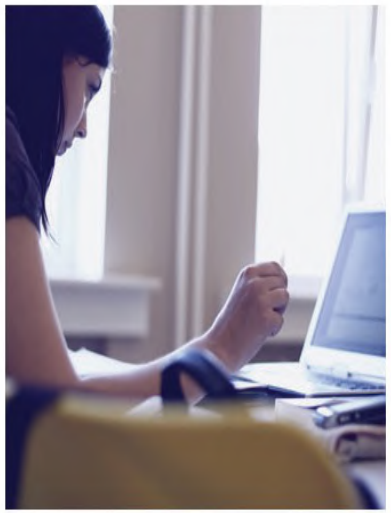
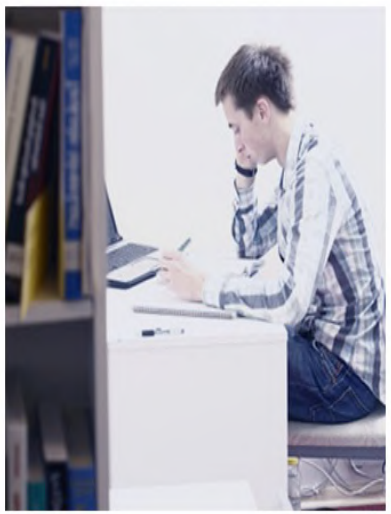




Estonian Business School

Estonian Business School

INF700 – IT for Business and Management

IntMA-1; IntMAk-1

Estonian Business School

Session Part B

Agenda

Case Study: Enterprise Resource Planning & Business Process Re-engineering (ERPs & BPRs)

Pause

Estonian Business School

Read Case again

Make Notes about key issues, lets discuss

Case 1: Energia OU replaces legacy systems with enterprise resource planning system

- Energia OU provides systems for supporting energy and transport. This project was to support the Estonia gas turbine part of Energia's business.
- The project involved the introduction of a new enterprise resource planning (ERP) system to replace 15 critical legacy systems and many peripheral applications and connect satellite offices across the EU region and the globe into a single, integrated system. The project was instigated following an IT strategy review in 2013, where it was realised that a major project was needed to provide a single integrated system based on SAP R/3.
- In the words of Project Director Mikk Tuisu: '*we realised that our vision of creating a single, integrated system was simply not feasible with our legacy infrastructure. The SAP solution is not only easier to run and manage, but has also improved our ability to collaborate with our employees and external partners on a global scale*'.
- The first phase of the project, completed in 2014, migrated the company's old logistics and finance systems to SAP R/3.
- The previous legacy systems were a twelve year old OMAC 2000 manufacturing system and Oracle Financials.
- The first phase involved connecting 750 users at its Tallinn head office, as well as providing access to a limited number of international sites.
- The next two phases, which will be implemented through 2016 and part of 2017, will replace the remaining legacy systems for pre-point of order and post-point despatch processes, including its customer service module and extend the ERP system to a further 1000 users.
- Lastly, the system will be rolled out to about 20 global locations. According to Mikk Tuisu, the project is already financially justified on reduced IT support costs alone and Energia OU expects to make a 200 per cent return on investment over the seven to ten year life of the system.
- Energia OU employed EestiSoft, an IT services company or 'systems integrator' to implement the project.

Estonian Business School

The Case

- Traditionally, discussions of approaches to information systems development has tended to concentrate on development of operational applications using bespoke development approach.
- This case is an example of **IS development project** which replaces **legacy systems** with **enterprise resource planning system**
- This will involve data migration (transferring or exporting data on existing customers and importing them to the new system) and its risks.

