
Book Review

Commercialization of innovative technologies: Bringing good ideas to the marketplace

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Most pundits agree that we will need to innovate our way out of the current global economic meltdown. While some argue about whether global economic fundamentals are strong, few dispute that a strong entrepreneurial base, a viable capital stock and innovation, creating value in the marketplace, will be the key drivers for recovery. Simply throwing dollars at basic research has proved to be unsuccessful in the past and, without a process for commercialization, such as translational research and processes for speeding technology transfer, will be unsuccessful in the future, leaving future generations to pay for discoveries with no market potential. The economic crisis has created a renewed awareness that ideas are not inventions and that inventions are not innovations without customers willing to buy them.

The authors of *Commercialization of Innovative Technologies*, technologists with experience in bringing technology products to market, offer a step-by-step strategic and tactical advice to both students and practitioners of technology commercialization. The 18 chapters of the book are divided into three basic sections. The first part discusses the strategic and planning issues confronting

the four members of the innovation team, technopreneurs (inventors and technologists) and market perceivers (entrepreneurs and investors), and how they address them in creating a commercialization plan. The second part is more hands-on and deals with team building, finding the money, marketing tactics and other technology and new product design and development challenges. The final chapters focus on both tactical and strategic decision making related to how a successful technology can be improved and what happens after ventures achieve their goals.

The authors are technologists with military and engineering backgrounds, who give the reader a glimpse into their thought processes as they evaluate and develop technologies, particularly those that have a military application or will ultimately be sold to a government client. One of the authors, Gregory Touhill, was responsible for developing a radar integration technology for the US Air Force, and his story, developing a battlefield technology, is the only real case study in the book. As such, they admit to clear biases that punctuate the text. For example, they do not recommend working with university professors because

‘they are tough to deal with because of the academic bent of the inventor and because universities don’t have a sense of urgency.’ They make it clear that each member of the innovation team has a specific role to play at each stage of development and that managing inevitable conflicts between the inventor and the technologist, the investor and the entrepreneur and between engineering and marketing are challenges that need to be managed effectively. Failure to do so can result in collapse of the venture.

The chapters on designing, demonstrating, standardizing, packaging and applying technology are particularly informative and provide pearls that are not often mentioned in similar books. For example, if you have a new technology, nobody wants to be the first to use it. So how do you overcome this dealbreaker? Touhill *et al* offer a few tips as follows:

- Appeal to customers who are known to want to be on the cutting edge of technological innovation.
- Offer incentives to customers who are afraid to be first.
- Consider approaching a customer who desperately needs your product and is eager to use it, but does not at present have the money to buy it. Perhaps they are willing to offer you an incentive, such as partial ownership of the company, to use it.
- Identify and qualify companies that need your product the most and go after them using good old-fashioned marketing and selling.

This book was written for students and technology commercialization practitioners, who want to get into the heads of the authors as they evaluate and make investments in technology deals. Readers will discover several valuable lessons in this book and will

find that the core themes and tips resonate, regardless of what kind of technology they are developing. The book is loaded with tips from experienced practitioners of the art, including, keeping the end in mind (possible exit strategies), focusing on the team and recruiting the best leadership and management talent, being flexible and persistent and focusing on execution of their plan. Biotechnology and life science entrepreneurs probably would like to see more discussion about intellectual property strategies and managing regulatory and reimbursement risk, but those are minor omissions. The authors supplement the chapters with several anecdotes and tales, and refer to sources ranging from Arthur Rock, founder of the term ‘venture capitalist,’ to historian Doris Kerns Goodwin to Tiger Woods.

Unlike other recently published bio/technology entrepreneurship books that are either textbooks or provide a higher-level overview of technology commercialization, *Commercialization of Innovative Technologies* is a practical guide for technology commercialization practitioners, who want a perspective from the viewpoint of a technology commercialization consulting firm. One of the early chapters discusses whether entrepreneurship can be taught. The authors conclude that there is a difference between talent and skill. I agree. The book will not teach you how to be an entrepreneur, any more so than a surgical faculty member can teach a resident or house officer how to be a surgeon. They can only teach people how to do surgery, not how to be surgeons. Given the entrepreneurial aptitude and talent, this book provides a nice toolbox of skills needed to navigate the turbulent and risky waters of technology commercialization.

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