


Key Vocabulary


Bluetooth	A short range technology (10 metres or less) that can connect multiple devices. e.g. mobile phones & speakers
Ad hoc Network	A wireless network that does not rely on fixed hardware such as routers in wired networks.
Personal Area Network	Used for data communication between devices.
Tethering	Where a smartphone acts as an access point, allowing other devices to connect to it to share its mobile broadband connection to the internet.
Personal hotspot	Using a phone's internet connectivity to access the internet from the laptop.
PIN	Acronym meaning Personal Identification Number
Encrypted	Information or data has been converted to a type of code that cannot be understood without a translation key.
USB	Universal Serial Bus. A standard for connection sockets on computers, connecting devices such as mice, keyboards, printers, external hard drives, etc.
Insecure	A connection where data maybe intercepted by other users.
Streaming	Data is sent to your device in a continuous flow when connected to the internet.

Traditional vs ad hoc networks

Traditional networks are made up of several PCs, routers and other devices that are connected using cables and wires.



Ad hoc networks are networks that do not require wires or cables, Modern technology has made it possible for organisations to connect devices when they are needed.



Benefits of ad hoc	Drawbacks of ad hoc
✓ They are scalable	✗ They are less secure.
✓ They are flexible	✗ They have a reduced speed.
✓ They require limited setup.	✗ The network can become unorganised.

Examples of ad hoc networks:

- PAN
- Open Wi-Fi
- Tethering or Personal Hotspot

Issues affecting availability:

- Rural vs city locations
- Developed vs developing countries
- Available infrastructure
- Mobile network coverage
- Blackspots

Key Vocabulary

Server	A computer that delivers data between machines that are connected to a local network.
Downloading	A file or document can be used when you are not connected to the internet.
Uploading	A file or documents can be used by you or other with access when connected to the internet.
Synchronising	Is when files held on two devices are updated to make sure that both have the same content.

When is cloud storage available?

- Only when there's an internet connection.
- If the connection is broken access will be terminated.
- The speed of the connection will impact file upload speed and download stream speed.
- If there is a suitable connection, data and files in the cloud can be accessed 24/7

Cloud Storage Providers:



Features and usage of cloud storage:

- ISPs often give users a cloud storage allocation as part of a phone or tablet contract
- **Scalability** - you can pay for extra storage.
- Services can also be provided by third parties
- Cloud storage is useful for storing backups of your files. Copies of the files are made on different servers so that they are protected if attacked or in case of a natural disaster such as fire or flood
- You can **synchronise** with the cloud.

What is cloud storage?

Files and folders are stored remotely rather than on a PC or device.

The files are stored on **servers** so they can be accessed via the internet.
When you want to access the media, the data is **downloaded** or streamed to the device you wish to use it on.
It remains in the file in the cloud unless you delete it.
Data on your device can also be **uploaded** to the cloud.

What can be stored in the cloud?

- Images/Videos
 - Emails
- Contact info
- App Back Ups



What do you store on the cloud?

Benefits of cloud storage	Drawbacks of cloud storage
You can access your data from any device that has an internet connection and a web browser.	If there is no connection you can not access your data. Slow connection also will hinder your experience.
Scalable - You can purchase more storage space easily.	Some providers offer limited storagespace for free, but additional space can be expensive
The data and its security is managed by the provider.	You have no control where or how your data is stored. You must trust the provider to keep your data confidential.



There are two main ways of accessing online applications.

1. Web-based applications which run entirely through browsers
2. Cloud-based applications where your local services and cloud service work together to provide a service.

Benefits of online applications	Drawbacks of online applications
No installation	Must have a reliable internet connection.
Cost effective	
No need for updates	
Accessible from anywhere	
Direct access	

What is file sharing?

Two or more people can work on the same document at the same time.



Benefits of collaboration tools

- Collaboration tools allow users to:
- Add comments to documents
 - Track changes made to the document
 - Use services such as live editing
 - Use chat facilities to discuss proposed changes to documents, plans or drawings before these changes are made in the file.

Example exam question

PublishShare works with writers from all over the world. They use cloud computing technologies for employees and writers to collaborate.

(c) Annotate the diagram to explain how **two** different features of this cloud computing system can be used to aid collaboration.

