

# FIT5101 Enterprise Systems



## Lecture 09

- ❖ ERP Implementation
- ❖ Change Management
- ❖ Reporting

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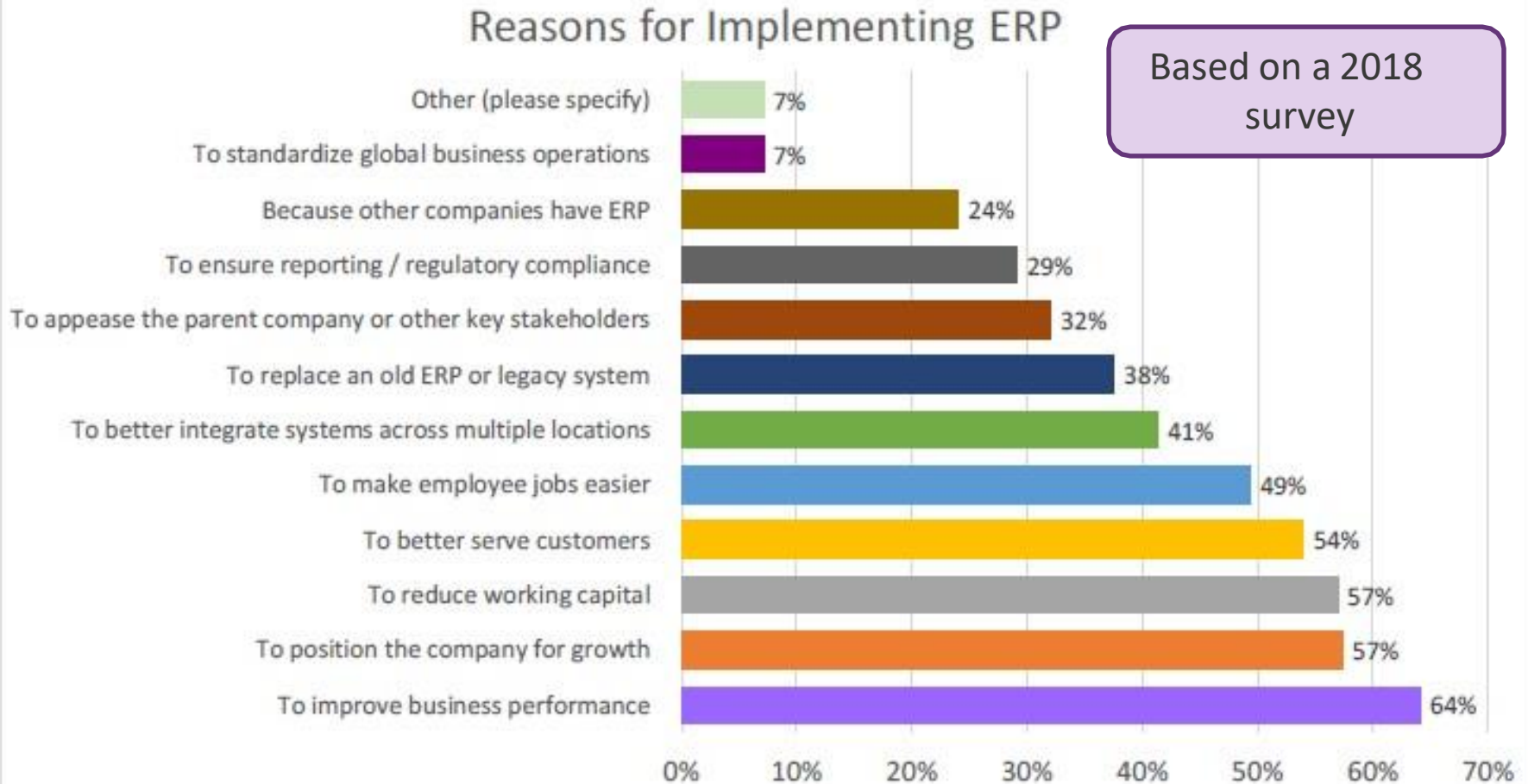
# Unit Topics (Subject to change)

Week	Date (W/C)	Lecture	Tutorial	Assessment
1	9/3	Introduction (ONLINE)	NO TUTORIAL	
2	16/3	Business Functions & Processes	Introduction	
3	23/3	ERP Structures	Business Functions	Ass 1 Rel
4	30/3	Materials Management & Procurement	SAP Introduction	S A P  W O R K S H O P S
5	6/4	Sales & Distribution	Materials Management	
	13/4	BREAK		
6	20/4	Production Planning	Procurement	
7	27/4	Financials	Sales & Distribution	Ass 1 Due
8	4/5	Process Integration & Modelling	Production Planning	Ass 2 Rel
9	11/5	ERP Implementation	Financials	
10	18/5	Current Technologies	Process Modelling	
11	25/5	Future Trends	Work on Assignment	Ass 2 Due
12	1/6	Guest Lecture / Review	Presentations / Review	
13	8/6	TBA	Exam Preparation	

# Implementing ERP Systems

- ☐ Late 1990s: many firms rushed to implement ERP systems to avoid the Y2K problem
- ☐ Since 2000: pace of implementations has slowed considerably
  - Most Fortune 500 firms have implemented an ERP system
  - Current growth is in the small to midsize business market
- ☐ Implementation of ERP is an ongoing process

# Reasons for Implementing ERP



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# Top 5 keys to successful ERP Implementation

- Clear alignment with overall business strategy
- Realistic expectations during implementation planning
- Focus on people, organisational change management and workforce transition
- Effective business process management and process improvement
- Strong project management, governance and controls

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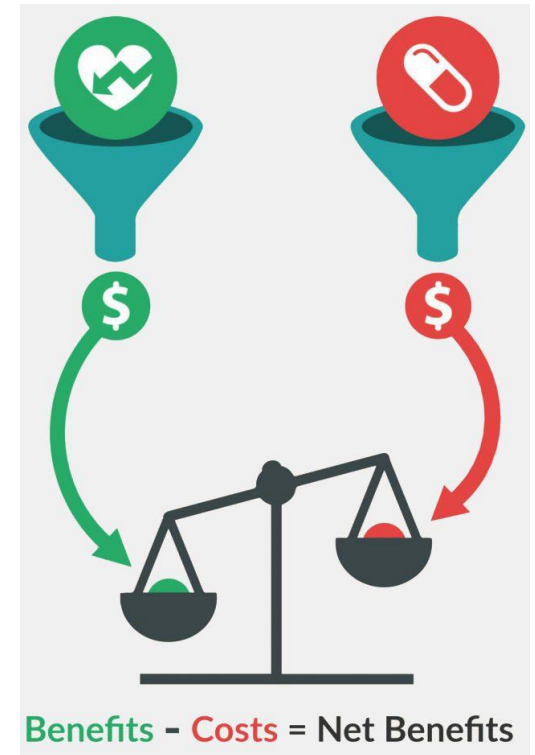
# ERP System Costs and Benefits

## ERP implementation is expensive

- Usually ranging between \$10 million and \$500 million, depending on company size

## Costs of ERP implementation

- Software licensing fees
- Consulting fees
- Project team member time
- Employee training
- Productivity losses



# ERP System Costs and Benefits

## **To justify the cost:**

- Companies must identify a significant financial benefit that will be generated by ERP system
- Only way companies can save money with ERP systems is by using them to support more efficient and effective business processes

## **Additional implementation issues**

- Companies must manage transfer of data from old computer systems to new ERP system
- Change management

# IT Project Failure statistics

## Standish Group (2001)

- US spends \$275B per year on 200K projects
  - 28% of projects fail,
  - 46% were “challenged”,
  - 26% succeeded (out of 23,000 projects)

## Projects deviate from budget, schedule and scope

- Over 50% of projects run over time
- *31.1% of projects will be cancelled before they ever get completed*



## Standish Group, “CHAOS 2007”: (2007)

- A staggering 39% of projects with budgets over US\$10 million failed
- Do not achieve their objectives
- Do not deliver the promised results
- Are not completed on time or within budget
- **WHY?**

<http://www.standishgroup.com/chaos/introduction.pdf>



# Some ERP statistics...

## ERP IMPLEMENTATION

Based on a 2018 survey done by TEC

Nearly **50%** of ERP implementations fail the first time around.



