



Portrait of Nicole Formica-Schiller

"Digital innovation lives through interdisciplinary exchange."

Nicole Formica-Schiller, author of "Artificial Intelligence and Blockchain in Healthcare: How COVID-19 and forward-looking technologies are revolutionising the status quo", CEO and founder Pamanicor Health, on disruption, digital transformation and innovation in healthcare.

Ms Formica-Schiller, you run your own company Pamanicor Health, are internationally active and are considered an expert in the field of Artificial Intelligence (AI), Blockchain, Big Data and Digital Ethics with a focus on healthcare. Did you imagine it all this way or did everything turn out differently than planned?

I had already been toying with the idea of becoming an entrepreneur before I started my studies. At the same time, however, I knew that I first wanted to gain international practical experience on the way there. My career steps were therefore designed from the start to acquire a broad range of skills that I can now apply and maximise in managing my own company and in dealing with our clients.

Because at Pamanicor Health, we consult globally. We identify disruptive trends in health, life sciences and biotechnology to support clients from a wide range of sectors in their digital transformation and innovation strategies with interdisciplinary solutions to shape a highly connected, regulated and global digital ecosystem. My previous international work experience, e.g. as Liaison Officer to the CEO of Nord Stream, as well as with companies such as Allianz, Shearman Sterling and Munich Re, proved helpful. At Freshfields Bruckhaus Deringer in London, I was able to contribute and deepen my digital knowledge in connection with the then groundbreaking Microsoft decision of the European Commission.

You studied law in Germany and graduated as an Attorney-at-Law. Was this choice of study always clear to you? And why did you decide to do an additional economics degree in parallel?

It was clear to me that I wanted to complete a degree programme that would provide an understanding of global economic, but also legal and political contexts against the background of digital developments, among other things. Especially as preparation for an international job. That's how the choice of law and economics came about.

There is a nice saying "Judex non calculat". And indeed, it is important to have an understanding of numbers and economic contexts. A law degree is a good basis for an analytical approach to issues, the quick comprehension of a large amount of partly unstructured information and, based on this, the development of efficient solutions. A skillset that is also advantageous for entrepreneurs.

What I missed in law school was interdisciplinarity. At Pamanicor Health, we work in an interdisciplinary way, i.e. everyone brings in their specific expertise, including from the areas of digitalisation, technology, medicine, business, regulation and policy, etc. This should be the normal case. Otherwise, the complexity of the rapid digital developments, especially in the health sector and in the international context, cannot be depicted realistically.

You are publishing in April this year your book "Artificial Intelligence and Blockchain in Healthcare: How COVID-19 and forward-looking technologies are revolutionising the status quo", are a member of various task forces, including on AI regulation, advise commissions and committees and run your own company. How do you reconcile everything?

My book is the logical consequence of my daily professional experience and interaction with various stakeholders worldwide. Especially in a field like health, which concerns us all sooner or later, it is important to show (digital) developments in a networked health ecosystem to a broad majority of the population. In particular, to understand connections between disruptive innovation and its impact on institutions, markets and societies, including Big Tech. My recommendations in the book - also to political actors - on disruptive technologies, taking into account regulatory, economic, socio-political and ethical aspects, also feed into my work with commissions, etc. And last but not least, I have a wonderful family that not only accepts what I do, but also actively supports me.

Were there moments of uncertainty or doubt for you and how did you deal with them?

Of course, there were and are always moments when you question things and yourself. But that is a good thing, because it is the only way to develop yourself and your environment and not lose your grip. Gerhard Schröder once said "Nicole, you are a fighter". In moments of doubt, I occasionally remind myself of this.

When you get positive feedback from your professional as well as private environment, it encourages you and you know this is the right path. Being selected and invited by Forbes for one of the most innovative ideas to "Writing Future Codes" in Zurich was such an example.

What would you recommend to lawyers who would like to become entrepreneurs?

My advice to women in particular is: have confidence! Look for role models who inspire you, be self-confident and trust in your knowledge and skills! Don't be intimidated and if you compare yourself to someone, then only for your own motivation and not to hide your own light under a bushel. Unfortunately, women tend to do that too often.

In your opinion, is entrepreneurship something that can be acquired theoretically or is there nothing better than "learning by doing"?

In terms of entrepreneurship, there is always the difference between theory and practice. Entrepreneurship can be taught from a theoretical perspective, as is now done at some universities in the DACH region (editor's note: DACH = Germany, Austria, Switzerland). However, entrepreneurial success in reality is based not only on a sound business model but also strongly on qualities that cannot be taught theoretically: Persistence, determination, unbiased curiosity and interest in new things, questioning the status quo, lateral thinking and taking responsibility for entrepreneurial decisions. In this respect, I welcome the approach of some universities to enable their students to exchange ideas with practitioners, for example by inviting start-up founders as guest lecturers to provide practical insights into entrepreneurship. My personal experience is that this offer is taken up by students with great enthusiasm.

You work globally and have been employed in many metropolises around the world, such as Kuala Lumpur, Moscow, Hong Kong, Munich and London. How do you experience the cultural differences in terms of prejudices against women in leadership positions?

There are undoubtedly big differences. In the DACH region, among others, the impression is sometimes given that everything is going wonderfully here when it comes to career (advancement) opportunities for women. However, this is far from being the case and there is still a lot of catching up to do compared to other countries, as the recently published glass-ceiling index of "The Economist" has impressively shown.

