COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

Strasbourg, 13 April 2021

CDDG(2021)4
Item 3.1.1 of the agenda

EUROPEAN COMMITTEE ON DEMOCRACY AND GOVERNANCE (CDDG)

DRAFT STUDY ON THE IMPACT OF DIGITAL TRANSFORMATION ON DEMOCRACY AND GOOD GOVERNANCE

Secretariat Memorandum
prepared by the
Directorate General of Democracy
Democratic Governance Division

Introduction

According to its terms of reference for the biennium 2020-2021, specific task (i) of the European Committee on Democracy and Governance (CDDG) reads as follows:

(i) Building on its previous work on e-democracy and taking into account the outcome of *the 129th Session of the Committee of Ministers in Helsinki, prepare a study on the impact of digital transformation, including artificial intelligence and automated decision-making, on democracy and good governance, also with a view to contributing to the work of the CAHAI.*

The preparatory work to complete this task is being carried out by the working group on democracy and technology (GT-DT). The present draft is the result of working group meetings held in 2020 and 2021 as well as examinations by the CDDG Bureau and the CDDG meeting in plenary.

To prepare this draft study, GT-DT has held hearings with the following experts:

- Mr Thorsten Thiel, Research Group Lead, Weizenbaum Institute for the Networked Society, Berlin, Germany, on *Digitalisation and democracy*, and
- Ms Gabriela Viale Pereira, Department for E-Governance and Administration, Danube University Krems, Krems a.d. Donau, Austria, on *Smart cities and good governance*.
- Mr Peter Wolf, International IDEA, on *Micro-targeting in political campaigns: state of current debates*
- Ms Ines Mergel, Professor of Public Administration in the Department of Politics and Public Administration at the University of Konstanz on *Digital transformation of public administration: best practice and trends* and on *Digital transformation of public administration: best practice and trends*
- Mr Hans Kundnani and Ms Marjorie Buchser, Chatham House on *The future of democracy in Europe: Technology and the Evolution of Representation.*
- Ms Barbara-Chiara Ubaldi, OECD, on *12 Principles of Digital Government*

The chapter on Good Governance is largely based on an expert paper provided by Prof. Ines Mergel, expert consultant. Ms Mergel also presented the main findings of the paper to the CDDG plenary in November 2020.

A restricted webspace has been set up to ensure that all CDDG members can have access to the working documents of the working group and contribute to its activities remotely. All publications can be found there, including additional documents such as the presentations by experts, current research studies and contributions made available by the member States themselves.

At its meeting of 8 February 2021, the working group considered the preliminary draft study and agreed on some changes and additions. While instructing the Secretariat to introduce these changes and additions, the working group approved the study in substance. At the request of the working group, the Rapporteur on democracy and technology accepted to review the draft study prior to its final submission to the CDDG, with a view to adding an executive summary, further developing the conclusions, taking account of the most recent developments and ensuring consistency with ongoing Council of Europe work, namely the work being carried out in CAHAI. The working group took note of the offer by the UK delegation to support the Rapporteur in the final drafting.

The CDDG is invited to examine the following study, with a view to its approval.

TABLE OF CONTENTS

Executive summary

This study explores the impact of digital transformation on democracy and good governance in the light of the 12 Principles of Good Democratic Governance, highlighting risks, opportunities, mitigating and enabling factors, as well as providing examples drawn from the experience of Council of Europe member States.

There are various debates at play on the **future of democracy in the digital age**. Distrust in representative institutions and traditional political actors, including criticisms for being elite and unresponsive to the real needs of the people have been amplified by social media. Individuals, however, are willing to **engage in the public sphere**. Digital technologies provide additional opportunities to express this engagement: citizens participate in online conversations, consultations and deliberations; contribute online to causes they support, including financially; and share their input through digital platforms that help hold public institutions to account.

Case studies show that, increasingly in recent years, **deliberative forms of democracy** have been used to complement representative democracy, without replacing it but contributing to greater transparency and inclusiveness of the public decision-making process by democratic institutions, at all levels of government. Digital transformation has offered a new range of tools for deliberative democracy, contributing to its widespread use.Digital transformation is also affecting the **political and civil society landscape**. New actors of democracy have emerged while traditional actors have adapted to new ways of campaigning and spreading their message. Increasingly, even if not equally in all member States, political parties have recourse to **microtargeting in political campaigns**. The report deplores the lack of transparency and accountability around the way political ads are run and financed. More research and access to data is needed to fully understand the impact of microtargeting on the formation of public opinion.

Private actors, in particular internet intermediaries and social media platforms, increasingly play a central role in the public sphere, as providers of infrastructure, content creators and distributers. Increasingly, big tech companies play a role as gatekeepers, selecting the information which is shared on social platforms, targeting it to specific audiences and potentially having an influence on the public opinion, the political debate and ultimately electoral results.

Overall, digital technology offers ways to enhance the quality of democracy in terms of participation, accountability and responsiveness. At the same time, it increases the risk of discrimination against some parts of society, due to lack of access and/or digital literacy which may exclude some citizens from the democratic process.

Digitalisation can offer public administration new channels to deliver quality services online. Since the 1950s, public administration has made significant efforts to modernise, progressively taking up digital technologies. Digitalisation of the public administration is led by the political will to deliver better services while ensuring cost-efficiency, yet it is not free of challenges: effective changes have the needs of end-users at the heart and must be accompanied by the development of enabling measures, such as training for the civil service and diversification of human resource profiles. **Embracing digital transformation means also promoting a cultural change in the work of civil servants.**

The increase in the use of AI and automated decision making in the public sector raises several issues, among them accountability, transparency and the risk of discrimination. Without adequate safeguards in place, technology can adversely affect the enjoyment of individual rights and freedoms, for instance as regards privacy and data protection or the right not to be subjected to discrimination, on any ground, including digital literacy or access. These concerns need to be addressed to maximise the positive impact of digital transformation in the respect of human rights, democracy and the rule of law. This is why it is necessary to **regulate the use of AI in the public sector** so as to protect individual rights and avoid undesirable wider impacts on society.

The **local level** offers an ideal platform to introduce and learn from new democratic practices and technologies, given its size and proximity to citizens. Examples of smart city governance and participative democracy can be found in abundance and information about best practice should be exchanged on a regular basis to promote shared learning and further innovation in this field.

The digitalisation of the public sector has rapidly accelerated in the context of the Covid-19 pandemic. Indeed, the ability to quickly digitalise administrative processes and services has greatly contributed to the **resilience** of public action, ensuring that democratic institutions could continue to work and public services to be delivered. In parallel, however, digitalisation exposes democracy to new risks and influences, and the public administration to new **vulnerabilities** at the hands of hostile or ambivalent private and public actors, which must be identified and appropriate mitigations put in place.

PART I – GENERAL ISSUES

1. Introduction

Digital transformation has an impact on all aspects of life, from the economy to government, from geopolitics to the way in which ordinary people interact. It is developing at a very fast pace, to such an extent that there is an impression that some technologies, especially artificial intelligence, may soon bring about a revolutionary change for which people, institutions and societies are not yet fully prepared.

In the last twenty years, the Council of Europe has started a reflection on these matters, to help its member States identify the challenges posed by digital transformation and be better equipped to take advantage of the opportunities it offers.

For instance, the Council of Europe has worked on issues such as e-democracy, e-governance, internet governance, the use of artificial intelligence in criminal law, preventing discrimination due to biased algorithms, and the manipulative use of social media in electoral campaigns.

The Council of Europe work in this area has intensified in the past 2-3 years, with mandates being given to different intergovernmental committees to look into different aspects relating to technology and its impact on human rights, democracy and the rule of law.

In this context, in its terms of reference for 2020-2021, the CDDG has been asked to draft a study on the impact of digital transformation, including artificial intelligence and automated decision-making, on democracy and good governance, also with a view to contributing to the work of the Ad Hoc Committee on Artificial Intelligence (CAHAI). CAHAI is an ad hoc intergovernmental structure that has been set up to examine the feasibility and potential elements of a legal framework for the development, design and application of artificial intelligence, based on Council of Europe standards in the field of human rights, democracy and the rule of law.

So far, the impact of digital transformation on democracy and good governance has not been described in a comprehensive manner by academic institutions, think tanks or international organisations. While many scholars, experts, organisations and the Council of Europe itself have examined the impact of social media, misinformation and disinformation on the electoral process, an analysis of the overall impact of digital transformation on democracy and governance in all their aspects is missing. Without the pretence to be exhaustive, the CDDG study would, therefore, have an added value in itself, being the first attempt to describe this impact in a comprehensive manner, identifying on the one hand risks and mitigation measures and, on the other hand, benefits and enabling factors.

In addition to contributing to the work of the CAHAI in the specific area of artificial intelligence, the study could also help identify some areas for further follow-up by the Committee of Ministers and/or the Centre of Expertise for Good Governance.

2. Definitions

Digital transformation refers to the use of digital technologies, tools and applications of any kind: from digitisation of processes to blockchain and artificial intelligence. Applied to government and public administration, digital transformation enables new ways of functioning, engaging with citizens and civil society at large and providing services to the public.

Digitisation is the conversion of data or information from analogue to digital or binary while **digitalisation** goes beyond this process, opening effective online interaction.

To date, there is no single definition of **artificial intelligence** accepted by the scientific community or agreed by various international organisations. The term, which has become part of everyday language, covers a wide variety of sciences, theories and techniques of which the aim is to have a machine reproduce the cognitive capacities of human beings. It can therefore cover any automation resulting from this technology, as well as precise technologies such as machine learning or deep learning based on neural networks. In the course of the discussions, CAHAI members, participants and observers indicated different view on the need for a definition of AI. A consensus, however, was found on the need for the future Council of Europe legal framework on AI to adopt a simplified and technologically neutral definition of its purpose, covering those practices or application cases where the development and use of AI systems, or automated decision-making systems more generally, can impact on human rights, democracy and the rule of law, and taking into account all of the systems' socio-technical implications. (1)

An **algorithm** is a finite suite of formal rules (logical operations, instructions) allowing to obtain a result from input elements. This suite can be the object of an automated execution process and rely on models designed through machine learning.

