BT Group

# Healthcare

## Caring for our health in a digital age

Our healthcare system is an **essential part of our lives.** It ensures that everyone can access the **advice, care and treatments** necessary to look after their **health and wellbeing.**




However, the NHS faces **growing demands and challenges**, such as **staffing shortages**, **reduced budgets,** and **more patients** needing help. Many NHS trusts use **outdated systems and processes** that are costly and time-consuming.

**Technology** is transforming the healthcare system by **enhancing patient outcomes,** improving access to care, and streamlining service delivery.

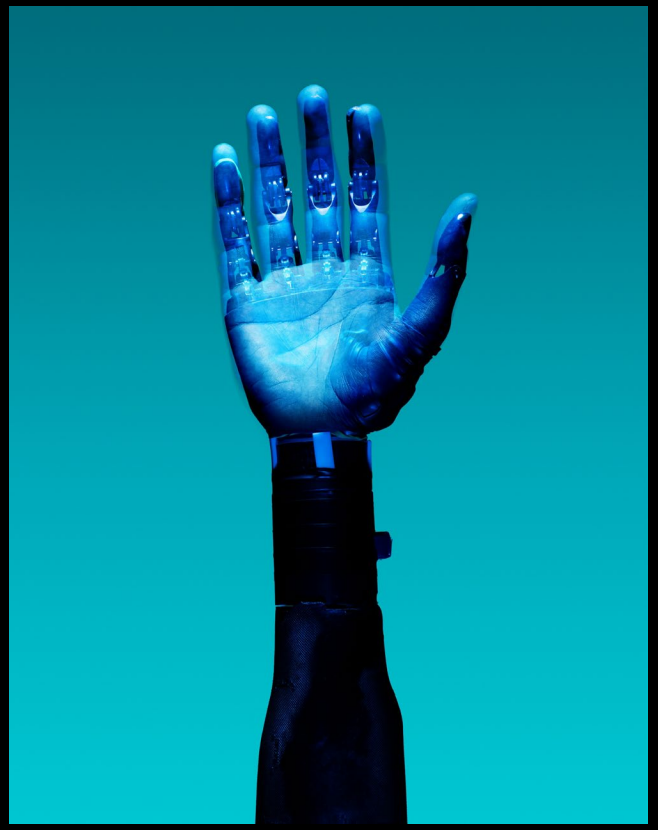
Companies like BT Group support the NHS with **cutting-edge research** and the development of new technologies, enabling **real-time, data-driven decisions** and **collaboration**. This is transforming the delivery of healthcare services into a **connected community of care.**



# Big Thinking...

By the end of this module, you should be able to form an opinion on the ‘big thinking’ statement:

*Is technology transforming our healthcare service for the better?*



# Module overview

## 01

**Caring for our health in the digital age**

Introduction to how technologies like VR, AR and AI are transforming our healthcare system

## 02

**Bringing tech in healthcare to life**

Explore the importance of imagery and animation in healthcare innovation through practical project-based work

## 03

**Animation station**

Use digital tools to create a visually impactful animation to support peers with their mental health

## 04

**Presentations and reflections**

# Module objectives

Today's lesson is one part of a module of four lessons.

By the end of the module, you will be able to demonstrate different technical and human skills that will help you succeed in a future transformed by technology.



# Module objectives

This module will focus on the following skills:

- Technical skills: using and managing digital devices, platforms and apps
- Human skills: critical-thinking and problem solving



# Lesson objectives

By the end of this lesson, you will be able to:

- Understand more about cutting-edge technologies like AI, VR, AR and wearables
- Identify how these technologies are transforming healthcare and explain how they work

