

Carlson's Law – an interview with SRI International President & CEO Dr. Curtis Carlson – part 2

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In [part 1](#) of my interview with [SRI International](#) President & CEO Dr. Curtis Carlson, Dr. Carlson discussed how innovation can be infused into an organization's DNA by following the disciplines described in his book, [Innovation: The Five Disciplines for Creating What Customers Want](#). In this final installment, Dr. Carlson discusses how projects at SRI coalesce into spin-off companies.

Todd: Before we finish, I wanted to make sure that we touched on the process by which projects get spun off into companies. Is Siri a good example?

Curt: Siri's a great example. So the way SRI is organized in terms of incubating ideas, whether it's for research programs or new products or licenses or services or new ventures is if the base of SRI – they have funding that they can do whatever they want to do. I leave that up to them. There's a group above that we call Strategic Business Thrust where people can come and ask for bigger pots of money.

It's run according to the process we just described. What's the value proposition? We have a standard framework and they have to stand up and be critiqued. And we give them a mentor to work with and all the things you'd expect to help expedite the ideation and the value creation process. Then there's one other group called our Commercialization Board where we incubate major licenses and ventures.

So we have a dedicated team for down here, the Strategic Business Thrust, and the Commercialization Board where there are serious professionals who've been through this dozens and dozens of times. So the Commercialization Board runs exactly the same way. They have to come in with a value proposition. It doesn't have to be perfect in the beginning. What we like them to come in with is a big idea, a pain point, something that you'd consider to be an important market opportunity.

And the beginnings of an idea may be hard to address, but we have no expectation that it's going to stay that way when we're done, for those reasons we talked about. So we have teams and they bubble up, and it's advertised on the Web what to do. And basically, it's easy.

It's a transparent process. If people have an idea, they can come and pitch their idea. Over time, the idea is to flesh them out. So if they can't meet our criteria, they tend to fade away. People realize in the case of a venture, if it can't be worth multiple hundreds of millions of dollars, it doesn't make sense to do it.

Curt: If it's not that valuable, first off, the return to SRI would be too small. The second is we won't be able to hire the quality of CEOs and other technical staff we need, and we won't be able to work with the absolute best venture capitalists. And we want to work with absolutely the best venture capitalists. So we really work hard not to say no. The philosophy more is to say, "This is what we need to do to get to the threshold," because we're in the Olympics here. This is not the back yard where we're jumping over a high hurdle. It's way up there. So we'll incubate them. We'll start adding more resources to them as we flesh out the value proposition. The goal is to take risk out of it in the beginning, as you'd imagine, not to spend money on technology, not to build the product, not to do any of those things – take risk out. So if that means we need to build some little piece of it, we will do that. But we hate building the product, again because in the beginning you are *always* wrong.

It's, again, this mistake that so many companies make. They jump in before they really get all these things worked out. When we get to a point that we think we really have something, we will often bring in an entrepreneur in residence to help incubate it. Sometimes they work out. Sometimes they don't. That's okay.

One of the beauties of being here in Silicon Valley, there are lots of people, like yourself, who are proven entrepreneurs, who are looking for their next gig, and since we're a steady source of new ventures, we're a great place to interact with. And if a particular deal doesn't work out for you, maybe the next one will. So we flesh it out. We hire the entrepreneur in residence.

We hope to come up with a really compelling value proposition. We'll invest almost always in the seed round, sometimes a small A round. But, typically, after that we want to have outside partners – typically venture capitalists, but not always. And we want the best ones because what you want to avoid, always, is believing your own propaganda. So, again, we believe in working with great partners who bring great perspectives and great skills and can help us hire the talent we need, and to keep us honest.

So, at some point, we decide we should bring in some other folks to help us with this. So then, at that point, we'll spin out the company. The problem here is our companies don't fail for technology, generally. We're really good at technology. Our risk is in terms of market and management, so we work hard to address those.

We have an outside venture group that comes here every six weeks or so and spends the better part of the day. They have no special arrangement with us. They just volunteer to come over. Gary Morgenthaler from Morgenthaler Ventures is one. Yogen Dalal from Mayfield is another. They help us a lot because our folks stand up in front of them. You can imagine it's quite a hoot for them to stand up in front of a group of six or seven of the best Silicon Valley VCs.

Curt: So that helps reinforce how good it has to be. And they help us understand the market and the trends, and they help us hire entrepreneurs, and so it's just one other element of our process. This runs continuously. It never stops. Our goal is to spin out two or three new companies every year. That's what we do.

Todd: Two to three new companies a year. That seems like a lot.

Curt: Most people say, "Why don't you spin out more since you're doing almost \$600 million a year in research." You know why – and so you come at it with the right perspective.

Todd: It depends what the batting average is on those companies, right? If most of those two to three companies are “A” companies then you’re way ahead of the game.

Curt: Yeah. I think we do pretty good on that score. I think, certainly better than the typical Silicon Valley notion of what it means to be successful. Again, you understand how hard it is to form these companies. So our goal is not to form a bunch of companies. Our goal is to form *good* companies. So yeah, if we do three new companies a year, actually that’s a lot.

Curt: So one other thing about how we incubate it. Siri came out of a basic research program we did for DARPA. It’s a \$200 million research project and it exemplifies the values that we have been talking about. Our folks working with the leaders at DARPA concluded that it was time for the next revolution in personal computing.

