

From Idea to Innovation:

A Handbook for Inventors, Decision Makers,
and Organizations

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We must have the courage to let the NOTHING encounter us. Face to face with the NOTHING, we do realize that we are not only SOMETHING real, but that we are creative beings able to let something emerge from the NOTHING.

Martin Heidegger

Foreword by Dr. Martin Stark

The ability to innovate is a fundamental property an enterprise needs to achieve sustainable success.

This book examines innovation holistically, taking into account the variety of aspects and the corresponding interactions, which determine innovativeness in the real economy. Especially the many known, but most of all the unknown and therefore not considered interactions assess the complexity of innovation processes. Successful enterprises are able to actively manage or influence these interactions and the associated risks. Examples of this are abundant. For an enterprise, the management of innovation is of fundamental importance: a failing innovation may shake the enterprise, but must not endanger its very existence. This is the maxim.

In this book, Bernd Weis shows how innovation occurs – from the initial spark of an exciting idea, its sometimes tedious elaboration, to the organizational integration into the daily business of the enterprise. Based on his experience as inventor, innovator and experienced leader he knows the traps and pitfalls in which inventors, decision makers and entire organizations may fall, thus defeating in their very beginning promising innovative approaches. He analyzes these pitfalls and provides methods and techniques to circumvent them.

The range of the issues discussed stretches far. Innovation is enabled by the – not always harmonious – interplay of creative people in an organization that supports an innovative, creative development while at the same time preserves its existential economic interests. This book provides the reader with an overview of the factors that shape and influence this interplay. However, despite all efforts, the result of the innovation process often depends on luck or chance – and also this is not withheld here.

For your own path to innovation competence, this book is an exceptional and therefore valuable companion for those who want to delve deeper into the subject of innovation in its fascinating diversity and complexity.

Weinheim, December 2013

Martin Stark

Foreword by the Author

"Another book about innovation – the bookshops are full of them.“... but anyway.

The purpose of this book is to venture beyond the phenomenology of innovation and to shed some light on the causes, reasons and drivers of innovation. It is about the why, about the understanding of innovation, which comes in so many facets. It is about people who have ideas, who invent, about organizations for which innovation is the elixir of life and whose existence depends it, about markets that cannot get enough innovation. It is about success and failure, chance and luck.

Innovation leads to change and change leads to innovation. This elementary cycle forces perpetual change. It is also the causes of the complexity of innovation processes, and complex processes have the truly unpleasant property that it is not easy – if at all possible – to understand, to see through them. Therefore, the underlying general tenor in every reasoning is that the future is by its very nature unforeseeable and certainly not predictable. Future is contingent – it can turn out one way, but also some quite different way. The reader will notice that I used in the text often weak words like "often", "usually", "sometimes" , "occasionally", "hardly" is used, rather than strong words such as " always" or "never" . This has precisely to do with the fact that statements are not always or never true – even if they seem so obvious and counter-arguments or examples do not immediately come to one's mind.

Innovation is art. An artist should master the techniques and rules of his profession, even when he develops other techniques and breaks the rules – the art lies in the idea, the composition and the specific execution. Likewise, the innovator must master the techniques and rules that lead from idea to innovation, even if he intends to go an entirely different course himself. The art of innovation lies in the idea, the design and implementation in different proportions.

The book is the result of over 30 years working with innovation. In these years, I discussed and debated in countless meetings with teachers, work colleagues and friends even on evenings and weekends. From each of these encounters I have taken a lot. From this perspective, many are involved in this book, including Professor Herbert Kroemer, who is Nobel Prize laureate (2000) in Physics, and Michael Ashby, grandson of Ross Ashby, one of the founders of cybernetics, who I will refer to in this book. However, to list them all would be beyond the scope of this book as well as my recollections.

Essential for this book are the contributions, constructive criticism, and the enthusiasm of Dr. Joachim Crone (Munich), Ines Engel (Asperg), Peter Graeser (Berlin/Freiburg), Dr. Susanne Happ (Bonn), Susanne Moser (Munich), Dr. Astrid Sandweg (Stuttgart) and Thomas Volk (London/Bobingen).

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