# FIT5101 Enterprise Systems


## Lecture 02

- Functional Areas and Business Processes
- SAP Modules
- SAP S/4 HANA

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# Unit Topics (Subject to change)

| Week | Date (W/C) | Lecture | Tutorial | Assessment |
|---|---|---|---|---|
| 1 | 1/3 | Introduction | Introduction | |
| 2 | 8/3 | Business Functions & Processes | Business Functions | Ass 1 Rel |
| 3 | 15/3 | ERP Structures | SAP Introduction | |
| 4 | 22/3 | Materials Management & Procurement | Materials Management | |
| 5 | 29/3 | Sales & Distribution | Procurement | |
| | 5/4 | BREAK | | |
| 6 | 12/4 | Production Planning | Sales & Distribution | Ass 1 Due |
| 7 | 19/4 | Financials | Production Planning | |
| 8 | 26/4 | Process Integration & Modelling | Financials | |
| 9 | 3/5 | ERP Implementation | Process Modelling | Ass 2 Due |
| 10 | 10/5 | Current Technologies | Work on Assignment | |
| 11 | 17/5 | Future Trends | Sample eExam / Review | |
| 12 | 24/5 | Review | ?? | Ass 3 Due |

SAP WORKSHOPS

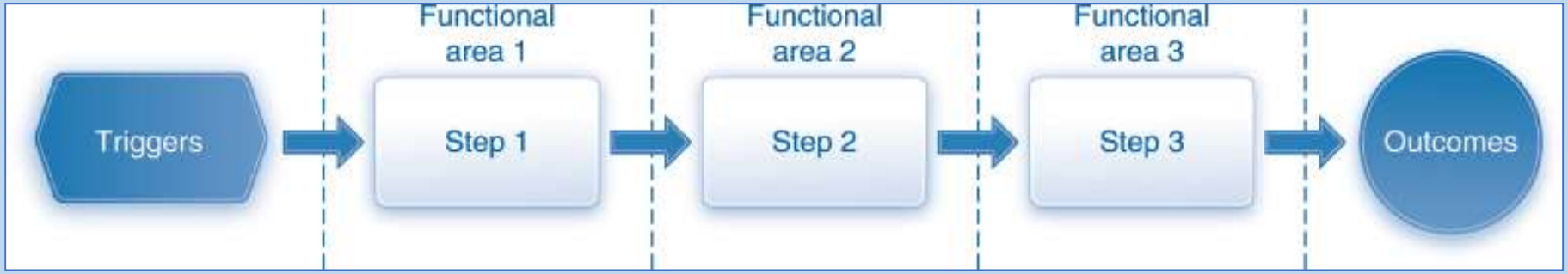
# Functional Areas and Business Processes

Definition : “A **functional area** is a broad category of business activities”. The main functional areas are –

- Marketing and Sales (M/S)
- Supply Chain Management (SCM)
- Accounting and Finance (A/F)
- Human Resources (H/R)

Definition : “A **business process** is a set of tasks or activities that produce desired outcomes” - Simha & Word
A business process may involve one or many functional areas e.g. “Order-to-Cash”.

# Generic Business Process

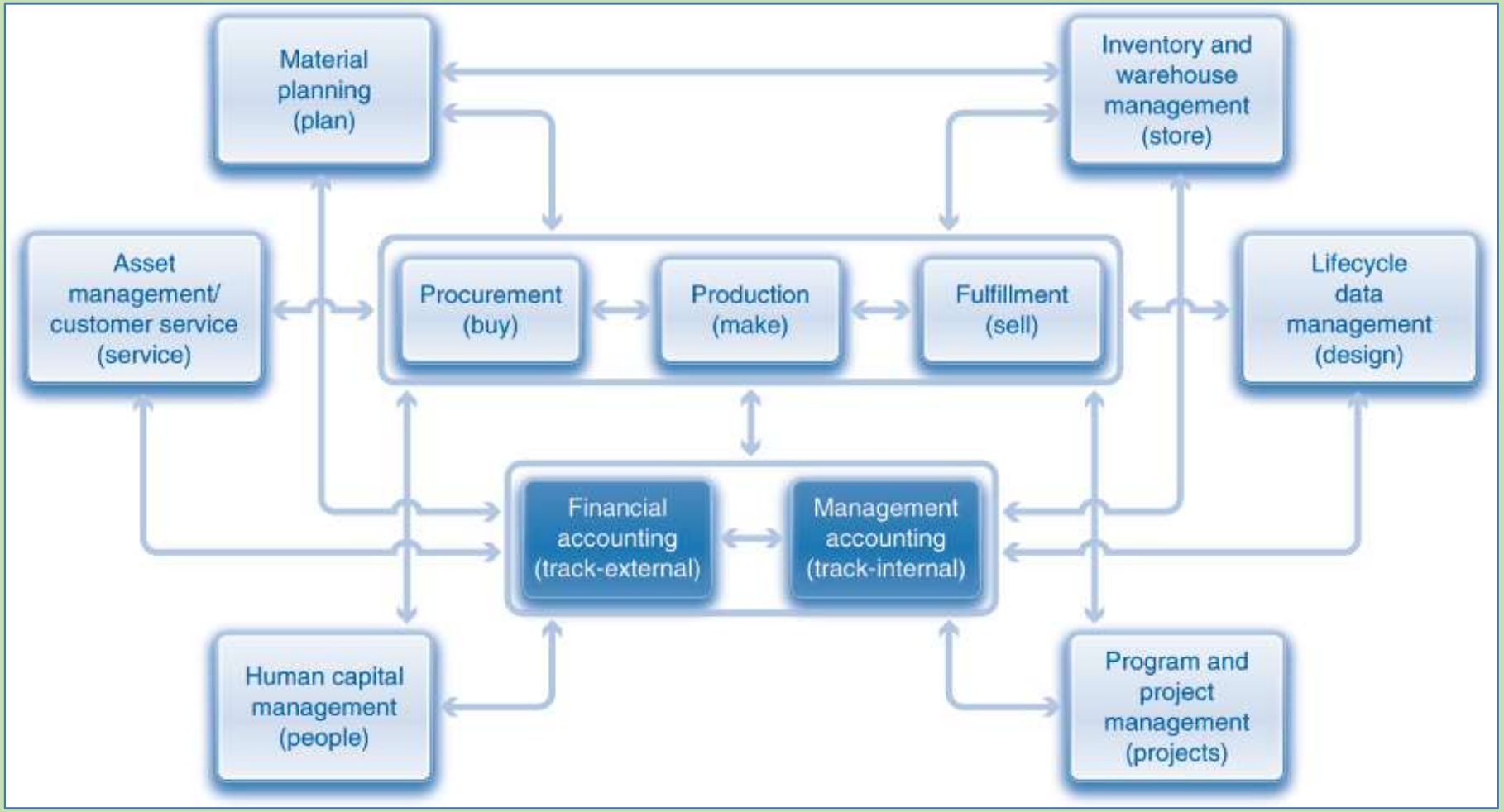



Every business process is triggered by some event such as receiving a customer order or recognising the need to increase inventory. The specific steps in the process may be completed by different functional areas.
E.g. When a customer places an order it will be processed by the sales department, warehouse and accounting department.

