

# Cybersecurity

## Designing a safer digital environment

### The cyber-physical environment

Our environment is made up of physical and **digital spaces**. For example, **buildings** have **computer controlled devices** like doors, air conditioning and lifts.

We need to design and construct our cyber-physical environments in a way that **protects** us from **software errors** and **malicious attacks**.



### Intelligent transport

Traffic management systems transfer information between cars and roads, to make our journeys faster, safer and more environmentally friendly.

These systems must be able to run smoothly and adapt to last minute changes (such as a child running out into the road).



### Smart and future cities

Future buildings and systems could react and respond to our **shifting** needs, e.g. **climate change** and **population growth**.

As well as considering our living needs, designers and builders must meet structural and safety standards.



### Digital exploration

We can use **technology** to explore **other environments**, e.g. **robot space exploration** or **undersea exploration**. This helps us to develop a **greater understanding of life on Earth**.



### Cyberspace and the Internet

Cyberspace refers to where data 'is' when it **travels** through a **global network of computers**.



Stay safe online – choose **strong passwords** and **check your privacy settings**. Be aware of your digital footprint – everything you post online leaves a trace that can be seen by others.