On average, ERP implementations take **30%** longer than estimated.



Regardless of deployment method, most implementations cost 3-4 times what was budgeted.

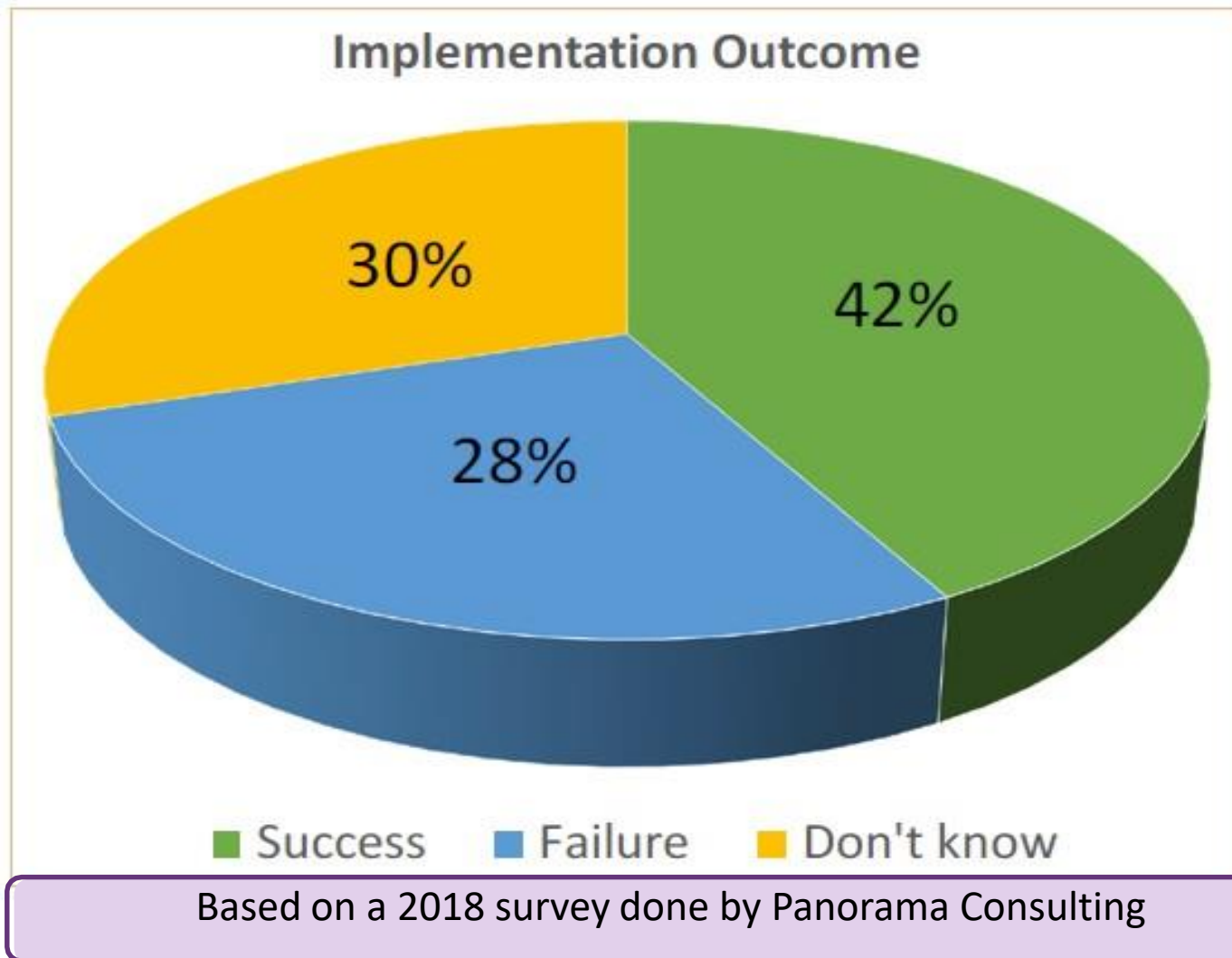


About **65%** of the time, budgets go over because the system needs modifications to improve usability. But companies realize this only after the implementation has started.



[https://www3.technologyevaluation.com/getattachment/Content-Library/Research-TEC/2018/06/ERP-Software-Facts-Stats%E2%80%94and-Lessons-Learned/ERP\\_FactsStats.jpg.aspx?lang=en-US](https://www3.technologyevaluation.com/getattachment/Content-Library/Research-TEC/2018/06/ERP-Software-Facts-Stats%E2%80%94and-Lessons-Learned/ERP_FactsStats.jpg.aspx?lang=en-US)

# Some ERP statistics...



# Case Study : A successful ERP implementation

*Arco* is one of the *UK's* leading suppliers of safety equipment, *workwear*, safety boots and shoes, gloves and maintenance supplies.



<http://www.youtube.com/watch?v=u3vaSLDU4os>

Implementation of SAP Warehouse & Logistics solution for ARCO by CSI Computer Systems

## A not-so-successful implementation

### RMIT – AMS Project – 2001



- ☐ The Victorian Auditor-General's Office slammed RMIT University's management over their bungled Academic Management System (AMS) IT project, identifying "fundamental failures" in project management structures.
- ☐ The AMS, which "went live" in October 2001, was supposed to ***streamline processes*** by consolidating all of RMIT's student management activities, but instead cost the university more than AU\$47 million, a figure equal to 3.7 times the original budget, according to the report.

#### References:

1. Gray, P. (2003) In depth: RMIT's PeopleSoft disaster
2. Gray, P. (2003). Auditor-general slams AU University's software project.

# Failed IT project



- ☐ Project Commenced Dec 1999
- ☐ Objective:
  - Replace existing student administration management systems
- ☐ Aim:
  - Integrate all RMIT' student management activities into a single consolidated system using PeopleSoft software whilst exploiting internet technologies to streamline processes
- ☐ Decision to use PeopleSoft\*:
  - PeopleSoft could provide a single, integrated software platform as opposed to multiple systems

\* PeopleSoft, Inc. was a company that provided [human resource management systems](#) (HRMS) and [customer relationship management](#) (CRM) software, as well as software solutions for manufacturing, financials, enterprise performance management, and student administration to large [corporations](#), governments, and organizations. It existed as an independent corporation until its acquisition by Oracle Corporation in 2005. The PeopleSoft name and product line are now marketed by Oracle.

