The

GOLDILOCKS ZONE

ANNALISA GIGANTE // Innovation Expert

As a native innovator Annalisa Gigante is always open in our discussion about the future. She is a very strong and independent woman with many talents. 20 years of delivering digital transformation (including AI and IoT). Extensive industry experience in Life Sciences, Food & Nutrition, Chemicals, Building Materials, Human Capital Services, and Strategy Consulting.

When we visited Zürich in Switzerland the last time, we had a pretty good mountain top view at the Zürichsee. Only a few weeks later we got an invitation to the Zürichsee village Richterswil by innovation expert Annalisa Gigante who lives close by. We walked along her favorite jogging route at the lake, enjoying the swiss summer, watching people cleaning their sailboats and talking about her role in different innovation projects, the swiss startup ecosystem and agile idea generation.

"FINDING THE RIGHT PARTNER IS CRITICAL, ONE THAT SHARES THE SAME PURPOSE."

ILI.DIGITAL: What a beautiful view! Thank you for inviting me to the Zürichsee! But first things first: What is your profession?
Annalisa Gigante: Innovation. It's such a big word, though. I enjoy getting involved in really big, juicy problems, solving them and finding ways of connecting great technology with markets. My last role was Head of innovation and R&D at LafargeHolcim. I've run large innovation programs with companies in different areas like life sciences, chemicals and HR services. Right now, I'm focusing on a few supervisory boards and a couple of really great startups.

Here in Switzerland?
Yes, in Switzerland, and also abroad.

You were born in Italy, right?
Yes, I am from Venice. Later I studied natural sciences at Cambridge University, biology in particular.

Biology? Can you use this expertise in your job right now?
Well, strangely enough, the connections between biology and innovation are becoming more and more apparent to me, especially in the last 5 or 10 years. We use a lot of terminology from biology. We talk about innovation ecosystems, we know that things have to work together, they have to collaborate. And if you look at the startup system, for me, it works very much like a Darwinian evolution system. You throw ideas at the wall and some of them are able to fly over it. More recently though, I started to focus on the idea of the „Goldilocks Zone".

The Goldilocks Zone?
It's a concept that is used in astrobiology to identify the habitable zone around a star, just the right area where a planet could have liquid water and possibly contain life. So, not too close to a star thus too hot, and not too far away thus too cold, just like Earth. I find many parallels between the idea of habitable zone and building or finding the right environment for running an innovation pipeline in a big company. What I try to do is find this zone which is just right and where life – or new businesses – could explode. This zone is very different from company to company. It depends on whether the company is very centralized or decentralized. It depends a lot on the company culture as well. The skills that they have, the markets that they operate in. There isn't a „one-size-fits-all" but that concept of the „Goldilocks Zone" actually works wherever you are.

I have a feeling that this is one of the things you enjoy the most, facing new problems, putting together a team, or leading an existing team in new directions. Could you elaborate this process?
I love seeing how things work and seeing how we can optimize a business, a project or an idea. I'm extremely curious. I love exploring, talking to people, seeing what works, what doesn't work, why something worked in the past or not. And, most importantly, finding out what the team's superpowers are. I really believe that everybody has their own „thing" that they're brilliant at. And part of my job is to make sure that team members are in the right role to show off their superpowers. We can create an ecosystem where everybody can do their best work.

We talked to Andreas Clausen from Beiersdorf recently. He talked about new organizational structures and how some of his departments are something like a „coral reef". A living, breathing organism that defies typical hierarchies of big companies. Is that something you see in your collaborations too?
Oh, what a great concept. Of course I see teams coming together for a certain period, or certain skills coming to a team for certain periods, and then going off to another team. And I think that's a great description of what a more flexible, more agile environment looks like.

