

FIT5101 Enterprise Systems



Lecture 07

- ❖ Financial Accounting
- ❖ Management Accounting
- ❖ Sarbanes-Oxley

Lecturer: Stephen Paull
stephen.paull@monash.edu

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	
3	15/3	ERP Structures	SAP Introduction	Ass 1 Rel
4	22/3	Materials Management & Procurement	Materials Management	S A P W O R K S H O P S
5	29/3	Sales & Distribution	Procurement	
	5/4	BREAK		
6	12/4	Production Planning	Sales & Distribution	
7	19/4	Financials	Production Planning	
8	26/4	Process Integration & Modelling	Financials	
9	3/5	ERP Implementation	Process Modelling	Ass 2 Due 7/5
10	10/5	Current Technologies	Work on Assignment	
11	17/5	Future Trends	Sample eExam / Review	
12	24/5	Review	??	Ass 3 Due 28/5

Accounting Activities

Areas of accounting:

- Financial accounting (FI)
- Managerial accounting (CO)

Video: https://www.youtube.com/watch?v=o_ttx-9JbLw

Financial accounting (External)

- Documenting all transactions of a company that have an impact on the financial state of the firm.
- Using documented transactions to create reports for external parties and agencies.
- Reports, or financial statements, must follow prescribed rules and guidelines of various agencies.

Managerial accounting (Internal)

- Determining costs and profitability of company's activities.

Financial Accounting

Common financial activities and statements

- Ensure accounts accurate and up-to-date
- Making “Closing” entries and “Adjusting” entries
- 2 Common financial reports: Balance sheets and Income statements

Balance sheet

- Statement that shows account balances
- $\text{Assets} = \text{Liabilities} + \text{Equity}$
 - Assets: Current assets: Cash, Accounts Receivable, Inventory,
 - Long-term assets such as Building, Plant & Equipment, Land
 - Liabilities: Amounts owed to vendors, banks, and other creditors
 - Equity: Amounts owners have invested in company

Income statement

- Profit and loss (P&L) statement
- Shows company’s sales, cost of sales, and profit or loss for a period of time (typically a quarter or year)

A Sample Balance Sheet

Fitter Snacker Balance Sheet December 31, 2011 (in thousands of dollars)		
Assets		
Cash		\$5,003
Accounts receivable		\$4,715
Inventories		\$9,025
Plant and equipment		\$6,231
Land		\$1,142
Total assets		\$26,116
Liabilities		
Accounts payable	\$6,400	
Notes payable	\$10,000	
Total liabilities		\$16,400
Stockholders' Equity		
Contributed capital	\$2,000	
Retained earnings	\$7,716	
Total stockholders' equity		\$9,716
Total liabilities and stockholders' equity		\$26,116

Current assets – amounts owned
Accounts Receivable: amounts owed by customer (debtors)

Long -term assets – amounts owned (not easily convertible to cash)

Accounts Payable: amounts owed to vendors
Notes Payable: amounts owed to banks

Assets = Liabilities + Equity

A Sample Income Statement

Fitter Snacker Income Statement For the year ended December 31, 2011 (in thousands of dollars)		
Revenue		
Sales revenue	\$36,002	
Total revenue		\$36,002
Expenses		
Cost of goods sold expense	\$25,691	
Selling, general, and administrative expense	\$4,251	
Research and development expense	\$962	
Interest expense	\$521	
Total expenses		\$31,425
Pretax income		\$4,577
Income tax expense		\$1,144
Net income		\$3,433

Sales revenue – Amount sold at selling price

COGS – Amount sold at cost price

Net Income – part of this may be used to pay dividends and the rest added to Retained Earnings in the Balance Sheet.

Financial Accounting: General Ledger

- Main financial record of a business.
- Utilises double entry bookkeeping.
- Account balances on both the debit and the credit are extracted using the Trial Balance.
 - The double entry style of bookkeeping ensures that the GL should always balance
 - TB provides the assurance that all debits equal all credits
- Supports the items identified in the major financial statements
 - Profit and Loss
 - Income Statement
 - Cash Flow Statement
 - Balance Sheet

Definition of ledger: a book or other collection of financial accounts.