Effective communication, and collaboration among the departments is essential to ensure the smooth execution of the processes.

Video : What is a business process ?
https://youtu.be/Tp3ysZpi_TE

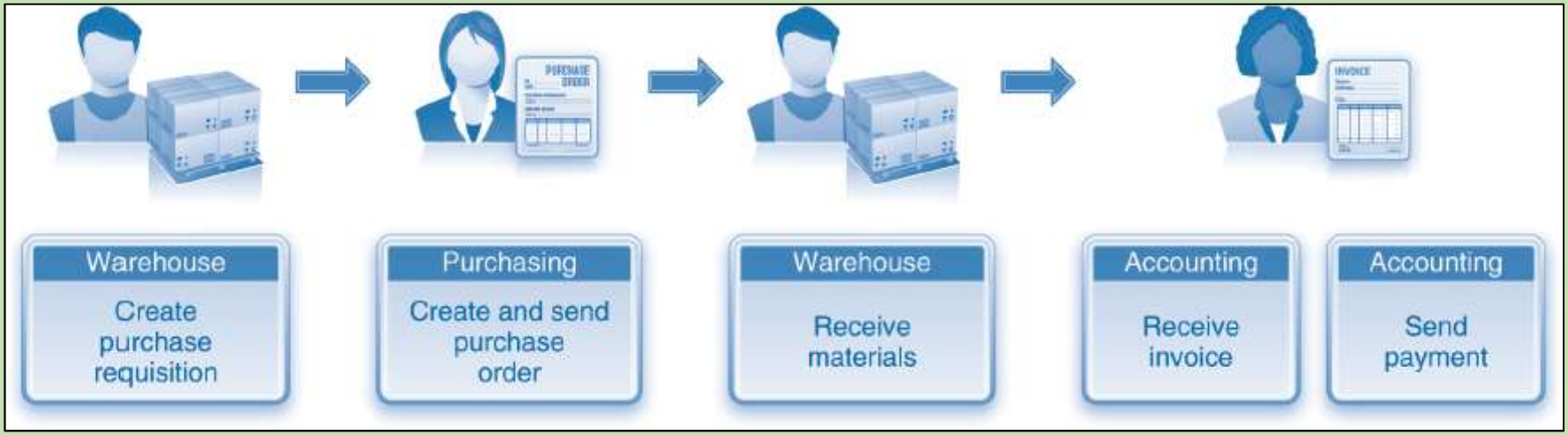
# Key Business Processes




An organization uses many processes to achieve its objectives.

# The Procurement Process (Buy)

The procurement process includes all of the tasks involved in *acquiring needed materials externally* from a vendor.

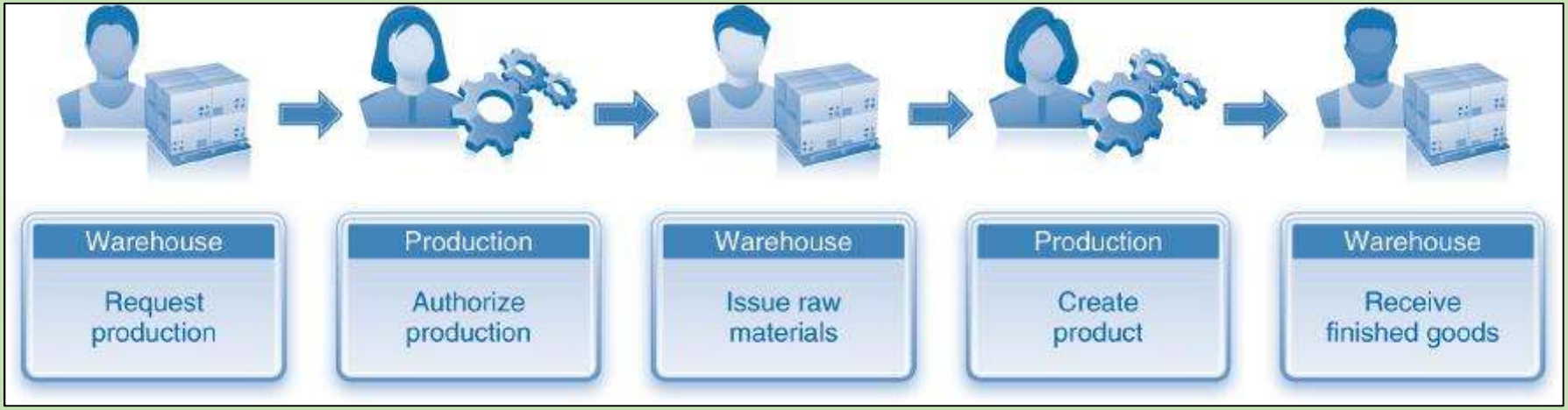



This process would be triggered when the warehouse needs to procure materials, perhaps due to the low levels of inventory.

What functional areas would be involved in this process ?

# The Production Process (Make)

The production process includes all of the tasks involved in *acquiring needed materials internally.*




This process would be triggered by a customer order or the material planning process.

What functional areas would be involved in this process ?

