# Technological Influence

## Information and Communications Technology (ICT)

**Definition:** The computing and communications systems that a business might use to exchange information with stakeholders.

## How can ICT be used in a business?

- **Communication** ➔ through emails / texts / word processing ➔ ordering
- **Marketing** ➔ websites / "spam"
- **Stock control / customer details** ➔ databases ➔ tills ➔ barcodes
- **Record keeping** ➔ and analysis / spreadsheets ➔ finance ➔ online banking
- **Selling** ➔ online auction sites
- **Research** ➔ using the internet
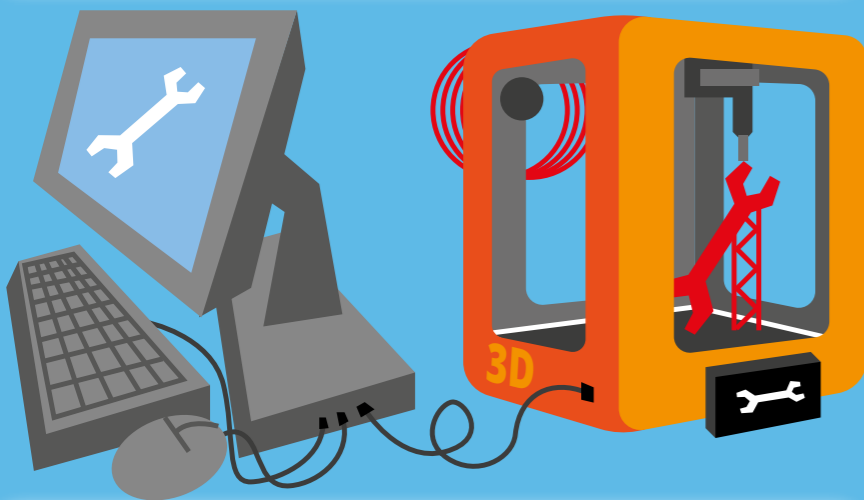
## 3D Printing

**Definition:** Products and components can be produced using 3D printers working from computer-drawn designs.

## Computer-Aided Design (CAD)

**Definition:** Allows designers to produce new products using 3D models displayed on computer screens.

**Advantages:**
Reduce costs and improve quality are the main benefits, there are a number of different examples:
- ☑ **Speeds up design** ➔ simple to edit
- ☑ **Alternative designs can be considered** ➔ simple to edit
- ☑ **Producing drawings of finished goods and parts** / no need to build models (prototypes) nor finished goods ➔ reduce costs
- ☑ **To view finished goods before manufacture to find best design** ➔ improves quality and accuracy of the design
- ☑ **Testing** ➔ materials and design to reduce errors and reduce costs
- ☑ **Linked to CAM to speed up production**

**Disadvantages:**
- ☒ **Cost of setting up** ➔ machinery ➔ training of workers
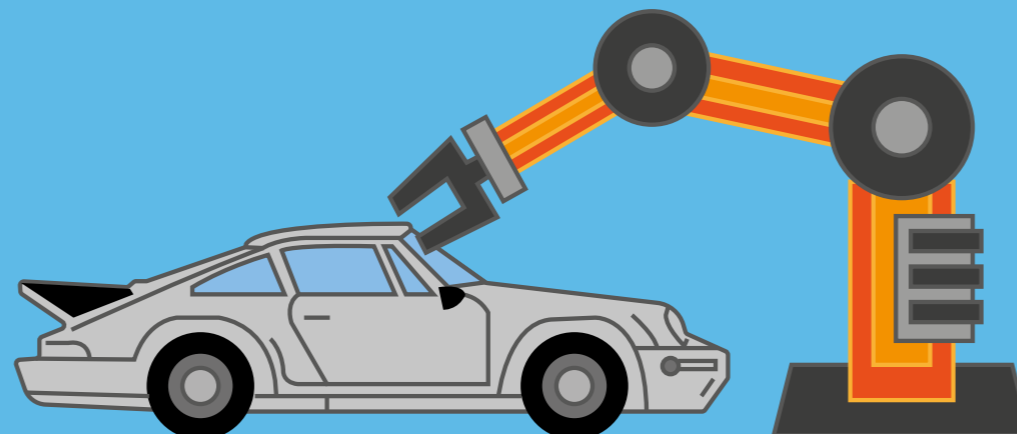
## Computer-Aided Manufacturing (CAM)