IS projects & The Systems development process

- Estimation: what work is involved (work breakdown structure, WBS)
- Resource allocation: who will complete the work
- Schedule/Plan: when will work be completed
- Budgeting
- Monitoring and control

Tools for support project management process

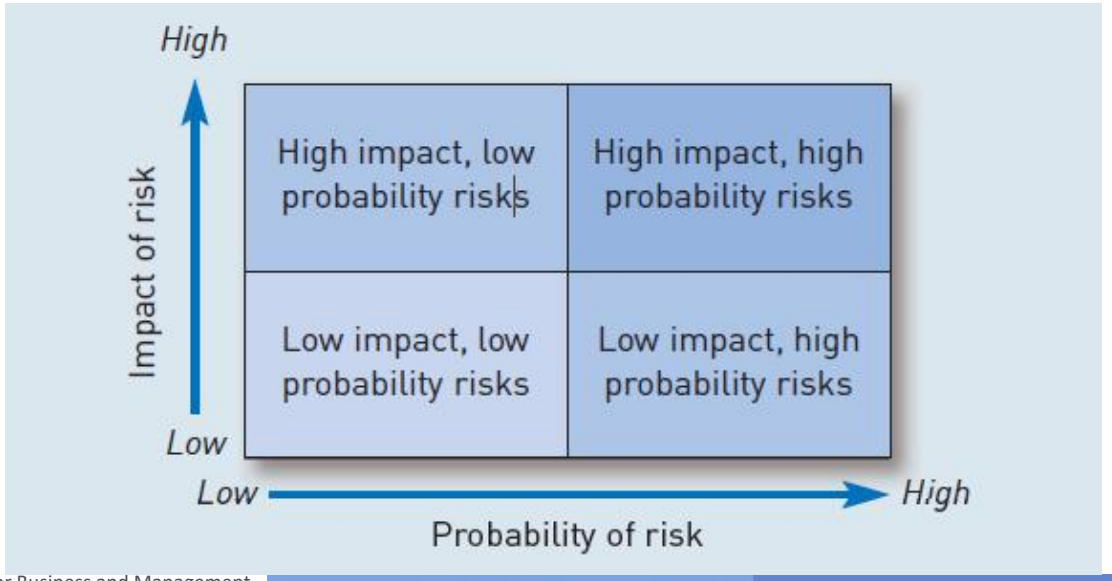
- Gantt charts
- PRINCE2 etc.

Project Risk Management

Risk management is a valuable approach to help reduce the likelihood of project problems. It is typically used in the start-up phases of information systems development projects. Its purpose is to identify potential risks which may prevent the project from achieving its goals and then ensure actions are taken to minimize these risks.

The risk management process involves these stages:

- Identify risks, including their probabilities and impacts
- Identify possible solutions to these risks.
- Implement the solutions targeting the highest-impact, most likely risks.
- Monitor the risks to learn for future risk assessment.



SAP AG.

- SAP is an Integrated Business system that has evolved from an original concept, first developed by five former IBM German systems engineers in 1972.
- SAP™ stands for **Systems, Applications and Products** in Data Processing. The company has pioneered the development of ERP (Enterprise Resource Planning) software systems in the client/ server market.
- SAP AG has developed three very distinctive and powerful software products in the ERP market, these being **R/2 (for Mainframe computing**), **R/3 (for Client/ Server computing**) and **mySAP.com**. All three are integrated systems with the latter two being e-business enabled via the Internet.

Estonian Business School

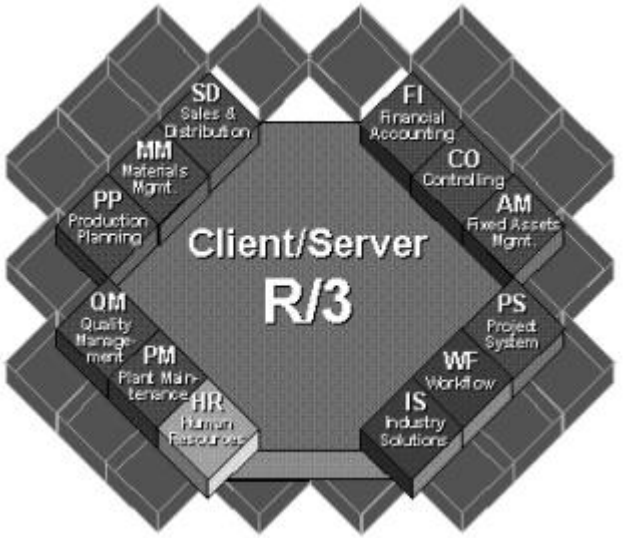
What is SAP R/3.

