# *Enterprise Systems Inf. & Arch.*

## *Module Review & Exam Prep*

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## Module Content

1. IS / IT in the Enterprise
   - ✓ Role of IS/IT
   - ✓ Business Strategy & IT / The Value Chain
2. Enterprise Business Systems
   - ✓ ERP
   - ✓ SCM
   - ✓ CRM
3. Enterprise Application Integration
   - ✓ Goals
   - ✓ MOM
   - ✓ ESB
4. Enterprise Integration Technology
   - ✓ XML
   - ✓ XSD
   - ✓ XSL

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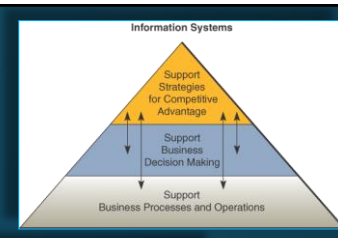
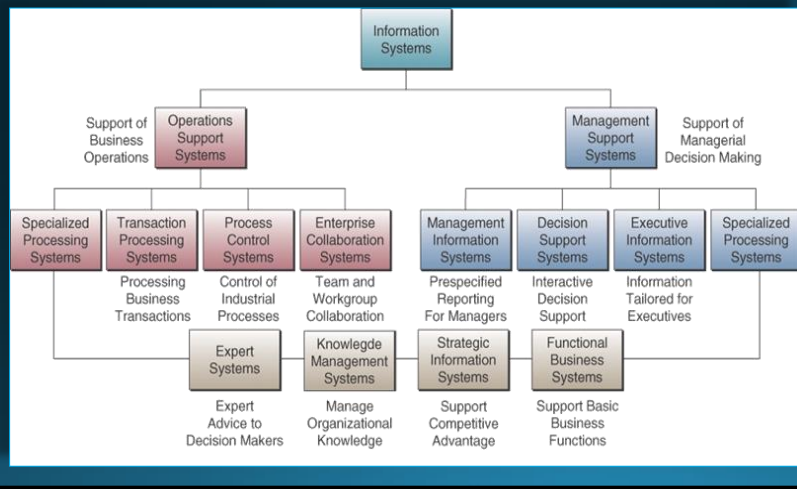
# IS / IT in the Enterprise

*Role of IS/IT*

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# IS / IT in the Enterprise

*Business Strategy & IT*

- Technology is no longer an afterthought in business strategy, but the cause and driver
- IT can change the way businesses compete
  - Porter's Competitive model & Business strategies
- A **strategic information system** is any information system that uses IT to help an organization…
  - Gain a competitive advantage
  - Reduce a competitive disadvantage
  - Or meet other strategic enterprise objectives
- **Value Chain** - a chain of basic activities that add value to its products and services

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## Enterprise Business Systems
*ERP*

A process of **managing all resources** and their use in the entire enterprise in a coordinated manner

ERP is a set of **integrated business applications**, or modules which carry out common business functions such as general ledger, sales forecasting….

Support business through optimizing, maintaining, and tracking **business functions**: HR, financial, manufacturing etc…

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## Enterprise Business Systems
*SCM*

**Supply chain management (SCM)**

The function of planning, organising and optimising the supply chain's activities.

**It consists of two areas:**

The *flow of materials, information, money and services* from raw material suppliers, through factories and warehouses, to the end customers

- Supply chains exist within businesses and between/across businesses

A *network of facilities* for procuring materials, transforming raw materials into finished products,' and distributing finished produce to customers.

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# Enterprise Business Systems
## *CRM*

**An enterprise-wide effort to acquire and retain customers.**

Includes a *one-to-one* relationship between a customer and a seller.

One simple idea "*Treat different customers differently*".

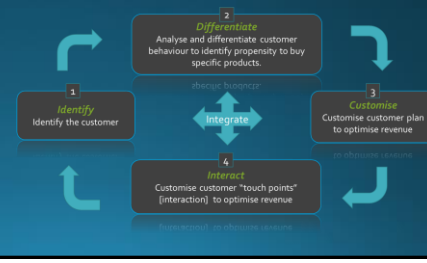
Helps keep profitable customers and maximizes lifetime revenue from them.

