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## THE FUTURE OF INDUSTRIAL DESIGN IN MALAYSIA

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### ABSTRACT

*This paper discusses the current development and possible future activities of industrial design in Malaysia. Besides quoting from resources literature review, some of the information provided in this paper is based on the researcher's personal observations and experiences in this field. This paper showed that as Malaysia moves towards the era of modernisation, the government strongly realised the important role of industrial design to the country's industrialisation. For the institutions of higher learning, the government has allocated millions of dollars for the encouragement of research and development (R&D) projects. A comprehensive incentive package has also been set aside to give boost to local industries to enhance the local product development capability. It is hoped that through all these incentives and support given will help to realise the nation's aspiration of becoming fully industrialised by the year 2020. This paper concludes with several proposals that needs to be adopted by four interested parties; namely the government, the industry, the education sector and the general public (consumers) as seen from the industrial designer's perspective.*

*Keywords: art and design, industrial design, design education, Malaysian government, AFTA*

### INTRODUCTION

The definition of 'industrial design' has until modern times been unclear and even confused. However, a widely accepted definition of industrial design that has emerged is the International Council of Societies of Industrial Design (ICSID) definition formulated by Dr Thomas Maldonado in 1964 :

*'Industrial design is a creative activity whose aim is to determine the formal qualities of objects produced by industry. These formal qualities include the external features but are principally those structural and functional relationships which convert a system to a coherent unity both from the point of view of the producer and user. Industrial Design extends to embrace all aspects of the human environment which are conditioned by industrial production'.*

Industrial design may be sub-divided into the following categories:

1. Design which affects the function, form and finish of a manufactured object such as radio or television set, kitchen utensil, a toothbrush or a safety razor.
2. Design which affects the form and finish of a manufactured object with a mobile or static mechanical function, such as a motor car, a vacuum cleaner, a typewriter and a sewing machine.
3. Design which is concerned primarily with decoration, and which may be described as industrial decorative art, and which affects industries that still operate on a craft basis, such as those manufacturing domestic glass, pottery, textiles and wallpaper.

According to Lorenz (1990) the earliest recorded official use of 'industrial design', with its specific meaning, came in 1913. However, the birth of industrial design often pre dates this by six years and originates from Germany and not the US. Industrial design was introduced by Germany's architects and designers and known as the '*Werkbund*'. This aimed to improve the technical and aesthetic values of final products with the utility of the end-user in mind. The efforts made by the *Werkbund* and the Bahaus design school started a new era of design with better quality in products. Due to these developments, Germany became a focus of attention as a role model in industrial development.

## INDUSTRIAL DESIGN

### History of Industrial Design in Malaysia

Many researchers in this field have indicated that it may be possible to relate the design activities in Malaysia with the early activities of the local craftsmen. During the establishment of the first British trading post in Penang in 1786, craftsmen in the states of Kelantan, Terengganu and Malacca traded their traditionally hand-made crafts and pottery (Ibrahim 1999).

After gaining independence from Britain, Malaysia has experienced significant improvements in the living standard and the tremendous development has occurred in the manufacturing industries to meet consumer demand. By the 1960s, the importance of design for industries was first witnessed when the Prime Minister, Tun Abdul Razak, (honorably named the 'Father of Development') called for the need for a national design identity, urging local designers to explore the utilization of new technology that will help reduce the nation's reliance on imported product dependency. By 1971, a New Economic Policy was established with the main aim of encouraging local manufacturers to assemble and manufacture product to fulfill this aim.

By the 1980s, the importance of design and industrial design began to be recognised and was highlighted through two successful mega-projects (1) the image of National trains, and, (2) the design of the Malaysian national car, Proton Saga (Ibrahim 1999).

By 1990, Malaysia had made a successful transition from being a commodity-based exporter to becoming a producer of manufactured products. The progress of Malaysian industrialisation had also received a new impetus with the government's commitment to converting the nation into a fully-industrialised country by the year 2020.

