Barry O’Reilly on Lean Enterprises

Johannes Thönes

**EPISODE 234 OF** Software Engineering Radio features a conversation between host Johannes Thönes and guest Barry O’Reilly, coauthor of *Lean Enterprise: How High Performance Organizations Innovate at Scale*. A lean enterprise is a large organization that manages to innovate while keeping its existing products in the market. Other topics from the interview, omitted here for space, include the management of lean projects as a portfolio, the importance of failure, and how the British government adopted a lean approach in response to a spectacular failure in their healthcare system. Download the entire episode at www.se-radio.net. –Robert Blumen

Johannes Thönes (JT): Your book *Lean Enterprise* is, in essence, an extension of the lean-startup idea [a method for developing business and products that Eric Ries proposed in 2011] to big companies. Is that correct?

Barry O’Reilly (BO): Yes, in part. We wanted to capture the essence of the lean-startup principles, such as scientific thinking, and then apply that across an entire organization. In the book, when we talk about new-product development, the lean-startup approach is a great way to discover what works when building new products. But it’s also a great way to reduce uncertainty—for example, what kind of CMS [content management system] and tools to use, or how to experiment when building new processes.

Start by thinking about the outcomes [you] want to achieve, then devise experiments to move toward that outcome, and learn along the way. Those are the core elements: building a culture of experimentation and learning in your organization so that it can adapt to the changing circumstances both in the market and internally. By creating that culture of learning and empowering people, you create a high-performance culture where the people who are doing the work don’t have to ask for permission to try new things, make things better, and become engaged. That’s where we see the most radical improvements in organizations.

JT: You said that lean startup is about scientific thinking. What does that mean for you?

BO: Eric Ries talked about the concept of build, measure, learn. What’s the smallest thing you can build to test [an] idea, specifically with the customers that it’s designed for? The scientific method is what we use to explore uncertainty. For years, humans have made observations, formulated hypotheses, and then created experiments to test that hypothesis. The outcome of most experiments is some sort of learning. Either you invalidate your hypothesis, in which case you might want to change what you do, or
you get confidence that you’re on the right path and you want to continue.

JT: Can you give an example of an experiment you would run in a lean enterprise?

BO: A lean startup I [was involved in] was trying to create a wine company. We formulated a business hypothesis: people who take photos of bottles of wine might want to buy them. Under the business model, if someone took photos of a bottle of wine, we could send two bottles to them in two days. How do you test that hypothesis? Typically, you would start by crafting an amazing business case and then spend months analyzing how the supply chain works and trying to sign deals with different wineries. It could be months before [that idea gets] to market. But the lean-startup approach is to find the smallest possible experiment or test to reduce the uncertainty of that business model.

We mapped out, literally, who we thought our customers were and how they would interact with the business. Then we thought about how to test that. Where do people take photos, and where do they store them? I went on Twitter, did a search for red wine, and looked for people who had taken photos of bottles of red wine. I tested part of my hypothesis: Do people take photos of bottles of wine? Yes. I could move forward.

The second part of the hypothesis was, if they took a photo, they might buy [the wine]. How could I test that? What I did next was create a Twitter account of a fake company selling wine. Then I created a customized tweet. I [looked at a user’s photo of red wine], read the name of the wine off the bottle, did a bit of research to find out how much it cost, and then sent [the user] a customized tweet based on the picture of wine he or she had taken. “Hi Johannes, it looks like you’re enjoying [this wine]; would you like to buy two bottles for £20? Click this link to purchase.” Very quickly, with very limited investment, I had created an experiment.

JT: And then you count the people actually clicking the link.

BO: Exactly. It shows that people are interested. It doesn’t necessarily guarantee they’ll buy, but it shows the method of reducing the uncertainty in a business model by making small investments from which you can quickly learn what people want.

JT: How long did it take you to build that experiment?

BO: About three minutes.

JT: What was the outcome?