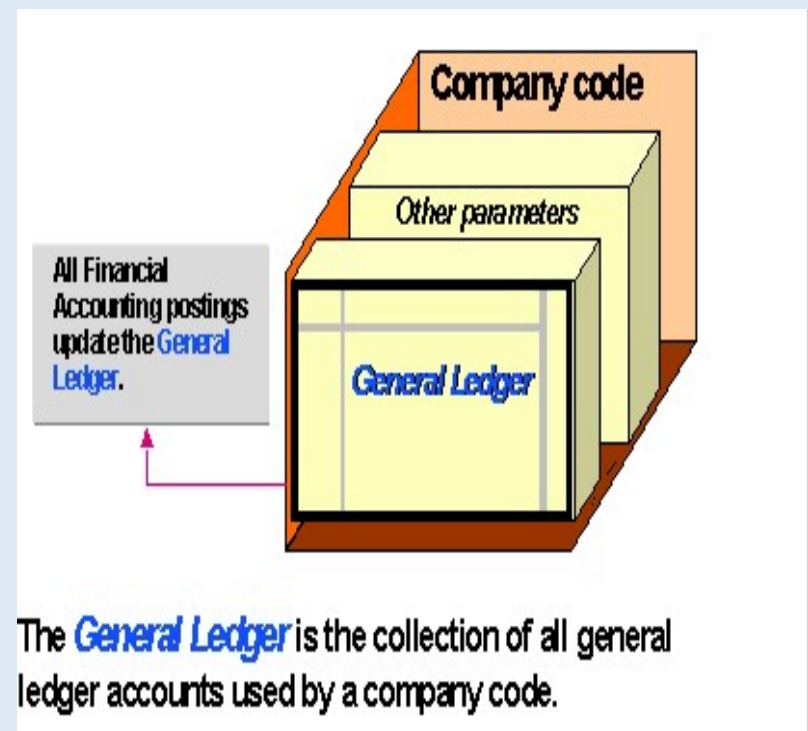
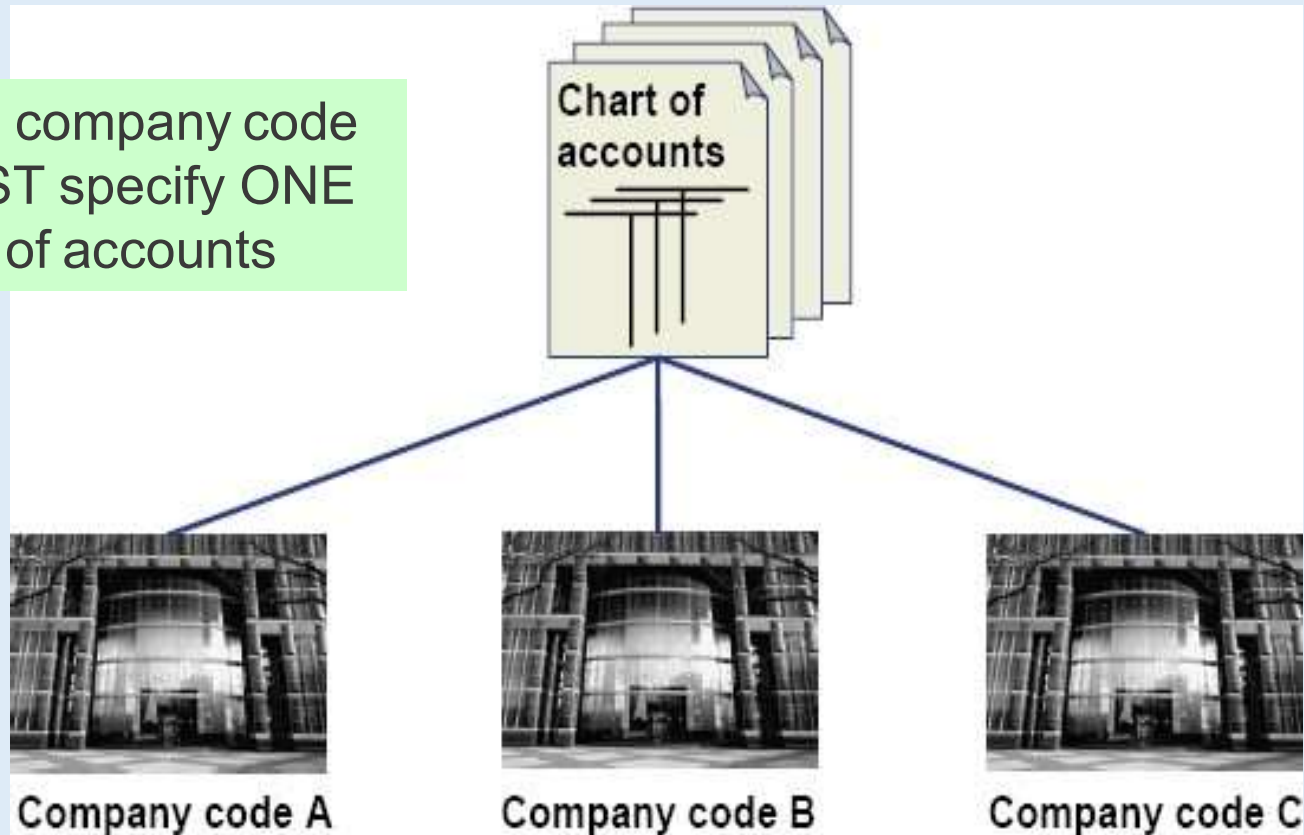


Chart of accounts

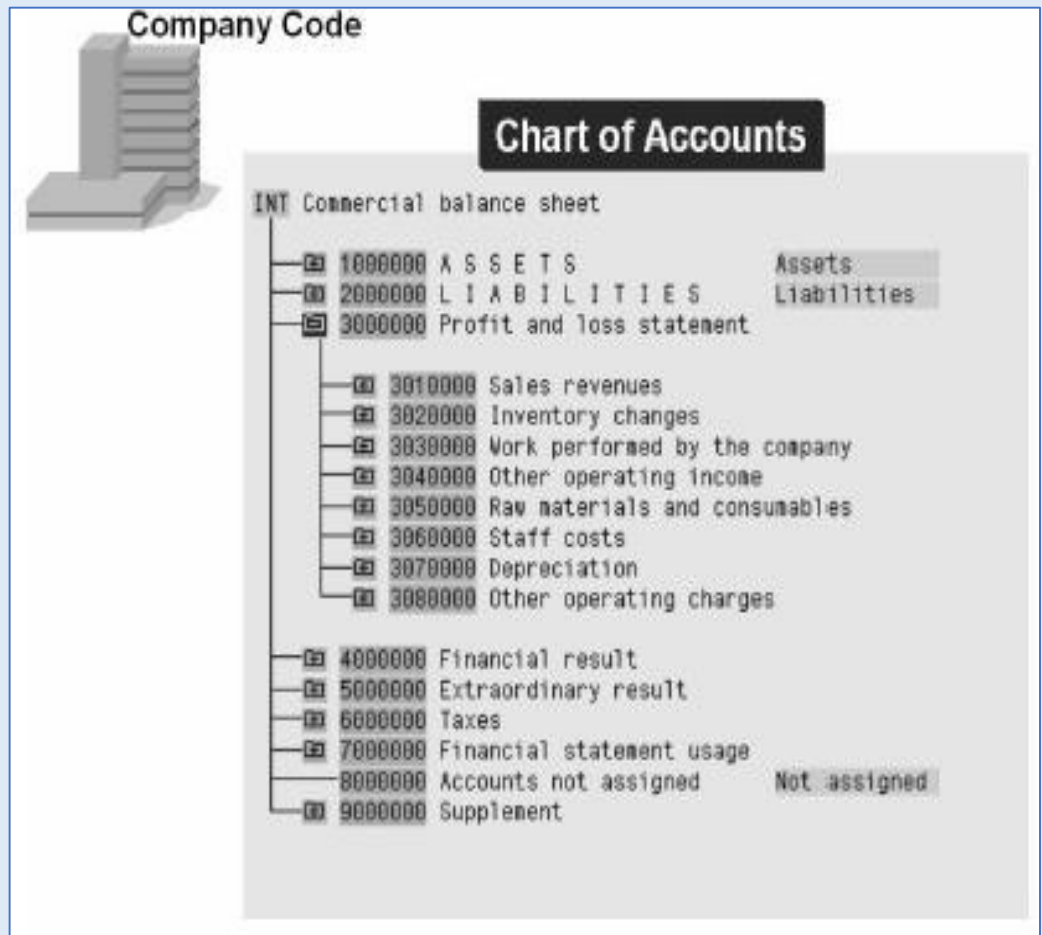
For each company code
you **MUST** specify ONE
chart of accounts