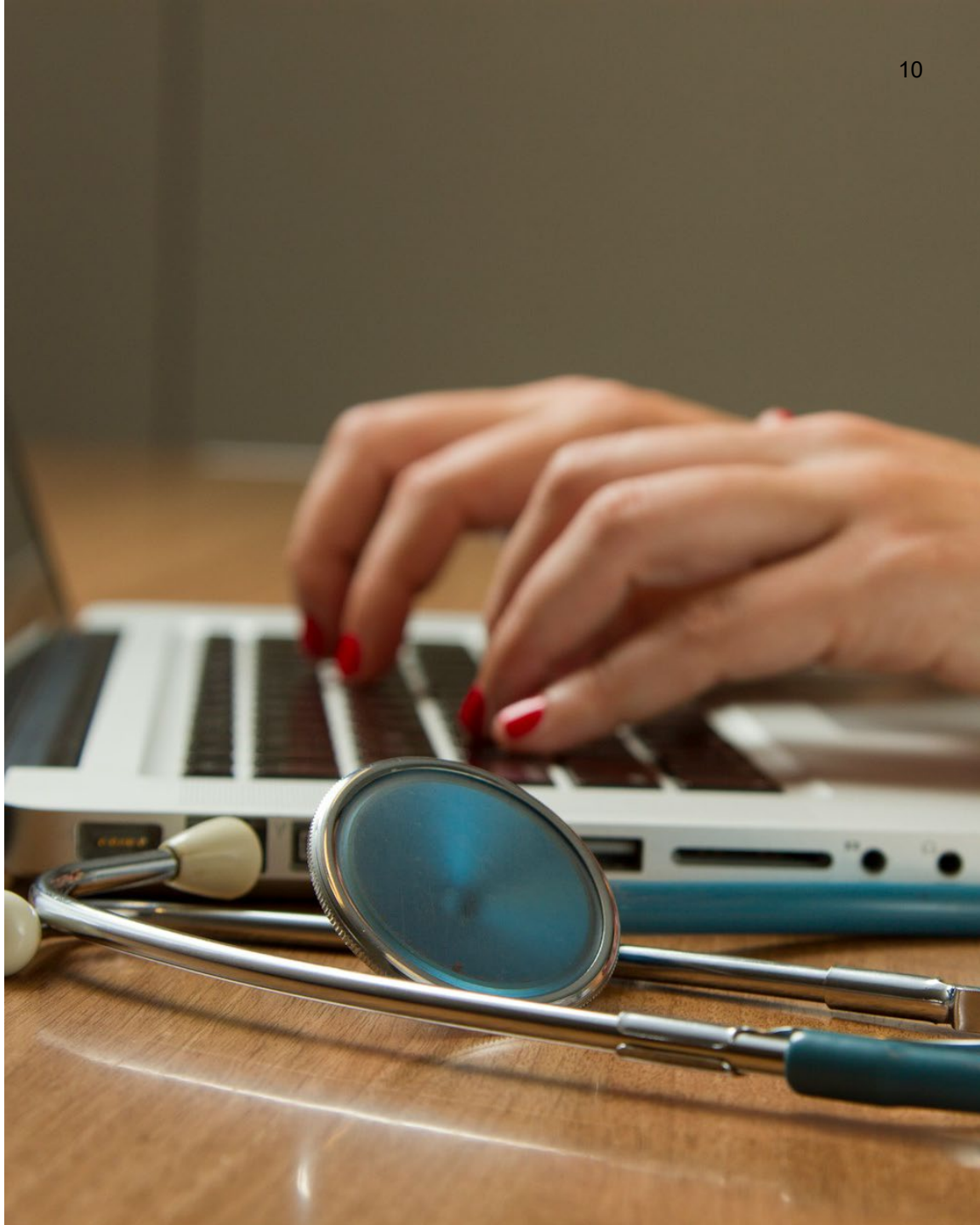


# The medical marvels of healthcare technology

# Technologies transforming our healthcare system

Using your ‘Definition detective’ cards, match the following terms to the correct description:

- Virtual reality (VR)
- Augmented reality (AR)
- Artificial intelligence (AI)
- Camera vision
- Holograms



# Technologies transforming our healthcare system

**Virtual reality (VR)** can help therapists support patients with mental health conditions such as post-traumatic stress disorder (PTSD), allowing them to safely assess how they deal with potentially triggering situations

