

Different Information Systems and Their Role in Modern Business



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Content

This presentation aims to:

- Explain the role of Information systems in business
- Compare ERP, CRM and DSS
- Discuss ethical issues
- Analyse real business examples
- Recommend the most suitable systems for a growing business

Role of Information Systems in Business

What is an Information System?

Information systems combine people, hardware, software, data, and procedures to support business activities.

Importance in business:

- Improve efficiency by automating tasks
- Support decision-making through real-time data
- Enhance customer experience
- Create a competitive advantage

Small example

A coffee shop moving from cash-only payments to card machines can reduce waiting time and improve customer service.

(*Filip, 2007*)

Types of Information Systems

Short descriptions

System	Purpose
TPS	Records transactions
MIS	Produces reports
ERP	Integrates departments
CRM	Managers customers
DSS SCM	Supports decisions Controls supply chains

At the bottom:

ERP, CRM and DSS were selected because they address operational efficiency, customer experience and managerial decision-making.

(Miocevic, 2007; Filip, 2007)

ERP System

Functions

- Finance
- Inventory
- HR
- Procurement

Benefits

Reduces duplicated data

Improves coordination

Provides real-time information

Limitations

- High cost
- Long implementation period

Practical example

The lecture mentioned automated production at Mini Cooper factories, where robotics significantly reduces production time.

(Bhattacharya et al., 2023; SAP, 2025)

CRM System

Functions

- Customer databases
- Loyalty programmes
- Marketing campaigns

Benefits

- Personalised services
- Improved customer retention

Limitations

- Privacy concerns
- Staff training requirements

Example

Tesco Clubcard tracks customer purchasing patterns and provides targeted promotions.

Amazon customer service can immediately access customers' order history.

(Miocevic, 2007)

DSS System

Functions

- Forecast demand
- Evaluate alternatives
- Analyse risks

Benefits

- Better strategic planning
- Faster managerial decisions

Limitations

- Depends on High-quality data

Example

Managers can analyse seasonal sales trends and predict future demand.
(Yeoman, 2009; Chen et al., 2012)

Comparison of ERP, CRM and DSS

Criteria	ERP	CRM	DSS
Main users	Entire company	Marketing & Sales	Manafers
Cost	High	Medium	Medium-High
Customer focus	Moderate	High	Low
Decision support	Moderate	Low	High
Complexity	High	Medium	Medium

Consultant evaluation

ERP improves internal efficiency.

CRM enhances customer satisfaction

DSS supports strategic growth

Ethical Considerations

Data privacy

GDPR compliance

Security

Encryption Access control

AI bias

Unfair recruitment decisions

Employee monitoring

Warehouse tracking systems

Mitigation

- AI audits
- Staff training
- Human supervision

(Kunebelakere Siddappa et al. 2025; Siau and Wang, 2020, Calder 2023)

Case Studies

Amazon

Challenge

Managing millions of orders

Solution

ERP+DSS

Ethical issue

Employee monitoring

Impact

Faster deliveries

Starbucks

Challenge

Increasing customer loyalty

Solution

CRM

Ethical issue

Customer data collection

Impact

Personalised offers

(Salesforce, 2025; Filip, 2007)

Consultant Recommendation

This is probably the most important slide, according to your lecturer
Imagine you are presenting to the company's directors.

Recommended approach

Phase 1- CRM

Immediate improvement in customer relationships

Phase 2- ERP

Integrates finance, inventory and operations

Phase 3- DSS

Supports long-term decision-making

Why?

CRM provides quick results at a lower cost

ERP increases operational efficiency

DSS helps managers make data-driven decisions

Our consultation team recommends implementing CRM FIRST, followed by ERP and DSS, because this combination offers the best balance between cost, efficiency and business growth.

This recommendation should come from AI. The lecturer repeated this several times.

(Filip, 2007; Yeoman, 2009; Paul et al., 2024; Erl and Barcelo, 2024)

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Thank you!