

New and emerging technologies

New technologies are those that are currently being developed or will be developed in the next 5 to 10 years, and which will alter the business and social environment.

Examples:

Fuel-cell vehicles

Zero-emission cars that run on hydrogen



Additive manufacturing

The future of making things, from printable organs to intelligent clothes



Industry - Automation and the use of robotics

As industry has grown new and emerging technologies have changed the way designers, architects and engineers work.

Intelligent machines and robotics have replaced machine operators and engineers.

The development of work now almost always involves the use of Computer Aided Design (CAD).

This software can carry out complex tasks such as virtual stress testing this is called Computer Aided Testing (CAT).

Designs can be produced to look 3D so customers can give opinions before prototyping begins.

Enterprise

An idea that is developed into a business proposal for a product that has commercial viability.

Products developed in this way require a patent to protect the idea so that other companies cannot use it without permission this is called a registered trademark.



Buildings and the place of work

The development of the internet has changed how data is transferred. This has led to people being able to work together remotely (from different buildings or countries).

Projects can be sent to machines using computer aided manufacturing (CAD) techniques including computer numerical control (CNC) machines such as laser cutters and rapid prototyping (RPT) machines such as 3D printers.

Physical layout of buildings for production should be logical to increase efficiency. This will reduce unproductive time, movement and waste materials.

Here is an example of a simplified production line that might produce wooden blocks.

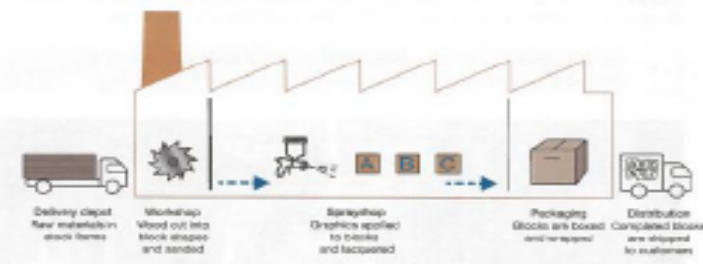


Image from AQA

Crowdfunding

Funding a project or venture by raising money from a large number of people who each contribute a relatively small amount, typically via the Internet.

Virtual marketing and retail

Virtual marketing the use of search engines positioning and ranking, banner advertising, e-mail marketing and social media in order to reach a wider audience to promote a product.



Co-operatives

A farm, business, or other organization which is owned and run jointly by its members, who share the profits or benefits.

Fairtrade

Trade between companies in developed countries and producers in developing countries in which fair prices are paid to the producers.

