Podcast Episode #7 – How one company wants to radically cut down the lead-time of electronics manufacturing of all volumes, with Radu Diaconescu of Swie.io, Switzerland

Balint: Today I'm thrilled to bring you Radu Diaconescu, responsible for Business Development at SWIE.IO. Welcome, Radu to this episode.

Radu: Hi, thanks a bunch for inviting me.

Balint: I appreciate it! We met at the event organised by Hardware Pioneers in London this year, where you gave an overview of your company's activities and you talked about industry 4.0 or the fourth industrial revolution. Due to audio only feature of this podcast we cannot reproduce or we cannot show such an overview and actually I wouldn't really want to as during this interview I would like to concentrate more on some other aspects, that is how you started the company and how you run it. So Radu my first question is that can you tell us about your company and your motivation for joining it or even cofounding it.

Radu: Yes, of course so about SWIE. The company, well we started it a year and a half ago and the reason behind it was that we were absorbing that more and more people require electronics products, and hardware products, that are manufactured in lower and lower volumes. The problem with this is that factories and electronics factories are not really equipped to accommodate this type of change from the consumer side. The consumers doesn't want mass-produced products, they want products that are more individualised that serve a very specific user need. So observing this we thought how we can solve this and our answer, and we think that it's one of the potential answer and solution, is that actually working with the factories. So what we do at SWIE , we basically have an industry 4.0 technology, this is a buzzword, so I continue using it, that comes on the factory floor, and equips electronics manufactures and helps them to move towards a higher mixing environment. So they are able to produce products in smaller quantities in let's say similar conditions to high volumes as they are expecting.

Balint: So you say that you work with factories and you said you work with low volume factories, right? What is the added value?

Radu: The added value towards the customers or towards the factories?

Balint: Both sides

Radu: The way we operate is, on one hand, we work with the factories, and we help them move towards this high mixing environment, but this basically translates in-

creasing their capacity for production. And on the other hand we also help the factories to take the advantage of this increased capacity, basically supplying them with the additional amounts and volume orders, so they can see the benefit. So the value added, on the factory side is that we allow them to take new customers and to reduce the non-recurring engineering cost and reduce the setup time for this smaller volumes generating more revenue than one able to do right now and on the consumers side it's the convenience of not having to for example to deal with all the technical difficulties associated with manufacturing. Regardless if it's low volume. And another advantage is the fact, that customers are able to sit with us from the first prototypes, so we are able to help them with the first batch of 10 products up until they are ready to scale, because we act as an interface towards the customer, so they don't have to change the supplier, they don't have to work for the first prototyping round with a local manufacturer and than go to China for example and set up the entire supply chain. Everything is streamlined and I think this is in their advantage.

Balint: How do you deploy industry 4.0 in this sense, in this framework?

Radu: Well how do we deploy it? That's a question that is quite specific to the electronics industry. If you look at the electronics industry and moreover the factories, there one of the biggest challenges that they have right now is is making targeted improvements along the production line, because their equipment is usually quite old and the competition inside the industry is quite fierce so the margins are getting, well slimmer and slimmer by each year so they don't necessarily want to invest in new R&D so considering the fact, that the machine are old on the factory floor you can see that you have an assembly line and each machine has different software revision, sometimes they even use different communications protocols so making targeted improvements and having all these machines communicate to each other and to aggregate data and provide analytics on this, well, it's not done until now. So that's basically how we deploy it, we want our solution to be retrofittable with existing machines, so we take this new approach where we gather data from the machines and we also provide the control layer where we can control the setup of machines and reduce.

Balint: Do you bring off-the-shelf components to deploy in this setting or do you develop your own components?

Radu: Both.

Balint: okay.

Radu: But usually I think we try to use all off-the-shelf equipments.

Balint: I had a question at the beginning regarding your motivation for joining and co-founding it. How do you remember it was?

