

By Mark Graban



ric Ries was my guest for • episode 115 of the Lean Blog Podcast. Eric is an entrepreneur and author of The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses which was just about to be published when we spoke back in 2011. His next book, His second book, The Startup Way: How Modern Companies Use Entrepreneurial Management to Transform Culture and Drive Long-Term Growth, is due out in October.

Working as a software developer,

Eric had the bad luck to work on several cool pieces of technology that never found customers, Eric said he eventually moved away from looking only at technical solutions, as he started to think about increasing the odds the stuff he was building actually mattered to customers.

"I didn't get exposed to Lean thinking directly until relatively late in my career, but I had been exposed to something called Agile programming, which is basically an application of Lean principles to the methodology of developing software," Eric said. Unfortunately, Agile didn't really meet Eric's needs, either. As he explained, at the startups where he was applying Agile, building software was more efficient than it had been using the older Waterfall programming approach as Agile was driving down the batch size of work and reducing cycling time by making things more like what the customer wanted, but the problem was they didn't have any real paying customers to start with.

"We were a startup. So, we would wind up using internal customers, or kind of the internal project visionary, as the person who set out the spec. and we would wind up building that which is specified more efficiently. But, then that didn't actually work very well becauseit would turn out that the person that we thought was our customer wasn't [going to really pay to be a customer] and the visionary was wrong. We were kind of right back where we started," Eric said.

To remedy this, Eric started to develop new techniques to bring the customer and the startup's theories about the customer, into the product development process itself, accelerating the Agile paradigm.

"So, for example, driving the batch size of our work down all the way, as low as we could, to almost get into single-piece flow," Eric said. "We would deploy software to production, fifty times everyday using a process called continuous deployment. And those techniques didn't make sense according to all of the theories that I had been taught about what software development was and how startups should be managed."

Eric defines a startup as a human institution designed to create something new under conditions of extreme uncertainty.

Eric found it hard to evangelize this method to coworkers, bosses, and investors who were uneasy about challenging the dominant paradigm, and so he began reading everything he could searching for models to make sense of his experience and to help him explain it to others.

"When I read *Lean Thinking*, it was

like a light bulb went on for me. It was such a dramatic experience," Eric said. "Of course, what we're doing is so different from traditional Lean manufacturing, because we still have this big unknown about the customer. But, with a few tweaks, it seemed like we could take ideas that had been well proven in other industries and bring them into the entrepreneurship industry. And that was the origin of *Lean Startup*."

Eric defines a startup as a human institution designed to create something new under conditions of extreme uncertainty. It was from that basic definition he created his Lean theory of entrepreneurship. That definition doesn't say anything about industry, sector of the economy, or company size, and Eric added that it is completely applicable to entrepreneurs inside big companies as well, as The Startup Way book explores, based on his experience helping GE, Toyota, and other companies embrace and adapt Lean Startup methods.

During Eric's presentations about his *Lean Startup* methodology, he learned, in speaking with attendees, that big organizations treated innovation like a black box. Their theories of disruptive innovation and other frameworks said that getting the right kind of people, giving them the right budget, and outlining the organizational structure around them properly is all that was needed for magic to happen.

"And that's basically what we used to believe about entrepreneurship, too," Eric said. "That's actually the exact same problem we see with venture-backed entrepreneurs, who managed to raise a check for \$5 million. And they're like, now what? What specifically am I supposed to do every day? How can I tell if I'm making progress?"

In *The Lean Startup,* Eric emphasizes the idea that uncertainty is both a technical and a market risk.

So, the dominant question of our time is really not, **can** it be built, but **should** it be built."

"We live in a world of increasing uncertainty, just in general. And yet, our capabilities are also at their all-time high," Eric explained. "Lean manufacturing is a huge part of the reason why we find ourselves in this situation. We literally have more productive capacity than we know what to do with. So, the dominant question of our time is really not, **can** it be built, but **should** it be built."

When the vast majority of products **can** be built with enough time and resources, the question becomes whether there is a market for the product and if so, is there a way to build a sustainable organization around that set of products or services?

"If you think of the world in a kind of a two-by-two matrix. On one axis we ask, how much market uncertainty is there compared to technical uncertainty? So, in some products, the dominant questions are, can it be built? Market uncertainty means [asking] can we build a business around it?" Eric explained. "And on the other axis we have the question of, what's the underlying cycle time of that business?"

In the upper right-hand quadrant of that chart, there is very fast cycle time and lots of market uncertainty. Eric said that's the place where *Lean Startup* really excels, where we can try to use our advantage in faster (shorter) cycle time to help reduce uncertainty as quickly as possible to understand where to invest.

Eric dismisses the idea that *Lean Startup* principles don't apply in some industries.