# Failed IT project cont/d

Go Live: Oct 2001



Anticipated cost savings

- expected savings \$10m per year
- Actual - Loss    \$47m

☐ Since going live:

- Difficulties in billing fee paying students
- Difficulties in issuing HECS statements
- Delays in processing and advising students
- Problems in meeting statutory/legal reporting
- Shortcomings in hardware and software performance

☐ Organisational impact:

- Contributed to weakened financial position of RMIT

# What went wrong: Systems Perspective

## Key Findings:



- “go live date” too early\*
- Technology not robust
- Business processes were not suitably identified\*
- Roll-out of the system coincided with an administrative overhaul
  - o Subject codes and student numbers were changed
  - o Familiar conventions removed
- Mismatch between what was promised by vendors and what was delivered (Vendors oversold product)\*
- Ineffective documentation
- Need to modify the key proprietary component of the PeopleSoft system selected for the AMS\*
  - o These systems are developed from best practices

\* These items are considered critical to the successful outcome of an implementation. (CSFs)

# What went wrong: Project Management perspective

## □ Key Findings:



- No project management methodology
  - o PMBOK (Initiating, Planning, Executing, Controlling, Closing)
- Ineffective risk management
- Inadequate project reporting
- Lack of stakeholder management
- Poor change management
- AMS project failure due to internal culture

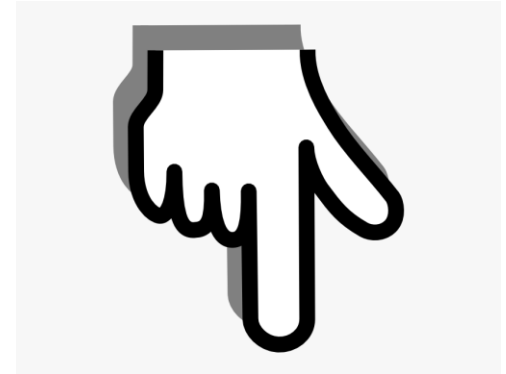
## **Key Audit findings:**

- Appeared to be no formal signoff of key project deliverables
- Business requirements, specifications, testing etc.
- No evidence of formal signoff of project functionality by stakeholders



# Consequences of Project Failure

- Degrade business capability
- Degrade competitive advantage
- Increase operating costs
- Reduce revenue earnings
- Failure to meet critical business requirements
- Poor levels of user satisfaction
  - Loss of staff
  - Staff will not use the system properly
- Loss of control



(Yardley, 2002)

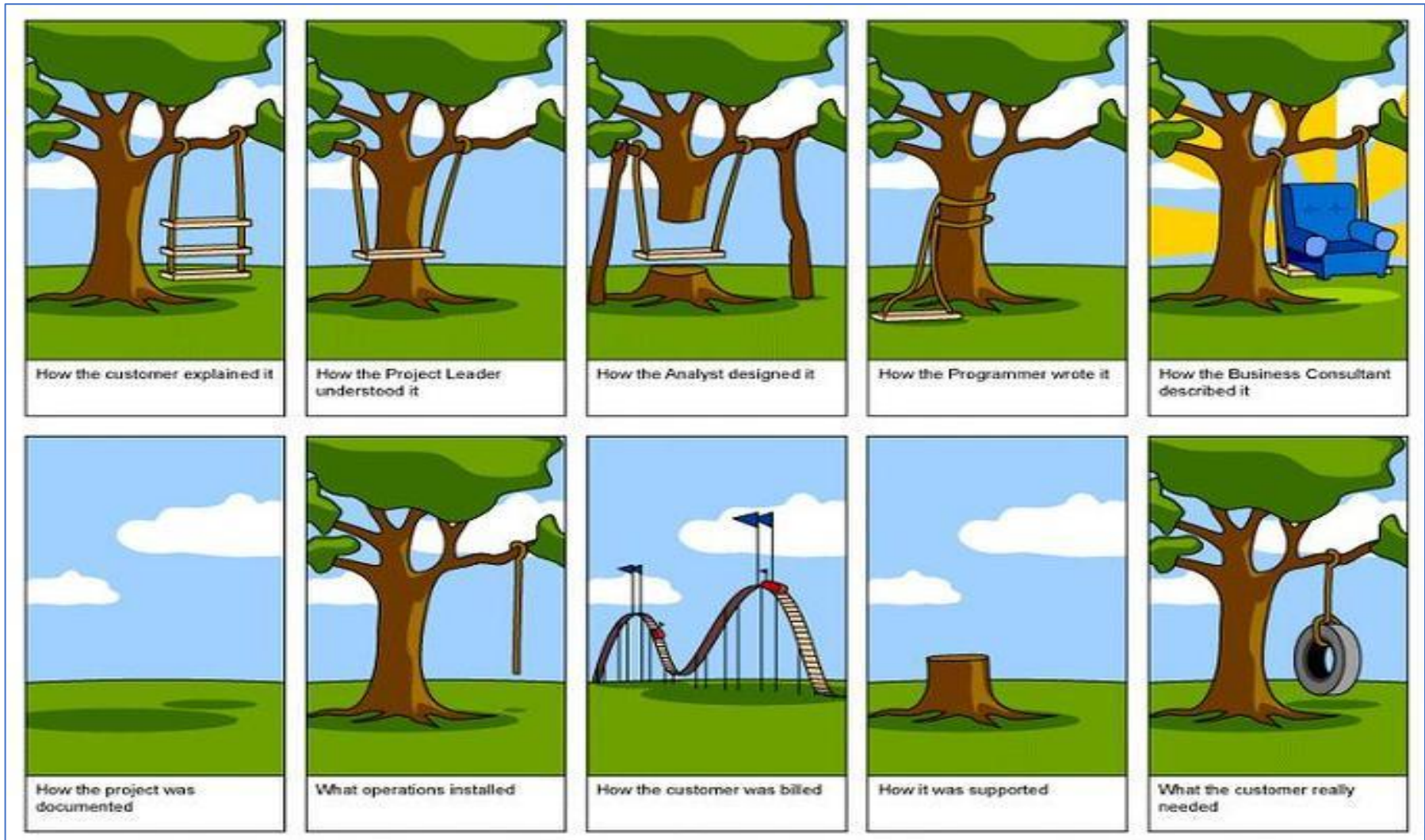
# Why IT Projects Fail – The Critical Factors

- ❑ Poor project planning
- ❑ A weak business case
- ❑ Lack of senior management involvement & support
- ❑ Lack of user involvement
- ❑ Technology new to the organization
- ❑ Lack of business ownership
- ❑ Poor or ineffectual training
  - Train the trainer
  - Consultants

(Failure factors - KPMG 2002)

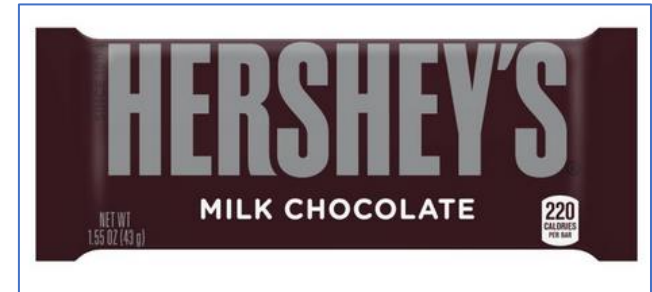


# Why Projects Fail – Poor Communications



## Another Failure – Hershey Foods

- IN 1998 Hershey implemented a new order-taking and distribution computer system; a \$112 million combination of software from SAP, CRM provider Siebel and third party supply chain software.
- Problems:
  - Unrealistic time frame
  - Insufficient testing
  - Cut-over at the busiest time
- The problems kept Hershey from delivering \$100 million worth of chocolates for Halloween that year.



