

Feature

The Judy Estrin Interview:

Entrepreneurship and Innovation



Judy Estrin, CEO of JLabs, is the co-founder of seven technology companies. She was the chief technology officer of Cisco Systems from 1998 to 2000 and has served on the boards of Rockwell and Sun Microsystems. Currently, she is on the board of directors of the Walt Disney Company and FedEx, the advisory board of Stanford's School of Engineering and Bio-X interdisciplinary program, and the University of California President's Science and Innovation Advisory Board. Most recently, she is the author of *Closing the Innovation Gap* (McGraw-Hill, 2008). We met with Ms. Estrin in Menlo Park, California to explore her thoughts on educating and managing for entrepreneurship and innovation.

Kaizen: What was it like growing up in a high-powered science-and-engineering family?

Estrin: That's hard to answer because I don't know anything but growing up steeped in science. A lot of the trips we took during the summer were to academic scientific conferences throughout the world. As I talk about in the preface of *Closing the Innovation Gap*, it wasn't just that my parents were both academics, but both were Ph.D.s in electrical engineering — it was quite rare at the time for a woman to have a Ph.D. in electrical engineering. And so I just grew up in an environment where I was surrounded by academics and scientists.

Kaizen: How did your parents cultivate your passion for the sciences rather than make it seem dry and academic, as science often, unfortunately, is presented?

Estrin: Somehow my parents managed to expose us without pushing us away. I'm the middle of three girls, and all

three of us ended up staying in science to some extent. My older sister is an M.D.; my younger sister is a professor of computer science. So I'm the black sheep — I'm the only one without a "Dr." in front of my name. We were constantly exposed to science and learning and saw how passionate our parents were about their careers. I have wondered if I had grown up in a different family, might I have taken a different path? But it was such that I never even questioned that I would end up doing something in a scientific field.

And when I went into business and became an entrepreneur—that was actually a real break from my upbringing, the academic roots. I never imagined, as a kid, that I would ever be interested in the business aspects. And I even remember when I first was working as an individual contributor as an engineer, I had such disdain for the people in marketing. I just had no appreciation for the importance of other aspects of the business when I was an engineer.

It wasn't until I had my first experience leading a project and actually realized that if you didn't have the right marketing and sales strategy aligned with the product, it didn't matter how good your product was. Nothing happens unless the product, marketing, sales, and strategy are aligned. So that was a very key lesson for me.

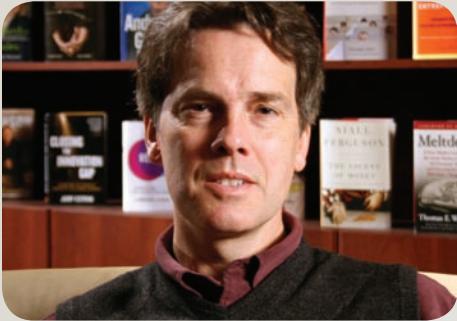
Kaizen: When you went to college, you already knew your major would be in the sciences?

Estrin: Yes. I was exposed to computers early because of my father, and at UCLA I very quickly went into computer science. I think what attracted me to computer science is that I love to solve problems, and computer science is about solving problems.

I'm not a typical nerd, though. I was an individual contributor for a couple years and then went into management very

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From the Executive Director



Where are most new jobs created? Strikingly, 66% of all new jobs are created in *businesses that are less than five years old*. That statistic, from a recent Kauffman Foundation report based on Census Bureau data since 1980, highlights the importance of entrepreneurship to our economy.

So—what kind of person starts a new business? And what kind of employee is attractive to new businesses that are hiring?

Our feature interview is with Judy Estrin, a serial entrepreneur who has started seven new businesses over her career. Ms. Estrin is currently CEO of J-Labs and sits on the boards of Disney and FedEx. I spoke with Ms Estrin in California about her experiences in start-ups during the explosive growth of the Internet, the challenges of leadership in rapidly-changing companies, and the cultivation of innovation in oneself and one's organizations.

In this issue we also report on guest lectures by Professor Jerry Kirkpatrick and Professor Joshua Hall and the excellent work of three students in Professor Shawn Klein's Business Ethics course—congratulations to Erin Filak, Kristy Luck, and Elliot Welsh.

When you are on campus, please feel welcome to visit us at the Center's space on the second floor of Burpee—or online at www.EthicsandEntrepreneurship.org.

The signature of Stephen Hicks, Ph.D., is written in blue ink in a cursive, flowing style.

Stephen Hicks, Ph.D.

