This book provides a solid, straight-forward, description of the Capability Maturity Model Integration (CMMI) well-suited to CMMI adopters as well for those with a broader interest in process improvement references.

Practitioners of the Capability Maturity Model (CMM), now a “legacy” model for the Software Engineering Institute (SEI), will find a valuable reference for CMM-to-CMMI transitions but you don’t have to be a CMM “guru” to benefit from this book. It also provides an informative reference point for professionals whose interests in process improvement include other sources such as Rational Unified Process (RUP), Agile development and eXtreme Programming (XP).

With the core chapters coming in at 199 pages, this book is not quite as “distilled” as some of the similarly titled books in this series. However, the topics are cleanly segmented so most can be consumed on an as-needed basis. Initial chapters focus on the history and basic themes of the CMMI. The more expansive and numerous middle chapters describe the CMMI process categories – Process Management, Project Management, Engineering and Support - with a variety of diagrams, outlines and guidelines. The final few chapters discuss the future of the CMMI and include several appendices of reference information.

The primary appeal of this book will be as an introduction to the CMMI for process engineers – persons actively engaged in trying to improve processes for developing complex technical systems. The full CMMI is not discussed here but all of the essentials are summarized. The well-structured presentation provides a valuable guide for organizing subsequent, more detailed, investigations of the CMMI. Managers and engineers with a process improvement responsibility but primarily focused on other objectives will also benefit from this book. Some basic concepts and idioms in the early chapters are required to make sense of the rest but the CMMI is more forgiving that its CMM predecessor to an a la carte approach to process improvement and this flexibility is reflected here.

However, there are a few obstacles on the way to process nirvana. For example, the vocabulary of the CMMI is extensive – “process areas”, “specific goals”, “generic goals”, “generic practices”, and many more phrases have very specific meanings in the CMMI. Further, acronyms are used pervasively though generally re-defined in each chapter. The CMMI is no more ornate than many other process references (and this book does a good job with a complex topic) but it is easy to become overwhelmed by the vocabulary.

A more serious shortcoming is the lack of supporting research or case studies. SEI probably has this material but it isn’t included here – a serious shortcoming for the skeptical reader. The introductory pages provide very few, very summary, references to cases of process improvement but without substantive connections to the elements of the CMMI. Introductory chapters also mention public and private sector contributors to CMMI development - without showing how the CMMI process areas reflect either successful or failed project experiences. This lack of supporting data blunts the persuasive impact. The narrative is articulate and informative but not convincing for the senior manager requiring evidence that process improvement initiatives will provide specific, measurable, contributions to organizational objectives.

If your organization has decided to base their process improvement efforts on the CMMI, this text is very valuable reading. If you are investigating a variety of process improvement references, this book should also be considered and provides the one of the best summaries of the CMMI available. Even with no particular interest in the CMMI, the sections on requirements management, project planning, configuration management, etc. provide solid general information on these topics. Finally, if you’ve previously looked at CMM but found it didn’t suit your needs, you might read this book to see where CMMI breaks from (and still draws from) the CMM legacy.

Reviewed by Brian Lawler (brian.lawler@acm.org) for the January 2005 edition of Software Engineering Notes published by the Association of Computing Machinery (ACM).