School of Mechanical Engineering

Course Code: BTME3056 Course Name: Product Design

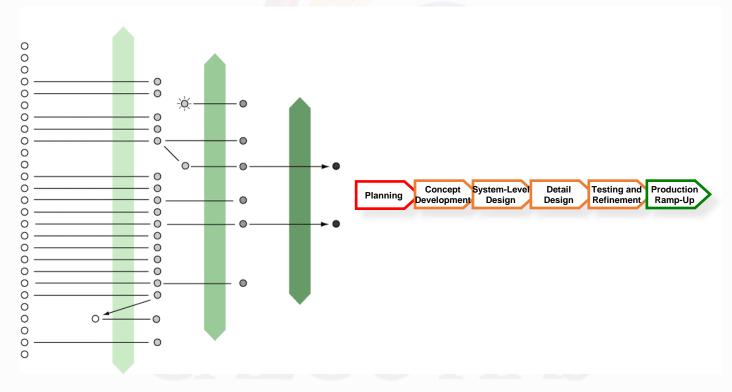
Opportunity Identification

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Opportunity Identification

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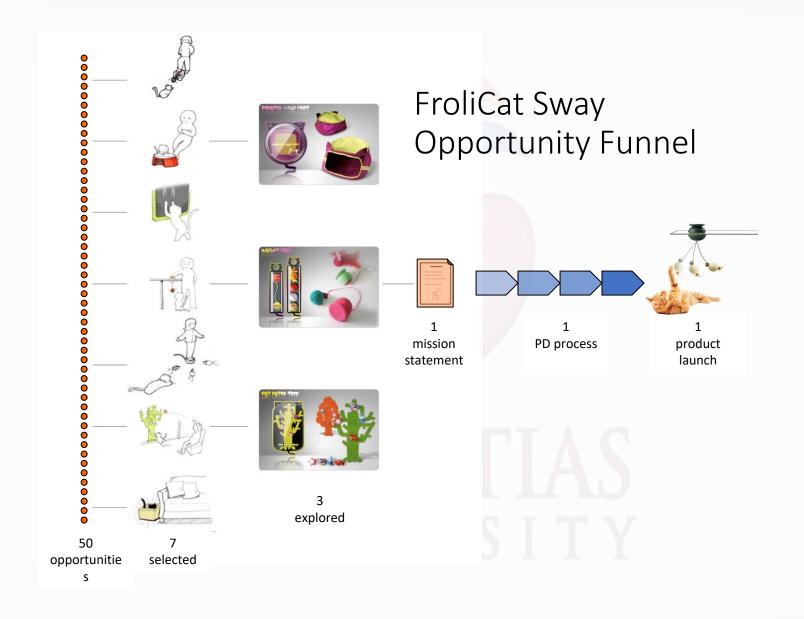
Opportunities Begin the Product Planning and Product Development Processes

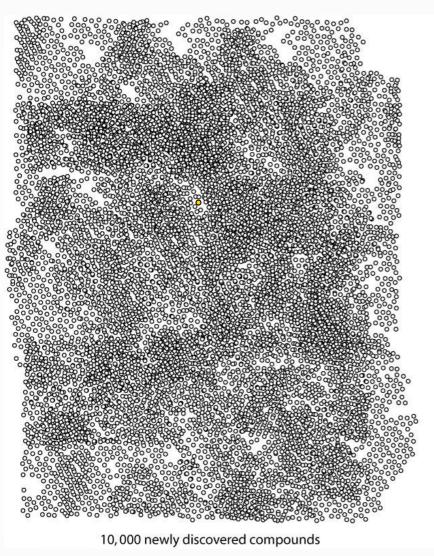


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Opportunity Identification Example