**ROCKFORD
COLLEGE**

ESTRIN, CONTINUED

quickly, because, in the end, I prefer working with people than with just machines. I love applying technology, but sitting in front of a computer all day is just not my thing.

I had a very strong education in problem solving through my computer science training, but ended up applying it not just to technology, but to solving customer, organizational and other business problems.

Kaizen: Hopefully in college you find a major you love, but even so you have to deal with challenges and frustrations. How did you learn to handle increasingly large-scale and difficult issues?

Estrin: First, I was brought up in an environment where my parents instilled in all of us this notion of continual learning and being stimulated. And so I, as a personality, am very driven. I am also good at taking in lots of data and being able to synthesize it.

There's a story that I tell in the book about a lesson that I learned from my father that was very influential to me in college.

When I took my first really tough computer science class—the first computer science class at UCLA was pretty easy, the second one was a real killer programming class—I can remember staying up all night trying to get my program to work. It was in the days of batch computing, so you'd submit your program; you'd wait a couple hours before you got it back. And IBM has this term, "ABEND," which was for "abnormal ending," and every time it would come back it would say "ABEND." Today, on PCs, your PC crashes and it's very easy to just change it. But in those days it was hours and hours spent.

And I can remember coming home in tears—I had been up all night and not been able to solve the problem—and talking to my dad about it. My dad said to me—and this is something I

Pop Culture and Academia Panel

On November 2, CEE sponsored a panel discussion entitled "Buffy the Vampire Slayer, Stephen King, Harry Potter, & the Wizard of Oz: I can really talk about this stuff at College?"

Philosophy professors Matt Flamm and Shawn Klein and English professor Michael Perry made up the panel. Drawing from their own publishing and teaching experiences, the panelists explored the use of pop culture as a subject of study within academia and as a learning tool in higher education.

have applied throughout my career and my life—which is, when something is overwhelming, maybe you're trying to tackle too much of it at once. And that the key to solving problems in programming, which I think applies to life also, is first to look at that big problem and break it into pieces. Any problem is a set of steps, a set of pieces that are all interrelated. And then go figure out how to solve the smaller problems, often tackling the hard ones first, but remembering how they all fit together. And that was a very important lesson to me.

Kaizen: You got a first-rate science and engineering education at UCLA and Stanford. Did your formal education also help prepare you for being an entrepreneur?

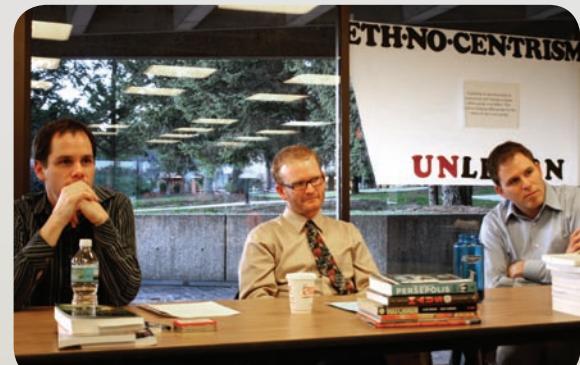
Estrin: No. I think that my personality prepared me as an entrepreneur. I love people. I've always enjoyed taking complex subjects and being able to explain them to people. So communication skill is something that I think I innately had to some degree and then developed. I am also

That's how I made my to go where the

flexible and hard-working, attributes valuable in entrepreneurial environments. But none of those were taught.

Kaizen: When you graduated in the 1970s, did you consider going to work some place other than Silicon Valley?

Estrin: No. Actually, at the time I wasn't sure what I was going to do long-term, but I just wanted to get a first job and get some experience. I interviewed at all the large high-tech companies—Xerox, HP, Intel—and had offers from most of them, but I also interviewed at a small startup called Zilog that had just spun out of Intel; they had 51 people. And the guy



Professors Flamm, Perry, and Klein

who ran software at the company was a visiting professor at Stanford, and I remember being interviewed walking down the Stanford campus.

I knew nothing about startups, nothing about entrepreneurship at all; I didn't even know the word "entrepreneurship" at that time. Remember, this is in 1976 and I was 22. So I was very young.

But I chose the job because a friend of my father's told me that the smartest people he knew—he was a professor at Berkeley—were at that company: Federico Faggin and Charlie Bass and Ralph Ungermann and the people who started it. And that's how I made my decision. I just decided to go where the smart people were.

It changed my life, because if I had gone to HP or Xerox or Intel, it probably would have taken me five to ten years as an individual contributor and then maybe [I'd be promoted to] a project manager. But at Zilog I was exposed to an entrepreneurial experience that I would not have been exposed to otherwise.

decision. I just decided smart people were.

