

MODERNISING BUSINESS OPERATIONS USING IS

Programme: BA (Hons) Leadership and Management Skills for the Workplace
Module: Managing Business Information (LCLM 5004)
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SLIDE AGENDA



Welcome Message

We appreciate your time to discuss how we may optimize our business performance using information systems.

Presentation Scope:

Developing highly actionable strategies for integrating core electronic systems, managing transformation timing, and addressing digital compliance.



Our Agenda

- Overview: Definitions of IS (Business viewpoint & Technical viewpoint).
- Major Systems: ERP, CRM, & DSS — Deep dive.
- Comparison Table: System features/functions, advantages/disadvantages.
- Ethics and Data Protection: Employee Monitoring, AI bias, security, GDPR compliance.
- Empirical Evidence: Target Corporation & Hershey's case studies.
- Strategic Action Plan: Recommendations & Q&A Session.

WHAT ARE IS?



From a Technical Standpoint

"All of the various elements which gather, obtain, treat, store, and disperse data so that it may be utilized to aid in making decisions and controlling within an entity (Laudon and Laudon, 2021)."

Focuses primarily on hardware architectures, database structures, security protocols, and operational workflows.



From the Viewpoint of the Business

A business management and organizational strategy for addressing challenges brought about by the business environment.

Strategic Benefits:

- Operational Efficiencies: The elimination of manually performed operations via automation.
- Competitive Advantage: Enhanced response times through the use of real-time insights.

MAJOR SYSTEM #1 — ENTERPRISE RESOURCE PLANNING (ERP)



Enterprise Resource Planning

Definition: Software that integrates all aspects of an organization's primary functions (finance, HR, manufacturing, supply chain) into a centralized database (Davenport, 1998).

- Centralized design of system that removes isolated data silo locations.
- Real-time insight into an organization's internal supply chain and accounting.
- Cross-functional processes executed automatically throughout departments (e.g. Sales automatically adjusts inventory).

In Practice Example: Before placing a bulk purchase client order, a production firm verifies whether they have sufficient raw materials in its warehouse via an ERP system.



MAJOR SYSTEM #2 — CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

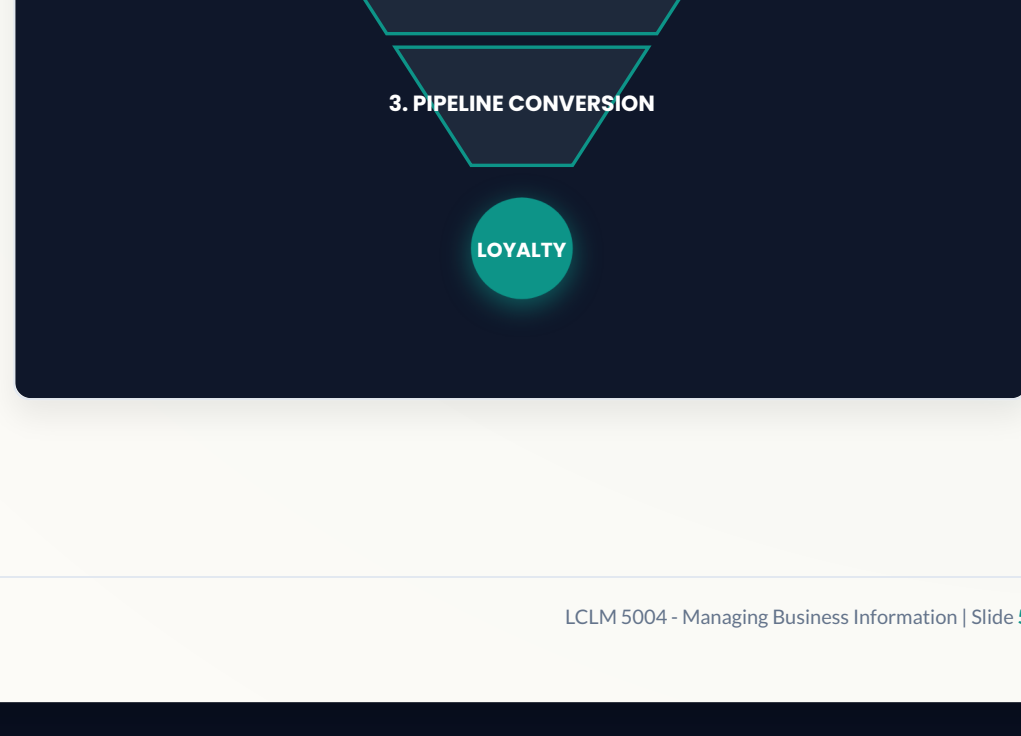


Customer Relationship Management

Definition: An integrated system designed to track and handle all forms of communications with clients as well as potential sales contacts at every stage of their relationship life cycle (Payne and Frow, 2013).

- Contact Management: Collectively storing records of past communications with customers.
- Tracking of Sales Pipelines: Monitoring of leads from the point of initial connection to ultimate sale.
- Targeted Segmentation of Clients: Grouping clients for tailored advertising efforts.

In Reality Example: Retailers utilize CRM databases to monitor consumer spending patterns and send personalized birthday coupons to enhance customer loyalty.



