

The Fully Integrated Engineer

Combining Technical Ability and Leadership Prowess

By Steven T. Cerri

Who Is This Book For?

You are an engineer. You believe you are a good engineer. You received good grades in college. You know how to solve technical engineering problems. You have recently joined the workforce. You are ready to go, and you are convinced you are going to show everyone just how good you really are.

Or...

You have been an engineer for a while. You really like your work but you are being passed over for advancement for lead positions. Others are being promoted and you are told you are not quite ready, but that doesn't make sense to you. You have experience. You have been in the company longer than those who are being promoted instead of you. What is wrong with this picture?

Or...

You have been a lead engineer for a while. A portion of your time you spend performing engineering technical work as an individual contributor and part of your time you spend performing management/lead tasks. You think you are doing well, but when you and your team completed your last project, you were returned to full-time individual contributor technical work. You are no longer a lead. Did you do something wrong? Was this a demotion?

Or maybe...

You are a manager and some of your employees seem to be stuck in a set of behaviors that keep them from contributing to the team in effective ways. Other engineers don't particularly enjoy working with them. They are smart but often work as loners. As their manager, you would like to understand what is holding them back and what you can do to assist them in moving from being purely technical to being a full contributor to the team and maybe even into management.

If any of the above scenarios describe you, then this book is just for you. Throughout my career as an engineer, scientist, manager and leader, it has become evident that there are a set of thinking processes and behaviors that make good engineers very good engineers. These are the thinking processes and behaviors that engineering schools teach. However,

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these so-called “good engineer thinking processes and behaviors” do not necessarily make you a good team member or contributor or a good lead or a good manager.

I wrote this book because I saw--over and over again--engineers who thought that once they joined an organization, all they had to do to be successful was solve technical problems. They thought that all the organization wanted was their ability to bring engineering and technical solutions to bear. This is just not true. Organizations want more than just your ability to solve technical problems. They want you to be able to work well with others, to be a contributor on a team, to be able to control your behaviors and interactions with others so that the team functions smoothly and effectively.

I wrote this book to give you the solutions to the misperception that what makes you a good engineer is sufficient to make you a good engineering employee.

This book describes, in detail, 15 thinking process and behaviors that make engineers very good engineers. At the same time, these 15 behaviors make good engineers terrible team players, terrible contributors of ideas, and terrible leads and managers.

In this book, I list, describe, and unpack the 15 thought processes and behaviors that make you a good engineer and the 15 counter thought processes and behaviors that must be added to your repertoire in order for you to still be a good engineer while contributing to your team as a leader and manager.

This book is about making a transition from a very good engineer to a complete, fully contributing engineer. It is about making the transition from being a very good engineer to a fully effective lead and manager. I hope that my insights will teach you the skills not learned in college that are critical to your long-term success.

College taught you how to be a successful technical problem-solver. It probably did not teach you how to communicate well with others, or how to lead others, or how to get out of your own way.

In fact, I can't imagine an engineer or technical lead or manager for whom this book is not a perfect fit.

Enjoy!