It also happened to be where I then met my business partner and now ex-husband, Bill Carrico. We co-founded seven companies. So it ended up being a pretty significant decision in terms of my career path.

Kaizen: In 1981 you went entrepreneurial yourself and co-founded Bridge with Mr. Carrico. What was your division of labor with him?

Estrin: Up until the early '90s at NCD [Network Computing Devices], he was the CEO, I was the executive vice president. So, officially he was the boss. I started out running engineering, but very quickly, once the product was out, I got very involved with customers because it was such an

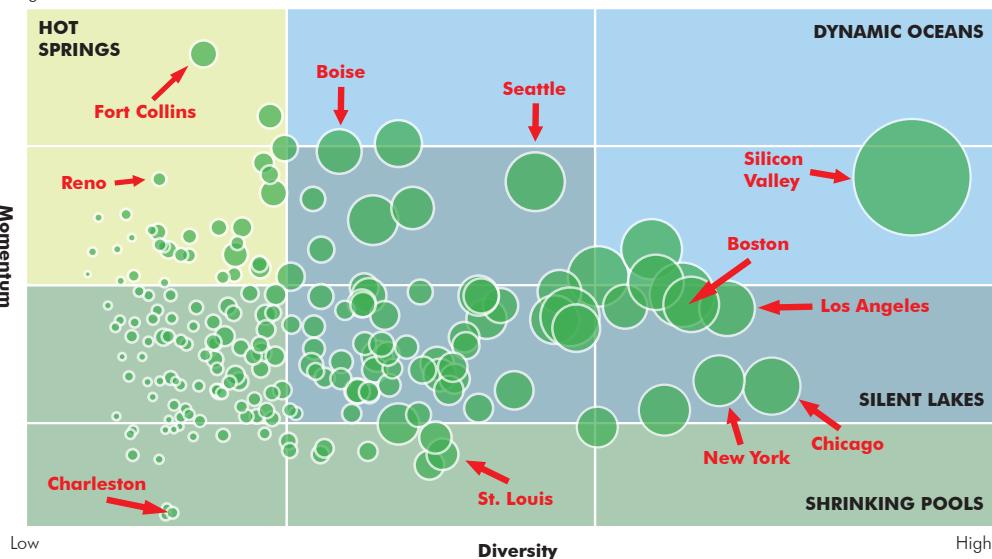
Mapping innovation clusters in North America

High

Momentum: Average growth of patents in cluster from 1997 to 2006

Diversity: Metric based on number of separate companies and patent sectors in cluster in 2006

Cluster size: number of patents granted in 2006



Source: <http://whatmatters.mckinseydigital.com/innovation/building-an-innovation-nation>

evangelistic sale. Eventually I ended up running marketing and sales also.

In the beginning I was more engineering-focused and Bill had marketing and sales experience. As the company evolved, and even then in future companies, I ended up being more externally focused and he ended up liking to focus on the operations.

Kaizen: In these early days of Ethernet and the Internet, did you have a sense for where it could go?

Estrin: We knew that it was going to be really significant—knew that it was going to be something that was going to change the way people worked. At that time most of the focus was on communication within enterprises, not so much personal—the consumer market. We weren't sure exactly how things would evolve, but we believed that it would be very significant.

Kaizen: Bridge was successful and went public in

1985 and merged with 3Com in 1986?

Estrin: I think it merged with 3Com in '87.

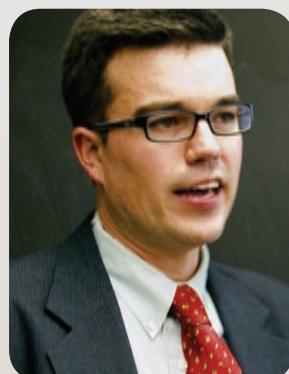
Kaizen: What made Bridge successful and attractive to 3Com?

Estrin: Even though they were bigger, it was a merger that we both needed. Bridge was in the business of selling directly to enterprises. We sold what were called communications services. They connected terminals to computers, and we sold routers and gateways, which is what Cisco later started their business on. 3Com sold PC adapters to connect to the Ethernet. As PCs were becoming more and more of a force in the market, we either needed to develop a PC business or merge with a company that was doing PCs. 3Com needed to expand their business more into a systems business, which we were. And so it was a merger that seemed to make a lot of sense.

