

NLAI Coalition

Action Agenda

Algorithms that work for everyone



Preface

Better diagnostics than the ones made by the best specialists, early detection of failures in transport systems, drastic improvements in fraud detection, optimising generation and demand for sustainable energy, and improving cybersecurity. These are a few examples carrying a similar core message: Artificial Intelligence (AI) will generate breakthroughs in society and economy, as well as bring welfare and well-being, hence contributing to solve societal challenges. However, innovation does not happen by itself. The Netherlands will have to embrace this new technology, accelerate science and invention and develop new applications. We do not have time to waste as AI boosts the “winner takes all” effect in digital, and data-driven economies, in which the early adopters objectively gain the most benefits. The Netherlands, therefore, has to strive for a global role in AI yet so matching our values in Europe: *Human-Centric*.

Our position paper "*Algorithms that work for everyone*" ("*Algoritmen die werken voor iedereen*") describes how the Taskforce AI wants to accomplish this goal: by building on a solid knowledge basis and numerous initiatives in AI in the Netherlands. Moreover, the Netherlands is a country with a solid history and experience in **collaboration**. In our view, building on this strength is essential for the implementation of AI in society and economy with an optimal social return on investment.

That is why we launched the Netherlands AI Coalition: *the* platform for collaboration between businesses, research and education centres, governments and representatives of our society. Starting with this action plan, represented in the following common pillars: (a) human capital, (b) research & innovation, (c) data sharing, (d) social acceptance and (e) start-ups and scale-ups. The coalition is pivotal for parties active or involved in AI applications in many areas and markets or for societal challenges.

We have chosen an inclusive approach, striving for responsible and trustworthy AI. The Dutch Government considers the Netherlands AI Coalition a strategic and overarching public-private partner, crucial for speeding up and realising a substantial part of their ambitions in the National Strategic Action Plan AI (SAPAI).

With the establishment of the NL AIC and the action plan, we are set to take off. We hope that many will join. Joining the Netherlands AI Coalition implies in:

- A rapid start of new initiatives and AI projects;
- Consolidating forces, learning from others and not having to do everything by yourself
- Having access to important contacts and organisations in the Dutch AI playfield;
- Being a pivotal partner in new investment applications in AI;
- Contributing to a robust Dutch proposition in knowledge and innovation within Europe.

So, let's get going!

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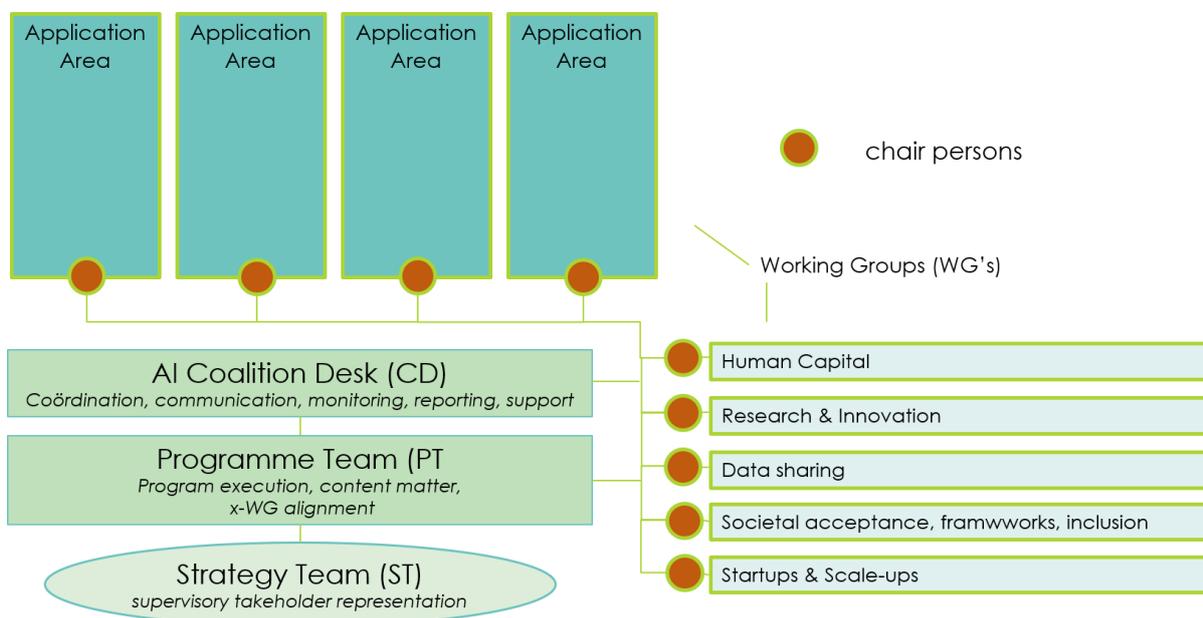
About the Netherlands AI Coalition

