A 30-Year Veteran Investor On the Mistake He Wishes You'd Stop Making, and Why He Prefers Younger Entrepreneurs

Russell "Russ" Tweeddale, an engineer, Marine, and investor with Connecticut Innovations for more than three decades, sat down this week to talk shop with Douglas Roth, CI's director of investments. Over the course of their hour-long chat, during which they covered everything from fuel cells to the importance of strong advisory boards, Russ imparted some hard-won pearls of wisdom he gained while investing more than $75 million in numerous Connecticut companies. Russ's notable successes include many of today's industry leaders, such as Affomix, AxioMx, Proton Energy Systems, CuraGen Corporation, Genaissance Pharmaceuticals, Bio-Plexus, International Telecommunication Data Systems, Open Solutions, and Ipsogen.

Douglas Roth: Thanks for taking the time to talk to me, Russ. Let's start with this: Why did you become an investor?

Russ Tweeddale: Back in 1985, I was looking for a career change. With my background, I wanted something that incorporated economic modeling and a chance to work with new technologies and figure out how to expand their use, and the job just fit. Greater Hartford, where I lived, was a small community, so I started networking. A senior vice president at Travelers Insurance said to me, "We like your background, but we can't use you. You belong in a small company." One of my neighbors, who had a sales position, said that my resume—I had an engineering degree and a master's degree—was the same as his father-in-law's, who had been a president with United Technologies and was now president of the Connecticut Product Development Corporation, which was the predecessor to Connecticut Innovations. I sent in my resume, they had an opening, I was accepted, and I stayed for 31 years before retiring this year.

Many people today become venture capitalists for the same reasons I did: It's not the same old job day after day, week after week.

DR: What did you invest in back in the 80s?

RT: CPDC's emphasis was to take military companies like Pratt & Whitney and Electric Boat and help them develop commercial products to reduce their dependency on the military. There was a major recession in the early '70s, and companies were out of luck with nothing to fall back on. We put our money in [new technologies], they matched it, and if it failed we all failed. If it succeeded, we got royalties of 5 percent of net sales. It was a one-shot affair. If the company couldn't produce and market the product, we wouldn't earn any money. After awhile, I, along with a colleague, started to argue that companies needed multiple rounds of capital, and that was the beginning of the drive toward equity. We couldn't keep adding more and more money and expect a royalty. It would work on IT but not with most other types of companies.

DR: Did any companies come through the door that you didn't invest in and later regretted?

RT: Yes. We were too slow for some companies that were looking for their last quarter million dollars. In some cases, our due diligence process took too long and we lost out, and the companies went on to do well. There haven't been many we've lost out on over the years, though, as long as we knew about them.

DR: You've picked so many winners. When you look back at them, do you see a common thread?

RT: Yes. The ones that did well, like Proton Energy and others, had management teams that truly understood their technology, the marketplace, and the technology that already existed in the market. Winners were able to demonstrate that what they had was better, and why the marketplace was going to go for it.

DR: Picking winners is a skill of judging people, then?

RT: Yes. What's never good is when the entrepreneur talks about doing X and you say how about Y and the entrepreneur pushes back. I would say no because we don't want a one-product company. We want a corporation. So, if they don't know what they can do with the technology they have, they'll miss opportunities, and they won't inspire other people to invest in their companies. Not knowing how they'll grow and succeed is the biggest mistake they can make.

DR: Did your time in the military or at Pratt & Whitney give you any fundamental skills that you drew on to succeed at CI?

RT: I saw things that were negative and said to myself, That isn't the way you should do it, you know? [Laughs.] You have to be aware. You can't ignore things. Let me give you a military example. I was attached to the artillery at the time, communications at [Marine Core base camp] Lejeune. We were doing a communications workout and we set up a camp with tents and everything. And it started raining quite hard. So some Marines said, "Let's pull out and go back to the base." My tent-mate and I heard this racket, finally looked out and saw trucks leaving. They'd abandoned us. So we got our gear, went down to the main tent, and they looked at us and said, "Where'd you guys come from?" The important thing I get out of this is here it was an exercise, there was no danger—it was pouring—and yet they didn't make sure they had everybody to pull out with, and the Marines are noted for not leaving anybody behind. But they sure did in that training. The important thing is you've just got to be aware of everything around you.

DR: Social media wasn't around in the '90s but then it exploded, and it's been a quick trend, investment-wise. Have you seen other trends ebb and flow?

RT: The one that comes to mind is the use of fuel cell technology to purify hydrogen. That's ebbed and flowed. That's one of the problems. I've worked on a number of alternate energy sources over the years with UTC. I'd do more studies, and by the time I got the studies done, the interest in the area had diminished and they weren't spending any money on it, so there was no long-term development in so many of these technologies. It's one of the problems we have in the United States. If you can't get a return on your investment quickly enough, no one wants to invest.

DR: What technology do you think will be the hot investment over the next several years?

RT: Fuel cells are a critical area to develop. Other countries are leaving us behind. Japan, Korea, Germany…they realize they can't be tied to petroleum. We need other sources. Our country is falling behind.

DR: What about trends in investment? Has that changed at all?

RT: When we first started doing deals, Mom and Pop would put some money in and Uncle Joe would, and the professional investors would come in and say they didn't want to deal with family members. The investors would buy the individual investors out or marginalize them by the kind of stock they'd give them. But lately investors are more willing to invest in companies where we put money in, and friends and families do, too, and individual investors, such as doctors, do also. That's a big difference. But I still don't think it's wise. You want to minimize those types of investors because you want to get professionals in there, people who can help the company grow.

DR: What changes have you seen in entrepreneurs since the '80s? I can't imagine you had a lot of 20-somethings starting companies back then?

