

Preface

While this is a technical book, the idea of it sprang from our agile development classes. As I was teaching teams how to do Scrum or Lean I was often asked the question - "how are we supposed to be able to build our software in stages?" The answer was readily apparent to me. The real question was, of course, "how can we best learn how to build our software in stages?" I knew of three approaches:

1. Read our books. I am confident that anyone who read and absorbed the books *Design Patterns Explained: A New Perspective on Object-Oriented Design* and *Emergent Design: The Evolutionary Nature of Professional Software Development* would know how to write software in stages
2. Take our courses. A better approach (albeit, more expensive). Our combination of *Design Patterns* and *Emergent Design* classes can't be beat.
3. Learn the trim tabs of software development that makes building software in stages more efficient.

The first one requires a big investment in time. The second one requires a big investment in money. The third one requires less of both, but, unfortunately, there was no succinct place that these "trim tabs" were described. What are trim tabs? They exist on planes and ships - they are a way of reducing the amount of energy needed to control the flaps on a plane or the rudder of a ship. But the way I mean them comes from Bucky Fuller. Bucky once said:

Something hit me very hard once, thinking about what one little man could do. Think of the Queen Mary -- the whole ship goes by and then comes the rudder. And there's a tiny thing at the edge of the rudder called a trim tab.

It's a miniature rudder. Just moving the little trim tab builds a low pressure that pulls the rudder around. Takes almost no effort at all. So I said that the little individual can be a trim tab. Society thinks it's going right by you, that it's left you altogether. But if you're doing dynamic things mentally, the fact is that you can just put your foot out like that and the whole big ship of state is going to go.

So I said, call me Trim Tab."

When I've done agile courses I've always been frustrated that I couldn't just give my students the trim tabs of software development. These are those actions that would help them the most with the least investment.

In our design patterns courses we had identified three of these trim tabs that I had suggested if people did just these three things, they would see a tremendous improvement in their design and programming abilities. What were these three? Why they are chapters in this book of course:

- Programming by Intention
- Separate Use From Construction

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- Consider Testability Before Writing Code

I pick these three because they are very simple to do and take virtually no extra time than not doing them. A fourth which I also recommend (but admittedly takes some time) is Follow Shalloway's Principle.

This book is essentially a compilation of the trim tabs that Net Objectives instructors and coaches have found to be essential for agile developers to follow to write quality code in an efficient manner. It is intended to be read in virtually any order. However, we have put the chapters in an order we think supports the flow of ideas. My recommendation would be to read the book from front to back unless there was a chapter that struck a chord and then I would just jump to that. Each chapter is meant to be independent and therefore the book can be read in easy time segments.

Alan Shalloway

Business-Driven Software Development (BDS) is Net Objectives' proprietary integration of Lean-Thinking with Agile methods across the business, management and development teams to maximize the value delivered from a software development organization. BDS has built a reputation and track record of delivering higher quality products faster and with lower cost than other methods

BDS goes beyond the first generation of Agile methods such as Scrum and XP by viewing the entire value stream of development. Lean-Thinking enables product portfolio management, release planning and critical metrics to create a top-down vision while still promoting a bottom-up implementation.

BDS integrates business, management and teams. Popular Agile methods, such as Scrum, tend to isolate teams from the business side and seem to have forgotten management's role altogether. These are critical aspects of all successful organizations. In BDS:

- **Business** provides the vision and direction; properly selecting, sizing and prioritizing those products and enhancements that will maximize your investment
- **Teams** self-organize and do the work; consistently delivering value quickly while reducing the risk of developing what is not needed
- **Management** bridges the two; providing the right environment for successful development by creating an organizational structure that removes impediments to the production of value. This increases productivity, lowers cost and improves quality

Become a Lean-Agile Enterprise

All levels of your organization will experience impacts and require change management. We help prepare executive, mid-management and the front-line with the competencies required to successfully change the culture to a Lean-Agile enterprise.

Prioritization is only half the problem. Learn how to both prioritize and size your initiatives to enable your teams to implement them quickly.

Learn to come from business need not just system capability. There is a disconnect between the business side and development side in many organizations. Learn how BDS can bridge this gap by providing the practices for managing the flow of work.

Why Net Objectives

While many organizations are having success with Agile methods, many more are not. Much of this is due to organizations either starting in the wrong place (e.g., the team when that is not the main problem) or using the wrong method (e.g., Scrum, just because it is popular). Net Objectives is experienced in all of the Agile team methods (Scrum, XP, Kanban, Scrumban) and integrates business, management and teams. This lets us help you select the right method for you.

<p>Assessments</p> <p>See where you are, where you want to go, and how to get there.</p> <p>Business and Management Training</p> <p>Lean Software Development Product Portfolio Management Enterprise Release Planning</p>	<p>Productive Lean-Agile Team Training</p> <p>Team training in Kanban, Scrum Technical Training in ATDD, TDD, Design Patterns</p> <p>Roles Training</p> <p>Lean-Agile Project Manager Product Owner</p>
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