

TOWARDS BENEVOLENT AI

Report of the International Expert Meeting

“How can Governments become AI-Proof?”

Conditions for more effective & evidence driven government

December 2, 2020

The Hague

Organised by:



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PROGRAM

14.00 - 15.00 <u>Plenary opening</u>		
14.00	Bram Klievink	Full Professor of Public Administration & Digitalisation, Leiden University
14.15	Nick Hart	CeO, Data Foundation, USA
14.30	Barbara Ubaldi	Digital Government Lead, OECD
14.45	Massimo Craglia	Senior Scientist in AI, European Commission
15.00 - 15.15 Break		
15.15 - 16.15 Parallel sessions		

<u>Actionability of Transparent algorithms</u>	<p style="text-align: center;">Chair: Stephan Raaijmakers Professor by special appointment Communicative AI, Leiden University and TNO</p> <p style="text-align: center;">In the presence of: Bram Klievink Full Professor of Public Administration & Digitalisation, Leiden University</p> <p style="text-align: center;">Participants: Ministries, Provinces, Municipalities</p>
<u>Conditions for managing AI in a data driven government</u>	<p style="text-align: center;">Chair: Paul Groth Professor of Data Science, University of Amsterdam</p> <p style="text-align: center;">In the presence of: Massimo Craglia Senior Scientist in AI, European Commission Barbara Ubaldi Digital Government Lead, OECD</p> <p style="text-align: center;">Participants: Ministries, Provinces, Municipalities</p>
<u>From AI to evidence informed policy</u>	<p style="text-align: center;">Chair: Jaap van den Herik Professor of Computer Science and Law & Chair of the Board of Directors of the Leiden Centre of Data Science (LCDS)</p> <p style="text-align: center;">In the presence of: Nick Hart CeO, Data Foundation, USA</p> <p style="text-align: center;">Participants: Ministries, Provinces, Municipalities</p>
16.15 - 16.30 Break	

16.30 - 17.15 <u>Closing Panel</u>	
Chaired by: Kees van der Klauw	Strategist and Manager, Netherlands AI Coalition
Babette Bakker	Strategy & collaborations TNO, key technology area AI, The Netherlands
Jeroen van Velzen	Sr. director Dataservices, Research & Innovation at CBS, The Netherlands
Marten Tilstra	Program manager Interprovincial Digital Agenda at IPO, The Netherlands
Mona de Boer	Director Data & Technology PWC, Chair Algorithm working group NOREA
Hans Rijs	Board Member International Institute of Municipal <i>Clerks</i> (IIMC)
Stijn van Balen	Head of Datalab, Rijkswaterstaat, The Netherlands

Report on session 1

Actionable transparency to ensure accountable and auditable use of AI in Government

Responsible and fair use of algorithms in and by government is extremely important, and requires collaboration between professionals of various expertise, academic disciplines, layers of government, and across sectors. Ultimately, this will ensure acceptability with the wider public.

There is an important ethical side, which requires specific expertise to be understood and incorporated. Yet, even when ethically consequential decisions on deploying AI are identified and made, many choices and trade-offs are ultimately made at implementation. Ensuring equality and fairness, dealing with biases in algorithms and in the data, identifying and explicating (implicit) assumptions, are often specific for certain use, selection of algorithms, and data sets. Especially when decisions are informed by or based on AI, the difficulty in demonstrating how and why this input for the decision came to be, is problematic. Problematic cases of algorithm use (both public and private) find their way into the media, making it increasingly hard to get algorithm use accepted, both within the organization and to the public. Some participants felt that use of algorithms makes you 'guilty by association' to problematic cases, even if they are incomparable. Consequently, even those applications that are limited in scope and as transparent as they can be, require a lot of effort on both communication and political support.

Transparency helps, but stakeholders must also feel that they have assurances on the responsible use of algorithms, and can understand the use of AI to the extent that they can act on what transparency is offered them. Emphasizing that there is always a human being involved could help, also the concerned public could be engaged in sessions in which is shown how the algorithm came to a conclusion. Yet, if a person – whether a public service professional, a decision-maker or policy-maker – does not understand what is happening in the machine, they cannot fully explain or guarantee it. However, there can be technical measurements; standard tests are emerging to deal with this, e.g. by scoring the application score for bias and public communicability.

