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

James P. Womack & Daniel T. Jones
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Reviewed by Paul Harmon

I have often commented on Lean and mentioned the fact that Lean derives from the Toyota Production System, and thus from a manufacturing background. I was certainly aware that there were books on Lean Six Sigma for Service, but having glanced at a couple, I wasn't convinced that they had really made the transition to a service orientation. Obviously service companies have backroom operations, and obviously there is waste present in service companies, just as there is in manufacturing operations, so Lean must somehow apply, but I wasn't convinced that reading a book on "Lean for Service" provided any important new ideas. I had a student challenge me on this recently and suggested I read *Lean Solutions* – a book that James Womack and Daniel Jones – the ultimate Lean gurus – had written in 2005. I hadn't realized that *Lean Solutions* was focused on the service business until I sat down to read it.

Lean Solutions is a great book that anyone in process work, Lean or otherwise, should read. It awakens the reader to the notion that there really are exciting ideas that Lean can bring to the analysis of service industry problems.

Lean includes a number of different techniques. Among the most prominent are defining a value stream and then examining each step in the value stream to determine how long it takes, whether or not it's creating value, and if it relies on push or pull. The techniques are mixed in with a lot of heuristics, often derived from practices at Toyota. Thus, for example, everyone at Toyota is urged to "always go to the *gemba*." (a Japanese term for the place where the work is actually done). At Toyota, and in almost all books on the Toyota Production System or on Lean, the *gemba* is understood to be the factory floor where production processes takes place.

What Womack and Jones have done is to imagine a new *gemba* – the place where the customer lives. (Note that in doing this, Womack and Jones have moved beyond *Lean* as a set of practices derived from the Toyota Production System and have started to create new Lean techniques for the service industry. I would suggest that some of what they are doing is what people in the process management tradition have been doing for some time, and is one of the reasons people in the process management tradition have thought Lean was limited to manufacturing – but that's a quibble. They key is that they arrived at the right solution.

The essence of *Lean Solutions* is found in the following statement: "Customers have a gemba, too. It's the path they follow to solve their problems."   In other words, to learn about service processes, watch what customers do.

Womack and Jones refer to the customer's gemba as *consumption*, and refer to the service company's process as the *provision* process. (We prefer to refer to the customer's gemba as the customer process, and the company's process as the business process, but either set of terms

will do.)

As Womack and Jones say: "Consumption is a continuing process – a set of actions taken over an extended period – to solve a problem. It involves searching for, obtaining, installing, maintaining, repairing, upgrading, and eventually, disposing of many goods and services."

How does this work in practice? Womack and Jones recommend the following:

- Draw a Consumption Map – a list of the steps in the consumer process. Time each step.
- Determine the value of each step in the consumer process. (The time the consumer wastes.)
- Determine the "perceptual time" of each step. (Is the customer happy or unhappy about waiting.)

Next Womack and Jones turn to the company's provisioning process (the company's gemba), and they repeat the steps:

- Draw a Provision Map – a list of the steps that the company goes through to provide service to a customer. Time each step.
- Determine the value of each step in the provision process. (The time the consumer wastes.)
- Determine the "perceptual time" of each step. (Is the employee happy or unhappy about the step.)

In each case, the authors first create a list of steps and then shift to a diagram of the steps. By the time they have modeled both processes, they have a model that looks like the one shown in Figure 1.

