

INTERVIEW

Interview with the Managing Director of ABB Technology Ventures

**Grant Allen**

Corporate venturing has become a key component of ABB's quest for growth. To understand better how ABB works with startups and how investment decisions are made, ABB Review met with Grant Allen, Managing Director and Head of Ventures at ABB Technology Ventures (ATV). Grant is based in ABB's new Silicon Valley headquarters in San Jose, CA.

ABB Review (AR): Can you please describe the innovation ecosystem at ABB and how it has changed in the last few years?

Grant Allen (GA): A robust and forward-leaning R&D function is the foundation for ABB's pioneering technology leadership. It's what I point to most frequently as our sustaining competitive advantage and the number of true breakthroughs we've had as a company over the years is remarkable. Every time I meet with ABB's researchers, I'm impressed by the capacity we have internally to develop new products and progress the state of the art in our industry. However, as in any large company, there can be a bias towards improving the known, rather than exploring – even clumsily – the unknown. This can lead to patterns of incrementalism and optimizing towards the evolutionary rather than the revolutionary. In practice, this means that a large percentage of development resources are spent on improving and optimizing the current portfolio, often at the expense of risk-taking and investigation of new breakthroughs. We view this as a search for local rather than global maxima that will, over time, build shareholder value. I clearly see the need for any large company to have a search party function to identify and capitalize on breakthrough technologies and business models that go beyond the core and help the parent company find entirely new offerings for their customers. This is the search for the new white space and ultimately the global maxima. And this is where I believe corporate venturing functions like ATV can be a good tool.

- AR** Where do you see corporate venture capital (CVC) five years from now? What are the biggest trends in terms of corporate startup engagement?
- GA** Corporate venturing is more prevalent today than it has ever been. It is a clear trend that large companies are looking outside their walls for disruptive innovations. Now, whether they are simply looking to track those innovations or take them seriously, engage with them, perhaps even challenge their own existing models, that's the real trick. I don't think many of these corporate venture capitalists are doing this well – they're window shoppers in the sense that they're looking at and talking with a lot of startups and bringing their executives through Silicon Valley for what we call the technology petting zoo but they are not investing big checks or meaningful business unit calories. That's when CVC activities become hard because while we all like to make money on our investments, the real measure of our success is how much it moves the strategic needle for our parent company.

In five years, I see CVC still going strong but with about half – if not more – of the groups investing today having pulled back from the market. These are the groups who have dabbled but have either failed to produce strategic value for their parents or have lost too much money, or both. History dictates that CVC groups have a short shelf life; often the simple turnover of an executive sponsor can trigger a strategic review and bring about the end of the venture capital arm. Thus, we have to be especially vigilant that at every stage of our platform life cycle we are delivering strategic value and doing so in the context of a durable financial returns mechanism.

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AR Tell us a bit more what role ABB Technology Ventures plays in this market environment?

GA When I first moved to Silicon Valley three years ago, I met with many of the big-name financial venture capitalists: Andreessen Horowitz, Greylock, Kleiner Perkins, Lightspeed. There was generally muted interest in the ABB-relevant topics such as renewable energy, factory automation – even robotics. The hardware investment trend had not taken off yet and there was still a hangover from the cleantech boom of the early 2000s in which most funds investing in energy tech lost their shirts. Fast forward to today, and AI and robotics are two of the hottest topics in tech investing, deep tech is highly en vogue, and in spite of the longer ramps, many funds have turned to hardware investing. Other funds like Eclipse Ventures and

Andy Rubin's Playground Global have been created solely to invest in hardware! Now, some of these same top venture capitalists seek ABB out because we are experts in these fields, particularly robotics and industrial IoT. We are happy to play the role of technical advisor and as we leverage that to add value to the other investors in the ecosystem, we can then get into the very best deals and bring to the table the other things that make ABB such a great investing partner: ABB's brand, a deep R&D bench, a global supply chain and channel access, market knowledge and decades of experience producing some of the most precise, rugged and functional products on the planet.

AR What is your investment footprint and style?

GA Since we were founded, ATV has invested directly into 26 startups. One of our most recent investments was a Chinese company, but the rest are spread between North American, Western Europe and Israel. The pace has been about four new investments per year and today we have 18 active portfolio companies in which \$88 million is invested.

