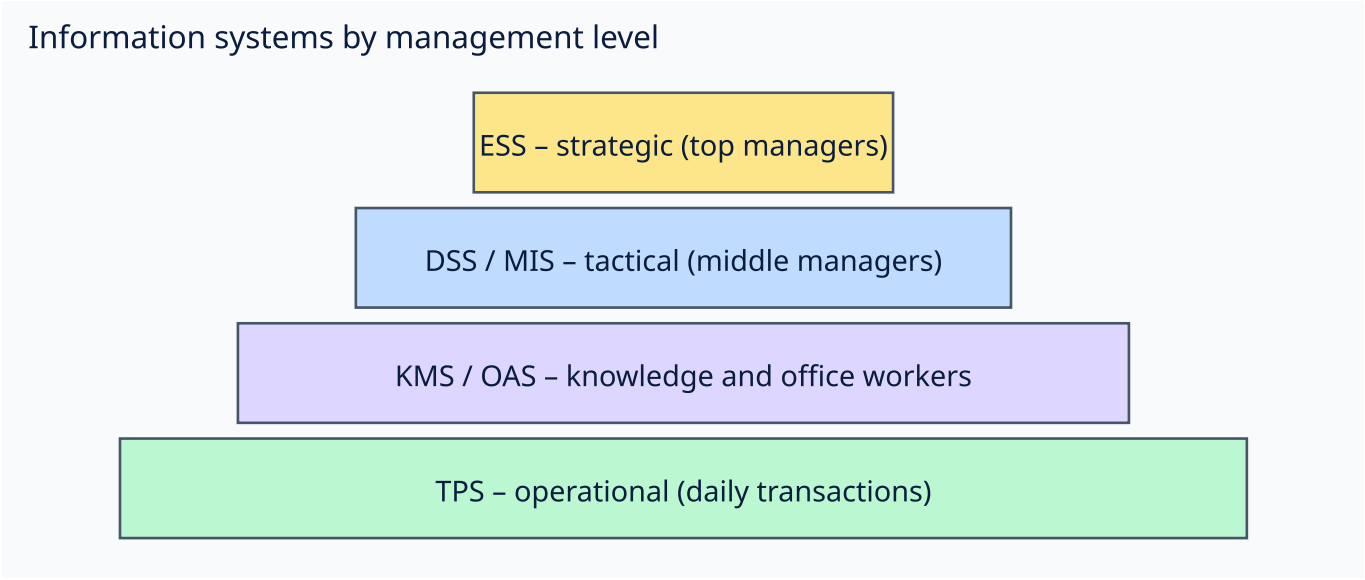
Grade 12 A/L ICT · Lesson 7

7.2 Types of Information Systems

Syllabus 7.2. Organisations use different **manmade information systems** for different objectives. You compare **OAS, TPS, MIS, DSS, ESS, GIS, KMS, CMS, ERP** and **smart systems** by who uses them and what they do.

1. Systems by management level



Information systems pyramid

System	Objective / function	Example
OAS	Office productivity: documents, email, scheduling	Word processor, shared calendar
TPS	Record day-to-day transactions accurately	Supermarket POS, ATM
MIS	Summary reports for middle managers	Monthly sales report
DSS	Models and what-if analysis for semi-structured decisions	Loan approval model
ESS	Dashboards for strategic decisions by top managers	CEO KPI dashboard
GIS	Store and analyse location (map) data	Flood-risk map
KMS	Capture and share organisational knowledge	Company wiki, FAQ base
CMS	Create and manage website content without coding	WordPress
ERP	Integrate all departments in one database	SAP, Odoo
Smart system	Sensors + AI to act automatically	Smart traffic lights

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2. How they link

A **TPS** produces the raw data; an **MIS** summarises it; a **DSS** uses it in models; an **ESS** shows key trends to top management. **ERP** joins these across departments.

> 🧱 **Worked example: A supermarket chain: name the system for (a) each sale, (b) weekly branch report, (c) choosing where to open a new branch.**
> (a) **TPS** (POS). (b) **MIS**. (c) **DSS** with **GIS** location data; the CEO sees the result on an **ESS** dashboard.

> 💡 Remember the ladder: TPS (operations) → MIS (control) → DSS (analysis) → ESS (strategy).

> 🚀 **Beyond the syllabus (2026 update)** *Not required for the exam – read for interest.* In 2026 many ERP and CMS products include generative-AI assistants that draft reports and pages.

Key Words

Office Automation System – Tools for office work like documents and email.

Transaction Processing System – Records routine daily transactions.

Management Information System – Produces summary reports for managers.

Decision Support System – Uses models for what-if decision analysis.

Executive Support System – Dashboards for strategic top-level decisions.

Geographical Information System – Stores and analyses map-based data.

Knowledge Management System – Captures and shares expert knowledge.

Content Management System – Manages website content without coding.

Enterprise Resource Planning – Integrates all departments in one system.

Smart system – Uses sensors and AI to act automatically.

Dashboard – Visual summary of key indicators.

What-if analysis – Testing results of changing input values.

Sample Q&A

1. What is the main job of a TPS?

> **Answer:** To record routine transactions accurately and quickly.

2. MIS vs DSS?

> **Answer:** MIS gives regular summary reports; DSS supports specific decisions with models.

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3. Who uses an ESS?