Yet, just transparent algorithms, documentation, or just putting a 'human in the loop' is insufficient. External auditors, explicit trade-offs between e.g. transparency and accuracy, clear and early communication are all required. Perhaps most importantly, professionals of different expertise must **interact and align**. Decision-makers or policymakers do not always understand what choices and trade-offs are made by their colleagues when configuring or using AI. Also the other way around, an analyst does not always have an overview of what potential political and administrative consequences their operational and technical choices have. Each professional involved must be aware of the interdependence with the work of others. Additionally, professionals should be exposed to adequate education (e.g. courses on AI, regularly updated due to the fast pace of this field, and effective communication strategy training).

Society holds government to a higher standard, compared to what is expected of how businesses use AI. This makes the deployment of AI by government much harder on all accounts: technical, organizational, administrative, legal, ethical and political. Yet, if we look at AI not as a tool but as an innovation process, and emphasize and institutionalize learning across organizations, sectors and disciplines, we may reach a broader and better understanding of how AI contributes to the public tasks, and within what boundaries and limitations. Combined with technical advances on explainability and auditability of algorithms, we may live up to society's expectations.

Report on session 2

Managing AI in a data driven government

We need to **change the terms of the conversation**: instead of focusing on technology we should pay attention to adding (public) value. In order to develop this public value we could as a first step develop approaches or maybe standards for the use of “open data”. The application of AI generally implies the use of (large quantities of) data. Governments can learn from “big tech”. These organizations are able to use data in order to get to know their customers. Governments are in a different relation towards citizens, but they could still learn about societal problems if they use AI to analyze the way their open data are shared and used, with the aim of getting a better view on the demands and preferences of citizens. “Data readiness comes before AI readiness” as one of the contributors said.

AI is regarded **too much as a “boogy man”**. We need to enhance awareness and regulation in order to use AI in responsible ways. Not using AI is not an option in the long run.

We need to **share practices (good and bad) in order to learn**. We are at the beginning of using AI in government, so learning is important to be able to use AI in responsible ways. The most promising areas for learning are in the areas where there is not a direct link with privacy issues. For example the automated translation of municipal council meetings, or data with regard to food spillage. If large quantities of data can be collected and shared and governments are able to show how public value is created using this data, this will pave the way for more experimentation and at the same time for regulation and ethical/responsible use of data.

We **need both trust/trustworthiness and transparency** but we should differentiate between these two as they are not the same. Transparency should be aimed at the “process”, not so much at the “product”. Algorithms for example are continuously changing. If you focus on the algorithm as a product you are aiming at a moving target. Still, transparency is not everything: most of us trust their automobiles without exactly understanding how the engine works. But minimal standards of transparency will have to be enforced by law and should be auditable. Trust in AI is very important as well. Governments need to show how public value is created, this will enhance trust. Learning experiments, sand boxes and pilots re important for building trust because they may lead to small business cases on public value creation.

Report on Session 3:

From AI to evidence informed policies

In the USA, AI technologies are used at a large scale in public administration. This may cause problems as Policymakers often do not understand AI, so bias and flaws in application are not always recognized. There also is a huge variety of privacy laws. In US alone, there are over 3000 privacy laws. Internationally, it is even more difficult to calibrate and align these laws. Therefore, we need more international collaboration for AI and big data, to help administrations in order to share insight into all laws applicable.

How to make the best of international collaboration? Do not disregard Africa and other parts of the world outside USA, China and Europe from the start, as Kenia for instance had its AI strategy earlier in place than the Netherlands. We should explore if we may gain insights from these and other processes around the globe.

Privacy is a highly fluid development and challenges time and again effective legislation. Governments need to understand the needs and desires of citizens, which includes both respect for the privacy of

the individual and innovation of government services with the use of AI. One possible approach for responsible creation of algorithms may be to turn datasets into Synthetic datasets that do not disclose confidential information.

Public-private cooperation

In the USA, there is more trust in business than government. So we need to find out how we can turn that to our advantage. Collaboration between business and governments creates opportunities and we need to convince policymakers to use these. Public-private collaborations are not always working well, as IPR and commercial ownership may create bottlenecks for serving the public good optimally. We may have the risk that the private sector will outclass the public sector. Still, public-private cooperation is needed as new technologies have to wait for political approval to allow for utilization.

