CHAPTER 8

PRODUCT DEVELOPMENT: FROM INVENTION TO REALIZATION
BEVERAGE COASTER CASE

A coaster is a base to rest a glass or cup upon. The main purpose is to protect the table surface from dirt or water spilling. As it is not being properly kept, coasters are usually misplaced after being used and this will cause inconvenience to users. In order to keep this product intact, it is important to design a container that will serve this purpose. As a result, a coaster container is designed. It is based on the stylization process of shapes with reference to the Rhinoceros beetle. Besides incorporating an impressive appearance in its design and styling, the flat piece coaster that is included in a set is printed with a series of different types of Rhinoceros beetles as further information to users. Moreover, the coaster set may be used as a decorative item for the users, as well as an advertising and promotional item which serve as perfect executive business gifts.

STICKABLE BEETLE CLOCK

A clock usually functions as an indicator, keeper and coordinator on time. Therefore, clock was designed to portray a fun and interactive approach within the shape and system of a beetle. With impressive design and styling, suitable materials were chosen to evoke the user’s positive emotion towards the beetle clock, which consists of plastic for its body and clear syntactic rubber for its leg. In comparison to the refrigerator magnet, the advantage of this product is not only can it be attached on the refrigerator surface, but also on the wall due to its syntactic rubber material. Apart from this, it may also be useful as a souvenirs for tourists.
PRODUCT DEVELOPMENT: FROM INVENTION TO INNOVATION

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Solar Heater Box
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Beverage Coaster Case
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Stickable Beetle Clock
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Oryctes Rhinoceros Bottle Opener
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Product Development: From Invention to Innovation

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In today’s’ world we can see numerous product inventions around us. Starting from intangible to tangible products, all of them are derived from human inventive and creative ideas. The invention of the airplane by the Wright Brothers in 1903 (Crompton 2007) is a process of inventive and creative thinking that produced a new means of vehicle for human beings. This can be considered as the biggest breakthrough in the aviation history which provides an alternative transport that is time-saving, comfortable and convenient for the users.
Nectar is a rare and rare treat loved by the insect world. They spend a significant portion of their life cycle in the cocoons, where they live, and emerge as beautiful butterflies. Unlike their closely related sister species, butterflies spend much of their adult life on the ground, feeding on nectar and visiting flowers. However, due to their complex life cycle, butterflies undergo several metamorphosis stages in their development. This process can take several months, and the result is a beautiful and colorful butterfly, which the nectar loves to consume and transform.
In Malaysia, the culture of product invention has been seriously practised as this is one of the Government plans to increase the country’s economic growth. The seriousness was shown by forming societies, e.g. Malaysia Invention and Design Society (MINDS), and organizing competitions and exhibitions e.g. PECIPTA.

Fundamentally, product invention can be understood as a method of formulating new ideas for products and processes. It can be a novel product idea which appears in one’s mind that can initiate new product development or improvement on the existing product.

In terms of initiating new product development, this can be defined as a new idea that is different from anything seen or known before, for instance, a calculating machine which was invented by William Seward Burroughs in 1885 (Cavendish 2008). This product was totally a new idea when it was first introduced in the market and created a ‘wow effect’ in terms of its novelty.
As for the improvement of existing products, it is considered the product development process that relates to the appearance and technology based on the similar category of previous product inventions. This can relate to the invention of a cell phone by Martin Cooper in 1973 (Wilkinson 2011), which was based on the Alexander Graham Bell invention of 1876 called the telephone (Bruce 1973). At present, cell phones are widely used and can be regarded as a ‘must-have’ product by any individual. The cell phone as a product invention created a wider range of market segments that attracts the attention of global companies to venture into the telecommunication business.

Basically, when a first product is invented there is less consideration in terms of its commercialization aspect. To make the new product invention marketable, a group of people will be assigned in developing the product to look more innovative. This can be considered as a process of converting inventions (promising ideas for products) into innovation (commercialized products) (Chandy et al. 2006).

As for Malaysia, this group consists of experts from inter-disciplinary areas such as arts, business and technology which are currently being practiced in the industry. Specifically, these involve experts like designers, marketers and engineers who engage in developing product appearance, market study and new technology.

However, there is less study on product perception in the innovation process that involves psychologists. This discipline is considered a significant area which needs to be engaged by the industries in order to produce innovative products that appeal to the consumers’ sense of aesthetics and emotion.

In actual fact, the combination of many disciplines is the key to the success in product invention and innovation. For instance, in the US, the success of iPhone by Steve Jobs is the result based on the collaborative work of inter-disciplinary experts (Kim 2011). Similarly with IDEO, an award winning global design firm based in Silicon Valley, which invented famous products such as the Apple mouse, Palm V and Polaroid I-Zone Pocket Camera (Kelly 2007).

For any developing country, product invention and innovation is considered a big ‘thing’ as it not only shapes the world to become a better place to live in, but also functions as a key factor in the development of modern society. In relation to Malaysia, besides the industrial sector, the education sector, especially universities, need to play a vital role in producing new inventions by having inter-disciplinary collaboration in order to create innovative products that is ready for commercialization.