

Source of Innovation

CHEMICAL ENGINEERING TECHNICAL DIVISION (CETD)



by Dr Chong Chien Hwa

WHAT is innovation? What are the barriers and key factors to promote effective innovation? These were questions answered at a half-day workshop organised by Chemical Engineering Technical Division (CETD) on 7th Sept 2013. Assoc. Prof. Dr Edwin Chung from the School Of Engineering at Taylor's University and Head for Taylor's Technology Innovation Centre (TTIC) was invited to conduct the workshop.

Dr Chung started by requesting all participants to introduce themselves and to state their expectations for the workshop. It was noted that most of the participants wished to learn more about innovation, how to start to innovate, tools and techniques to generate ideas, what comes after innovation, how to apply innovation techniques to research and development as well as how to generate high impact innovation.

Next, participants were engaged in the second session with a simple paper game to illustrate how we limit our thinking with a self-imposed barrier. Participants were pushed until they had no choice but to think past the artificial barrier for a solution and they awakened to the realisation that it was they themselves who put a limit on their thinking.

SESSION 2

Innovation is not only good for business but it also creates shareholder value. A report in Business Week in 2006, indicated that the top 25 most innovative companies at the time achieved a median profit margin growth of 3.4% a year since 1995 compared with 0.4% for the median S&P1200 company. Dr Chung also related the story behind Honda's CVCC engine development to illustrate the benefits of innovation.

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Figure 1: Participants trying to solve the paper challenge at the workshop

The taxonomy for innovation was introduced. Dr Chung said that when we talk about innovation, we normally think of innovation in the form of product and services but there is more to innovation than just product and services. He then introduced participants to the 10 types of innovation as defined by DOBLIN. This model is as depicted in Figure 2.

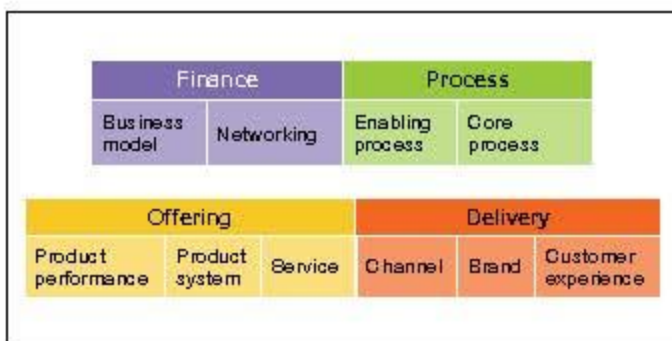


Figure 2: Types of innovation defined by DOBLIN

SESSION 3

After this, he introduced a framework for innovation based on Design Thinking. Based on the simple process of Understand, Observe, Ideate and Prototype, Dr Chung first illustrated this with a short video presentation and then followed up by going through some of the underlying techniques for each of these steps in turn.

In conclusion, it was emphasised that effort is extremely important, for nothing happens without effort. Finally, Dr Chung engaged the participants in a discussion about the source of innovation. He stressed that if we know where the source of creativity is and that innovation is within us, we will become more creative and innovative by constantly nurturing this source. He kept at it until most of the participants finally realised what he was talking about.

The workshop ended at 1.00 p.m. ■

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