

Managing the Unknown

Managing the Unknown

A New Approach to
Managing High Uncertainty
and Risk in Projects

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Arnoud De Meyer
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Foreword

Project management, as an important part of our disciplinary background, has been close to our interests for a long time and has been part of our professional experience as consultants, program directors, and, in one case, dean at INSEAD. The research on which this book is based began in 1996, when we became interested in project risk management and, in particular, methods that might help project managers to deal with novel projects.

We first explored real options and contingent decision-making in projects, a “new” method from the finance discipline that was widely discussed in the mid-1990s. This turned out to be a dead end, as the powerful analytical methods from finance did not sufficiently carry over to project management, an environment where much less information is available than in financial markets. In project management, these methods were wonderful in theory but required too many assumptions to apply in practice.

As we worked with project managers and wrote cases about the projects we analyzed, we began to realize that our concerns with managing novel projects were not so much with the existing project risk management (PRM) methods per se—as these methods were quite well developed over many years—but with the very concept of risk itself. We felt that the concept of risk, as discussed in PRM, was not entirely appropriate for novel projects. The first practical lessons we learned from these project managers were summarized in a *Sloan Management Review* paper in 2001. But we also understood that we needed a conceptual framework to help us understand how seasoned project managers of novel projects dealt with uncertainty and risk, and how a project team might in principle deal with it.

We realized that a key reason many projects fail is because organizations do not recognize the fundamental difference between project novelty and project risk. This thinking led to a publication in *Management*

Science (2002), in which we examined the key difference between project risk and project novelty. We defined two critical characteristics of novel projects: unforeseeable uncertainty and complexity. We also identified two fundamental approaches that were, in principle, possible in the presence of unforeseeable uncertainty and complexity. We referred to these new approaches as selectionism and learning.

These theoretical considerations gave us a “roadmap,” a lens through which we could gather evidence and examine the projects with which we worked. We discovered that, while selectionism and learning had, of course, been discussed before, a complete approach to managing novel projects was missing. How should organizations and project management teams approach novel projects? How do they diagnose the level of project novelty, how do they build the organizational capabilities to deal with novel projects, and finally, how do they go about managing these projects?

This, then, is the new thinking and the contribution of this book. Selectionism and learning can be viewed as a powerful arsenal of weapons in the face of high novelty and unforeseeable uncertainty in projects, an arsenal *in addition* to established project risk management methods. The book explores the nature of unforeseeable uncertainty, of “unk unks” and explains the concept of selectionism and learning. Then, most of the book tries to develop operational and actionable methods and tools that managers can use to evaluate selectionism and learning and to put them in practice. This book may be interesting for academics, but we are addressing an audience of practicing managers, and we hope they find it useful.

We are indebted to the many project managers with whom we have worked and from whom we have learned—in our case research and in our management seminars at INSEAD, where the participants learn from us, but where we also learn invaluable insights from them.

We also thank our colleagues, notably Christian Terwiesch and Svenja Sommer, the collaboration with whom has helped us think through many issues. We are indebted to Jean Cropper, who helped us turn our clumsy language into readable English.

If this book makes a small contribution to the project management profession, we feel proud, and the tremendous effort was worthwhile.

Fontainebleau and Singapore,
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