UNDERSTANDING THE FRONT END: HOW TO BE SUCCESSFUL IN DISCOVERING BOTH NEW SUSTAINING AND BREAKTHROUGH PRODUCTS, PROCESSES AND SERVICES

Course Objective

This symposium will present:

- The latest thinking and most effective practices in the front end or discovery portion of the innovation process.
- The role of open innovation and where new breakthrough technologies can be found.
- Why new breakthroughs in technology adjacencies and new business models are so difficult to achieve.

Summary

Best Practices in the Front End

The Front End of Innovation is widely regarded as the greatest opportunity to improve innovation and enhance sustainable growth. Many companies have dramatically improved development cycle time and efficiency by implementing a formal Stage Gate™ process. In contrast, few companies have an effective Front End, which continuously feeds the product development process with new, highly profitable concepts which lead to new breakthrough opportunities. Eleven companies (Air Products, Akzo Nobel, Alcoa, Bethlehem Steel, BOC, Corning, Crompton Corporation, DuPont, ExxonMobil, Henkel and Rohm and Haas) collectively formed a team to determine the most effective practices in the Front End of Innovation. Data was obtained from over 2000 individuals from 300 business units over a 3 year period. Results from this study will be presented and will include the most effective methods for finding new opportunities, understanding unmet customer needs, how to develop effective teams, and why organizational practices for incremental projects need to be different than breakthroughs. In addition participants will be able to compare their own divisions' practices against top quartile companies.

Open Innovation

Companies are aggressively moving away from a closed innovation model where they expect all of the innovation to occur within the company. Data will be presented explaining why the closed innovation model has become obsolete and current methodologies and practices companies are using to source new ideas and complementary technologies.

Breakthrough Innovation

While large firms have demonstrated their ability to succeed in breakthrough innovations, they often have difficulty succeeding with breakthrough technology adjacencies and new business-model innovations. Sony changed the way people listen to music with their Walkman and Discman portable music players; Microsoft made a computer in every home a reality; Xerox photocopiers reconfigured the business environment; and Intel leads in the development of next-generation microprocessor chips. But these same firms faltered when it came to technology adjacencies and business-model innovation. Sony failed to develop a successful MP3 player and allowed Apple to take over the market with the iPod and iTunes. Microsoft allowed Google to dominate the search-engine space, failing in multiple attempts to compete in the search market. Xerox ceded the small-copier market to Canon, and Intel has been markedly unsuccessful in moving into the cell phone market despite many valiant attempts. We have found that breakthrough projects need to deal with five dilemmas in order to be successful:

- Paradoxical Leadership – often leaders do the wrong things for all of the right reasons.
- Organizational Complexity – Breakthrough efforts sometimes need to be separated from the sustaining efforts.
- Innovation Management: - Breakthrough projects often need to be managed differently.
- Financial Uncertainty - Current financial tools are often inadequate for use in dealing with the high uncertainty in breakthroughs.
- Team Prior Knowledge: Breakthrough teams are often poorly configured and staffed.

Evidence Based Management

Often management practices are determined from what others seem to be doing, what senior leaders have done and believe have worked in the past, closely held ideologies and learning practices from only high performing companies. Basing decisions on these factors often fail to produce significant improvements. The majority of studies and conclusions used in this symposium are based on multiple fact based studies.

Training Parameters

Date

The course will be taught in two full day sessions.

Type of training

The course will consist of both lectures and cases in a highly interactive format.