ONE CHART OF ACCOUNTS CAN BE
USED BY MULTIPLE COMPANY CODES

Chart of Accounts

- The Chart of accounts contains the definitions of all G/L accounts – master data
- Definitions consist of account number, account name and the type of G/L account
- You can define an unlimited number of charts of accounts



SAP G/L Account Master

G/L Account Master Data

101015
Bank 001

GENERAL
COMPANY CODE DATA
CONTROLLING DATA
WHERE USED

Basic Information

Control

Chart of Accounts: GL00 (GBI Global)

Account Type: Balance Sheet Account

*Account Group:

P&L Statement Account Type:

Functional Area:

Description in Maintenance Lang. (EN)

*Short Text:

G/L Account Long Text:

Administration

Created on: 14.04.2020

Created by: TEACH-001

Group Chart of Accounts:

Others

Blocked for Creation: ☐

Blocked for Posting: ☒

Blocked for Planning: ☐

Marked for Deletion: ☐

Translation

<input type="checkbox"/>	Language Key	Short Text	G/L Account Long Text
<input type="checkbox"/>	EN	Bank 001	Bank Account 001

Accounts Receivable

- Accounts receivable
 - It contains monetary amounts that are owed by all your customers to you for services rendered.
 - shows monetary amounts that have been received by you from your customers.
- Known as a reconciliation account
- Subsidiary ledger accounts
 - individual Customers accounts are kept separately from reconciliation account
 - Automatically linked via transactions with accounts receivable



Account Receivable Process

- A sales order is received from a customer
- The customer is sent the goods (picking slip) and invoice
 - AR
 - Revenue accounts are updated
- The invoice sets out details of the payment requirement
- Once goods are deemed of good quality by the customer a payment should be made

NB: These transactions prompt changes in the General Ledger accounts they affect

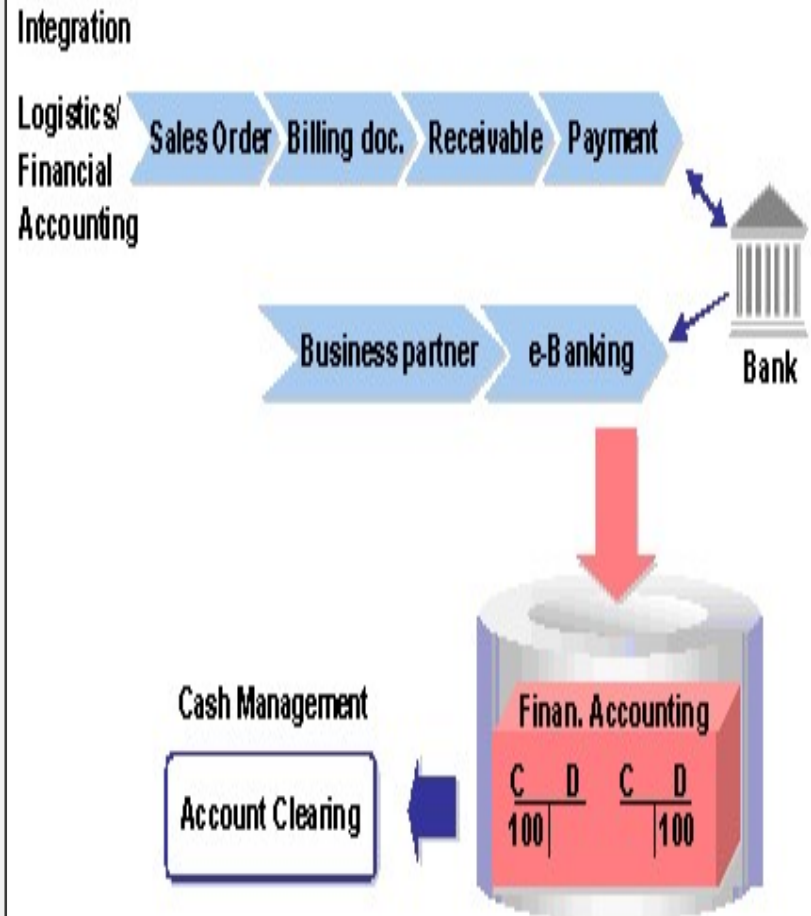
Cash Management

Cash Management can automatically process the incoming payment from the customer.

The bank's account statement is imported into the SAP system via the electronic banking function in Cash Management.

The item can then be posted automatically to the bank and customer account.

Any differences must be cleared manually (clearing of open items)