Machine learning makes it possible to construct a mathematical model from data, including a large number of variables that are not known in advance. The parameters are configured as you go through a learning phase, which uses training data sets to find links and classifies them. The different machine learning methods are chosen by the designers according to the nature of the tasks to be performed (grouping, decision tree). These methods are usually classified into three categories: human-supervised learning, unsupervised learning, and unsupervised learning by reinforcement.

3. Relevant Council of Europe work

In the last twenty years, the Council of Europe has worked on digital transformation and its consequences in the following main areas:

- E-democracy (including e-government, e-voting and e-participation)
- Online media and electoral campaigns
- and, most recently, artificial intelligence.

The work of the Council of Europe on data protection is also to be taken into consideration as large-scale personal data processing (including profiling and targeting of internet users), which is a common practice for social media platforms and online services, presents new threats to freedom of expression and privacy, but also to human dignity and respect for vulnerable groups.

3.1. E- democracy

The Council of Europe has been a pioneer in identifying the opportunities and risks that digital technologies present for democracy and governance.

The work of the Council of Europe in the field of e-governance started with the **Integrated project "Making democratic institutions work"** (2002-2004). In February 2004, the Committee of Ministers of the Council of Europe adopted the terms of reference for the Ad Hoc Inter-Sectoral Group of Specialists on e-governance (IP1-S-EG). On the strength of its work, in 2004, the Committee of Ministers adopted **Recommendation Rec(2004)15 on electronic governance ("e-governance").**

1 https://rm.coe.int/cahai-2020-23-final-eng-feasibility-study-/1680a0c6da

Subsequently, the **Good Governance in the Information Society Project** (2004 – 2010) focused on how new information and communication technologies (ICT) affected the practice of democracy in Council of Europe member states. Its main aim was to provide governments and other stakeholders with new instruments and practical tools in this field and to promote the application of existing instruments and of good and innovatory policy practice. The Committee of Ministers also set up a specific structure, the Ad hoc Committee on e-democracy (CAHDE, 2006-2008). Its work ushered into the first international legal instrument to set standards in the field of e-democracy, Recommendation CM/Rec(2009)1 of the Committee of Ministers to member states on electronic democracy (e-democracy).

The Council of Europe is the only international organisation that has set intergovernmental standards in the field of **e-voting**. The first text on this matter was recommendation Rec(2004)11 of the Committee of Ministers on legal, operational and technical standards for e-voting. Since its adoption, the Recommendation has been subject to biennial review meetings. In 2014, when it became clear that after ten years there was a need for updating Rec(2004)11, the Ad Hoc Committee of Experts on Legal, Operational And Technical Standards for E-Voting (CAHVE), consisting of government appointed representatives from members States and organisations with direct experience or specialised knowledge on e-voting, was set up and given the mandate to revise the standards and prepare a new recommendation in the light of the new developments in the field of new technologies and elections. **Recommendation CM/Rec(2017)5 of the Committee of Ministers to member States on standards for e-voting** aims to harmonise the implementation of the principles of democratic elections and referendums when using e-voting, thus building trust and confidence of voters in their respective voting process and methods.

The relationship between democracy and technology has been high on the agenda of the **World Forum for Democracy** (WFD). In 2013, the WFD dealt with the topic: *"Re-wiring Democracy: connecting institutions and citizens in the digital age"*.[2] The Forum highlighted the potential of online platforms, e-democracy applications and similar digital tools to enable participation and make democracy more transparent and responsive. It also examined the risks posed by such tools, especially with regards to privacy issues and the digital divide. The Forum concluded, among others, that for democracy to become stronger in the digital age, it is necessary to introduce safeguards and standards for e-democracy applications, invest in digital literacy and close the digital divide.

In its 2019 edition, the WDF tried to answer the question: *"Is democracy in danger in the information age?"*.[3] The way information is produced and consumed has changed remarkably over the last two decades. Traditional media outlets have been supplemented and at times even surpassed by platforms, blogs and social media. The Forum thus raised questions with regards to the reliability and independence of information and its accessibility and addressed issues such as hate speech, safety of journalists and disinformation campaigns on social networks – all topics highly relevant to the functioning of democracy and governance structures in the digital age.

3.2. Social media and electoral campaigns

In a report on *Digital technologies and elections*, published in 2019, the Venice Commission and the Directorate of Information Society and Action against Crime further delved into the use of social media and electoral campaigns. (4) They highlighted how the growing use of "bots" and "trolls" in social media, as well as the massive distribution of false information, seriously damage equality of arms in the electoral competition and allow for external actors to manipulate public discourse and the citizens' voting preferences.

2 https://www.coe.int/en/web/world-forum-democracy/2013-forum and the report: http://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016806b1783
3 https://www.coe.int/en/web/world-forum-democracy/forum-2019
4 https://www.venice.coe.int/webforms/documents/?pdf=CDL-AD(2019)016-e

Furthermore, the algorithms that govern search engines and social media may foster a partial and sometimes illusory comprehension of politics and democracy.

Furthermore, the Declaration of the Committee of Ministers on the manipulative capabilities of algorithmic processes - Decl(13/02/2019)1 also addresses this issue, highlighting that *"8. Contemporary machine learning tools have the growing capacity not only to predict choices but also to influence emotions and thoughts and alter an anticipated course of action, sometimes subliminally. The dangers for democratic societies that emanate from the possibility to employ such capacity to manipulate and control not only economic choices but also social and political behaviours, have only recently become apparent. In this context, particular attention should be paid to the significant power that technological advancement confers to those – be they public entities or private actors – who may use such algorithmic tools without adequate democratic oversight or control."*

Work in this area is ongoing: in December 2020, the Venice Commission adopted the "Principles for fundamental rights - compliant use of digital technologies in electoral processes"(5), while the Committee of Experts on Media Environment and Reform is elaborating a draft recommendation by the Committee of Ministers to member States on electoral communication and media coverage of election campaigns.

3.3. Artificial intelligence

The Council of Europe has shown awareness of the threats and opportunities associated with **artificial intelligence**, including its potential to revolutionise the relation between state, business and citizens.

In its 2019 report on *The State of Democracy, Human Rights and the Rule of Law in Europe*, former Secretary General Thorbjørn Jagland called for a strategic, transversal approach on AI, developed and applied in line with European standards on human rights, democracy and the rule of law. Subsequently, in the conclusions of the Helsinki ministerial meeting, the Committee of Ministers pointed out, that: *"Effective supervisory mechanisms and democratic oversight structures regarding the design, development and deployment of AI must be in place. Functioning democratic processes require an independently informed public, and the encouragement of open and inclusive debates. Public awareness of the potential risks and benefits of AI must be enhanced and necessary new competencies and skills developed. Due public trust in the information environment and AI applications must be fostered; (...) The design, development and deployment of AI tools must be subject to risk assessment in line with applicable principles. All automated processes should be designed to make them scrutinisable to a human reviewer. Effective remedies must be in place within public and private remits in all cases where human rights violations are alleged. Algorithmic transparency is crucial for building trust and ensuring due rights protection."*[6]

Following the decision of the ministerial meeting in Helsinki in May 2019, the Committee of Ministers set up the Ad Hoc Committee on Artificial Intelligence (CAHAI).[7] CAHAI has a mandate to examine the feasibility and potential elements of a legal framework for the development, design and application of artificial intelligence, based on the Council of Europe's standards on human rights, democracy and the rule of law. Its work should be finalised by the end of 2021.

5 https://www.venice.coe.int/webforms/documents/?pdf=CDL-AD%282020%29037-e
6 https://rm.coe.int/conclusions-from-the-conference/168093368c
7 Webpage of the Council of Europe Ad Hoc Committee on Artificial Intelligence

In April 2020, the Committee of Ministers adopted a Recommendation on the human rights implications of algorithmic systems, issuing a set of guidelines calling on governments to ensure that they do not breach human rights through their use, development or procurement of algorithmic systems.[8]

Given the complexity, speed and scale of algorithmic development, the guidelines stress that member States must be aware of the human rights impacts of these processes and put in place effective risk-management mechanisms. Furthermore, the development of some systems should be refused when their deployment leads to high risks of irreversible damage or when they are so opaque that human control and oversight become impractical.

Council of Europe documents on Artificial Intelligence

- Feasibility study on a legal framework on AI design, development and application based on Council of Europe standards, adopted by the CAHAI on 17 December 2020
- CAHAI Secretariat, Towards Regulation of AI systems, 2020
- Recommendation of the Committee of Ministers to member States on the human rights impacts of algorithmic systems - CM/Rec(2020)1
- Declaration of the Committee of Ministers on the manipulative capabilities of algorithmic processes
- PACE, The need for democratic governance of artificial intelligence (2020)
- PACE, Preventing discrimination caused by the use of artificial intelligence (2020)
- PACE, Justice by algorithm – the role of artificial intelligence in policing and criminal justice systems (2020)
- PACE, Artificial intelligence in health care: medical, legal and ethical challenges ahead (2020)
- PACE, Artificial intelligence and labour markets: friend or foe? (2020)
- PACE, Legal aspects of 'autonomous' vehicles (2020)
- Unboxing AI: 10 steps to protect human rights - Recommendation of the Commissioner for Human Rights, May 2019
- Guidelines on Artificial Intelligence and Data Protection - *T-PD(2019)01*
- European Ethical Charter on the use of artificial intelligence (AI) in judicial systems and their environment
- Recommendation 2102(2017) of the Parliamentary Assembly of the Council of Europe on Technological convergence, artificial intelligence and human rights