**Definition:** Uses computers to operate robots and other machines in production lines.

**Advantages:**
- ☑ **Can be linked with CAD** ➔ speeds up the whole production process
- ☑ **Measurements easily transferred to manufacturing process**
- ☑ **Less scope for error in production** ➔ more accurate ➔ allows for standardised quality ➔ greater customer satisfaction ➔ fewer returns
- ☑ **Used in mass production/flow production** ➔ easy to adjust ➔ speed ➔ cheaper
- ☑ **Fewer workers** ➔ lower wage costs ➔ less supervision

**Disadvantages:**
- ☒ **Cost of setting up** ➔ machinery ➔ training of workers ➔ possible redundancy payments to unskilled workers
- ☒ **Reputation of business if making redundancies**

## Why would workers be concerned by the introduction of new technology?

- **May lose jobs** ➔ technology may replace need for workers / changes require fewer workers
- **Promotion opportunities may be reduced** ➔ with smaller workforce
- **Lower morale** ➔ lack of job security / promotion opportunities
- **Fewer hours** ➔ reduced pay
- **Need to familiarise with technology** ➔ need to be trained ➔ may need to work harder
- **Health risks** ➔ technology could be dangerous
- **New skills may be gained** ➔ which may lead to higher pay ➔ greater opportunities

## Impact of technology on customers

- **Better service** ➔ as more work done by machines
- **Lower prices** ➔ as lower total wage bill
- **Inferior service** ➔ because of lower morale of workers
- **Higher prices** ➔ to pay cost of machines
- **No effect** ➔ as customers do not appreciate differences in service

## Apps (Applications)

**Definition:** Pieces of software designed for a specific purpose and for use on smartphones and tablets.

## Social Media

**Definition:** Involves websites and applications which allow users to create and share information, ideas and interests with other individuals, communities and networks.

## Video Conferencing

**Definition:** The use of computers to provide a video link between two or more people.



## Web Chat

**Definition:** Simple means of communicating in real time using only web browsers such as Firefox or Internet Explorer.

## E-Commerce

**Definition:** Involves the buying and selling of goods and services via the internet.



## Purchasing materials using e-commerce [buying on the internet]

**Advantages:**

- ☑ **Can see images of products** ➔ can compare many products
- ☑ **Prices of many sellers can be compared** ➔ on one computer
- ☑ **No need to travel to suppliers** ➔ so costs saved
- ☑ **Can pay online** ➔ may save bank charges
- ☑ **May be cheaper** ➔ because seller costs lower
- ☑ **Wider choice** ➔ from many sellers
- ☑ **Order 24/7** ➔ more convenient for business owners

**Disadvantages:**

- ☒ **Goods not inspected** ➔ to see if goods meet the need
- ☒ **Images may be misleading** ➔ so quality difficult to judge
- ☒ **Delays** ➔ in receiving goods ➔ if goods need to be returned
- ☒ **Possibility of fraud** ➔ if goods not sent ➔ when paying
- ☒ **Technical issues** ➔ e.g. reliability, speed
- ☒ **Convenience/easier** ➔ than possibly having to drive miles to purchase the item

## M-Commerce

**Definition:** Mobile commerce involves buying goods and services through handheld mobile devices such as smartphones.

## Benefits of creating customer records using a database

- **More effective data handling** ➔ sort and search for customer records quickly ➔ inputting the data
- **It is easy to make changes** ➔ save your work and print it out again
- **Can create reports** ➔ print out records and store hard copies
- **Can create mail merge** ➔ speed up sending correspondence via letters
- **Marketing** ➔ creating customer profile and loyalty scheme



## Why would customers be concerned by the introduction of new technology?

The customers:
- **Delays in service** ➔ consequences of this
- **Better service** ➔ as more work done by machines
- **Lower prices** ➔ as lower total wage bill for the business
- **Inferior service** ➔ because of lower morale of workers
- **Higher prices** ➔ to pay cost of machines
- **No effect** ➔ as customers do not appreciate differences in service