Big and unusual collaborations sometimes even between competitors are on the rise. You can see it in the automobile industry. Why is it important to open up for this process in these times?
I've always thought collaboration is a critical skill in innovation because you need to put together and work with multifunctional teams. Silos never work. Innovation typically happens in the areas that are between different disciplines.
In large companies we used to believe that in order to protect IP you had to have all the skills in-house. But it's clear that this really gives you a disadvantage in terms of time to market and some specific skills that you might not be able to attract. For example, if you think of data science today, these experts are more likely to be found in the top tech companies rather than in an industrial company. So the best way of accessing a team with brilliant and specialist talent is to put different partners together. I also think it needs a particular skill to put these kinds of organizations together. Finding the right partner is critical, one that shares the same purpose. This is true also for businesses in general: companies do well when there is a clear and shared purpose. You know why you want to work there and you can attract the right team. When you're building a collaboration in order to solve a problem – among companies or even different functions in the same company – spending the time to really describe that purpose and agreeing on it is the main point. This will help you overcome some of the issues that are always coming up during a project.

You are working with big companies and also with startups. What do you think about the startup ecosystem in Switzerland or maybe also in Germany?
I can definitely tell you more about Switzerland because that's what I'm focusing on at the moment. You can find incredible technical skills, and great business ideas here, but the system as a whole really favours incremental change. It's a country of engineering perfection. We love that. The main focus is on fixing and optimising one little thing at a time. And then building the scaffolding. If you compare it to what is successful in Silicon Valley, it's very different. There you just try to create the most amazing, scalable, enormous idea. You put it out there and then you might be able to build a part of it. You might get to the same place, but actually you're starting from two opposite ends. What I'm seeing here is that investments also follow the same approach. In Switzerland it's easier to get investment for incremental ideas, proven things. Once you prove something in practice, you can access some more investment, and a little bit more money. Whereas in the States, you're able to accelerate and get past that, reaching a bigger market share by thinking big, and maybe accepting more risk into the system. In a system that is able to move fast and at scale with many, many companies, then -back to the concept of Darwinian Evolution – one of them might do really well.

Do you see this changing in the near future?
I look at it in terms of collaboration. What I would love to do is bring the two systems together and find ways of using the strengths and skills from Silicon Valley and apply them to some of the technology and the amazing ideas that we have in this area.

How do you usually approach a new company or clients in general?
My first approach is to try and read as much as possible of what is out there regarding a certain topic or problem, just to get an idea of how it might develop next. For me, that's the most interesting thing, trying to understand how a certain business idea could grow, even become huge, and what it would take. What are the steps? And then understanding how easy or difficult it might be to get there. Sometimes the difficulties are purely technical. The current technology might only bring you so far. Oftentimes, though, it's about the organization, people, risk, and all sorts of other elements come into the mix. I then try to analyze where the critical points are that might make a project fail or work. This is a concept that X (formerly Google X) uses so well. Shell too had a wonderful innovation accelerator that focused on identifying the potential key points of failure in a project and testing those first, rather than funding a project sequentially, one step at a time – which is a more typical approach. This system forces you to look at the whole process. You try to identify the critical steps, the most difficult issues to overcome. If you can find a good solution for those, then you can work on the rest, and fund the whole project.

Can you give us some insight on one of your projects?
Some time ago I was working with DSM, we were looking at how to apply a brand new technology to any potential application, we were looking for both a product and a market that could give us a quick win. We had a wonderful brainstorming session with people from the team and from outside, which resulted in at least 20 areas where this technology could work. But we had a very, very clear goal that we needed to make money within 3 years. Some of the potential applications for this technology would have taken at least 5 or 10 years to turn a profit because they needed to go through industrial approval processes etcetera. This helped us really narrow down the field to consumer applications with no need for long approval processes or long purchasing cycles. We ended up launching a new product into the market that we branded as Claryl. It is an anti-reflective coating for glass to use in picture frames . So, when you hang up a beautiful painting, you don't see the reflection of the light. You just see the painting.

And you were the first ones with that idea?
Other technologies existed that did that. But we were able to produce the coating much faster and much cheaper. We ended up disrupting an industry that we hadn't sought of targeting until we had gone through that obstacle course of „How do we apply this technology? Where are the key difficulties? And then, how do we overcome them?". We were able to prove that the company could become innovative and introduce new products early into the market.

