"Innovation isn't just a question of technology."

Interview with Stephan Sigrist
Founder and head of the W.I.R.E think tank

W.I.R.E.
Over the past ten years, the interdisciplinary think tank W.I.R.E. has analyzed developments in business, science and society. The Swiss idea laboratory has focused on identifying new trends and translating them into strategies and areas of action for private companies and public institutions. Thematic priorities are digital economy, social innovation and promoting the future viability of business. Stephan Sigrist is the founder and head of W.I.R.E, publisher of the ABSTRAKT book series, author of a number of publications and a keynote speaker at international conferences.

Stephan Sigrist
After studying biochemistry at ETH Zurich, Stephan Sigrist initially joined Hoffman-La Roche's medical research team. He subsequently went on to work at Roland Berger Strategy Consultants and the Gottlieb Duttweiler Institute as a management consultant. Stephan is a member of the Governing Board of the aha! Swiss Allergy Center and the Foundation Board of Science et Cité.

Trends are developments and changes with economic, political or social relevance. But how do we know which developments are relevant and to what degree? It might seem like every aspect of our lives has already been overrun by rampant digitalization. Yet what opportunities does it offer, where are its limitations and will people even be able to keep up with the accelerating pace of change in the long run? What other trends are impacting the Swiss economy and how are they being addressed?

We look into these and other issues in an interview with Stephan Sigrist, founder and head of the W.I.R.E. think tank.

Can Arikan spoke to Stephan Sigrist

KPMG Mr. Sigrist, what are trends and how can they be identified?

Stephan Sigrist Trends are defined differently depending on which field of application you're talking about. In essence it's about documenting a change over a period of time which is then attributed a certain amount of relevance.

And how do you know if this kind of change will have a major impact on our lives?
There's really no final answer to that question. It depends on what your

objectives are. We live in the "Age of Big Data", which is a fact of life that we have to address on a daily or even hourly basis. Identifying relevant information is getting trickier all the time.

But how can it be done, even despite the difficulties?
One key factor when looking at new information is the ability to see the big picture and link that new information to its potential consequences. Since a development's relevance isn't always apparent early on, thinking in terms of scenarios is also crucial.

So that also means it's impossible to predict a trend's typical half-life?
That's right; it's impossible to say. Depending on the nature of the trend, you're dealing with entirely different timescales and half-life periods. Demographic change is a silent social revolution that will have a lasting impact on our society over the next few decades. If we analyze consumer trends or game apps like Pokémon Go, on the other hand, they might be "hot" just for one summer and less relevant as a result.

Did you catch the Pokémon Go virus?
No. But I'm fascinated by the social mechanisms that led up to all the hype.

What determines whether a company joins a trend?
That depends on how you look at it. As a company or organization, you're driven by your own business activities, and those tell you whether a development should be considered relevant or not. Yet given the inundation of data and sensory overload of our modern world, identifying actual trends and long-term changes isn't getting any easier. Even though we strive to think in ever longer terms, it's becoming increasingly easy to get caught up in short-term issues. That's not without problems.

When identifying trends, do you rely on the results of market research or your gut feeling?
We most definitely base our attempts at documenting and explaining the past and present on statistical data since it provides us with quantitative evidence. A systematic approach is undoubtedly important when it comes to new developments, too. I wouldn't go so far as to talk about gut feelings, but a subjective estimation based on corresponding qualitative arguments is certainly relevant. When all is said and done, you can't use the past and insights about the present to extrapolate the future. Anticipation is called for instead. Projections based on the current potential of technologies frequently fall short.

Which trend is impacting you personally the most at the moment?
Among others, our society's growing flexibility: in other words the blending of work, family life and personal development. One difficulty here lies in the breadth and multitude of options that are open to us and we continuously have to choose from. Technological advances make a parallelism possible in our society, an ability to do things and satisfy multiple needs at the same time, which was unheard of a hundred years ago.

"SILICON VALLEY'S APPROACH COULD BE APPLIED MORE INTELLIGENTLY."

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In other words, the death of either/or?
Yeah, you could put it that way. Quite possibly one of our society's greatest achievements. At the same time, though, it's also a burden that takes a huge toll on us.

