

Designing for People



Greenfaulds H.S.

ECONOMICS AND MARKET FORCES

Economics can often provide the driving force to change the nature of the market, as is illustrated by the examples given below.

Over the past 10 years the increase in home ownership has helped to increase the interest in DIY and home improvements. This interest has been partly caused by people wanting to do the work themselves to reduce costs. One spin off has been a huge growth in the hand and power tool market. Many well known power tool manufacturers such as Bosch and Black & Decker have developed new products aimed specifically at the DIY market.



There are now multi head power tools with detachable heads for sanding, drilling, cutting etc. There have been other products developed by companies to meet the needs created by these market forces, e.g. garden equipment, conservatories, double glazing, furniture and carpets.

Bosch
Strimmer



Events such as the oil crisis in the 1970's saw a new interest in all types of energy generation and conservation. With the steep rise in oil prices, overnight car and aircraft designers were fighting to produce more fuel-efficient engines and body shapes to meet this new economic market need. Energy producers looked at new ways of making cheap electricity. Alternative renewable sources such as wind and waves were overlooked in favour of Nuclear energy which offered cheap electricity in the 1990's.

When oil later became relatively cheap the level of research and development to find a more efficient source of energy for heating homes, powering industry and transporting people reduced. In a market driven economy if there is no financial incentive, then no research will be done.

What recent change in market forces have caused energy providers to start new research into producing energy more efficiently?

CONSUMER DEMAND

Demand for products can be divided into three main types (this is commonly known as consumer demand):-

- Demand that is created by the consumers themselves through better education or increased awareness such as household cleaning products that are environmentally friendly, ozone friendly sprays, labour saving devices such as kitchen gadgets and remote controls or products with a higher design standard (Designer or label goods).
- Demand for a particular product that is created by either the manufacturer of the product or by some other group such as toys based on a movie or tv programme or fashion items of clothing.
- Demand for a product that is created through a combination of technical innovation and manufacturer push such as compact digital cameras, laptop/palm computers, computer games, CD players, video cameras and mobile phones.

This consumer demand is subject to change. It can be increased or decreased by the economic climate Designers are often the first hit when there is a downturn in the market as companies often halt the development of new products at this time.

COMMERCIAL ENTERPRISE

Commercial enterprise involves the identification of new markets and opportunities to sell products. It means giving a product an advantage in the marketplace to ensure reduced competition

Companies try to meet the needs of consumers by satisfying consumer demand. Enterprising companies approaching an established market in a new way can change the nature of this demand.

During the 1980's several new companies did just that. They entered the market with products that were offered to the consumer in a new way.

Habitat, which was started by sir Terence Conran, was the first large chain store selling goods selected on the basis of their own design merits. This tapped into a new market area. Goods of this type had previously been unavailable except to the very well off. Companies such as Ikea and Lewis' have since entered this design oriented market.



TECHNOLOGICAL OPPORTUNITY

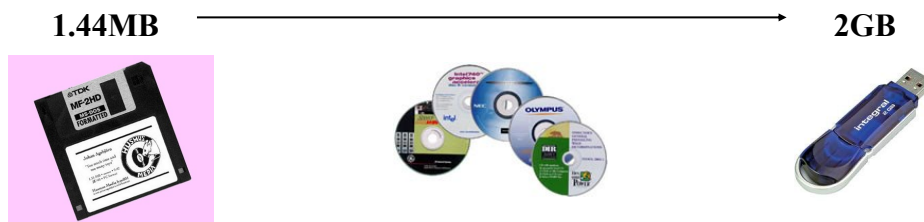
During the last 20 years a massive number of new products have been produced as a result of micro-chip technology and other developments in electronics, such as microwave technology. This has also led to existing products being developed and improved. Innovations such as portable power sources and new materials have made it possible to develop many new products such as compact digital cameras, laptop/palm computers, computer games, CD players, video cameras and mobile phones.



New materials such as carbon fibres, as well as being used in high performance aircraft and cars due to their strength to weight ratios, have also made possible a new generation of tennis, badminton and squash raquets.



These new materials have also demanded that new production techniques be developed to process them and turn them into products that are wanted. If we look at how computers have developed, it is interesting to note that as they have become more powerful, so the need to develop new ways of storing the data they produce has also grown. Here one technological development can be seen to have provided the need for the other.



Though the development of new technologies is important it is equally important that uses are found for them. The designer has to examine new developments and see if there is a use for them. Problems can occur with new technologies, as their drawbacks only become evident after people start using them.

OBSOLESCENCE

Planned obsolescence is a strategy used by companies and designers to cause products to be perceived to be obsolete before they actually need to be replaced. This can be done in three ways.

- Create a fashion change or a demand for a new style.
- Hold back attractive functional features then introduce them on a later model, making the previous one obsolete.
- Produce products that will break, wear, tear or rot before they should.

Many young people are very fashion conscious when it comes to clothes, mobile phones etc. Designers are aware of this and design products with a fashionable appearance, which almost guarantees that it will look out of fashion in a year or two. This is known as **STYLE OBSOLESCENCE**.

Technological developments continually offer electronic goods with more features, more power and more variety. This means that a products features and functions will evolve over time.

Successful companies should consider a programme of planned obsolescence if they are to remain competitive in today's global marketplace. Consumers now expect their products to evolve. They demand new improved technology and cosmetic change on a regular basis.

Explain how each of the 5 factors below may have influenced the design of digital camcorders:

1. Consumer demand 2
2. Commercial enterprise 2
3. Environmental concerns 2
4. Technological opportunity 2
5. Planned obsolescence 2



When designing furniture, ergonomics is an important consideration.
In the design of a chair:

1. Name 4 important ergonomic factors which should be considered when designing a chair. 4
2. Explain why each factor is important. 4

