



Learning from the Best

Why do certain companies always seem so far ahead of the competition? Because, argues MIT's Steve Spear, they've instilled a culture of constant discovery that enables them to solve problems earlier – and thus innovate faster – than their rivals.

By Ben Thompson

There's an old joke about a man caught in a flood. With the waters rising, he climbs up onto his roof and prays for God to save him. After a while, someone comes by on a raft and says, "Get on. I'll get you out of here." The man replies: "It's okay. God is going to save me, I'll wait." But the water keeps rising, and pretty soon he has to scramble up on top of the chimney. A second guy in a motorboat comes by and offers to help him, but the man gives the same response: "God will come to my rescue. He will answer my prayers." Yet an hour later, the waters are up to his chest. A helicopter flies overhead and a rope ladder comes down. "Grab hold and climb up!" shouts the pilot over the noise of the rotors. "I'll lift you to safety!" Incredibly, the man shakes his head. "God will not forsake me," he says calmly. "He will not let me drown." So the helicopter flies off. Before long, the man does indeed drown.

When he gets to heaven, he confronts God over his failure to act. "How could you let me drown?" he asks. "I was waiting for you to help me. I prayed and I prayed. Where were you?" God looks at the man and sighs with exasperation. "I sent you two boats and a helicopter," he says, shaking his head. "What more do you want me to do?"

Steve Spear laughs as he tells the story, but he does have a serious point to make. "Sometimes you've got to help yourself," he smiles. "It's like the US car companies going cap-in-hand to Washington, looking for assistance. They've known for decades that if they can't keep up with Toyota, they can't win. They had that lesson on fuel efficiency, they had that lesson on product reliability, they had that lesson on costs. They've known this since the 1970s, so they've had ample opportunity. Yet here you have them in 2008, going to Washington with a tin cup claiming crisis relief, as if a hurricane suddenly hit them. It's mind-boggling."

A senior lecturer at MIT, Spear has spent his career studying high-performing companies and working out what makes them tick. Unsurprisingly, Detroit's automakers do not figure amongst his long list of case studies; Toyota, on the other hand, is a perfect example of what Spear has termed a 'high-velocity organization' – firms that outpace the competition despite operating on what is ostensibly a level-playing field.

"Toyota's time from start to finish on the design of new models is about half to two-thirds the time of its rivals," he explains. "Not just the American Big Three, but other companies as well. Once a car is designed, they're much faster to get a factory to the point that it can switch from one model to the next. The ramp-up is faster and then their time through the factory is faster, too. Velocity is key to the creation of value.

"Southwest as another example. Part of what makes Southwest outperform its competitors is its ability to do the basic routine work of running an airline quickly and efficiently: turning planes around at the gate, through preventative maintenance, scheduled maintenance and that kind of thing. They're flying the same fleet and hiring from the same

labor pool, but they're squeezing out an extra couple of flights per day, per plane and that flips them from a breakeven or loss-making position to profitable."

Spear argues that what makes these companies so successful is their ability to learn and react to complex problems. "They start with the same degree of ignorance and uncertainty about the work they undertake as anybody else," he says. "It's not like they have a head start or are innately smarter. But what they've done is establish mechanisms so that when they start their work, their ability to learn – and replace ignorance with useful knowledge, and then deploy that knowledge so it's useful systemically – is much greater. They do it at a much higher rate, with much greater duration, over a much broader range of application than anybody else. That's where the real velocity comes from. It's the velocity in which they, as an organization, can learn."

And while many firms have tried to benchmark and copy the success of these high-velocity organizations (just look at the popularity of just-in-time production systems and lean manufacturing, both taken from the Toyota model), Spear believes that most are missing the point. "What everyone else seems to have focused on is imitating where these high performers are today," he says. "What they've not learned to do, or realized that they even have to do, is copy the process by which they got there. Really, what sets Toyota apart from its competitors is not what the factory looks like today. It's how they discovered what the factory should look like today, and how they're discovering what it should look like tomorrow."