What is the main focus of W.I.R.E.'s current activities?
We've always been interested in life sciences, food, banks and insurance companies, but also media and cities. Right now our activities revolve around digitization, which is not only changing our workflows and strategic planning but also society as a whole.

And where do you see your part in all of this?
Currently, our main job isn't identifying the latest trends. Instead, we're helping make sense of rapid changes and taking a critical look at peoples'

expectations of the digital revolution, some of which are quite high. We're also working in depth on the conse-quences of increasing life expectancies, researching what options a predictably longer life could offer us. You might be able to have two careers and pursue two different educational pathways, one after the other, and generally plan your life in an entirely different way. The question at the heart of this is frequently how to successfully make long-term plans in an ever-changing world.

Which trends are currently shaping the Swiss economy?
That would have to be digitization in all its shapes and forms including the search for new business models, organizational forms and positioning on the job market. At the same time, the economy is being shaped more than ever by politics, particularly the

relationship of Switzerland and the Swiss economy to Europe. Under-standing societal trends plays an increasingly important role in this too. Politics, the economy, the world of research and society are all parts of the overall system and need to be linked accordingly.

How would that work?
Innovation isn't just a question of technology. The sustainable, active shaping of social structures is a central requirement for political stability, which, in turn, is pivotal for economic growth. That means we need more integrated thinking and actions. The silo solutions we've used over and over again in the past come up short. I believe this realization is gaining acceptance and companies are starting to make more long-term plans and see the big picture again as a result.

And how are companies in Switzerland dealing with this?
At the moment we're a bit trapped between a hyped-up situation, in which we'd like to anticipate as much of the new reality as possible and a state of shock of sorts, in which we don't really know where changes are coming from and where they are taking us.

So that means they're stuck between two poles?
In principle, at least, companies are aware of the fact that the world is changing. We see numerous examples of companies and industries that are actively addressing issues relating to the future. At the same time, however, many others are still overwhelmed by trying to come to terms with the dimensions of the changes actually taking place in the world and wondering if they're really as fundamental as the technology companies in Silicon Valley would have us believe. Whether we're in the midst of a revolution or this is simply part of an evolution will only be revealed in retrospect.

What does that mean for Switzerland?
For us in Switzerland, that means we need to think about what role we want to play in this new economy. After all, we're not at the mercy of Silicon Valley's ideas and predictions calling for a digitization of everything that is digitalizable. One of our jobs will be to challenge the euphoric hype of the new economy. Uber and Airbnb, for instance, aren't merely innovations that are growing at lightning speed; they also cause damage and uncertainties that have to be dealt with.

Your recommendation?
The right step now would be not merely to view innovation as a technical component, as previously mentioned, but rather to embed technology within a market economy and within society. It's not the potential of a new technology that's primarily at the heart of this, but rather the added value it offers users. It's my belief that those companies that align their activities with this approach are the companies that will enjoy the greatest commercial success. That's why I don't share Mark Zuckerberg's motto of "Move fast and break things". It should really be "Think ahead and create value".

Will Silicon Valley remain the Mecca of this culture of innovation or can you already spot fresh sources of new ways of thinking in the world?
Of course Silicon Valley has certain qualities that will keep it at the forefront of industry's digitization process for quite some time. The location's magic touch can be attributed to a combination of several factors that have evolved historically. Yet we're also seeing new locations that cultivate a start-up culture and technological innovation: these are popping up in Berlin, London and Tel Aviv, and increasingly also in Switzerland. We can expect them to contribute new approaches. I'd like to re-emphasize, though, that it would be a mistake to think that technology is, in and of itself, the only thing capable of solving the challenges facing our society and economy.

Is interdisciplinarity the magic word?
Exactly, that's precisely what I'm trying to say. In Switzerland, people can be heard claiming that digitization means we'll mainly be needing software engineers in the future. I'm not so sure about that. Even in tomorrow's world, there will still be a need for manual skills and liberal arts mentalities capable of tackling the real challenges facing the market economy in a very real way. And I consider Switzerland predestined as a place where these

qualities can interact. Thanks to our dual education system, we have a long tradition of intellectual and physical skills. You can't just program everything; you also have to be able to build things. Silicon Valley's approach could definitely be applied more intelligently. That's where I see an opportunity for us.

