
Preface

It is hard to escape the word “innovation” today. In most industries, the continuous creation of innovative new products and processes is considered to be of highest strategic relevance. Not only for companies, but also for whole nations, innovation is understood to be the key factor that enables competitive advantage, economic growth, and thus sustainable wealth. On the other hand, innovation draws scorching criticism. This year, the front page of *The Economist* bore the headline, “Will we ever invent anything (that) useful again?” To us as inveterate optimists, the answer to this question is clear: we will see a wealth of innovation, and the progress of science and innovation will continue to accelerate in the years to come. The question is *who* will win the global innovation race. For companies like GE, Siemens, IBM, Novartis, or Google, the technological world has become a global village. Innovation takes place not only within the classical triad, but also within the emerging markets, at an incredible speed. In the last 5 years, more than 80 % of all newly founded R&D labs have been founded in China and India and more than 90 % of all newly hired R&D staff has been hired also in these two countries. The world is flat, and the speed of the global innovation race has been increasing. New ideas which are bright, customer oriented, hard to imitate, and fast to implement will be vital for future competitiveness.

The key to this innovation ability clearly lies in the early innovation phase, the so-called fuzzy front end of innovation. Top managers tend to neglect this critical phase despite their knowledge of the leverage of the fuzzy front end of innovation for later product success. Much truth lies in the words an experienced project manager told us: “Tell me how the project starts, and I’ll tell you how it will end.” Empirical research has shown that the fuzzy front end of innovation is most critical for innovation success. Yet, most managers fail at designing an effective innovation process for the early phase. Real innovators, such as Larry Page, Steve Jobs, and Gottlieb Daimler, did not see this problem when they founded their companies. But innovation managers in established companies find it easier to focus on the late phases of innovation, where clear processes and rules can be defined and documented. This is a paradox: knowing that the factor decisive for project success lies in the start and early phases, managers focus their management attention on the late, highly structured phase.

Most top managers do not like “fuzziness”; they have been selected because they are good at planning and execution. Fuzziness is more difficult to address, and its

outcome is hard to predict. But since the fuzzy front end of innovation is *the* critical factor for innovation and thus the competitive advantage of firms, we need to focus on it. Michael Dell's mantra on innovation – "fail earlier to succeed sooner" – contains much truth, according to our studies on the front end of innovation.

The cornerstone for innovation is laid in the very early stages of the innovation process – its fuzzy front end. The importance of this phase for overall innovation effectiveness has already been identified by many practitioners and researchers in the last few years. Yet, the front end is poorly understood, and managers experience a lack of knowledge on how to best organize the front end. Ideas about the intensity with which certain activities are to be carried out and the tools that assist their professional execution are vague, and the allocation of resources and top management attention are still ancillary in many companies as compared to other phases of the innovation process. These gaps all add up to an aura of fuzziness, which is often put on an equal level with unmanageability. This book addresses this sensitive phase by demystifying the front end and by providing practical information about activities and tools which boost front end performance.

The objective of this book is to show the way toward winning the innovation game at the front end of innovation by setting the course for successful innovation. To this end, the book is divided into two parts. In the first part, conceptual insights into key capabilities at the front end of innovation are provided. Each of the chapters offers a sound theoretical background and practical suggestions on how to develop these capabilities in order to maximize front end success. In the second part of the book, a multitude of case studies from different industry sectors illustrate how companies approach the fuzzy front end and manage to successfully navigate through it. Cases have been contributed by 3M, ABB, Autoneum, Bayer, BGW, BMW, Emporia, Evonik Industries, Google, Henkel, Hyve, IBM, Landis+Gyr, SAP, sprint> Radar, voestalpine Anarbeitung, and Volkswagen. These cases offer valuable insights into the challenges and opportunities of managing the fuzzy front end. Every case study concludes with clear lessons learned that help the reader to utilize the findings in his or her own business environment.

The book focuses on enabling professionals to broaden their understanding of *success factors* at the fuzzy front end of innovation and reflect on their innovation practices, and it aims to inspire the use of new tools and techniques to optimize the front end. At the same time, the readers of this book are not limited to innovation managers, as the book has been designed to allow master's students from product development, innovation management, and engineering management disciplines to gain insights into the front end processes and activities at leading companies. They will be enabled to critically reflect about the interplay of strategy, process, people, tools, and methods at the fuzzy front end of innovation.

We owe a debt to many for this book. Our appreciation goes to Julia Peherstorfer and Iris Gabriel for thoroughly formatting the book, to Herbert Gsottbauer for increasing the explanatory power of all the figures in the book, and to Elisabeth Hassek-Eder and Kurt Uebelhoer for their effective proofreading. This book was published within the Austrian project Front End (FFG No. 607404) funded by the Austrian Research Promotion Agency (FFG). Most of all, we would like to thank

our authors, leading international academic thinkers and practitioners on innovation who have been willing to share their valuable time and insights through their contributions.

We wish the readers many new insights from reading this book and a successful design and implementation of their fuzzy front end of innovation.

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