- Identify/acquire/retain most profitable prospects
- Acquisition is far more expensive that retention.

  Integrating information from sales, marketing, customer service and any other service points
- Also known as *touch points* – where the customer interacts with the organisation

**Therefore must provide analytical tools for determining *value, loyalty, profitability* of customers**

Assist in acquiring new customers, providing better service and support to customers, customize offerings to customer preferences, provide ongoing value to retain profitable customers

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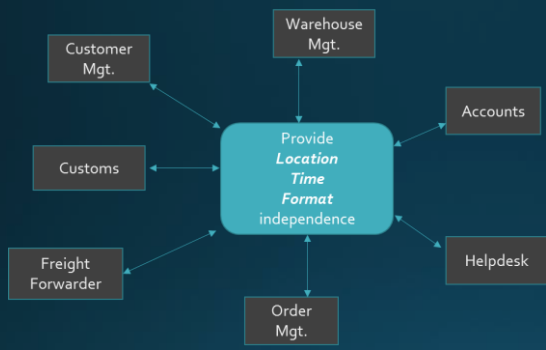


# EAI
## *Goals*

**Loose Coupling**

- ✓ Reduces brittleness
- ✓ Allows scalability
- ✓ Can allow additional processing without the need for systems development

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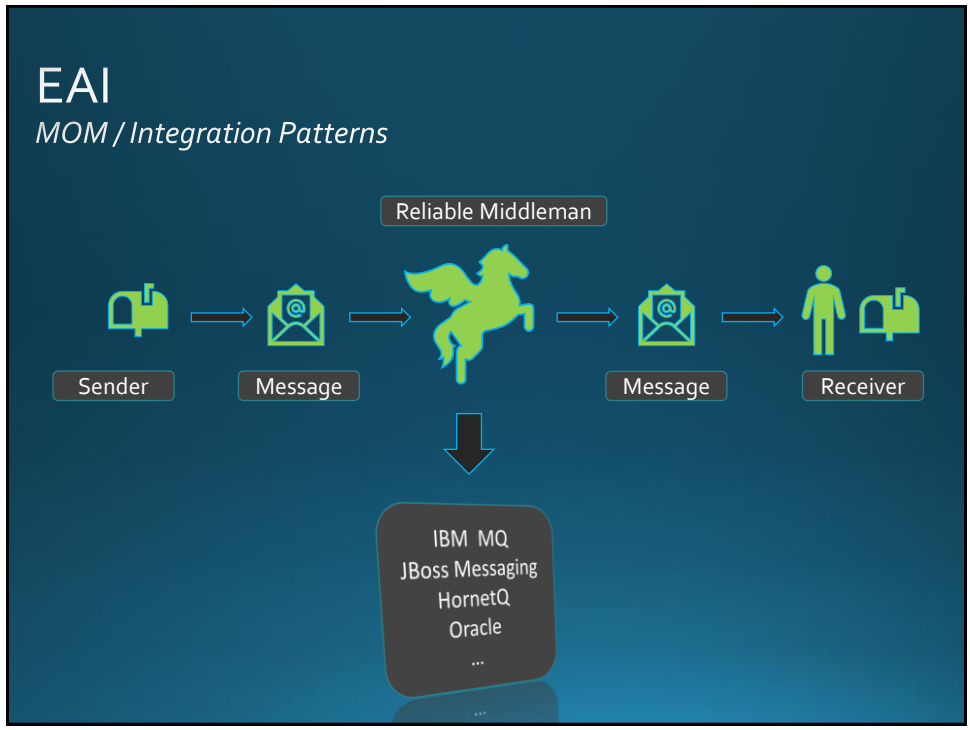
# EAI

