



Planning & system installation

IB Computer Science



Content developed by
Dartford Grammar School
Computer Science Department



HL Topics 1-7, D1-4



1: System design



2: Computer Organisation



3: Networks



4: Computational thinking



5: Abstract data structures



6: Resource management



7: Control



D: OOP

HL & SL 1.1 Overview

Planning and system installation

- 1.1.1 Identify the context for which a new system is planned.
- 1.1.2 Describe the need for change management
- 1.1.3 Outline compatibility issues resulting from situations including legacy systems or business mergers.
- 1.1.4 Compare the implementation of systems using a client's hardware with hosting systems remotely
- 1.1.5 Evaluate alternative installation processes
- 1.1.6 Discuss problems that may arise as a part of data migration
- 1.1.7 Suggest various types of testing

User focus

- 1.1.8 Describe the importance of user documentation
- 1.1.9 Evaluate different methods of providing user documentation
- 1.1.10 Evaluate different methods of delivering user training

System backup

- 1.1.11 Identify a range of causes of data loss
- 1.1.12 Outline the consequences of data loss in a specified situation
- 1.1.13 Describe a range of methods that can be used to prevent data loss

Software deployment

- 1.1.14 Describe strategies for managing releases and updates



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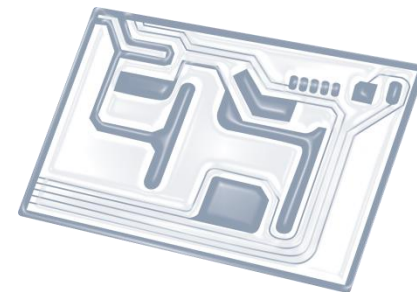


7: Control

D: OOP



Topic 1.1.5



Evaluate alternative **installation processes**



Changing? **4** alternatives

When **implementing/installing a new system** or piece of software, there are 4 alternatives of doing it:

- Direct changeover
- Parallel running
- Pilot running
- Phased conversion





Exam note!

This curriculum point requires you to **evaluate** the different options.

That is exam speak for **knowing/discussing advantages, disadvantages** and for **comparing** them against one another to arrive at a conclusion.

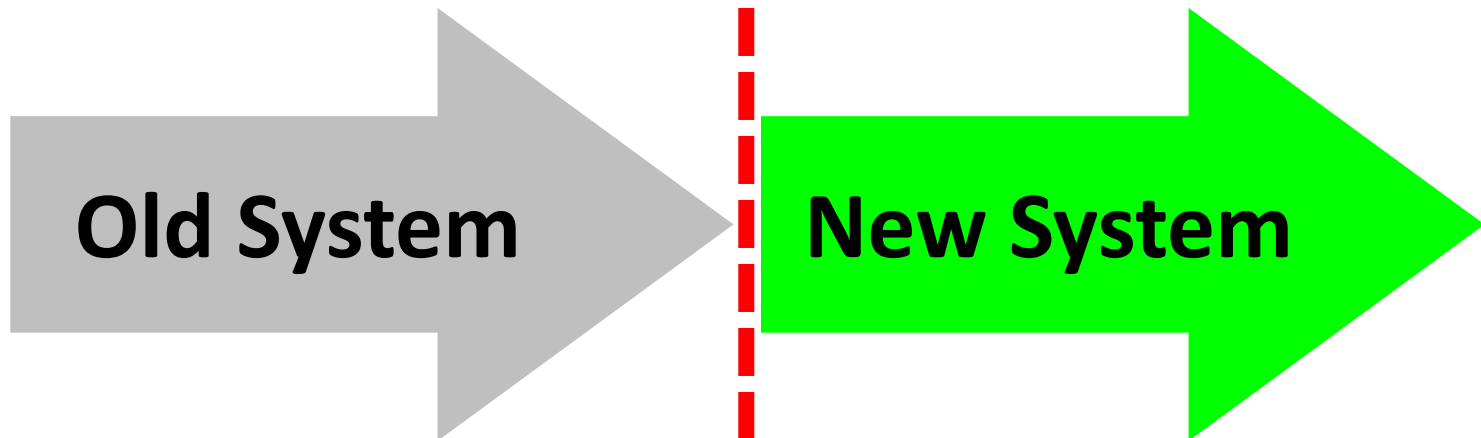


Direct changeover

Old system is stopped and new system is started.

