



Talk on “ Ideas to Innovation “

by Ir. Chew Weng Yuen

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The Engineering Education Technical Division had co-organized a talk entitled “Ideas to Innovation” with Engineers Australia Malaysia Chapter, and the Institution of Mechanical Engineers Malaysia Branch, on 15th November 2018, at Wisma IEM. The talk was delivered by Ir. Dr. Ling Chen Hoe who is currently the Senior General Manager and Director of Meiden Malaysia.

There were 58 participants in the talk, and Ir. Dr. Ling commenced by explaining the differences between ideas and innovation. Ideas are concepts developed in the mind whereas innovation is the creation of better or more effective products, processes, services, technologies, or ideas that are accepted by the markets and society. Innovation unites two distinct processes namely invention (i.e. creates new knowledge) and entrepreneurship (i.e. transforms new knowledge into new value). An example of innovation is the process of transforming goods to products, whereby inputs such as raw materials were transformed via various production processes into outputs (i.e. finish products). Factors that are involved in the transformation process are land, capital, labour, and entrepreneurs.

Ir. Dr. Ling explained that in general, the innovation process commenced with the existence of an entrepreneurial goal. This is then follow by one’s recognition of an opportunity in achieving that goal, and finding the resources needed to realize the said opportunity. Next, one may develop a venture for the development of the innovation, and to ensure that value is created in the said innovation.

It was then informed that the innovative idea of value chain was mooted based on the view of organizations adopting the concept whereby a manufacturing (or service) entity is seen as a system consisting up of subsystems each with its own inputs, transformation processes, and outputs with the sole purpose of creating value. The importance of managing the supply chain process in the manufacturing industry was duly emphasized to the participants.

Ir. Dr. Ling also illustrated the importance of innovation for the survivor of an organization via several notable case studies. It was shown that organizations that had failed to identify emerging market trends, innovate, and adapt to the changes are destined to fail.

The four types of innovation namely, product, process, position, and paradigm innovations were discussed. It was explained that *product innovation* involves in changing the products or services which an organization offers. It helps an organization to capture and retain market shares, and increased profitability in those market. *Process innovation* involves in

changing in the ways products are created and delivered. It enables the organization to make something no one else can, or to do so in ways that are better than anyone else. *Position innovation* involves in changing the context in which the products or services are introduced to the market and lastly, *paradigm innovation* involves in changing the underlying mental modes which frame what an organization does.

The innovation process and the various type of product life cycles were next illustrated. It is vital that an organization keeps innovating its products or services as the same go through its life cycles. This is to ensure that the organization stays relevant and its command of the market share remains unscathed from any disruptive changes in its business environment.

Various innovative business models of successful enterprises were also shown and discussed. It was illustrated that game-changing innovation is the core of a successful company's business model. It is not just the invention of new products and services, but the ability to systematically convert ideas into new offerings that would alter the very context of the company's business.

Ir. Dr. Ling also discussed the importance of team diversity in driving innovation. It was informed that diversity unlocks innovation as diversity of thought, view point, and mindset will lead to more innovative results as compared to "like-thinking". Other drivers of innovation that were discussed are (1) the intensity of competition in an organization's business environment, (2) the emergence of disruptive technologies *inter alia* Internet of Things (IoT), and artificial intelligence (AI), and (3) organizational culture. These are all contributing factors to driving an organization's ability to innovate.

In conclusion, Ir. Dr. Ling reiterated that innovation is the creation and delivery of new customer value in the market. In order to stay relevant, an organization should integrate innovation into everything that it does such as finding new and better ways of doing things, creating new customers, and creating new markets. There was a brief Q&A session before the talk ended with the presentation of a memento to Ir. Dr. Ling by the session chairman.



Ir. Dr. Ling Chen Hoe illustrating a point while delivering his talk on "Ideas to Innovation"