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CEE Guest Speakers: Joshua Hall and Jerry Kirkpatrick

CEE welcomed Joshua Hall on October 13 and November 11. Dr. Hall is Assistant Professor of Economics at Beloit College, and he has published in the *Journal of Economics and Politics* and *The Independent Review*. Professor Hall gave a talk entitled "The Dilemma of School Finance Reform." He discussed the financial inefficiencies of the U.S. public education system and the funding issues caused by a top-down, centralized administration. Watch our short interview with Professor Hall on the Center's website to learn more about his talk.



Joshua Hall

On October 27 and 28, Dr. Jerry Kirkpatrick visited our campus. Dr. Kirkpatrick is Professor of International Business & Marketing at California State Polytechnic University, and is the author of *In Defense of Advertising*. Dr. Kirkpatrick discussed "The Importance of Philosophy to a Successful Business Career," and "Montessori and Dewey as Educational Philosophers." Three short interviews with Dr. Kirkpatrick on the above topics are now on our website.



Jerry Kirkpatrick

ESTRIN, CONTINUED

Kaizen: Your next company was Network Computing Devices (NCD), which you joined at the beginning as executive vice president, later becoming president and CEO in 1993?

Estrin: Right after we left 3Com a group of five people who were prototyping a new type of product approached us to come join them as CEO and EVP. We joined and raised financing for the company right away. NCD was the early leader in the Xterminal market—thin clients before thin clients were popular. The common theme is “ahead of its time” in all of these.

Kaizen: You also co-founded Precept in 1995—what was Precept’s focus?

Estrin: NCD went public in 1992, and in 1994 we decided that we badly needed a break. I found a CEO to replace me. We didn’t think that we were going to start another company, but after six months we realized that we were not very good at retiring and we started Precept.

Kaizen: Precept was acquired by Cisco in 1998 for \$82 million. You then became Cisco’s chief technology officer and were now managing a large number of people. Did you have to learn or upgrade your management skills for the different environment?

Estrin: I had to adjust my internal expectations because it was a big company. It was a different type of job. I was used to running a company, not working in someone else’s culture. I was used to being able to set the culture. It was a big company—there were a lot of politics, there were dynamics going on that I had to deal with.

But from a leadership style, I think that I had developed the skills that carried over to that. But more challenging issues had to do with that it was the peak of the bubble and some of the dynamics of what Cisco was going through at that time.

CEE Essay Contest Winners

During the Fall 2009 semester, CEE sponsored an essay contest in Professor Shawn Klein’s Business and Economics Ethics class. Students were asked to defend or criticize the following claim made by the character Gordon Gecko in the movie *Wall Street*: “Greed, in all of its forms—greed for life, for money, for love, knowledge—has marked the upward surge of mankind.” Cash prizes were awarded for first place and two honorable mentions. The essays were judged on their accuracy and depth of interpretation and their independence of thought. Congratulations to our three winners!

Kaizen: Packet Design was your next project, starting in 2000—what was its product?

Estrin: Packet Design was a technology lab/incubator. We had multiple projects that were more medium-term, research-focused; they weren’t short-term focused. And then for those projects that got through proof of concept, we would spin out companies and get venture capital.

We ended up spinning out three companies. One of them exists and is still a private company but is doing well today; the other two are essentially gone.

The parent company Packet Design, LLC was eventually dissolved. In 2003, we changed the business model and stopped doing future development and just focused on the spin-outs. And then two years ago we distributed all of its assets. I then focused my attention on my board work, and that’s actually when I started writing the book.

Kaizen: Looking back on your extensive entrepreneurial experience, what was the most exciting aspect of being an entrepreneur?

Estrin: I don’t know that I can pick just one. One of the most exciting aspects of entrepreneurship is identifying an unmet need and developing a new approach to address that need and then actually seeing it happen—creating a new market and seeing people use the products and figuring out how you need to adapt it to bring that to market.

The second part is the part I miss the most—teambuilding; when you build a company, you get to create the culture bottom-up, which is very special. People used to joke that I used to talk about my companies as kids. I actually give a presentation where I compare great leadership to great parenting. Ethics and values, whether you’re raising kids or building cultures and companies, are not dictated by little notes on a card—they’re set by example. There’s something to me just

really wonderful about bringing teams of people together and watching them grow.

Kaizen: What has been the most challenging aspect of being an entrepreneur? Anything that caused sleepless nights?

Estrin: First of all, being an entrepreneur is really, really, really, really hard work. It’s all-consuming. The great entrepreneurs are consumed by passion. It takes a lot of time. It’s a really big commitment. And so you have to realize there are compromises that you give up by throwing yourself into something.