# The Fulfillment Process (Sell)

Fulfillment is concerned with *efficiently processing customer orders.*

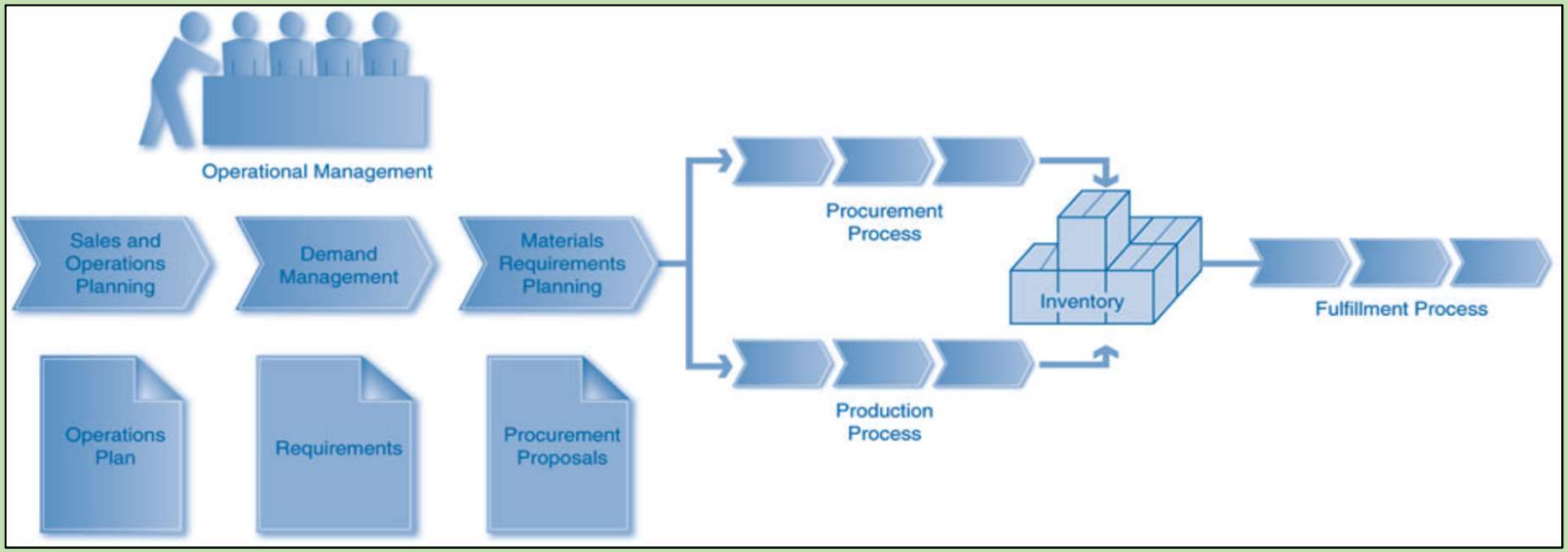

This process would be triggered by a customer purchase order that is received by the sales department.

What functional areas would be involved in this process ?

# The Material Planning Process (Plan)

The purpose of material planning is to *match the supply of materials with the demand.*

These materials may be Finished goods, Semifinished goods and raw materials.




The demand for finished goods is dependent on customer orders while the demand for the other materials is based on the demand for the finished goods.

# Inventory & Warehouse Management (Store)

IWM is concerned with the *storage and movement* of materials.


For a business to operate efficiently, it is essential that materials be stored so that they can be quickly and easily located when necessary. Stock movements may be the result of production, procurement, or fulfillment processes.

# Lifecycle Data Management (Design)

Lifecycle data management provides a set of tools to *manage product design and improvement* throughout the lifecycle of a product.


LDM (also called *Product Lifecycle Management – PLM*) enables an organisation to optimize its product development process, from design to market and eventually until the product is discontinued, while ensuring that it complies with industry, quality and regulatory standards.

# Human Capital Management (People)


HCM consists of numerous processes related to all aspects of *managing people* in an organization.

HCM touches every process in the organization as it is the people in the functional areas who perform the tasks.

# Project Management (Projects)

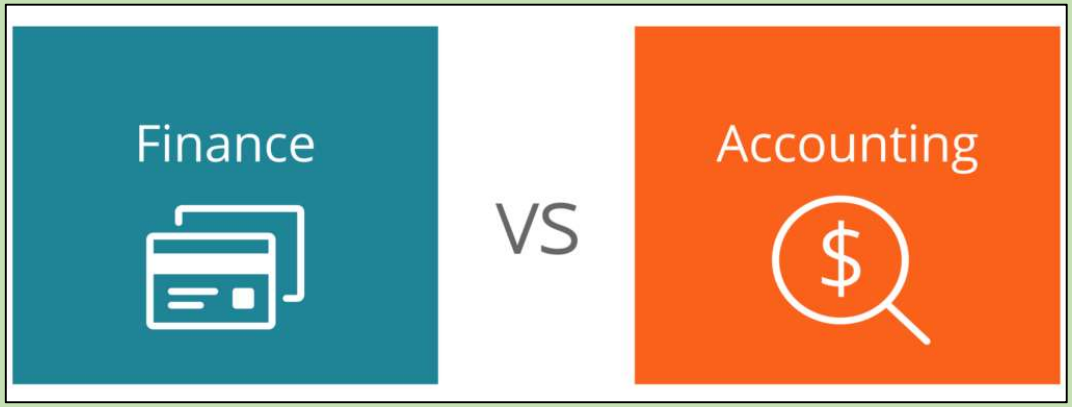
A *project* is temporary in nature and is typically associated with large, complex activities such as the construction of a factory.
Project management refers to the process a company uses to *plan and execute large-scale projects.*


Projects rely on resources and capabilities available in other processes.