The development of *Artificial Intelligence (AI)* is inevitable. In the next decade, the prosperity and well-being of the Netherlands and its inhabitants will be determined by our ability of embracing the development of AI in both the private and public sectors. We cannot lean back. The Netherlands can only secure its welfare and well-being by becoming a significant player in the development and application of AI in multiple areas. *Collaboration* is a strong bearing of the Dutch and building on this strength is essential to successfully exploit AI, both for our society and economy. In this way, investments will maximise the social benefit.

The Netherlands AI Coalition (NL AIC) mission is to stimulate, support, and where applicable, organise the Dutch AI activities in collaboration with the public and private sectors. The NL AIC wants to make a substantial contribution to settle the position of The Netherlands among the European frontrunners in knowledge and application of AI for prosperity and well-being, whilst always taking into account the Dutch and European norms and values.

The NL AIC aims to include participants from enterprises, government, research & education, and society. Since the start of the NL AIC on October 8, 2019 over 200 organisations have signed on (status at the end of 2019). Please visit www.nlaic.com for more information on our current participants.

Focus in approach



The NL AIC stimulates, supports and organises (where applicable) *Working Groups* initiatives in which participants of the NL AIC are active. The *Working Groups* are the most important entities in the NL AIC and focus on the development of fundamental and practical knowledge and know-how in the so-called *Building Blocks* that are common to many AI applications. *Working Groups in specific Application Areas* are focusing on integration and implementation of AI in industrial and commercial sectors, governments and socio-economic missions. This document provides a summary of the activities of the Working Groups in (horizontal) *Building Blocks* and (vertical) *Application Areas*.

Each *Working Group* has control over (a) organisation, (b) subjects and (c) approach, but is, at the same time, well connected to other *Working Groups* via their chairpersons and the *Programme Team*. *Working Groups* individually and collectively within the *Programme Team*, decide on the contents of the NL AIC program. This program is in line with the strategic intent, as endorsed by the *Strategy Team*. The leadership of the *Working Groups* collectively forms the *Programme Team*.

The *Strategy Team* consists of high-level representatives of stakeholder groups of the entire AI value chain, collaborating within NL AIC:

- Fundamental and applied research and education;
- Government;
- Business (large, medium, small and start up);
- Society and consumers

Five members are directly appointed and elected by the participants within the NL AIC.

Working Groups, *Programme Team* and *Strategy Team* are operationally supported by the *Coalition Desk* in (a) organisation, (b) coordination, (c) communication (in- and externally) and (d) administration. The NL AIC also provides a dedicated linkage with EU initiatives.

Participants of the NL AIC can opt-in for several *Working Groups*, depending on their expertise and interest. They will (after the launch period) elect their leadership internally. The five (horizontal) *Working Groups* are defined on common Building Blocks. The (vertical) *Working Groups* in *Application Areas* can be extended in number, depending on the interest and involvement of participants. *Application Areas* will include Energy and Sustainability, Security, Peace and Justice, Technology Industry, Health & Care, Public Sector, Mobility Agriculture-Food and, finally, Financial Services.