Biennium 2020-2021: Council of Europe work on Artificial Intelligence

- Draft guidelines for online dispute resolution ("ODR") mechanisms, including possible AI applications in such systems – CDCJ
- Concept note: Artificial intelligence and criminal law responsibility in Council of Europe member states – the case of automated vehicles - CDPC(2018)14rev
- A study on the impact of the digital transformation, including artificial intelligence and automated decision-making, on democracy and good governance is currently being drafted by the European Committee on Democracy and Governance (CDDG): CDDG is drafting standards on new technologies and the different stages of the electoral process in the form of a Committee of Minsters' recommendation or guidelines - Democratic Governance Department
- Ground work to explore risks and benefits of AI (measures need be taken to prohibit the use of software algorithms with corrupt intent and great potential of AI to

8 https://search.coe.int/cm/pages/result_details.aspx?objectid=09000016809e1154

improve the effectiveness of steps taken to combat corruption, for instance in being used in complex investigations) – GRECO
- Development of Recommendation and Study on the impacts of digital technologies on freedom of expression - MSI-DIG
- Development of Recommendation on Combating Hate Speech - ADI/MSI-DIG
- Draft standard-setting instrument with guiding principles for media and communication governance in the context of the new media and information paradigm based on social media distribution, taking account of related risks (manipulation of public opinion, lack of public trust, information disorder) - MSI-REF
- Youth policy standards and other institutional responses to newly emergent issues affecting young people's rights and transition to adulthood, including AI - Joint Council on Youth
- Publication on E-Relevance of Arts and Culture in the Age of Artificial Intelligence - Culture and Cultural Heritage Division
- Report on AI in the audiovisual industrie - European Audiovisual Observatory
- Draft Declaration of the Committee of Ministers of the Council of Europe on the risks of computer-assisted or artificial-intelligence-enabled decision making in the field of the social safety net

4. Digital transformation and the 12 Principles of Good Democratic Governance

The 12 Principles of Good Democratic Governance are enshrined in the Strategy on Innovation and Good Governance at local level, endorsed by a decision of the Committee of Ministers of the Council of Europe in 2008.[9] Developed initially with the local level in mind, the 12 Principles in practice assist public authorities at all levels of government in improving governance and enhancing service delivery. As such, the 12 Principles act as an inspiration and orientation for member States, representing the fundamental values of European democracy and requirements for good democratic governance.

12 Principles of Good Democratic Governance

1. Participation, Representation, Fair Conduct of Elections
2. Responsiveness
3. Efficiency and Effectiveness
4. Openness and Transparency
5. Rule of Law
6. Ethical Conduct
7. Competence and Capacity
8. Innovation and Openness to Change
9. Sustainability and Long-Term Orientation
10. Sound Financial Management
11. Human Rights, Cultural Diversity and Social Cohesion
12. Accountability

Whether in the area of democracy or in the area of government and public administration, ***when adequate safeguards are in place***, technology can play a vital role in strengthening the implementation of all these principles, thus improving the quality of government, meeting people's needs and expectations, and ultimately contributing to greater trust in public institutions.

9 15th session of the Conference of European Ministers responsible for local and regional government (Valencia, 15-16 October 2007) − Report by the Secretary General
https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805d3dc8

Despite the manifold opportunities digital technologies offer to strengthen democracy and governance, digital technologies might also adversely affect the enjoyment of individual rights and freedoms, for instance as regards privacy and data protection; lead to opacity of electoral campaigning and political decision-making, thus weakening the democratic process; and create divides and new grounds of discrimination based on digital literacy or internet access. These concerns need to be addressed to maximise the positive impact of digital transformation.

5. The impact of Covid-19 on digital transformation

The Covid-19 pandemic has accelerated digital transformation in the public sector, especially in the public administration. During the lockdowns introduced in Spring 2020 to respond to the first wave of the pandemic, Council of Europe member States had to find new ways to ensure the uninterrupted functioning of key institutions and continue to deliver services to the public.

Thus, bureaucratic procedures were simplified and digitised; a number of services to the public were digitalised in record-time; public servants – at all levels of the administration – were asked to work from home; and a number of elected assemblies and other bodies met by videoconference and introduced online voting, to name a few of the measures that were introduced.

The same trend happened outside the public administration: being unable to organise public gatherings, political parties campaigned online; likewise, civil society organisations mobilised online.

This acceleration of digitalisation was not equally straightforward in all Council of Europe member States: some were better equipped than others to introduce the new measures, due to existing legal and administrative regulations, work culture, level of digital literacy and availability of the technological infrastructure.

This study will include references to the innovations introduced as a result of the pandemic even if, at this stage, it is too early to know the extent to which they will have a durable legacy. The CDDG has published a study dedicated to the issue of "Democratic governance and Covid-19" (10) which highlights in more detail trends and lessons learned.

10 https://www.coe.int/en/web/good-governance/-/cddg-releases-a-report-on-democratic-governance-and-covid-19-

PART II – IMPACT ON DEMOCRACY

1. Forms and characteristics of democracy

> While democracies share common features, there is no single model of democracy.
> *UN Resolution on promoting and consolidating democracy (A/RES/62/7)*

In order to understand the impact of digital transformation on democracy it is necessary first of all to understand what a democracy is. While there are many philosophical and sociological definitions of democracy, an international legally agreed definition does not exist. Democracy is commonly understood as a system in which government is exercised by the people, either directly or through their elected representatives.

The annual reports of the Secretary General of the Council of Europe on *The State of Democracy, Human Rights and the Rule of Law in Europe* provide a list of parameters which, despite difference and specificities, are common characteristics of democracies. They include:

- The separation of the three branches of power (executive, legislative, judiciary);
- An effective system of checks and balances between the branches of power, including parliamentary oversight of the executive;
- A balanced distribution of powers between different levels of government;
- Political pluralism (freedom of expression, freedom of association and freedom of assembly; and existence of a range of political parties representing different interests and views);
- Free and fair elections, and a plurality of forms of civil and political participation;
- The rule of the political majority with respect to the rights of the political minority;
- The rule of law, with nobody being above the law.

Furthermore, often different forms of democracy are referred to. They include:

Representative democracy: a system in which the electorate elect representatives to initiate and vote on laws, policies, and other matters of government on their behalf;

Direct democracy: a system in which the electorate initiates and/or vote on laws, policies and other matters of government;

Deliberative democracy: a system in which deliberation (by consensus or majority) is central to decision-making;

Participatory democracy refers to the direct participation by citizens and civil society at large, individually or in associations, in public decision-making.

Normally these forms coexist, with a different emphasis on each of them according to the specific tradition and context of each member State.

Scholars refer also to other forms of democracy. One of the most interesting developments of the past few years are **aleatory (or aleatoric) democracy**, which relies on the active involvement of randomly chosen citizens in the public decision-making process, and **collaborative democracy**, which is a broad term to refer to the combination of elements of representative, direct and electronic democracy.

2. A different impact on different forms of democracy

Every two years, International IDEA publishes a report on the state of democracy. In its 'Global State of Democracy 2019: Addressing the Ills, Reviving the Promise' (11), International IDEA highlights that *"While the past four decades have seen a remarkable expansion of democracy throughout all regions of the world, recent years have been marked by declines in the fabric of both older and younger democracies. (…) Democratic erosion is occurring in different settings and contexts. New democracies are often weak and fragile. Older democracies are struggling to guarantee equitable and sustainable economic and social development. The share of high-quality democracies is decreasing and many of them are confronted with populist challengers."*

Indeed, many argue that liberal democracy is in a crisis or has come under attack. However, there is no consensus about the causes of the crisis nor on the role digital technologies play with regards to the crisis.

A recent study on "The future of democracy in Europe: Technology and the Evolution of Representation" (12) by Chatham House argues that "(…) *the crisis of liberal democracy cannot be blamed on the development and prevalence of digital technology, as is sometimes asserted or more often implied. Rather, the crisis has deeper causes about which there is little consensus, with views dependent on normative assumptions about democracy that are ultimately political. Nevertheless, it is clear that digital technology is transforming society, and in particular the public sphere, in ways that are not yet fully understood."* The study challenges the assumption that social media has amplified polarisation and even argues that one of the causes of the current crisis of liberal democracy, at least in Europe, might be the lack of polarisation in the past 20-30 years.

Criticisms that democracy is experiencing a crisis should be nuanced. Some elements of democracy are being challenged and losing ground while others are acquiring greater prominence. It is hard to say whether this is a problem or rather an evolution of democracy. For instance, for many years Council of Europe member States have witnessed a **disenchantment with representative democracy**, which is epitomised by declining participation rates in elections and plummeting support for traditional political parties. At the same time, **new political actors and movements have arisen** and new forms of democratic engagement have flourished, giving **greater weight to direct, participatory, deliberative or collaborative forms of democracy**.

Very often the authorities themselves have promoted recourse to these new forms of democracy to bridge the gap between representative institutions and citizens, or to compensate for some weaknesses such as lack of clear political direction, lack of public support for some reforms or lack of specific expertise in a given area. These initiatives have the advantage of combining bottom-up and top-down approaches, even when initiated by the authorities, they lead to greater citizen engagement in public decision-making and, ultimately, they result in greater acceptance of the final policies by the public. In this way they do not replace representative democracy but are complementary to it.

Digital transformation is not the root cause for accrued emphasis on these forms of democracy, but is accompanying and accelerating this trend by **providing new channels and opportunities for sharing information and engaging citizens in policy and legal initiative and design.**

In this sense, technology can contribute to revitalising democracy, enhancing participation, openness, transparency, inclusiveness and responsiveness.

11 https://www.idea.int/publications/catalogue/global-state-of-democracy-2019

12 Hans Kundnani, The Future of Democracy in Europe. Technology and the Evolution of Representation, March 2020.

Democracy is not a static system. On the contrary, *"One way to think about the current crisis is that another moment may have arrived that requires democracy to evolve. In particular, citizens may now be demanding a kind of democracy that is more responsive than the current representative model. The solution is thus not to limit democracy, for example in response to the threat from perceived populism, but to deepen it further in what Claus Offe has called the 'democratization of democracy'."* (13)

The current situation can also be interpreted in light of two different approaches to democratic governance: responsible v. responsive modes of government, or a constitutional v. popular approach. The open question is where to strike the balance between these two modes, since both elements are important. **Trust in government depends as much on responding effectively to the needs of people as on governing responsibly and accountably.**

In fact, trust in government is crucial to ensure a well-functioning democratic system. Without trust by the public in the ability of the government to deliver and adequately govern, the foundation of democratic system is eroded. Member States therefore need to invest in trust building measures. The 12 Principles of Good Democratic Governance provide a good blueprint for that.