# Accounting & Finance (Track)

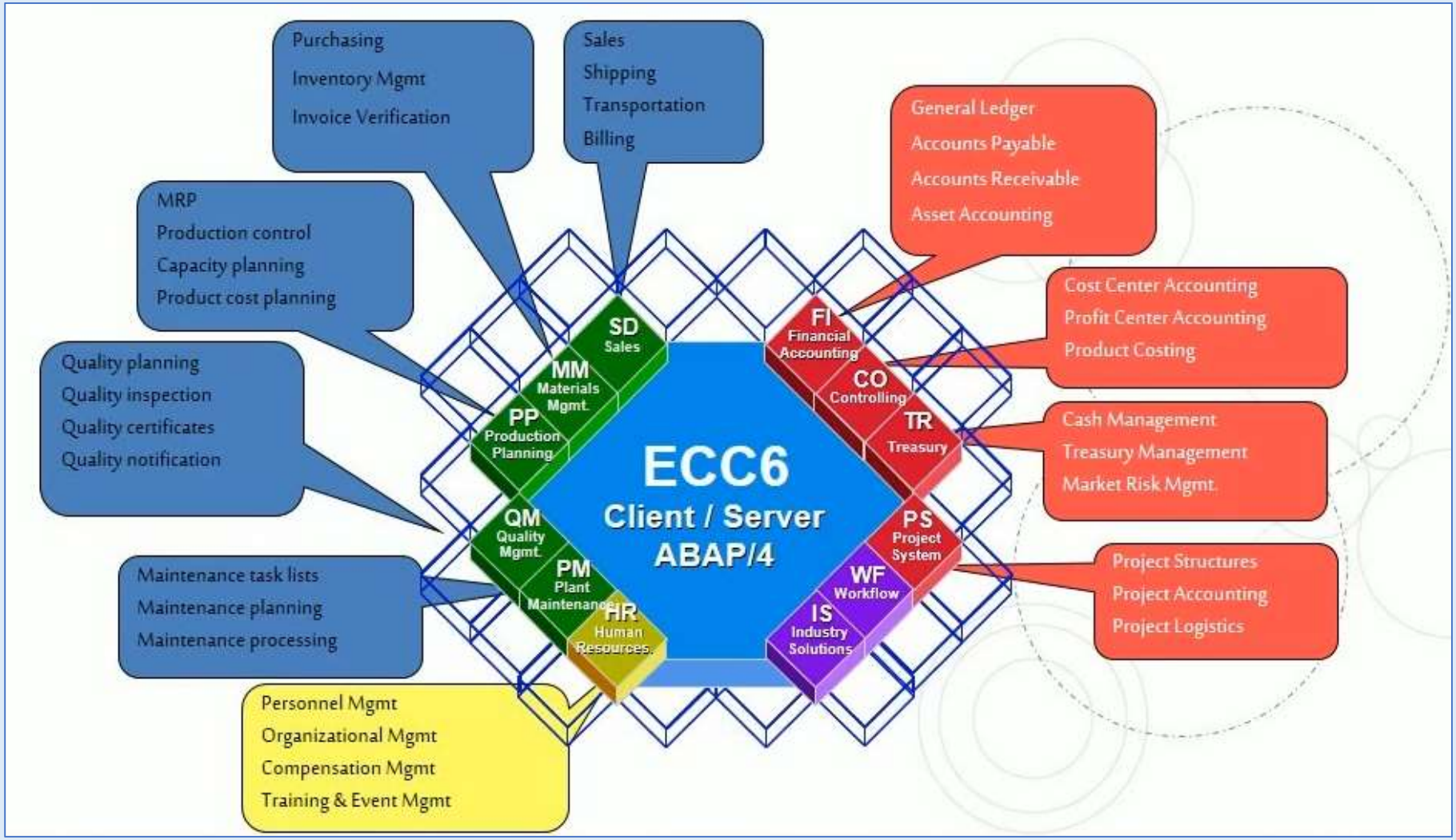
There are two areas :

- Financial Accounting – track for external reporting
- Management Accounting – track for internal reporting.

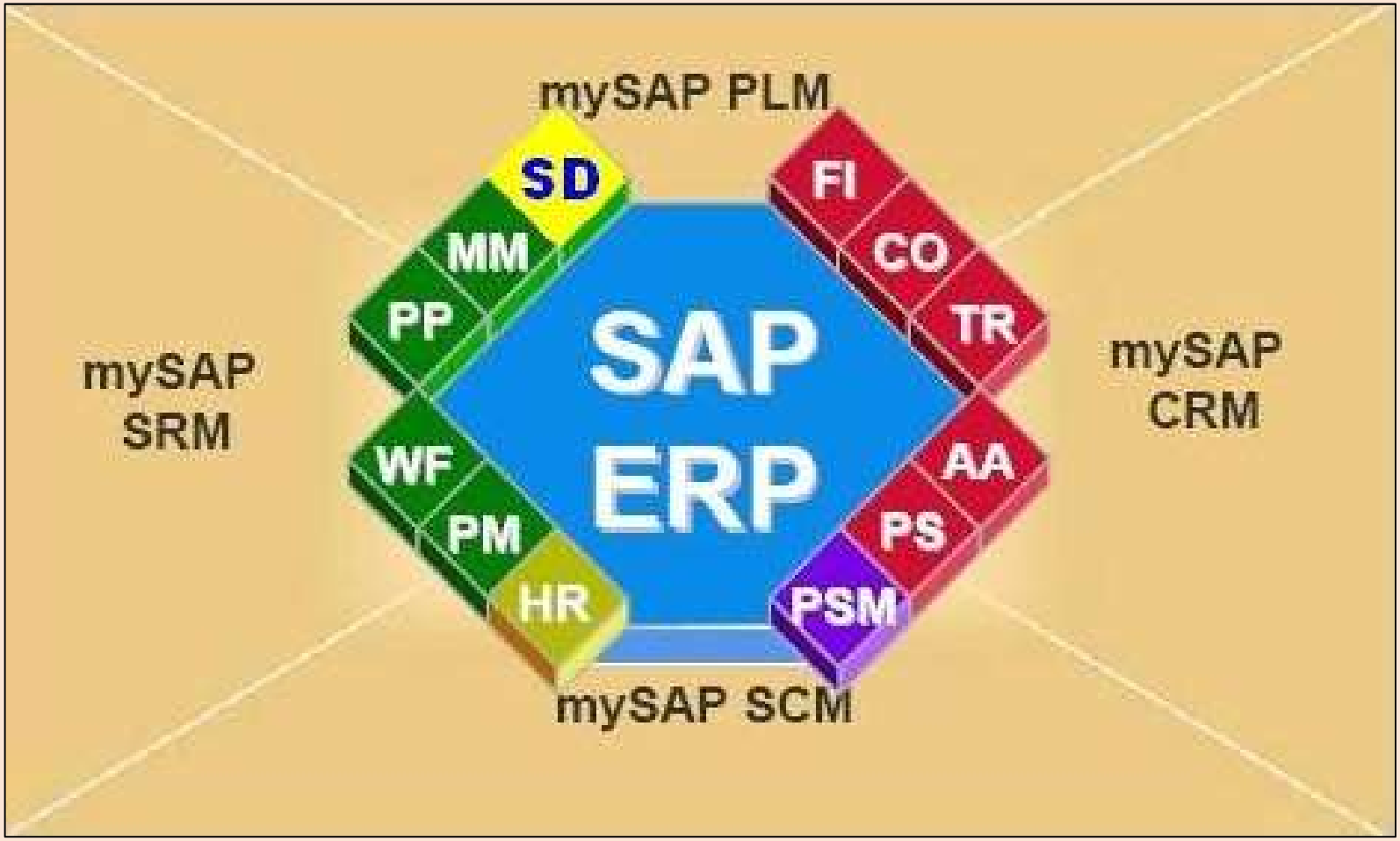



Financial accounting (FI) is concerned with *tracking the financial impacts of processes* with the goal of meeting legal and regulatory reporting requirements (e.g. profit and loss statement, balance sheet)
Management Accounting or Controlling (CO) is concerned with *tracking costs and revenues* to assess the profitability of various profits and market segments.

