PRODUCT EVOLUTION

**Development in technology has affected materials and their manufacturing processes. New materials have been produced and the way we make products has changed.**

- Improve the standard of living
- New manufacturing techniques such as JIT production
- The use of CAD (computer aided design) and CAM (computer aided manufacturing) have improved the accuracy and quality of the product.

**Social factors has an impact on the products that are manufactured.**

- Peoples views on what is considered to be acceptable is changing all the time
- Products have to be designed to appeal to a wide range of people and consumers.
- Products are often seasonal and colours and styles are constantly changing and adapting

**Products for a ‘greener’ future are being developed.**

- There is a big drive to ‘rethink, repair, reuse, refuse, reduce and recycle’ materials and products (6 R’s of sustainability)
- Prices are sometimes higher for a product that is better for the environment.
- Governments are introducing laws around carbon footprint and product miles to deal with ‘green’ issues.

**TECHNOLOGY PUSH:** New advances in science and technology are passed on to design teams and used in the production of new products.

- e.g. mobile phones have developed from only making phone calls to being multi functional.

**MARKET PULL:** This describes the inspiration for new products coming from clients and consumers (the market). Customer demand is high.

- e.g. green cars with better fuel economy.

**OBSOLESCENCE:**

Some companies design and manufacture products deliberately to minimise the ‘product life’.

This helps them to maintain sales of the product.

Also known as ‘built in’ or ‘planned’ obsolescence.

- e.g. single use/disposable cameras and pens.

Can also be down to changes in fashion and the addition of new features on products.

- e.g. Mobile phones are planned obsolescence after 12-18 months due to changes in styling and new additional features to the product.

**CONTINUOUS IMPROVEMENT:**

This focuses on making designs better.

Products are continually improved through involving the client and customer in the design and manufacture process and updating the product specifications. A range of issues are often taken into account including:

- New technology
- Legislation and laws
- Improvement with production methods
- Fashion
- Impact on the environment
- Product maintenance
- Product durability
- Costs
- Feedback from the client and customer

This approach is called TOTAL QUALITY MANAGEMENT (TQM)