# And One More ..... FoxMeyer Drug Company

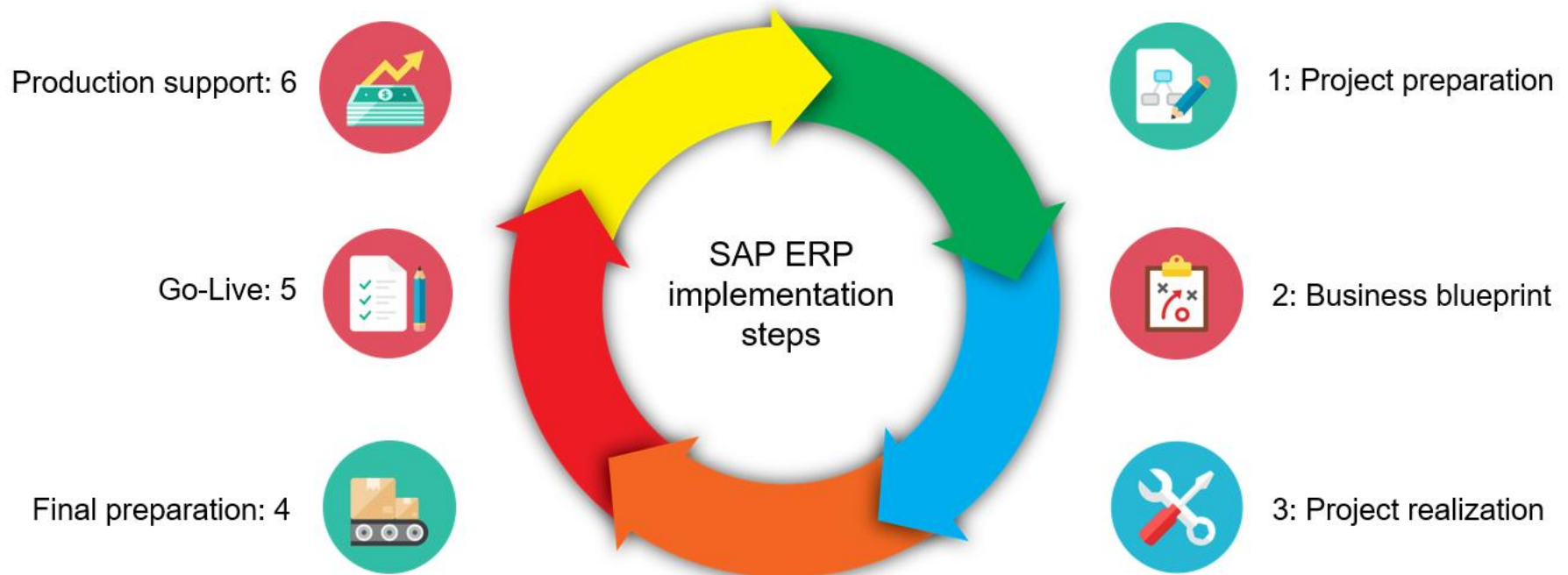
- FoxMeyer was the fifth largest drug wholesaler in the United States with annual sales of about 5 billion US\$ and daily shipments of over 500,000 items. The business of the company was principally in healthcare services.
- In 1992, the company decided to hire Arthur Andersen consulting company to implement SAP (R/3),
- The implementation cost for SAP was budgeted in 1994 at US\$65m.
- The ERP system was projected to save FoxMeyer US\$40m per year.
- The project failed due to:
  - Poor selection of software
  - Lack of contingency planning
  - No end-user involvement
  - No reengineering of the business processes
  - Insufficient testing
  - Over ambitious project scope
  - Poor management support
- FoxMeyer filed for bankruptcy in 1996, and sued SAP and AA in 1998.



# Implementation Tools

## Implementation Tools

Many tools are available to help manage implementation projects.



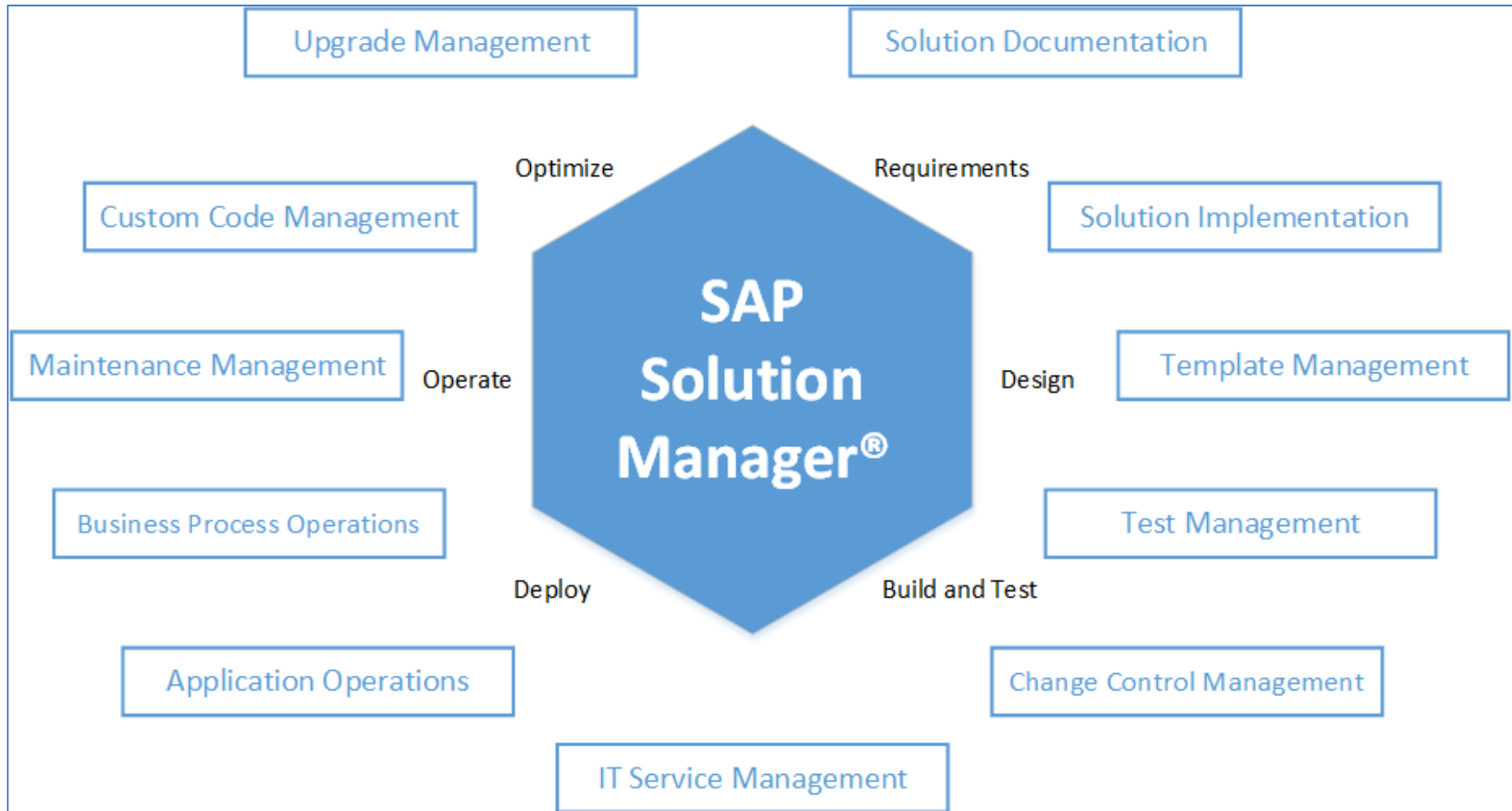


# Implementation Tools : SAP Solution Manager

- Helps companies manage implementation of SAP ERP
- ERP implementation project is presented in a five-phase Implementation Roadmap:
  - Project Preparation (15 to 20 days)
  - Business Blueprint (25 to 40 days)
  - Realization (55 to 80 days)
  - Final Preparation (35 to 55 days)
  - Go Live and Support (20 to 24 days)