Due to the COVID-19 pandemic, many of the successes achieved in recent years with regard to professional equality between men and women have been undone.

Early on in my career, as well as today, when I work abroad, I experience that in some countries it is a matter of course for a woman to participate in board meetings and to be an expert in my field.

Worldwide, the majority of businesses are founded by men, although the number of women who start their own businesses has increased in recent years. As a woman, how do you experience entrepreneurship in Germany and Switzerland?

At first glance, it is still predominantly very male-dominated, although there are many great female entrepreneurs in the most diverse sectors. However, they are not sufficiently recognised by the public. There are various reasons for this. Some women entrepreneurs deliberately avoid the public eye. In addition, the reporting on this in some media focuses more on men.

Also, one cannot deny the impression that the same names of women often appear on award lists or "Top 50" overviews. A colleague from Silicon Valley once asked me in amazement, "Are there seriously not enough women so that it appears that always the same ones are on these lists?" Other countries are much further ahead. The visibility of women entrepreneurs is a matter of course there. This is an important point to encourage more women to start their own businesses.

One of the biggest hurdles for women entrepreneurs is finding new resources, especially funding for a new concept. How can women overcome this hurdle?

Through my work with venture capital and private equity, I still see some barriers for women, especially in deep tech. That is why it is very important to have a convincing business concept and to present it in an understandable way. A principle that applies equally to women and men, especially for founders in the field of AI, there are some investors in the current market environment who are interested in getting involved in the early stages, provided they are presented with a promising concept.

Until recently, you were Vice-President of the Healthcare Businesswomen's Association (HBA) Zurich-Zug and are now, among other things, a Board member of the largest German AI Association (KI-Bundesverband) at the Bavarian level. What do you particularly like about these roles?

Innovation thrives on professional exchange, to which I am happy to contribute with my expertise. At the same time, I can contribute my extensive global network and act as a link between the various stakeholders and the expectations of society.

Because of Covid-19, global health has become an important geopolitical issue. You have experience with large geopolitical projects, partly due to your work for Nord Stream. How can AI and Blockchain technology, for example, help to overcome the current challenges?

Global health care was an important geopolitical issue even before the outbreak of COVID-19. Even before the pandemic, I repeatedly pointed out to a wide range of stakeholders not to underestimate the geopolitical importance of the issue of health (care), especially in conjunction with technological developments such as AI and Blockchain, among others. America and parts of Asia are often cited as pioneers vis-à-vis Europe in terms of these forward-looking technologies. However, it is often forgotten that their success is not based solely on the purely commercial interests of the respective technology companies, but is also promoted by the state. When talking about the possible applications of AI and Blockchain in the fight against COVID-19, they are manifold. There are, for example, AI-based platforms for clinical studies on COVID-19; apps that use AI to recognise COVID-19 symptoms based on a voice evaluation; and the use of Blockchain to share COVID-19 data transparently, quickly and securely, to name just a few examples.

You are known for your ability to translate complex trends and disruptive technologies of tomorrow into use cases of today. Where do you see the biggest challenges in an increasingly digital healthcare system, also with regard to digital ethics?

Some time ago, I made the statement "AI does not stop at national borders" in the context of the German government's data ethics commission. The same applies to the sensitive health data of each and every one of us. In the future healthcare system - which is not as far away in time as some might think - this data plays an essential role. Both in connection with the use of Artificial intelligence, Blockchain and Augmented Reality, Quantum Computers, etc. Today, this data is already being collected on a large scale by the big technology companies (Big Tech) using apps, wearables, etc. But what exactly happens with this data? Should every citizen be entitled to data ownership in the sense that they can monetise it themselves or donate it in exchange for expensive health services? These are some of the challenges I see our society facing.

Especially in the area of preventive health care or general "fitness tracking", more and more apps and devices for tracking health data are being used in the private sector or by health insurance companies. Do you see a need for regulation of AI here?

As Co-author of the position paper "EU Regulation of Artificial Intelligence" by the German AI Association, which is currently being discussed with various stakeholders at national and EU level in Brussels, it is important for me to emphasise that regulation may be necessary in certain areas, but that it must prove to be understandable and implementable for the respective stakeholders. When drafting corresponding regulations, it is indispensable to pursue an interdisciplinary approach and to involve experts from the respective fields. In addition, too much regulation is detrimental to innovation and investment, especially for start-ups and SMEs. Regulations usually focus on yesterday's problems. Instead, the problems of tomorrow need to be solved. It is inherent in artificial intelligence that it is constantly evolving. It is imperative to take this into account when developing regulatory solutions. Today we are talking about apps. Tomorrow we'll be talking about digital twins.

Which female lawyer inspired you so much that she should be nominated as a role model for breaking.through? Why?

I am inspired by female lawyers who combine interdisciplinarity and internationality in one person, who fight their way against all odds and do not fall down in the face of headwinds. Margaret Thatcher was such a person. Indeed, controversial because of her political decisions. But a social climber who was born into a male-dominated environment, who unflinchingly made her way from humble beginnings to become the first female Prime Minister of the United Kingdom and who achieved great things.

Thank you very much for the interview and the time you took for it!

Zug, 10 March 2021. Nicole Formica-Schiller answered the interview in writing. The questions were asked by Audrey Canova.