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Richard DeVaul on Disrupting Innovation Consulting

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CEOCFO: ***What does Innovation mean for you?***
Richard DeVaul**:**
I've led innovation teams at Apple, Google, the MIT Media Lab, and in venture-backed startups. I'm an inventor with 70 issued US patents. I've overseen the creation of billions of dollars of enterprise value. I've worked with some of the smartest, most creative people in both academia and in Silicon Valley. And based on all of these experiences, I can tell you that innovation doesn't mean what you probably think it means.

Most people see innovation as a benign, positive force that improves everyone's life, the product of serendipity, creativity, and invention. This is wrong. I believe that innovation is about overturning the existing order of things. And while innovation does create great value in the world, that process is not benign. Innovation disrupts.

And innovation has very little to do with invention or serendipity. Invention usually happens years, decades or centuries before an idea has great impact on the world. And while serendipity can play a role, if you are serious about innovation, you can't leave it to chance. The most innovative organizations are very systematic about the process.

CEOCFO: ***How has the concept evolved for you over time?***
Richard DeVaul:
I started out, like most people who work in technology and design, focusing on the inventive and creative problem-solving aspects of the work. I worked with some great teams developing cool technology, but the impact of much that work was limited, and I asked myself: why?

After a time I realized that we were doing it wrong — you can invent and creatively problem-solve all day, but if you aren't working on the right problems, or you don't have the ability to execute your vision quickly and get to scale, you will never have the impact you are looking for. That's when I started studying innovation in a broader context, thinking about process and incentives and organizational psychology, putting the pieces together.

Eventually I realized that innovation boiled down to insight, design, and execution. But making that happen successfully in a larger organization can be quite the challenge.

CEOCFO: ***Innovation isn't about making something new, it's about overturning the existing order of things. Why?***
Richard DeVaul:

Because we only care about something being new if it makes a meaningful difference in our lives. New things that don't make a difference aren't actually innovation, or aren't until they are put into a useful form.

Take the example of the steam engine and the industrial revolution. There is a myth that James Watt invented the steam engine, thus kicking off the first industrial revolution. But this simply isn't true. Watt learned about steam engines by repairing a previous generation of inefficient commercial steam engine, the Newcomen atmospheric engine, developed nearly 50 years before.

What Watt did was to radically improve the design of the steam engine (with a separate condenser, improvements in fabrication processes, *etc.*) and then create a business to deliver that product at scale. This made steam power economical, kicking off the first industrial revolution and disrupting the global economy.

Interestingly, the Newcomen engine also wasn't the first steam engine; for that we would have to go all the way back to ancient Rome. So for two thousand years, nobody cared about steam power until Watt "invented" it, not by inventing the steam engine but by improving it, making it a commercially viable product, and delivering it scale.

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CEOCFO: ***What is the importance of an innovation strategy?***
Richard DeVaul:
It is hugely important. Even if you don't believe you are in the innovation business, your competitors are. Change is coming, and you need to have a plan for how to drive it, harness it, or fight it. If not, you are doomed to be out of business in the not-so-distant future.

Oddly enough, even organizations that are making substantial investments in innovation often don't have a plan for what to do if those investments are successful. The consequences range for missed market opportunities to being made completely irrelevant.

This has happened over and over — Xerox PARC invented almost everything important in personal computing in the pre-mobile era, but failed to capitalize on it, and so Microsoft, Apple, and Adobe did. Kodak was the pre-eminent film photography company for a century, till their research lab invented digital photography. Did they pursue it? No. Japanese companies did, and Kodak became irrelevant. Bulova was the Apple of it's day, a premier luxury brand making high-end mechanical watches. Guess who destroyed the mechanical watch industry by inventing the first accurate electronic watch? Yup, Bulova. Casio thanks them.

Innovation is a monster that will come in and wreck your business unless you are ready, and yet there are many corporate research labs being run by companies without a plan for how to harness the monsters they themselves are creating.

CEOCFO: ***How do you work with a client to formulate a plan?***
Richard DeVaul:
The first step is to get leadership to recognize the need for such a plan. Ironically, it's often organizations that don't see themselves as innovative that are furthest along, because they see outside innovation as a threat. They are already thinking through how to respond. Businesses with innovation-positive leadership are more likely to have an unrealistically benign view of innovation, and overestimate the resilience and adaptability of their own organization. "Hey, we've already got a research lab, what more do we need?" tends to be the attitude.

Once leadership recognizes the need for an innovation strategy, it's a matter of sitting down and gaming through scenarios. At the high level, how are you going to deal with disruptive change? Are you planning to fight it, harness it, or drive it? Who is in charge of leading this effort? How does this connect with your other business and strategic goals? What is the level of investment, and how will you evaluate success?

