

## Foreword

This is a unique book. It is a thoughtful compilation of CMMI practice interpretations and software engineering principles, approaches, and proven techniques that helps the reader internalize all three CMMI models. Raghav accomplishes this by taking us on a tour of the thirty-five process areas, making a careful examination of their terminology, ideas, and practices, and considering various proven management and technical approaches, methods, and techniques that help implement them; leaving us better equipped to make effective use of CMMI in process improvement.

I have had the pleasure of knowing Raghav for more than ten years. Raghav has now been a consultant for more than seventeen years with various CMMs, including CMMI and the People CMM, and with an emphasis on a holistic look at the needs of an organization, and the careful integrated application of these models and related frameworks such as those for Six Sigma. Raghav has been in the High Maturity field as long as anyone, being part of the establishment of Motorola India Electronics Ltd. (MIEL) as one of the world's first official commercial maturity level 5 organizations. Raghav is also the author of multiple books that contain many reflections and helpful observations from his many years in process improvement practice. Finally, Raghav is a true polymath, as you no doubt will be able to tell as you read this fascinating book (once I got to around to the part on business goals, around page 67 or so, I found it very hard to put back down!)

I am amazed at the wealth of information contained in this book. Here, for the first time, is a systematic coverage of all three CMMI constellations. Raghav has identified multiple techniques that have proven to add value across a range of organizational situations. Philosophically, Raghav is of the same mindset as Watts Humphrey and others who hold to the idea that zero-defect software is a goal that the software engineering community should aspire to accomplish. However, because each organization has its own set of challenges, and because behavioral change is difficult, each process improvement practitioner must guide the organization on a unique journey to become more effective at what it does. To do so, the process improvement practitioner must be well equipped and knowledgeable of multiple models, concepts, principles, and frameworks. In this book, Raghav has summarized his almost twenty years experience in high maturity to provide the perspectives, insights, and knowledge that process improvement practitioner will need.

As I write this foreword, CMMI is being revised to Version 1.3. Among the most important changes are revisions to the high maturity practices (those situated at maturity levels 4 and 5) primarily to improve their clarity. Since Version 1.3 is still a work in progress, this book presents interpretations of those practices as they were written for Version 1.2. These interpretations are Raghav's carefully thought-through reflections, and given Raghav's background, they provide insightful and beneficial reading. I recommend you consider his interpretations as those from a thoughtful and wise man, a careful thinker, one with as much practice in this field as perhaps anyone else, and whose writings are full of rich and nuanced perspective, but not as "legal opinions" on CMMI as a legal document.

There is so much value in this book. It is written by one of the most experienced practitioners of high maturity in the field (e.g., knows and has written about People CMM as well as CMMI) who has had time

to reflect on a large variety of different engagements with different models to abstract unique lessons learned. Raghav brings a broad perspective to approaching process improvement that allows him to direct attention to needs and concerns of different parties (for all 3 constellations, focusing on the why's of process improvements but also acknowledge limitations to what we know). The book offers a unique tour of all 35 Version 1.2 process areas to help one better hold the whole CMMI picture in their head (i.e., a cognitive map), which is so essential to obtaining best value for process improvement (sum is greater than the parts, not sub-optimizing, etc.). The quality and diversity of Raghav's reflections on the software engineering field, on its practice, on its measurement and analysis, and on lessons learned is extremely valuable.

Imagine holding a single volume that addresses all 3 constellations in some detail and from a wizened interpretation perspective. Hooray! If you are curious about the other CMMI constellations, this book can help you decide whether to pursue them, and if you do decide to pursue them, it can help you with implementing your improvements in an integrated way!

For those who are mostly interested in CMMI for Development, you might want to jump directly to Chapter 2 for a review of software engineering methods that can be of benefit in implementing the Engineering process areas. A caution from Raghav in this: you must acknowledge the best practice that is already performed by the organization's projects and make minimal interventions necessary to address gaps and the risks associated with those gaps.

If you've already implemented CMMI for Development but are curious about the other two constellations, you should probably start with the review of all three models at the end of Chapter 1 and then jump to Chapter 3 for the systematic review of each process area. What I particularly like about Raghav's treatment is the emphasis on measurement and analysis, philosophically, and technique-wise. Measurement by itself has no value – it's instead an aid or lens to guide you in your work activities.

Finally, if you already know CMMI basics for one or more of the models, you might want to jump directly to the SITARA questionnaire extracts beginning on page 67, where much of the practical value of the book really begins. The earlier pages are of a more philosophical character, more thought provoking and motivational than essential to deriving value from the rest of the book. I like the author's musings, sometimes provoking us to ask why something is or how to make better use of a concept.

This book is a unique companion for you on your process improvement journey, written by one of the world's most experienced and observant maturity level 3-5 practitioners. This book will help you visualize the broader terrain available to you in process improvement and help you enrich your CMMI tool-kit to better address the opportunities and challenges that lie ahead. Raghav's voice is an independent one, one that does not necessarily align in every respect with anyone's conventional teaching, but is nevertheless a beneficial, thought-provoking, and learned one likely to be useful to you.

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