



A Consulting Recommendation Built on the LTA's Digital Transformation Journey

Comparing information systems, weighing ethical trade-offs, and drawing lessons from Britain's national governing body for tennis – The Lawn Tennis Association

Group Presentation | Business Information Systems

MODULE: LCLM5004 - Managing Business Information

1. Michael Elkin – 2431185
2. Vladislavs Suhankins - 2430395
3. Roberts Znotins - 2416071
4. Raquel – 2428509

Lecturer – Afzal Munna

Introduction

Information Systems collect, process and distribute information to support decision making, efficiency and competitive advantage. They are an essential part of any major company or organization and help to both grow and keep an organization at the forefront of their particular field.

The Case: The Lawn Tennis Association (LTA)

Britain's National Governing Body for Tennis — a real organization mid-way through a large-scale digital transformation

Annual turnover	Employees	Individual members
------------------------	------------------	---------------------------

£60M+		
--------------	--	--

	450+	
--	-------------	--

		250,000+
--	--	-----------------

Courts represented

23,000+

The challenge: the LTA's website and CRM had been hosted by an ageing, co-located datacentre, causing regular performance issues for players, members, and staff — the trigger for a full digital transformation programme.

(Delloite UK, 2025, Atech Support, 2025)

Benefits of information Systems

- Information systems collect, process and distribute information
- They improve organisational efficiency
- They support decision making
- They enhance customer experience
- They create competitive advantage

(Laudon & Laudon, 2020)

Types of Information Systems: An Overview

Transaction Processing System

Records routine, high-volume transactions — e.g. a court booking or a sale — with accuracy and speed.

Management Information System

Takes raw TPS data and organizes it into reports (e.g. daily bookings by region) for mid-level managers.

Decision Support System

Combines internal and external data with analytical tools to model, compare, and evaluate options.

Executive Support System

Gives senior leaders dashboards and summarized data to guide long-term, unstructured strategic decisions.

Transaction processing systems (TPS)

TPS handle a business's routine daily operations — like billing, orders, payroll, and reservations — and their key strength is processing large volumes of simple transactions quickly and accurately, as seen when a grocery checkout logs items, updates inventory, and takes payment in seconds.

Management information systems (MIS)

MIS turn raw TPS data into organized reports (e.g., daily sales by region or product), helping mid-level managers monitor performance and make routine operational decisions about staffing, supply, or budgeting — its focus is keeping current operations on track, not long-term forecasting.

Decision support systems (DSS)

DSS help organizations work through complex or unclear decisions by combining internal and external data (like market trends, regulations, and economic forecasts) with tools to compare options, simulate changes, and highlight risks — rather than giving a final answer, they support the thinking process, as when a transportation company uses one to plan cost-effective delivery routes based on fuel prices, road conditions, and vehicle availability.

Comparing the Three Systems

	Transaction processing systems (TPS)	Management information systems (MIS)	Decision support systems (DSS)
Decision Level	Operational	Managerial	Strategic
Main Benefit	Fast processing	Better reporting	Better decisions
Main Limitation	Only routine tasks	Depends on TPS data	High cost & complexity
Relative Complexity	Medium	High	High

(Maylor, 2010, Heerkens, 2002)

Ethical Considerations

Introducing new information systems isn't just a technical decision — it carries real ethical responsibilities.

Data Privacy & Security

Organisations collecting personal data have a duty to protect it, following "privacy by design" — building in safeguards from the start. For the LTA, this means their Azure CRM needs strong access controls, encryption, and a breach-response plan to prevent reputational and legal harm from a data leak.

AI Decision-Making

AI tools like Infosys Topaz risk being a "black box," producing outputs without clear explanation. The framework calls for explainability — the LTA should be able to plainly describe what drives its AI-generated player insights or fan content, rather than leaving the logic a mystery.

Employee & Player Monitoring

Performance-tracking tools can overreach if data collected for one purpose (e.g. coaching) is quietly reused for another (e.g. performance decisions) without informing people. The framework's "purpose limitation" principle requires genuine, informed consent — not just a one-time formality.

Ethical Considerations

Bias

AI systems can unintentionally repeat unfair patterns from their training data — relevant for anything analysing player or fan behaviour, since imbalanced historical data can produce imbalanced results. The framework recommends regularly testing for uneven outcomes rather than assuming automation means neutrality.

Key mitigations

Build in privacy from the start, keep humans in the loop for impactful AI decisions, regularly test for bias, stay transparent about data use, limit how monitoring data is used, and run independent security and bias audits.

“Just because you can do something doesn’t mean you should.” — LTA leadership on prioritising real user needs over technology for its own sake.

Real-World Impact:

TPS: NBA & NFL Biometric Tracking

Wearables and medical records turn every training session into a structured transaction

How it's used: League wearables capture heart-rate, GPS, and injury telemetry every session, feeding structured medical records and per-club dashboards (Karkazis & Fishman, 2016).

MIS: IBM/Wimbledon & Infosys Courtvision

Live match data becomes scheduled stats, highlights, and fan dashboards in ~4 seconds

How it's used: Shot type, position, and serve speed are captured live and converted into match stats, momentum graphs, and highlight reels within roughly four seconds (Nott, 2014).

DSS: Amazon, Netflix & Starbucks

Internal and external data combine to support semi-structured, what-if decisions

How it's used: All three combine internal TPS/MIS data with external signals for predictive decisions — pricing and inventory (Amazon), content greenlighting (Netflix), staffing and demand (Starbucks) (Joel & Oguanobi, 2024).

KEY TAKEAWAY FOR LTA

Modernising a national governing body's information systems

The Challenge

Ageing, co-located datacentre infrastructure caused regular performance issues for the LTA's website and CRM, limiting access for staff and members.

The Solution

Migrated to a scalable Microsoft Azure cloud platform with partner Atech, and built the LTA Play integration platform on MuleSoft to unify bookings nationally.

The Ethical Issue

AI tools like Infosys Topaz raise questions about data privacy and algorithmic transparency in player and fan insights, requiring clear explainability safeguards.

References

Heagney, J. (2016) *Fundamentals of Project Management*. 5th edn. New York: AMACOM.

Heerkens, G.R. (2002) *Project Management*. New York: McGraw-Hill.

Kaimini, S., Sneed, R. and Wysocki, R.K. (2014) *Effective Project Management: Traditional, Agile, Extreme*. 7th edn. Indianapolis, IN: Wiley.

Maylor, H. (2010) *Project Management*. 4th edn. Harlow: Pearson Education.

Project Management Institute (2017) *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. 6th edn. Newtown Square, PA: Project Management Institute.

Roberts, P. (2011) *Effective Project Management*. London: Kogan Page.

Laudon, K.C. and Laudon, J.P. (2020) *Management Information Systems: Managing the Digital Firm*. 16th edn. Harlow: Pearson.

References for the LTA case study

Atech Support (2025) Lawn Tennis Association Digital Transformation with Atech Support.

Deloitte Digital (2025) The LTA Opens Up Tennis to New Audiences.

Deloitte UK (2025a) The LTA: How Tech is Helping to Open Up Tennis.

Deloitte UK (2025b) Acing the LTA's Digital Transformation Journey.

Deloitte Insights (2023) The LTA Elevates its Game with Digital Engagement Tools.

PR Newswire (2025) Infosys and LTA Sign Strategic Technology Partnership.

GOV.UK. Data and AI Ethics Framework (updated 18 December 2025). [gov.uk/government/publications/data-ethics-framework/data-and-ai-ethics-framework](https://www.gov.uk/government/publications/data-ethics-framework/data-and-ai-ethics-framework)