*MOM / Integration Patterns*

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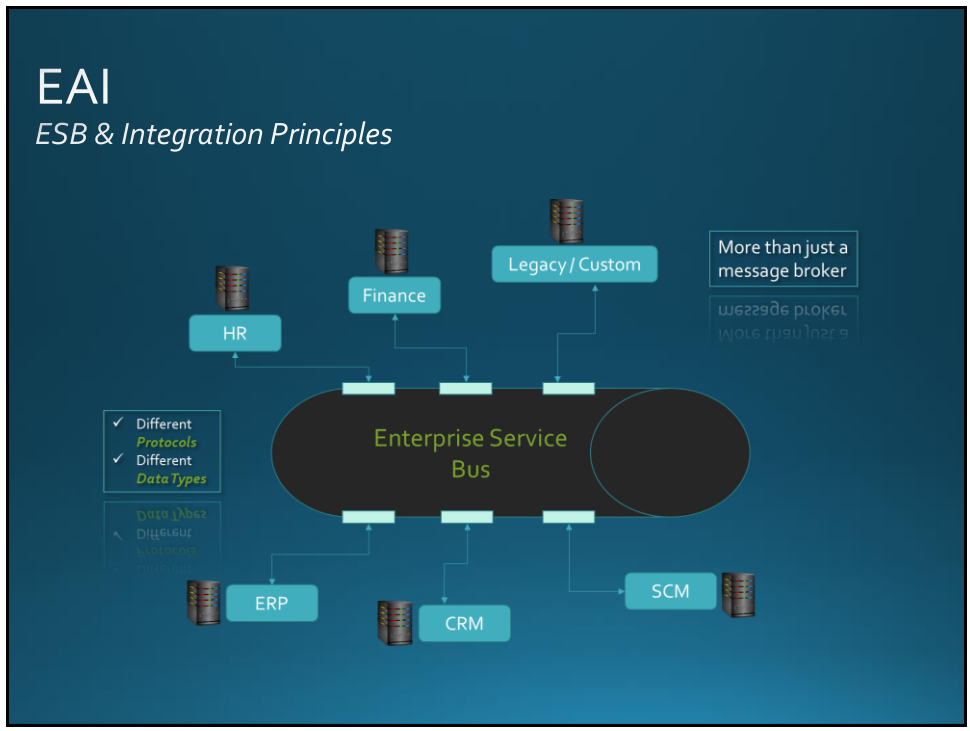
# EAI

*ESB & Integration Principles*

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## Enterprise Integration Technology
## *XML*

Stands for **EX**tensible **M**arkup **L**anguage

XML was designed to **carry data,** not to display data like HTML

XML tags are **not predefined**. You must define your own tags

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## Enterprise Integration Technology
## *XSD*

A **schema** is an XML document that defines the content and structure of one or more XML documents.

Alternative to Document Type Definitions (DTDs)

The XML document containing the content is called the **instance document.**

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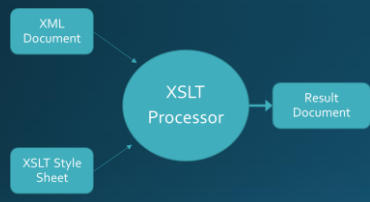
# Enterprise Integration Technology
## *XSL*




- **EXtensible Style sheet Language**
  - Developed by the W3C
- **XSLT**
  - **EXtensible Style sheet Language Transformation**
  - Used to ***transform*** *XML* content from one XML format to another
- **Xpath**
  - A declarative language used to ***locate*** information from an XML document and ***perform operations and calculations*** upon that content

