

Shayne Crimp Guest Lecture Summary

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The main points that Shayne covered was the ideas of design and development and how real world design progresses and the issues that can come designing for the real world. He started with a quote "Power of failure in success". He told us that Through failure we all learn and thats how we improve at what we are doing. He gave us a figure, 63% of new products fail. This he said showed the complexity in successful design. Shayne then listed some real life failed business/engineering ideas.

- BIC attempted to make disposable underwear
- Harley Davidson attempted a fragrance
- Google attempted a social networking platform, Google Plus
- Colgate attempted frozen dinners

All of products failed either very quickly or had to be killed off slowly after never becoming profitable. Shayne then talked about time pressure in the real world and how as engineering students we are put though pressure to ensure our abilities in the workforce. Shayne then went through the main reasons for failure.

1. Lack of Market research
 - Poor market assessment and validation
 - Poor quality market research
2. Technical Issues
 - No/poor preliminary technology assessments
3. Timing to market
4. Insufficient sales and market effort
 - Management thinks it will sell itself
 - Usually takes 7-10 times the cost of development just to get to market
5. Political Upheaval
 - Change of management
 - May have the correct product, management decides it is not ready
6. Financial
 - Budget
 - Risk
 - Preliminary financial and business analysis

Shayne gave several examples of designs that failed and why. The first was due to political upheaval where his company was working with an aluminium company where they were designing a ventilation system to be fitted in their windows and to be controlled using either smart device or temperature sensors. Although this idea seemed to be marketable after a management change the design was stopped and not resumed due to a difference of opinion from the new manager. The next example that was given an automated road user charges system however there was not enough technical research at the end of the project it was realized that there was an issue with the wheels blocking the signal from the transmitter to the base unit. The next example was regarding Shayne's company offering to work with Skope to put LED lighting in their fridges. Skope refused citing that it was unnecessary. After several months Skope's competitor applied the technology and Skope came back asking if the technology could be implemented in a few weeks, Shayne's company refused. This example showed the issues that can occur when an idea is not timed correctly for market. The final example was related to finances where Shayne's company had spent \$300,000 developing a seismic detecting unit however they discovered they would need to go \$30,000 over the \$300,000 budget. The CEO of the company said no therefore the project was stopped. Due to the company not having the product they lost much more than the \$30,000 that it would have cost to complete.

Shayne finished the lecture with a few important messages, don't be afraid, seek challenges, we will make mistakes, learn from them, and repeat.