Innovation Capital

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A great idea may not be enough to build a great business. Whether you have invented an amazing new technology or product, you could still fail. And one of the most overlooked reasons for entrepreneurial failure is innovation capital.

That's why I enjoyed talking with Jeff Dyer who, along with Nathan Furr and Curtis Lefrandt, wrote a new book, *Innovation Capital: How to Compete and Win Like the World's Innovative Leaders*. He offers a unique perspective on innovation and winning in the marketplace.

Why is it that Thomas Edison succeeded wildly while Nikola Tesla died penniless? It's a fascinating study, one that echoes my constant inquiry of the difference between success and failure.

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Lessons from Tesla versus Edison

You have a book that teaches creativity, one that teaches how to test and validate those ideas, and now this one which is unique. You are teaching what separates successful innovators from those who struggle. I love how you use Tesla and Edison to drive this point home. Would you share that briefly?

The dangers of not understanding, or overlooking, innovation capital is illustrated by the battle between two great inventors: Thomas Edison and Nikola Tesla. Edison was known as a practical inventor who produced inventions largely through trial and error. He is credited with inventing the phonograph, the motion picture camera, the alkaline battery, and, most importantly, the electric light bulb and the accompanying distribution system for electric power.

By contrast, Tesla grew up in Europe and showed early signs of genius. His ability to perform integral calculus in his head led his tutors to think he was cheating. Tesla's genius and education led him to develop the foundations for electric induction motors, wireless telegraphy, radios, neon lamps, and remote control. In fact, his inventions in three-phase electric power and alternating current eventually enabled the global distribution of electricity as we know it.

Although Tesla's ideas arguably were more brilliant, he was unable to commercialize his ideas. He died virtually penniless in a hotel room in New York. In stark contrast, Edison died wealthy in his New Jersey mansion having won the Congressional Gold Medal and having his birthday,

February 11, designated as National Inventor's Day. If Tesla's ideas ultimately had more impact, then why was Edison so much more successful?

Edison was far superior to Tesla at winning backers, collaborators, and attention for his ideas. For example, he worked purposefully to fashion an image of himself as a hardworking, hands-on inventor (he once reportedly smeared soot on his hands and face before an interview to bolster that reputation). He also worked hard to build his social capital with other talented inventors, but also with wealthy families and financiers like J. P. Morgan, the Vanderbilts, and the Rockefellers. As a result, Edison attracted talented associates like Swiss-born machinist John Kruesi and an English master mechanic, Charles Batchelor. When Edison developed a commercially viable light bulb, he was able to convince Morgan to advance him $30,000 for the Edison Electric Light Company. When the company began installing electricity in homes, Morgan's home in New York was one of the first to get electricity. The electrification of the financier's home generated further attention for Edison's invention. When Edison and his team invented the phonograph, he immediately took it to the editor of Scientific American to show it off. This demonstration led the *Scientific American* staff to take up the cause of his invention, writing about it in newspapers worldwide throughout the next week.

Tesla was a visionary and was even described by Edison as someone whose "ideas are magnificent." But he was simply unable to attract the right talent and financial resources to successfully commercialize his ideas. Some have suggested that his personality traits were a contributing factor. He was reclusive and kept rigid habits (he worked each day from 9 a.m. to 6 p.m., ate dinner at the same restaurant each night, and had to be served by the same waiter). Tesla's partners eventually sold Tesla Electric Light Company's patents to George Westinghouse, CEO of the Westinghouse Electric Company. According to one Tesla biography, "Tesla was a visionary. But without the backing of the great entrepreneur and gifted engineer George Westinghouse, Tesla's revolutionary inventions would probably have come to nothing."

Ultimately, Edison's commercial victories over Tesla were due not to the superior quality of Edison's ideas but to differences in the men's innovation capital. Although Tesla deserved better, his lack of innovation capital hindered his efforts to attract the talent and backing to commercialize his ideas.

What are the components of innovation capital?

One's innovation capital—or ability to convince sponsors to support a novel idea—comes from three interrelated innovation-specific factors:

- *Human capital:* who you are as a leader of innovation
- *Social capital:* who you know with key expertise and resources
- *Reputation capital:* what you've done to warrant a reputation for innovation

In addition, these three types of capital can be multiplied by *impression amplifiers*—visible actions you take that help you gain attention and credibility for your ideas.

How exactly are potential supporters influenced by these factors? In academia, we use what we call a *simultaneous equation model* to describe how these factors work together. Sponsors are simultaneously weighing all these factors: whether you have the innovation skills as a leader to pull this off (who you are as a leader of innovation), whether you are well connected with others who will need to support your project (who you know with resources or expertise), and whether you have a track record and reputation for innovation success (what you are known for). Finally, potential sponsors look at the things you have done to persuade them (the impression amplifiers). They consider all these elements of your innovation capital to decide whether to support you and your ideas.

What are some ways to build a favorable reputation for innovation?

Jeff Bezos, Elon Musk, and Mark Zuckerberg all sit atop our most innovative leaders list. Why? Because they were founders. More importantly, they were founders of successful companies doing something innovative and impactful. The most valuable thing you can do to build your reputation for innovation is to be a founder. Let us give you our definition of what it means to be a founder: *Playing a central role in starting and managing an initiative that will have impact (preferably visible and large) on an organization or the broader world*.

There are many ways to be a founder. In fact, about half of all new ventures created are created by hybrid entrepreneurs—individuals who keep their day jobs and start a venture on the side. There are also many opportunities to create a new venture—launching a new product, service, or business—inside a company as a corporate entrepreneur (or intrapreneur). Being a corporate entrepreneur has a profound effect on both your reputation for innovation and your prospects for leadership opportunities. We know this because we studied 600 business professionals working for established companies over a 5-10 year time period and found that those who were corporate entrepreneurs were promoted faster and were paid more money than their colleagues who did not. Being a corporate entrepreneur gets you noticed! But you don't have to find a new business to get noticed. You can be the founder of a new process to improve customer service, a more effective way to attract top human capital, a company-sponsored conference or any number of initiatives that bring value to your organization.

