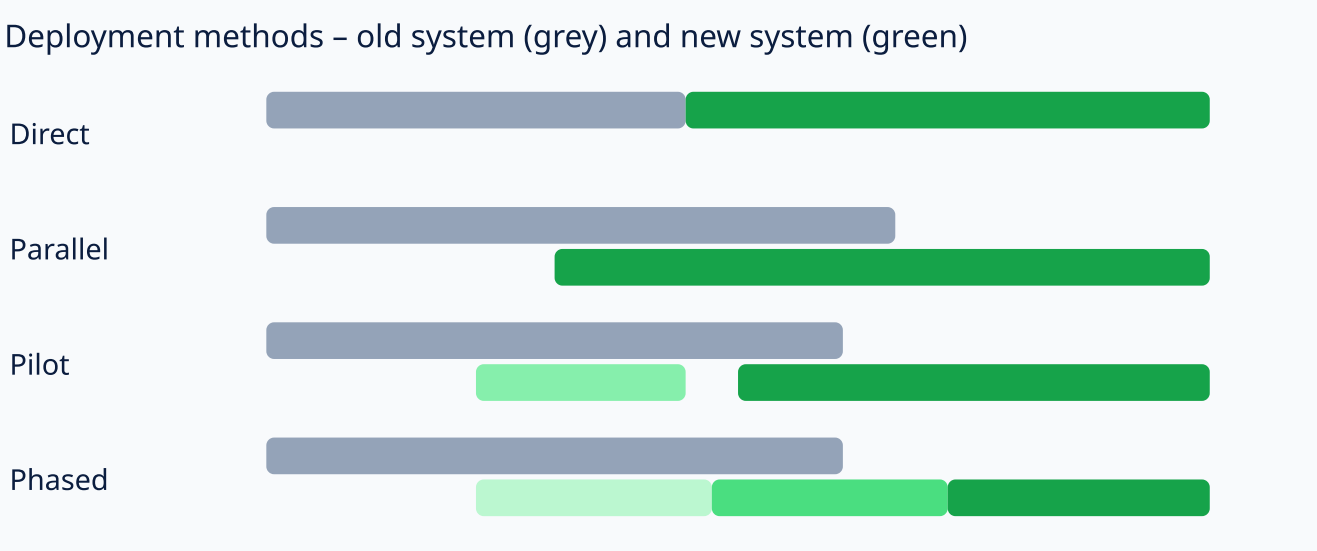
Grade 12 A/L ICT · Lesson 7

7.9 Deploying the System: Changeover, Training and Maintenance

Syllabus 7.9. Deployment puts the new system into use. You compare the four **changeover methods – direct, parallel, pilot and phased** – and describe **hardware/software installation, data migration, user training**, then **review, support and maintenance**.

1. Changeover methods



Deployment timelines

Method	How	Advantage	Disadvantage
Direct	Old system stops, new starts on one day	Fast, cheap	High risk if new fails
Parallel	Old and new run together for a period	Safe – outputs can be compared	Double work and cost
Pilot	New system used in one branch first	Problems found on a small scale	Slower to reach all sites
Phased	New system introduced module by module	Staff learn gradually	Takes a long time; interfaces needed

🧮 **Worked example: A bank has 20 branches and runs a pilot in 2. What percentage is in the pilot, and why choose pilot?**
2 ÷ 20 × 100 = **10%** of branches. Pilot limits risk: errors affect only 2 branches, then the system is rolled out to the other 18.

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2. Installation, migration and training

- Install and configure hardware, network and software.
- Data migration: convert, clean and load old data; verify record counts.
- User training: manuals, workshops, help desk.

3. Review, support and maintenance

Corrective
Fix bugs found after release.

Adaptive
Change for new laws, hardware or OS.

Perfective
Improve speed or add requested features.

Post-implementation review
Check the system met its objectives.

💡 Critical systems (hospital, bank) prefer parallel or pilot; small low-risk systems can go direct.

🚀 **Beyond the syllabus (2026 update)** *Not required for the exam – read for interest.* Cloud "blue–green" and canary releases in 2026 are modern versions of parallel and pilot changeover.

Key Words

Deployment – Putting a new system into operation.

Direct changeover – Old system replaced by new at once.

Parallel running – Old and new systems run together.

Pilot changeover – New system tried in one part first.

Phased changeover – New system introduced in stages.

Data migration – Moving data from old system to new.

User training – Teaching staff to use the system.

Installation – Setting up hardware and software.

Corrective maintenance – Fixing errors after release.

Adaptive maintenance – Changing for a new environment.

Perfective maintenance – Improving performance or features.

Post-implementation review – Evaluating the system after go-live.

Sample Q&A

1. Name four deployment methods.

Answer: Direct, parallel, pilot, phased.

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2. Why is parallel running safe?

> **Answer:** The old system is still available and outputs can be compared.

3. Main risk of direct changeover?

> **Answer:** If the new system fails there is no fallback.

4. What is data migration?

> **Answer:** Converting and transferring old data into the new system.

