# 1.6 ELCE Concerns

## Keywords & Definitions

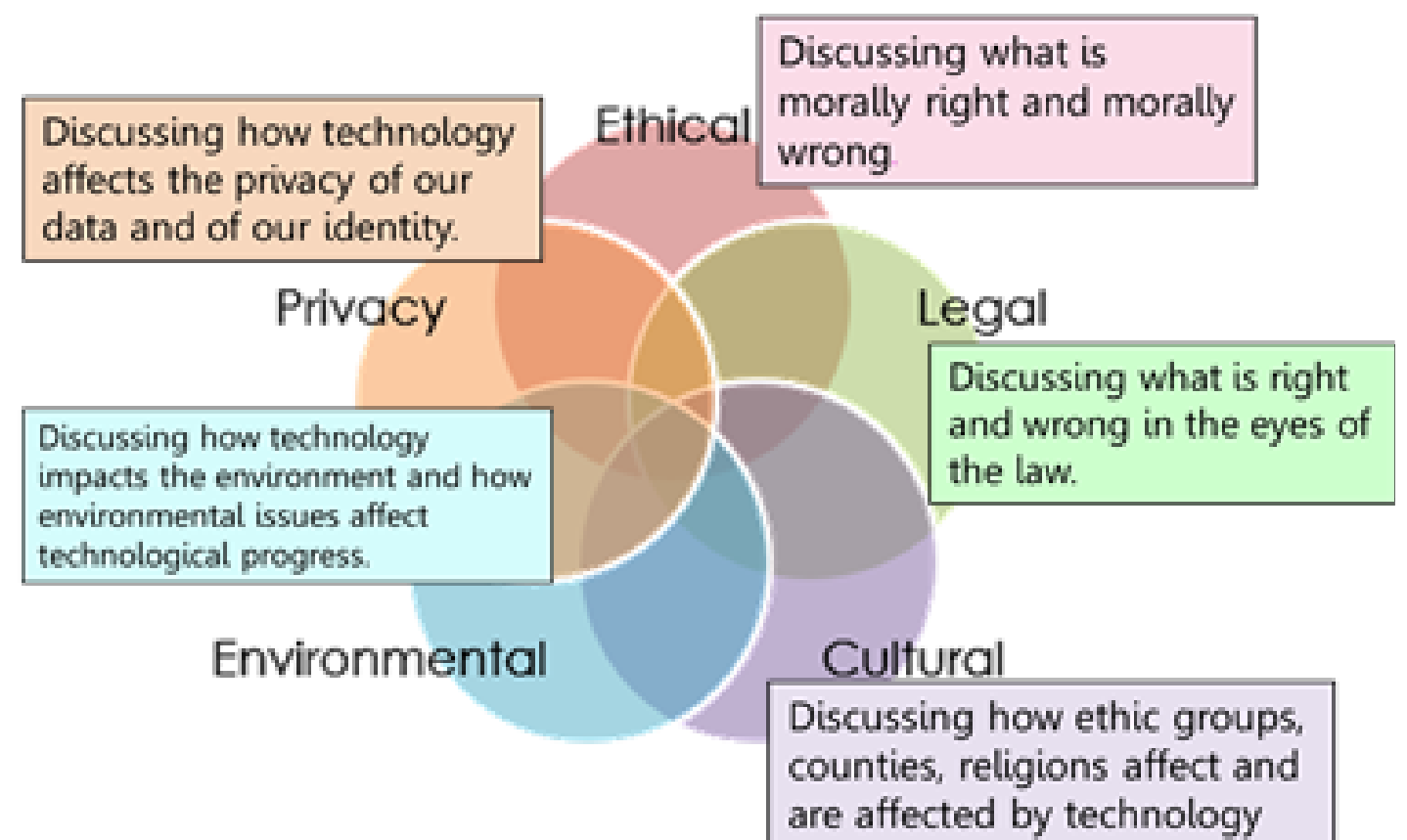**Stakeholder:** a person or group who is affected by an issue

**Software:** Programs or applications that can be run on a computer system

**Open Source:** Software that can be modified and shared by anyone

**Proprietary:** Software where modifying and aharing is not allowed

**Legislation:** The different laws

## Issues Surrounding Technology:



Discussing how technology affects the privacy of our data and of our identity.

**Ethical** — Discussing what is morally right and morally wrong.

**Privacy**

**Legal** — Discussing what is right and wrong in the eyes of the law.

Discussing how technology impacts the environment and how environmental issues affect technological progress.

**Environmental**

**Cultural** — Discussing how ethic groups, counties, religions affect and are affected by technology

### Remember: Stakeholders!

For example, when discussing issues relating to illegally downloading music, there will be several stakeholders involved:

- The Individual (downloading the music)
- The Music Company
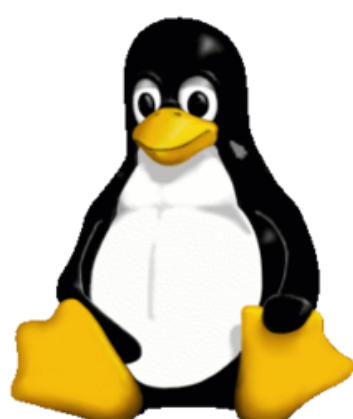- The Government

## Software – Open Source VS Proprietary

### Open Source

**Benefits:**
- Users can **edit and customise** software freely
- Made for **greater good—not for profit**
- Usually **free** and good for companies with limited budgets
- Allows **collaboration** with other people who may want the same modifications

**Drawbacks:**
- Small projects may not get updated regularly—**buggy/less secure**
- **Limited** user documentation
- **No customer support**



### Proprietary

**Benefits:**
- Comes with **warranties, documentation and customer support**
- Should be w**ell-tested** and reliable (company's reputation depends on it)
- **Fixes and updates** will be regular
- May contain **more features**
- Usually cheaper for a company than developing their own custom-built software

**Drawbacks:**
- Can be **expensive**
- Software may not fit a **user's needs** and they cannot modify it to suit
- **Reliant on one company** – what if it goes bust?

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## Legislation

### Data Protection Act

Covers how personal data may be used by companies and includes:

- what can be collected
- how long it can be kept for
- steps to keep it up to date/accurate
- sending and using the data
- who can see that data

**The principles:**

1. Personal information must be fairly and lawfully processed.
2. Personal information must be processed for limited purposes.
3. Personal information must be adequate, relevant and not excessive.
4. Personal information must be accurate and up to date.
5. Personal information must not be kept for longer than necessary.
6. Personal information must be processed in line with the data subject's rights.
7. Personal information must be secure.
8. Personal information must not be transferred to other countries without adequate protection.

### Freedom of Information Act

This allows members of the public to access information that is held by public services

### Computer Misuse Act

Makes is illegal to use computers to:

- Access computer systems without proper authorisation
- Access computer systems with intent to commit a criminal offence
- Alter data without permission (e.g. through the use of viruses, physical deletion etc.)

### Creative Commons Act

- Allows people with protected work to allow free distribution of the work
- E.G Remixing their songs, an author wanting other people to edit and improve their book.
- They may allow Commercial, or non-Commercial use of their work

### Copyright design and patents Act

- Protects people's written, dramatic, musical, film, broadcasts property
- Makes it an offence to copy or distribute other people's intellectual property without permission

## World of work links

**Programmer, IT Technician, Software Engineer, Teacher, Systems Architecture, Data Engineer, Software Developer**