# COVID-19 as an opportunity for IT

Experts prognose we will encounter more pandemics in the future as climate change progresses. Not to mention that the population is getting older. With that said, we have to adjust to this future and take on the opportunities given with this. You may ask yourself what this issue has to do with IT. Before I explain I’d like to state in advance that this is written from a German perspective with corresponding examples.

So what does health and IT have in common? Besides us getting a lot of health issues like backpains and headaches after we stare at screens almost the whole day, every health gadget has a underlying algorithm that makes it function. Not only newer technologies like CTs and MRTs use IT but also the common digital thermometers have little computers integrated to, for example, save the last result. Back to the screens: Nowadays there are also a lot of apps or smartwatches tracking your health data like your heartrate or your steps or they are helping you to find the best health care specialist for your concerns. You see, there are a lot of IT solutions related to health.

Only think about the Corona-Warn App or the Luca App generating QR codes to check our vaccination and track contagion chains. Two necessary apps developed solely to fight the Covid pandemic and with success: Despite the accusations about the lacking data privacy the Luca App states that in the timespan of May 2021 until January 2022 they have over 40 Million registered citizens (in comparison Germany has 83 Million citizens) and 323 registered health departments. The app generated over 555,000 warning notices and has an interface with the health departments (culture4life, 2022). In the same timespan the Corona-Warn-App has about 40 Million download, received over 90 Million test results and generated over 11 million warning notices. (Robert Koch Institut, 2022)

Tracking contagion chains and even more distributing vaccines all over the world is key to reduce the risk of the virus to mutate significantly. Especially in developing countries the risk is high because only a small number of the population has access to vaccines as the vaccines are mostly reserved for industrial countries. Therefore the US company Zipline has developed self-flying drones to deliver vaccines to rural areas in Ghana and plans to expand this project to more countries. Their drones can deliver vaccines faster and more reliable than traditional delivery methods without breaking the cold chain. (Vincent, 2021)

Also due to the pandemic the German government pushed the network expansion as the health care sector needed more data lines to cope with the increased health data that had to be distributed as fast as possible. Germany´s network was and is still far behind other countries but now with the governmental push, more and more IT solutions will be possible to roll out. Hospitals already have and try new IT solutions such as 3D printing for body parts, automated analysis for laboratory samples and augmented reality in surgeries but they still lag in communication and personnel is overloaded. The pandemic adds even more work on top and as stated in the beginning pandemics will occur more often that is why we need to develop those technologies further and develop more innovative technologies. Some even prognose that AI will replace parts of the health care personnel.

Additional to that German politicians respond to these issues by planning to pass new laws making it easier to put necessary health innovations on the market. In mid-2022 the new law “Digitale–Versorgung–und–Pflege–Modernisierungs–Gesetz (DVPMG)” will enter into force. The goal is to exhaust all digital resources to ease the health care sector and to incorporate digital health solutions into daily life. This law includes the financing and acknowledgment of digital care and health applications as well as strengthening their data protection. Telemedicine will be strengthened including digital consulting-hours, which started in Germany due to the pandemic in 2020, and submitting an incapacity to work certificate online. Also prescriptions will be issued digitally and the digital health record will be expanded. Further, it´s planned to expand the telematics infrastructure by meeting the requirements the various actors have and making the user surface more attractive, developing a data base for all patient info while reorganizing the purpose of the health insurance card and making data transfer and data saving more secure. Also the laws will take bureaucracy processes of service providers making it easier to roll out technologies. (Bundesrat Drucksache 52/21)

As you see there are a lot of opportunities oping up due to the German government passing long overdue laws.

A study conducted in 2020 interviewed and surveyed health care providers from countries in Europe where they see (unused) potential in health care technologies and how they see the digital transformation. The German participants recognized potential in every technology especially in telemedicine, digital prescriptions and remote monitoring and in only 2 out of the 18 given technologies they agreed that the potential is fully used. The two biggest obstacles seen for the digital transformation are bureaucracy and costs, both of them will be diminished by the new DVPMG law. (Deloitte, 2020)

Further experts prognose that by 2025, the market volume for digital products and services will to approximately 38 billion Euro in Germany and roughly 155 billion Euro in the EU. (Hosseini, 2019)

You see, there are a lot of opportunities opening up in the digital health field because Covid showed us where we lag behind and which issues we have to overcome. Covid showed us in particular how digital our world had become and what opportunities we have in IT which we haven’t even thought about before. Furthermore, the numbers don’t lie and digital health is and will be a promising and future-proof career.

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