Being a founder has a profound impact on your career because it provides a relevant, observable, and hard to imitate signal (the three characteristics of strong reputation signals) of your leadership capabilities. Being the founder of an innovative product or service requires holistic thinking, taking into account all aspects of what makes a new venture successful—from its value proposition to the customer (user), product development, technologies, cost to deliver, performance metrics and finally to getting the resources needed for implementation. What better way to signal that you have leadership capabilities? Moreover, it's hard. "I think the

most important thing that I look for [when funding a project] is really, who's that champion?" says Adobe CEO Shantanyu Narayen (#7 on our list). "I think ideas come from everywhere. But I think all of the great products we've developed as being characterized by somebody who is incredibly passionate about that idea…Championing change is hard." In sum, being a founder sends a powerful reputation signal of your abilities as a leader.

What did you find most surprising in your research of innovation leaders?

I think we were surprised at the number of different ways that leaders built their innovation capital.

- Some founded innovative companies (e.g., Jeff Bezos, Elon Musk, Mark Zuckerberg) and built their innovation capital rather quickly as their new venture proved disruptive to incumbents and competitors. Others built their innovation capital rather slowly as they navigated their way through a large company with multiple small wins (e.g., Satya Nadella, Indra Nooyi, Mark Parker). Those who had to navigate their way through large firms seemed to excel at emotional intelligence—the ability to read others' emotions and respond appropriately. Those who founded companies and stayed at the top were more likely to lead with more brutal intellectual honesty (e.g., Steve Jobs; Elon Musk).
- Some built their innovation capital largely through building relationships and social capital. Marc Benioff launched Dreamforce, now the largest software trade show in the world with more than 150,000 attendees, which was a critical action to build his social capital and innovation capital. We tell the story of David Bradford, current CEO of FluentWorlds and former CEO of Fusion-IO and HireVue, and how his innovation capital was largely built through relationships—spending 1-2 hours per day networking over the past 30 years.
- Some leaders, like Jeff Bezos, succeed primarily by being a "customer first" innovator. Bezos has established an innovation process at Amazon called "working backwards" which starts with an obsessive focus on a customer's needs and then works backwards to figure out how to best meet those needs. In contrast, Musk cares about customer needs as well but only at a high level; he picks what he perceives as big important needs that haven't been met because of technology constraints and is more of a "technology first" innovator. He attributes his problem-solving success to first principles thinking—the practice of identifying the fundamental key constraints to achieving a breakthrough in performance, and then testing every option possible for eliminating one or more of those constraints. Bezos' approach works especially well when the innovation requires overcoming a lot of market/demand uncertainty (will people buy it?) and Musk's approach works well when there is a lot of technological uncertainty (can we build it?).

What can others do to emulate the most innovative leaders?

- *Practice and spend time being a forward thinker*. Innovative leaders excel at a skill we call "forward thinking." Forward thinkers engage in mental time travel to imagine the future and see opportunities to create new value for customers. This practice is a choice and a habit. By trying to envision the future, innovative leaders can see what else is possible in their industry and then place smart bets, often risky bets, on the technologies or activities that could be transformative. So, one thing to emulate is to devote time peering into the future to understand: 1) key trends and how they will influence customer preferences, and 2) the emergence of new technologies and business models and how they will enable companies to deliver new value. As Microsoft's Satya Nadella observed, "A leader must see external opportunities and the internal capability and culture—and all the connections among them—and respond to them *before they become obvious parts of the conventional wisdom*. It's an art form, not a science."

- *Become an expert—quickly*. The more knowledge you possess in more areas, the more problems you can solve in pursuit of your vision. Unfortunately, many of us have developed expertise in only one field (software engineering, information technology [IT], marketing, biotechnology, automobile manufacturing, the food industry, etc. and we like to stick to our knitting. Innovative leaders are willing to dive in and develop expertise in new domains. For example, Bezos has developed deep expertise in software engineering, robotics, information technology, devices (e.g., Kindle, Alexa) and even rocket technologies (his company Blue Origin competes with SpaceX for space travel). "I've been lucky enough to work with Jeff for a long time now, and I don't know many people who learn at the rate that Jeff does," says Andy Jassy of Amazon Web Services. Similar comments have been made about Elon Musk as he has invested to master key knowledge domains relevant to software engineering (PayPal), automotive and battery technology (Tesla), rocketry (SpaceX) and solar energy (SolarCity). Unfortunately, we are too often unwilling or afraid to become a student again—to attempt to master new areas of expertise.

- *Maintain (or develop) a beginner's mindset*. One of the challenges of developing expertise in a knowledge domain is that it can prevent you from approaching problems with a beginner's mindset—which Jeff Bezos argues is key to successful innovation. Says Bezos, "To be a successful inventor you have to be an expert in your domain, but still have a beginner's mindset. The problem with being an expert in your domain is that you become numb to all the things that are wrong; you're so used to it. It doesn't matter how inventive you are, you need to expertise. But [great innovators] are not only experts, but they can put themselves in a place where they can see it as if it's the first time, they've ever seen it." This paradox requires simultaneously developing deep expertise while working feverishly to maintain a beginner's mindset. One of the techniques that Bezos uses to help maintain a beginner mindset is to be the last to speak at most meetings. Like a beginner, he listens to everyone else first and is careful not to let his opinion influence what others may be willing to share.