



NEXTGEN NETWORK

PRACTICAL APPLICATIONS OF AI IN 2028: BERLIN, GERMANY | DECEMBER 7, 2018

At the second workshop in the NextGen Network in Berlin, Germany, participants met in groups and were tasked with imagining a scenario in 2028 to brainstorm practical applications of AI with a mock news article that, when ethically implemented, could improve German society. The discussions about values fed into group perceptions of how AI could be used to solve pressing social problems, such as: the effects of climate change, the changing landscape of traditional industries like agriculture, the logistics of healthcare systems, and the prevalence of incurable diseases like cancer. Find the workshop key takeaways here.

PANCREATIC CANCER: CURED

An international research consortium today announced that researchers successfully cured pancreatic cancer, one of the deadliest types of cancer. The consortium relied on the European medical database, which provided the relevant data to run different therapeutic models, out of which two eventually turned out to be effective. The consortium's lead scientist, Prof. Dr. Matthias Schweighöfer, announced that the therapy will be available to the whole EU until the end of the year.

The database was launched in 2020, with its beta-phase running until 2023. Back then, besides large popular interest, very few people decided to donate their data during the beta-phase. Privacy was one of the reasons why people decided not to participate. Many feared that their data would be used by employers, insurance companies, and other third parties to discriminate against them, for example, by increasing their insurance fees. After a large campaign, dramatically started by the Marlboro Man after being diagnosed with lung cancer, more and more people started to donate their data. Just before the beta phase was going to end in 2023, the EU increased their information efforts to collaborate with local celebrities, civil society and corporations. With the first positive results being published just when the beta-phase was going to end, an increasing number of people actually started to experience these positive results in their community, with many people knowing at least one person who was cured due to the insights generated through the data base. Since the beta-phase ended, citizens have to opt-out of the process.

Dr. Schweighöfer explains: "We are today able to cure most diseases that threatened humanity just 10 years ago. Getting diagnosed with pancreatic cancer was basically a death sentence in 2018 - less than 2% of people die of these cancer types today."

Today, 87% of European citizens are registered in the data base. By 2038, scientist expect a coverage of 100%. With full coverage within reach, Dr. Schweighofer expects that nearly every disease can be cured by the middle of the century.

BREAKTHROUGH: PREDICTIVE HEALTHCARE FOR FREE RELEASED BY GERMANY

As of today, a newly developed chip can be implanted under your skin to monitor health indicators continuously. The chip can measure your insulin, hydration, heartbeat,



sugar, blood pressure, and many more health data. This data is constantly analyzed and checked by an AI algorithm against data sets of known health and disease patterns. The system knows already 4,500 different diseases patterns and can help detect them at the earliest stage possible. This is considered a major breakthrough. The users will be notified upon the detection of health deterioration and will propose the most useful steps to take next for the user. Users can then decide autonomously with a built-in opt-in which health issues they want to have monitored by the system and which not. They can also decide whether they want to forward the notification to a doctor, or not disclose them at all. Even in a critical situation, the user has a veto on the transmission of the data.

Public health insurances have agreed to fully finance the project, given the significant savings potential that the application bears for health insurers throughout Germany.

The implementation process was not easy - many obstacles had to be overcome. Apart from privacy concerns and anti-cyborg sentiments in the population, ethical considerations had to be discussed. The current solution is based on the requirement that all data are secured, protecting data privacy. Data protection agencies have positively commented on the fact that users retain full data sovereignty. Moreover, the decentralized storage of user data helps to reduce the vulnerability to hacking attacks. However, given the extremely high sensitivity of the data generated by this application, and the potentially disastrous consequences of a data breach, additional measures will be necessary to make sure that no abuse can occur. Therefore, data are secured in in a decentralized way. In addition, to prevent the system form forcing users to change their lives, every patient has the possibility to opt out of sharing their data at any point. The government supports this system, investing that everyone has the possibility to use this service. Roll-out is planned for the whole European Union.

LAST TRADITIONAL FARM IN BAVARIA TO BE TURNED INTO 'AGRICULTURAL THEME PARK'

Driving a harvester, picking strawberries, planting wheat the attractions available at FarmLand are fun, diverse, and not only for kids. The last traditional farm in Bavaria closing is not only the end of an era, it also means a new beginning for Kirchheim. Müller's farm, once employing up to 500 farm workers

during harvest, will be renamed FarmLand and open its doors to visitors in early 2029. A European delegation now got to visit the park for the first time.