Are there any sectors or branches of industry that are completely resistant to trends?
It might seem like every aspect of our lives has already been overrun by the rampant trend of digitization. The big question will be whether and how we can successfully design man-machine interfaces, and how smoothly we can integrate technology into our day-to-day lives.

To what extent do visions influence innovations and vice-versa?
There are essentially two mechanisms involved. Either you observe the present and project a development into the future. That's how Google is developing self-driving cars, which means that we'll have driverless cars in the future. Or you think about what might be desirable for the future without having any idea whatsoever as to when and how that goal might be reached. That was the approach used by German inventor and author Ernst Höckel in 1910 in his book entitled Handbuch für Erfinder (The Inventor's Manual), in which he documented desirable visions for the future. This is the right approach for a vision: Don't let yourself be guided by the possibilities opened up by existing technologies, instead imagine the best possible version you would like to see.

Everybody is talking about digitalization. Do you think they all know what they're talking about?

No, but it's really impossible to grasp right now because people aren't aware of its long-term consequences. The problem starts with understanding what digitalization actually entails. First you have to realize just how many different levels digitalization is occurring on. We are talking about personalization through data processing, about automation and virtualization, and, finally, about the democratization of production processes. And platforms need to be created where the first step is to learn where and how digital components can be employed meaningfully and where it's better to refrain from using them.

Where do the boundaries of digitization lie?

Digitization promotes efficiency. We will entrust algorithms and robots with performing simple processes and pattern-based tasks but it will be very hard to substitute digital solutions for anything more complex than that. And that's a good thing too.

Opinions differ on this point ...

Algorithms still fail when it comes to performing integrated analyses of highly complex systems like financial markets or human biology. There will always be people who say it's just a matter of time until algorithms become sophisticated enough to surpass the human brain's ability to process complex situations. On the other hand, there are also the skeptics who insist that an algorithm is only a model that will eventually reach its limit, and that people will always be needed to process complex, unexpected occurrences.

But will that limit ultimately be purely technological in nature?

No. If you shift the focus onto how digitalization benefits man, its limit will probably lie at the point where the disadvantages outweigh the advantages.

Could you give us a concrete example?

Users or end consumers provide a company with their personal data in return for a product or service that offers them added value. People benefit from digitization as long as this trade-off exists. If you are merely inundated with meaningless advertisements in exchange for your personal data, the disadvantages outweigh the advantages and you lose interest.

Does that mean users' personal data is becoming the new currency of the digitalized world?

That's the big promise being made and right now it's being presented without question as the foundation of the future economy at every conference I attend. The only thing we're getting right now, though, is useless advertising. Today we're living right in the middle of a data bubble that's about to burst because it simply can't produce the benefits people were promised.

Is big data just a pipe dream?

That's not entirely accurate. There are already a lot of applications available that provide real added value by processing and analyzing large volumes of data. Examples include those capable of recognizing patterns in customer behavior or others in the field of healthcare that assign therapies to patients with specific diagnoses. Yet here, too, there will likely be limits to the performance of such applications. Overfitting will reduce the precision of analyses once the volume of data has exceeded a certain level.

Where do we stand on the Internet of Things?

It's still in its infancy. We're just slowly starting to interconnect everyday appliances and get an inkling of what the long-term consequences of this technology might be. You could also say that we've just developed the alphabet and now have to learn how to read and write. While we might start seeing a large number of applications in our everyday lives through which intelligent devices actually offer added value, this development will also open up new risks of dependencies or system outages as a result of cyber attacks.

With that in mind, what is the biggest opportunity offered by digitization?

The biggest opportunity undoubtedly lies in increased efficiency. There are industries that still hold a great deal of potential for enhancing efficiency.

Will Industry 4.0 render human labor redundant?

Whenever I read articles on this topic written by concerned politicians, what springs to mind is that almost exactly the same essays and warnings were making the rounds during both the period of industrialization in the early 20th century and the period of automation in the 1950s. Pessimistic predictions repeat themselves in a regular cadence. But what always happens – and is about to happen again now – is that we adapt and change our abilities and skills to fit the circumstances. New professional profiles will pop up, and we will redefine the man-machine interface yet again. That means we'll have to think about how robots should be used, how we should make use of the freedom this gives us and how our work should be remunerated in the future.