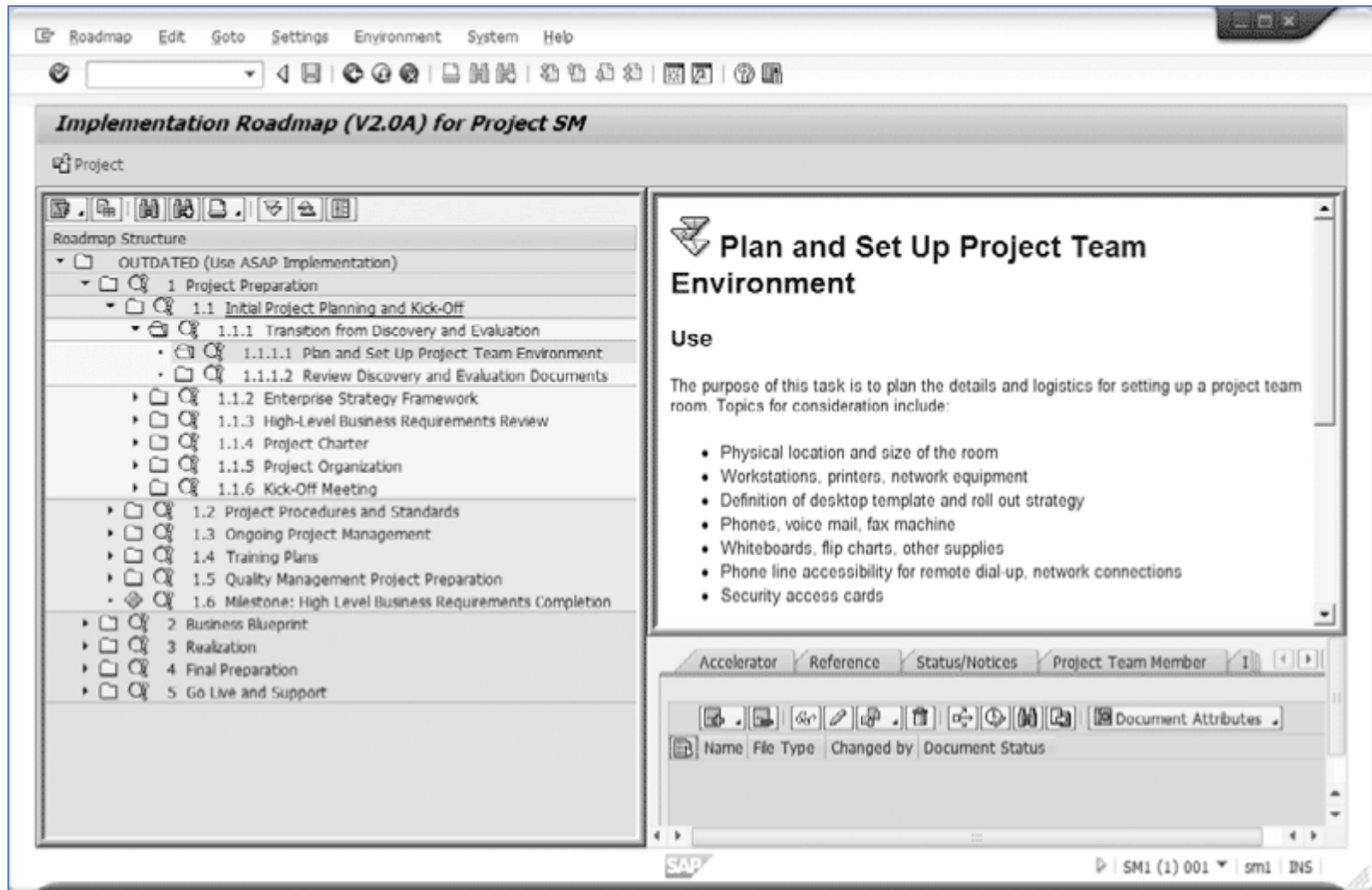


# Implementation Tools : SAP Solution Manager





# SAP Solution Manager



Implementation Roadmap in Solution Manager

# Change Management



The pace of change has increased considerably - particularly with the advent of the Internet and the rapid deployment of new technologies, new ways of doing business and new ways of conducting one's life – many people can't keep up.

What is Change Management <https://youtu.be/IYNMdV9E>

# Change is constant

- “Enterprise systems are in a constant state of flux
  - upgrades
  - enhancement packs
  - business process changes
    - > new functionalities
    - > additional features
    - > optimise business processes
- Knowledge leakage
  - employee attrition can be as high as 25% in any given year.
- ERP training is an ongoing business requirement and not a one-time event”.



# Lack of critical factors in ERP implementations

## Top Issues Organizations Face During Enterprise Resource Planning implementations



Source: Deloitte Consulting and Benchmarking Partners (Based on a study of 62 companies that have gone live with an ERP system)

Note: Rounded percentages; not all categories are shown as bars

# ERP implementation challenges – how do you manage these issues .....

- Enterprise wide business process changes
- Job redesign/upskilling
- Reduction in head count
- Change in climate and culture
- Change in relationships
- Project team skills
- Consultant skills
- Data migration
- Training needs
- Managing risk

How people adapt to this change positively or negatively is affected by

***HOW CHANGE IS MANAGED***

# Changing employees perceptions



**Very, very slow to change**

**Can cause disruption**

**May leave the system rather than change**

**They have usually been with the company for a long time**

**Your target!**

**Move through the personal change journey quickly**

**Become your evangelists – change champions**

**SMEs**

**Process owners**

# Two ways to manage change

## WHY IS IT IMPORTANT TO MANAGE CHANGE??

How will a risk management strategy help with managing change?

- *Establish a change management strategy as part of the implementation approach*
- *Conduct a risk management strategy as part of the implementation approach*

How to lead change management 4.49 mins

<https://www.youtube.com/watch?v=PQ0doKfhecQ>

## Establish an organisational change management strategy

*Organisational change management is defined as the process of assisting the organisation in the smooth transition from one defined state to another, by managing and coordinating changes to business processes, systems and people*





# Managing change

- *Study by Foster(2003) asked respondents to identify the best example of change management they have been involved in.*
- A summation of responses identified the following best practices:
  - • Keeping staff informed by communicating changes and the need for these changes
  - • Training staff before during and after implementation
  - • Using staff as expert users and trainers (SMEs)
    - > staff could relate to them – Train the trainer approach
  - Training manuals which are easy to follow
  - • Users of the system form part of the process
  - • Employ a variety of change strategies

Ref: Foster, (2003). CM: The real struggle for ERP Systems.

# Communication Strategy/Plan

Communication Theme	Objective	Content Outline (high Level)	Audience Stakeholders	Channel/action required
List the reason that has triggered the need for the communication	List clear objectives as to what the communication is aimed at achieving, such as raising awareness, providing new information	Try to provide the key topic areas, messages that the communication must address	List specific targeted audiences or general groups as per stakeholder analysis	List appropriate channel(s) mechanism's) to create and deliver this communication in the most effective way. Also list any specific actions required, such as who will facilitate

# Training

- Identify key training issues
  - Risk management strategy
    - > Assess the types of risks impacting on training
    - > Put in controls to manage the risks
    - > Monitor the controls you have put in place



# Why is training so important??



Staff who feel they have not been involved in the change and have not been trained properly are likely to resist using the system

# Key Training Issues

- Identify strategies to manage stakeholders
  - Needs analysis
  - deskilling
  - up-skilling
  - appropriate trainers and training with appropriate documentation with ongoing support
- Standardised training
  - Consultant attribute Transfer of knowledge/Train the trainer
  - Trainer attributes
- Training needs analysis —
  - Identify training needs based on the business process changes to their job role and the amount of contact with the new system
  - Identify different stakeholder requirements
  - analyse prospective attitude issues that could negatively impact on the implementation
- Post implementation review based on business case outcomes (timings and expectations)