# SAP Business Processes (Modules)



# SAP Business Processes (Modules)




mySAP Business Suite added additional functionality to the core modules.

# SAP Business Processes (Modules)

# SAP Business Processes (Modules)

**Sales and Distribution** records sales orders and scheduled deliveries. Information about the customer (pricing, address and shipping instructions, billing details, and so on) is maintained and accessed from this module.

**Materials Management** manages the acquisition of raw materials from suppliers (purchasing) and the subsequent handling of raw materials inventory, from storage to work-in-progress goods to shipping of finished goods to the customer.

**Production Planning** maintains production information.
Here production is planned and scheduled, and actual production activities are recorded.

**Quality Management** plans and records quality control activities, such as product inspections and material certifications.

# SAP Business Processes (Modules)

**Plant Maintenance** manages maintenance resources and planning for preventive maintenance of plant machinery in order to minimize equipment breakdowns.

**Asset Management** helps the company manage fixed-asset purchases (plant and machinery) and related depreciation.

**Human Resources** facilitates employee recruiting, hiring, and training. This module also includes payroll and benefits.

**Project System** facilitates the planning for and control over new research and development (R&D), construction, and marketing projects.
This module allows for costs to be collected against a project, and it is frequently used to manage the implementation of the SAP ERP system. PS manages build-to-order items, which are low-volume, highly complex products such as ships and aircrafts.

# SAP Business Processes (Modules)

**Financial Accounting** records transactions in the general ledger accounts. This module generates financial statements for external reporting purposes.

**Controlling** serves internal management purposes, assigning manufacturing costs to products and to cost centers so the profitability of the company's activities can be analyzed. The CO module supports managerial decision making.

**Workflow** is a set of tools that can be used to automate any of the activities in SAP ERP. It can perform task-flow analysis and prompt employees (by email) if they need to act. The Workflow module works well for business processes that are not daily activities but that occur frequently enough to be worth the effort to implement the workflow module—such as preparing customer invoices.

# SAP Business Processes (Modules)

**Customer Relationship Management (CRM)** is a tool for managing and maintaining relationships with customers. It keeps track of business contacts, clients, contract wins and sales leads.

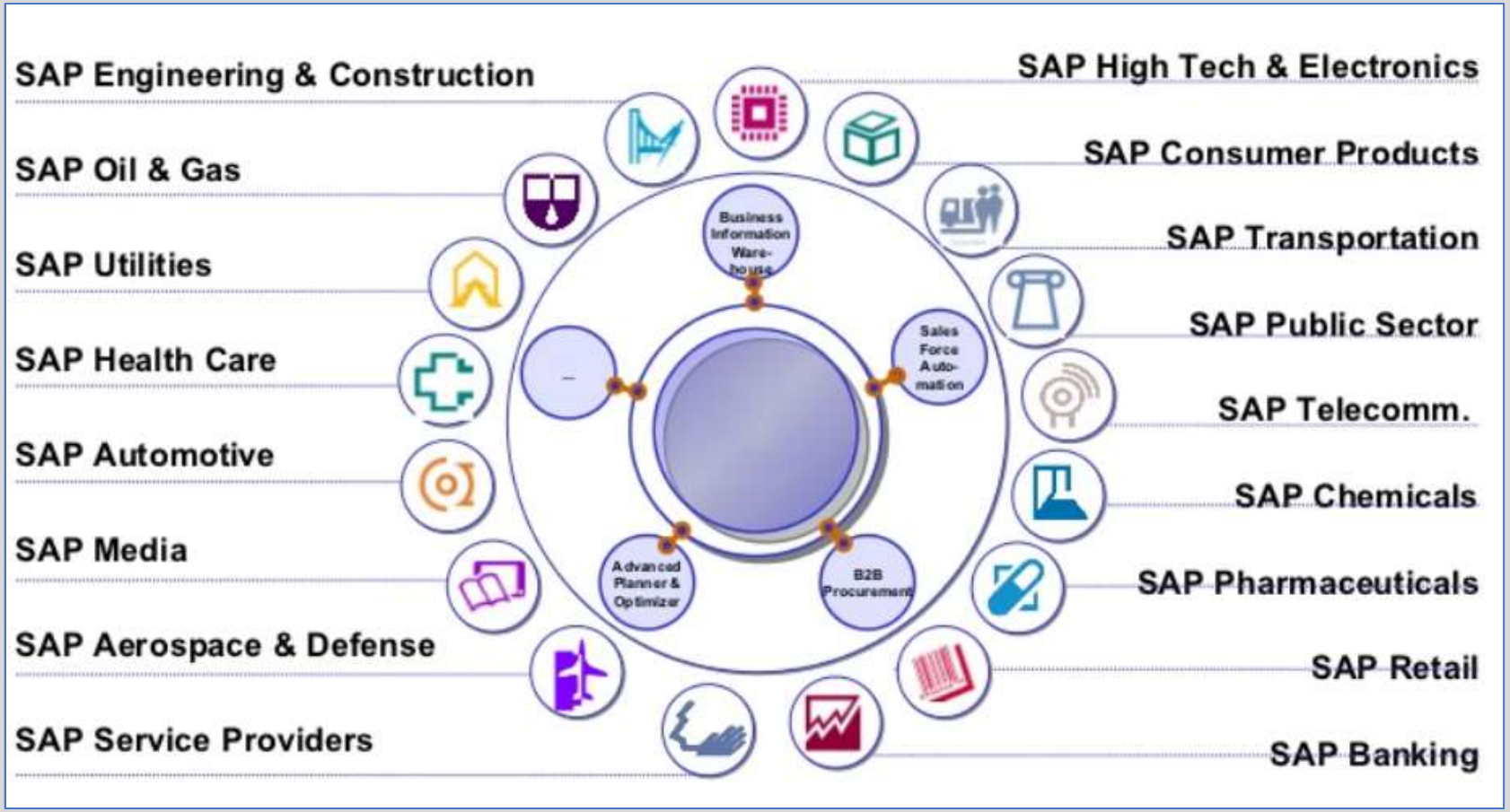
**Supplier Relationship Management (SRM)** is a tool for planning for, and managing, all interactions with third party organizations that supply goods and/or services to an organization in order to maximize the value of those interactions.