To illustrate his point, Spear uses another analogy – that of running a marathon. "Most people are happy just to finish," he says. "However, if you really want to stay in touch with the leaders in order to compete for first place, you have to be in contention at each of the mile markers as well. The leaders get to all those places faster too, not just the finish line, and by the time everyone else reaches those points the best have moved on and already refocused their sights on the next target. That's what you see with companies like Toyota."

It's an important lesson. Detroit will make the argument that their quality is now close to (and occasionally better than) Toyota's. The problem is that Toyota was competing on quality in 1980, and on quality plus workplace efficiency by 1985. "Essentially, it's true that the Detroit Three have closed the gap on quality, and to a certain extent on efficiency, but at this point that is not a source of competitive advantage; it's a necessity just to compete. You can't sell a crappy car anymore. You can't sell a car that's grossly overpriced because the market is just too competitive. That's necessary but completely insufficient."

What is needed now is product variety, so that when customers change their purchase patterns – for example, when they go from big to small, from luxury to regular and economy – car companies have the velocity and the agility to respond to those needs. "When people walk in, you've got to have a very broad product portfolio so that they can pick and choose," says Spear. "Again, everyone gets to those mile markers, but what's really important is how quickly you get there."

The key, once again, is learning. "Most of us learn through trial and error," argues Spear. "So what you need to do, if you're truly trying to create a Toyota-like organization, is teach a group of people who are engaged in very difficult work – highly integrated, highly orchestrated and highly harmonized – how to do that so collectively they're learning." That means incorporating all the layers connecting the shop floor to the production manager, the plant manager, the company president, right up to the top of the organization. "If we can teach them how to discover collectively, they can generate systems and processes that fit their own context. What we have to do is make sure that we create a good learning environment in the first place."

It's a model that has proved successful at a number of industry leading organizations across industry verticals, from Toyota to aluminum producer Alcoa, from Southwest to engine-maker Pratt & Whitney, from the US Navy's Nuclear Reactor Program to some of the country's leading hospitals. In each case, success has been driven by a culture of self-

discovery. “Draw attention to failure because only by drawing attention to the disruption, the difficulty or the problem can we discover what we don’t know,” says Spear. “And only by discovering what we don’t know can we convert that into an opportunity for improvement.”

Such a journey becomes particularly important in a period of economic uncertainty. The need for organizations to focus on execution, identify what’s not working for them and their customers, and have the posture, the structure and the dynamics to cope with very rapid improvement, innovation and adaptation, is imperative. “The stakes are much higher and the slack is much less,” he says. “As both the technical systems and the organizations that deliver the technology get more complex, the need to be able to discover good solutions as opposed to just designing good solutions has gone up. Very few companies have caught up with that reality, so there’s still ample opportunity for most organizations to catch up.”

Even Detroit? “What’s the alternative?” replies Spear. “If you learn these lessons, at least you have a chance of survival – maybe to a smaller base from which to grow, but at least you have some chance. If you don’t learn them, you’re gonna get clobbered.

Extra info...

Full throttle

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1. Master the skills: “As desperate as you are to get better, realize that you’ll only get better if you master the skills. Learning in small increments can have a profound multiplicative effect.”

2. Define parameters: “Be ambitious in terms of the organizational levels that are involved, but make sure you define an area in which you’re learning (the laboratory, the model line) that is fairly tightly bounded.”

3. Make it important: “We learn best about things for which we’re motivated to learn. If you pick an auxiliary function that is not considered core to organizational success, no one is gonna care – no matter how good you get it.”

4. Don’t skimp on time: “Make the investment in repeatedly seeing and solving problems, even the little ones – because it’s through the frequency of trial and error, the frequency of practice, that you’re going to improve.”

5. Get C-level buy-in: “Senior leadership must be involved. This is about learning to improve collectively. If leadership isn’t involved, it sends a signal that they’re not really concerned with increasing the ability of the organization to create value.”

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