The establishment of the Malaysian Design Council (MDC), Proton, Perodua (Malaysian 2<sup>nd</sup> National cars project), Modenas (Malaysian motorcycle), Malaysian Electrical Corporation (MEC) are some of the examples in this decade, of the commitment and support given by the government in order to achieve the 2020 vision.

### Industrial Design Education In Malaysia

Formal industrial design education in Malaysia began in 1967 with the establishment of the Department of Art and Design as part of the School of Applied Arts and Architecture at the Institut Teknologi MARA, (ITM) [*which later in August 1999, upgraded its status to become the Universiti Teknologi MARA - UiTM*]. By 1972, the department of Art and Design was separated from the School of Architecture to become the School of Art and Design, which amongst the courses offered was also the Department of Industrial Design. According to Ibrahim (1995), in the early years of the formation of the Department of Industrial Design, only nine students were enticed to enroll and was taught by two expatriate design lecturers (namely Mr. Omar James McKendry from Ireland, and Mr. Earl Johari Theroux from the USA). As stated by Ibrahim, in 1973, only seven of the nine students had graduated. They became the first batch of industrial design graduates in Malaysia and due to limited domestic expertise became pioneers in the development of industrial design in Malaysia.

Today, the Faculty of Art & Design at UiTM is now proudly offering various level of education in art and design from Diploma, to Bachelor Degree (Hons.), to Masters and even Doctoral programme in most of the art and design disciplines.

In line with the Malaysian government's aspiration and focus on industrial design education, UiTM is no longer *the only* university to date that offers courses in industrial design. Other universities and institutions of higher learning such as Universiti Teknologi Malaysia (UTM), Universiti Malaysia Sarawak (UNIMAS), Kolej Ugama Sultan Zainal Abidin (KUSZA), Politeknik Johor and other commercial institutions such as Centre for Advanced Design (CENFAD), Malaysia Institute of Art (MIA), Institut Teknologi Tun Abdul Razak (ITTAR), INTEC College and Limkokwing Institute for Creative Technology (LICT) are also offers similar courses in industrial design. In the near future, the Universiti Putra Malaysia (UPM) and Universiti Sains Malaysia (USM) together with several other polytechnics and commercial institutions throughout Malaysia are likely to expand the educational opportunities in industrial design.

## The Employment Sectors of Industrial Designers

According to first survey done by Bajuri (1988), the number of graduates who actually went into practicing industrial design in the local industry in the late 1980's has been very limited, with less than 6% employed within the industry. A second study by Mujir (1990) shows that, from 186 students, eighty-two (44%) were working in manufacturing sectors, 29% with design consultants, 12% were in semi-government, 6% in higher education institutions and 9% opted to work in other profession.

The latest survey by Ibrahim (1999) was done to compare and verify the findings from the earlier Bajuri's and Mujir's surveys. Ibrahim managed to acquire two hundred and eight names of industrial designers working in various areas of industry. This survey again indicated some similarities as well as differences with Bajuri's and Mujir's works.

**Table 1 : Working Sector of Industrial Designers in Malaysia**

<i>Working Sector</i>	<i>No. of People</i>	<i>(%)</i>	<i>Total %</i>
Consumer Durable Products	45	22%	
Transportation	18	8%	
Furniture	26	13%	
Plastic Products	12	6%	49%
Government Agency	11	5%	
Higher Learning Institution	28	14%	
Art Teacher	18	8%	
Research Institute	12	6%	33%
Industrial Design Consultants	6	3%	
Other Consultants	32	15%	18%
<b>TOTAL</b>	<b>208</b>	<b>100%</b>	<b>100%</b>

As an example, the results from Ibrahim's finding that 49% of industrial designers work in the manufacturing sectors are similar to Mujir's (44%). Both these findings contradict those made by Bajuri who claimed that only 5.5% of the industrial designers are actually practicing their profession in industry. Considering the factors such as the economy, the government policy and incentives given to industries today, which was not available at the time of Bajuri's, Ibrahim believed that Bajuri's finding do rightly reflects the true status at that time. A summary of the survey findings of industrial designers in industry conducted by Ibrahim is presented in *Table 1* above.

