

Are Lean IT and Agile Compatible?



Lean IT results from the application of lean principles to information systems and the IT function. Changes made to IT are directly related to changes made and learnings discovered while converting manufacturing to the Toyota Production System or “lean”. Via an evolutionary spiral that began in earnest in the early 90’s, the elimination of waste in all processes at the shop floor yielded huge improvements in lead time and quality. This was accomplished through the use of continuous improvement thinking by all employees who were trained in lean principles and adopted a lean attitude. Then, over the past decade, this experience and the same thinking has been applied ever wider outside the manufacturing function...eventually making its way to the IT function. Lean IT is both changes made to applications to support lean operations throughout the enterprise, and improvements made to the performance of the IT function itself.

Agile software development refers to a group of software development methodologies based on iterative development, where requirements and solutions evolve through collaboration between self-organizing cross-functional teams.

Agile methods generally promote a disciplined project management process that encourages frequent inspection and adaptation, a leadership philosophy that encourages teamwork, self-organization and accountability, a set of engineering best practices that allow for rapid delivery of high-quality software, and a business approach that aligns development with customer needs and company goals.¹

Are lean IT and agile compatible? Does a company need to pick one or the other?

The term lean IT encompasses both “IT for Lean” and “Lean for IT”. IT for Lean refers to the changes to applications and tools to support the Lean Enterprise—particularly in manufacturing, supply chain and accounting. Lean for IT refers to the use of lean thinking to improve how the IT function utilizes its interdepartmental processes to provide all products and services to the organization. The software development process falls under Lean for IT as do the processes making up the many other products and services that the IT function provides to the company like hardware management, software management, web presence, telecommunications, etc.

Category	Improvement/Support Focus	Lean IT	Agile
IT application changes to support Lean Manufacturing	Changes in ERP and other system capability to support one piece flow, Kanban, back flush accounting, product line costing, process metrics, etc.	IT for Lean	
Improve IT Function	Infrastructure for SW and HW Management, Help desk, Security, etc.	Lean for IT	
	Improve Application/Capability/Software Development	Lean for IT	Agile

¹ From [Wikipedia](http://en.wikipedia.org)

As you can see from the table, there is only one area where Lean IT and agile intersect: software development. The concepts underlying lean and software development are very similar. In both there is a focus on (1) small improvements delivered quickly, (2) utilizing the collective genius of the team, and (3) eliminating functional boundaries between workers. So, certainly, utilizing agile in a lean IT environment would make a great deal of sense.

Recently, I had the opportunity to lead a kaizen improvement event with an IT organization who was trying to improve the speed and quality of project delivery. The company used the waterfall method for software development but was considering incorporating agile methodology. One of the team members had been studying agile in depth, and, in fact, had prepared a presentation for the improvement team on agile. After this team member heard my introduction to lean and lean thinking, he was extremely enthusiastic that lean concepts and agile would be very complementary.

This improvement event was focused on how the company launched a project and ultimately identified a large amount of waste in the existing process. While improving the process overall, we were able to adapt the process in a way that could support both agile and modified waterfall for software development. I have found in many, many prior kaizen events I have facilitated that to truly get to the core unseen efficiencies buried in a process, the kaizen team must look at the supporting processes using the lean tools, process mapping and waste elimination. In this case, the agile methods would have met barrier after barrier within the existing process if we had not used these valuable tools. As of this writing, the company has cleared the deck to trial agile for a project as a result of applying lean methods on the overall process in the kaizen improvement event.

About the Author



Jean Cunningham is internationally recognized as a pioneer in Lean Accounting and the Lean Back Office and is one of the founding Thought Leaders for the Lean Accounting Summit. She is the co-author of *Real Numbers* (Lean Accounting) and *Easier, Simpler, Faster* (Lean IT) which won the 2004 and 2008 Shingo Prize for Research respectively.

Jean is president of [Jean Cunningham Consulting](#) which provides lean back office services including workshops, kaizen events, and strategic direction. She is the CFO for Stiles Associates and the Association of Manufacturing Excellence. She was previously the CFO at Lantech and Marshfield Door Systems. She has a BS in Accounting from Indiana University and an MBA from Northeastern University's Executive Program. She and her family reside in the Chicago area.