Programmes in building blocks

The NL AIC stands for *collaboration*:

- *across the value chain*: from fundamental research to practical applications;
- *across various interest groups*: science and education, government, business and end-users (citizens, consumers);
- *Across a multitude of areas*: technical, economic, legal, ethical and social.

This unique approach leads to:

- Significant *acceleration in implementation* of responsible and relevant AI applications;
- *Increased efficiency* compared with individual, stand-alone approaches;
- *Speed up in knowledge and experience creation* ('learning');
- *Strengthening and use of resources* in national and European context.

The collective contribution of participants empowers the NL AIC. It leverages a cooperative approach in building *blocks* that are relevant for multiple *application areas*. *The starting plan and propositions summarised below will be further detailed and updated based on the participants of NL AIC.*

Human Capital

AI will have a significant impact on the entire labour market. It is expected that approximately 3 million people, in the Netherlands alone, will need additional education. Education institutions, businesses and the government need to collaborate to manage this challenge and exploit opportunities accordingly.

The *Working Group* Human Capital focuses on:

- the development of specific AI knowledge in different disciplines (technical, social, economic, business, legal) as well as the application and ability to work with AI;
- the development of new talent as well as retraining and educating the existing workforce (including management).

Activities in this *Working Group* are organised in three main lines of action:

- Mapping of demand and offering in AI knowledge and required competences for an AI professional;
- Stimulating a 'Life-long Learning' for employees and offering AI-focused training programs;
- Connecting and participating on existing initiatives for disseminating AI knowledge such as 'Tech in a day', 'Teach the Teacher', 'Geef IT door', and development of online tooling and matching tools.

This *Working Group* collaborates intensively with the Human Capital Agenda ICT and the Human Capital Working Groups of the Dutch Blockchain Coalition. Therefore, matching the ambition of team Dutch Digital Delta to create knowledge convergence and expertise in various ICT key technologies.

Research & Innovation

AI research in the Netherlands is in good shape, albeit losing international ground because other countries are improving rapidly. Shaping a combined approach leveraging both fundamental and applied research as well as valorisation will accelerate AI research, development and application while making it more efficient too. This approach is also part of the mission-driven and essential technology plan of the government with top sectors.

The Research & Innovation Working Group focuses on:

- identifying and solving obstacles to AI research, such as maintaining and increasing research talent at knowledge institutions;
- the link between knowledge institutions and organizations applying AI;
- the digital transformation of research, which is becoming more data driven.

These focus areas result in actions that stimulate a powerful field of research and innovation:

- Consolidating the positioning of Dutch knowledge institutions regarding European research funds;
- preparing a strategy for retaining and attracting researchers to Dutch knowledge institutions;
- involving more parties in the AI research field, including (technical) high schools and communities;
- strengthening existing partnerships such as the ICAI labs and the stimulation of new field labs for short-term and demand-driven research;
- improving the link between start-ups, scale-ups and subject-matter experts (SMEs), so that everybody has access to the knowledge needed for innovation.

On sharing data

AI applications need a significant amount of data (often) from different organizations. There are still obstacles to sharing data, albeit. We only want to share data if it falls under conditions that we determine ourselves and whose value we recognize. This is done lawfully and securely so that citizens and organizations feel protected.

This Working Group will provide participants with knowledge and resources for responsible data sharing. We provide training on data-sharing techniques for different target groups such

as decision-makers, businesses, lawyers, and technology. We focus on actual implementation and take the following steps to develop the training materials to carve the path to implementation:

- training on the prospects of responsible data sharing;
- analysis of data-sharing problems based on a specific AI case of the members involved;
- getting started fostering data sharing.

The development of the plan will take place in 2019, followed by its implementation in the first half of 2020. We are in line with existing data-sharing initiatives, such as *Datadeal* and *Dataloket*, CBS data lab, Learning and Expertise Centre for working data driven (LED) and the Big Data Value Centre, to deliver results as quickly as possible.

We now adhere to the following principles:

- data sharing initiatives must be based on well-defined standards;
- we explicate which principles we consider sensible, useful and legally justifiable;
- we connect with what is happening abroad while also considering our own positions.