## Industrial Design Promotion and Activities

Design promotion activities began in the 1976 when the first national seminar on industrial design held in Kuala Lumpur. Foreign design experts from the UK, Sweden and Germany were invited to present papers at the seminar (Er 1994). Unfortunately, despite the enthusiasm and support given by the various mass media, the outcome of the seminar was very poor. A second national seminar (furniture design workshop) took place in 1985, and was organised by the German consultants in collaboration with the Malaysian Timber Industry Board (MTIB). A third design promotion initiative (1986) was with a Workshop on furniture design, focusing also on finishing and jointing techniques. This workshop was organised by ITM and participant mainly targeted for industrial design students.

In July 1991, the first International Industrial Design Conference and Exhibition was held in Kuala Lumpur. The conference theme 'Quality Through Design' was chosen to emphasise the importance of industrial design in creating quality product through both appearance and performance. This event appears to be the major significant milestone to industrial design awareness programme in Malaysia and became very detrimental in the development of the industrial design profession in the country. Malaysia's first official design magazine, titled the 'Malaysia Design' was launched during this conference.

The importance of industrial design as a vehicle to the nation's industrialisation initiative and the concerted effort to create greater design awareness among the general public and manufacturing industry was being facilitated through the official formation of the Malaysia Design Council (MDC). The Council through programmes such as the *'Concept Car Competition'*, the *'Malaysian Young Designers Award'*, and the *'Malaysia Good Design Mark'* spearheaded promotions of industrial design activities. The *'Concept Car Competition'* (launched in 1993), for example, aimed to promote the development of inventions, innovations and designs in the Malaysian automobile industry and to transform creative ideas into commercial products. Similarly, the *'Malaysian Young Designers Award'* (1996) aimed to promote an awareness among the young generation on the importance of innovative and quality design in the production of world class, marketable products. The more recent *'Malaysia Good Design Mark'* (April 1997) principle purpose was to act as a benchmark for good design in Malaysia. This is possible since it enhances design awareness among local designers and manufacturers and encourages local designers and manufacturers to create innovative products and packaging designs.

Besides the MDC, there is also the Malaysian Timber Industrial Board (MTIB) and the Malaysian Invention and Design Society (MINDS), which have also taken a very positive step by holding competitions activities on industrial design. MTIB has continuously conducted national furniture design competition annually in conjunction with Malaysian International Furniture Fair (MIFF). MINDS conducted design competition and exhibition on an annual basis under the banner of the *'Malaysian Invention and Design Exhibition'* held in conjunction with Malaysia Science and Technology Week with the objectives of encouraging local designers and inventors to get seriously involved in design and innovation.

## THE FUTURE OF INDUSTRIAL DESIGN

The future of industrial design in Malaysia is bright. Since the 1990's, the Malaysian government has significantly promoted and supported Industrial Design as one of the important profession alongside the Engineering and Architecture. This is based on the Malaysian government's aspiration that the ability to create new designs for the international market is the basic necessity in Malaysia struggle towards the achieving the national objective of becoming an industrialised nation. At long last, the industrial design profession has achieved due recognition for its role in the country's economic development and well being in Malaysia. Below are some examples of the development of industrial design that the researchers believe will help brighten the industrial design profession in the near future.

### Design and Industrial Design Education

In realising the importance of design education, the Malaysian government has implemented 'learning through design education programs' in all primary and secondary schools as well as in upper secondary schools throughout the country since 1996 (Ibrahim 1999). The government has also introduced Computer Aided Design (CAD) subject into the secondary schools to help student produce innovative design. It is very encouraging to see that since 1991, the emergence of a few hundred of design clubs established in the schools that promotes the concept of good design and help raise the consciousness of design amongst school students. For the institutions of higher learning, the government has allocated some RM45.5 million to support the emergence of more research and development projects that can help rejuvenate the sense of creativity and innovation amongst the lecturers and students. The government has also allocated RM1 million to the department of Industrial Design ITM, for training and learning programs in industrial design.