- **SAP R/3 is an integrated Enterprise Resource Planning system**.
- It comprises a set of business modules that are designed from industry 'Best Practice' techniques.
- The **software is built to operate in the client/ server market**, which is where the business logic can be held either on the server or partly on the client, depending on the circumstances (www.sap.com, 2000).
- **SAP uses relational tables and adopts transactional processing to present information to the user** (Blain et al, 1997).
- The required data is keyed in or inputted automatically from peripheral equipment, i.e. a bar-code scanner, and is transacted in the background, within the database server via the application server (if a 3-Tier architecture is utilised). It is then presented in the SAP user interface for its required use.

What does SAP R/3 Offer?

- **SAP R/3 provides a complete set of integrated applications, referred to as modules**. These are developed around industry best practice by SAP and cover most business functions. They include the following:

Finance and Accounting: This includes Financial Accounting, Controlling Assets management and a Project System.
Human Resources: This involves the full set of capabilities required to manage, schedule, pay and hire human resources.
Manufacturing & Logistics: This is the most complex function and comprises the largest set of modules, including materials management, plant maintenance, quality management, production planning & control and Project Management.
Sales & Distribution: This function provides customer relationship management, sales order management, configuration management, distribution, shipping and transportation management.



The figure represents how the R/3 system is structured, i.e. the R/3 system is client/ server based with the integrated modules residing on the R/3 database.

Estonian Business School

Integration & Customisation

- A **fully integrated system**, means that each module can access other business modules (depending on the information structure of the database tables) and provide real-time information on any aspect of the enterprise. As a result SAP has stated that companies should re-engineer their business wherever needed, so as to reduce the possible consequences in other modules (as data is integrated and used elsewhere in the system)
- SAP R/3, although designed around industry best practice solutions, **still has to be adapted to the particular needs of the business**. **With most companies there needs to be a major development phase involving not only configuration and re-engineering, but customisation of the generic package**.

Estonian Business School

Investment in Data Migration and Transfer

- SAP invests a great deal into systems development. This has placed SAP in the position they are in today and the position they will surely maintain in the future.
- The **package itself comes with many software development tools**, including the (1) **ABAP/4 Development Workbench**, (2) **the Legacy System Migration Workbench (LSM)** and **other integrated tools**.
- The **LSM is an addition to R/3** that **allows the conversion and transfer of legacy data from the legacy systems, making the whole process of migration far more efficient and controlled**.
- The R/3 data dictionary stores every modification, update or deletion of any data or programme, which is used in SAP.