Another issue is the opportunity to insource AI. This may become risky the more so when governments do not really oversee all the details of the technologies. It's also very cost-ineffective.

Innovation

We need to understand better how we can innovate within AI or through AI. At the moment the policy approach is principle based versus rules based. The latter makes it difficult to act responsibly on AI. If we still choose that approach, we need an extensive set of measures. When embracing the preferable former option (principle based), we need to combine the development of new successful systems, and check timely if the outcomes are still in line with the current policies and laws.

There is quite some difference in being a 'first mover' that can operate without regulations and can apologize afterwards, versus followers that are mentally and operationally constraint. Should we create 'environments' for innovation?

The role of education is crucial. First and foremost, judges need to understand the basics of AI, considering their legislative authority. But educating civic workers and public administration is vital as well. Do be aware of the culture differences between professions, as these will never be fully resolved.

How to stimulate innovation responsibly? Industry best practices are key, as they can demonstrate which innovation will work or will not work in a sector where the turmoil is generally lower than in the public sector.

Knowledge driven policy programmes need to collect data from the very start. Therefore, this doesn't happen, as managers are busy with day to day operations, and are not looking ahead. We should adapt to a learning culture, and big data and AI should be a huge part of that. Please be aware that obstructing innovation is not only about privacy but also about procurement/tendering rules and organizational culture.

The citizen

Shouldn't we build in every AI-solution a permanent check whether humans still understand what it's doing? Is this already integrated in the national legislation? If yes, we should also address the broader legal framework which includes human rights and civil rights in general.

The Closing Panel

Recommendation from session 1 (on transparent algorithms): Explainability is key to including the human factor in AI, which requires people to be engaged in AI and emphasize learning on and from AI.

Recommendation from session 2 (on internal organization): We need to change the terms of the conversation, we need to focus less on technology and more on the (public) value of AI.

Recommendation from session 3 (on generating evidence): We need to stimulate public-private cooperation, but we need to be fully transparent on the related conditions; private ownership of data may be a hurdle too high to overcome in the public sector.

Panel Discussion

Standards are important in order to be able to cooperate not only technologically but also on the process level. We need standards in order to bridge data-use between public agencies/departments, between governmental levels and between public- and private parties. For creating transparent AI, we need to build trust between parties and on conditions.

Not in all cases, technical standardization may be applied or already feasible. Standardisation is difficult. Often there are already competing (semi)standards; a new attempt may easily lead to yet another standard and the problem becomes the implementation thereof by the professionals involved. In some environments we need to get agreed on goals first and on what we want with the data, before we can get an agreement on the technology. A good example of an upcoming standard is FAIR: (Findable, Accessible, Interoperable, Re-usable) which would enable federated use (i.e. avoiding physical transfer of data). But most historical data does not meet that standard

One of the challenges now is to build algorithms, based on datasets from different domains. Important to develop standards not only for technology but also to develop standards of what we expect for application aspects of AI from different users in different domains. Especially in the ethical, legal and social aspects we need to develop common views which also can be regarded a 'standard' This is particularly important in an international context, as companies will face serious roadblocks if those 'standards' diverge while trust with citizens will also be affected by different interpretations. Such approach would be best served by considering clear application use cases from domains.

Some experts state that algorithms need to be certified and listed in order to build more trust. In Amsterdam they have established an algorithm register for this purpose. In order to use these registers properly we need to agree on how we wish to scrutinize or supervise AI, and make sure that transparency is not just for the sake of transparency, but is actionable for various stakeholders. Algorithms are not right or wrong in itself. It's the use of it that can lead to mistakes. We should stick to the law, but laws leaves ample decision space on how to apply them.

A second point of attention is that we should leave ample space for experiments in order to find out how we can work with algorithms e.g. in order to enhance the prediction of specific interventions or to reduce costs. We should enable standards and create a safe environment in which these experiments may take place for the purpose of learning.

In general we may state that we need data engineers and data scientists to build AI, we need academia to understand the underlying principles and methods and we need policymakers to deal with the consequences. If we make use of each other's expertise in the earliest phase of development, allow for piloting and a safe environment for learning and share best practices across, we may be able to achieve the best results.

All participants are invited to discuss things further at the conference "Evidence for Policymakers", where a specific day (December 17) takes place on Data & Algorithms. Please indicate "Guest AI meeting" at the registration form.