The Malaysian government, through the Ministry of Sports and Youth has introduced programme called "Rakan Muda-Rekacipta" (Youth Club-Design Innovation program) in order to produce a creative, innovative and inventive generation.

### Government's Incentives and Policy

The government has provided financial assistance to local industries, particularly in the areas of product design as well as the development of industrial and consumer products. These include the *Industrial Technical Assistance Fund II* (ITAF II), the *Intensification of Research in Priority Areas* (IRPA), tax concession and training programmes. These schemes are aimed at enhancing local product development capability, which is viewed as essential for the industrial development of Malaysia. These incentives

reaffirmed the government's policy of providing assistance to industries (particularly small and medium scale). The ITAF II scheme for example, is aimed to provide grants to industries for improving and upgrading local product development and design, upgrading of the indigenous technology through the development of new products/processes and improving existing products/ processes. The IRPA grant on the other hand has been introduced with the aim of improving the efficiency and competitiveness of local industries particularly in the areas of product design and development, and in industrial and consumer products.

In order to enhance the product development in the area of industrial design, the government has approved a variety of projects to be undertaken by industry. These include furniture projects (rubber wood, rattan), consumer durable products, plastic manufacturing projects, electrical goods, automotive components etc. The government, through Ministry of Science, Technology and Environment is planning to pay certain royalty and incentive for certain product innovation and process which succeeded to be commercialised.

### **General Agreement on Tariffs and Trade (GATT)**

Malaysian industries now face new challenges since the loss of GATT (General Agreement on Tariffs and Trade) privileges due to the industrialised nation status having been imposed on Malaysia in December 1997. As a result, foreign manufacturers are slowly moving to other new countries offering cheap labour, hence leaving the local industries to fend for themselves (Salleh 1996). In order to survive nationally and internationally, these industries do not have any other choice but to make an extra effort to produce high quality local products to face more challenging global competition. This move will eventually give confidence to foreign investors when the local manpower became capable of contributing ideas and skills in design and manufacturing process.

### **The Implementation of ASEAN Free Trade and Agreement (AFTA)**

The importance of the industrial design is also highlighted by the implementation of the AFTA in the year 2003. According to Abdul Razak Ramli, the International Trade and Industry Ministry's Director of the ASEAN Economic Co-operation Division (NST 22<sup>nd</sup> May 1997), Malaysian industries should take advantage of the opportunity offered under the AFTA. AFTA will offer industries a way to move into export markets by tapping the large regional market. The removals of tariffs will assist industries in doing business in the regional free trade area as would the increased market size with Cambodia, Laos and Myanmar all joining the ASEAN region.

Similarly Datuk Soong Siew Hoong (NST 22<sup>nd</sup> May 1997), Chairman of Federation of Malaysian Manufacturer's Committee believes that the competition will be keener with the implementation of AFTA. He suggests that if industries are not efficient, quality-conscious or price-competitive, their products will not be able to enter other ASEAN countries. He thus urges Malaysian industries to take advantage of the facilities being offered to compete on a level playing field under AFTA.

### **Initiative by Local Industries**

Based on the researcher's personal observations at various industrial settings in Malaysia, it is evident that some early initiative has been taken by industry in adopting industrial design activities into their fold. For example, most industries in Malaysia have now started to co-operate with research centres, design centre and higher learning institutions in order to upgrade their understanding of industrial design as well as to acquire the transfer of knowledge, technology and know-how. Some companies have even begun to actively show support on design activities by getting involved in sponsoring design short-course programmes and design projects.

## **SUGGESTIONS**

The researcher further believed that more issues should be considered in order to realise the nation's aspiration of becoming fully industrialised by the year 2020. The researcher also firmly believed that the four major parties; namely the government, the industry, the education sector and the general public

(consumers) are the *players* that will dictate the future fate of industrial design in Malaysia. To ensure a brighter future of the profession, the researcher have put forward some suggestions for consideration and adoption in the near future.