> **Answer:** Top (strategic) managers.

4. Give a use of GIS.

> **Answer:** Mapping flood-risk areas or planning bus routes.

5. Why use ERP?

> **Answer:** One shared database removes duplicate data between departments.

6. What is a CMS?

> **Answer:** Software to create and manage web content, e.g. WordPress.

MCQ

1. A supermarket POS that records each sale is a

A. TPS
B. ESS
C. GIS
D. CMS
E. KMS

2. Monthly summary reports for middle managers come from a

A. OAS
B. MIS
C. TPS
D. CMS
E. smart system

3. What-if analysis for a loan decision uses a

A. DSS
B. TPS
C. KMS
D. CMS
E. OAS

4. A CEO KPI dashboard is an

A. TPS
B. OAS
C. ESS
D. GIS
E. CMS

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5. Analysing flood-risk maps uses a

A. OAS
B. GIS
C. TPS
D. ERP
E. CMS

6. WordPress is an example of a

A. DSS
B. GIS
C. TPS
D. CMS
E. ESS

7. One integrated database for HR, finance and stock is

A. ERP
B. GIS
C. OAS
D. DSS
E. KMS

8. Smart traffic lights that adapt using sensors are a

A. CMS
B. closed TPS
C. KMS only
D. OAS
E. smart system

9. Which term means: “Tools for office work like documents and email”?

A. Office Automation System
B. Dashboard
C. Management Information System
D. Geographical Information System
E. Content Management System

10. Which term means: “Records routine daily transactions”?

A. What-if analysis
B. Transaction Processing System
C. Knowledge Management System
D. Decision Support System
E. Enterprise Resource Planning

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11. Which term means: “Produces summary reports for managers”?

A. Smart system
B. Office Automation System
C. Executive Support System
D. Management Information System
E. Content Management System

12. Which term means: “Uses models for what-if decision analysis”?

A. Geographical Information System
B. Transaction Processing System
C. Dashboard
D. Enterprise Resource Planning
E. Decision Support System

13. Which term means: “Dashboards for strategic top-level decisions”?

A. Smart system
B. What-if analysis
C. Management Information System
D. Knowledge Management System
E. Executive Support System

14. Which term means: “Stores and analyses map-based data”?

A. Office Automation System
B. Geographical Information System
C. Dashboard
D. Content Management System
E. Decision Support System

15. Which term means: “Captures and shares expert knowledge”?

A. What-if analysis
B. Enterprise Resource Planning
C. Executive Support System
D. Knowledge Management System
E. Transaction Processing System

16. Which term means: “Manages website content without coding”?

A. Office Automation System
B. Smart system
C. Content Management System
D. Management Information System
E. Geographical Information System

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17. Which term means: “Integrates all departments in one system”?

A. Knowledge Management System
B. Decision Support System
C. Transaction Processing System
D. Enterprise Resource Planning
E. Dashboard

18. Which term means: “Uses sensors and AI to act automatically”?

A. Management Information System
B. Content Management System
C. Smart system
D. What-if analysis
E. Executive Support System

19. Which term means: “Visual summary of key indicators”?

A. Office Automation System
B. Enterprise Resource Planning
C. Dashboard
D. Geographical Information System
E. Decision Support System

20. Which term means: “Testing results of changing input values”?

A. Knowledge Management System
B. Smart system
C. Transaction Processing System
D. Executive Support System
E. What-if analysis

Structured Questions

1. Compare TPS and MIS. *(2 marks)*

> TPS records transactions (operational); MIS summarises them into reports (tactical).

2. Explain DSS with an example. *(2 marks)*

> Models and what-if for semi-structured decisions; e.g. pricing model.

3. State two features of an ESS. *(2 marks)*

> Summarised dashboards; external and trend data for strategy.

4. Why do firms adopt ERP? *(4 marks)*

> Integrates departments; single data source; reduces duplication; faster reporting.

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5. Match systems to a supermarket chain. *(4 marks)*

> POS = TPS; weekly report = MIS; new branch = DSS + GIS; CEO = ESS.

Summary

- TPS records daily transactions.
- MIS summarises for managers.
- DSS and ESS support decisions.
- GIS maps; KMS shares knowledge; CMS manages web content.
- ERP integrates; smart systems act with sensors.

MCQ answer key – 7.2

1. **A** – TPS.
2. **B** – MIS.
3. **A** – DSS.
4. **C** – ESS.
5. **B** – GIS.
6. **D** – CMS.
7. **A** – ERP.
8. **E** – Smart.
9. **A** – Office Automation System – Tools for office work like documents and email.
10. **B** – Transaction Processing System – Records routine daily transactions.
11. **D** – Management Information System – Produces summary reports for managers.
12. **E** – Decision Support System – Uses models for what-if decision analysis.
13. **E** – Executive Support System – Dashboards for strategic top-level decisions.
14. **B** – Geographical Information System – Stores and analyses map-based data.
15. **D** – Knowledge Management System – Captures and shares expert knowledge.
16. **C** – Content Management System – Manages website content without coding.
17. **D** – Enterprise Resource Planning – Integrates all departments in one system.
18. **C** – Smart system – Uses sensors and AI to act automatically.
19. **C** – Dashboard – Visual summary of key indicators.
20. **E** – What-if analysis – Testing results of changing input values.

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