

Group presentation on Different Information System

Module: Managing Business Information

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Introduction - The Role of Information Systems

Information Systems (IS) are systems that collect, store, and process information to help a business work better (Laudon & Laudon, 2022).

Why they are important:

Improve daily work efficiency

Help managers make better decisions

Improve customer service

Give competitive advantage

Modern businesses need information systems to survive in digital markets (Bocij et al., 2020).

Transaction Processing Systems TPS & MIS

Record daily activities (sales, payroll, stock)

Work fast and reduce mistakes

Provide basic data for the company
(Stair & Reynolds, 2021)

Management Information Systems (MIS)

Turn data into reports

Help managers check performance

Support short-term decisions
(O'Brien & Marakas, 2019)

Decision Support Systems (DSS)

Help managers make difficult decisions

Analyse data and give forecasts

DSS reduce risk and improve planning (Power, 2020).

Business Benefit:

Better strategic decisions

More accurate predictions

Stronger market position
(Sharda et al., 2023)

Enterprise Resource Planning (ERP)

ERP Systems

Connect all departments (finance, operations)

Use one shared database

ERP improves teamwork and saves time (Monk & Wagner, 2019).

Benefits:

Better communication

Real-time information

Lower costs

Customer Relationship Management (CRM)

Store customer information

Manage sales and marketing

CRM helps companies keep customers and increase profit (Chaffey & Ellis-Chadwick, 2019).

Impact:

Better customer service

More sales

Stronger competitive advantage

Recommendation & Conclusion

Use **ERP** (Enterprise Resource Planning) to improve internal operations

Use **CRM** (Customer Relationship Management) to improve customer relationships

Use **DSS** (Decision Support Systems)to support business growth

Conclusion:

Using the right information systems helps the company:

Work more efficiently

Make better decisions

Improve customer satisfaction

Stay competitive

Information systems must support business strategy (Laudon & Laudon, 2022).

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Analyzing and Comparing Information Systems

Analysis and Comparison of information Systems.

Exploring ERP, CRM and DSS for business success.

ERP (enterprise resource planning)

Definition:

ERP systems integrate core business functions in to 1 unified system, helping businesses streamline processes and improve information flow across departments.

Key functions:

- ▶ Centralised financial management
- ▶ HR management
- ▶ Inventory control
- ▶ Supply chain management

Benefits:

- ▶ Integration of departments
- ▶ Improved data accuracy and real-time reporting
- ▶ Streamline operations

Limitations:

- ▶ High implementation cost
- ▶ Complex training required
- ▶ Risk of business disruption during transition

Best for:

Businesses requiring enterprise-wide integration, especially those with complex operations or those in growth stages.

CRM (Customer Relationship Management)

Definition:

CRM systems focus on managing customer interactions and improving customer loyalty, sales, and service.

Key Functions:

- ▶ Sales tracking and management
- ▶ Customer service report
- ▶ Marketing automation
- ▶ Customer data analysis

Benefits:

- ▶ Enhanced customer retention
- ▶ Improved sales targeting and forecasting
- ▶ Personalised communication and service

Limitations:

- ▶ Data quality issues if improperly managed
- ▶ Risk of customer privacy concerns
- ▶ Subscription fees can be expensive for smaller businesses

Best for:

Businesses focused on customer engagement, sales growth, and improving customer service interactions.

DSS (Decision Support Systems)

Definition:

DSS systems are designed to assist with decision-making by providing tools for analysis, scenario modelling, and forecasting.

Key Functions:

- ▶ Data analysis and reporting
- ▶ Decision making and simulation
- ▶ Forecasting future trends
- ▶ Risk assessment

Benefits:

- ▶ Helps management make data-driven decisions
- ▶ Improves planning and strategic decisions
- ▶ Reduces uncertainty with scenario analysis

Limitations:

- ▶ Dependant on data accuracy
- ▶ Can be complex and expensive
- ▶ Over-reliance on the system might undermine human judgement

Best for:

Organisations requiring advanced data analytics to support strategic decision-making.

Summery and Key Takeaways

Key Takeaways:

- ▶ **ERP** improves efficiency by integrating business functions but can be costly and disruptive.
- ▶ **CRM** enhances customer engagement and sales growth but must be carefully managed to ensure data security.
- ▶ **DSS** supports better strategic decisions through data analysis, but it requires high-quality data and may create over-reliance on technology.