Social acceptance and inclusion

One of the most significant challenges lies on exploiting the full potential of AI without compromising our public values and fundamental rights. The question arising is the following: how do you give companies, governments and scientists the room to research and implement AI applications in a way that we, as a society, find adequate? A critical challenge associated with that is the broad and diverse group of stakeholders necessary to agree on sustainable and pragmatic solutions.

The Working Group follows a practical approach based on four steps to achieve results:

- bottlenecks need to be clear: we make the most important bottlenecks in AI transparent and understandable to all stakeholders involved;
- agreeing on a solution: we design practical and supported solutions for these bottlenecks and make agreements to use them as a starting point to develop AI applications;
- application: we test the solutions agreed upon on practical use cases using field labs for implementation. Together, we evaluate the results and implement improvements to find common ground;
- cooperation and upscaling: we actively seek collaboration with (international) partners to guarantee socially acceptable and inclusive AI applications.

Solutions for the ethical and social bottlenecks in the application of AI have not yet been fully developed. This Working Group allows participants to co-create, together with experts, a broad environment for the responsible use of AI.

Start-ups and scale-ups

AI start-ups and scale-ups are of great importance for our economy and our innovation capability. In 2018, 309 Dutch start-ups were active in AI, and, on average, these companies grew by 29 FTE. AI-driven start-ups and scale-ups need to be better supported in the Netherlands to retain home this innovation power and to reduce the flow of these companies abroad. The NL AIC is committed to improve access for AI start-ups and scale-ups to risk capital, data, research and innovation ecosystems and talent (via the Human Capital Working Group) as outlined next.

Access to risk capital

Dutch AI start-ups experience great difficulties finding investments in our own country, especially in their initial phases. The main reasons are the lack of large funds in the Netherlands

and that investors are risk-averse and focused on short-term returns preferring, for example, the US or China.

To improve access to venture capital for Dutch AI start-ups and scale-ups, we will set up a national fund with approximately 2 billion Euro for AI start-ups, and scale-ups specifically focused on value-based rather than revenue-based investments.

Access to data

Innovative applications made by start-ups often need significant amounts of data from different domains and organizations. In many cases, this is an incredibly complex and lengthy process. In this Working Group, we will, in collaboration with the Data Sharing Working Group, simplify and make the process more concise by:

- Creating new datasets available in the Dutch language;
- implementing data trust use cases to guarantee secure data access and exchange, enabling a better use of, for example, digitised and anonymised government data;
- setting up a GDPR (General Data Protection Regulation) portal that helps vulnerable parties to be able to share data with start-ups and scale-ups according to the rules as quickly as possible.

Access to research & innovation ecosystems

The Netherlands will have to mature the development of a lively ecosystem of start-up and scale-up companies focused on AI applications. Only four European companies are among the top 100 global AI start-ups and Dutch start-ups are not yet included¹. Hence, we will:

- develop a code of conduct for companies, government and knowledge institutions, with the aim of further opening up to AI start-up partnerships and co-creation;
- organize at least fifty matchmaking interviews per year to give AI start-ups and scale-ups better access to potential partners;
- Provide expertise that start-ups can use when applying for (European) grants.

This plan will be developed in 2020, followed by implementation already in 2020 and beyond. We are aligning with existing initiatives to deliver results as quickly as possible.

Application Areas

AI is a generic technology that will eventually find its application in all sectors of industry and society. However, for the development of knowledge and experience in the implementation of AI in the Netherlands, it is vital to focus the limited resources and to deploy them onto specific sectors that are relevant to the Netherlands. In that way, good results are achieved, and knowledge and experience multiplied for use in other sectors or industries. In addition to the areas of application that are of great social importance and have been designated as mission-driven areas of innovation by the government, such as Security, Peace and Justice, Agriculture and Food, Health and Care, and Energy and Sustainability, other essential sectors participate in the NL AIC such as the Technical Industry.

Contact

For more information, please visit www.nlaic.com or contact the Netherlands AI Coalition Desk via info@nlaic.com.