Accounts Payable

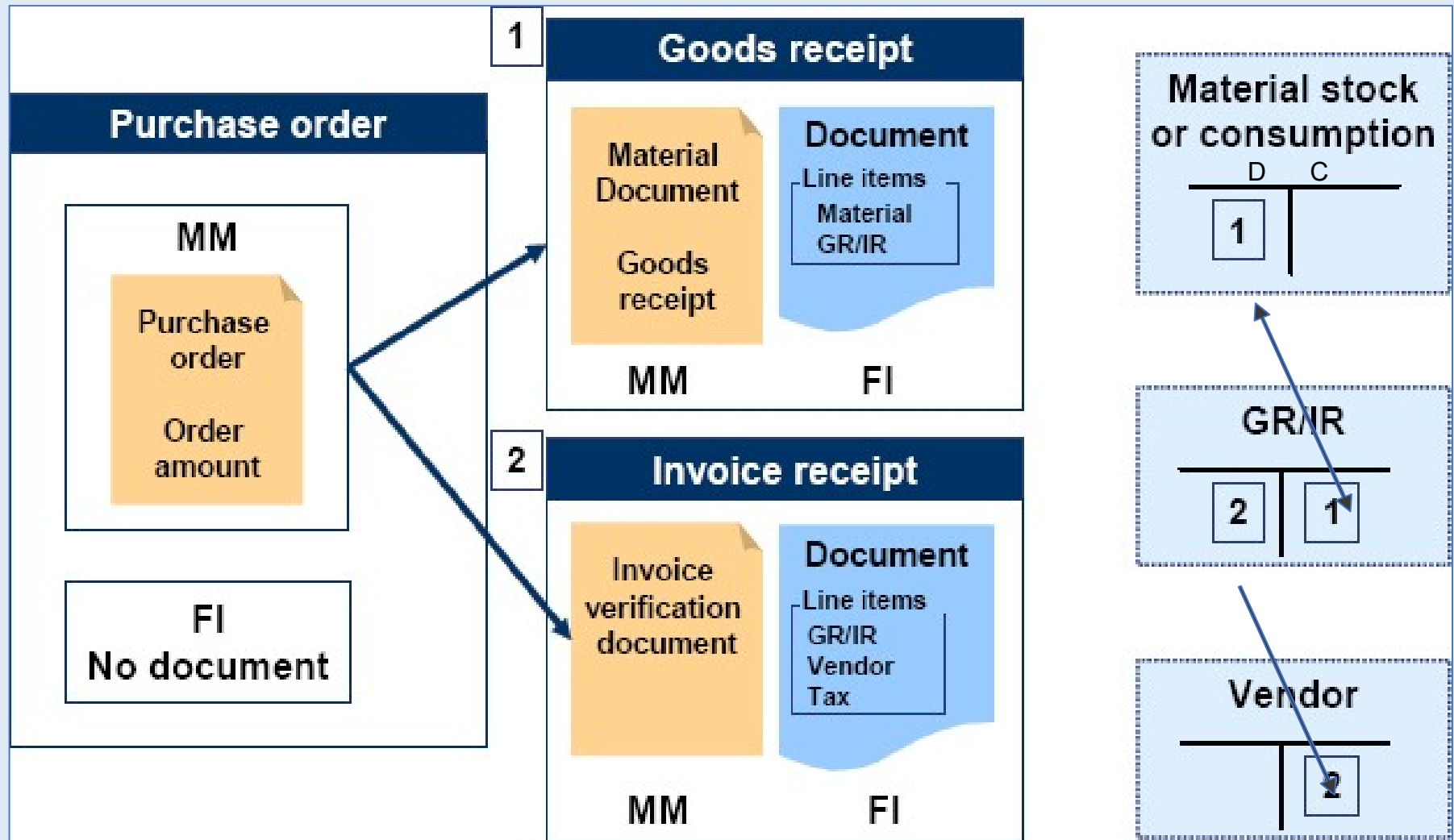
What is Accounts Payable (AP)?

Accounts payable (AP) is an account within the [general ledger](#) that represents a company's obligation to pay off a short-term debt to its creditors or suppliers.

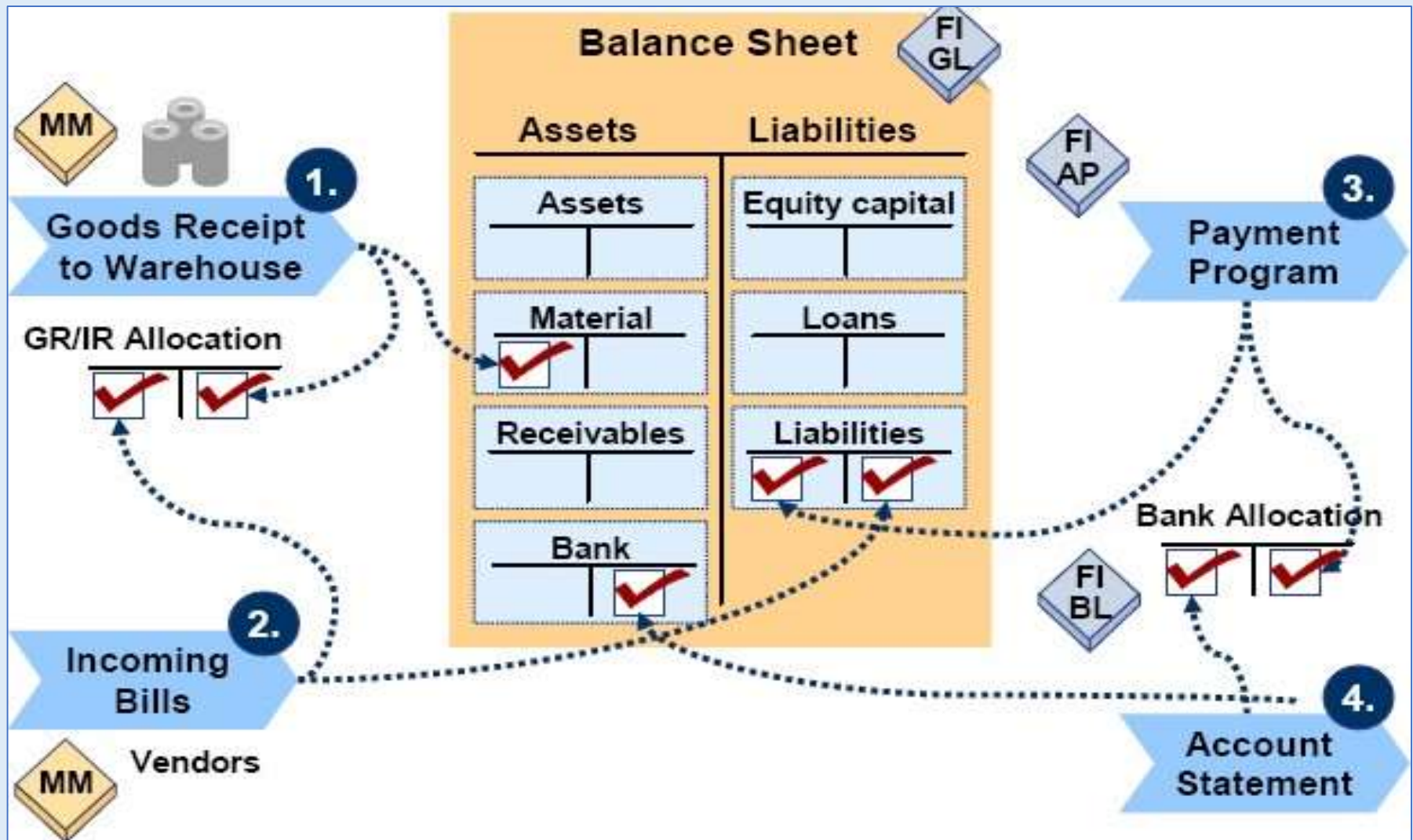
- Accounts payable are amounts due to vendors or suppliers for goods or services received that have not yet been paid for.
- The sum of all outstanding amounts owed to vendors is shown as the accounts payable balance on the company's balance sheet.
- The increase or decrease in total AP from the prior period appears on the cash flow statement.
- Management may choose to pay its outstanding bills as close to their due dates as possible in order to improve cash flow.



