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FEATURED BOOK: Flexible Development: Building Agility for Changing Markets by Preston G. Smith

WRITTEN BY BRAD APPLETON

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december07featuredbook Most books I read related to Lean and Agile development talk about how Agile has roots in Lean that were then applied to the world of software development. Preston G. Smith's latest work, **Flexible Product Development**, is a bit of "switcharoo" in this regard: it takes the ideas and principles of Agile software development and then shows how they can be applied to non-software products.

The book also has a very healthy dose of Lean behind it, taking some of the ways in which Agile differentiates itself from Lean, and feeding those back into Lean for product development, with the moniker of "Flexible" to represent the result.

What motivated me to want to read this book was the following excerpt from the inside flap of the description of the book:

In this landmark book, Preston Smith attributes the recent decline in innovation to pressure from financial markets that drives management toward rigid development approaches such as phased development processes, Six Sigma, and project office. These processes have unintentionally (but effectively) made changes during development more difficult, disruptive, and expensive, while the need for change continues at an accelerating pace.

{sidebar id=1} As an Agile advocate who works in a large corporation that has solidly "bought in" to the likes of Six Sigma, stage/gate project management, and project office, this *immediately* caught my attention.

- If the book could explain this in language I could use with senior managers, it would be worth its weight in gold.
- And if the book could, by showing how Agile can work in non-software products, convey additional insight into scaling Agile to large systems engineering efforts that span multiple geographically dispersed teams, well, then it would be worth its weight in platinum.

So I pored through its chapters ravenously, starved for insight that would help me help a large organization implement Agile at enterprise-scale.

Before going any further, I should mention a bit more about the author. In addition to being a founder of the Agile Project Leadership Network (APLN), Preston G. Smith is co-author (along with Lean Product Development guru Don Reinertsen) of the classic **Developing Products in Half the Time** and co-author (with Guy Merritt) of **Proactive Risk Management**. With the publication of this new book comes a related website *www.flexibledevelopment.com*, which contains additional articles, links to resources, and, of course, promotional material. The last paragraph of the book's homepage differentiates and perhaps contradicts my own impressions about the relationship between Agile, Lean, and Flexible Development:

Development flexibility is not a variant of lean development, rapid development, or any of a host of others. It is a package of tools focused on one objective: dealing with change effectively. Its nearest relative is agile software development, which also aims at embracing change but depends on some special characteristics of object-oriented software development to achieve its demonstrated successes.

The book is only 250 pages comprising 10 chapters. The first chapter, entitled "*Understanding Flexibility,*" focuses primarily on the issue of the inevitability of change and uncertainty, and the need to be flexible in its presence (including a section explicitly declaring the roots of Flexible development in Agile software development). Chapter 2 deals with the "fallacy of frozen requirements" and the value of customer feedback. Chapter 3 moves from requirements to design, focusing on modular (versus integral) architecture as a key to flexibility. Chapters 4 and 5 discuss experimentation and set-based design, along with the "Lean" concept of delaying decisions to the "last responsible moment."

What many agilists might really enjoy most are chapters 6 and 7, which discuss the importance of people and teams over process, and the kinds of decision-making processes and "real options" thinking that are based at enabling flexibility and responsiveness to change. Smith references Barry Boehm's data on the COCOMO model to illustrate just how significant the people and team factors are as compared to "product" factors, and "tool and process factors."

Chapter 8 reads like an abbreviated overview on Agile project management (APM), covering time-boxing, risk management, metrics, and retrospectives. As someone well versed in APM literature, this chapter didn't hold my attention as well as the others. However, I appreciated the overview of rolling-wave planning (which isn't often defined in Agile literature) and the author's coverage of "strategic versus tactical" metrics began to pique my interest again. It was a good thing, too, because immediately afterward came a hidden jewel out of the blue that Smith dubs a "Flexibility Index" -- defined as evaluation-time divided by development lead-time. This was something new and promising buried in a chapter that otherwise seemed like a straightforward rehashing of familiar APM concepts and techniques.

Chapters 9 and 10 were perhaps of most use to me for what I was hoping to get out of the book. Chapter 9 addresses issues of processes and emergence, and, of most interest to me, issues of scaling flexibility and sustaining *iterative and incremental innovation* (with numerous references to the Agile Manifesto and the work of Alistair Cockburn). I most enjoyed the sections on "Bottlenecks and Queues", and "Balancing Structure with Flexibility." Chapter 10 is more concerned about the work of the change agent for implementing flexible product development.

In the end, as read by someone focused on software development, the book really is focused on the application of Agile software development concepts to non-software application. As such, it is an outstanding and relatively easy to understand introduction to the subject. For someone looking at how to expand the scope of Agility beyond software, there is much material to help you relate the concepts and benefits of agile methods and principles to the non-software portions of the business.

About the Reviewer

Brad Appleton is an enterprise SCM/ALM solution architect for a Fortune 100 technology company. Currently he helps projects and teams adopt and apply agile development & SCM practices. Brad also author's the Agile CM Environments blog, and is co-author of *Software Configuration Management Patterns: Effective Teamwork, Practical Integration,* the "Agile SCM" column in CMCrossroads.com's CM Journal, and is a former section editor for The C++ Report. Since 1987, Brad has extensive experience using, developing, and supporting SCM environments for teams of all shapes and sizes. He holds an M.S. in Software Engineering and a B.S. in Computer Science and Mathematics.

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