# Component 3C

# Sharing data

## Accessing shared data

When we communicate with each other, search the internet, use our satnav or do transactions on our devices (smart phones), knowingly or unwittingly, we leave **passive digital footprints** which third parties can see and use.

There are advantages and disadvantages for third parties to access out digital footprints

## Transitional data

Most of what we do generate transitional data.

- Details of sales; what sells and what doesn't well. Then stock levels can be adjusted accordingly.
- Staffing during planned holidays. To minimise the impact on production when regular staff are on planned leave, short term staff might be hired to keep production activities going.

**Cookies.** When searching the net, enquiring or purchasing online, organisations often keep records of our transactions which are shared with other parties who would send us offers tailored to our interests.

## Using shared data.

| Benefits | Drawbacks |
|---|---|
| Sharing information would help teams to coordinate and plan activities. | When sharing data, users must make sure they are not breaching any copyright. |
| Collaboration on projects encourages more ideas. | Data must be protected by law. |
| Using existing data saves time, effort and cost. | Existing data might not be entirely relevant. |
| Availability of more data improves decision making. | Data from some sources might be infected with virus. |
| Sharing work on real time can save time. | Data can be sabotaged, damaged or altered. |

## Responsible use of data

Both individuals and organisations have the responsibility for ensuring that the use of data meets legal and ethical requirements.

**General Data Protection Act.** Formerly called Data Protection Act sets out the legal requirements to protect data. Failure to protect data may result in heavy fine.

**Privacy.** We all have the right to confidentiality. Personal data should remain private even NSH professionals are not allowed to view records of members of their own family. They could be disciplined if they do.

**Ethical.** Data may not be used or shared without the permission of the data subject.

## The impact of technology on the environment

**Manufacture.** Large quantities of raw materials are being used in the manufacturing of devices. Many of the materials like, copper, gold and palladium are non-renewable and rather rare. Once these are depleted, they cannot be replaced.

Some materials such as chromium, cadmium and arsenic are highly toxic. A high percentage of toxic materials are mined and processed in countries where protection standards are low which adversely impact Health and safety and emission level.

**Wastes:** Manufacturing of e-devices inevitably produces waste. Uncontrolled waste causes environmental problems. Unwanted/discarded items that cannot be recycled are sent abroad to be disposed off safely. Recyclable items are processed and turned into useful materials and used in manufacturing new products

Recycling on the other hand creates pollution. Burning the e-waste to separate the raw material releases harmful chemicals into the atmosphere.

**Use of e-devices:** I.T systems are constantly used in homes and in organisations. The demand on electrical energy is massive and will continue to increase with the increase of I.T activities.

There are ways to minimise the consumption of energy and prolong the life of our device.

- Reduce the brightness of the screen.
- Turn the device off when not in use to conserve power.
- Set screen saver on.
- Minimise the consumption of printing paper where possible.

**Upgrading or replacing:** Sometimes organisations are faced with the decision to upgrade or replace their computer systems. Costs and reliability play part.

Replacing systems can be costly, but also creates wastes. Replaced systems may be recycled or re-used somewhere else or stripped as spare parts.

Up grading might be a cheaper short-term option, where only certain components are replaced to improve/speed up the operation of the system.

Mobile phone companies know the life cycle of their phones is around two years. They often introduce new devices or new versions of existing models.

The longer a device is kept in use, the better it is for the environment.

## Equal access to information and services

Mobile/tablet users may experience different connection speed in different areas due to geographical locations. Hills and high-rise blocks of buildings may impede the signals. Some rural area may have poor signals. This may cause intermittent connection or absence of it.

### Benefits of reliable and equal access to networks:

### Benefits to individuals:

- Access to online information and services; education, employment, entertainment from anywhere.
- Social benefits; communications with friends and family nationally and internationally.
- Time saving; completing transactions, including banking, online is usually quick and direct and largely guaranteed.
- Cost saving through online shopping, wide range of products choices, offers and prices.

### Benefits to organisations:

- Improved productivity. Good digital equipment and efficient employees with digital skills.
- Competitive edge. Having a digitally skilled work force, improves the potential of an organisation to remain competitive in the technological world. The demand for digitally skilled employees is on the increase.
- Increased revenue. Successful organisations attract more skilful employees, increase their productivity and hence their revenue.

### Benefits to society:

- More tax revenue. With more people in jobs, tax revenue will increase and hence more benefit to society; public services and NHS.
- Democracy. Through digital technology, more people can voice their notions/express their concern on issues that affect them.