Financial Integration with Purchasing



Procurement Process from Accounting view



Asset Management

Asset management is the process of developing, operating, maintaining and selling [assets](#) in a cost-effective manner.

Every company needs to keep track of its assets. That way, the relevant [stakeholders](#) will know just what assets are available and what can be used to provide optimal returns.

The assets owned by any business fall into two main categories: fixed and [current assets](#). Fixed or non-current assets refer to assets acquired for long-term use, while current assets are those that can be converted into cash within a short amount of time.



Managerial Accounting

Determine costs and profitability of company's activities

- To develop long-term plans and strategy

Provide managers with detailed information

- To make informed decisions
- To create budgets
- To determine profitability

Information that managers use to control day-to-day activities

- To develop operational plans
- To handle different managerial issues

Using ERP for Accounting Information



Problems associated with unintegrated systems

- Data sharing usually did not occur in real time
- Accounting data were often out of date
- Accounting personnel had to do significant research
- In traditional accounting, company's accounts are kept in a record called a **general ledger**



Integrated ERP systems

- ERP system, with its centralized database, avoids these problems
- Simplifies process of closing books and preparing financial statements
- In the SAP ERP system, different modules (such as SD, MM, PP, HR, AM) cause transaction data to be entered into the general ledger simultaneously as and when the business transactions occur

Accounting Problems

Out of date or inaccurate accounting data that results from unintegrated information can cause problems when a company is making operational decisions e.g.

- Managing Credit
- Determining Product Profitability
- Inaccurate Inventory Costing
- Inaccurate Product Costing
- Difficulty in Data Consolidation



Operational Decision-Making Problem: Credit Management

Credit management requires a good balance between:

- Granting sufficient credit to support sales and
- Making sure that the company does not lose too much money

What it involves?

- Setting a limit on how much a customer can owe at any one time
- Monitoring that limit as orders come in and payments are received

Require real-time information

- Sales representative needs to be able to review an up-to-date accounts receivable balance when an order comes in

How an integrated ERP Systems helps

- Accounts receivable is immediately updated

An Example: Credit Management Problem

Credit Management Procedures

- Sales clerk refers to a weekly printout of a customer's current balance and credit limit to see if credit should be granted
- Sales data are transferred to Accounting by disk three times a week
- Accounting clerk can use sales input to prepare a customer invoice
- Accounting must make any adjustments for partial shipments before preparing the invoice
- Accounting clerks process customer payments

Problems with unintegrated information systems

- Results in out-of-date or inaccurate accounting data that can cause problems when a company is making operational decisions

Credit Management in SAP ERP – An example

Customer Credit Management Change: Overview

Administrative data

Customer: 201 Health Express
Credit control area: FS FS Credit Control Area
Currency: USD

Status

Credit limit	1,000.00
Credit exposure	590.00
Cred.lim.used	59.00 %
Horizon	03/01/2012

Dunning data

Dunning Area	
Last dunned	
Leg.dunn.proc.	
Dunning level	0

Payment history/arrears

With cash disc.	0.00	0
W/o cash disc.	0.00	0

Payment data

DSO	0
Clearing amount	0.00
Author.deduct.	0.00
Unauthor.deduc.	0.00

Control

Risk category	Z00
Last int.review	
<input type="checkbox"/> Blocked	
Cred.rep.grp	
Payment index	
Rating	
Last ext.review	
Monitoring	

Annotations:

- SAP ERP would allow company to set a credit limit for each customer (points to Credit limit field)
- Credit limit (points to Credit limit field)
- Amount of credit used (points to Cred.lim.used field)
- Company can configure any number of credit-check options in SAP ERP system (points to Control section)
- Advantages of using SAP ERP to manage credit:
 - Process is automated
 - Data are available in real time

Product Profitability Analysis

- Business managers use accounting data to perform profitability analyses of a company and its products
- When data are inaccurate or incomplete, the analyses are flawed
- Main reasons for inaccurate or incomplete data
 - Inconsistent recordkeeping
 - Inaccurate inventory costing systems
 - Problems consolidating data from subsidiaries



Inaccurate Inventory Costing Systems

Calculating inventory costs

- One of the most important and challenging accounting tasks in any manufacturing company

ERP and inventory cost accounting

- Many companies with unintegrated accounting systems analyze their cost variances infrequently
- Often, they do not know how much it actually costs to produce a unit of a product
- With an ERP system, employees throughout the company would have recorded costs in a company-wide database as they occurred
- ERP system configurations allow analysts to track costs using many bases

ERP and Activity-based costing

- Accountants identify activities associated with overhead cost generation and then keep records on costs and on activities
- ABC requires more bookkeeping than traditional costing methods

Inventory Cost Accounting

Manufactured item's cost has three elements:

- Cost of raw materials
- Cost of labor employed directly in production of item
- Overhead: all other costs

Direct costs: materials and labor

- Can be estimated fairly accurately

Indirect costs: overhead items

- Difficult to associate with specific product(s)

Standard costs for a product are established by:

- Studying historical direct and indirect cost patterns
- Taking into account the effects of current manufacturing changes
- **Cost variances:** differences between actual costs and standard costs

Product Costing Example

- Suppose Fitter Snacker wishes to update standard costs for NRG-A bars
- Product cost analysis for NRG-A bar