AGENDA

Day 1

Pre-reading Assignment: Case I, II and Back Bay Simulation

AGENDA ITEM	ACTIVITY	START TIME	TIME	WHO IS RESPONSIBLE
Welcome	Welcome and Introductions	8:30am	15 min	
Hot Topics	Hot Topics – What did we come here to learn	8:45am	30 min	Peter Koen
Module I	Module I – Front End of Innovation (The objective of this module is to provide an overview of the front end of innovation, a model for explaining it, and knowledge of the best tools and techniques associated with it.)	9:15am	90 min	Peter Koen
	Bio Break	*10:45am*	*15min*	
Benchmark Comparison	Compare company's survey with Front End results and develop an action plan.	11:00am	60 min	Break-Out
Feedback	Feedback from the groups	12:00pm	15 min	Peter Koen
	Lunch	*12:15pm*	*45min*	
Case I	Case I – Managing Corporate Entrepreneurship	1:00pm	60 min	Case discussion
	Bio Break	*2:00pm*	*15min*	

AGENDA ITEM	ACTIVITY	START TIME	TIME	WHO IS RESPONSIBLE
Module II	Module II – Open Innovation (Companies are aggressively moving away from a closed innovation model where they expect all of the innovation to occur within the company. Techniques and methods for accomplishing this will be discussed in this module. A discussion of identifying unmet needs and where breakthroughs come from will be included)	2:15pm	90 min	Peter Koen
	Bio Break	3:45pm	15 min	
Case II	Case II– Feed R&D or Farm it out	4:00pm	45 min	Case Discussion
Back Bay Simulation	Attendees will be responsible for running one pass of the Back Bay simulation, in teams of 2, to familiarize themselves with it.	4:45pm	45 min	Attendees

Attendees will be responsible for running Back Bay simulation on their own, in the evening in teams of 2.

1st Day ends at 5:30 pm

Day 2

Pre-Reading Assignment: Case III.

AGENDA ITEM	ACTIVITY	START TIME	TIME	WHO IS RESPONSIBLE
Reflections	Reflections on Day 1	8:30am	15 min	Company
Module III	Module III – Breakthroughs and New Business Models (Over the last several years companies, consultants and academics have been actively evaluating methods for developing breakthroughs. The objective of this module is to review the latest thinking and techniques.)	8:45am	90 min	Peter Koen
	Bio Break	*10:15am*	*15min*	
Simulation	Running Back-Bay Simulation in teams of 2	10:30am	90 min	Peter Koen
	Lunch	*12:00pm*	*60 min*	
Simulation	Debrief of Back-Bay Simulation in teams	1:00pm	60 min	Peter Koen
	Bio Break	*2:00pm*	*15min*	
Case III	Case III – Flight of the Kitty Hawk	2:15pm	60 min	Case Discussion
	Bio Break	*3:15pm*	*15min*	
Company Take Aways	Company Take – Aways (Where do we go from here?)	3:30pm	60 min	Company

2nd Day ends at 4:45 pm

CASES

Case I Managing Corporate Entrepreneurship

Objective: To understand best practices in corporate entrepreneurship and the roles and responsibilities of managers at different levels of the organization.

Narrative: A middle-level division manager must decide whether he should support an investment request for a third attempt at launching a new product developed by a struggling business unit. Describes the long, difficult process by which the unit has developed the product--a computer privacy screen--after years of problems and continuing losses, and its absolute faith in the project. Also presents the division manager's concerns about the need for discipline and control, setting up a tension that is focused on the launch decision. This case focuses on the role of the first--line and middle level general manager, the subject matter also allows an exploration of the challenge of creating and sustaining entrepreneurship in large organizations--in a company that has managed it with great success for decades.

Case Reading: 3M Optical Systems: Managing Corporate Entrepreneurship, Harvard Business School Case Study (Case 9-395-017, revised May 28, 1999).

Case Questions:
1. As Andy Wong, how would you handle the authorization for expenditure (AFE) for the relaunch of the privacy screen?
2. As Paul Guehler, would you approve the AFE if Wong sent it to you? T

Case II – Feed R&D or Farm it Out

Objective: To address the strategic and cultural issues associated with outsourcing innovation.