Radu: Well our story is actually quite different to the normal startup because the company was originally started by Ben, who is the CEO and he had this idea, he was thinking about it and prior to joining to SWIE I used to work in a much bigger company. It was very interesting because I've seen the same problems. I've seen the gap between between design and manufacturing and that was from an OEM perspective. He told me what he has in mind, basically what is the problem that he's trying to solve. What he had in mind as a solution was quite different back than, so the solution evolved along the way, it immediately resonated with what I've seen in my previous experience so I said let's do this, lets work together on this. After this we had Aubrey joining the team. He came with with an experience from SAP, more of the software layer of manufacturing part.

Balint: So these are a three people who funded the company. So basically there was this video that I saw on vimeo about your company so you can consider yourself as the avatar in the video, the person who embodies this issue, this problem which is shown in the video that you have five weeks of lead-time and your goal is to decrease it down to 2 days.

Radu: Yes if you look at manufacturing, it is a zero added value activity. Technically manufacturing should be like printing a piece of paper, if anything manufacturing decreases the value of your product due to various issues and problems in supply chain. I'm sure you and your audience know all these issues but it shouldn't be like this. The real value is in what the engineers design and what they have in mind. That's where the real value is. Manufacturing should be an activity that shouldn't add any hurdles to the company or the individuals. That is where we see our mission. Of course we try to work on the factory's side, reduce the friction as much as possible, that's the long-term goal we have.

Balint: As far as I could understand you're a one-stop solution for prototyping, for low volume and high volume manufacturing?

Radu: Yes.

Balint: Do you work with one factory or different geographical locations so you can be connected to the customer in that area so you can have an optimised, for the overall process, an as short lead-time as time as possible?

Radu: So currently we we have partners just in China and in the near future we will have a partner in South Africa and another one in Germany. What you said before, that's the goal, that what we want partners all around the world so that companies

can produce close to them so we remove part of supply chain and imports and what ever other problems. But more importantly we can produce close to their customers. Let's say that there is a startup or a company that has operations in US and in Europe and it's headquartered in, let's say, Zürich. Why should the products be manufactured in a central hub than shipped to all the customers, when the products can be manufactured close to their customers? Thus removing even more hurdles.

Balint: What is your uniqueness in this, are there similar company initiatives where they have similar lead-times, somewhat similar?

Radu: Maybe some of them are comparable but I think what is unique to us is the fact that we marry the two sides, we marry the manufacturing side and the consumer side. Also other competitors, I would say, they have their own factories. Scalability depends on either acquiring new equipments or building a new factory or expending geographically. For us scalability is just finding a new partner.

Balint: It rings a bell, because when we were at this meeting organised by Hardware Pioneers there was another talk by 3-D hubs where they have a similar concept for 3D printing.

Radu: The concept is very similar to 3D hubs. It's just the difference, that we don't work with 3D printers that are owned by individuals, we work with factories. But the concept is very very similar.

Balint: Can you describe us how you reached this business model? You said that at the beginning you started out with something else and I guess you iterated gradually to this one.

Radu: Well, it's asset leverage and it's kind of, if you look at it's in the trend. Part of my my page, at some point is that we try to be UBER for electronics manufacturing. Because UBER doesn't own taxis or anything, like we don't want to own any factory. We just want to provide the technology so that they can produce more and in a better way and we control the quality. Leveraging other assets and moving from ownership to access, I think, is is one of the biggest economical trends recently.

Balint: What were some major challenges that you encountered during founding the company and also at a later stage and how did you overcome?

Radu: One of the bigger challenges, especially in Switzerland, is getting the right people. As a startup it's sometimes hard to compete for the best people in certain branches or areas, so what what we decided from the first days was that we cannot be geographically restrained so this means that we work with people so with partners that are in e.g. Greece or in South Africa or China or in Germany, and that's because we want to get the best people for a specific job and we simply cannot be restrained

geographically to Lausanne or Switzerland or anything. We have this very distributed way and we work pretty much online, everything is online, all the meetings happen online.

Balint: It's kind of like a virtual office then.

Balint: Regarding funding, did you see some challenges?

Radu: I don't think that we have seen challenges that are bigger than any other startup going through this phase and I don't necessarily see that things have changed in the past months but it is true that there is a gap in in funding between seed and series B. I would say that the series A is I think the hardest especially for a hardware startup because most of the VCs are either generalists or focused on software. Then when you talk to them they have certain metrics that they expect from a startup and sometimes for a hardware startup, it's not that easy to reach those metrics as it is for a software startup and in a certain timeframe. So I think series A is quite the most difficult financing round for a hardware startup, at least.