Functionalities

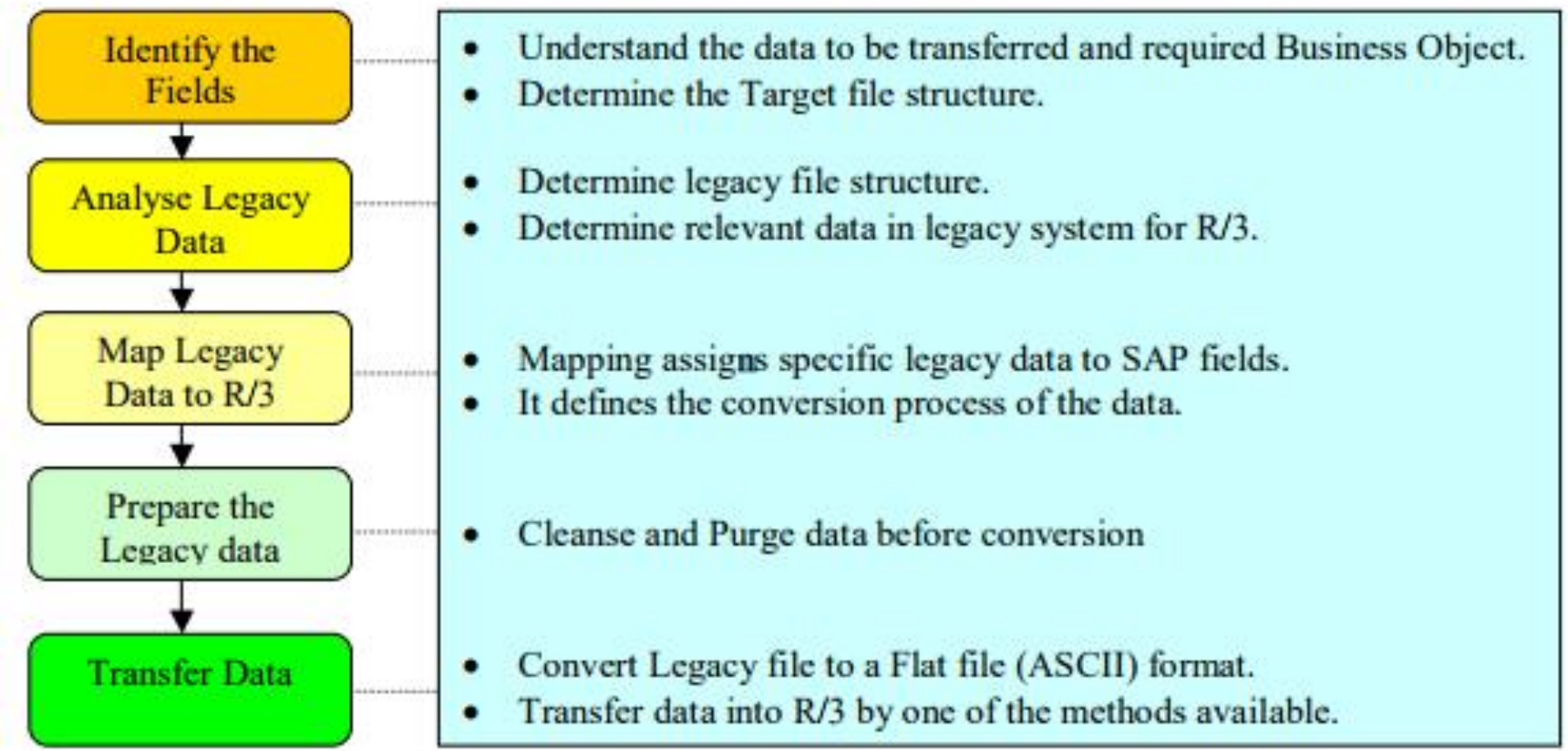
- SAP R/3 **gains all its functionality**, i.e. the **integrated modules and the adaptability** in the configuration of them, through its **Open Architecture structure and Portability**.
- According to the SAP 50 Basis Training Guide, the outstanding feature of the components, **is the combination of up to the minute technology with comprehensive business functions**. The high level of application integration ensures that all functions can be accessed directly through the system and therefore by the user. This is achieved by the integrated relational database.
- The Open architecture that SAP adopts also **makes it fully compatible with most software and hardware**. It also enables interfacing through various standard protocols and networks,

Legacy Systems

- ‘**Legacy systems are the information resources currently available to the organisation**.
- They include **existing mainframes, personal computers, serial terminals, networks, databases, operating systems, application programs** and **all other forms of hardware and software that a company may own**’.
- This also includes **any paper systems**, e.g. manually indexed systems.

- Architecture
- Integration
- Migration

Legacy Systems



Flow Chart of Transferring Business Objects (SAP Labs, Inc, 1999)