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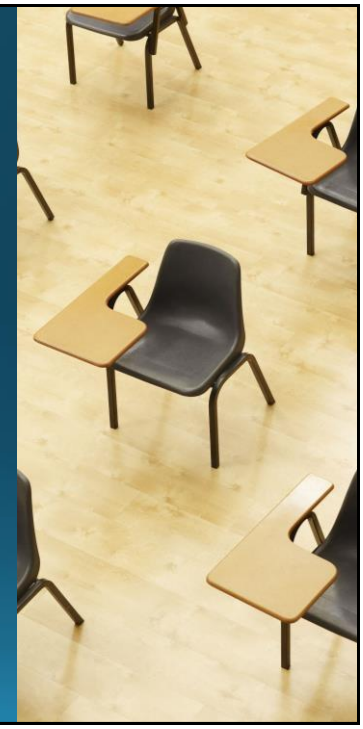
# Exam

**Answer 3 out of 4 questions**

- Each question carries equal marks (33 marks each, one complimentary mark)
- Read questions carefully and spend appropriate time on them.
- Be prepared…

**2 hours for the exam**

- 10 minutes to read paper / choose questions
- 33 minutes per question
- 10 minutes to re-read your answers



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# Sample Paper Question

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# Sample Question

Q. (a) *Enterprise Resource Planning (ERP) and Supply Chain Management (SCM)* are a set of business processes and activities that take place within an Enterprise. ***Using a manufacturing company as an example***, outline ***three*** processes/activities that would typically be required as part of either ERP or SCM.

***[5 Marks]***

(b) For ***each of the three*** examples that you have described in answer **(a)** above, explain how an ERP or SCM **software system** could provide functionality that would support those processes/activities.

***[10 Marks]***

(c) For ***each of the three examples*** that you have described in answer **(a)** above, explain how ERP / SCM **software system** functionality could enable increases in *Efficiency* and *Effectiveness* for those processes/activities.

***[9 x 2 Marks]***

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# Outline/Approach to Answer – Part (a)

***Question***

*Enterprise Resource Planning (ERP) and Supply Chain Management (SCM)* are a set of business processes and activities that take place within an Enterprise***. Using a manufacturing company as an example,*** outline ***three*** processes/activities that would typically be required as part of either ERP or SCM.

***[5 Marks]***

***Sample Answers***

- Sales Order Process – managing the activities of capturing and planning the delivery of products relating to a customer order.
- Monitoring Inventory – the levels of supplies, materials or finished products needs to be monitored so that there is sufficient quantities available at any given time.
- Supplier ordering – need to order and process the delivery of supplier's goods.

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# Outline/Approach to Answer – Part (b)

***Question***

For ***each of the three*** examples that you have described in answer **(a)** above, explain how an ERP or SCM **software system** could provide functionality that would support those processes/activities.

***[10 Marks]***

***Sample Answer for Sales Order Process:***

Functionality:

An ERP system would provide a user interface to allow operators to create and update customers sales order. This functionality would execute based on real time data from other departments such as inventory/warehousing, logistics and finance. E.g. an existing customer may have a good credit history and so can get favourable payment terms. Goods may be available immediately and can be shipped same day depending on inventory and logistics links. Functionality would also allow for automated creation of orders based on automated integration links with customer systems.

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# Outline/Approach to Answer – Part (c)

***Question***

For ***each of the three*** examples that you have described in answer **(a)** above, explain how ERP / SCM **software system** functionality could enable increases in *Efficiency* and *Effectiveness* for those processes/activities.

***[9 x 2 Marks]***

***Sample Answer for Sales Order Process:***

***Efficiency:*** Having such an (semi-)automated order creation system greatly streamlines the process for both the organisation and customers (less steps, checks and communication delays). User interfaces that use real-time information from other business departments/units means the turn around time for customers can be increased. This leads to increased customer satisfaction and greater visibility within the organisation.

***Effectiveness:*** The extent to which an ERP system can effectively manage the sales order process depends on the organisational approach. Having said that, businesses can adopt best practice, templated activities that an ERP system is designed to provide with the view of being capable of catering for different needs in different enterprises. You would expect an ERP system to be able to handle most of, if not all, the required activities in a manner which minimises the resources necessary to fulfil the requirement. Having a centralised system then means that the information captured and activities completed are available in real time to managers and decision makers.

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