To maximize our value-add to the companies in which we invest and to give us downside protection, we like to take an active role in each investment. In practice, this means ATV takes either a voting seat on the board of directors or one or more non-voting observer seats. We often get asked if we need right of first refusal or other special considerations and the answer is "no."



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01 TaKaDu's AI solutions complement ABB's products.



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AR How do you find the appropriate startup to invest in?

GA We talk to over 2,000 startups per year that we identify through many different channels. We are continually running market and technology sector studies and mapping companies in segments of interest – understanding the key startups in the food and beverage automation space was one of our recent projects – and we have a full-time team member helping with market analytics and driving competitor insights. We also are developing a tool to help us track all of these companies and allow a common, Web-based means for R&D and the ABB businesses to uncover relevant startups on their own.

AR What does a typical startup collaboration look like?

GA Once the ATV investment committee, which includes ABB's CTO, to whom I report, approves an investment and that company becomes part of the active portfolio, ATV, together with our counterparts in the sponsoring business unit, supports and mentors them. We assist, as most good VCs do, with technology roadmapping, refinement of business model, finding product/market fit, recruiting and follow-on financing. We go beyond the "typical" VC value add, though, and assist directly with deeper technology development, giving the startup access to ABB's R&D bench, and making introductions to ABB customers and partners. We drive them quicker to commercial viability and the interaction the startup has with the ABB business units is critical to begin this catalysis. From the outset of working with potential investments, ATV acts as a bridge between the startup and the key ABB players: global business and technology managers, any of ABB's seven corporate research centers, as well as local and global business units, sales groups and product groups. This ensures that there is a full alignment of expectations and goals and maximizes the ease with which a smaller company can tap into ABB's global network of ABB expertise and resources. With 135,000 employees and

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02 Pointgrab's vision sensor counts and tracks people without using CCTV but with similar accuracy.

being the largest supplier of industrial motors and drives, the largest provider of generators to the wind industry and the largest supplier of power grids in the world, the ABB network is a formidable asset for a startup at any stage. ABB helps companies in rapidly accelerating their paths to the commercialization of products and services through access to ABB's R&D manpower and labs, global sales channels and wide-ranging partnerships.

AR Is there a concrete example where working with a startup has created direct value for ABB's customers?

GA In each of our investments, we look for the win-win synergy where there is value for the startup and for ABB. When we unlock this combination, by definition we are providing more ultimate value for ABB's customers. One example is TaKaDu, an Israel-based startup providing a Software-as-a-Service (SaaS) solution for water utilities. Their software enables the utilities to detect, analyze and manage network events and incidents via an automated cloud-based service. Whereas ABB is a supplier of instrumentation and control systems, and hardware components such as sensors and measurement products, TaKaDu delivers an AI-based solution to provide early warning of the most likely leakage scenarios in the system and

to tell the customer the optimal placement of the minimal number of pressure sensors. This approach saves costs and maximizes reliability. ABB together with the TaKaDu expertise is a clear symbiotic relationship →1. Again, a win-win in our eyes.

AR Tell us a bit about one of your latest investments.

GA For the past few years, we've been trying to figure out how ABB can participate in the aerial inspection and drone services space. We initiated an external study on drones and have been tracking a number of UAV companies and how they are deploying value-add services for field operations, logistics and security. One company, Kespry, emerged as a clear leader in the space, with a unique focus on the data ingest and workflow capabilities as well as the ease-of-use so that field workers can very quickly deploy their drone solution on the job site. Kespry is using a high-resolution aerial camera to do volumetric estimations of mining aggregates and device estimations are ±1 percent accurate. This is a huge leap forward from the current practice and we see significant applications for this technology within ABB. For instance, with our marine and port operations, we could use the drones from this particular company to do high accuracy counts of shipping containers and to automate many other aspects of port operations. And that's just the beginning.

AR Can you give us some concrete examples of technologies that are bound to cause disruption?

GA Let's take the example of PointGrab, an Israel-based company. PointGrab developed a vision sensor with an integrated deep-learning algorithm for home and building automation. The sensor is not a video sensor – no video signal is produced, though the sensor is able to count and track people with an accuracy you would usually get only with a CCTV camera →2. This solution is cyber-safe and no-one can look into the room. It represents a completely new generation of sensors that overcome physical barriers by using artificial intelligence.

AR Thank you for the interview. ●