Pharmaceutical Drug Development

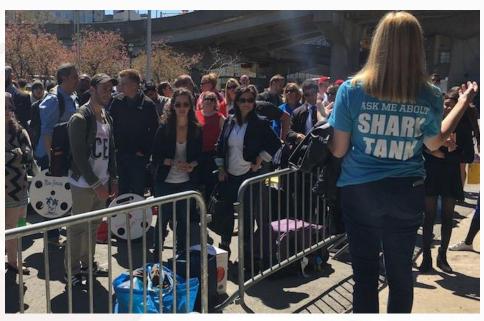




1 new drug













Nerdwax

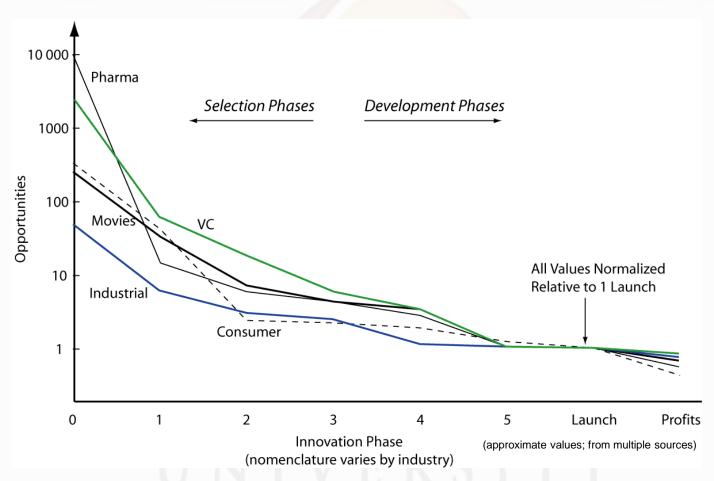


Hoodie Pillow



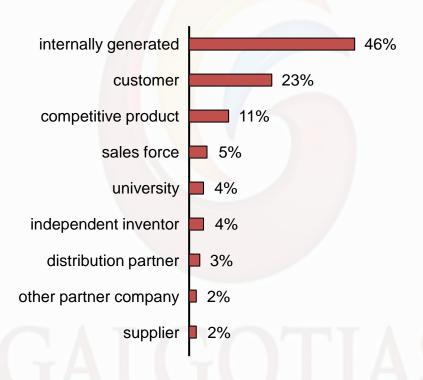
Scrub Daddy

The Funnel in Various Industries



Source: Terwiesch and Ulrich, Innovation Tournaments, 2009.

Where do opportunities come from?

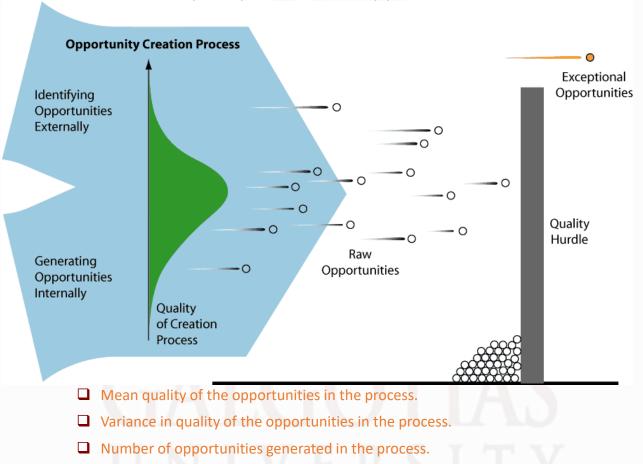


Source:

Terwiesch and Ulrich survey of 524 managers in diverse service and product industries, October 2006.

What drives the quality of the best opportunities?

☐ Accuracy of evaluating the opportunities generated.