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Ethical considerations



- ❑ Data privacy is the fair and proper use of people's data in a secured and safety manner. According to the GDPR, businesses should only collect data that is necessary for their functions.
- ❑ Furthermore, systems should be built to be privacy by default, only giving access to data to the essential people and removing that data from systems once that is no longer required (del Real & De Busser, 2025).
- ❑ Effective data governance involves making identifiable data owners, training staff, and monitoring systems, all of which will lead to a reduction in the risk of data damage and reputational harm (Buckley et al., 2024).

COLLECT

→ STORE

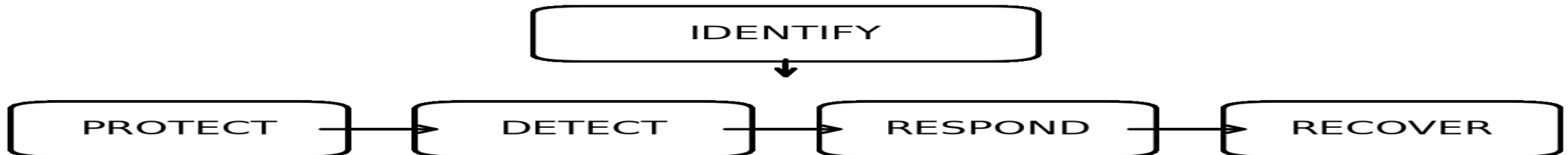
→ USE

→ SHARE

→ RETAIN

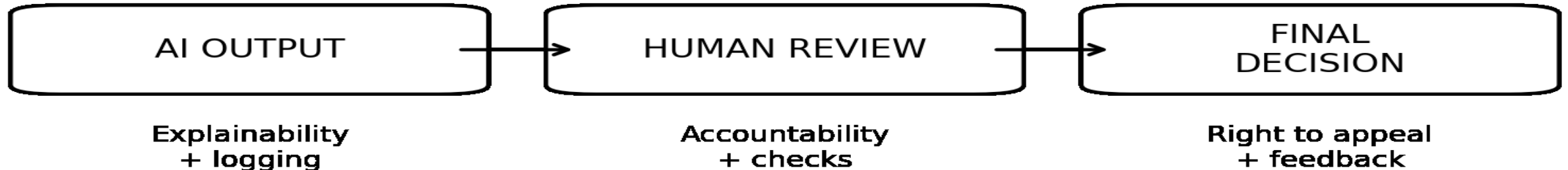
→ DELETE

- ❑ Ethically cybersecurity is not an extra, attacks can harm the customer and will let the service to shutdown.
- ❑ Manage Risk Using Framework – Identify what you need to protect, Protect it, Detect, Respond, and Recover (NIST, 2024)
- ❑ Things like multi-factor authentication, least-privilege access, encryption, redundant security patches, API security, and backups that have been tested protection are good controls.
- ❑ Ensure critical systems are segmented so a single breach cannot propagate. Adopt the information security management system approach (ISO 2022).
- ❑ Establish a plan for incidents, including roles and responsibilities, contact lists, and reporting procedures (NIST, 2024).



decision-making: transparency & accountability

- ❑ While AI may assist with decision-making, it can also create decisions that are unfair or even dangerous if used incorrectly.
- ❑ In critical decisions, such as hiring, lending, and pricing, the outcome must be reviewed and signed off on by a human being (European Union, 2024).
- ❑ Increase the transparency of the AI systems by logging the training data, the purpose of the AI system, and the boundaries of the model, and provide individuals with the right to challenge and appeal the reported results (European Union, 2024).



Employee monitoring & surveillance ethics

- ❑ Modern systems can monitor employees' activity through screen recording, keystrokes and location data. Such methods may be secretive and overly invasive (Brinson et al., 2024).
- ❑ For effective and ethical monitoring, certain criteria must be met (Laksanadjaja, 2024).
- ❑ The staff must be made aware of what data will be collected, why and for whom it will be used (Buckley, et al., 2024).
- ❑ The data collected should be strictly used for organizational purposes only and not misused to discipline staff members.
- ❑ Finding the right balance between the interests of the organization and the dignity and privacy of its staff is essential (Brinson et al., 2024).

Bias, fairness & mitigation controls

- ❑ Bias is when a system produces unfair outcomes for certain groups. This can come from bad data, proxy variables, and biased rules within the system (Ebrahimi 2025).
- ❑ Furthermore, determining how the results will affect different groups and running impact assessments on high-risk systems will help ensure that the model is safe and appropriate for the data (European Union, 2024).
- ❑ Maintaining audit logs and requiring change approvals will allow better study of the outcomes and remaining vigilance.
- ❑ Building fair systems will increase the level of trust and the performance of the systems in the long term (Hasanzadeh et al., 2025)



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