MAJOR SYSTEM #3 — DECISION SUPPORT SYSTEMS (DSS)



Decision Support Systems

Definition: Interactive computer-based systems developed to assist managers and/or other decision makers to develop useful datasets and models to resolve unstructured or partially structured business problems (Shim et al., 2002).

- What-if Analyses: Simulate effects resulting from variations in different factors (for example, changes in gas prices).
- Data Visualization Dashboards: Transform complex raw data produced from analytical studies into visually accessible charts.



Operational Example & Practical Value

A logistics manager utilizes DSS to examine current weather conditions, traffic patterns, and pricing for transport carriers.

Analytical Output:

Enables the dispatch department to automatically identify the most economical route for shipping goods, ensuring consistent customer service.

COMPARISONS AMONG ERP, CRM, AND DSS

System Type	Primary Function / Role	Principal Benefit	Main Drawback
ERP (Enterprise Resource Planning)	Integration and centralization of internal processing activities and data.	Removes communication barriers among divisions; ensures a "single version of the truth".	Initial costs for acquiring ERP software are very high; setup periods are typically lengthy and complicated.
CRM (Customer Relationship)	Manage client relationships and sales pipelines.	Enhances client retention rate while increasing average purchase price.	Has extreme reliance upon employees inputting correct client data.
DSS (Decision Support System)	Statistical model building, predictive analytics, and strategic planning analysis.	Provides managerial staff with data-driven forecast capabilities for difficult issues.	May generate inaccurate predictions if the initial assumptions used are flawed.

RISKS REGARDING ETHICS, PRIVACY & SECURITY



Core Security & Monitoring Risks

- Data Security & Confidentiality: Centralized databases represent prime objectives for hackers. Both regulatory requirements and ethical responsibilities compel us to protect data.
- Employee Monitoring: Assessing productivity continuously through ERP/CRM metrics can adversely affect morale and create workplace stress (Zuboff, 2015).
- Algorithmic Bias: Forecasting models inherit pre-existing human prejudices if trained on historical decision data with underlying biases.



Methods for Mitigating These Risks

- Employ multi-factor authentication (MFA) and encrypt data to safeguard against unauthorized access.
- Remain compliant with GDPR regulations as well as local legislation regarding protection of personal data.
- Put "human-in-the-loop" protocols in place to audit each decision made using an AI algorithm prior to applying those decisions.

EMPIRICAL CASE STUDIES



Target CRM (CRM Predictive Analysis)

The Application: Target applied predictive analysis using client transaction history to identify pregnancies and target relevant coupons.

The Ethical Problem:

Backlash occurred when consumers perceived that Target invaded their private lives by using transactional history to send pregnancy baby coupons. This illustrates the line between marketing and client monitoring.



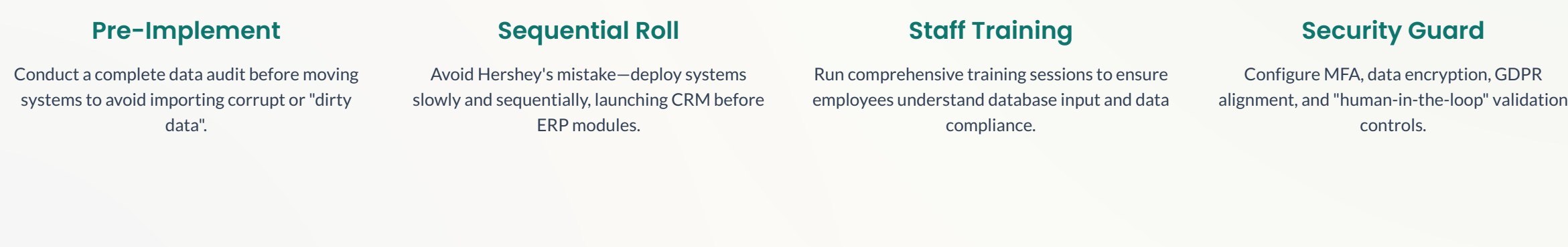
Hershey's ERP (Implementation Failure)

The Application: Hershey's attempted to implement three separate ERP systems simultaneously just prior to their peak holiday season.

The Operational Problem:

Delays in system setup resulted in thousands of unfilled customer orders over Halloween weekend, dropping stock value. This highlights that change management and timing are as vital as selecting the technology.

RECOMMENDED COURSE OF ACTION



1. **Pre-Implement**: Conduct a complete data audit before moving systems to avoid importing corrupt or "dirty data".

2. **Sequential Roll**: Avoid Hershey's mistake—deploy systems slowly and sequentially, launching CRM before ERP modules.

3. **Staff Training**: Run comprehensive training sessions to ensure employees understand database input and data compliance.

4. **Security Guard**: Configure MFA, data encryption, GDPR alignment, and "human-in-the-loop" validation controls.

QUESTIONS & ANSWERS

OPEN DISCUSSION FORUM

We welcome any queries, analytical feedback, or requests for clarification regarding information systems, ethics, or strategic implementations.

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ACADEMIC REFERENCES

Author (Year)	Article / Book Details	Source Link
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