And then—not true in the early years—but one of the reasons why I’m no longer running

Ethics and values, raising kids or building companies, are

a company is that, today, the venture-entrepreneurial ecosystem is broken. And so raising money and having to deal with venture capitalists today is an unbelievably frustrating experience. Not across the board, but for the most part, they’ve become very risk-averse. It’s become more adversarial. Now, I also think entrepreneurs today are feeling too entitled. They don’t realize that there’s risk involved and how much work is required and often expect returns too quickly. So I would say the venture-entrepreneurial dynamic to me is the most frustrating part.

Kaizen: You’re an innovative person in an innovative field, and that has led you to write an innovation manifesto—a call to action, as one of your chapters describes it. Why did you decide to write *Closing the Innovation Gap*?

Estrin: I think what drove me to write the book is that I was giving presentations to people on

First Prize



Erin Filak

Runner-up



Kristy Luck

Runner-up



Elliot Welsh

innovation and leadership and started to realize how much people took it for granted. And ever since leaving Cisco, ever since we were in the bubble, I have been increasingly uncomfortable with the state of innovation in this country and feel that the ecosystem, or the values that support innovation and have always made it thrive in the United States, have been undermined by a set of forces.

I wanted to be able to communicate to a broader audience, number one, that innovation is really important and how much it matters. It drives the economy, it impacts our quality of life; it's the only way we're going to get to energy independence, or reverse climate change, or affordable and available health care.

whether you're ing cultures and set by example.

And it matters to individuals. As you go through life, you change, and so innovation really matters. I realized very few people that I came across really understood innovation in a broad perspective.

We've become much more focused on short-term greed, which has driven and undermined long-term innovation. We have an innovation deficit. We are harvesting the seeds that were planted decades ago, but we're not planting seeds at the sufficient rate to grow.

Kaizen: You identify three things that leaders must do to start and grow an innovative company: find the right talent, get and allocate funding to the talented, and then nurture that talent. You use organic metaphors here—"Innovation does not just happen. Like a garden, it must be actively nurtured."

Estrin: There's one left. Part of nurturing, if you

use the organic metaphor, is also protecting them from the elements. So a big job of a leader in a large company is, if you have a small group, to protect them from all of the forces in the company that want to kill that small group. Meg Whitman at eBay, whom I interviewed for my book, calls them "baby tigers." But you could call them small groups, seedlings, whatever you want to refer to them as.

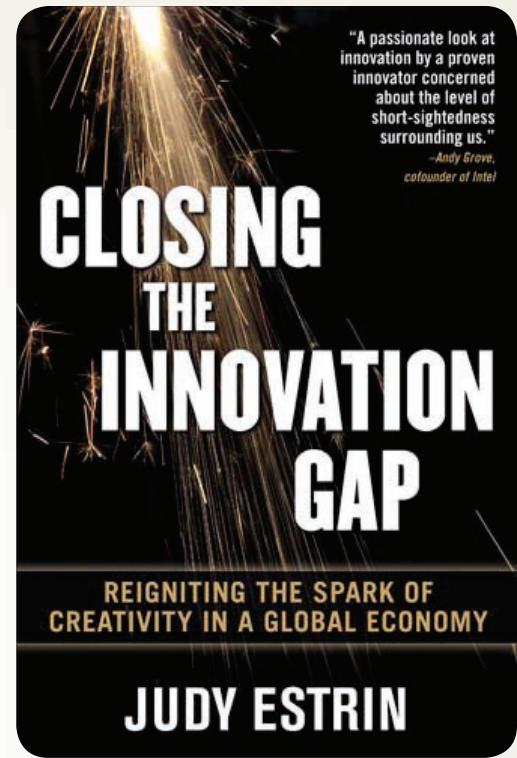
Kaizen: Why do they need special protection in a larger organization?

Estrin: Again using this organic notion, think of a big business as a factory farm. And the role of a large business is to be very customer-focused, to mass produce, to eliminate all defects, all surprises, and just have high quality to support the customer. You can get incremental innovations in a factory farm, but if what you're trying to do is eliminate surprises and mass produce, you will never get more disruptive innovation.

And so you need to couple that with what I call little greenhouses or gardens, which are smaller groups that are managed differently, where surprises are good, where you're doing more nurturing.

Another problem is that companies often put up ROI [return on investment] hurdles before they'll start something. If you do that, that's just the way to kill innovation, because you don't know how big something's going to be. You want to take a certain amount of your resources, no matter how big a company you are, and be able to just play and explore if you want to make sure you're going to have that future growth horizon. The other way to do it is not do it internally, but keep your communication open with startups and academia.