Governments should ensure a meaningful participatory approach and the involvement of different stakeholders (from civil society, the private sector, academia and the media) in the decision-making processes concerning the deployment of AI systems in democratic processes.

Case studies

Ireland: Citizens' Assembly on Gender Equality

The establishment of the Citizens' Assembly on gender equality was approved by the two chambers of the Irish parliament in July 2020. Its aim is submitting legislative or policy proposals to parliament, with a view to ensuring effective gender equality and removing barriers that stand in the way of this objective. The resolution sets out that the Assembly should consist of 100 people, including a Chairperson appointed by the Irish government and 99 citizens entitled to vote at a referendum, recruited at national level and randomly selected in accordance with best recruitment practice, as advised by industry experts so as to be broadly representative of Irish society. The resolution also sets out specific topics for the Assembly to consider, working methods and the establishment of an Advisory Expert Group. Members of the public do not have access to the meetings but the plenary sessions are streamed live at www.citizensassembly.ie. Ireland has a consolidated experience in the area of citizens' assemblies.14 One specificity of this assembly is that, due to the Covid-19 pandemic, its meetings take place online.

Austria: E-Participation

Austria has seen a number of efforts in e-participation initiatives during the last years. A major step in the field of e-democracy and e-participation was taken with the creation of a new Central Electoral Register ("Zentrales Wählerregister - ZeWaeR") in 2018. The Register not only contains the voter lists of all 2,096 Austrian municipalities but also allows to sign nation-wide public initiatives both online (with a qualified electronic signature) and at any Austrian municipality.

13 Ibidem

14 Previous Assemblies - The Citizens' Assembly

A recent example of the possible use of other e-participation tools took place in the city of Scheibbs, Lower Austria. The city administration and the Federal Computing Center (BRZ) used the blockchain-secured e-participation tool "BRZ eDem" and combined it with virtual reality technology in order to get citizens involved on a new e-participation platform. At the end of 2019 all Scheibbs residents received a token. By using the token, participants could decide between three different designs, which they could experience with the help of virtual reality technology. The choices were expressed anonymously, without drawing any conclusions about the participants' identity. Each token could only be used once.

Norway: Participatory budgeting at local level in Fredrikstad

The municipality of Fredrikstad has since 2009 held three rounds of participatory budgeting, with a mixed use of e-Democracy tools. Projects have been created from time to time on case-by-case basis. The aim was to include especially the less politically active segments of society and had a special focus on young people, older persons and immigrants. The municipality decided on the topic and the size of the budget, allowing citizens to design different suggestions for the proposed project and vote electronically on the topic at this webpage. Users signed up by registering their email address. Participatory budgeting has also been done offline by inviting people to a central meeting place (circus tent in the square) hot food and asking people to take part in designing a town square.

Belgium: Involvement of citizens in the multi-annual policy plan in Tielt

The initiative aims at involving citizens with the drafting of the multi-annual policy plan. The choice has been made for an online budget platform by way of the website http://www.tielt.kiesmee.be/, on which the citizen can indicate which of the twelve policy areas – ranging from mobility to care to culture, sports and tourism, etc. – are really important for him or her. All policy areas are extensively documented, which lets the citizen to make a reasoned choice. All items receive a base amount, calculated on the current policy/ budget. On the basis of the priorities of the participating citizen, each time more, less or just as much funds can be allocated to one of these policy areas. The principle of the shopping basket applies: as long as money is available, more funds can be allocated. If the budget is inadequate, funds have to be moved. A file describes for each policy area how the base amount is currently used.

Belgium: E-platform municipality and Public Centre for Social Welfare in Kinrooi

To post an idea or proposal, the citizen must first register on the site. This can be done with his or her email address, but also with a Facebook or Google account. Once logged in, the citizen can submit his or her idea or proposal (title, description, possibly photo, etc.). The process provides feedback points for what will happen with the proposals. Launching an idea or proposal is not yet a guarantee of implementation.

Sharing is caring: citizens can call on other citizens of their municipality to vote on their or to submit an idea themselves. He or she can also provide feedback or vote on other proposals. Proposals from children under the age of 13 are also welcome. But for privacy reasons, they cannot register directly. If children under the age of 13 wish to participate in this e-platform, this can be done through the registration of a person who has the right to exercise parental authority over the person concerned.

3. Stakeholders of democracy

The Council of Europe has consistently referred to stakeholders of democracy as all individuals and institutions involved in the functioning of democracy, such as public authorities, institutions, NGOs, citizens and civil society at large.

Digital transformation affects the way in which these stakeholders act and interact. Thus, also reshaping the way in which citizens engage with public authorities. Digital transformation has affected the functioning of different forms of democracy opening up new ways and possibilities: campaigning for elected assemblies increasingly takes place online; various citizen initiatives, including petitions, are conducted online; similarly, online consultations platforms are more and more widespread and used also by public authorities.

3.1. Political parties

In recent years, there has been a sharp decline in the membership of traditional political parties coupled with the rise of new political movements and parties greatly reliant on digital technologies. It is evident that **digital technology has helped to reinvigorate democracy, in particular the role of political parties**. The new so-called digital parties in various member States have been using digital technologies to effectively mobilise citizens and, in many cases, gain electoral support. They have done so by shifting internal decision making online and opening the process up to civil participation. This opening up to a wider audience has been effective in generating large scale support. However, some may argue that the draw-back has been the "tyranny of people with time" – as the voices and positions of those who have the most time to spend might be the most visible and prominent.

Piattaforma Rousseau, Movimento 5 Stelle, Italy

Rousseau is the platform of direct democracy of the Five Star Movement in Italy. Its objectives are the management of the Five Star Movement in its various elective components (Italian and European parliaments, regional and municipal councils) and the participation of members of the platform in the life of the Five Star Movement through, for example, the writing of laws and voting for the choice of electoral lists or to settle positions within the Five Star Movement. As of July 2020, 306 consultations have taken place through the platform.

Online political crowdfunding, International IDEA

In a 2018 publication, International IDEA – the International Institute for Democracy and Electoral Assistance – draws an overview of online political crowdfunding initiatives implemented by political parties, mainly in Europe. Online political crowdfunding is the process whereby individuals donate small amounts of money to a political initiative, very often a political party, through digital means. As a tool, it can help political parties increase their resources by garnering support amongst disenfranchised groups; on the other hand, it opens a number of issues from the point of view of transparency and compliance with party funding regulations, which need to be taken into account by relevant legislation.

3.2. New civil society landscape

The **civil society organisations landscape has changed** too, with the rise of tech-savvy global players such as Avaaz (the world in action), change.org and successful national variations (Campact in Germany, 38degrees in the UK). These groups are often dismissed or critiqued as slacktivism/activism from the couch. However, by using technology to mobilise people they have managed to have an impact on laws and policies.

Using digital platforms to share information, to launch public consultations, to express one's views, to mobilise campaigns, to collect funds and to pursue common objectives has become common practice. In Switzerland, for example, the campaigning organisation Campax runs campaigns on pressing issues, and the Operation Libero movement aims at a long-term change in politics, to become a new political movement. Both operate largely digitally.

Technology is creating unprecedented opportunities. At the same time, **it is stretching the limits of existing laws and regulations on freedoms of expression, association and assembly which were conceived for traditional forms of political engagement**. An example of this is facial recognition software that tracks movement of people in public spaces and therefore potentially impacts on their right of assembly and association, in addition to other human rights, such as privacy.

In its 2021 Guidelines on Facial Recognition (15), the Consultative Committee of the Council of Europe Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data calls for strict rules to avoid the significant risks to privacy and data protection posed by the increasing use of facial recognition technologies. Furthermore, it proposes banning certain applications of facial recognition to avoid discrimination.

3.3. New actors of democracy

Digital transformation is also bringing about a new role for private in the public sphere: a stark increase in the power and influence of the private sector over the digital eco-system is apparent. In addition, companies such as internet intermediaries, platforms and digital service providers are expanding their activities (and subsequently influence) into the public sector – as producers and providers of services, infrastructure and know-how. This development can lead to a better, more responsive and cost-effective design and delivery of services, with a subsequent improvement of the quality of governance. At the same time, it could also potentially lead to risks for public safety and national security, especially if sensitive data is leaked, systems are hacked or malfunction due to technical or human errors. Furthermore, the public sector might become dependent on private companies for the smooth running of the administration (e.g. Wannacry ransom attack in 2017 (16)).

The Parliamentary Assembly of the Council of Europe (PACE) adopted Resolution 2341 (2020) on the "Need for democratic governance of artificial intelligence (17). In the report, the Rapporteur Ms Bergamini (Italy, EPP/CD) highlighted among others that "***One of the more general concerns about AI technologies in terms of democracy is an unprecedented and un-checked concentration of data, information and power in the hands of a small group of major digital companies*** *which develop and own the algorithms, as well as the centralisation of the internet itself. These big companies no longer serve as simple channels of communication between individuals and institutions but play an increasingly prominent role on their own, setting the agenda and shaping and*

15 https://rm.coe.int/guidelines-on-facial-recognition/1680a134f3
16 https://www.kaspersky.com/resource-center/threats/ransomware-wannacry
17 https://pace.coe.int/en/files/28803/html

transforming social and political models. If too much political power is concentrated in a few private hands which prioritise shareholder value over the common good, this can threaten the authority of democratic States. Thus, there is a clear need to reduce the influence of major private companies on democratic decision-making. Moreover, public-private collaborations in AI and its use in sensitive fields, such as public order; security and intelligence; border control, but also in research and development, blur the boundaries between the responsibilities, processes and institutions of democratic States, and the interests of private corporation."