**Supply Chain Management (SCM)** is a module dealing with controlling the flow of goods through the supply chain. It starts from the acquisition of raw materials to the delivery of finished products to the end user.

**Product Life Cycle Management (PLM)** is a system which helps companies to plan, design, build and administer production with greater visibility and more control. It allows efficiently tracking, controlling and managing all information related to products over the complete lifecycle.

# SAP Business Processes (Modules)

**Industry Solutions** SAP has many customized modules which address a wide range of industries with specific business processes.



# SME SAP Solutions

## mySAP All-in-One

Midsize companies and subsidiaries
Complete functionality
Easy to get started
Pre-configured, single database
Adaptable
Industry templates & configurable
Partner network with
Proven solutions and expertise
Proven ROI and over 2000 customers

## SAP Business One

- Small enterprises and subsidiaries
- "Off-the-shelf" product
- Easy to customize
- Wide range of innovative functionality
- Immediate impact
- Easy to use / running in a few days
- Low cost of entry and ownership
- Low maintenance
- Over 800 customers

# SAP Business By Design

A web-based business management software service which moves away from its traditional software. (“Software as a Service”)

Aimed at businesses with 100 to 500 employees, users can draw together data from different parts of their business.

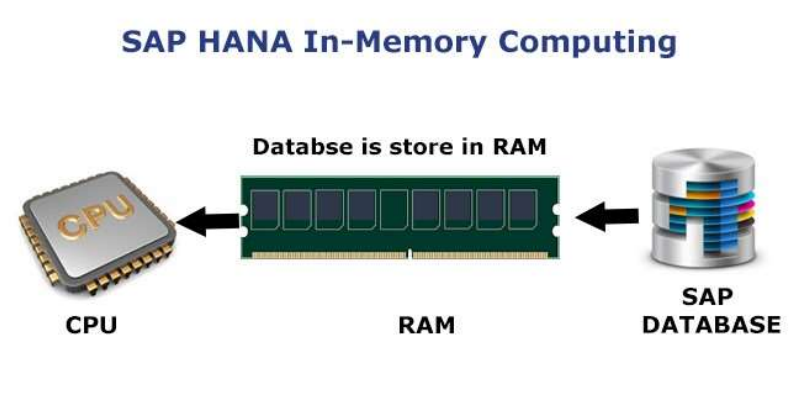
Includes eight areas of data analytics and management : finances, human resources, supply chain, goals, customer relationships, projects, supplier relationships, and compliance.

The service will cost $149 per month per user. There is a minimum of 25 licensed users, and the cost includes software, infrastructure, services and support

# SAP S4/HANA

## Definition - What does SAP HANA mean?

SAP HANA (High-performance ANalytic Appliance) is an application that uses *in-memory* database technology that allows the processing of massive amounts of *real-time* data in a short time. The in-memory computing engine allows HANA to process data stored in RAM as opposed to reading it from a disk. This allows the application to provide instantaneous results from customer transactions and data analyses.



# SAP S4/HANA

## Challenges in traditional DBs

- Designed to perform well on computers with limited RAM
- Data Storage in HDDs
- Complex Data Model
- Redundancy of Data/ Need of Aggregations
- High Data Footprint
- Row based Data Storage
- Slower Transaction Processing
- Slower Reporting