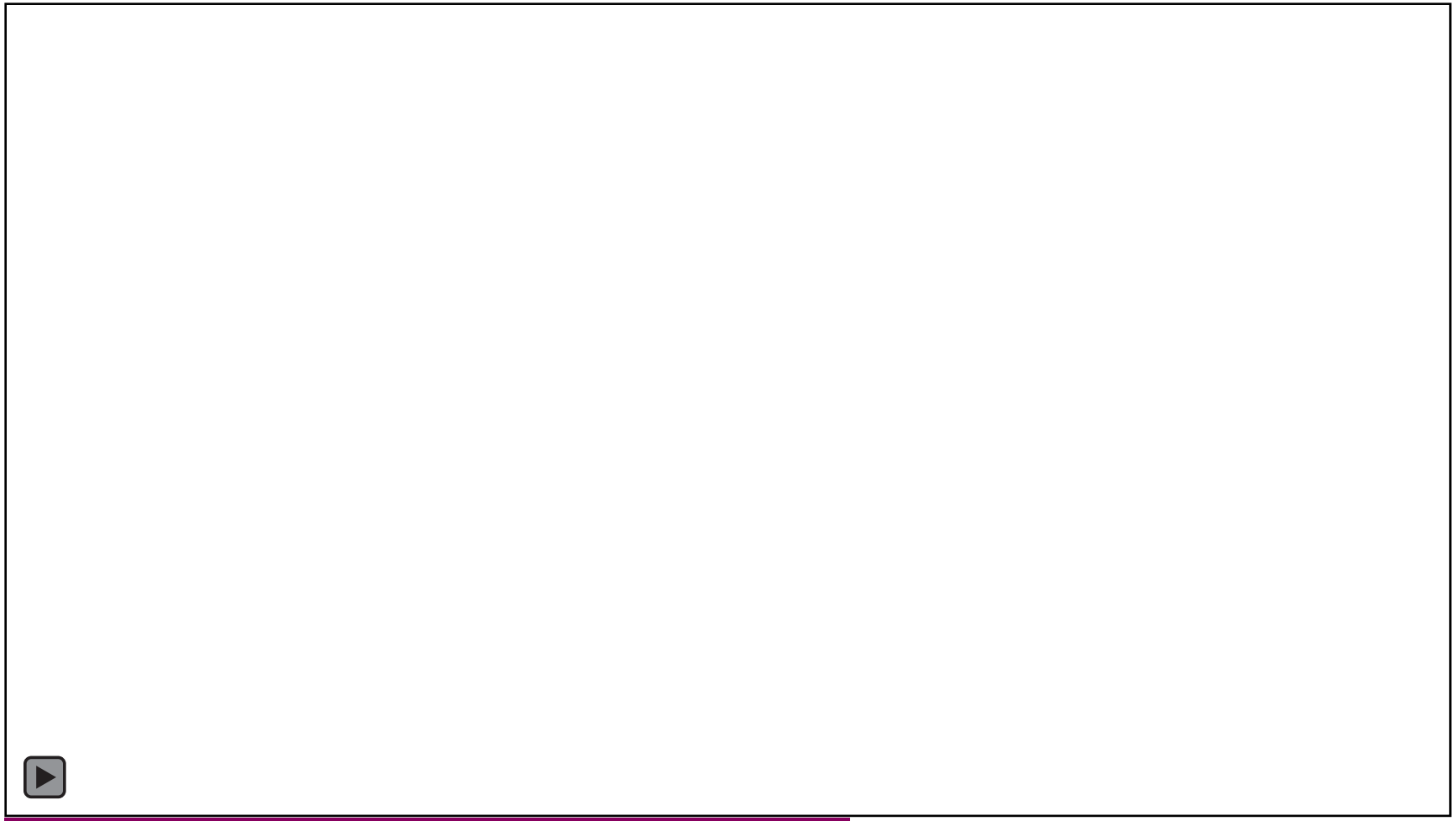
**Artificial intelligence (AI)** can help doctors to make more accurate diagnoses, predict when diseases will develop, and figure out treatment plans. It can also support assistants or receptionists to manage and request appointments and hospital beds

**Holograms** can provide doctors with 3D maps of patients' bodies and vital organs. This can help them prepare for operations by allowing them to visualise procedures and practice different ways of operating before doing it on the real patient

**Augmented reality (AR)** allows surgeons to see a patient's body from different perspectives as they operate, improving the safety and effectiveness of the surgery

**Camera vision** can help to detect illnesses, make early diagnoses and give real-time information that reduces complications during surgery

# Meet a BT Group colleague



# Discuss...

*What role was referenced in the video? How does this role bring technology and the healthcare industry together?*

*Which human and technical skills are needed for this role?*



# Technologies transforming our healthcare system

In groups, read the scenarios on your ‘Helpful healthcare’ cards and discuss these questions:

- **Who** benefits from this technology and **how**?
- In what ways does this technology **improve more traditional methods?**



# Reflect...

*The ethical considerations of healthcare technology...*

- Some technologies are still very new, which can mean there has been limited testing on longer-term implications. What are some potential issues with this?
- Cybercriminals have been known to hack connected devices, stealing information from and even controlling these devices. What consequences could this have in a healthcare setting?
- A patient with a mental illness may need to speak urgently to someone in person. They may also be unable to communicate clearly. What challenges could there be if their first point of contact for help is through a computer or other digital device?
- Sometimes a patient may have an illness, or multiple illnesses which result in a lot of complexities. It may even be something completely new to medical science. What challenges might this pose for a digital or AI driven diagnosis tool?



# Recap

What have you learnt today?

- What are some examples of healthcare technology?
- What are some benefits of these technologies for patients and healthcare professionals?
- What are some of the ethical issues and risks of using technology in healthcare?
- Why is human intervention so important when it comes to caring for people’s health?