# Two ways to manage change

Establish a change management strategy as part of the implementation approach

**AND**

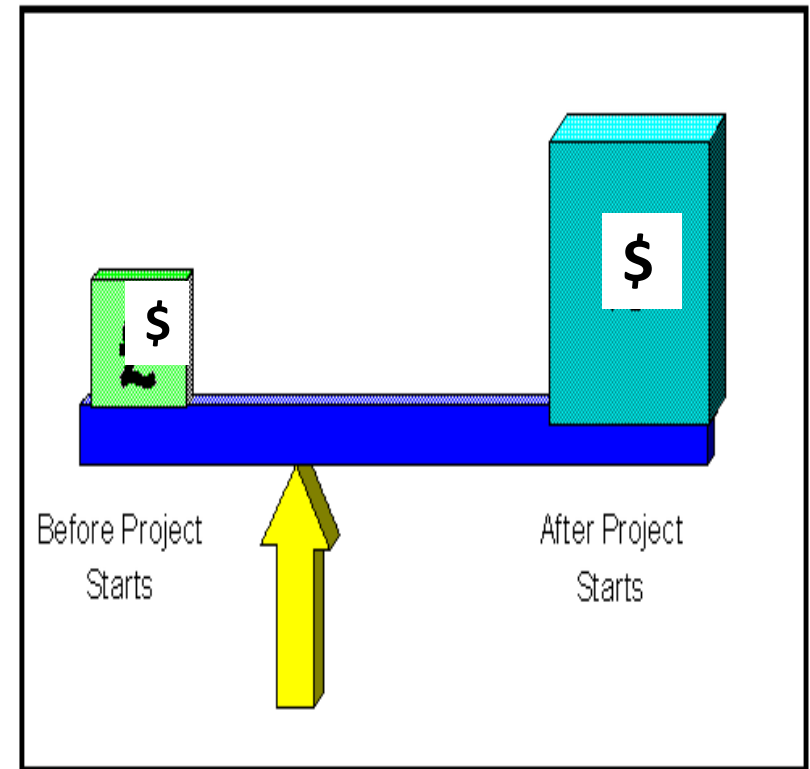
Conduct risk management as part of the implementation approach

WHY IS IT IMPORTANT TO MANAGE CHANGE??

How will a risk management strategy help with managing change??

# Cost of Fixing Project risks

- Money invested in reducing risk in the early stages of a project is money well invested.
- Any risks incurred during the project have to be diagnosed, and fixed.
- Using risk control as an iterative process will help to manage major risks and thereby cut cost blowouts



# Reporting in SAP

Today's ERP systems create large volumes of raw data. However, report-handling is usually accepted as being the most important function of all, since without this capability, the ERP system is virtually useless.

Consequently, ERP reporting tools are critical to an enterprise's success. In SAP S/4 HANA there are several different options for creating reports:

- Standard Reports
- Embedded Analytics
- Business Warehouse
- Other Tools
- XBRL



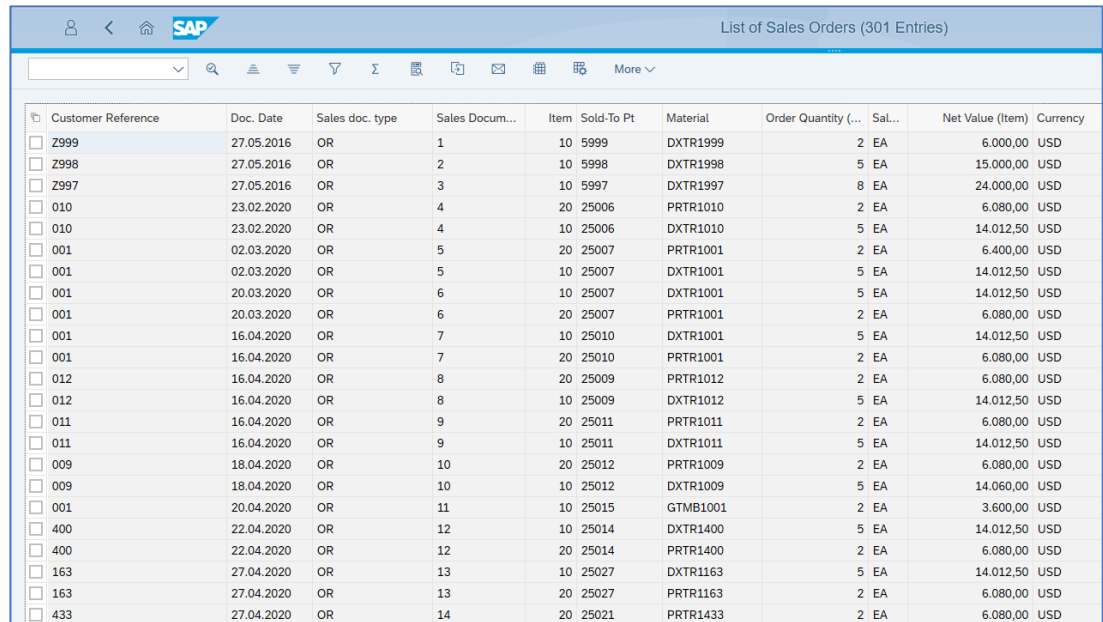


# Standard Reports

SAP includes many standard reports that are usually not able to be customized.

For example:

- Display Stock Overview
- Financial Statements
- Display Routing
- List Sales Orders
- Display BOM

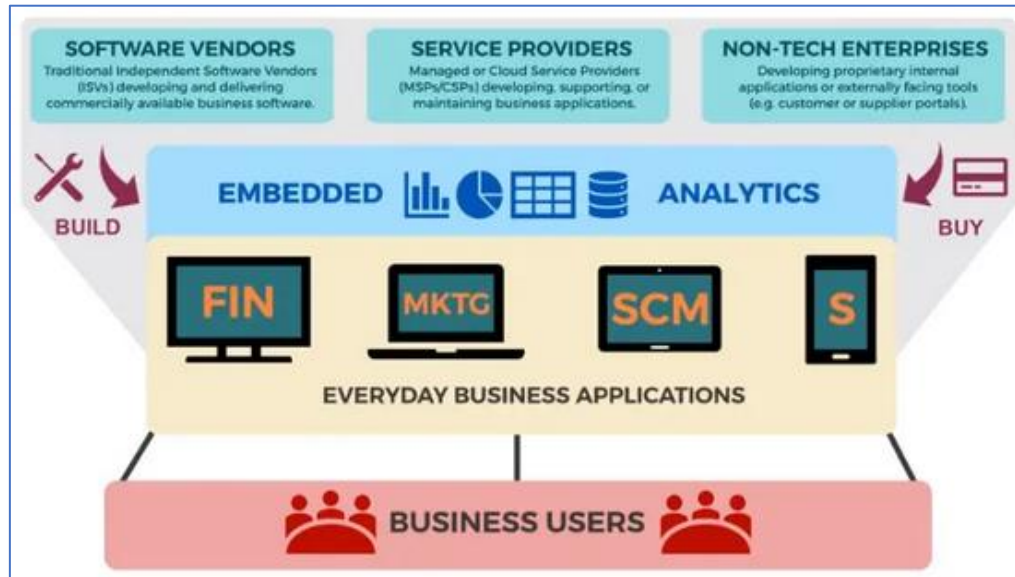


The screenshot shows the SAP 'List of Sales Orders' report with 301 entries. The table includes columns for Customer Reference, Doc. Date, Sales doc. type, Sales Docum..., Item, Sold-To Pt, Material, Order Quantity (...), Sal..., Net Value (Item), and Currency. The data is organized into rows, each representing a sales order entry with its specific details.