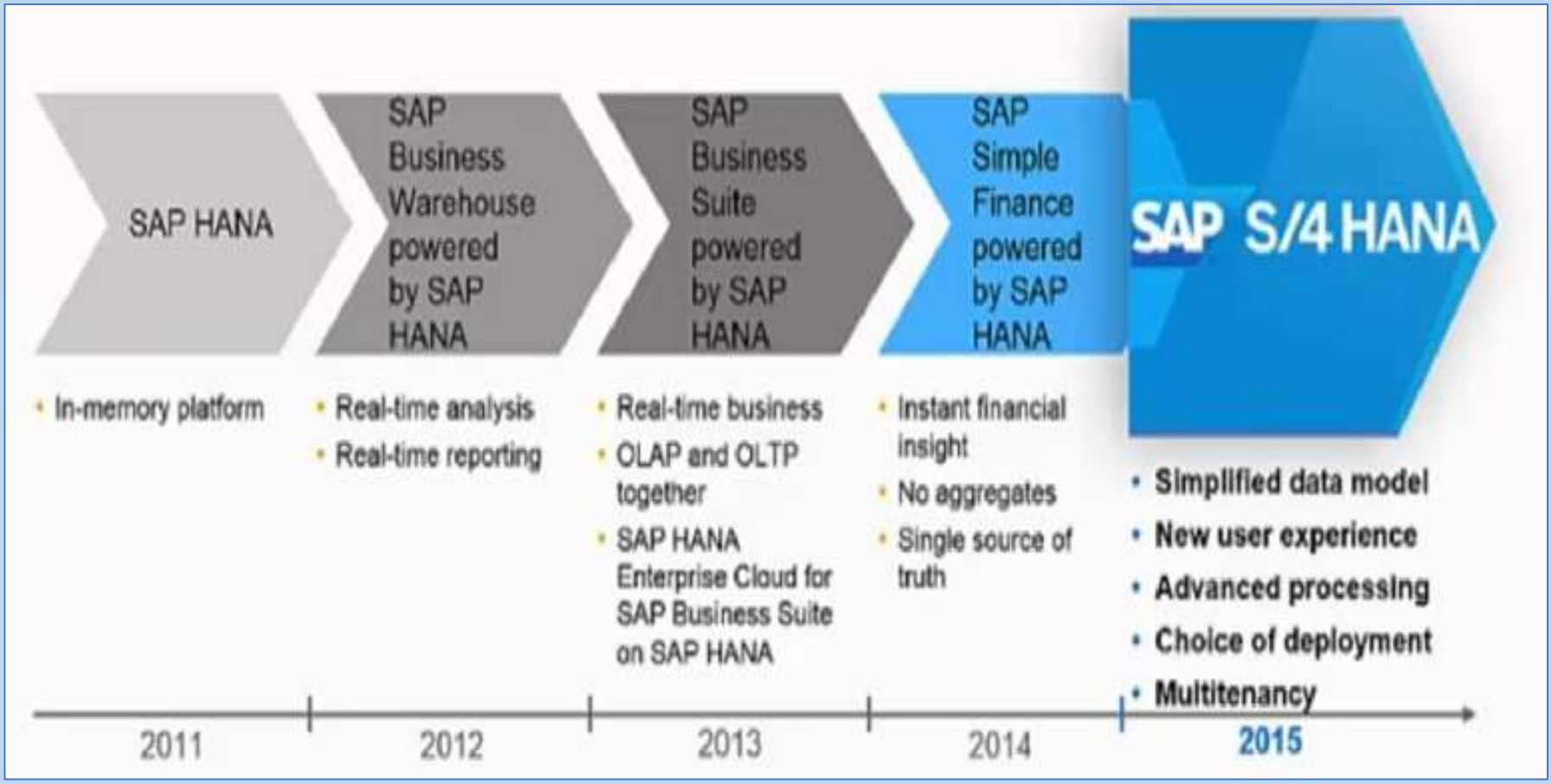
# SAP S4/HANA

## S4/HANA

- Designed for In memory computing
- Data is stored in RAM
- Simplified Data Model
- Removed Redundancy (Removal of Aggregates & Indices)
- Less Data Footprint
- Row + Column based storage
- Up to 1800 times faster processing

# SAP S4/HANA

## Journey to S4 HANA



# SAP S4/HANA

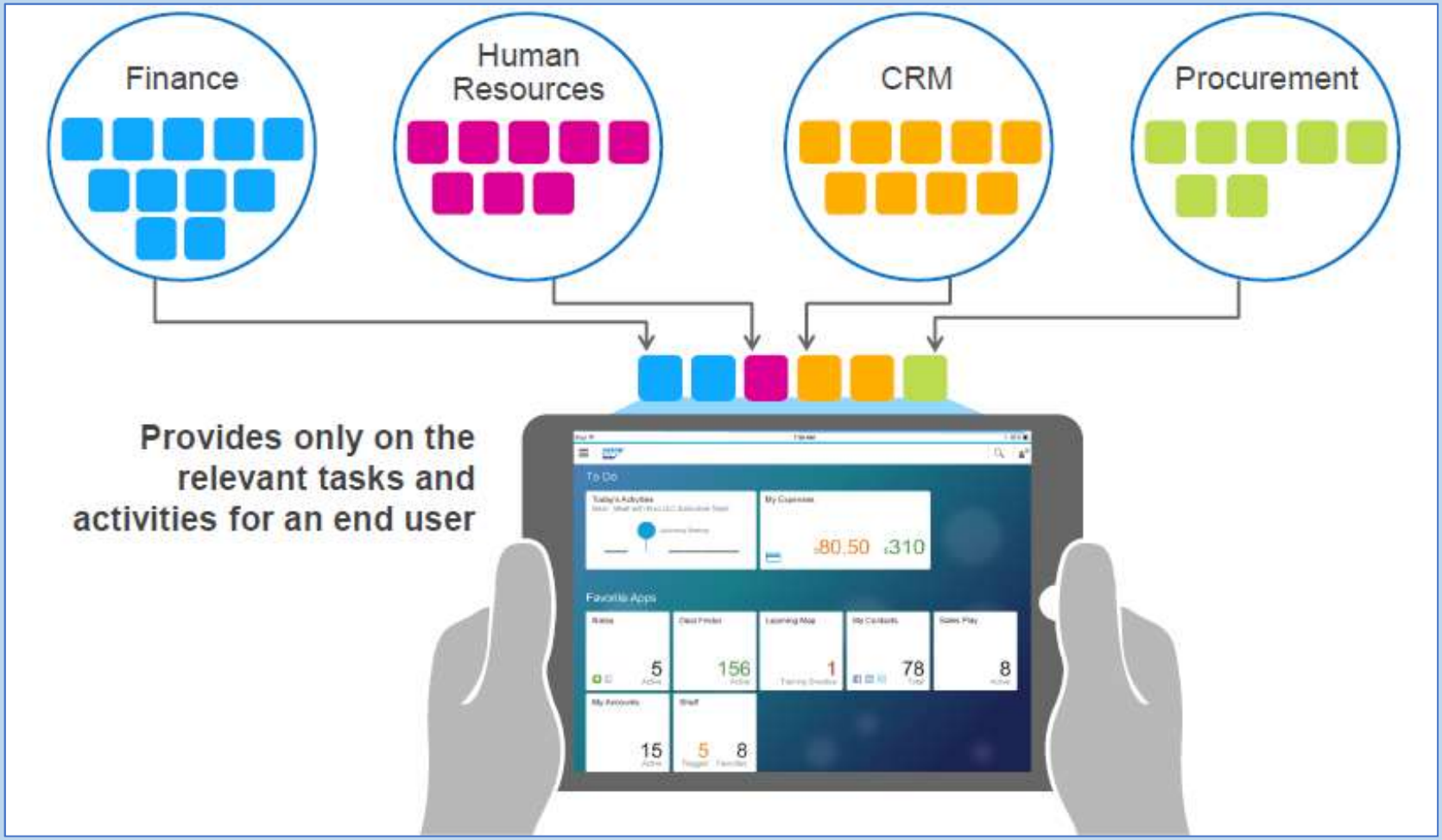
## What is SAP Fiori UX?

SAP Fiori UX is the new face of SAP to business users for ALL lines of business across devices and deployment options