RT: Way back then, a lot of people who came through were from major companies like General Electric and IBM. When those companies cut back on staff or relocated, these folks were out of a job or didn't want to move. But they had ideas that weren't that good. The products were good, but the market wasn't. They just didn't understand the market. The younger people don't necessarily know the market any better, but their enthusiasm, and how well they work with their friends, is better. They're more adaptable and willing to listen.

DR: When you started out, would you take a board seat?

RT: No. If you built a good relationship with the company, and we typically did, we might check in or they'd call us, but in those days we were note holders. Being on the board was not a comfortable place to be, especially if the company got into a crisis.

DR: What's the most common reason companies fail?

RT: That would be management's lack of truly understanding the marketplace and the players. Back in the early days, for example, especially in medical products, there was such a divide between the East Coast and West Coast practitioners and doctors. The East Coast doctors thought there was a pill for everything, while the West Coast doctors thought non-drug treatments were better. The history in some of those diseases [being treatable by devices and not drugs], like adult respiratory distress syndrome, was so evident and yet the East Coast doctors just shrugged their shoulders and said, so what? But really understanding the market and what's needed is so critical. Another example: We had two ventilator companies and they had products that were superior to anything else on the market. They didn't compete with each other, but we just couldn't do anything with the companies because the price range for their equipment was between forty thousand and forty-five thousand dollars. The problem was that all the big markets wanted ventilators for between nine thousand and twelve thousand dollars, because they were using them in ICUs and rest homes, where their long-term patients were on ventilators. You don't need a sophisticated machine for that purpose. So even though the devices were better, we couldn't do anything with the companies due to a lack of understanding of what the market wanted.

DR: What about companies with social benefits, those curing cancer and developing cost-efficient clean energy? Is it a coincidence that you've invested in these types of companies or is that part of what you feel you should be doing with taxpayer money?

RT: Societal benefit is critical, and it was part of CPDC's reason for being. In fact, we had to include in the application a paragraph or two about the benefits of the investment to people inside and outside of Connecticut. Today, we tend to gloss over it.

DR: What advice would you give to investors today?

RT: I've seen companies fail when we just put money in and didn't add an educational component. Small companies can't afford to hire all the big corporate executives, such as marketing and finance professionals. Investors need to make sure they educate and support their entrepreneurs.

DR: What advice would you give to CEOs?

RT: Build a solid board, and have regular board meetings. We've seen companies that don't have that set up, they don't have an agenda so they can't get through issues, and they don't have an advisory board. Companies should have an advisory board of people in their field and spend time with them. Don't just put them on the letterhead so it looks good. Have them participate periodically in areas that are doing well, and figure out why, and do the same for those areas that need help. A good board has people who have experience, people who have done what you're trying to do before. A good board does not have friends and family. Have a balanced board that includes a financial person, a technology person, a marketing person, etc. Speaking of marketing, some companies invest a lot of money in marketing before they have a marketable product. But by the same token they should spend time understanding the market so they're not going down a path that no one has any interest in. That's exactly what happened with the ventilator product I mentioned. The market was not interested in a ventilator that cost forty-five thousand dollars.

DR: What's been your biggest surprise in your career?

RT: What surprised me over the years were all the failures that didn't fail because of technology but failed because of a failure to understand the marketplace. Technical people get all wrapped up in technology, but they have to understand what's going on in the market, on the outside. Sometimes the biggest failure is wearing blinders as to the market. When I started my career in data processing, I was told point blank, the product belongs to the user, not to you. You have certain leeway as to input/output, but it's their desire, not yours. I see this happen when I update my cell phone's operating system. It changes and there's no rhyme or reason why the manufacturer did it. There's no improvement, but I've lost data. They need to remember, it's not their product, it's the customer's product. Another good example: You buy a new dishwasher and you can't get the dishes in! It's all fancy, there's all kinds of buttons, but you can't get the dishes in. You wonder, has that designer ever used a dishwasher?

30 Years of Investing Teaches You Some Things. Here are Russ's top 3:

1. If you're an entrepreneur, it's not enough to know your technology. You have to know your market, and how your technology fits into that market so the company isn't just going down a path [to market] with no one interested at the end."

2. If you're an investor, you'll go much farther if, on top of the cash you invest, you mentor your entrepreneurs. Young companies can't afford to hire executives. Devote your time to educating your entrepreneurs and finding resources for them.

3. Create a balanced board.

Russell Tweeddale

Retired Managing Director, Investments

Russell formerly invested in more than 50 companies during his tenure at CI. He led CI's investments in bioscience companies including Affomix Corporation, Cardiopulmonary Corporation, Genaissance Pharmaceuticals, Ipsogen and Metagenomix, Inc. Russell also led CI's investments in I-Mark and LiveClips, and served on a number of boards. Seven of the current or former CI portfolio companies that Russell had worked with have had successful initial public offerings.

Russell has considerable experience in economic and venture analysis, engineering cost accounting, systems analysis, scientific and commercial programming, math analysis, EDP auditing and computer modeling.

He was previously with United Technologies Corp., Wolf Research and Development, Scientific Leasing and the Robert E. Nolan Co.

Douglas Roth

Director, Investments

Douglas is responsible for sourcing new investment opportunities, evaluating and negotiating investments, and serving on the boards of portfolio companies.

Before joining CI, Douglas gained extensive experience with early-stage businesses as both an advisor and operator. He founded a consulting firm to help early-stage companies identify and assess growth opportunities, generate sustainable revenue and manage intellectual property. Previously, as a senior consultant at a boutique management consulting firm, Douglas provided strategic intellectual property advisory services to companies in the telecommunications, information technology, and medical device industries. He advised investors in early-stage businesses, representing more than $250 million in invested capital. Early in his career, Douglas spent more than a decade in the telecommunications industry, primarily focused on international voice, data and IP networks.