Advantages: minimal time and effort, new system is available immediately

Disadvantage: if the new system fails, there is no fall back

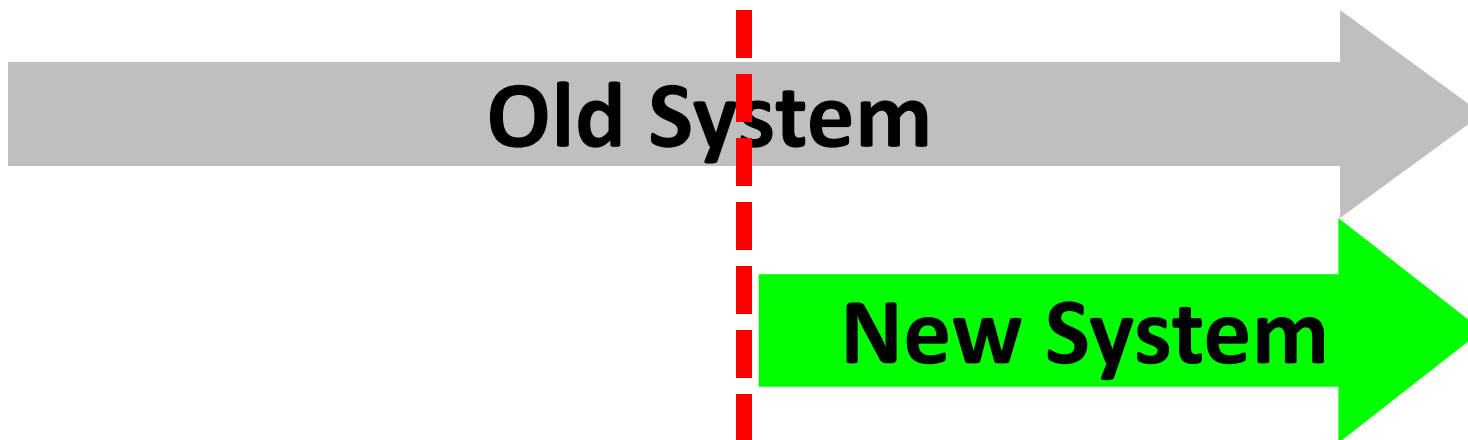


Parallel running

The new system is started, but the old system is kept running alongside it. Data has to entered into both systems.

Advantages: if the new system fails, the old systems runs a backup (no loss of productivity); outputs from the two systems can be compared to see if new one is running correctly

Disadvantage: running two systems is costly in terms of time and money

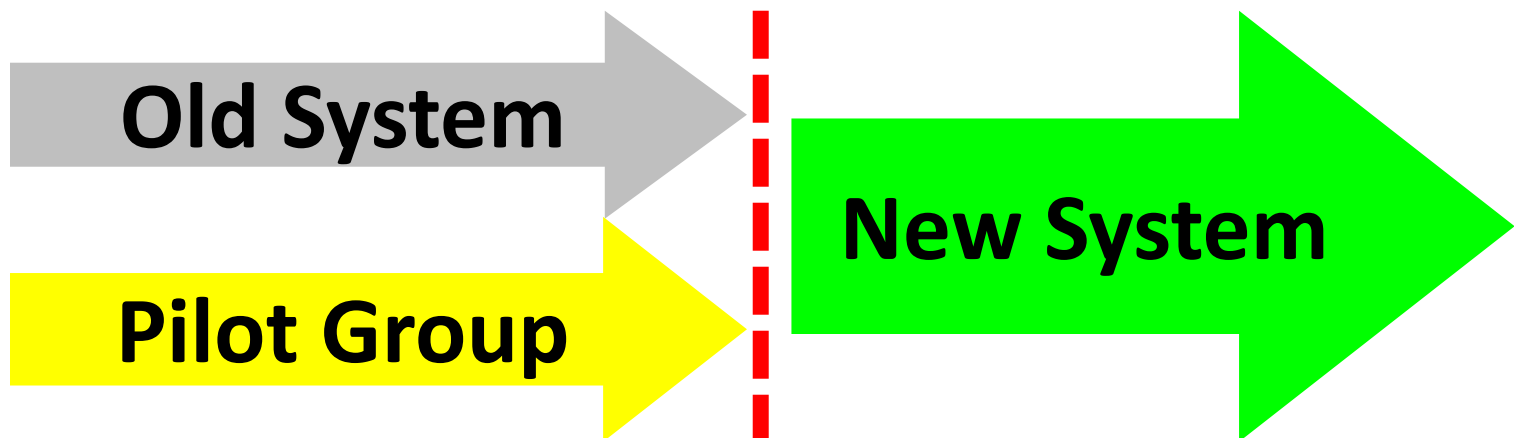


Pilot running

The new system is piloted (tested) with a small subset of the organisation. Once it is running correctly and all bugs have been ironed out, it is implemented across the whole organisation.

Advantages: all features are fully trialled; if the new system fails, only a small part of the organisation suffers; staff who were part of the pilot can train other staff

Disadvantage: for the subset of users in the pilot group, there is no backup if the new system fails



Phased conversion

The new system is introduced in phases as parts of the old system are gradually replaced with the new system

Advantages: allows people to get used to the new system; training of staff can be done in stages

Disadvantage: if the new system fails, there is no fall back for that part of the system

A large horizontal arrow pointing to the right, representing the transition from an old system to a new system. The arrow is divided into two sections: a grey section on the left and a green section on the right. The text 'Old System' is written in black on the grey section, and 'New System' is written in black on the green section.

Old System

New System

Practice doing combinations like these...

Advantages of...

Phased	Pilot
...	...

Disadvantages of...

Direct	Parallel
...	...

Comparison of...

Phased	Parallel
<i>Adv</i>	<i>Adv</i>
<i>Disadv</i>	<i>Disadv</i>