Your annotation should include the identification of each feature and an explanation to show how the feature can be used to aid collaboration. An example has been provided

(4)



Users icons show all collaborators who else is currently working on a document

Key Vocabulary

Stakeholders	These are people with a financial interest or investment In a business or organisation
Downtime	A period of time when a computer and it's services are unavailable.
Geo-data	Geographical information stored in a way it can be used by your device. i.e. your location.

The most common platform types:

- Desktop client
- Notebook
- Tablet
- Smartphone



Features that affect platform selection:

- Screen size
- Portability
- Processing power
- RAM
- Storage capacity
- User interface (keyboard, mouse, touchscreen, voice control, etc)
- Operating system (Apple iOS, Microsoft Windows, Android etc)

What might an organisation consider when selecting a cloud platform?

- Security methods
- Amount of storage space
- Ease of use
- Frequency of updates
- Accessibility
- Cost
- Interface design

Example exam question

A photographer/ journalist at a football match takes hundreds of pictures during a game. They will need to select the best picture and write a story before the deadline 2 hours after the game has finished. Using the features below which device would be most suited for his job?

- Screen Size
- Portability (how easy it is to move around)
- Storage capacity
- User interface



Key Vocabulary

Synchronisation

Process of making two or more data storage devices or programs (in the same or different computers) having exactly the same information at a given time.

Notifications

Cloud systems will send you notifications based on your activity, or what team members with shared access to the same folders you are working on.

 Your OneDrive is up to date
Last updated 43 minutes ago

Sync

Pause syncing

Synchronising content over devices

Sometimes applications and files are located on an organisation's own system or user's PC, but they could be in the cloud.

Most organisations and many individuals use a combination of both.

When using a combination of both, synchronisation is particularly important to make sure that all versions of the files are exactly the same.

e.g. A sales person has files stored on their work PC, which are then synchronised to their laptop and are available via a smartphone.

Syncing Apple devices using iTunes:

A user can choose to automatically back up their device to the cloud, and to only sync ticked songs and videos (rather than all content) over Wi-Fi. If the user has several devices that access the same cloud content, all the devices would be updated.

Online/Offline Working

Many workers are not necessarily in the office every day, they may work in another geographically remote office, at home, or while travelling.

When working offline, files can be saved in a shared area. They will not be saved immediately in the cloud, but copies of the files are also saved offline on the user's device. When internet access become available, the files will be automatically synced.

Connecting to the internet:

Most laptops connect to the internet using Wi-Fi. If no Wi-Fi connection is available, it may be possible to **tether** laptops to smartphones.

In this way the phone is being used as a **personal hotspot**, which allows the laptop to connect to the internet via the phone.

If no internet connection is possible, the user will work offline and upload or synchronise the content with the relevant systems when an internet connection is available.



Example exam question

1. Explain why you should sync content between devices and systems.
2. Explain how a personal hotspot helps with synchronisation.

There are different factors that organisations will have to consider when choosing cloud technologies that will work for them and their situation. Some of these include:

- The Disaster recovery policies
 - Data Security
 - Compatibility issues

Disaster Recovery Policies

Most cloud technology services offer backup services as part of their set-up costs.

Automatic backing up is usually carried out at quiet periods.

A disaster recovery policy is typically designed to set out the **actions** that will need to take place after a disaster, **for example an attack or natural disaster**, such as a fire or flood, **to restore** an organisation's **services and processes** as quickly as possible.

Cloud technologies can generally be relied on to:

- Be unaffected by attack of disaster as they are located away from the organisation.
- Have appropriate nightly backups - in the event of a disaster very little data is lost.
- Be protected by good security.

Data security

Most cloud computing companies will have several strategies in place to protect the security of their customer information. Any breach could damage their public image and lead to serious consequences for the organisation such as loss of customers and legal action.

As a result, the cloud technologies service provider will employ a range of security measures, including keeping their digital systems protected at their large data centres, where many computers are located under one roof. They will also control access to data and are storing data safely and in an encrypted format where necessary. Broken or outdated digital systems will be appropriately disposed of.



Compatibility

Compatibility isn't usually an issue for organisations when choosing cloud technologies. Most cloud technologies use well-supported and documented operating systems such as Microsoft Windows or Linux. This should enable organisations to run any combination of popular applications and services without an issue.

Benefits of disaster recovery policies	Drawbacks of disaster recovery policies
The can reduce the amount of time it takes to recover following a cyber security disaster.	It is not always possible to think of every single risk that could occur before an attack is carried out.
The set out the roles of each person so everybody knows what to do following an attack.	Once the policy has been created, it needs to be continually updated to ensure new threats have been accounted for.