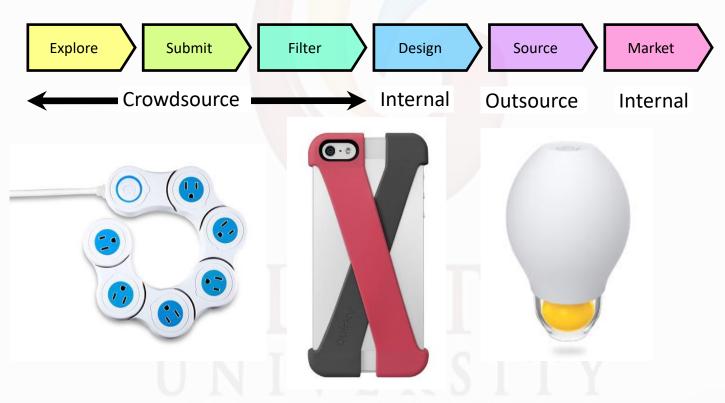
Marine Litter
by David Soames and Dev Gupta



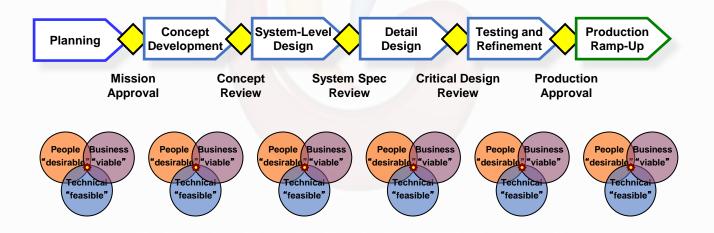
A-OK by Jaclyne Ooi



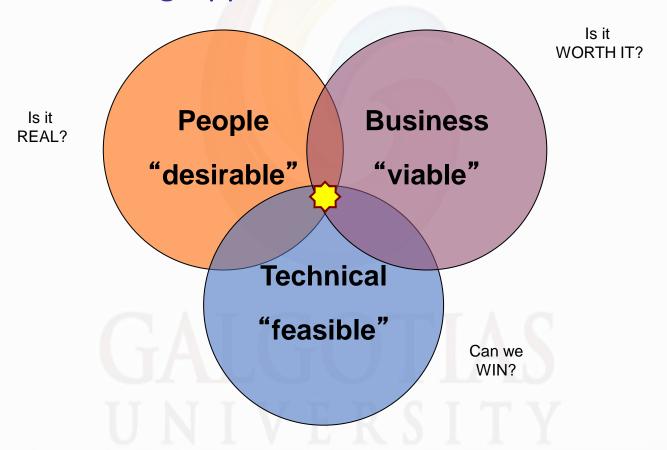
Quirky's Crowdsourced PD Process



Product Development Process



Evaluating Opportunities



Real-Win-Worth It (RWW) Analysis

- Is the opportunity real?
 - Is there a real market that we can serve with the product?
 - Consider the market size, potential pricing, and availability of technology.
- Can we win with this opportunity?
 - Can we deliver the product in the required volume at the required cost?
 - Can we establish a sustainable competitive advantage?
 - Can we patent or brand the idea?
 - Are we more capable of executing it than competitors?
- Is the opportunity worth it financially?
 - Do we have access to the necessary resources (financial, developmental, supply chain)?
 - Will the investment be rewarded with appropriate returns?

References

Day, George S., "Is it Real? Can We Win? Is it Worth Doing?: Managing Risk and Reward in an Innovation Portfolio", *Harvard Business Review*, December 2007.

Ulrich and Eppinger, Product Design and Development, Chapter 3 - Opportunity Identification, 6th ed., McGraw-Hill, 2016.

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- 2. Stephen C. Armstrong (2005), Engineering and Product development Management— The Holostic Approach, Cambridge University Press, ISBN: 978-0-521-01774-9.
- 3. IbrahimZeid (2006), Mastering CAD/CAM, 2nd Edition, Tata McGraw-Hill, ISBN: 978-0-070-63434-3.
- 4. Anoop Desai, Anil Mital and Anand Subramanian (2007), Product Development: A Structured Approach to Consumer Product Development, Design, and Manufacture, 1st Edition, Butterworth-Heinemann, ISBN: 978-0-750-68309-8.

Thank you

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