Invention, Innovation and Design (Marcouse u54)

**Definition**

An invention occurs when a new product or process is created. Inventions will only earn money if they are put into practice, in other words innovation takes place.

Innovation means using a new idea in the market place or the workplace.

Design involves developing both the physical appearance and the internal workings of a product. Design is used by firms to ensure that their products are attractive and practical.

Introduction

At the heart of any business is the product it sells. That product is the key to its success. Invention, innovation and design are the processes by which interesting, new or unique products enter markets. Inventions can increase the total value of a market, or can lead to the birth of totally new market.

Invention

The very activity of inventing new products is somewhat hit and miss. Many products have been invented ’by accident’ (Post-it notes and Sony Walkman)

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| **Type of Invention** | **Description** | **Examples** |
| Product invention | Devising a new type or category of product, i.e. opening up a new market | * Video recorder * Digital radio * Your example * Your example |
| Process invention | Devising a new way of producing or manufacturing (which may allow new products to be made, or improve the efficiency of making existing products) | * Spray painting * Soft ice coating (Wall’s Solero) * Robotic welding * Your example * Your example |

Remember invention also takes place in production processes (Pilkington [float glass](http://www.youtube.com/watch?v=GpektVh6aFw) and now [self-cleaning glass](http://www.youtube.com/watch?v=-wLXYoaTHzg))

Inventions originate in the corporate ‘think tank’ laboratories (NyLon), and equally in the lone inventors shed (James Dyson).

After inventing the product or process it must be protected by a patent, which offers up to 20 years protection against copying without first paying a licence fee. Patents are valuable assets; Google recently paid £8bn for Motorola to get access to its 17,000 patents and another 7,500 pending.

Innovation

Innovation can be based on products or processes. Successful innovation requires business skill in addition to inventive talent. The inventive idea must be marketable, and meanwhile the method of production must be developed and the finance found. Successful innovation is vital for the long-term survival of a firm.

Innovation can be incremental (squeezable sauce bottle), or revolutionary (internet).

Design

Designers consider the design mix, that is three factors: Aesthetics, Function & quality, and Economic manufacture.

Products from different manufacturers and for different target customers will have different weightings; for example consider a perfume for Chanel versus one for Aldi; a shawl for Primark versus one for Liberty, and a T-shirt for Marks & Spencer versus one for Crew.

Invention and Innovation in business

The challenge for businesses is will they accept the long-term payback often required for innovation to be rewarding. Nevertheless unless a business does innovate it will always be ‘following’ competitors (which is a recognised strategy), and requires a never ending focus on reducing costs, to match the lower prices that can be charged for not-very-different products, as there is always the threat of someone cheaper taking the market.

In the space below add your own examples of innovation in each of the four business functions

Invention and innovation in people

Invention and innovation in finance

Invention and innovation in operations

|  |  |
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| Issues for Analysis | Issues for Evaluation |
| * Do not confuse invention with innovation. Britain has a successful track record of invention, but a much poorer one of innovation. * Innovation can completely change a firm’s market share and prospects. * It is a key responsibility of management to look ahead and anticipate trends in the marketplace * Innovation can occur in people, finance, processes and in Management itself; by addressing its own functions and people it may encourage innovation throughout the whole organisation. | * The most common tool for evaluation is time. British companies tend to be focused on the short-term; quarterly reporting, annual management bonuses, dividends for shareholders. * But invention and innovation are long-term activities requiring years and sometimes decades of commitment. * There is a link between spend on R&D and innovation and [economic growth.](http://www.dius.gov.uk/assets/biscore/corporate/migratedd/publications/b/businessinnovationuk.pdf)  The UK spend on R&D as a percentage of GDP has fallen every year since the 1980s, it is now ranked 6th in the G7 nations. Although very efficient in its ‘spend to gain’ ratio this is not a promising trend for the economy. |