From a democratic perspective the increasingly influential role played by private companies poses challenges as the responsibilities and obligations of the public sector and the private sector are very different in nature.

4. Impact on the formation of representative institutions

Free and fair elections are the cornerstone of representative democracy. They require independent public opinion formation. Digital technologies form an integral and important part of the information eco-system that voters rely on. Digital technologies have reshaped the ways in which people express their will through votes and representation, and they have to a large extent changed political campaigning.

Online media and electoral campaigns

The constant and simultaneous flux of information across multiple online platforms represents a huge challenge for the surveillance of behaviour and resources during political campaigns. Moreover, the anonymous creation of content hampers the identification and attribution of responsibilities for illegal online behaviours. The growing use of *bots* and *trolls* in social media, as well as the massive distribution of false information, seriously damage equality of arms in the electoral competition and allow for external actors to manipulate public discourse and the citizens' voting preferences. Furthermore, the algorithms that govern search engines and social media may foster a partial and sometimes illusory comprehension of politics and democracy. The Venice Commission and the Directorate of Information Society and Action against Crime of the Council of Europe have recently published a report (18) exploring these aspects from the point of view of democracy, human rights and the rule of law.

4.1. Misinformation and disinformation

For democracy to function, a well-informed public is needed. In the digital age, information circulates on a global scale and is often produced in one country and consumed in another. The global nature of information sometimes makes it hard to identify the source or check the credibility of the information. Interference by foreign actors in the electoral process has been on the rise.

18 https://www.venice.coe.int/webforms/documents/?pdf=CDL-AD(2019)016-e

The European Parliament set up a Special Committee on Foreign Interference in all Democratic Processes in the European Union, including Disinformation (INGE) (19). The Special Committee is tasked with assessing *"the level of these threats in different spheres: major national and European elections across the EU; disinformation campaigns on traditional and social media to shape public opinion; cyber-attacks targeting critical infrastructure; direct and indirect financial support and economic coercion of political actors and civil society subversion."* It aims at identifying solutions and proposing tools to counter attempts to sabotage Parliament's core work.

Digital technologies, including artificial intelligence and machine-learning algorithms, have been used by various actors to influence democratic processes and outcomes. For instance, the recourse to *bots* and *trolls* during electoral campaigns with a view to manipulating voter behaviour has received great attention by media, governments and organisations working in the area of democracy, including the Council of Europe. And yet, it seems to have become an increasingly frequent problem against which it is difficult to find a solution.

As noted by the Venice Commission, "*The "democratisation" of content production and the centralisation of online distribution channels have had as unintended consequence the proliferation of false information, private and public disinformation tactics. The advent of every means of communication (a) expands the dissemination of and the access to information (freedom of communication); (b) implies the risk of abuses (malicious content); (c) opens the way to censorship and (d) to manipulation by the powerful public and private actor."* (20)

The issues raised above concerning misinformation and disinformation are further exacerbated by technological developments such as deep fakes. These technological advancements make it harder for all stakeholders, including the service providers themselves as well as citizens and civil society at large, public authorities, and media specialists to identify the truth content and thus separate fact from fiction.

The Council of Europe has addressed issues related to these trends, among others in the Study on the use of internet in electoral campaigns (21) in 2018; Recommendation CM/Rec(2018)2 of the Committee of Ministers to member States on the roles and responsibilities of internet intermediaries (22); and the Declaration by the Committee of Ministers on the manipulative capabilities of algorithmic processes (23).

Furthermore, the Council of Europe works on media and information literacy and has numerous programs to this effect. For example, the Council of Europe work on freedom of expression highlights with regards to media literacy that "*it is of utmost importance for individuals to be able to develop cognitive, technical and social skills and capacities that enable them to effectively access and critically analyse media content; to make informed decisions about which media they use and how to use them; to understand the ethical implications of media and new technologies, and to communicate effectively, including by creating content*." (24)

19 About | INGE | Committees | European Parliament (europa.eu)
20 https://www.venice.coe.int/webforms/documents/?pdf=CDL-AD(2019)016-e
21 https://edoc.coe.int/en/internet/7614-internet-and-electoral-campaigns-study-on-the-use-of-internet-in-electoral-campaigns.html
22 https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=0900001680790e14
23 https://search.coe.int/cm/pages/result_details.aspx?ObjectId=090000168092dd4b
24 https://www.coe.int/en/web/freedom-expression/media-literacy

United Kingdom: assessing the impact of misinformation and disinformation

The UK Election Commission published a report on the 2019 general elections[25] and concluded among others that:

- Misleading content and presentation techniques are undermining voters' trust in election campaigns

- It is too often unclear who is behind digital election campaign material. Significant public concerns about the transparency of digital election campaigns risk overshadowing their benefits

- Social media companies need to provide more detailed and accurate data about election campaigns and spending in ad libraries on their platforms so we and voters can see more information about who is campaigning.

4.2. Voting applications

Before an election, it is sometimes difficult for the public to assess the information provided by political parties due to the sheer amount of this information and the speed with which it spreads. Voting Advice Applications (VAAs) are online tools that assist and inform voters by comparing their policy preferences with the political stances of parties or candidates running for office. The users of these tools mark their positions on a range of policy statements. After comparing the individual's answers to the positions of each party or candidate, the application generates a rank-ordered list or a graph indicating which party or candidate is located closest to the user's policy preferences. VAA have been proliferating in the last decade and are used by millions of voters in Europe.

Examples of the most widely used VAA include StemWijzer in the Netherlands, Smartvote in Switzerland and Wahl-O-Mat in Germany. Originally embedded in citizenship education initiatives, they influence voter behaviour by motivating users to engage in further research about party policies, motivating participation in elections and affecting vote intentions.[26]

At this stage, trying to evaluate the impact of voting applications requires great caution: there is no full transparency as regards how these voting recommendation systems function, namely, what data they use, how priorities are ranked, how answers are weighted and who finances the AI application. In the light of these uncertainties, relying on voting applications could have unintended consequences on democracy.

4.3. Political microtargeting

Digital microtargeting in the context of political campaigning is a technique that political parties use to analyse large datasets to better understand the behaviour, opinions and feelings of potential voters. This allows political parties to cluster voters into groups which in turn receive messages that speak to their concerns and resonate with their opinions. Instead of one central message for all, political parties can disseminate a multiplicity of targeted messages in various formats and channels to carefully chosen audiences.

25 https://www.electoralcommission.org.uk/who-we-are-and-what-we-do/elections-and-referendums/past-elections-and-referendums/uk-general-elections/report-overview-2019-uk-parliamentary-general-election

26 Diego Garzia and Stefan Marschall, Voting Advice Applications, Oxford Research Encyclopedias, March 2019

The debate about political microtargeting revolves around the question of targeting as such: is the targeting done by malicious actors? Are people aware and understand where the information comes from? Can people opt-out or choose themselves to receive information? These questions raise issues with regards to transparency, accountability and digital literacy among others.

To a large extent the debate about microtargeting also centres around how political information is produced and distributed at scale in the digital age. Microtargeting for political campaigning is thus to be understood as one practice in the context of a wider digital eco-system.

In this context it becomes particularly relevant to examine the role of internet intermediaries and platforms, as they distribute, curate and moderate content and sometimes also produce content.

The Council of Europe has published several studies that deal with the question of freedom of expression, media pluralism and journalism on the internet. The Committee of experts on media environment and reform (MSI-REF) is currently preparing guidelines with regards to content curation and moderation. These practices affect what information people are shown and how readily information is available and accessible.

In the context of microtargeting by political parties, one of the key challenges is to define **what actually constitutes political advertising**. In addition, there are other key questions such as, who should decide the definition? Are internet intermediaries and platforms entitled to provide a definition? Should political parties decide what information they categorise as a political advertisement? Should independent bodies be set up to decide? What happens when decisions are challenged? Who is in charge?

Currently, no agreed definition exists and internet intermediaries and platforms act according to their own rules with little to no oversight by independent bodies. There is no consistency and little transparency. While Twitter banned political ads from its platforms, Facebook allows them under certain conditions. Youtube started to look into its recommendation algorithm.

Political parties that rely on microtargeting argue that it is an efficient way to formulate policy proposals tailored to the relevant constituencies and to respond to the citizens' needs in a better way.

For the public as well as for relevant oversight bodies, it is difficult to track who receives what message. As such digital microtargeting brings campaigning to a whole new level of sophistication and can be used both positively and negatively. It might enhance or undermine democratic values and strengthen or amplify either democratic or populists' voices. Machine-learning algorithms are also being used by political parties to refine their message.

Microtargeting and similar technologies raise questions with regards to the protection of fundamental principles of good democratic governance such as transparency, accountability, inclusiveness and ethical conduct as well rights such as privacy and data protection.

Convention 108+ as well as the EU General Data Protection Regulation (GDPR) establishes strict guidelines based on individual consent for the collection and processing of personal data, placing limitations on the use of digital microtargeting for parties. Profiling for political purposes is not allowed. While the GDPR plays a key role in the context of microtargeting, it is only a piece of the puzzle and it is insufficient for mitigating the risks caused by microtargeting.

In practice **people often do not know that they have been microtargeted in the first place.** Even if they recognise an ad as a targeted ad, they often do not know what kind of information was used to target them. Facebook, for example, provides some information about the targeting criteria specified by the advertiser. However, this is not sufficient and does not give people a ground to challenge those behind the ads.

In short, this kind of data gathering threatens privacy and the collection of personal information might lead to chilling effects and self-censorship, as people might modify their online behaviour so as not to be singled out.

Another danger of political microtargeting is that the public debates and democratic processes are captured by narrow interests, are fragmented or systematically exclude vulnerable or minority groups. In a recent study published in the Utrecht Law Review (27) the authors argue that "*A political party could also misleadingly present itself as a one-issue party to each individual. A party may highlight a different issue for each voter, so each voter sees a different one-issue party. In this way, microtargeting could lead to a biased perception regarding the priorities of that party. Moreover, online political microtargeting could lead to a lack of transparency about the party's promises. Voters may not even know a party's views on many topics."*

The authors identify three main threats from the perspective of citizens: *"(…) they could have their privacy invaded, be manipulated, or excluded. Even if microtargeting were not effective, the mere collection of data would still be a privacy threat*."

