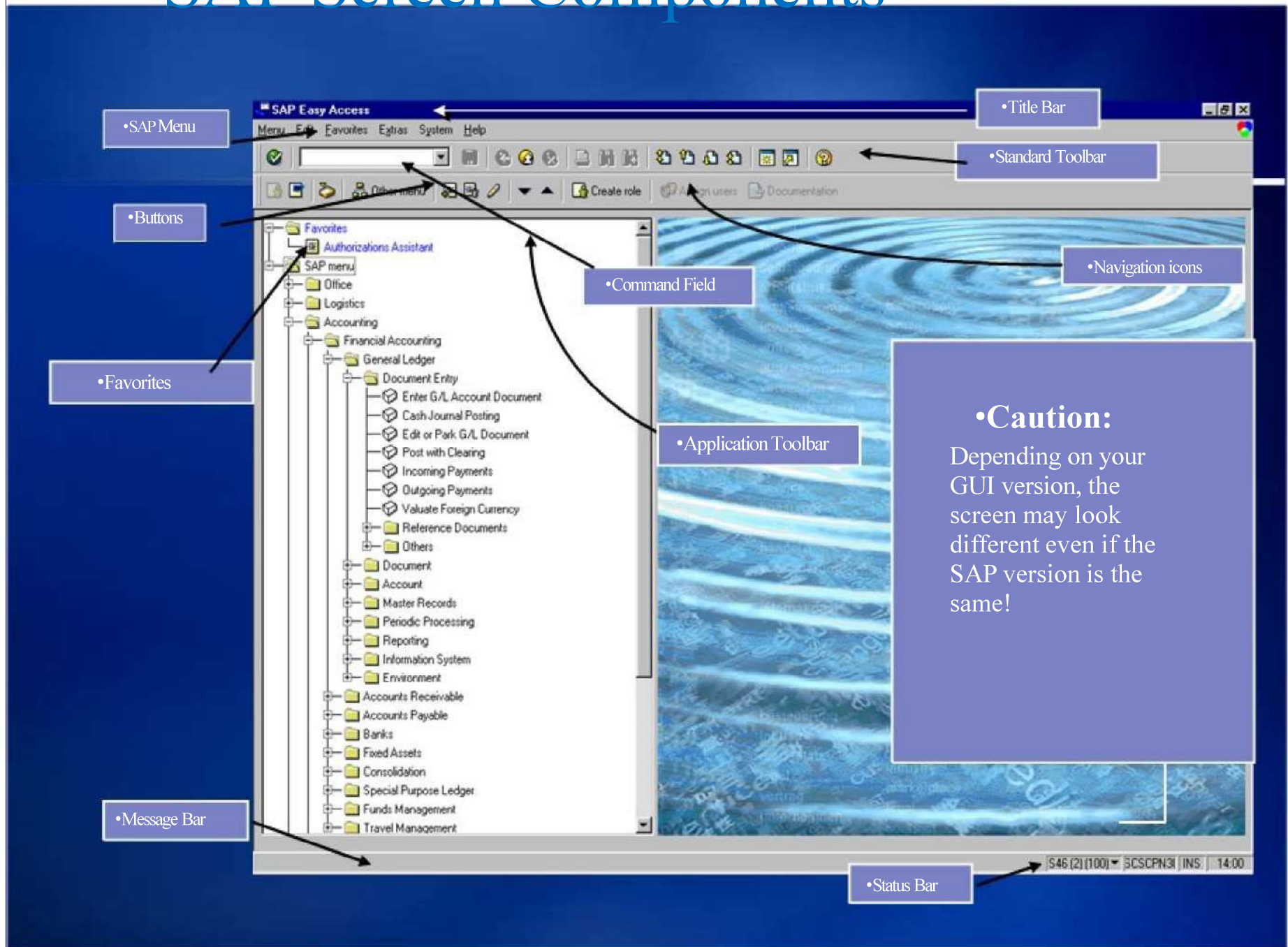


• Two ways to choose a task:

• Clicking on the menu option

• Enter a transaction code in the command field

SAP Screen Components



SESSION 4

SAP Organization

SAP Organization

- Instance — One installation
- Client — At least one Client per Instance
- Company Code
 - At least one Company Code per Client
 - Generally a legal entity
 - Trial Balance can be drawn at this level
- Some data can be defined at Client level, will apply to all Company Codes of that Client
- Chart of Accounts: Maintains Inventory of all GL accounts.

SAP OrganizationContd.

- Purchasing Organization
- Sales Organization
- Plant — assigned to a single Company Code

* Definition is extremely important for functionalities and security

SAP Organization Impact on Audit – Review Considerations

- **Correct Instance /Client scoping** is critical for audit
- **Appropriate scoping of Org elements** ensures that audit is focused on correct parameters. No over auditing or under auditing.
- **All configurations possibilities** should be evaluated in a complex ERP.
- Review relevant Menu Path / Transaction Code / Tables to ensure appropriate testing.

Questions?