Balint: If I may ask where are you now?

Radu: In series A.

Balint: I see. After or before or during?

Radu: In the middle of Series A, during.

Balint: Interesting. And the funding situation in Switzerland, how do you see that or in Europe?

Radu: There are two sides of Europe: it's UK and DACH, Germany and Switzerland that's kind of the two sides. UK seems to be a bit less conservative. I think it's a good time actually, I haven't seen any friction lately but is just normal. In Germany and in Switzerland usually VCs are more conservative than for example what you hear or you read in the news what is happening in the US, companies that get large sums of VC capital without generating revenue or results, something that, which is not necessarily a bad thing for Europe because the company should focus on generating revenue. But I think things are going towards a good direction, things are levelling out. European investors are hungry for risk and it's gradually turning.

Balint: So what are your next steps besides the series A?

Radu: Well, the next steps is scaling this thing up and reach the scale that we hope and we think that we can achieve and the next step would be probably to look at other industries so not be focused or restrained by the electronic industry regarding manufacturing.

Balint: So then let's move on to the ultrafast round of questions, so this means I would ask you 4 questions and it would be good if you could answer these relatively short. If you could time travel, like in Back to the Future movie to the time when you were 20, what notes would you give yourself?

Radu: You mean apart from the lottery numbers, right? And apart from the Pokémon GO idea, right? Well I think I would suggest myself to not be so afraid of failing, so try to fail more and do more crazy stuff in terms of professions or studies.

Balint: I like that. I think many of us are in such situation or we have such thoughts even though when you're young you do some crazy things but not crazy enough from a carrier perspective. Second question: if you had to name a book which one had the biggest impact on your carrier?

Radu: So impact on my career I think it's too much, but I really enjoyed Black Swan by Nicolas Taleb and I really liked the ideas presented there, and I think it resonated with me a lot because especially maybe as an entrepreneur, or somebody involved in the startup, life and a path of a company is completely not linear. The way we are used to judge life or in terms of personal life or professional life we are used to judge it very linearly, like we think that things will progress in a certain slope and it's really not the case. So that's why I liked that book.

Balint: I'm curious, if you listener, have read such a book, this book. Actually I haven't heard about it; I know that there's a movie with this title but as I heard it it's quite different.

Radu: No, it's completely different, and it's a series of books. The second one is Black Swan and the the third one I don't really remember.

Balint: Third question: I'm amazed by habits and how they can have an effect on our life, it does have an effect on my life. What kind of morning routine or other kind of routine do you have throughout the day?

Radu: This will be a very short answer, because I don't really have a routine, because things are different from one day to another. So I know they are quite important, but unfortunately I don't really have a routine or certain habit apart form coffee or whatever.

Balint: Fourth question: in your work if you had to pick one or two cultural differences that are critical, which ones do you wish you knew before and how did you resolve those issues? Because you said you work with China and South Africa.

Radu: To be honest, we are of course quite diverse, but I think this diversity is very very good. I think that is why I'm having troubles, because I cannot necessarily see

big problems arising from this. Especially if people have common sense and work towards the same goal. Because what I've seen especially in our team is that there are cultural differences and sometimes they are quite obvious in the way that your approach situations. So it happened in one point that we received an email, so it was something written, and I interpreted the email quite bad, while my colleague from South Africa interpreted it quite good and in the end the email, how it was written, it was good for us. So my first instinct was like what happened. I don't think cultural differences should not be necessarily tackled but I think it should be embraced. It's the best if you can see the difference, acknowledge the difference and see how the difference can make the team better.

Balint: If you feel like you have an issue, it's better to discuss it with other people who you work with to get a different perspective. So, Radu, before we close this interview, how are you best reachable, by email or by social media, if the listener would like to reach out you?

Radu: They can write me an email radu@swie.io or connect with me on LinkedIn. That's the best way.

Balint: I put it into the shownotes, these information, so that you listener can find this info. I appreciate it, I know that you have some busy time. So an extra thanks for being available. All the best!