Kaizen: Part of the challenge is telling the difference between a tiger and a toad, so to speak? You quote Robert Spindler of Xerox: "I assumed that half of the stuff we were doing wouldn't pan out. But I never knew which half."



So, what goes into nurturing the baby tiger to the point where you can tell if it's actually a tiger or a failure?

Estrin: A lot of that is instinct. How do you know, when you're nurturing a plant, whether it's going to make it? It starts to flower. And sometimes you could give up on a plant, and it might be just about ready to flower.

One of the reasons why leading for innovation—and I use this term "green thumb leadership"—is so hard, and why people are more comfortable with incremental innovation, is those people are taught in business schools that you can't manage what you can't measure. So if you can manage with metrics and measurement, that's much easier than to manage based on judgment or patience and letting things grow.

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Adopting new technologies

Years it took these innovations to reach 50 million users:

Radio—38 years



TV—13 years



Internet—4 years

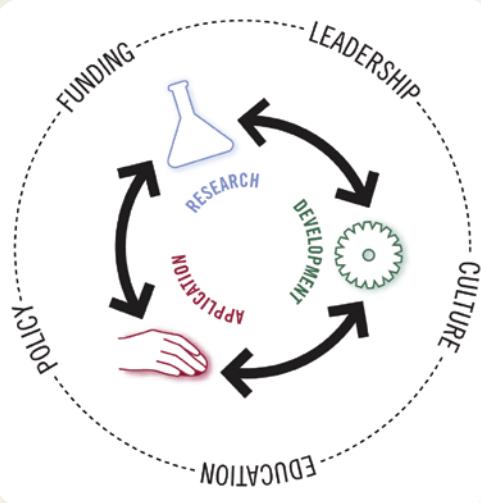


iPod—3 years



Facebook—2 years





The Innovation Ecosystem

So there is no rule book for it. It's a question of how much do you trust the talent? Asking the right questions. Having a sense of where it's going. Having a sense of how long you can afford to fund something, funding it lean for a while, trying different things. It really is something that is hard to quantify.

Kaizen: Much of leadership involves making very difficult judgment calls: Whom to hire; what to fund and how much funding and for how long; when to acquire and when to cultivate innovation; recognizing stagnation and deciding to cut funding off; recognizing progress and deciding when to move from the lab to development, from development to the market; and so on. Is that true to your experience?

Estrin: Yes. But the difference between leading in an entrepreneurial or in a more disruptive innovative environment versus an ongoing business, is that in an ongoing business, you often have hard data with which to make those decisions and make those judgments. You sometimes have to fill in a couple of blanks, but you usually have data. In entrepreneurial businesses, when the market doesn't exist yet, or in research environments, or very early stage innovative environments, again, places where you don't have that hard data, that judgment has to be sometimes made with asking the best questions you can and then instinct.

Kaizen: So what do we need to do as an "innovation ecosystem" culture to develop more people with that potential?

Estrin: I actually think that there are two different issues. There is a question about whether you can teach judgment: some of that is people's aptitude and some people just are better at it than others, better at making decisions in ambiguous situations.

But I think it's also experience. And I think one of the things that we don't do in our education system very well is give people experience with not just answering questions, but framing questions and being able to play out scenarios that they then make decisions on the basis of. And too often even case studies that are done in business schools or entrepreneurial programs are all success stories and don't deal with the failure scenarios. So I think there's a lot more that we could do to prepare future generations.

Now, you asked about the ecosystem. I was trying to find a way to describe the environment in which what I call "sustainable innovation" can thrive. And I call it "sustainable" because I'm not talking about just one product or one idea. And I wanted to communicate to people that it didn't begin and end with products.

So I came up with the notion of comparing it to a biological ecosystem—communities of living organisms that exchange nutrients and then interact dynamically with their environment.

With innovation, there are three communities. There's the research community, which is about furthering understanding, about discovery and, very importantly, it's the community in which we train young minds. It's where most people learn how to tackle problems. There's the development community, which is about developing products and services in innovative ways. And then there's the application community, which is about applying those products and services in different ways. Examples of the application community are the government, doctors, or consumers that use iPods, social networks, or 3M sticky notes in new ways.

And it's not a line—it's not research-development-application—it's a circle. Because needs and questions and communications need to go between all of those different communities, and people move between them. And then the environmental factors in innovation, the factors that influence the ecosystem, are leadership, policy, funding, education, and culture. An important notion of an ecosystem is that a biological ecosystem needs to be in balance to sustain life. And so too an innovation ecosystem needs balance across the communities and the right balance of these environmental factors to sustain innovation.

Kaizen: What can schools do better? You mentioned paying more attention to asking open-ended questions as opposed to focusing on answers.