Lack of transparency as to the authors of the political ads and their source of financial backing may result in an uneven playing field, which further undermines trust in elections in particular and democratic processes in general. **The challenges for election administration authorities** in charge of monitoring the electoral process and political campaigning are manifold. They include fragmentation of enforcement and oversight, distribution of responsibilities amongst different agencies and regulators and the cross-border nature of online campaigning.

There is a big difference among member States when it comes to the **prevalence of microtargeting**. Some member States have witnessed consorted or intensive use of microtargeting by political parties, other member States have little or no experience with microtargeting, since political parties might not be ready and/or adequately equipped to invest in and deploy advanced digital tools. Therefore, the level of concern and the perception of urgency with regards to formulating a reaction to microtargeting differs among member States.

However, there is a growing consensus that platform self-regulation is insufficient. It is thus not surprising that there is a multitude of proposals on how to deal with microtargeting. These proposals focus among others on:

- More research to better understand the effects and impacts of microtargeting on the political sphere;
- Need for an increased transparency on how much is spent on political ads and by whom;
- Need to improve the quality of advertising archives which internet intermediaries and platforms currently make accessible to researchers;
- Calls to reduce political targeting to human scale and not to rely on or use AI technologies such as machine learning or algorithms in the process;
- Calls for universal transparency of all types of advertisement (not only political advertisement);

27 Online Political Microtargeting: Promises and Threats for Democracy (2018) Frederik J. Zuiderveen Borgesius, Judith Möller, Sanne Kruikemeier, Ronan Ó Fathaigh, Kristina Irion, Tom Dobber, Balazs Bodo, Claes de Vreese

Suggestions to introduce (automated) measures for counter-speech;

- Demands for effective regulation;
- Calls for a complete ban on microtargeting.

It remains an open question whether microtargeting renders political debates opaque, polarized and susceptible to being captured by narrow interests (groups) and thus creating an uneven playing field or on the contrary whether microtargeting is giving a positive contribution to democratic discourse as citizens receive personalised information that is relevant to them and parties can more effectively connect with their voters and citizens at large. This question cannot be fully answered, due to lack of empirical data or evidence. More research and above all access to data from political parties and the internet intermediaries and platforms is needed.

Case study

United Kingdom: data protection compliance by political parties

In 2020, the UK Information Commissioner's Office published an "Audit of data protection compliance by UK political parties" (28).

Key recommendations for the parties include:

- providing the public with clear information at the outset about how their data will be used;
- telling individuals when they use intrusive profiling such as combining information about those individuals from several different sources to find out more about their voting characteristics and interests;
- being transparent when using personal data to profile and then target people with marketing via social media platforms;
- being able to demonstrate that they are accountable, showing how parties meet their obligations and protect people's rights;
- carrying out thorough checks on all contracted and potential processors and third party suppliers to gain assurances that they comply with the key transparency, security and accountability requirements of data protection law and;
- reviewing their lawful bases for the different types of processing of personal data used to ensure the most appropriate basis is used.

When considering regulation of microtargeting, different rights need to be balanced. The question is where and how to draw the line, especially keeping in mind the scale and speed of information in the digital age. At the same time, civil society organisations in more fragile democracies warn of the danger that regulation of online spaces might be abused to curb political rights of the opposition.

28 https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2020/11/uk-political-parties-must-improve-data-protection-practices/

Table: Impact of political microtargeting

	Benefits	Risks
Citizens	Receive relevant political advertising Receive message that resonate with them	Privacy breaches Manipulation and potential for misleading information Being excluded Profiling Abuse of data
Political parties	Cost effective Reach and mobilisation of target groups Reach social groups that might be difficult to contact Efficient Effective	Expensive Internet intermediaries, platforms and data brokers increase their power (without proper oversight)
Public opinion	Diversification of opinions Potentially more engagement	Fragmented messages and marketplace of ideas Lack of transparency regarding overall program of a party Priorities unclear Capture by narrow issue groups
Election bodies		No oversight Cross border nature of online campaigning Lack of transparency regarding finances and criteria
Regulation	Transparency Ensuring level playing field	Ineffective Freedom of expression

Source: Online Political Microtargeting: Promises and Threats for Democracy in Utrecht Law Review; further developed and expanded on.

5. Impact on participatory and deliberative democracy

Participatory democracy is a process in which individuals, NGOs and civil society at large are involved in the conduct of public affairs at local, regional, national and European levels.

Participation in political life is essential for the legitimacy and functioning of democracies. Several documents of the Council of Europe have highlighted the importance of civil participation in decision making for good governance. These include among others the 12 Principles for Good Governance, Recommendation CM/Rec(2007)14 on the legal status of non-governmental organisations in Europe[29], the recommendation CM/Rec(2018)4 on Participation of Citizens in Local Public Life and the recommendation on the Protection of Civic Space. The Committee of Ministers also adopted Guidelines for civil participation in political decision making[30], underlining the centrality of citizens' participation to democracy.

29 https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805d534d
30 CM(2017)83

According to the Revised Code of Good Practice for Civil Participation in the decision-making process,[31] adopted by the INGO Conference in 2019, there are seven steps in the political decision-making process: Input/incentive ideas, agenda setting, drafting of policy, decision-making, implementation of policy, monitoring and reformulation of policy. Each step offers opportunities for civil society organisations and public authorities to interact.

Digital tools can be used at each of these stages. In fact, digitalisation has opened new channels to reinforce participatory democracy, empowering citizens and civil society at large to engage in public affairs through various means such as online platforms, public portals providing information, online public consultations, e-petitions, etc.

This process can be top-down (initiatives are set up by the authorities with a view to ensuring the openness, transparency and inclusiveness of the decision-making process), or bottom-up (initiatives are set up by citizens and civil society with a view to contributing to better policy making by public authorities).

Belgium: The Ostbelgien Model

On 25 February 2019, in Ostbelgien, the German-Speaking Community of Belgium, the parliament unanimously voted in favour of a piece of legislation that establishes three new democratic institutions:

A permanent Citizens' Council: it is comprised of 24 randomly selected citizens, who have a mandate to represent fellow citizens for one and a half years. One third of the members rotate every six months. Its mandate is twofold. First, it has an agenda-setting role. It initiates up to three ad hoc Citizens' Panels during its term and decides the issues the Panels should address.

Second, the Council has an oversight role, ensuring that the recommendations from the Citizens' Panels are presented and debated in the parliament and receive a response from the relevant parliamentary committee and minister. The Citizens' Council met for the first time on 16 September 2019.

Citizens' Panels: There will be between one to three panels per year. Each Citizens' Panel will be comprised of 25 to 50 randomly selected citizens, who will meet for a minimum of three times over three months. The Citizens' Council decides the number of participants and the length of the Citizens' Panel. Citizen proposals that have the support of at least 100 citizens, as well as proposals of parliamentary groups or the government, can also be submitted for the consideration by the Citizens' Council (Parliament of the German-speaking Community of Belgium, 2019).

A Secretariat: this consists of full-time officials who are responsible for carrying out the random selection for the Citizens' Council and Citizens' Panels, servicing the Citizens' Council, and organising the Citizens' Panels.

A decree establishing the permanent participatory process can be found here (in English): https://www.governanceinstitute.edu.au/centres/deliberative-democracy-and-global-governance/working-paper-series and here (in French): https://www.pdg.be/PortalData/34/Resources/dokumente/diverses/2019.02.25_Dekret-Buergerdialog-FR.pdf

31 https://rm.coe.int/code-of-good-practice-civil-participation-revised-301019-en/168098b0e2

Citizen participation can take different forms and processes. One way to organise citizen participation are so called **citizen panels or citizen assemblies**. Citizen panels can take the shape of planning cells, consensus conferences, townhall meetings, policy labs etc. They are mostly physical meetings to allow for in depth deliberation on issues. In "Challenging futures of citizen panels: Critical issues for robust forms of public participation" (32) the authors highlight some issues regarding citizen panels, namely: representativeness of citizens panels; legitimacy to speak for the public; and neutrality (power asymmetry and bias in design). **How and whether to effectively transfer citizen panels – which are mostly offline events – into the digital age remains an open question**.

Key challenges in the area of participatory democracy lie in the risks of exclusion and discrimination due to the digital gap and other barriers. This also touches both the question of representativeness and legitimacy. **Increasing reliance on e-participation should go hand in hand with an effort to narrow the digital divide.** In addition, authorities at all levels of government should continue to provide traditional participation channels, giving citizens the choice of the way in which they participate.

Making open data available increases the ability of citizens and civil society at large to co-create services, engage in informed policy making and conduct participatory projects. Particularly at the local level this changes the interaction of people with the local authorities. Examples of participatory measures with a digital component at the local level include **participatory budgets and online consultations**.

The **impact of artificial intelligence on participatory tools** is not clear and might vary greatly, depending to a large extent on who is using the AI systems and for which purposes. The use of AI enabled technologies in participatory tools raises questions of transparency (are people aware that an AI system is being used; do people know who is behind the AI system; are people aware what data goes into the system and what algorithms are used?) and accountability (who is held to account in case of false results, data breaches or misuse of data?).

Special care needs to be taken to ensure that democratic principles are not undermined, and that participation is enabled for all (and thus issues are not co-opted by vocal and digital-savvy interest groups). In general, digital tools for participation, including AI systems, must avoid creating new barriers. At the same time, the tools are vulnerable to misuse and manipulation. Therefore, measures must be taken to minimize these risks with full respect to the demands of data-protection and the right to privacy as well as transparency and accountability.