SAP Fiori Launchpad : Demonstration

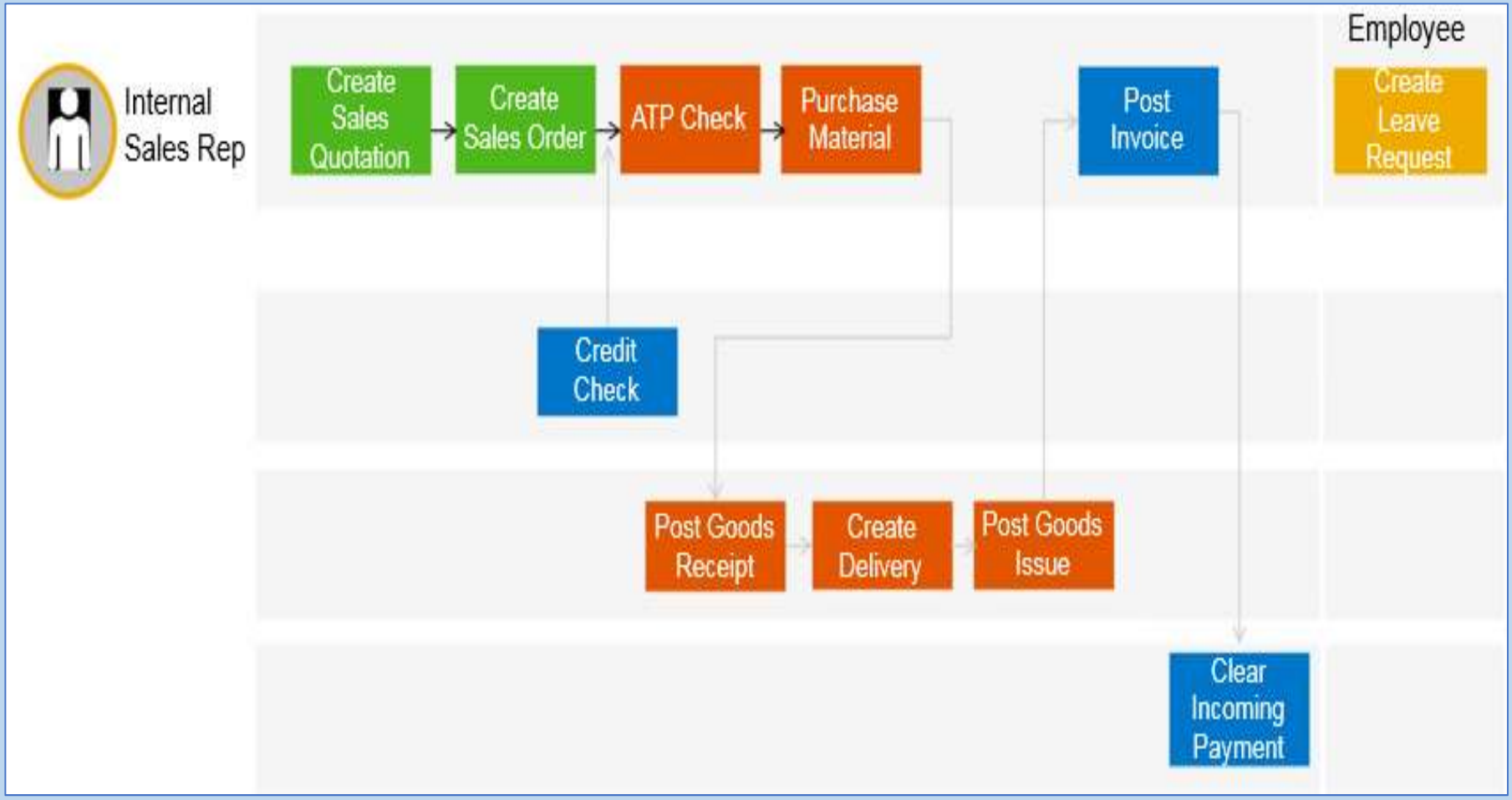
# SAP S4/HANA

## SAP Fiori UX – A coherent experience across the Enterprise



# SAP S4/HANA

## User activity in end-to-end business processes



# SAP S4/HANA

## SAP Fiori principles

# SAP S4/HANA

## Fiori App types

### Transactional

**Task-Based Access**

Access to tasks like change, create, or entire processes with guided navigation

### Analytical

**Insight to Action**

Visual overview of a complex topic for monitoring or tracking purposes

### Fact Sheet

**Search and Explore**

View of essential information about an object and contextual navigation between related objects

# SAP S4/HANA

## SAP Fiori LaunchPad for Web Based Access

SAP Fiori Launchpad is a **role based, personalized**, **real-time, contextual** aggregation point for business applications and analytics.

It runs on **multiple devices**, using **responsive web design**, and is deployable on **multiple platforms**.

It's designed according to the **simple** and **intuitive** SAP Fiori user experience, while **supporting established UI technologies** like **Web Dynpro or WebGUI.**

# SAP S4/HANA

SAP HANA is designed to process structured data from *relational* databases. It is capable of using three styles of data replication depending on the source of the data – the relocated structured data is stored directly in memory. Because of this, data can be accessed quickly in real time by the applications that use HANA.

SAP HANA supports various use cases for *real-time analytics*. Some examples include:

- Monitoring and optimization of telecommunications network
- Supply chain and retail optimization
- Fraud detection and security
- Forecasting and profitability reporting
- Energy use optimization and monitoring

# SAP S/4 HANA Case Study :

**MacLaren Formula One using S/4 HANA**

MacLaren use the in-memory processing speed of S/4 HANA to process the millions of data points collected during a race.

The cars are fitted with hundreds of sensors which collect the data and allow it to be analysed in real time.

https://www.youtube.com/watch?v=_F8AHo5BTcA

# Sample Exam Questions


A. Define the term “Functional Area’ and give two examples.

B. Name and describe two of the key business processes in an organisation.

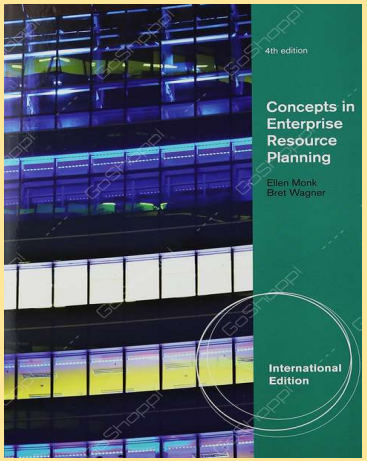
C. List, in the correct order, the tasks involved in the Procurement Process.

D. Explain the difference between Financial Accounting and Management Accounting.

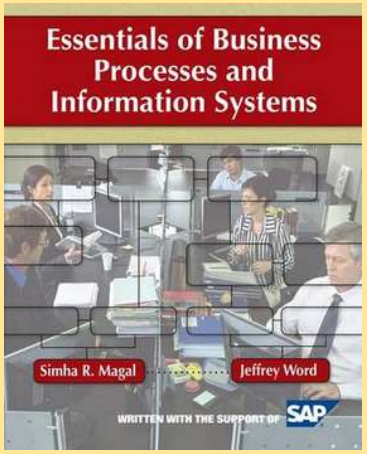
E. Explain the concept of an “In-memory” database and give one example.

F. List two features of SAP Fiori.

# References




Monk & Wagner Chap 1

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