Key Vocabulary

Virtual Machines	Software applications that are designed to behave as if they are a whole computer.
System administrator	A person who is responsible for a technology to make sure they are maintained and reliable.
Spam	Electronic junk mail, usually sent with a commercial purpose.

Maintenance of cloud computing solutions

Usually automatic because solution providers regularly update processes, which keep the **virtual machines (VMs)** up to date and make sure that the solutions stay healthy and secure.
Organisations may add their own services and updates as part of their security policies.
Most cloud computing solutions have web-based dashboards that can monitor activity levels, such as CPU usage, disk space and network communication.
Additional settings can email the organisation's **system administrator** about potential problems, including high CPU usage, low available disk space etc.

Downtime

Downtime is usually limited on a cloud computing solution.
Downtime of just a few minutes can be a serious issue for organisations that rely on a continuous 24-hour service.
Downtime can be caused by:

- Interrupted internet connectivity,
- Cyberattacks,
- Updates

Performance considerations

- A fast broadband connection is required or the responsiveness to user requests and synchronisation of devices may be slow.
- Service or storage needs to satisfy all the requirements of the organisation.
- May need to be scalable.
- Software must be responsive to users.
- Proposed cloud software will run on any devices that are used by employees.

Benefits of cloud technologies	Drawbacks of cloud technologies
Technologies are generally secure 'out of the box'	So services may not be allowed. E.g. mail servers.
They are up to date	A good internet connection is required.
Automatic backups may be created as part of the plan.	Organisational data is stored on the internet.
Solutions can be depilated easily	Pricing plans maybe more expensive than expected.
Solutions can be re provisioned quickly and without fuss.	Incompatible product may cause issues with data transfer.
Technologies may require less monitoring.	
Technologies may require less manual intervention.	
Disruption of service is generally rare.	

Set up Considerations

Setting up a server requires	Setting up a cloud computing VM solutions requires.
<ul style="list-style-type: none"> •Hardware purchase •Hardware build or customisation. •Operating system installation and configuration •Applications and services installation and configuration •Protecting from external threats. •Test network connectivity. 	<ul style="list-style-type: none"> •Selecting the cloud computing solution provider. •Creating an account and payment info. •Select type of cloud computing solution required. •Selecting operating system and role of solution •Deploying the device •Performing additional configuration as required.

Key Vocabulary

Version Control

Records changes to documents and files over time so that all versions can be recalled if needed.

Collaborative Technologies

Collaborative technologies enable staff to work together more effectively, allowing them to communicate and share information and documentation more easily.

There are lots of technologies and software to help employees to communicate and collaborate.

e.g. employees on different locations could work together on the designs for a new product, working in the same files at the same time.

Benefit of collaborative technologies

Description

Global and multicultural workplace

Can help build relationships between people of different ages, gender, religion or culture.
Leads to increased creativity and diversity in the workplace.

Inclusivity

Technology has provided functionality to help those who have limitations or disabilities.
e.g. people with visual impairments can work on the same documents as people with no impairment by using software to enlarge the text.

24/7/365

Services or facilities open 24/7/365
e.g. Internet content is available 24/7/365 – users are able to access pages at any time of the day or night.

Team flexibility

Teams who work in different locations, countries or time zones can use technologies that allow them to share information and to contribute to projects from remote locations and at different times of the day.
The working day can be lengthened e.g. one team can finish as another team in a different time zone begins.

Type of collaborative technology

Examples

Uses

Interoffice chat programmes

LiveChat,
Office Chat

Useful for answering business questions more quickly than through email

Conferencing software

GoToMeetin
g

Used to support meetings without employees having to travel

Project support technologies

Google
Drive,DropB
ox

Support document sharing

Project support technologies

FlockDraw

Enables team members to edit images simultaneously in real time

Version Control

If several people are working on the same document, they could each save their document onto their computer, which would create several versions of the same document.

They could also overwrite each other's work.

One way to overcome this is to use **version control** which can have the following features:

Workflow – only one person can work on a document at a time.

One person at a time has edit access, the other people only have read access.

History – a of what has been changed and who has changed it is kept.

You can see the changes that have been made and then agree or disagree with them.

