

Lean Development at Strata Health

February 9th, 2007

What is it?

“Lean” is a management approach for streamlining production systems. It was originally developed by Toyota to improve its manufacturing process (sometimes called the Toyota Production System or TPS) and later applied to product development. Lean is responsible for great improvements in productivity and quality over the past 30 years and is used successfully by industries that range from manufacturing and logistics to product development.

Lean Software Development is a translation of lean manufacturing principles and practices to the software development domain. It is compatible with the so - called Agile Software Development methodologies. Strata has adopted the agile methodology Extreme Programming (XP), whose set of practices are helping us to become a leaner company. Agile software development is relatively new; XP has been formalized just a decade ago and Lean Software Development is even younger. Most software development organizations are not familiar with either. Many of these organizations are still following a rigid, plan-driven approach (also called a Waterfall process) to software development. Others are not using a methodology and have no process at all (Chaos).

Lean Health Care

One of the recent trends in health care has been the application of lean principles to improving patient care and reducing medical errors. The Pittsburgh Regional Health Initiative has been one of the leaders in applying lean methods in hospitals.

Outlook

Strata Health is constantly striving to improve its software development process, guided by the principles of Lean Software Development. New employees learn the theory and then immediately participate in an ongoing effort towards improving the organization.

Being lean means there is no ultimate destination which, when reached, would allow us to relax and say that we are done. It is more of a journey. Our current efforts focus on improving quality by fine-tuning the collaboration between testers and programmers, and building consensus as to what our biggest waste is.

Strata Health’s growing expertise in lean, together with our knowledge about health care management, may enable us to guide health regions towards adopting lean health care for the benefit of all.

Further Reading

<http://agilemanifesto.org>

<http://kanban.blogspot.com/search/label/Healthcare>

Lean Thinking: Banish Waste and Create Wealth in Your Corporation

Lean Solutions: How Companies and Customers Can Create Value and Wealth Together

Lean Software Development: An Agile Toolkit

Implementing Lean Software Development: From Concept to Cash

Extreme Programming Explained: Embrace Change

Seven Principles

1. Eliminate Waste
2. Build Quality In
3. Create Knowledge
4. Defer Commitment
5. Deliver Fast
6. Respect People
7. Optimize The Whole

Seven Wastes

1. Partially Done Work
2. Extra Features
3. Lost Knowledge
4. Handoffs
5. Task Switching
6. Delays
7. Defects

Some XP Practices

- Short Iterations
- Small Releases
- On-site Clients
- No Overtime
- Incremental Design
- Frequent Retrospectives