The next generation is to develop computers that actually augment what you can do, so virtual personal assistants. So just like your assistant, it gets to know you. It gets to know that Todd likes different kinds of things than Curt. He has a different car. He likes different kinds of restaurants and hotels. And so when it begins to sort out options for you, it starts out with your preferences.

It’ll ask you, of course, but it starts out with your preferences so that it begins to act much more like a true assistant. Anyway, we convinced each other that we could do this, and we put together a who’s who team. It was the best folks in America: Harvard, MIT, CalTech, Stanford. We put together absolutely the best people we could get in each one of the segments of technology that was necessary.

We ran the program. We did research in areas where we have unique skills. And we were successful. The application for the government was in terms of mission planning. Things happen so fast in this world that nobody can sit there and sort through them. Basically, you need an assistant who’s watching you and watching the world, and bringing things up for you.

So if you had to do five clicks or seven clicks down to find something in today’s world, that’s way too long. One click is even too long. You like to have it be on the screen when you need it. That project was very successful. It went into what’s called the “Command Post of the Future.” It’s now being used by the Department of Defense. We won DARPA’s highest award.

And I think of that, literally, as a turning point in computer history. I think Tony Tether, who is the director of DARPA said that, so it’s not just Curt. He believes that this will be seen 10 or 15 or 20 years from now as one of those seminal moments when computing – personal computing and general computing – created a whole new branch. I think that’s why Steve Jobs bought Siri. He saw the same thing, that these devices had become too complicated.

There’s too much on them. They’re not intuitive enough and there needs to be a new generation of user interface, and Siri is the beginnings of that. So we did that research. That was a five-year program, very successful. Almost immediately when we formed that company, we started incubating ideas, putting down value propositions for possible business opportunities.

For several years, none of those made sense. Again, spending very little money, just trying to figure out. We were anticipating we were going to be successful, obviously. And out of that led to a small family of areas where, given the state of technology, we thought we could make a major contribution. Siri was one. And we incubated that.

We brought Dag Kittlaus from Motorola. He was part of the X Team, their leading team in Motorola. We recruited him in to be the CEO. We took some of our best people and we put them in the company – several of our people, but one really brilliant person who’d been running a key part of the DARPA program. It’s called

CALO, Cognitive Assistant that Learns and Observes – or Organizes. We incubated that for another year inside of SRI.

Dag says that his experience here was more demanding than anything else he's been through because we were constantly asking him, "How do we make a better value proposition?" Everybody, every meeting we had it was, "How do we take the risk out of this?" – just unrelenting. But eventually we decided it was time and we formed the company, and we actually co-invested on the second tranche of money because we thought it was going to be a big company.

Todd: Do you have any closing thoughts?

Curt: So today, as you know, innovation is the only game for developed countries. In China they can bring proven ideas and modify them, implement them, and they can create huge business opportunities over there. For us, it's about innovation and creating new business opportunities. That's the future of America and the West. And I would argue we're doing a terrible job right now.

I think we need to do much better and I think we can do much better. I'm on one of the innovation teams for Singapore, so I get to see what they're doing. And I'm on one of President Obama's innovation teams. And so everybody knows that this is the game. It's interesting to watch Singapore and how they've been very systematic about taking a country with nothing – no water, no energy, not natural resources, no agriculture because there's no space. And their GDP per capita on a PPP basis is now above America, and it's because of the processes they put in place. For example, they decided they wanted to be the most competitive country – so they created a tax incentive program that would put them at the top of anybody's list.

So whether it be business taxes, capital gains, regulations, labor laws, they went through, systematically and they said, "What does it take for us to be able to be more competitive than any other place on the planet?" And they pretty well implemented that. As you know, we're increasingly out of sync with what's expected around the world.

Curt: So we're still looking into America as if we're the only game in town, and we can have a capital gains rate of 35 percent and pretend that that doesn't matter. That we can regulate people upside down and backwards and that doesn't matter. It all matters today. And in America, there's one thing that distinguishes us from the rest of the world, and it's our ability to form new companies. Not small companies. New companies.

Over the last – I think it's roughly 15 years – the growth in America, the jobs, have been from new companies. Not *small* ones, *new* ones. Big companies tend to consolidate and reduce employment. It's the new companies that form new opportunities and new employment openings, new jobs. So if you look at the taxes and regulations and things like Sarbanes–Oxley – each one is not fatal to our ability to create new companies and new jobs.

But each one reduces the ROI, reduces the net present value of that first investment, incrementally, multiplicatively. And as you know, the number of IPOs and other measures of success in America have gone down dramatically. And the number of venture capitalists who now get a positive return has also dropped precipitously. If we want to remain a great strong country, we can't allow this to happen.

So I think we all need to keep on educating our politicians and others that this is America's strength. If we kill this part of economy, we'll become Europe where they don't create new companies at the rate they need to. They're not creating the new jobs. Basically, the number of jobs in Europe's been relatively flat for the last 15 years, so unemployment' has just crept up a little bit each year.

That's a long preamble – but the thing that gives me hope about America is that when you look at what a terrible job we're doing in innovation today – so I could give you company after company where, of the most important things, only 20 to 30 percent have any value for them.

Or if you look at the government and the amount of money they waste on their R&D programs because they violate some of the basic principles we've talked about, if we could begin to get people to understand that innovation is not just this miracle that only a few people can do, that actually there is a systematic process, and begin to implement that seriously across America, I think we could be gangbusters. I don't know of an alternative for us.