Tools for collaboration

Modern technologies have made it much easier for managers to monitor the activities of their teams.

There are many tools that can be used to promote collaboration e.g. BaseCamp.

These tools include several features, such as:

- To-do area,
- Message board,
- Schedule.

Communicating as a team

Many organisations used chat programs to help staff in different departments or locations have a quick discussion.

One of the main benefits of this software is that you can see which of your colleagues is online, so it is clear who can be contacted.

Other available settings include "busy", "unavailable" or "offline".

NAME	EMAIL	ACTIONS	ACTIVITY
 Claire	-	<button>Go to chat</button>	● Chatting
 Client	-	<button>Message</button>	● Browsing
 Support Team	-	<button>Go to chat</button>	● Chatting
 Client	-	<button>Message</button>	● Browsing
 Suzie	s.novak@gmail.com	<button>Go to chat</button>	● Chatting
 John	-	<button>Message</button>	● Browsing
 Pam	pam@gmail.com	<button>Message</button>	● Browsing
 Thom	thom@gmail.com	<button>Go to chat</button>	● Chatting
 Client	-	<button>Go to chat</button>	● Chatting
 Pam Beesly	pam.beesly@company...	<button>Go to chat</button>	● Chatting
 Eric	-	<button>Message</button>	● Browsing

Benefits of using collaborative and communication software to manage teams:

- Storing and managing relevant working files in a single location.
- Ensuring that the file being worked on is the most up to date (as there is only one working copy of the file).
- Archiving previous versions of the file.
- Using features of the software to allow team members to work on files at the same time.
- Communicating with the whole team simultaneously.
- Providing group support by the manager.
- Saving discussions (in case they are needed later).

Example Exam Question

The use of collaborative technologies will allow PublishShare's employees to work from home.

(d) Explain **two** benefits to PublishShare of allowing its employees to work from home.

(4)

1

.....

.....

2

.....

.....

Key Vocabulary

URL

stands for **U**niform **R**esource **L**ocator and is the address of a page on the World Wide Web.

Scheduling and Planning

When you create a new project in planning software you can set a start and end date and it will automatically calculate the number of days involved.

When managing teams, you could use project planning software to allocate tasks and control the schedule.



Setting up a team

- You can set up a team by inviting team members using their email address.
- The team member is then notified and is given a URL and password to access the system.
- When you invite users you can assign a role to them which will determine their level of access to the system.
- To add activities to the project you use the calendar function.
- Each participant then receives an email notifying them of any additions or changes to the calendar.

Benefits of using scheduling and planning software to manage and work within teams

Benefit	Description
Access	Files and folders can be stored in one place so that all members of the team can access them.
Tracking	Project managers can track progress and monitor the activities of team members.
Version control/archive	Older versions of documents can be archived to ensure the documents being used are always the most recent ones. The archive is a file of all the previous versions of documents.
Timelines and deadlines	Project deadlines and key milestones can be automatically synchronised with team member calendars.
Communication and collaboration	Software automatically allows for variations in time zones. This enables workers in different time zones to see when they need to do tasks in their own time zone

Communication Platforms

There are lots of communication platforms available, for example:

- Email,
- Social media,
- Text messages

Communication with Stakeholders

Organisations use a wide selection of communication technologies to connect with their stakeholders, from their corporate websites to social media platforms such as Facebook.

What is a stakeholder?

An organisation's stakeholders include:

- Customers,
- Employees,
- Suppliers,
- Anyone else with an interest in the organisation.



Technologies for Communication

Channels	Description
Websites	Provide a range of content, including information on products or services, prices, stock information and special offers so that customers can buy items online.
Social media	Organisations can communicate in a much more relaxed way e.g. customers can ask for advice about a product.
Email	More formal method of communication that has largely taken over from letters as the email is received almost instantly.
Voice communication	Brings people together without them being in the same place. Can be live video as well as audio. This technology is often used to deliver training. The presenter can display presentation slides on the screen and participants can hear the presenter speak.
Live chat	Some organisations offer technical support and customer service using live chat, where a text messaging app is used to support a conversation. Users usually have to log into their account to access this feature.

How to choose the right communication technologies

Organisations must think carefully about which communication channels they should use in different situations to share information, data or other media. Communications can largely be classified as either private/direct or public.

Private Communications

Communications between specific individuals. Only the people involved should be able to see the messages.