NRG-A Bar Product Cost Analysis (7 cases)				
Ingredient	Unit of measure	NRG-A	Cost per unit of measure	Direct material cost
Oats	lb	300	\$0.20	\$60.00
Wheat germ	lb	50	\$0.30	\$15.00
Cinnamon	lb	5	\$3.00	\$15.00
Nutmeg	lb	2	\$4.50	\$9.00
Cloves	lb	1	\$5.50	\$5.50
Honey	gal	10	\$6.40	\$64.00
Canola	gal	7	\$1.70	\$11.90
Vit./min. powder	lb	5	\$18.45	\$92.25
Carob chips	lb	50	\$2.10	\$105.00
Raisins	lb	50	\$3.20	\$160.00
Total direct material cost				\$537.65
Production overhead cost (100% of Total direct material)				\$537.65
Direct labor				54.50
Cost of goods manufactured (COGM)				1,129.80
Sales and administrative costs (30% of COGM)				338.94
Cost of goods sold (COGS)				1,468.74
COGM per case				\$161.40
COGS per case				\$209.82

Product cost analysis result in SAP ERP

Materials used in product cost calculation

Product cost results (COGM and COGS)

Cost Component View	Total Costs	Fixed Costs	Variable	Currency
Cost of Goods Manufactur...	76.43	0.00	76.43	USD
Cost of Goods Sold	107.14	0.00	107.14	USD
Sales and Administration C..	30.71	0.00	30.71	USD
Inventory (Commercial)	0.00	0.00	0.00	USD
Inventory (Tax-Based)	0.00	0.00	0.00	USD

Item	Resource	Cost Elme	Σ	Total Value	Σ	Fixed Value	COCr	Quantity	Un
1	M PT S200	720100		76.43		0.00	USD	71.429	LB
				76.43	0.00	USD			

Consolidating Data from Subsidiaries

- Account balances for each entity must be compiled and forwarded to the home office.
- Consolidated statement for the company as a whole must be created.
- Currency translation

Problems when **currency translation** is needed for a subsidiary's accounts.

- Intercompany transactions

Transactions that occur between companies and their subsidiaries



Document Flow for Customer Service

- With an ERP system, all transactions in all areas of a company get posted in a centralized database
- Each transaction posted in SAP ERP gets its own unique document number

Allows quick access to the data

- In SAP ERP, document numbers for related transactions are associated in the database

Provides an electronic audit trail



Document flow of a transaction in SAP ERP

Document flow

Document Flow

Status overview Display document Service documents Additional links

Business partner 0000000051 West Hills Athletic Club

Document	On	Status
Standard Order 0000000120	01/08/2012	Completed
Outbound Delivery 0080000060	01/08/2012	Completed
• Picking request 20120108	01/08/2012	Completed
• GD goods issue:delvy 4900000171	01/08/2012	complete
• Invoice 0090000048	01/08/2012	FI doc. generated
• Accounting document 0090000000	01/08/2012	Cleared

The Sarbanes-Oxley Act

Implications of the Sarbanes-Oxley Act for ERP Systems

- More stringent requirements for Financial Accounting.
- To meet the internal control report requirement, a company must:
 - Document the controls that are in place
 - Verify that the controls are not subject to error or manipulation.
- Companies with ERP systems in place will have an easier time complying with the Sarbanes-Oxley Act than will companies without ERP.



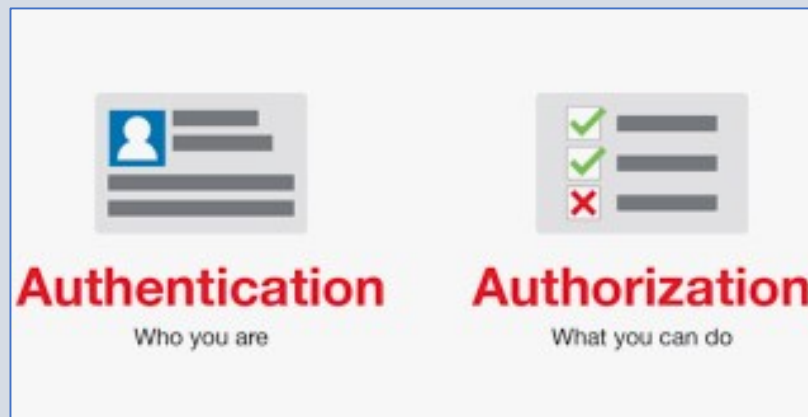
Archiving

- SAP ERP software offers very few ways to delete items.
- Data are removed from SAP ERP system only after they have been recorded to media (tape backup, DVD-R) for permanent storage.
- **Archive:** permanent storage.
- SAP ERP systems keep track of when data is created or changed.
 - Change Record



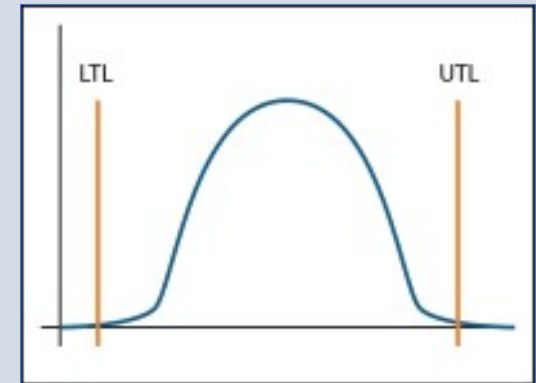
User Authorizations

- SAP ERP has sophisticated user administration tools that allow different levels of authorization management
 - Ensure that employees can perform only the transactions required for their jobs
- Profile Generator
 - Provides a simple method for selecting functions that a user should be allowed to perform



Tolerance Groups

- Setting limits on the size of transaction an employee can process.
 - In an SAP ERP system, this is done using tolerance groups.
- Tolerance groups
 - Preset limits on an employee's ability to post transactions.
 - Set limits on the dollar value for a single item in a document as well as the total value of document.