5. Pilot percentage for 2 of 20 branches?

> **Answer:** 10%.

6. Three types of maintenance?

> **Answer:** Corrective, adaptive, perfective.

MCQ

1. Old system stops and new starts on the same day is

A. acceptance testing
B. phased
C. direct changeover
D. pilot
E. parallel running

2. Running old and new together is

A. parallel running
B. unit testing
C. direct changeover
D. pilot
E. phased

3. Trying the new system in one branch first is

A. parallel
B. direct
C. pilot changeover
D. black box
E. phased

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4. Introducing payroll first, then stock, then sales is

A. direct
B. phased changeover
C. pilot
D. gap analysis
E. parallel

5. 2 pilot branches out of 20 is

A. 5%
B. 90%
C. 2%
D. 20%
E. 10%

6. Fixing a bug found after release is

A. adaptive maintenance
B. pilot
C. corrective maintenance
D. perfective maintenance
E. data migration

7. Updating software for a new tax law is

A. corrective maintenance
B. perfective maintenance
C. unit testing
D. adaptive maintenance
E. direct changeover

8. The most costly method in staff effort is usually

A. direct changeover
B. pilot in one room
C. a BSO
D. a feasibility study
E. parallel running

9. Which term means: “Putting a new system into operation”?

A. Data migration
B. Installation
C. Perfective maintenance
D. Deployment
E. Parallel running

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10. Which term means: “Old system replaced by new at once”?

A. Corrective maintenance
B. Direct changeover
C. Post-implementation review
D. Pilot changeover
E. User training

11. Which term means: “Old and new systems run together”?

A. Parallel running
B. Installation
C. Deployment
D. Phased changeover
E. Adaptive maintenance

12. Which term means: “New system tried in one part first”?

A. Perfective maintenance
B. Corrective maintenance
C. Data migration
D. Pilot changeover
E. Direct changeover

13. Which term means: “New system introduced in stages”?

A. Parallel running
B. Adaptive maintenance
C. Phased changeover
D. User training
E. Post-implementation review

14. Which term means: “Moving data from old system to new”?

A. Perfective maintenance
B. Data migration
C. Deployment
D. Pilot changeover
E. Installation

15. Which term means: “Teaching staff to use the system”?

A. User training
B. Phased changeover
C. Post-implementation review
D. Direct changeover
E. Corrective maintenance

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16. Which term means: “Setting up hardware and software”?

A. Installation
B. Deployment
C. Adaptive maintenance
D. Parallel running
E. Data migration

17. Which term means: “Fixing errors after release”?

A. User training
B. Corrective maintenance
C. Pilot changeover
D. Perfective maintenance
E. Direct changeover

18. Which term means: “Changing for a new environment”?

A. Post-implementation review
B. Parallel running
C. Phased changeover
D. Adaptive maintenance
E. Installation

19. Which term means: “Improving performance or features”?

A. Corrective maintenance
B. Data migration
C. Deployment
D. Pilot changeover
E. Perfective maintenance

20. Which term means: “Evaluating the system after go-live”?

A. Adaptive maintenance
B. User training
C. Direct changeover
D. Phased changeover
E. Post-implementation review

Structured Questions

1. Compare direct and parallel changeover. *(2 marks)*

> Direct fast/cheap/high risk; parallel safe/comparable/double cost.

2. Explain pilot and phased changeover with examples. *(2 marks)*

> Pilot: one branch first; phased: one module at a time.

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3. Describe activities in installation and data migration. *(2 marks)*

> Set up hardware/network/software; convert, clean, load, verify data.

4. Why is user training needed? Give two methods. *(2 marks)*

> Correct use and acceptance; manuals, workshops, online help.

5. Explain three types of maintenance. *(3 marks)*

> Corrective fixes bugs; adaptive suits new environment; perfective improves features.

Summary

- Four changeovers: direct, parallel, pilot, phased.
- Parallel safest; direct riskiest.
- Install, migrate data, train users.
- Review after go-live.
- Maintenance: corrective, adaptive, perfective.

MCQ answer key – 7.9

1. **C** – Direct.
2. **A** – Parallel.
3. **C** – Pilot.
4. **B** – Phased.
5. **E** – 2/20.
6. **C** – Corrective.
7. **D** – Adaptive.
8. **E** – Double work.
9. **D** – Deployment – Putting a new system into operation.
10. **B** – Direct changeover – Old system replaced by new at once.
11. **A** – Parallel running – Old and new systems run together.
12. **D** – Pilot changeover – New system tried in one part first.
13. **C** – Phased changeover – New system introduced in stages.
14. **B** – Data migration – Moving data from old system to new.
15. **A** – User training – Teaching staff to use the system.
16. **A** – Installation – Setting up hardware and software.
17. **B** – Corrective maintenance – Fixing errors after release.
18. **D** – Adaptive maintenance – Changing for a new environment.
19. **E** – Perfective maintenance – Improving performance or features.
20. **E** – Post-implementation review – Evaluating the system after go-live.

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