For example:
Customer queries, such as order/payment information or requests for payment
Customer payment details, including account details and payment methods
Customer contact details, such as phone numbers or changes of address

Public Communications

Anyone can see the information that has been communicated.

For example:
Product information, such as special features,
Price reductions and other special offers,
Advice on using a product.

Key Vocabulary

ALT Text

is alternative text that describes an onscreen image for users with visual impairments.

Accessibility and Inclusivity

Computers should be capable of being accessed and used by everyone, but some users have physical challenges that make aspects of computer use difficult or impossible.

Technologies that help users overcome some of these challenges are becoming increasingly available.

Interface Design

Organisations must think about how a website looks when it is viewed on different devices.

The screen size affects what is visible and how it is displayed. Websites that do not adjust for different devices are known as **non-responsive** websites.

For example, the Amazon website.

Amazon's solution is to provide apps for different devices to make sure their content looks its best on any device. They also have a mobile website that reflects the app design.

Interface Layout

The layout of screens also contributes to inclusivity and accessibility of web content.

The content should be simply laid out with clear differences between the sections, with simple input and navigation controls that allow all users to easily interact with what is onscreen.

The screen size affects what can be displayed and how it is displayed.

Accessibility Features

Most operating systems have built-in accessibility features, such as magnifiers, the option to change the colour schemes and even to use the computer without a display, mouse or keyboard.

Other accessibility tools available include:

- Screen readers - which read the content of the screen to the user.
- Software that converts speech to text
- ALT text - allows the addition of text-based description of each image on a website for the benefit of blind or partially sighted users.



Inclusivity

Inclusivity is about the different ways to involve employees who have useful skills to contribute, but who are not able to work in the traditional way
e.g. someone recovering from an operation who is not able to drive to work yet but could work from home.

Organisations can allow their employees to work more flexibly permanently.

This could be by allowing them to work hours that suit their childcare commitments or to choose working hours and locations that suit them.

Key Vocabulary

Distributed Data	Split into lots of bits and stored in different places.
Dispersed Data	Multiple copies of the same data in different locations.

Impacts of infrastructure on an organisation:

- Costing what is needed to buy and set up services
- Training for staff
- Implementing and testing time for the technology before staff use it in their work
- Maintaining technology - if software is not updated it may not work correctly
- Running costs of hardware e.g. printer ink
- Implementing a strategy to ensure that data is backed up and secure

Managers must weigh up the costs of technology against the benefits it will bring.

Security of distributed/dispersed data

Data that is **distributed** or **dispersed** can be stored over more than one server and network.
The locations of the different bits or copies of data need to be mapped so that the data can be found when it is needed.

Benefits and Drawbacks of Technologies

Technologies	Description	Benefits	Drawbacks
Communication technologies (devices)	It is now common practice for managers to be issued with laptops, mobile phones and tablets	Less paperwork to carry as files can be accessed electronically	Can be intrusive as staff can be contacted day and night, which can impact on the employee's work/life balance
Local platforms	Software installed and used locally	May run faster than a web-based alternative	Cannot be accessed outside the office
Web-based platforms	Software installed and used online	Can be accessed from anywhere	May run more slowly than local alternatives connectivity is poor or demand is high
Availability	Because of the costs of technology, many organisations try and find different ways of using what they have, rather than simply buying more.		

Benefits of distributed data	Drawbacks of distributed data
The data is less likely to be lost because it is not all in one place.	There are more locations to keep secure
Security is greater because criminals would not know where the data is being stored.	Locations of data need to be tracked so that the system knows where the data is
The data can be accessed over different networks	It can take a little longer to access data that is further away
Greater reliability	Additional software is often required

Organisations that use technology are usually accessible 24/7

Benefits and drawbacks for customers of 24/7 access	
Benefits	Drawbacks
Orders can be placed and accounts accessed at any time of the day or night	Usually you must wait until your purchase is delivered and pay extra if you want it delivered quickly
No need to stand at the till to pay for purchases as you can buy online	You cannot see or touch the product before you buy it
Lower prices as there is more competition	Security worries - it is a legitimate website?
More choice as you can access a much wider range of products	You often must pay for delivery, or higher rates for faster delivery
No need to spend money on transport or parking	Returning items can be challenging and you may have to wait to receive a refund.
Able to check your bank balance and pay bills at any time of the day or night	
Ability to transfer money from one account to another without having to go to the bank	