BO: As we went forward, we started to build more fidelity. The first tweet just went to a wine wholesaler. We had evidence that people were clicking on the links, so we built a very simple landing page that was customized to the bottle of wine and showed the price and a buy button. This way we could validate our test. People might have clicked the link out of curiosity, but would they buy? As you get further in, you see very quickly that this isn’t a scalable robust solution that can serve hundreds of millions of people. But I’m
feedback cycles is that it can take continuous reevaluation. The challenge on a regular basis. So you get under how you’re moving forward. Iterations are another way to create a feedback loop and understand how you’re moving forward on a regular basis. So you get continuous reevaluation. The challenge when you’re working in longer feedback cycles is that it can take months to get feedback from customers to find out if you’re building the right thing for them, if it’s actually what they want.

JT: How does that translate to the enterprise?

BO: There are many aspects of driving innovation in organizations, but the main thing is that innovation needs a strong executive mandate. It needs support from the board, people who will protect teams as they try new ways of working. Whatever it might be, we need to work in a short iteration because that forces us to have a feedback loop to measure how we’re performing.

When you think about build, measure, learn, it’s about creating a feedback loop. Iterations are another way to create a feedback loop and understand how you’re moving forward on a regular basis. So you get continuous reevaluation. The challenge when you’re working in longer feedback cycles is that it can take months to get feedback from customers to find out if you’re building the right thing for them, if it’s actually what they want.

JT: You discuss the three-horizons model in the book. Can you define that for us?

BO: It’s a model from McKinsey [a management consulting firm]. It was formulated by one of their partners a long time ago. Horizon one is essentially your current businesses. What’s generating today’s cash flow? This normally consists of business models, products, or services that are within [their first] 12 months. Horizon two is from 12 to 36 months. These are things that are not necessarily generating the most of your revenue today, but you can see that they’ll drive most of the revenue for your business in two or three years.

Then you have horizon three, which is anywhere from three to five years out. These are your highly experimental projects. When you ask, “What’s the market going to look at in three or five years?,” you don’t know. But if you’re not making any bets, how are you ever going to be able to maximize that? Some good examples of this might be, what does the Internet of Things mean now? What kind of services should banking organizations create to help maximize the leverage from the Internet of Things? What are the innovations three or five years out that are going to drive your future growth? What you need to do is make some investments to explore that idea and learn how the technology might work.

JT: Can you give an example of these three horizons in terms of products?

BO: The company we talk a lot about in the book is Intuit. Intuit is probably the largest self-service accounting firm in North America. They provide accounting services for small to medium-sized businesses finding out if the business model is valid. And I’m reducing uncertainty at a very low cost.

JT: Can you give an example of these three horizons in terms of products?
as well as individuals. Sixty percent of their investment budget goes into horizon one. That’s their growing category. They want to learn what kinds of things are successful, like TurboTax and Mint. In horizon two, they use about 30 percent of their budget. That’s really about increasing growth and efficiency, like QuickBooks and online accounting.

The last 10 percent of their operational expenses is really fun. They invest in really experimental things. One of the most interesting things to come out of that is a tool called SnapTax. I encourage listeners to go to the Apple App Store or Google Play and search for SnapTax. I’ve never seen a higher rating for any product in the App Store.

They started with a team of just three people. When the team started to build it, they were told “It’s a crazy idea,” “It’s never going to work,” “It’s insane,” and “What are you doing?” The concept of SnapTax is that at the end of the year when you get your tax form, you take a photo of it. [The app] scans the whole document and does your tax return in two seconds. It’s insane, right? But the team achieved it because Intuit is highly invested in using lean startup and lean thinking across their entire organization. They invest in ideas that are going to make them successful in the future. They challenge themselves around these horizons. They ask themselves, “Do we have a balanced portfolio?” “Are we working in horizon three?” “Are we looking after horizon one?”

There are strategies to manage each one of those horizons. Horizon three is very experimental, two is about growing your business, and one is about sustaining and making sure that the business is as optimized as efficiently as possible.

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