

Preface

This book is a critical analysis of the practice of risk management in agile software development projects. Risk, defined in terms of uncertainty relating to project objectives, is treated both as a threat and as an opportunity wherein the pitfalls and rewards that underpin project success lie. Although the agile community frequently cites risk management, research suggests that risk is often narrowly framed and at best implicitly treated, which in turn leads to an inability to make informed decisions concerning risk and reward and a poor understanding about when to engage in risk-related activities. Moreover, the absence of reference to enterprise risk management means that project managers are unable to clearly articulate, scope or tailor their projects in line with the wider expectations of the organisation.

Yet the agile approach, with its rich toolset of techniques, is more than equipped to effectively and efficiently deal with the risks that arise in projects. In this book we endeavour to address the above issues by proposing an agile risk management process derived from classical risk management but adapted to the circumstances of agile projects. We thus express the agile approach to risk management and illustrate its application to selected methodologies (XP, Scrum and DSDM) chosen on account of their varying foci on the software development process and their attitudes towards risk. Though our interest lies in the software development process, much of what we say could be applied to other types of IT projects.

Audience

This book is intended for those directly involved in agile software development who share a concern for how risk should be managed. The primary interest groups include project and risk managers, agile practitioners and general IT managers. Whilst we do not presume a thorough background in risk management, we do assume some basic level of familiarity with or exposure to agility. Where appropriate we refer the reader to more detailed sources in the literature.

Overview

We begin in the chapter “[Agile Software Development](#)” with an initial survey of agility focusing on those aspects that are of relevance later in the book and use this opportunity to introduce our three main methodologies (i.e., XP, Scrum and DSDM). We characterize the cyclical nature of iterative development and incremental delivery in terms of *agile charting* (and related notions such as *slicing*, *clock facing* and *escape velocity*) and show how this tool can be used to facilitate communication and improve understanding within an agile team. We conclude with some remarks concerning the current state of agility and comment briefly on the management perspective.

In the “[Project Risk Management](#)” chapter we formally define project risk and conduct a comprehensive survey of project risk management as it is understood by risk managers. We illustrate the consensus view by synthesizing best practices into a generic model of project risk management before moving on to the notion of enterprise risk management. In effect this sets the standard and defines the core concepts that agile risk management must embrace if we are to seriously apply risk management in agile projects. The reader already familiar with the details of project risk management may choose to skim over this chapter.

In the chapter “[Agile Risk Management](#)”, we first explore how risk is perceived and identify some of the shortcomings of agile methodologies before proposing an agile risk management process that is loosely based on traditional project risk management, though we introduce a number of adaptations that make it more meaningful in the context of agile projects. This process is concerned with how to risk scope a project and how to interpret this in the context of the wider risk environment by introducing the notion of a *risk driver map*. We then use agile charting to explore how a methodology can be risk tailored at the project level. In our treatment of risk management we explain a couple of techniques that can be used to identify risks during iteration planning and then go on to explain the options available to risk managers and the principles that underpin them. We introduce a number of tools such as a *risk list* and show how risks can be treated with a combination of *risk tasking*, *risk techniqueing* or *contingency planning*. We show how to make risks visible using a *risk modified Kanban board* and move on to describing a risk reporting technique using *risk burndowns*. We acknowledge the systemic nature of risk, *iteration residual risk*, and how to measure the effectiveness of risk management in terms of the *iteration residual risk ratio*.

In “[Applying Agile Risk Management](#)” we illustrate the application of the agile risk management process to our chosen methodologies. We critically review each methodology and describe its chief characteristics and level of maturity in relation to risk. From there we offer concrete advice and guidance on how to conduct risk management and relate our suggestions to existing artefacts and practices found within the respective methodologies.

Our final chapter on “[Enterprise Agility](#)” notes the rise of frameworks (including DAD and SAFe) that attempt to scale agile practices to the enterprise

and we evaluate their contribution to agile risk management. We note an absence of reference to enterprise risk management though there are indications of a growing awareness and maturity.

Terminology

Throughout we strive towards simplicity, clarity and neutrality in our use of terminology and for reasons of personal taste we often prefer the term “agility” over “agile” (e.g., “enterprise agility” rather than “enterprise agile”). We seek to use neutral language that is already widely accepted or understood within the agile community. Thus we refer to “daily stand-ups” (rather than the more methodologically specific “Daily Scrum”), “Kanban (board)” (rather than “Scrum-ban”) and “backlog” (rather than the “product/Sprint backlog” of Scrum or the “prioritized requirements list” of DSDM). We trust that the context will render clear what is meant by our use of the terms and that no bias towards a specific methodology be inferred through our choice of nomenclature. Needless to say some terms are simply applied differently according to methodology so that although we use “iteration” in the manner already defined earlier, we appreciate that this term is used in a broader sense in Scrum and a narrower sense in DSDM. Instead we respect our mutual differences and endeavour to make our language more precise where appropriate.

Acknowledgments

Though this book was born of efforts by the author to integrate risk management practices over a period of many years of setting up and working with agile processes, a truly deep understanding of how agility really works can only be achieved by working together with and learning from others. We would like to extend our thanks to all who directly or indirectly contributed to this book through their discussions, feedback and comments and through the exchange of experiences based on mutual respect and tolerance. Special thanks is afforded to our reviewers Scott Amber, Arie van Bennekum, Jutta Eckstein, Julia Godwin, Margaret Stewart and Patrick Verheij whose insightful remarks and comments helped validate and clarify the ideas raised in this book. Finally, since nothing would have been possible without the love and support of Helen, Markus and Patrick it is to them that I owe an unrepayable debt!



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