Customer Reference	Doc. Date	Sales doc. type	Sales Docum...	Item	Sold-To Pt	Material	Order Quantity (...)	Sal...	Net Value (Item)	Currency
<input type="checkbox"/> Z999	27.05.2016	OR	1	10	5999	DXTR1999	2 EA		6.000,00	USD
<input type="checkbox"/> Z998	27.05.2016	OR	2	10	5998	DXTR1998	5 EA		15.000,00	USD
<input type="checkbox"/> Z997	27.05.2016	OR	3	10	5997	DXTR1997	8 EA		24.000,00	USD
<input type="checkbox"/> 010	23.02.2020	OR	4	20	25006	PRTR1010	2 EA		6.080,00	USD
<input type="checkbox"/> 010	23.02.2020	OR	4	10	25006	DXTR1010	5 EA		14.012,50	USD
<input type="checkbox"/> 001	02.03.2020	OR	5	20	25007	PRTR1001	2 EA		6.400,00	USD
<input type="checkbox"/> 001	02.03.2020	OR	5	10	25007	DXTR1001	5 EA		14.012,50	USD
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<input type="checkbox"/> 001	16.04.2020	OR	7	10	25010	DXTR1001	5 EA		14.012,50	USD
<input type="checkbox"/> 001	16.04.2020	OR	7	20	25010	PRTR1001	2 EA		6.080,00	USD
<input type="checkbox"/> 012	16.04.2020	OR	8	20	25009	PRTR1012	2 EA		6.080,00	USD
<input type="checkbox"/> 012	16.04.2020	OR	8	10	25009	DXTR1012	5 EA		14.012,50	USD
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<input type="checkbox"/> 009	18.04.2020	OR	10	20	25012	PRTR1009	2 EA		6.080,00	USD
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# Embedded Analytics

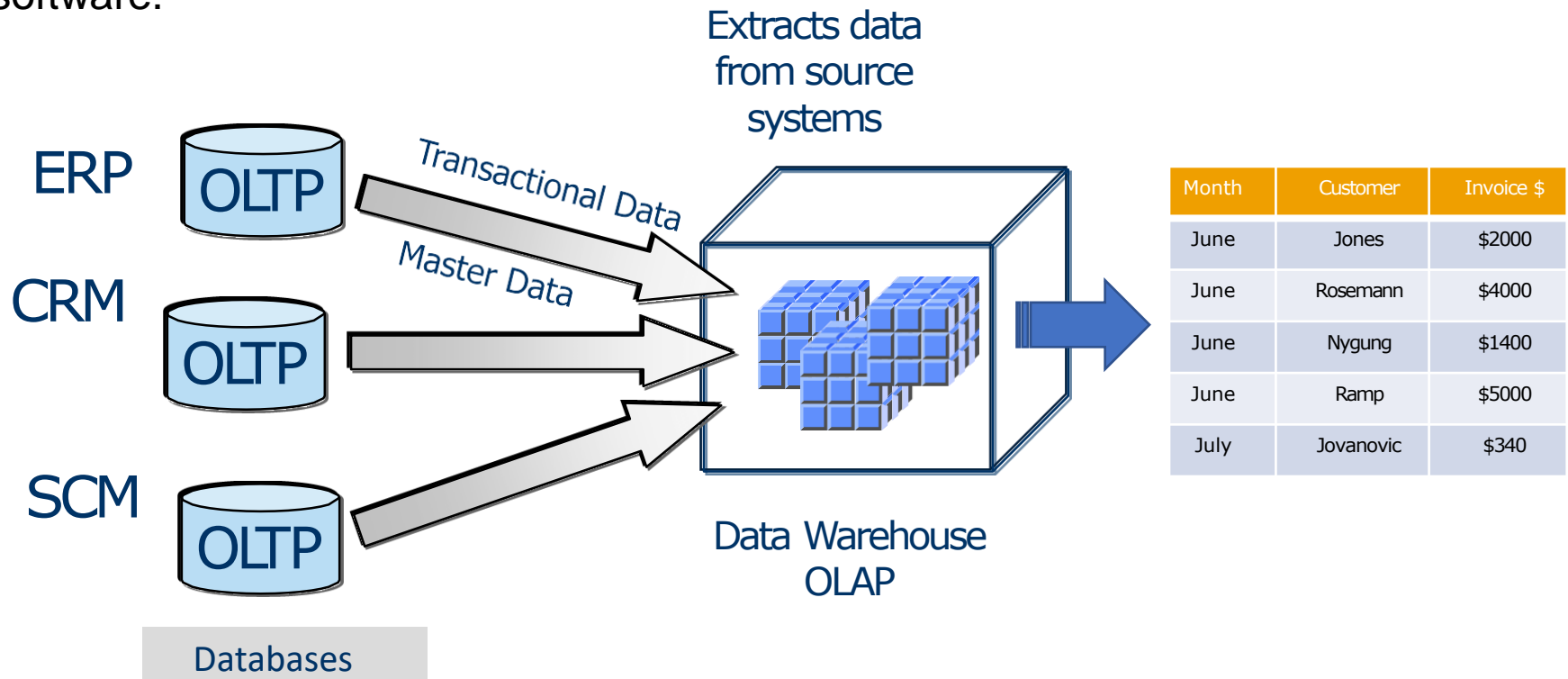
**Embedded analytics** is the technology designed to make [data analysis](#) and [business intelligence](#) more accessible by all kinds of application or user. (GoodData, 2018)



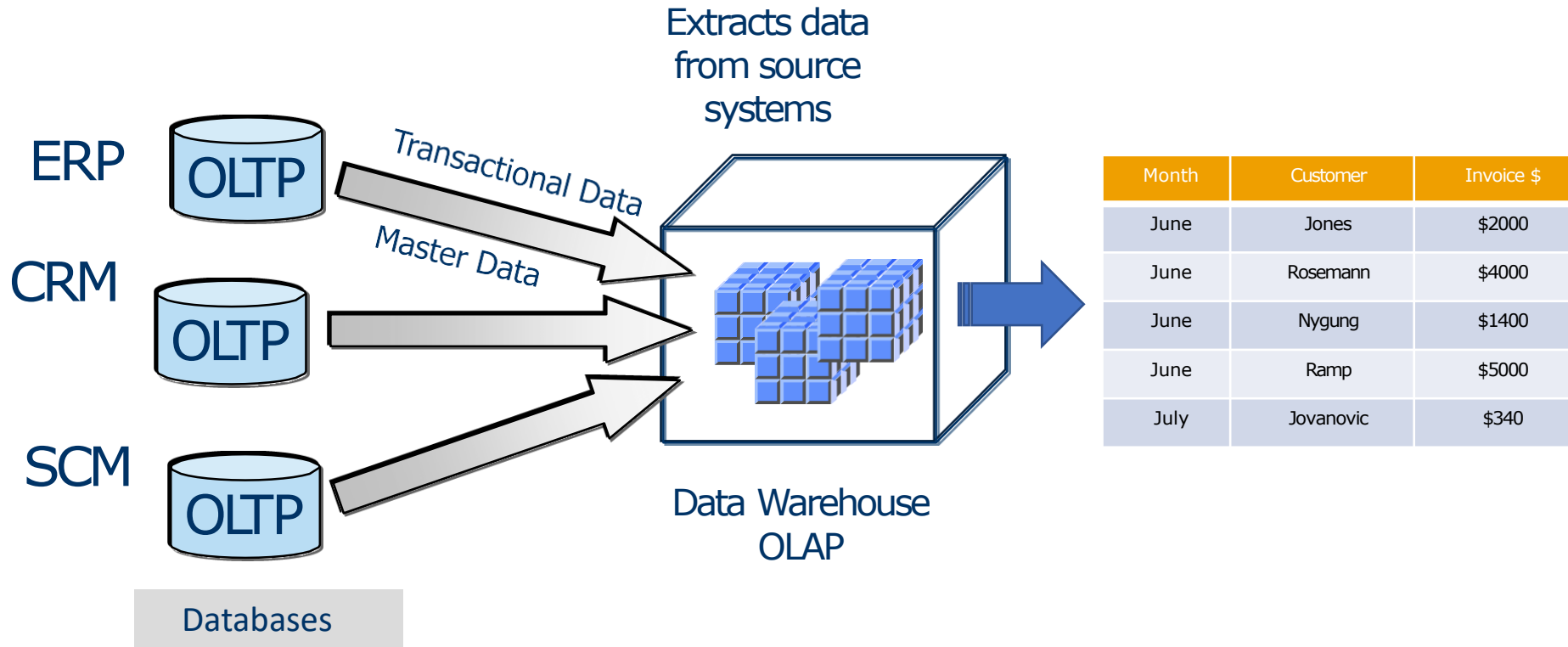
SAP S/4HANA Embedded Analytics is SAP's next-generation analytics capability which can be achieved within SAP S/4HANA. With this, the user community, IT Team, and the developers can perform real-time analytics using large transaction data. Millions of rows and large numbers of tables can be processed on the fly.