"Every industry is being pushed inexorably towards more market risk. As everything gets cheaper and it gets easier to start new companies, it gets easier to introduce new products and to distribute them, we all face much more competition, both globally and domestically. And consumers are faced with many more choices about what to do as technology changes faster and the capabilities of primitive tools become more complex," Eric said. "Interestingly to me, one of the forces is Lean manufacturing. Because we have been systematically applying a cycle time reduction strategy to the way that we work so that we can bring new models to market guicker, we can adapt demand to what customers really want. But, that same capability can be used not just for greater efficiency but also for exploring new product concepts, which I think is one of the capabilities that then we introduce into Lean Startup."

When it comes to some of the more cultural aspects of what Eric would consider a *Lean Startup* to be, Eric said that he found Dr. Jeff Liker's approach in *The Toyota Way* to be helpful in terms of framing the pyramid of concepts and the way it shows how processes are the foundation for creating a Lean culture, which is really about fundamentally empowering people. "Most of the people who try to create new entrepreneurial cultures do so without having changed the process first. And as human beings, we always misunderstand. We always think, when someone's behaving badly or being uncreative or doing something we don't like, we assume it's because of their personality, or that somehow they're a bad person, or uncreative person. But, as we've all learned, those who have studied how work systems operate, most people's behavior is determined by the system and incentives that they are embedded in."

"As a society, we are squandering our most precious resources, which is the time and energy and creativity of our most talented people."

In *The Lean Startup*, Eric discusses changing the process by which the companies are built, changing their daily work process to include smaller sizes, cross functionally, and faster feedback from customers so that there is an opportunity to unleash people's creativity in a new way.

"I think that's the most exciting possibility that this revolution is kind of bringing to attention, that most of the new products being built worldwide are a complete waste of time. And, as a society, we are squandering our most precious resources, which is the time and energy and creativity of our most talented people. So, to me, this is about allowing those people to be more productive, but not like just in a very narrow efficient sense of doing their individual function really well. But making the products that they work on actually matter."

Another concept Eric speaks about in his book *The Lean Startup* is what he calls the "pivot." The nerve that it takes to go start a company, the risk that you have to take isn't always combined with that willingness to listen to the market. To this point, I asked Eric a question I received via Twitter from Joe Dager, which was whether a pivot is different than just following the plan, do you check at cycle, where you react and adjust accordingly?

Eric explained that *Lean Startup* is a complementary theory to the plan-do-check-act (PDCA) continuous improvement management method called "build, measure, learn."

"Basically, the fundamental feedback loop that we're working in, we translate ideas into products by building. We have the customers interact with those products to generate data and that data informs our next set of ideas. So, build, measure, learn. Our heuristic, just as in any Lean context, is to minimize total time to the feedback loop, rather than becoming really efficient at any one of the three activities," Eric said. "But we reserve the term 'pivot' to mean that one of our core business hypotheses has been invalidated and it's time to make a change."

Lean startups will constantly optimize their product, Eric explained. This optimization constantly makes changes in response to customer feedback, and will utilize "split tests" for product presentation, marketing messages, new features, new designs, and functional improvements to products. A pivot is needed when optimization techniques start to yield diminishing returns. A pivot is also called for when a business is succeeding in making the product better, but is not really getting any closer to having a sustainable business.

"And this is a kind of thing that really doesn't have a regular old, kind of, Lean thinking analog. Because, in general, once you start to manufacture a product and start to drive out the waste in your manufacturing process, you tend to get incremental benefit for incremental investment," Eric explained. "But, entrepreneurs often find themselves in a situation where we are actually improving our work, but customers don't care. Because we're helping them do something that they don't care about. So, we're making a bad product easier to use, is the most common case. So, we've figured

out an easier way for people to discover what the product's all about and get registered and get involved, maybe even, we've made it easier for them to pay. But, fundamentally, the value propositions offered by our product is not one that any of our customers want. So, by making the product easier to use, we're actually helping them more quickly discover that they want to bail out and not be our customers anymore. So, that's a situation where we have to make a significant change to our business strategy."

Once the strategy is change, there is a cascade of changes that need to be made as a result.

"We might wind up having to throw out significant chunks of our product. We might wind up switching from a product to a service or vice versa. We might

have to really change the way we market the product or even where the company is located. So, there's all these kind of secondary changes that come out of a fundamental change in strategy. So, it's not something you want to undertake lightly, and it's not something you do all the time, but it is necessary. Because if you look at the history of startup success, you'll notice this pattern that, the majority of the time, successful entrepreneurs started with a really bad idea. So, if we are stubborn and persevere and just do that bad idea efficiently then we're just persevering the plane straight into the ground."

Eric's book, *The Lean Startup* is available at all booksellers. On his website, Eric lists some Lean Startup case studies including Dropbox, Grockit, and Aardvark, which you can read more about at theleanstartup.com.



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