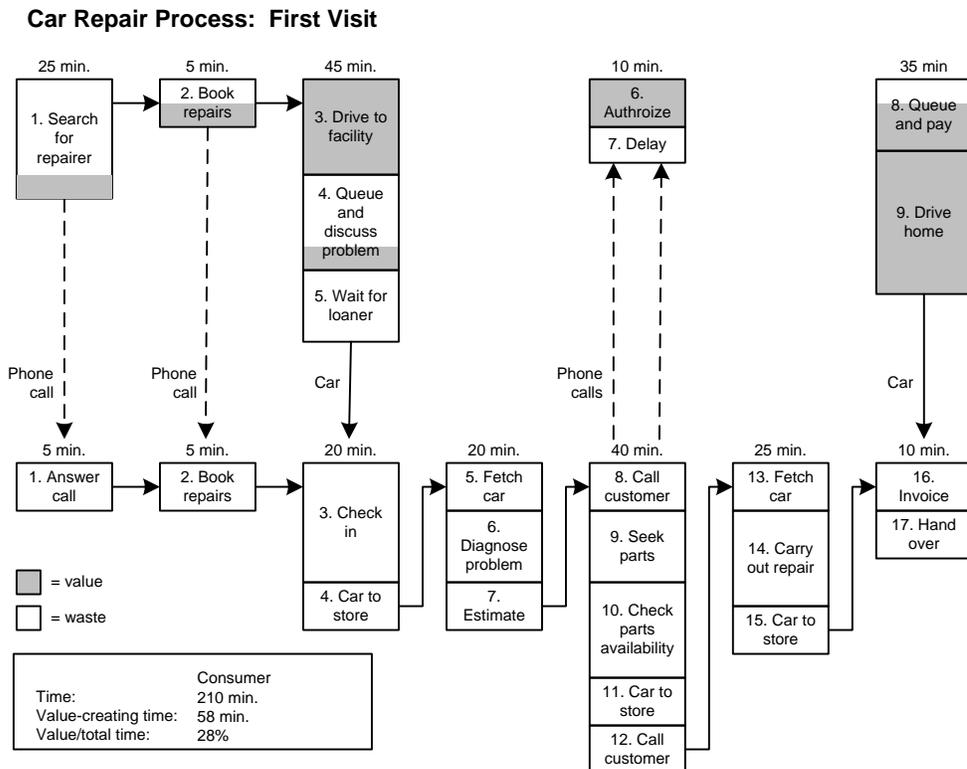**Car Repair Process: First Visit**

Figure 1. Womack-Jones diagram of parallel consumer-provider processes.

The model shown in Figure 1, however, only shows the first visit of the customer to the car repair shop, while, in fact, Womack and Jones have modeled two visits. They do this because auto repair data suggests that most car repair shops do not fix the problem on the first visit, requiring the customer to bring the car back to the shop some 40% of the time for a second attempt at fixing the problem..

Note that the model in Figure 1 shows where both the customer and the provider are wasting time. It does not show where the provider is producing any value time. In essence the redesign strategy is to clean up the customer process, eliminating all possible waste in the consumer process, and then to turn to the provisioning process, adjust it to support the improved customer process, and then finally, to eliminate what waste you still can from the provider process.

At this point I have only considered what Womack and Jones discuss in the first 50 pages of their 350 page book. They go on the discuss how they would systematically improve the customer process and then the provider processes and then move on to consider a number of other service processes and to provide lots of good advice on how to deal with a variety of service process problems.

Womack and Jones' new ideas will create some problems that they fail to address. In essence, when we look at a service problem, we are looking at two processes: the customers process and the service businesses process. Moreover, they are complementary, such that, in many situations, decreasing waste for the customer must necessarily increase waste for the business. Roger Burlton describes a class in which a student trained in Lean insisted that transportation was "waste," and that, therefore, a pizza company should not deliver its pizzas. Roger tried to explain to the student that much of the value of a pizza, for many of us, consisted in its being delivered, but he couldn'tt convince this person who was fixated on eliminating all possible "waste" from the production process.   Womack and Jones would solve the "pizza" problem this way. The pizza business is a service business. We begin by analyzing the customer's process and try to make it as efficient as possible. For us, as customers, transportation is waste. We don't want to have to travel to pick up the pizza.   We want to eliminate the waste by getting the pizza people to deliver our pizza right to our door when we are ready to eat it. As we maximize the value of the customer process, in this case, however, we impose a burden on the pizza company's production process. To eliminate waste in the customer's process, the pizza company needs to accept waste in its own process – it needs to deliver the pizza to the customer. Anyone working with customer processes quickly realizes that the effort to make things easier for the customer must often make things harder (more expensive) for the service provider. It would be nice if Womack and Jones had explored this issue in a bit more detail and suggested some heuristics for dealing with some of these enviable conflicts. This book will challenge the thinking of those Lean practitioners who regard Lean as a set of simple rules – it begins to introduce the complexities of BPM into lean practice.