# Business Warehouse

SAP Business Warehouse (BW) is a model-driven data warehousing product based on the [SAP NetWeaver](#) ABAP platform. It collects, transforms and stores data generated in SAP and non-SAP applications and make it accessible through built-in reporting, [business intelligence](#) and analytics tools, as well as third-party software.



# Data extraction via a data warehouse



Source: HILLAM, J., Demystifying the Data Warehouse.

<http://www.youtube.com/watch?v=mgEugd5kZgk&feature=related>

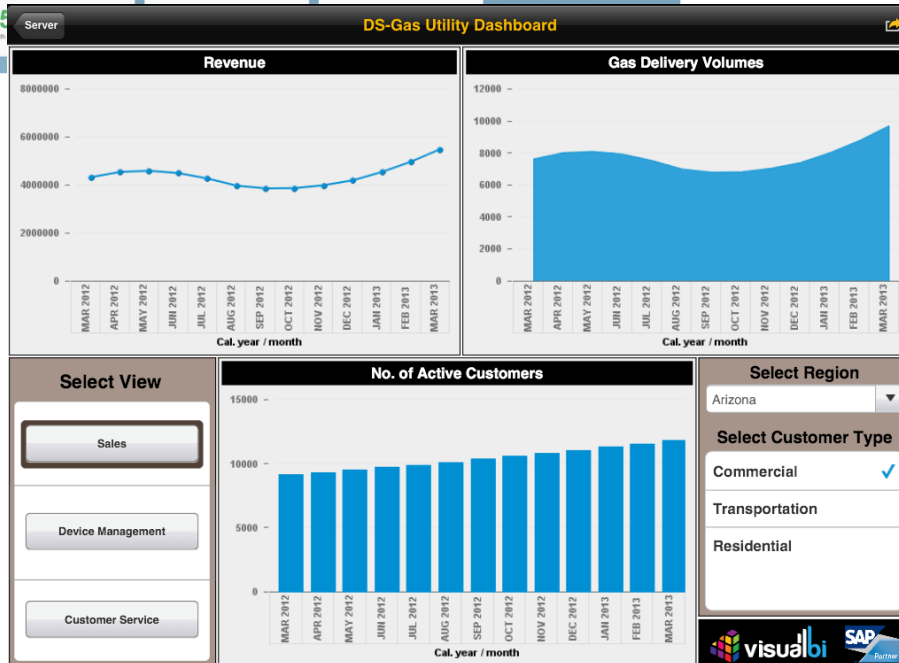
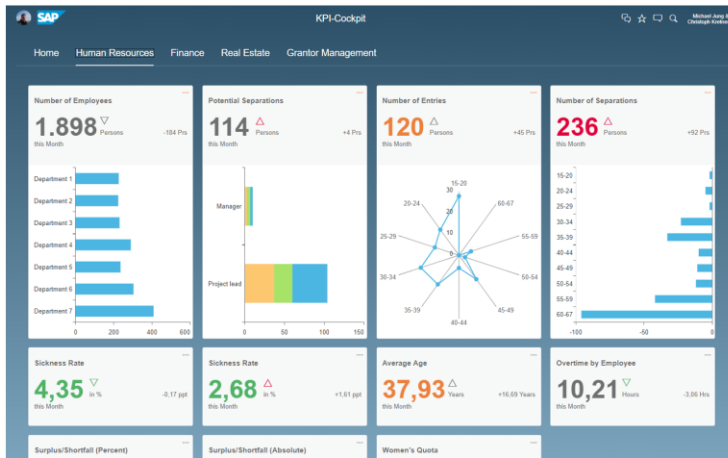
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# Other Reporting Tools

SAP HANA offers different kinds of reporting tools such as

- **Lumira** - also known as **Business Objects** is a business intelligence software developed and marketed by SAP. The software is used to manipulate and visualize data.
- **Design Studio** - an Application Development Tool for creating advanced level Dashboards using SAP BW, HANA and Universe Data Sources. These interactive dashboards can be accessed on mobile devices like iPad, mobile phones, and tablets.
- **Analysis Office** - a Microsoft Office Add-In that allows multidimensional analysis of OLAP sources. Includes versions for Microsoft Excel and Microsoft PowerPoint.
- **Crystal Reports** - a business intelligence application, marketed to small and medium businesses.
- **Dashboards** – a data visualization tool that is used to create interactive dashboards from different data sources.
- **Explorer** - a data discovery application that allows you to retrieve answers to relevant business questions from your data.
- **Web intelligence** - used for analytical and ad hoc reporting to meet an organization's business requirements. Web Intelligence is a Business Intelligence reporting tool for business users to analyze data in Data Warehouse.

# Other Reporting Tools



# XBRL



XBRL, or eXtensible Business Reporting Language, is an XML standard for tagging business and financial reports to increase the transparency and accessibility of business information by using a uniform format.

This standard is maintained by XBRL International, an international non-profit consortium of approximately 450 major companies, organizations, and government agencies around the world. It is an open standard, provided free of license fees, and is already being used in numerous countries.

Video : XBRL Explained <https://youtu.be/YIjWVAh42Vk>

```
<orcl:TradeReceivablesNet contextRef="C2" id="f1" unitRef="U1">5127</orcl:TradeReceivablesNet>
<orcl:OtherReceivablesCurrent contextRef="C2" id="f2" unitRef="U1">672</orcl:OtherReceivablesCurrent>
<orcl:DeferredTaxAssetsNetCurrent contextRef="C2" unitRef="U1">853</orcl:DeferredTaxAssetsNetCurrent>
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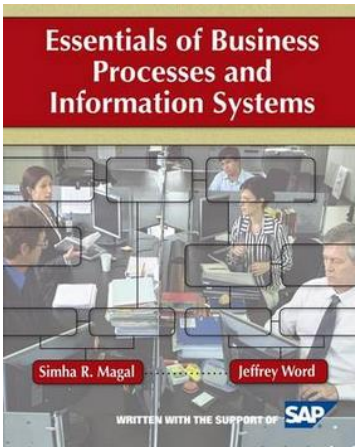


# References



Monk & Wagner

Chap 7



Magal & Word

Chap 6



# Fitter Snacker Project Presentation

- Presentation to FS Execs for project approval.
- Covers
  - Project background
  - Issues faced
  - Selection process followed
  - Justification for the decision.
  - Value to stakeholders
- Presented via ZOOM



# Fitter Snacker Project Presentation



## Presentation tips:

- Remember your audience
- Use a timekeeper
- Keep slides simple
- Be concise
- Engage the audience
- Be presentable
- **PRACTICE, PRACTICE, PRACTICE**

# Fitter Snacker Project Presentation

- Mark allocation: 25 marks
- Weighting: 5%
- Due date: Presentation PPT file is to be completed and uploaded into Moodle by Monday of Week 12.
- Presentations will be held in tutorials during week 12.
- Duration 8 – 10 minutes plus question time.
- All team members should participate.