Narrative: From a converted muffler repair shop, Ray Kelner launched RLK Media in 1985, selling its radical audio speakers to affluent connoisseurs for $20,000 a pop. By the 1990s, RLK had grown into a billion-dollar business. But things are no longer going so well, and Chairman Keith Harrington lays it all at the feet of CEO Lars Inman. "Your margins have evaporated," he barks. "You're missing your numbers. People aren't buying the old product, and you don't have anything new." But RLK might just have something new: the iVid headset prototype is light-years ahead of the competition. All Ray needs is another 18 months (or so) and $6 million to hire 10 elite software developers and he could put RLK back on the map. Lars considers outsourcing software development to Inova Laboratories in India, which promises to move RLK from prototype to volume manufacturing in 12

months--at a fifth the cost. But Ray is adamant. His group is just too tightly knit. Should Lars outsource R&D anyway?

Case Reading: Nohria, Nitin, "Feed R&D or Farm it Out?" HBR Case Study, July – August 2005.

Case Questions:

1. Should Lars Inman, the CEO of RLK Media, outsource the software development efforts to Inova Laboratories - a boutique software development shop in Gurgaon, India?
2. What are the implications on RLK Media's innovation strategy, culture, competencies and survival?

Case III – Flight of the Kitty Hawk

Objective: To better understand the dilemmas of developing a breakthrough project.

Narrative: Hewlett-Packard decided that, to grow more rapidly, it needed to design a revolutionary disk drive product that would create an entirely new market or application for magnetic recording technology. The company followed most of the "rules" good managers follow in such situations: heavyweight project team, lots of senior management support, etc. But it still failed. This case demonstrates why good management isn't enough when managing disruptive innovation.

Case Reading: Hewlett-Packard: The Flight of the Kittyhawk, Harvard Business School Case Study (Case 9-697-060, revised March 10, 2003)

Case Questions:

1. Rate the strengths and weaknesses of the way Hewlett-Packard structured and supported the Kittyhawk development team?
2. Discuss the way the team set out to find a market for the Kittyhawk? What do you believe that they did correctly? What do you believe they did wrong?
3. Discuss the root causes of the failure of the Kittyhawk program? Is there any way HP could have avoided this fate?

Back Bay Battery Simulation

Objective: To present disruptive technology in a real world context in which managers must make decisions about investing in innovative technologies under conditions of uncertainty.

Narrative: This online simulation allows students to play the role of a business unit manager at Back Bay Battery Company who faces the dilemma of balancing a portfolio of investment strategies across products in the rechargeable battery space. Players have to manage R&D investment tradeoffs between sustaining investment in the unit's existing battery business versus investing in a new, potentially disruptive battery technology. The student must also decide which market opportunities to pursue, each of which offers the student varying levels of market intelligence and differing short- and long-term payoff prospects. Students manage the investment portfolios over eight simulated years. Throughout the simulation the student is forced to address a number of challenges including timing and level of investment across both mature and new businesses, choices regarding market opportunities and inherent product performance characteristics, requirements to meet constraining financial objectives and constant trade-offs between investment options, all in the context of uncertain market information.

Case Reading: Shih, Willy and Christensen, Clay, "Back Bay Battery, Inc" HBR Online Simulation, 2008

Quotes from Previous Seminars

Solid presentation that set the stage for thinking about the front end.

Very interactive. Great interaction with audience. Bang on!

Learned more than I thought.

Great combination of lecturing and discussion, theory and case study.

Instructors professional sharing and experience.

Peter's teaching style is different and very good. I learned a lot.

Peter is the best instructor I have ever had in my entire life. I can take his seminars for any price/fee if time permits. He is just too perfect! HE IS THE BEST!!

Peter Koen is an expert in the field and presented his materials brilliantly.

Peter was an excellent Professor with exceptional communications and a dynamic personality. The seminar material was well taught and industry insight was provided.

One of the best instructors/professors I ever had.

Excellent Professor. Brought new and cutting edge tools and techniques.

This seminar is in the top 3 of all seminars I have ever taken. The professor has an excellent command of the subject and is highly successful in presenting it to the attendees.

Peter did a good job of pulling out different views and calling on people to solicit their viewpoint.

The open dialogue and discussion was a big plus. Everyone (almost) was actively engaged

New perspectives, module on breakthrough and also on best practices.

Reinforced ideas and opened up new areas to think about making improvements