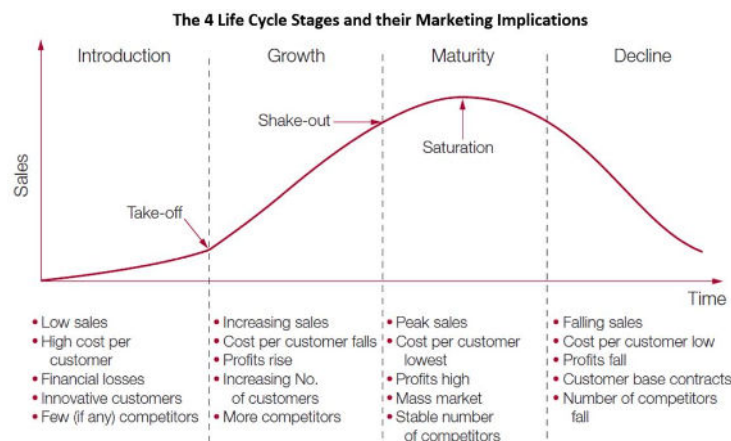


Technology Push

Research and development in science and industry can lead to new discoveries which can be used to improve existing products or develop new ones. This is known as technology push, and it happens *before* there is consumer demand for a product.



Sustainability

Development of more efficient electrical products, such as low-energy light bulbs, and better building insulation can cut down on energy costs. Electric cars can reduce burning of fossil fuels. Companies choosing to use renewable energy sources to power



Upskilling Workers

Rapid changes in technology and automation have meant a decline in the need for traditional skills. Workers have to retrain or 'up-skill' to manage the new technologies. Eg robotics



Wearable Technology

Fashion trends influenced by changing technology. Wearable items embrace new technology, such as high-tech watches. Textile technology uses electrically-conductive material or 3D printing technology.



Robotics

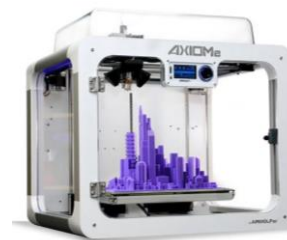
One part of automation. Difference between robotics and automation - robots use artificial intelligence (AI) to collect information and improve the performance of a particular procedure. Robotics has proven popular because of their ability to increase efficiency and handle harmful materials that humans can't, but they are very expensive.

Market pull

When product ideas are produced in response to market forces or customer needs. Examples of this include the development of cameras, which have become smaller, more lightweight and higher performing as a result of customer needs.

Virtual marketing and retail

Promotion of products online. Sharing experiences, reviews and recommendations. Algorithms can generate information about users' buying habits and suggest relevant retail sites for them to try using search engine optimisation (SEO). Blogs, vlogs and social media all provide advertising platforms. Costs of retailing from a website are far lower than from a high street shop.



Just in time (JIT) manufacturing

Triggered by a customer order. Correct amounts of materials are ordered in to cover the order, and these arrive just as they are needed by production. Saves money on storage, reduces waste and unsold stock.

Crowdfunding

Crowdfunding uses websites to advertise products as investment opportunities. People can choose to back a project with a financial donation if they think it is good. Backers are often rewarded with free gifts, discounts or a pre-agreed part of any profits if the product is successful.



Continuous improvement

Continually making small adjustments to production techniques to improve speed and quality and save resources.

Lean manufacturing

Minimising costs and maximising efficiency by cutting down on waste and the amount of materials and energy used in production. This is done by adapting designs and making changes to the production process. eg packaging net could be redesigned to include a tessellating pattern



Smart technology

Improved the efficiency of buildings. Factories using renewable energy sources to try to minimise environmental impact. Modular buildings can be erected quickly and at a low cost. Improvements in stock control mean less storage space is needed.



Market pull
Technology push
Sustainability
Virtual marketing
Just In Time
Manufacturing
Lean Manufacturing
Continuous Improvement
Smart Technology
Modular Buildings
Robotics
Artificial Intelligence
Wearable technology
Upskilling



Emerging technology is a term generally used to describe a **new technology**, but it may also refer to the continuing development of an existing **technology**

Design and Technology

New and Emerging Technologies