What's your experience in Switzerland? You have been here for 10 years now and have worked with companies and with startups. What's typical for Switzerland in a positive and a negative way?
The positives are enormous. The technical universities do research in extremely interesting areas. They're very well networked, both with the leading companies in their sector and with other research universities. That provides a pipeline that is enviable, and I would say different from everywhere else. The difficulty is getting these ideas through the first five or six steps of building and scaling a company. The first step, however, the legal and regulatory framework for start-ups in Switzerland is very clear, and that works really well, even in specialist areas like fintech and crypto currentcies. There is a system of how this works. It's a good, well-oiled machine. In comparison to other countries this part of the process is really positive.

And what about the next step?
The process of finding the first external investors I find is very, very different from how it works in other successful environments, and in particular in Silicon Valley. In Switzerland you will have to prove the idea, sign up the first clients, and have prototypes ready before you really attract a significant investor. In the U.S. you might even just go with a great ambitious idea, and if people get behind it and the team, they'll invest, and they will allow you the time to build a new product and test it. As a result, during the first few years you could have a lot more assistance.
Building a great business at scale is a challenge anywhere. Whether you are starting from a technology or from a business idea, finding the right fit between a technology and potential market needs a combination of hard and soft skills... and a dose of luck.

What's your take on the ethics of AI?
AI is a fascinating subject. You can have different reactions to this technology and what it can do, from the really positive, to the dystopic, to a mind-blowing one, given the exponential nature of it.

I think that they are all correct at this point. AI is exciting for me because it allows new business models to come about. You can analyse past data, find patterns in there that you may not have been able to see before, and then understand whether that means something for the future. Having said that, what I would call proper artificial intelligence in reality today is a very small part of what is going on. The term AI is an umbrella that is used to cover everything from an interesting use of statistics, to machine learning or deep learning and many other things. While it can be interesting to find patterns and correlations, not all of them are meaningful, useful, or helpful. An example of that is how AI and machine learning has been used by Amazon in their recruiting practices. Their system understood very early on that there were very few women's CVs that passed initial screening and very few women were being hired. The system found that pattern and made it mean something: being a women was somehow disqualifying for a job at Amazon. In reality it's a meaningless pattern. But until people understood what was happening and intervened, because of that pattern the system wasn't putting any more women's CVs forward.

Just because the correlation is there, it doesn't mean that it is useful or useless. Machine learning algorithms are typically let loose on old data sets that can contain all the biases from the past, and as a consequence all the data that we have produced in the past with all its limitations and lopsidedness can affect future decisions. It's somehow like having grandparents with their knowledge of the world teach grandkids how to live, great in some aspects but maybe not in others. So, while we're trying to talk about AI technologies as wonderful ways to un-bias, in reality they may have the opposite effect. I think ethics in AI is absolutely fundamental. I would love to be able to do more in that area. For example, it's very interesting to see how gender has impacted developments in life sciences and pharmaceuticals. Most clinical studies are done on men, and it turns out that in some cases this sub optimises drug development for women, or increases overall healthcare costs as drugs are not effective or even withdrawn from the market. So there is more we can do towards precision medicine, for example using AI to stratify research results by gender.

Regarding AI and ethics in particular, there's a famous discussion about self-driving car algorithms. At some point, if something goes wrong, the self-driving algorithm might have to decide where to crash into. Will it prioritise the life of the passengers inside the car (who may have bought it) or that of bystanders? These are incredibly important aspects that we need to understand much, much better before we just run ahead with the technology and implement it. We may find out that we're creating problems that are very difficult to fix. And this is a keen innovator talking!

What are topics right now that you would love to dive into more?
Working on AI, machine learning, and ethics for me is fundamental. I also think our legislative process is far behind our technology capabilities and we need the two to match. In general, the combination of IT and industrial technology is a fascinating area.

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