The closing of Müller's farm is also a symbol for the biggest structural change in the history of the Federal Republic since phasing out coal mining. The agricultural artificial intelligence revolution, as it was recently called, had become necessary after the Europe-wide drought of 2021, and the floods of 2022, which had seriously threatened food security on the continent. A result of climate change, the effects had

been exacerbated by several insurance companies hording proprietary data on climate and weather conditions, as well as agricultural production, that proved to be instrumental to the modernisation of the entire farming industry.

The final push for change arrived after 2023. An unprecedented investment program by the federal government, supported by the European Commission's Common Agricultural Restructuration Program, had resulted in a range of innovations that revolutionized farming. The European Open Data Provision, celebrating its five-year anniversary in October, had forced companies to give up proprietary control of data essential to the public good. The newly created EU Data Commons was able to pool experiences, climate data, agricultural data and open source applications, and made it available to all.

As a result, those innovations that now shape the farmlands of Germany received what they needed to leverage their full potential. Autonomous systems were created that revamped the entire farming sector. Artificial intelligence assured an optimal use of farmlands, as soil and weather conditions were measured and calculated to reap an enduring and sustainable output. Autonomous drones helped to recognize looming floods and droughts, which had been an increasing concern since early 2019. Farming vehicles, driving mostly autonomously since they were admitted for use across Germany in 2022, became ever more efficient in planting and harvesting at exactly the right time. The use of pesticides became a thing of the past, since smart technologies showed humans how to farm efficiently without destroying the countryside.

Yet the changes weren't easy. For many regions in Germany, autotomizing agriculture meant changing their business models and livelihoods. Bavaria, for the first time in 50 years, threatened to become a hotbed of unemployment. Yet the federal government, in close cooperation with the state of Bavaria and local authorities, managed to introduce the biggest retraining program in German history. Former farmers became supervisors of autonomous systems, and farming clerks learned how to maintenance the new machines. FarmLand is the latest output of a series of initiatives offering German urban elites a space to go back in time and enjoy the quiet peace of farm life.



"I still remember coming to Müller's farm in the early 2000s," says Piotr Moravczik, a local resident who emigrated from Poland in 2025. "In my early 20s, I used to pick the strawberries over here. Now I come back with my grandchildren to show them what farming used to be like." Like many other Europeans, Piotr was hit hard by the job losses created through autonomous systems. Yet he managed to retrain. With a grant by the European Commission, he became a systems engineer, now based in the Bavarian countryside.

Dealing with AI job losses will be a focus of the EU summit in early 2029. Another will be the advanced integration of national agricultural systems to make the current outputs even more sustainable. While FarmLand keeps the memory of traditional farming alive, one thing is for sure: The times in which humans had to bend down to pick strawberries are long gone.

EUROPEAN HEALTH DATA AGENCY LAUNCHED

The European Commission proudly launched the European Health Data Agency (EHDA) in Tübingen yesterday morning. 11 years after the initial idea of a European health-data ecosystem, the EHDA can finally take on its work. Binding their opt-in, this revolutionary agency will allow citizens all over the EU to share their patient data.

The EHDA will allow better diagnostics by collecting this data in a fully anonymized way, leading to better predictive analysis performed by sophisticated AI systems. Due to the large sets of data, rare diseases and diseases from previously underrepresented groups will be better recognized. An additional advantage of this AI application is in tele-diagnostics, helping healthcare in rural areas, as the system enables remote access and anonymous counselling. This would also allow for easier access to second opinions. The second component is a European-wide data patient system connected to the European health-care infrastructure. Doctors profit from access to better data and enjoy Europe-wide connectivity with fellow professionals, enabling them to provide more personalized care to their patients. Furthermore, national health agencies will now be able to get real-time updates on epidemic outbreaks.



The EHDA was set up after national standards among European member states finally could be harmonized. After a major security breach in Spain in 2021, when a massive amount of health data was stolen by Venezuelan hackers, the European Commission took more measures to protect health data and to reinforce data sovereignty. It was inspired by discussions on the GDPR and the cyber security directive. Moreover, as in Germany, insurance companies used heath data to attribute different rates to their customers, which was unconstitutional. A class-action lawsuit was filed, and more attention was given to a benign use of health data.

The EHDA is thus a great hope for many European patients. It remains open, however, how predictive analysis could be fostered. The European Commission has set up an expert group on this issue. It also wants to step up health-data cooperation with democratic Asian countries like South Korea. The European Socialist Party recently proposed to change the law toward an opt-out scheme, so more data could be collected by EHDA, due to the ongoing demographic change. Elderly people are still less prone to sharing their data.

Special thanks to Aspen Institute Germany for hosting the workshop.

