Introduction

It is every entrepreneur’s dream and company’s desire to invent and develop a new product that will not only transform our lives but create an extremely lucrative revenue stream. Traditionally, the innovation method focuses on sophisticated products, usually incorporating new technologies to achieve cutting-edge performance to meet the expectations of the high-end market users of the first world countries.

But what about the developing countries?

In this book, Rethinking Innovation and Design for Emerging Markets, the authors have put together an engaging narrative of the creation process of a new automobile by the Renault-Nissan Alliance, the Kwid. The Kwid is an automobile specifically designed to meet the needs of the Indian user and overcome the challenges of the Indian market. The authors provide incisive insight and analysis into the management philosophy, organizational structure within the Renault-Nissan Alliance, and design pathways necessary to develop the Kwid, which has the potential to disrupt the entry-level automobile market in India while establishing a competitive advantage for other emerging markets in developing countries.

Overview of Book’s Structure

This book, an English translation of Innover à l’envers - Repenser la stratégie et la conception dans un monde frugal, is organized in two parts. The book begins with the history of the Kwid project, from its inception through the design process to its scale-up and deployment in the Indian market. It is written in narrative form.

Part two of the book takes an analytical view of the Kwid project from three points of view. First, the authors characterize “fractal innovation” and “frugal innovation” and
their accompanying design processes. This is followed by a discussion of how a low-end strategy focused on emerging markets could be established and deployed in firms that are accustomed to serving first-world markets. The authors conclude this section with an analysis of how this reverse innovation strategy could be deployed in a large multinational organization.

**Highlights**

The conventional innovation strategy we see in industrialized countries first focus on the needs of the wealthiest areas (top of the pyramid) before trickling down to users in emerging or developing countries [1]. The alternative approach is reverse innovation, where the focus is on the customers at “bottom of the pyramid.” The product design revolves around the specific needs of the customers in these emerging markets and is more likely to be produced locally [2], bringing a new balance of cost-scope-quality in product development. However, it is with this reverse innovation approach that provides a company a competitive position for high growth markets of BRICS (Brazil, Russia, India, and China).

Today’s automobile industry, especially in developed countries, follows a “trickle down” model, where innovations are integrated into the home country first before expanding into the global markets. The innovations that made Kwid a success swim against the norm, using a “trickle up” approach built based on the emerging country’s customer needs.

Kwid hit the Indian market at the end of 2015 and did much to affirm the value of a reverse innovation strategy for emerging markets. Kwid is a car designed as a true entry-level car for the developing country market such as India. This book, written in a case study narrative, not only documents the trials and tribulations of the Renault-Nissan Alliance but also highlights the organization ingredients that enable fractal innovation - concurrent engineering, an environment where corporate design standards can be challenged, and heavy-weight project management. The complexities of balancing stakeholders’ needs from Renault and Nissan so as to ensure continued buy-in of the Kwid mission were also discussed.

Indeed, Kwid is an innovation that went against all accepted norms. The Renault-Nissan Alliance adopted a strategy of a single platform for a product intended for India and produced in India. Had the Alliance designed the Kwid in the traditional ways, they would have reproduced a product that is similar to a competitor’s.

However, implementing and realizing a reverse innovation strategy required significant effort and discipline. The Alliance had to:

- Implement frugal innovation, where the product is designed based on the needs of the India users and the constraints of the Indian market place.
- Co-locate all the design team in one location in India, the intended market for the Kwid.
- Develop a special system of governance to support the innovation and provide the necessary resources to bore fruit.
• Establish and stick to top-down cost objectives to ensure the profitability of the project based on an aggressive selling price strategy for the target markets.
• Engage key suppliers and vendors early to help achieve the design-to-cost targets.
• Develop and deploy fractal innovation, an approach in which the product definition is systematically questioned, along with the full gamut of design variables and at all level and for each component.
• Forster an organizational culture for deploying fractal innovation, where the established norms were allowed to be challenged.

References

Highlights: What I liked!

This is a very well researched study of frugal innovation [1] as implemented by the Renault-Nissan Alliance, highlighting the challenges and successes in product design and development, organizational structure, and project management necessary to produce a viable product while reducing its complexity and cost of goods and its production. Like any innovation and product design effort, the Kwid journey was rocky, such as the formation of a design team, design-to-cost, and supply chain management. However, the authors’ narrative pulls the reader into the shoes of the Alliance team as they face the challenges head-on, resolving these challenges one by one, and, with much persistence ending up with a successful design and product.

Managing innovation when it steps beyond the normal and accepted boundaries of business poses significant and diverse challenges. The authors extensively analyze these challenges and the strategies that can be utilized to help strengthen a company’s collective capacity to innovate – a necessity for business today.

Innovation depends on the people and their skills. Without the right people, an innovation will not become a reality. As such, this book highlights the pivotal strategies and decisions made by key contributors, such as Gérard Detourbet, the project manager, without whom the Kwid design may never have exited the design phase.

Reference

Who might benefit from the Book?

The Kwid is a great example of disruptive and reverse innovation. This book is a must-read for innovators or those who are interested in innovation.
This book is also a must-read for inventors and executives of companies where the developing country, most famously the BRIC countries, represent future markets. Indeed, this book details the challenges of two highly different multinational partners, Renault and Nissan, as they not only make frugal and reverse innovation work but produce a successful entry-level product for a developing country.

This story of reverse innovation is not limited to the automobile industry. The lessons learned here are applicable to executives and thought leaders in multinational companies or Non-Government Organizations (NGO) that wish to bring new agriculture or clean energy technologies to the emerging countries.

Conclusion

Both in the classroom and in industry, we are taught to be thoughtful and considerate of the market needs when developing and innovating a new product, especially if that product is to be competitive and lucrative.

Indeed, for us readers who live in first world countries, the new innovations obviously are focused on our needs. For example, Amazon Echo, Samsung Galaxy S9, the new F-150, just to name a few.

So, when we develop a competitive strategy for the high-growth markets of the emerging countries, why would we not develop unique products that are focused on specific needs of the users in these markets and produce the products locally, as opposed to the popular approach of taking an existing but aging product, designed and sold at a developed nation, slightly adapting it to emerging markets.

Many times, the simplest and most obvious answer is the right answer. However, it is this simple and obvious answer that most often alludes us.


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Dr. Charles Y. Chen has had the privilege of leading teams of engineers and scientists to transform ideas into viable products. His career began at Northrop Grumman, initially as a systems engineer and then as a program manager, he led matrixed teams of engineers to innovate, mature, and produce new electronic sensor technologies and algorithms. Energetics Incorporated introduced Charlie to the world of management consulting. Initially as a director then as the Chief Strategy Officer, he led teams to help clients transition ideas developed in the laboratory to the marketplace, overcoming the so-called valley of death. As Executive Vice President of Engineering at Hover Energy, Dr. Chen is leading and coordinating key activities to scale-up a new wind turbine designed for the urban environment.

Dr. Chen got his B.S. and Ph.D. in Electrical Engineering from Cornell University. He received his Executive Education from University of Chicago Booth School of Business. As a PMP, he looks forward to leading teams to achieve the impossible.

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