I have become obsessed recently with the idea that there are different traditions in business process work – quality control, management and IT – that don't talk to each other nearly enough. This idea is reinforced every time I find a good example of it. *Lean Solutions* provides an excellent example. In essence, Womack and Jones have discovered something that Roger Burlton and I have been talking about for the last several years. We have focused on customer processes in large part because we come out of the management tradition and are quick to use Rummler-Brache diagrams that always place the customer's activities in the top swimlane of a process model. Thus, for us, it is natural to think of a customer as having a process and to think of how one might align the customer's process with the service business's process. It was this same idea that led IBM researchers who had taken Rummler-Brache courses in the mid-Nineties

to adopt Rummler-Brache diagrams for their LOVEM methodology. The emphasis in LOVEM is on the Line Of Vision – which is the line between the top-level customer swimlane and the rest of the swimlanes. In essence, IBM was interested in having a model of all the places where their process touched the customer. Roger and I just took the idea a bit further and started doing formal customer process modeling. The Rummler-Brache diagram almost screams at you to do it.   Womack and Jones arrived at the same idea from another route. With a bit more communication, I would have known that we were both working along the same lines, but, as it was it came as a pleasant surprise. But it did make me think that it was a pity that Womack and Jones hadn't used Rummler-Brache diagrams – if they had, I suspect they would have arrived at the idea of modeling customer processes even earlier. For example, without any thought about service processes, as such, an analyst using Rummler-Brache diagrams, circa 1980, would have pictured the processes described in figure 1 as shown in figure 2.
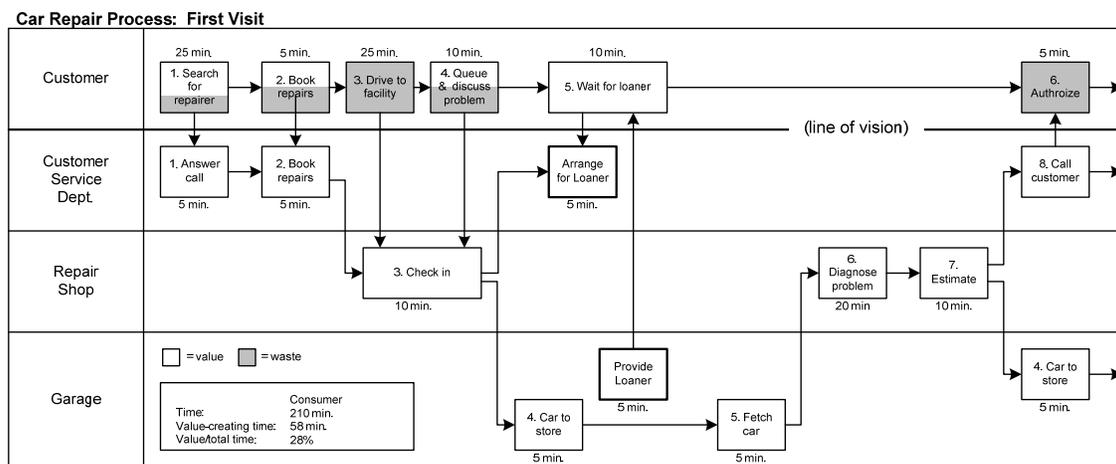

Figure 2. Customer and business process represented via a Rummler-Brache diagram.

Note that in the Rummler-Brache diagram we have all the information in the Womack-Jones diagram, plus we indicate who is responsible for each activity (the swimlane labels) and we show some parallel work, and the provisioning of the loaner, which Womack and Jones didn't show, I assume to avoid the complications of simultaneous activities.

But enough of different approaches and alternative notations. Most companies today are service companies. Most process technologies were developed to deal with manufacturing processes. We are in the midst of a transition as we all learn more about how to analyze and redesign service processes. This is especially the case when we focus on service processes that interact with the customer, and not just with back office operations at service companies. Womack and Jones have made a major contribution to this newly evolving practice. They have extended Lean to make it much more flexible and powerful, and show how to move towards a true service-oriented Lean Six Sigma approach – by focusing on the customer's gemba.

Every process practitioner should read this book. It is the kind of book that changes your view of the world and forces you to rethink what you know about process work.

As it happens Lean Solutions was published in 2005 and for some reason www.amazon.com is currently offering the book marked down to $7.99. That is an amazing bargain for anyone who wants to read one of the most important books published in the process domain in this decade.

Paul Harmon is the executive editor of Business Process Trends website and the author of *Process Change* (2nd Ed).