Estrin: Experience. Giving them experience with learning from failure. Experimentation. Trying things.

Kaizen: At the college level, as you mentioned, we have professors doing both academic research and educating. What needs to change on the academic research side?

Estrin: I wrote a lot in the book on this topic. At a very high level, there's a scarcity of financial resources in terms of investing in research, in terms of government funding, and corporate investment. Some scarcity is good; it creates competition. But when you have too much scarcity, people take fewer risks, and they take a safe route. So we need to look at how we're granting money, how we're allocating it, how much is being granted.

Universities need to become more interdisciplinary. They need to focus on not just training people as experts in one subject, but really looking at getting people to work across disciplines, because the problems of the future are mostly interdisciplinary.

You can be overwhelmed and can be optimistic way that you can

Kaizen: How about corporate research? What is the most significant reform you think needs to happen there?

Estrin: I think, unfortunately, corporations have gotten to the point that they're under so much pressure from Wall Street on short-term earnings per share that they just have forgotten about research. Not all, but for the most part. And I think they need to realize how important it is to their future not to go back to Bell Labs or house big labs themselves, but form connections with academia and help fund research in academia.

Kaizen: How about the role of government? A number of huge issues are on the table here—tax policies that encourage innovation, immigration policies that attract students and entrepreneurs, funding for science and engineering R&D, regulation and red tape (e.g., Sarbanes-Oxley), amounts of funding for education, allowing charter schools or vouchers, and of course conflicting political philosophies that are science-friendly or science-unfriendly. If you had to pick just one to focus on and fix, which would you identify as the best one to start with?

Estrin: There isn't just one issue. They're so interconnected. Let me just say a couple of things.

One is that there's a tendency in this

country to polarize and portray the issue of government involvement as black or white. Either you believe government is bad and you have as small a government as possible, or you're a socialist and you think government should run everything.

And the fact of the matter is, government has a really important role to play in innovation. Can government stifle innovation? You bet. But government's role should be, number one, to use the bully pulpit of the leadership of the country to inspire, challenge and rally the nation.

Government needs to fund research because it's for the good of society, and it doesn't bring returns to any one company, so it's something that companies can't or won't do. Creating regulation can help or hurt. Government has to really be smart about policy and think about the unintended consequences of that

frustrated and do nothing, or you and figure out a make a difference.

policy. You want policy that creates openness. Government should not pick winners, but it can spark innovation through funding, smart policy, and inspiration.

And then government needs to provide a safety net. The fact that you can educate your kids or that you can have health care available to your family allows you, as an entrepreneur, to leave your job at a big company and go start a company. But if you don't have a safety net, things like bankruptcy laws, an environment of trust, it's hard for entrepreneurialism to exist.

Kaizen: Nonetheless, you don't think the trends are irreversible, and you do think that it is possible for us to rejuvenate our innovation culture?

Estrin: Yes. Because I think there are two approaches in life: you can be frustrated and overwhelmed and choose to do nothing, or you can be optimistic and figure out a way that you can maybe try to make a difference.

So I choose optimism. But it's frustrating because you look around and these are big, big, hard, significant problems. And the financial crisis, unfortunately, has us even more focused on the short-term.

Kaizen: To come back to your own career as an innovator and technology pioneer, which of your business achievements has given you the biggest sense of accomplishment?

Estrin: Each experience was different. I would say that my most precious innovation is my son, who is 18 and just went off to college.

I think the two things that come to mind are the first company, Bridge, and writing the book. Because in both cases I was doing something completely different, completely new.

Kaizen: Looking back, what was the single most difficult business problem you had to overcome?

Estrin: For me personally, it was very early in my career—learning to make decisions and when decisions needed to be made. The engineer in me wanted to analyze everything. I also wanted everybody to like me. Working with Bill who is incredibly decisive and maybe not as people-oriented, over time I developed those skills.

But I think early in my career, as a leader and an entrepreneur, one of the hardest things was learning when it was time to make a hard decision. The other challenge throughout my career has been juggling—the balance of trying to do everything I want to do.

Kaizen: Most busy professionals struggle with balancing their career goals with their other major life goals—their relationships, their children. Do you have advice there about time management?

Estrin: When I talk to college kids or high school kids, or often women's groups, this work-life balance often comes up. It is a challenge for men and women. And what I suggest to people is: Think about an expert juggler. An expert juggler knows exactly how many balls they can juggle; they don't ever take on one more. Because if you take on one more than you can juggle, what happens? They all fall. So the trick is learning to put down the balls, knowing yourself.