Will our current educational system still be adequate in the future?

The way things look right now, only to a certain extent. Critical thinking calls for factual knowledge – in order to understand the world, you have to look at it in detail. In a world where the half-life of knowledge is becoming ever shorter, we have to take a critical look at our learning methods and target skills. Of course, basic math, writing and language skills will still have to form the cornerstones of education.

Where will urbanization take us over the next 50 years?

In a few highly developed regions of the world, including Switzerland, urban sprawl could decline again since the achievements of digitalization and mobility enable a more decentralized life. You don't have to live in a city anymore to get to work fast; in fact you can actually work in the Engadin as long as you have access to an internet connection. Plus, shortages in residential and living space combined with the desire for more peace and quiet will promote a broader distribution of the resident population throughout the entire country.

When all is said and done, aren't people working themselves into the ground, given the conflicting priorities of this fast-paced, technological world and the need for peace and tranquility?

Yes, we're already seeing this quite a bit and it has a lot to do with a misconceived understanding of technology. People are giving in to the temptation of trying to adapt to a computer's speed, but that's something they'll never be able to do. We might actually be standing at a turning point in history. Until now, the consensus was that more data, faster processing and more efficient processes would automatically provide a better decision-making basis. We've now reached a point where even greater volumes of information won't necessarily help us. I could have 500 or even 500,000 friends on Facebook, but it won't do me any good if I can't make use of those

contacts. That's why I'm convinced that the next level of innovation has to focus more on people.

So does that mean there will never be a 24-hour non-stop society?

No. As long as we are biological beings that require sleep and have a variety of other needs, we won't be able to pick up the pace however we want. We're actually already seeing countermovements. People's interest in working part time is growing again and work-life balance is a major topic of staff appraisals. I think people are reacting quickly and very instinctively on this point. Plus, this is also being influenced by market logic. Businesses are discovering that employees who take more breaks and don't work twelve hours back-to-back are more productive at the end of the day, have better ideas and work more precisely.

How are companies dealing with these developments?

It takes time to change cultures that have been growing for decades. We are currently experiencing a shift in workplace structures and models. Which work should I do at the office, which might be better to do at home? It's not a simple process and actually calls for a major effort on the part of companies.

Aren't millennials the ones demanding new innovations at an increasingly breakneck speed?

There's certainly a risk that we could become dependent on fast-paced changes. Reality will put a damper on it, though. Even millennials are actually already distancing themselves from that attitude and looking for a trade-off between fluctuation, change and permanence.

How will individualization develop over the next few years?

Individualization is one of the greatest achievements of our Western society in the past 50 years. We are free to shape our lives as we please, including our choice of career, partner, hobbies

and even eating habits. Yet that is precisely where we run the risk of overwhelming ourselves due to the sheer complexity of these choices. Even the task of selecting which groceries to buy at the supermarket presents us with countless decisions that our ancestors weren't faced with. In that context and in many aspects of life, I consider a return to the community and the individual's position within that community to be a cornerstone of each person's sense of belonging.

But doesn't digitalization lead to greater individual freedom?

Yes and no. On the one hand, of course, there are more ways to organize your life and better access to personalized products and services. On the other, though, digitization also leads to standardization and greater convergence. More importantly, the filters influencing your life will become increasingly narrow. That means algorithms recognizing your preferences and always applying them to you. You won't discover much of anything new outside your digital spectrum.

So the Gaussian curve has hit its social peak?

Yes. We'll always be pushed back into the middle. That can be seen in a number of different areas of life and business. Even in political discourse, where other opinions apparently no longer exist. Because in a personalized media world, you will only be offered news and opinions that confirm your prejudices. And that is a threat to democracy.

One last question: Does Switzerland's image abroad tally with how we see the country from the inside?

I frequently get the feeling that we overestimate our own importance and, to put it simply, rest on our laurels. In the past, Switzerland's pioneering spirit, hard work and courage have always helped it forge ahead. This is the spirit we need today – now more than ever.

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