Default Tolerance Group

Table View Edit Goto Selection Utilities System Help

Change View "FI Tolerance Groups For Users": Details

New Entries

Group

Company code FS Fitter Snacker Kalamazoo

Currency USD

Upper limits for posting procedures

Amount per document	1,000.00
Amount per open item account item	1,000.00
Cash discount per line item	2.000 %

Permitted payment differences

	Amount	Percent	Cash discont adj.to
Revenue	10.00	1.0 %	10.00
Expense	10.00	1.0 %	10.00

No group specified, so this is the default tolerance

Default setting allows posting of documents for \$1,000 or less

Payments can differ by \$10 or 1%

Financial Transparency

- ERP systems provide the ability to drill down from a report to the source documents (transactions) that created it
 - Makes it easier for auditors to confirm the integrity of reports.
- With a properly configured and managed ERP system, there are direct links between the company's financial statements and individual transactions that make up the statements.
 - Fraud and abuse can be detected more easily



Trends in Financial Reporting (XBRL)

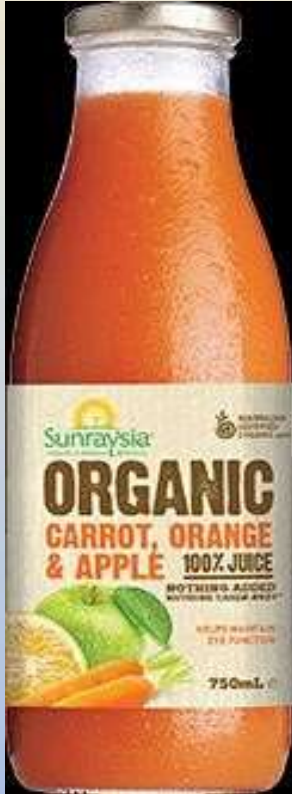
Extensible Business Reporting Language (XBRL)

- Standards based language
- Extensible Markup Language (XML) coded data directly from web page into database
- Reports processed faster and validated easier
- ERP systems accept data in XML and XBRL



* Will be covered in more detail later

Case Study : Sunraysia



- Who is Sunraysia
- A family-run business that is 100% Australian owned and operated
- **Entrepreneurial founder, Dan Presser, started The Sunraysia Natural Beverage Company over 25 years ago to bring to life his passion for health and family.**
- Dan set about creating a range of premium juices that not only taste great but offer natural benefits you can feel.
- Sunraysia has a passion for healthy juices which means they have a history of being first to market with unique flavours, and while their range has evolved over the years, their philosophy remains the same.
- They are famous for Prune and Cranberry, they are now in good company with a wide range of delicious flavours.

<https://www.sapphiresystems.com/en-us/company/resources/case-studies/sunraysia>

Case Study Sunraysia: Financial Management System

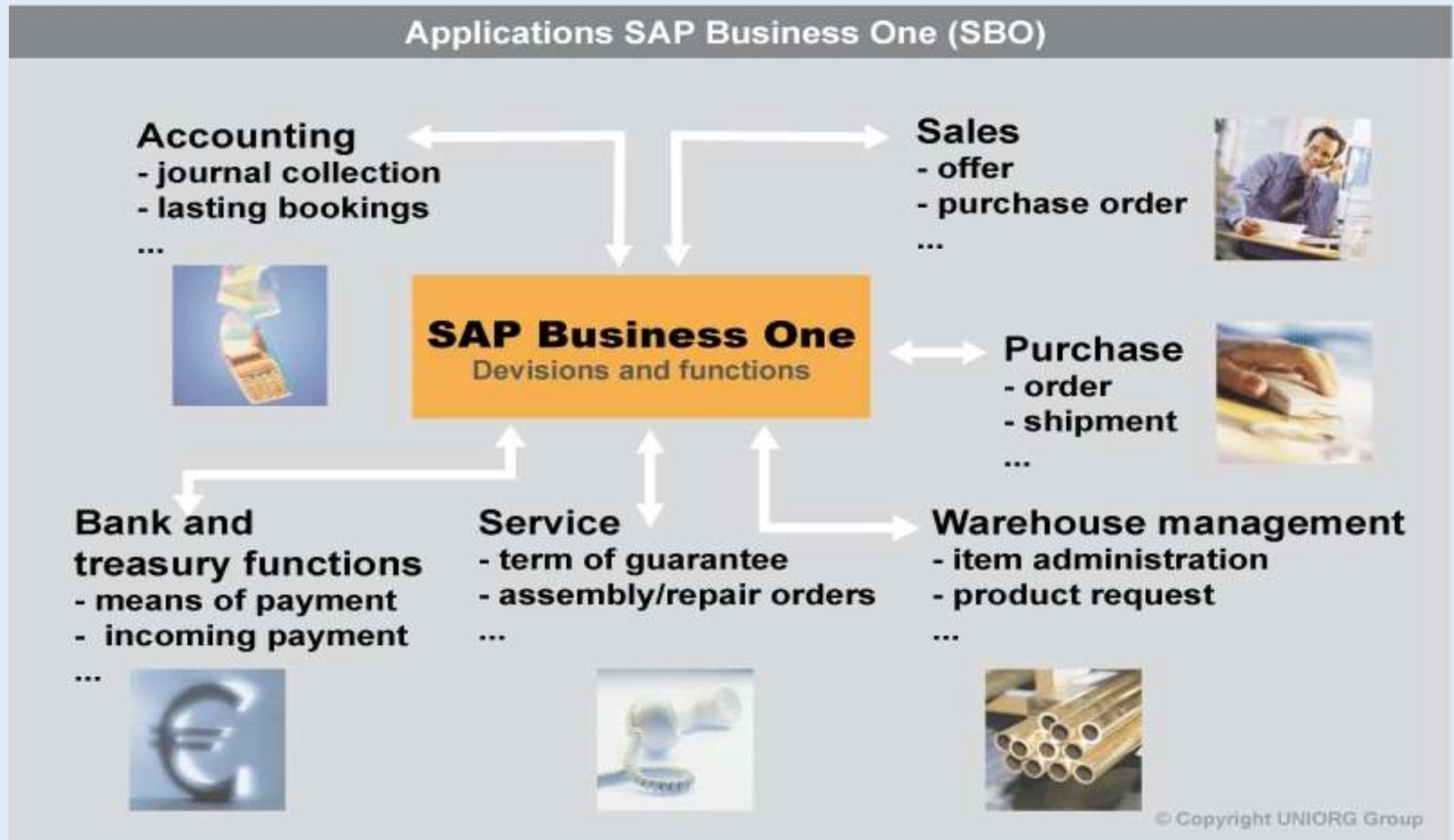
- The management team at Sunraysia required a financial management solution with multi-currency and international capabilities.
- They were also keen to put in place a customisable solution that could scale and grow with the company.
- Following a review of potential solutions including Oracle and Sage Line 200, a decision was taken to implement SAP Business One from Sapphire;
- the original plan was to implement in London with the system to be used in the UK, Australia and Hong Kong.
- 75% of the implementation was done in Australia