In the work-life business, what does putting down a ball mean? It means saying no or asking for help. And so I think learning that notion of tuning into yourself and figuring out how many balls you really can juggle and not judging yourself if the number of balls you can juggle is less right now. The trick is to prioritize and keep the important ones in the air, not how many are in the air.



"Whatever future you're building, don't try to program everything. Build a platform and prepare for the unexpected."

— Pierre Omidyar, founder of eBay



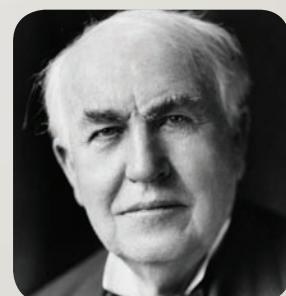
"Innovation happens in the cross-connections that you can't even predict."

— Yogen Dalal, venture capitalist



"You must have mindshare before you can have marketshare."

— Christopher M. Knight, entrepreneur



"Just because something doesn't do what you planned it to do doesn't mean it's useless."

— Thomas Edison, inventor

ROCKFORD COLLEGE

The Center for Ethics
and Entrepreneurship
5050 E. State St.
Rockford, IL 61108

ESTRIN, CONTINUED

Kaizen: You have received many awards—you have been named one of *Fortune* magazine's 50 most powerful women in American business three times, and in 2002 you were inducted into the Women in Technology International Hall of Fame. Do those impressive recognitions add to your sense of accomplishment?

Estrin: I think they look good on a book cover, but they don't mean a lot to me. Not that I don't like them, but to me the rewarding part of it is the experience and the people. Awards are not what drive me. The only reason that I really care about them is that I think they are good for providing role models for other women and future generations. I do think they play an important role, not so much for me personally, but in influencing others.

Kaizen: In closing, what advice would you give to young people starting out on their hopefully exciting (and hopefully innovative) careers?

Estrin: I'd say a couple things. One is that everybody is very focused on entrepreneurship now and it is a wonderful, wonderful experience, because the greatest thing about being an entrepreneur is, there's a very direct feedback loop between the success of the venture and the individuals in the company,

because it's small. When you're in a very big company and the customer's problem gets solved, for the engineer in the lab that feedback is not there. So there's this wonderful feeling of satisfaction that can come from entrepreneurship.

But if you're not an entrepreneurial type and don't want to be in a small company, you can be entrepreneurial in a big company, too. It's a state of mind, and it's a state of mind that is about passion and drive and flexibility and learning how to identify needs and thinking disruptively, and discipline, drive, and hard work. And so it's this interesting combination.

And my advice to entrepreneurs is that they should be driven by passion, not greed. When entrepreneurship is driven by greed, it becomes a very different experience. When it's driven by a passion to solve a problem, often the money follows if you're successful, but the most successful entrepreneurs have been driven by that passion.

But you need to go into it realizing that it's hard work. There's a lot of taking two steps backward to go one step forward. There are a lot of obstacles. It takes tenacity and patience. You can't go into it feeling entitled, because the fact of the matter is most new ventures fail. And so what if it fails? Then you pick yourself up and try something else.



Ms. Estrin in 2009

This interview was conducted for Kaizen by Stephen Hicks. To learn more about Judy Estrin, please visit www.theinnovationgap.com. Kaizen's full interview with Ms. Estrin will be posted soon on the Center's website at www.EthicsandEntrepreneurship.org.

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MORE INFORMATION ABOUT CEE AND ROCKFORD COLLEGE

Kaizen is published by the Center for Ethics and Entrepreneurship at Rockford College. Founded in 1847, Rockford College is a four-year, independent, coeducational institution offering undergraduate and graduate degrees in traditional liberal arts and professional fields. One of 81 colleges nationwide designated as a "College with a Conscience" by the *Princeton Review*, Rockford College is also among 76 U.S. colleges and universities selected by the Carnegie Foundation for the Advancement of Teaching for inclusion in a "Community Engagement" college classification. Rockford College is one of 11 colleges in Illinois and 276 in the country with a Phi Beta Kappa chapter, the oldest and most prestigious academic honors society, and in 2007 was named a "College of Distinction."

In the Next Issue:
**John Chisholm on
Entrepreneurship and
Customer Satisfaction**



Kaizen (改善) is a Japanese term meaning "change for the better" or "continuous improvement." Kaizen has been applied worldwide as a method for improving the efficiency of all aspects of a business continuously through a cyclical process of standardizing operations, measuring their efficacy, evaluating the data, and innovating to improve performance. Kaizen is also used to eliminate wasteful effort and to humanize relationships within the workplace.