HELMUT GASSEL

Former Management board member of Infineon

Paul Boudre, Silian Partner, former CEO of Soitec

Coming back to you, Helmut, what do you think about Europe acting in this race and what are the potential strengths and weaknesses you see?

Helmut Gassel, former Management Board member of Infineon

Good morning everybody, it is a pleasure for me to talk about semiconductors, my favorite subject. I have spent my whole professional life in semiconductors and I am as happy as you are Max, for the fact that finally a large proportion of society recognizes how relevant it is.

That is one of the reasons why the tensions between the US and China have gained so much attention because in Taiwan there is a very high concentration of semiconductor manufacturing, in particular advanced semiconductor manufacturing, which Handel showed some numbers on. It is critical because no car, phone, or Internet would be possible today without that particular manufacturing in Taiwan. People have had two thoughts about that, we want to regionalize manufacturing, diversify the manufacturing landscape, it has got to be in other places. Handel also said that TSMC is venturing into the US, Japan, and Europe, Intel is bringing its manufacturing into Germany, for instance, many things are happening at this point in time. Change is always an opportunity for those who are courageous enough to drive it so I think it is an opportunity for many countries and many companies to participate in that change and to make a fortune out of it. It does not come by itself and, as I said, I believe it takes quite a bit of courage to do that.

However, there is another relevant point. When we are talking about Taiwan and this particular strength of concentration of this particular capability in Taiwan, the semiconductor industry is a lot broader. We are talking about a very relevant, specific point but the 600 billion or whatever the number was in 2022 of value or revenue generated, is on the so-called device level. These devices have to be manufactured and for that we need equipment and for that to run, it needs material. If you add all those different steps of the value chain together, you are already at the trillion level today and these other areas are much more diversified. The concentration of capability in Taiwan is focused on manufacturing the leading-edge technology only and a lot of other things are being manufacture and designed, and value created in other regions, for instance, in Europe.

You asked about the European angle of this, beside the benefits to Europe now getting from advanced manufacturing being brought into the region, and Europe has its own strength in certain areas. One is automotive, where I would say that 50% of the semiconductors for automotive are being designed and to a large extent manufactured in Europe today, so it is a very great strength. We also talked about equipment and there is this famous company everybody has heard the acronym for, ASML. ASML is so critical because they are the only company in the world that can enable so-called leading-edge technology. Again, leading-edge is only a certain portion of the semiconductor industry, a critical one with a lot of focus, also because of its potential dual use, but there are a lot of other things being done in Europe today where Europe is leading the global effort in certain areas. Material is a third one, and Paul has been running a company called Soitec for many years, a capability in Europe that is unique to this industry and that is very critical for the development of certain specific areas. If you go a level deeper in trying to understand what semiconductors are all about, you recognize the strengths of each region. For instance, the US owns design automation, and no chip can be made in this world without certain capabilities that only reside in the US. Japan owns certain areas of wafer capability and some materials, of this leading-edge lithography would not be possible without the chemistry coming out of Japan. This is a truly global industry. It is changing as we speak and we can take advantage of it. Every region has to look at its particular capabilities and if you are brave enough to take advantage of the current change, you can bring this industry or a portion of it into this region as well and we will talk about that soon.

Paul Boudre

Absolutely. For me, everything you said makes sense and Europe does have very strong capabilities and niches that really bring this part of the world into the club. By which I mean if you want to enforce policy you have to have something to say, you also need the ability to play a part in this technology world. What we said before is that everything starts with innovation.