



ARTIFICIAL INTELLIGENCE IN THE NETHERLANDS

SUMMARY

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DenkWerk is an independent think-tank that wishes to contribute to the prosperity and the inclusive and progressive nature of the Netherlands by creating powerful ideas. To that end, DenkWerk brings together Dutch influencers who are willing to share their wide knowledge, experience, and creativity to give direction to broad societal issues close to their hearts.

DenkWerk thereto does its own research, using a wide network of experts. This way, we try to thoroughly study issues and provide structure and inspiration for actions and further research.

In order to contribute to the societal debate and to set change in motion, we strive to share the results of our work in the public domain.

Artificial Intelligence (AI) is not only an important theme worldwide, but also in the Netherlands. Generally, what we see and hear is just the tip of the iceberg: If a flight is canceled, KLM can reoptimize the entire schedule of routes, aircrafts and aircrew within minutes using AI; Dutch Railways can use it to predict and anticipate unplanned maintenance on its trains, resulting in fewer cancellations; also thanks to AI, online bookstore bol.com ensures that the discount applies to that very article that has been on your wish list the longest. Through its smart predictions and actions, AI is set to affect the government, the business community and consumers in the Netherlands on a larger scale. In a nutshell: AI is turning the world on its head.

We would summarize AI as a system that carries out functions normally associated with the human brain, such as perceiving, planning, dealing with uncertainty, resolving problems and recognizing emotions. In machine learning, the most promising type of AI, this is done using algorithms that learn from large quantities of data to try and reach the best statistical outcome for every task. AI is already proving to be capable of solving an increasing number of specific tasks better than humans.

If AI turns the world on its head, what impact will that have? We often hear negative reports about this impact, ranging from discriminatory AI and job losses, through to accidents with self-driving cars. It is undeniable that developments in AI raise serious social and ethical questions that call for a careful discussion and appropriate regulation. However, we have also seen the debate shift to

Leading the way in AI allows to decide on the values and destiny of the technology

the potential negative consequences of AI. A disproportional amount of attention for these issues means we are completely missing out on the opportunity to achieve a positive impact with AI.

We would like to rebalance the debate towards the much greater positive impact of AI. This involves more than looking at the impact of AI on gross domestic product which is in some cases estimated to be an incredible EUR 15,000 billion. Instead, we plot the impact of AI on two axes:



firstly gaining competitive advantage through AI (primarily higher revenues through the application of AI in marketing and sales, as well as lower costs through the use of AI in production and logistics), and secondly, creating value for the world's society (e.g. through improved medical care, better humanitarian aid, lower pollution and higher agricultural yields). For us, a country or business is successful in AI if it is able to generate impact through AI at its desired position along these two axes.

In order to achieve that, it is important to start early with developing and applying AI as a winner-takes-all effect happens much faster than for conventional products and services. The reason for this is that the technology increases in quality while it is being applied, and the knowledge acquired through this is less likely to seep away towards competitors and other industries. The need for an early start is the most important reason why the Netherlands should no longer delay a critical, widespread application of AI.

We encourage the Netherlands to turn the tide and demonstrate decisiveness in the field of AI

What is at stake here is a global race involving leadership in the field of AI. The prize in this race will be twofold. First of all, a leading position in the world that makes it possible to control the values upon which AI operates, and the uses to which it is put. Secondly, the winning countries will create economic success and gain political and military power through AI.

It will come as no surprise that the Netherlands, just like Europe, is currently lagging behind - while China is increasingly positioning itself as the projected winner in this race. The Netherlands is still way behind in terms of the private sector investments and government support for the technology. Academically, we are performing better than China, but see a lot of talent disappearing in the direction of the United States.

This disadvantageous position is caused by four factors, two of which are aspects of Dutch culture. We want to encourage the Netherlands to turn the tide by demonstrating decisiveness in the field of AI. We believe there is much more to be gained through AI than is currently being reflected in the public debate, and so want to initiate change. Becoming involved in AI will be crucial in order to determine the direction in which AI is heading, after all. We therefore call on the government to set a national agenda for the development and application of AI. In this agenda, AI can be used

for problems and in sectors that are already mentioned in the government's existing national digitization strategy, including healthcare, mobility and agriculture. In specific AI applications, there are genuine opportunities to adopt a leading position for the Netherlands. With a national agenda for AI, we hope to see concrete progress, serious ambi-

tions and urgent action. Together with the business community and universities, we aim to ensure that the Netherlands, once again, takes control over its destiny.