Case study: SAP Business One

- Fully integrated system
- Implemented out of the box
- Easy to set up/vanilla
- Chart of accounts is flexible
- Sub-ledgers update automatically
- Integrity of the data is excellent
- Reporting is easy
- Easy to use so it is easy to train new users



SAP Business One: at a glance



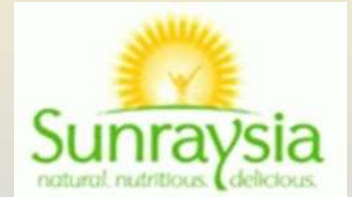
Case: Sunraysia Benefits

Since the implementation, Sunraysia:

- Benefited from marked cost savings
- Significant reduction in days taken to close monthly and annual accounts –
 - used to be 10-15 days – now down to 1 day
- Cost saving by doing more with the same staff
- Cashflow and profitability have improved
- Visibility of profit on a customer by customer basis



Organisational benefits (continued)



- Staff understand the business better
- Able to see what has been sold at the end of each day
- Freed up cash enabling UK to take control of their own financial affairs and manage their own accounts
- Staff much more 'on top of stock, inventory and cash
- Orders and stock are processed in real time
- Inventory holding reduced by half (reduced by \$1,000,000)

Sunraysia – Key Learnings

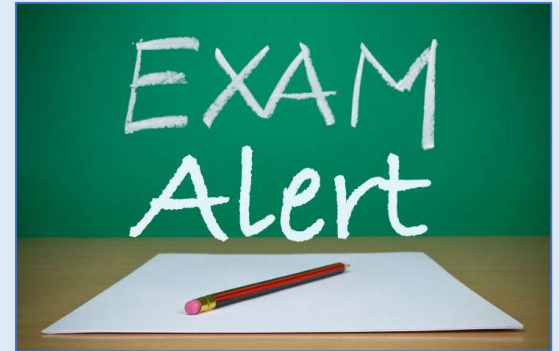
- Dedicate the right amount of time to the implementation project.
- Proper thought and planning into the set up.
- Make sure that the partner (consultant) you work with has the substance and resources required to support the implementation.



Sample Exam Questions

Which general ledger document tracks the amount of money that a customer owes for the goods received by the customer?

- A. Balance sheet
- B. Accounts receivable
- C. Accounts payable
- D. Income statement



What are the manufacturing costs that include factory utilities, general factory labor such as security guards, storage, insurance, and other manufacturing-related costs?

- A. Direct costs
- B. Plant costs
- C. Overhead costs
- D. Factory costs

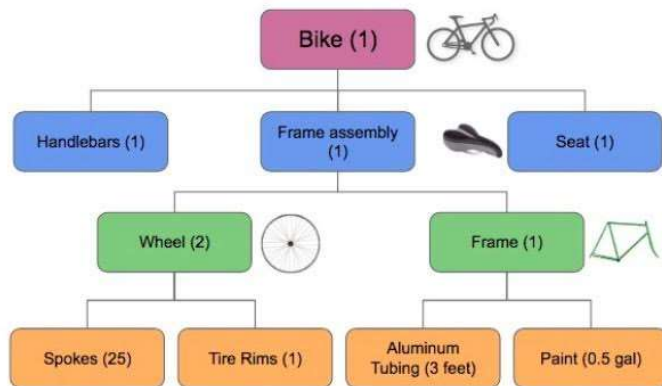
Assignment 2 – S/4 HANA Practical Application



Scenario

GBI, after considerable market research involving vendors and customers, has realised that there is potential for a new style of bicycle to be developed. The new bicycle is called the ***GT Mountain Bike***

Assignment 2 – S/4 HANA Practical Application



Key Deliverables:

- Create the master data for a newly developed Mountain Bike to include, BOM, Routings and work centres.
- Complete the sales order processing cycle to sell the Mountain Bike to a customer.
- Complete the procure to pay processing cycle to purchase additional accessories for the Mountain Bike.
- Download appropriate screen shots to demonstrate you have correctly carried out the transactions.
- Create explanations to explain the screens and their impact on the S/4 HANA system.



Assignment 2 – S/4 HANA Practical Application

Task 1 Materials Management

- Create a new Finished Good and Raw Material
- Create a new BOM
- Create work centres
- Create a routing
- Add initial stock

Task 2 Sales and Distribution

- Create a new customer
- Create a Sales Order
- Complete the Delivery Process
- Create an Invoice
- Process the payment

Task 3 Procurement

- Create a Purchase Order
- Create a Goods Receipt
- Process an Invoice

Assignment 2 – S/4 HANA Practical Application

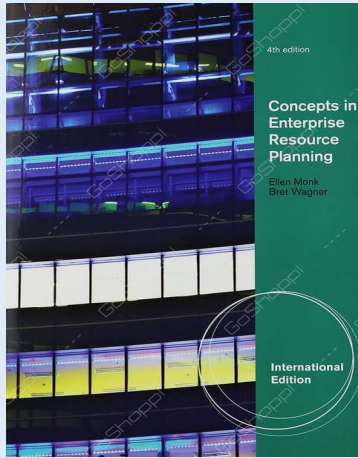
Deliverable: Materials Management	1. Display the MRP3 view of Raw Material VALV1###
Screen shot: (6 marks)	
Provide an explanation of the transaction you are displaying in the box provided including an explanation why the Material Master data is represented as separate views. (3 marks)	

Ten deliverables

Total marks : 20

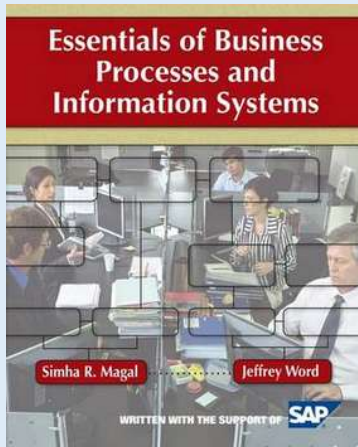
Due: 7th May

References



Monk & Wagner

Chap 5



Magal & Word

Various