If the goal is to drive change by investing in an internal innovation effort, a lot more work is required to set that effort up for success. My experience leading successful innovation teams at Apple and Google and in startups helps me translate the goals of my clients into actionable plans

CEOCFO: ***Why "get designers, not inventors" and "forget invention, learn to execute" for innovation?***
Richard DeVaul:
Well, the first step is to figure out what your strategy is, and then to decide that you actually want to pursue an in-house innovation effort, which you may not. But if you are going to make investments in innovation, focusing on invention is almost always the wrong thing, unless you are taking a 10-year plus view of the process.

The three essential pieces are:
1. insight — you need to choose the right a meaningful, high-value problem, and you must frame it in a way that makes it actionable
2. design — you need a design process and team that lets you iteratively improve your understanding of the problem and the product you are developing as the solution
3. execution — you must be able to execute at scale if you want to have impact. Execution can't be an afterthought, and execution considerations must be included in the design process if you want to be successful.

CEOCFO: ***You describe yourself as a Mad Scientist and Moonshot Launcher? How so?***
Richard DeVaul:
The title often makes people laugh, which is a good icebreaker. But there is a deeper meaning.

"Sane" scientists have powerful tools, but apply them narrowly to make incremental progress. I use the empirical methodology of science (I am a Ph.D. after all!) but apply it to big, non-incremental questions, like: "Hey, it might sound crazy, but why can't we provide cell-phone connectivity by high-altitude balloon?" Hence, "mad" scientist.

And moonshot launcher — It's another way to say go big or go home. I'm most motivated by the projects that have the potential for a big, positive impact. And thinking big forces you to work in non-incremental ways, which can free you from bad assumptions and the temptation to do an incremental step.

CEOCFO: ***What are the Seven Deadly Blunders of Innovation? How do you help your clients avoid them?***
Richard DeVaul:
This is my term for a collection of common innovation failure modes that I've seen over and over again, in teams big and small. You should read my essay on this topic, but here is a brief summary of the top three:

1. **failure is not an option** — If you are working on innovation, failure isn't an option, it's a requirement. Too often innovation leaders pay lip service to the "high risk" dimensions of their project, but don't make practical allowances for trying things that don't work. This can be disastrous, turning what could be quick, cheap early-stage learning opportunities into disastrous late-stage problems.
2. **putting off the hard part** — This is related to (1). When facing a big, scary challenge, it's tempting to work on the well-posed part of a problem first. But if your innovation requires a spaceship that you know how to build, with a hyperdrive that *nobody* knows how to build, maybe you should work on that hyperdrive first, before you start building the spaceship. I've seen projects run for years and burn tens of millions of dollars without ever challenging obvious, highest-risk problems identified in the first weeks or months.
3. **founder syndrome** — Ever since the emergence of the cult of Steve Jobs, Silicon Valley has suffered from an epidemic of founder syndrome. What is founder syndrome? It is a persistent delusion of exceptionalism that afflicts startup founders, investors, and their colleagues. Founder syndrome leads to progressively worse decision making, as contrary opinions are discounted. Treatable in the early stages, founder syndrome can become completely intractable once a founder is surrounded by a team that buys the hype.

CEOCFO: ***How did you develop your insights and strategies? What stands out? What has changed over time?***

Richard DeVaul:

I've developed my insights and strategies through a combination of hands-on experience and seeking out the words and opinions of other inspiring innovation leaders and researchers. My experience has given me a unique perspective on innovation, but this is an area in which one size does not fit all. I assume everyone I work with knows more about their business and their problems than I do — it's my job to listen to them and to develop a solution together.

CEOCFO: ***What types of projects do you prefer?***

Richard DeVaul:

I like the intersection of hard technical challenges and deep human needs. I've had the privilege to work on new ways to deliver food, drinking water, transportation, energy, communications, and medicine to those who don't have easy access to these things. I'm much less interested in projects that are focused on a short-term arbitrage, or moving value from one side of the balance sheet to another. I want to focus on value creation.

CEOCFO: ***What's next for you? More/different innovation?***

Richard DeVaul:

I started out expecting to focus mostly on helping large organizations with innovation. These days I spend more time helping startups — in part, this is because startups don't have a choice but to do something new. But it is also because innovation-focused employees in big companies are frustrated pursuing innovation internally, and finding it easier to innovate outside than in. I think that should be a warning sign for Silicon Valley.

Connect with Richard DeVaul on Twitter **and** LinkedIn**.**