32 https://www.ioew.de/publikation/challenging_futures_of_citizen_panels_critical_issues_for_robust_forms_of_public_participation

Artificial intelligence for political participation and accountability (Author: Paulo Savaget, Round Table on Artificial Intelligence and the Future of Democracy, Council of Europe, 2019)

	Negative prospects	Positive prospects
AI-based technologies for democracies	Facilitate central control over ICT	Permit marginalised people to join the democratic process
	Fake vocal political support on social media	Engage voters and help them be better informed about key political issues
	Spread false messages to create the illusion of public support and manipulate citizens	Increase people's voices and make sure their claims are heard by elected representatives
	Reinforce filter bubbles and institutionalises deep-rooted prejudice	Auditing for transparency

6. Democratic auditing

6.1. Democratic auditing of public authorities

Amplifying the capacity of ordinary people to access, share and report information, digital transformation can contribute to the democratic oversight of public institutions and strengthen their accountability.

Thus, watchdog organisations have been set up to hold the public sector to account. For example, in Germany FragDenStaat (33) is a non-profit internet platform through which enquiries to public authorities can be made based on the Freedom of Information Act and other laws. The platform facilitates the process and documents the answers. In this way, information is also made available to the public at large.

Similar initiatives exist in Austria and the UK. In Austria, FragDenStaat helps citizens exercise their information rights vis-à-vis the authorities. In the UK, the platform "what do they know" helps citizens get answers from the government and public sector. At the EU level, AskTheEU.org is an online platform for citizens to send access to documents requests directly to EU institutions.

The German non-profit FragDenStaat also runs campaigns to gain access to information in the public interest. For example, in June 2015 the Federal Administrative Court in Germany had ruled that the Scientific Service of the German Parliament should publish its expert opinions upon request. The campaign FragDenBundestag was launched in January 2016 after a list of all titles of expert opinions of the Scientific Service was received. Users of the platform could search the list by title and then request the relevant expert opinion. Just three days after the campaign started, over 1.000 expert opinions were requested. After less than a month the German Parliament's Council of Elders decided that all expert opinions would be published. The expert opinions can now be found on the website of the German parliament.

33 https://fragdenstaat.de/

"Operação Serenata de Amor"

Operation Serenata de Amor is an artificial intelligence project to analyse public spending in Brazil. The project started in 2016 in the wake of major scandals of misappropriation of public funds in Brazil. The platform was able to analyse more than 3 million notes, raising about 8,000 suspected cases in public spending. The community that supports the work of the team benefits from open source repositories, with licenses open for the collaboration. As a result of this work, 629 complaints were made to the Ombudsman's Office of the Chamber of Deputies, questioning expenses of 216 federal deputies. In addition, the Facebook project page has more than 25,000 followers, and users frequently cite the operation as a benchmark in transparency in the Brazilian government. One of the examples of results obtained by the operation is the case of a Deputy who had to return about 700 BRL to the House after his expenses were analysed by the platform.

6.2. Oversight of AI

There are also few civil society organisations that act like watchdogs with regards to AI. For example, AlgorithmWatch is a non-profit research and advocacy organisation committed to evaluating and shedding light on algorithmic decision-making processes that have a social relevance, meaning they are used either to predict or prescribe human action or to make decisions automatically.

To better ensure that automated decision making (ADM) systems currently deployed and those about to be implemented throughout Europe are consistent with human rights and democracy, AlgorithWatch recommends among others: to establish public registers for ADM systems used within the public sector; to develop and establish approaches to effectively audit algorithmic systems; and to promote an inclusive and diverse democratic debate around ADM systems. The question of democratic oversight over AI systems remains pertinent and, so far, no independent bodies or processes exist.

In its feasibility study CAHAI looked at models of enforcement for a potential regulation of AI, these include human rights impact assessments, certification bodies, public registries for AI used in public sector to name a few.

CAHAI points out that governments should take adequate measures to counter the use or misuse of AI systems for unlawful interference in electoral processes, for personalised political targeting without adequate transparency, responsibility and accountability mechanisms to safeguard democracy.

PART III – GOOD GOVERNANCE

1. The link between democracy and governance

Secretary General of the Council of Europe, Report on the State of Democracy, Human Rights and the Rule of Law, 2017

A democratically secure society requires both effective democracy and good governance at all levels. More specifically, "effective democracy and good governance at all levels are essential for preventing conflicts, promoting stability, facilitating economic and social progress, and hence for creating sustainable communities where people want to live and work, now and in the future", as underlined by the 2005 declaration by the heads of state and government of the member states of the Council of Europe at their 3rd Summit in Warsaw.

The Council of Europe has adopted several legal instruments to support democracy and good governance, including the 12 Principles of Good Democratic Governance and the 20 Guiding Principles for the Fight against Corruption. Their effective implementation is essential to ensure the proper functioning of democracy, to build trust between the citizens and the states, and to meet citizens' legitimate needs and expectations through democratic governance and efficient and transparent service delivery.

2. Digitalisation of the public administration in Council of Europe member States

The use of digital technologies in the public sector has become increasingly widespread. All member States are currently digitalising their public administrations and service delivery. The extent of the digitalisation differs among member States. In recent years, there has been a push to further digitalise the public administration due to increased availability of data, lower costs, increased computing power and general digital transformation of everyday life as well as expectation by citizens for smooth, easily accessible services (as they have become accustomed to from the private sector).

Public administrations have been building their IT architectures over the last 70 years. Starting from the 1950s, the **e-government** era, public administrations have used technology to digitise their internal data sets. This resulted in so-called legacy IT systems that remain vital for the successful operation of public administrations to this day.

The 1990s witnessed a shift in the focus of digitalisation projects. This led to the **e-governance** period. Public administration put the emphasis on using internet technologies to publish information about public administration online. Agencies started to add open government information on their website to appear more transparent to their stakeholders. In addition, citizen participation became more prevalent and first steps toward enabling citizens' participation were made, mostly in form of online surveys.

From 2005-2015, the concept of **digital government** emerged. Social networking technologies supported new forms of external communication with stakeholders. New forms of participation and open government appeared, such as open innovation platforms to collect insights from citizens, but also open data platforms to share government data with (mostly professional) re-users of government data. Simultaneously, the incentives increased to outsource technology development to external IT service providers or consultants. This resulted in a decline of in-house digital competences and capacities among public servants and a dependency on private companies and external consultants.

The **current digital transformation period** focuses on re-designing existing administrative processes with a digital-first attitude: all services are predominantly designed to serve the public online. Offline or analogue service delivery has become second priority. Across Europe, digital service teams have emerged in public administrations creating new roles, such as service and user-centric designers. These new roles bring new competencies and ways of working into the development of digital public services.

At the same time, it is evident that the public sector in general, and public administration in particular, cannot simply replicate 1:1 the approaches used in the private sector. The reasons for this are, among others, the different type of "business" model of the public sector itself; government's unique status as a quasi-monopolist; and individual countries' political contexts and regulatory environments as well as organisational culture.

The following table provides an overview of waves of digital government:

Time	Topic	Description
1950s-1990s	**E-Government**	• Digitization of data • Bulk processing
1990s-2000s	**E-Governance**	• Use of Internet technologies to put information online • Citizen participation
2005-2015	**Digital government**	• Web 2.0 – new forms of external communication • Open government • Outsourcing
2015-today	**Digital governance & Digital transformation**	• Human- and needs-based structures • Digitalization of administrative processes • Reintegrate outsourced functions (digital service teams)

Figure 1: Overview of digital government phases

Data collected on an annual basis by the United Nations since 2003 shows a constant growth of the **E-Government Readiness Index** (EGDI) of Council of Europe member States. In 2020, Denmark, Estonia, Finland, Sweden, the United Kingdom, the Netherlands, Iceland, Norway, Austria, Switzerland, Spain, France and Lithuania feature amongst the top twenty countries worldwide as regards this index.[34]

[34] United Nations, E-Government Survey 2020

The newly established **OECD Digital Government Index** 2019 (35) covers the following six dimensions: Digital by design, Data-driven, Government as a platform, Open by default, User-driven and Proactiveness. It assesses the maturity of digital government. In 2020, the United Kingdom, Denmark, Spain, Portugal, France, Norway, Luxembourg, Italy, Slovenia, Estonia, Latvia, Austria, Netherlands, Czech Republique, Ireland, Belgium, Germany, Lithuania, Finland, Greece, Iceland and Sweden rank amongst the top fifty countries as regards this index.

2.1. Digital strategies

Public administrations are inherently paper based. While there are many attempts to modernise the public sector and move toward a 'digital government', the core philosophy and therefore mode of operation is still derived from paper forms. Public administrations have developed different strategies to support and foster technology-driven change.

One strategy is digitisation. This refers to the process by which paper forms are replicated 1:1 from analogue to a digital format. The analogue services remain in place and an online channel is added (e.g. from a paper form to a non-editable pdf-form available online).

Another strategy is **digitalisation. This goes beyond mere digitising of existing processes and forms and focuses on opening effective interactions online** (e.g. type into editable forms and submit online for automatic processing by public administration.)

Digital transformation emphasises the cultural, organizational, and relational changes and different forms of public value creation as a result. It is about rethinking processes and services.

Member States are constantly refining their digital strategies. The approaches vary among member States. Some countries take a transversal approach to digitalisation, while others create new Digital Ministries. Below is a non-exhaustive list of digital strategies in Council of Europe member States.