### **The Government**

Although the government has set up and given various incentives and funds to industries and education, these still is insufficient. The Malaysian government needs to work hand-in-hand more strongly with the industries and the industrial design professionals and product development to increase productivity, provide higher levels of service and responsiveness and reduce costs, if it intends to fulfill its policy of making Malaysian industries more competitive in the global market.

The researcher also believed that the government should further enhance existing policies, help diagnose the industries problem, co-ordinate the network and add on smart partnerships (i.e. collaboration between government agencies such as Ministry of International Trade and Industries with selected industries) to produce new products.

### **Industry**

The time has come for Malaysian industries to produce 'product champions' which are desirable to the global market place and become more 'customer focused'. The researcher suggested that the Malaysian product manufacturer should produce their own products with their own design and brand name that aim to meet international standards. The researcher believed that company brands could be trademarked to stimulate an image of quality and design. This should be then assisted by the Malaysian government support schemes and incentives that encourage industries to design and produce their own products to compete in international markets. The researcher strongly believed that the success of Malaysian industries will greatly depend on the industries capability to design and produce products that can compete in both the local and global markets.

### **Education**

Based on the researcher own experience in industrial design education, it can be concluded that industrial design education in Malaysia concentrates too much on 'aesthetics' and art-based issues, rather than also meeting the reality of industrial needs. The researcher believed that the industrial design education needs to also focus more on the technical, engineering and marketing since much of industrial designers work today is related to highly engineered product design work. In order to achieve this, the design education should also engage experts from a variety of backgrounds including electronics, production and marketing into the curriculum, thereby bridging better understanding and appreciation between technology, marketing and design.

The re-training/upgrading courses for design education staffs must also be considered which allows for transfers of the most up-to-date trends of design and latest technology. Conscious attempt should also be undertaken to bridge the gap between technology and design such as teaching design to engineers and teaching engineering to designers.

### **General Public (Consumers)**

For the benefits of the Malaysian consumer, the researcher suggested that industries must be more focused on the consumer requirements when introducing new products to the market and not merely thinking of profits alone. Malaysian industries need to base their production on consumer and market requirements instead of trying to sell what their manufacturing plants can produce. In this way, industries will able to maintain their position in the contemporary competitive market. To achieve this, industries should carry out adequate market research, develop products with a clearer market strategy and pay more attention to the customer. A 'Consumer Protection Body' could be established for the Malaysian consumer public to protect consumers by assessing products in the market in terms of consumer requirements.

The researcher found that, although the Malaysian government has aggressively promoted design awareness to the public, it seems to have not been very effectively received by the public. Therefore, it is about time that design awareness programmes be widely and strongly promoted by the Malaysian government through all types of mass-media. For example, there is a need to propagate design and industrial design activities including design innovation, design trends, consumer lifestyle and other related activities to the population at large. Other parties too that are involved directly (or indirectly) in design and product development such as the trade associations, higher educational institutions, R&D institutions and development agencies must also be encouraged to play a more active role in promoting design awareness to the public.

In conclusion, the researcher believed that most of these suggestions are suitable for adoption and employed in Malaysian organisations that are involved directly and indirectly in industrial design. It is hoped that they can give due consideration and possibly take on board some of the suggestions outlined above that can help improve their product development and help prosper the nation at large.

### SUMMARY AND CONCLUSIONS

The profession of industrial design in Malaysia is still at its infancy. The contribution of industrial design to local industries only became prominent after the government articulated the targeted industrial-based nation status. This has given local industrial designers an impetus to show their ability to produce good and creative designs. The industrial design profession gained its limelight by the government's establishment of the Malaysian Design Council (MDC) in 1994. With this move, the government has officially recognised that design is one of the major factors influencing the market success of future Malaysian products in the world market.

The creation of AFTA in 2003 will also facilitate more liberal trade and investment flows in which Malaysia has already been a major. The new and expanded market opportunities will encourage Malaysian industries to set up new production capacities. Opportunities for the development of new products to cater for the needs of the local and global market as a whole will necessitate investment in industrial design and the adoption of product development in manufacturing processes.

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