



# *System backup*

IB Computer Science



Content developed by  
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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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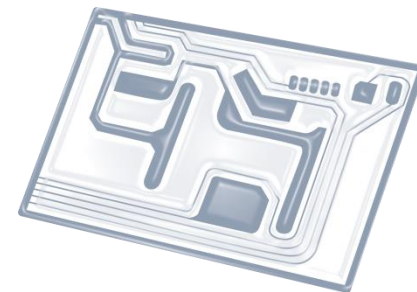
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# Topic 1.1.12

Outline the **consequences** of **data loss** in a specified situation

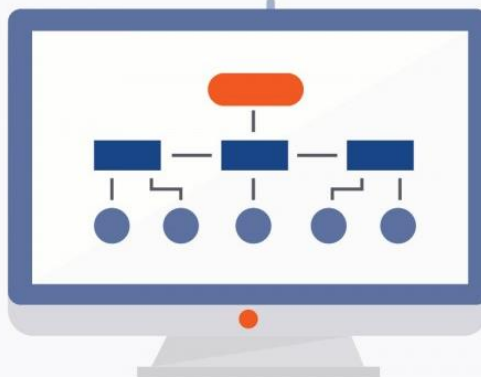


# THE TRUE COST OF DATA LOSS

## UK BASED STATS



**72% OF BUSINESSES**  
THAT EXPERIENCE A MAJOR DATA BREACH  
SHUT DOWN WITHIN **24 MONTHS**



**60% OF SMALL TO MEDIUM  
BUSINESSES**  
**DO NOT** ROUTINELY BACK UP THE  
DATA ON THEIR COMPUTER SYSTEMS.



**78% OF UK ORGANISATIONS**  
ARE **NOT FULLY CONFIDENT** IN THEIR  
ABILITY TO RECOVER AFTER A DISRUPTION.

OTHER COMMERCIAL CONSEQUENCES OF DISRUPTIONS WERE:



75 % OF UK COMPANIES WITH THREE OR MORE VENDORS HAVE EXPERIENCED UNPLANNED SYSTEMS DOWNTIME WITHIN THE LAST 12 MONTHS.



The average cost of data loss to global respondents was **\$585,892,**

Compared to the mammoth uk average of **\$1,302,895,**

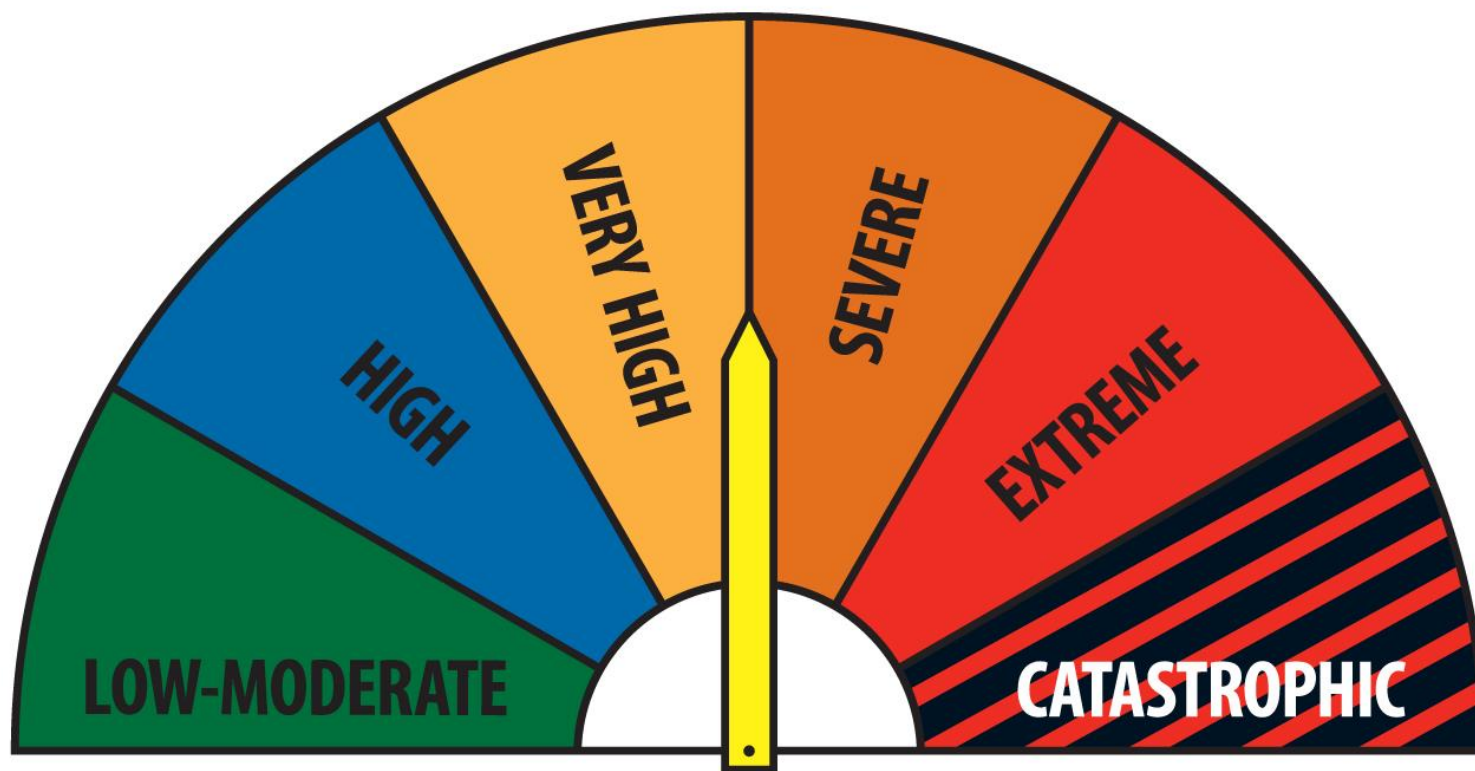
Whilst the figures for downtime were \$494,037 and **\$611,375** respectively.

Where losses occurred from these, the average total cost of a **cyber crime or data loss** is now estimated to be between **£35,000 TO £65,000** for a small business.

For Larger Businesses The Average Cost Is **£450,000 TO £850,000**



# Consequences vary in severity



# Depends on the situation...

- You can be asked to discuss the consequences of data loss for a variety of situations.
- Things to keep in mind when discussing this:
  - *Can the data be replaced?*
  - *How easy is the data to replace?*
  - *Who will be affected by the data loss?*
  - *Are there financial implications to the data loss?*
  - *Are the 'life-and-death' consequences to the loss?*
  - *Who is responsible for data recovery?*



# Examples

- Loss of a hotel reservation
- Loss of a patient's medical record
- Loss of a financial transaction
- Loss of a search engine request
- Loss of a student's test score
- Loss of a password

*What would be the consequence?*