Benefits and drawbacks for organisations of 24/7 access	
Benefits	Drawbacks
You can access more customers over a wider geographical area. Your potential customer base is anyone, anywhere in the world, you are only limited on where you are willing and able to ship products.	Many customers still like to visit a shop or business and speak to a person
You may not have to pay the costs of having premises. Many online businesses do not have a presence in the high street.	You have to make sure you build good relationships with customers as you will have more competition.
Online businesses may be cheaper to set up.	
You can collect information about your customer's browsing and shopping habits, which could enable you to improve how you target different types of customers with your different products	

Key Vocabulary

Wiki	this is a web page (or pages) that has been developed collaboratively by a group of people
-------------	--

Digital technologies have made communication and working together in organisations much more efficient and accessible.

Benefits and Drawbacks of Collaborative Technologies.

Technology	Benefits	Drawbacks
File sharing	Using software such as OneDrive or DropBox enables employees to work together and share development responsibilities and activities	There is a new to make sure that employees are always using the most up-to-date version of a document
Wikis	Web pages that can easily be edited by members of a team e.g. Wikipedia	You need to check that information is correct, particularly if you are responsible for a commercial wiki
Blogs	This is an abbreviation of web logs, which are often created about a specific topic	They need to be regularly updated to keep their audience interested
Chat Systems	Interoffice chat systems are useful for helping staff access information or those seeking decisions quickly	These systems can be time wasting if they are used for social rather than business discussions
Tele/videoconferencing	Staff in different locations can attend meetings virtually which saves significant travel time and money and enables collaboration and decision-making	A high bandwidth communication link is required to transmit and receive high-quality images.

Technology and Accessibility

Many organisations now support the use of wearable technologies. The benefit for staff is that they are easily accessible, they can receive phone calls and read emails without accessing their phones.

Many of these wearable technologies have sensors that can capture health and fitness information, so staff are reluctant to wear them as the organisation has access to data that they want to keep private. By law, organisations are required to make accessibility adaptations to the working environment if a member of staff has an accessibility or health-related issue.

Technology and Remote Working

More and more people can access paid work that does not require them to go to a specific place of work.

The benefits to the organisation are:

- Access to a wider and more diverse range of potential employees.
- Less office space is required if some staff work from home, resulting in cost savings.

Drawbacks to the organisation:

- Employee is not on site, limiting the interaction between colleagues and opportunities for ad hoc meetings and impromptu discussions.

Some employees choose to install monitoring software on their employee's computers to check the hours they are working and the activities they complete. This can be demoralising to employees who do not feel trusted.

How technology impacts individuals

Devices like smartphones have changed the way we communicate and entertain ourselves.

For example: We can play music, videos or games on handheld devices when travelling. We can stream music while working.

Using technology has now become common in the workplace and has made many aspects of work much easier, such as being able to access a work diary from anywhere.

Impact on individual wellbeing

Technology impacts on the way you feel about yourself and the world around you.

Technology can impact positively on the wellbeing of individuals, but this is not always the case, for some people there can be negative consequences as well.

Working flexibly and choosing your working style

If you can work flexibly, during hours that suit you and your family, this can improve your morale and reduce personal stress levels.

Working flexibly does require employees to be self-disciplined and organisations may monitor your activity.

Impact of Technology

The impact of technology	What it really means	Benefit or drawback
Contact with others	Can talk to other people about things in your life that are going well or badly, but too much contact can be intrusive	Benefit and drawback
Self-confidence	Being able to research things makes you more confident, if you are sure the information is correct and reliable	Benefit
Lack of confidence	Some of us need reassurance about what we are doing and we need input from others to feel confident about what we are doing	Drawback
Separation from a stressful environment	Technology means that you can escape into computer games, videos or music to remove yourself from stress	Benefit
Control of your own schedule	People who use electronic diaries or schedules often feel more in control of their personal and working lives because they know where they need to be	Benefit
Ability to control your schedule to meet the needs of your family	Technology gives you the confidence that you can adapt your schedule to meet the needs of your family	Benefit
Less time commuting to or between offices	Technology could make you more productive if you can work from home or can be based in a single place and take part in virtual meetings	Benefit
Loneliness	Just because you can talk to someone via a device or app does not mean that you are not lonely	Drawback
Depression	People who work lots on their own can become isolated and depressed because they are not interacting with others	Drawback