Member State	Strategy or Strategic Document	Date of Publication
Austria	The ABC guide of eGovernment in Austria	March 2016
Croatia	The eCroatia 2020 Strategy	2017
Czech Republic	Digital Czechia Strategic Framework of the Development of Public Administration in the Czech Republic	2019 2018
Denmark	Digital Strategy 2016-2020	2016
Estonia	Digital Agenda 2020 for Estonia	2018
Finland	A roadmap to advance digital services	2017
France	Stratégie pour la transformation de l'action publique (Public Action 2022)	2018
Germany	National E-Government Strategy	Updated in 2015
Italy	Three Year Plan for Information Technology in public sector 2019 - 2021	2019
Lithuania	Information Society Development Programme 2014 – 2020: Digital Agenda for Lithuania	2014, updated 2017
Malta	National Digital Strategy 2014-2020	2014
Netherlands	Digital Government Agenda	July 2018
Portugal	ICT Strategy 2020 – Public Administration Digital Transformation Strategy	2018
Spain	Digital Agenda for Spain Digital Transformation Plan of the State Administration	2013 September 2015

35 http://www.oecd.org/gov/digital-government-index-4de9f5bb-en.htm

Sweden	For sustainable digital transformation in Sweden – a Digital Strategy	2017
United Kingdom	Government Digital Strategy	December 2013
Switzerland	Digital Switzerland Strategy	September 2018

Addressing the 12th plenary meeting of the CDDG, Markus Richter, State Secretary and Federal Commissioner for Information Technology of the Federal Ministry of the Interior, Building and Community of Germany illustrated the experience of his country.

Speech by Mr Markus RICHTER, State Secretary and Federal Commissioner for Information Technology, Federal Ministry of the Interior, Building and Community, Germany
Delivered at the 12th plenary meeting of the CDDG

DIGITIZATION OF THE PUBLIC ADMINISTRATION IN A FEDERAL CONTEXT: HOW CAN DIGITIZATION SUCCEED IN DECENTRALISED STRUCTURES AND WHAT CAN EUROPE LEARN FROM THE GERMAN MODEL?

Dear Mister President, dear Chair, dear excellences,
fellow colleagues, Ladies and Gentlemen,

Thank you very much for inviting me to speak to you today.

Right now we are all living through a real-life demonstration of how digitization can save lives. In times like these, when many countries in Europe are in lockdown, we rely on digital processes to keep our governments up and running.

So I'm very happy that that we can share ideas across borders about the best ways to drive digitization forward in Europe. To strengthen public administration to serve the people in these difficult days.

Creating a functioning digital government is a job for every member of this committee – but our community as a whole needs to work toward this goal as well. Key to the success is – even during a pandemic - the involvement of citizens. To advance citizen participation is one of the main goals during the German Presidency of the Committee of Ministers of the Council of Europe.

Today I would like to share my thoughts on a topic that may surprise you: why a federalist system is an advantage when it comes to government digitization!

We are all familiar with the kinds of federal structures that determine administrative processes in Germany and across many European bodies: At first glance, they seem to be obstacles on the road to digital government. After all, there's some truth to the proverb "Too many cooks spoil the broth." The word federalism often evokes a tangled web of responsibilities and hierarchies. We rarely associate it with fast change. And of course it's true that processes may take longer in large federal systems than they do in small centralized ones. In Germany alone, 16 federal states and nearly 11,000 municipalities – all with significant decision-making authority – expect to have a say in what our digital public administration looks like. Since we want to offer 575 administrative services digitally in Germany by 2022, it all adds up to a very complex task.

And yet we in Germany have found a way to make digital innovation and our federal system go hand in hand – and to create user-friendly solutions at the same time.

I will present our approach using three examples: ***the tandems****,* ***the laboratories*** *and the* ***coordinators***

1. Gaining speed with tandems

11.000 municipalities, 16 states, and a single federal government. They all share the task of digitizing Germany's public administration – and the bulk of the work takes place at the decentralized state level. In fact, the states are responsible for more than 460 of the 575 administrative services that exist in Germany overall. To prevent a confusing thicket of online processes, the federal government and states work together in strategic partnerships we call "digitization tandems."

To enable the work in tandems, we first identified 14 categories of services. Using these categories, we can bundle similar services – for example, those related to education, work, or public health – even if different authorities are responsible for them. Then a "tandem" consisting of a ministry or agency of the federal government and one (or more) federal states develops all the digital services in each category.

Each service is piloted – in other words, tested and improved in day-to-day operations – in a single state. Once the pilot is successful, the service is made available to the other states as well. In short, it's a prototyping approach just like the one startups use!
And it's motivated by a simple idea: each process is only digitized once. That saves money and avoids unnecessary duplicate structures. And in the best case, it leads to a consistent digital user experience even in a decentralized federal system.

2. Co-creating with citizens in a digitization lab

Involving citizens early on in the development of e-government offerings is key to success. Doing so is the only way to ensure that the resulting solutions are user-friendly and that all sides accept them.

In Germany, digitization labs provide a way to take account of the needs of diverse – and sometimes divergent – stakeholders. The labs bring together users, IT specialists, administration staff, and legal experts, who all really take the time to think through processes from a new perspective.

The first step is to analyze how administrative services are provided today. It starts with a review of existing applications and forms. Then interviews and user tests take place to pinpoint problems and opportunities to do better. Finally, workshops are held to develop a new process based on these findings.

This effort takes several days and produces a very important result: a concept package that provides the foundation for implementing digital services throughout the federal states and municipalities. It includes a click prototype, which serves as the basis for technical development. There's also an implementation plan with concrete recommendations and suggested improvements. The plan provides guidance both for setting up a digital service for the first time in a specific state and its subsequent use nationwide.

Digitization labs cover a broad palette of topics. They range from social and family benefits with hundreds of thousands of recipients, such as allowances for children or parents or unemployment benefits, to complex services for companies, such as applications for building permits. Those affected by the changes are involved every step of the way. So

far we have set up more than 40 digitization labs in Germany and now, during the pandemic, they are fully digital.

3. With lots of cooks, you can serve a great buffet!

Our work is based on a simple, convincing concept we call the "one for all" principle. Everyone cooks something and we all get to enjoy the full selection of digital services as a result. A fully collaborative approach, where everyone can contribute what they can do best!

Of course, it's only natural that diverging political interests exist side by side in a federal system. Not all participants have the patience to wait for another state's solution. Or they want to be sure that the development work takes specific considerations for their region into account. The all-for-one approach only works if there's trust, a lot of coordination, and a good facilitator. A central coordinator that keeps the process going and pushes for progress – regularly and persistently – is essential whenever a number of independent, self-reliant actors work together.

For this reason, we built in coordination at key points from the very start. For example, every state has a central coordinator for issues related to the Online Access Act, or OAA. Each federal ministry or agency has an OAA contact, too. And the Federal Ministry of the Interior has overarching responsibility and keeps an eye on the big picture. This oversight requires networking, negotiation, and sometimes late-night telephone calls.

And all that relates to how I see my role as the federal government's IT Commissioner: as someone who builds bridges, clears obstacles, and drives digital public administration throughout the largest federally organized country in the EU.

This approach has proven successfully, especially during the coronavirus pandemic. In just a few weeks, we are able to provide relevant support to citizens in digital formats and in (nearly) every state.

4. Europe works from the bottom up

I believe that our federal approach to digitization can serve as a model for Europe. Just like Germany, Europe faces the challenge of bringing different interests and ways of working into harmony as it makes digitization a reality.

A centralized approach that specifies finished solutions and dictates their use from the top won't succeed. Europe is a bottom-up system, not a top-down one – participation at the local level is what makes it work. This is true for both the EU and all the members of the Council of Europe.

Local participation is the reason why Europe's people accept broader solutions, which makes it a cornerstone of European democracy. And so it's essential to provide a structured way for all the member states to contribute to digitization in Europe for their mutual benefit.

This brings us back to how a federal system can bring a digitization advantage – as long as it's possible to identify the best solutions from the great variety of ideas that arise in such a diverse structure. And this is exactly what we need to do, to build lasting solutions and a bright digital future for Europe.

2.2. Digital academies

Digital transformation is a continuous process. To navigate it effectively, it is important to understand digital trends, create an enabling organisational culture and to avoid conceptualising digital transformation solely as a technology problem.

Therefore, to use digital technologies successfully, scale up initiatives and develop a digital mindset, public servants need to be equipped with a minimum level of knowledge to be able to identify the opportunities of technologies, but also understand which barriers might prevent proper implementation or lead to negative impact on stakeholders.

To this end, some member States have established **government digital academies.** These include, for example, the Government Digital Service Academy in the United Kingdom, or the recently established Digital Academy for the Central Government in the Danish Agency for Digitization in the Ministry of Finance. Internal and external experts provide public servants with formal training programs on relevant digital topics. In these digital government academies, entire teams can be taught in the form of accelerator models, or individual digital pilots train stewards who then serve as multipliers for the rest of the organisation.

In addition, public managers can also support informal learning opportunities for public servants, e.g., providing permission for "open laptops" so that administrative staff can install and test new technologies; or establishing communities of practice on the Intranet.

Some member States have focused on recruiting IT personnel from the private sector into the public sector. One example is the Work4Germany fellowship programme at Germany's Tech4Germany (36) digital service in the Chancellery. The fellows bring expertise and skills from outside of government, work in tandem on agency-level projects to build digital solutions and transfer practices and skills to their counterparts.

2.3. Types of digital competencies

To transform the public sector into a digital actor, different competencies are needed at various levels of government. These include among others:

- technical competences: ability to access data and information in various media,
- information literacy: ability to identify information needs, and to use data effectively to solve a given problem,
- digital fluency: ability to develop an open-minded attitude towards the use of alternative technologies and to switch seamlessly between different applications if necessary,
- overall organisational readiness or digital maturity of the digital capacities of the public administration itself.

For example, the "Teaching public service in the digital age" (37) initiative focuses on the following eight competencies: user-centric; mitigating risks inherent in digital age; multi-disciplinary teams; iteration; change management; openness; data-driven and affordance.

It is worth highlighting that one of the competencies is mitigating risks in the digital age. While digital technologies offer opportunities to improve and enhance service delivery or policy making, they might also negatively impact those processes. Therefore, it is vital that public and civil servants have the necessary skills, competences, and resources to be able to identify risks to privacy, national security or equality to name a few. Once these risks are identified, appropriate and effective safeguards need to be developed.

36 https://tech.4germany.org/
37 https://www.teachingpublicservice.digital/

Furthermore, not everyone needs the same set of skills and competences. In other words, stakeholders need skills and competences tailored to their field of responsibilities. **Managers in public administrations must form a digital mindset to be able to rethink administrative processes from a digital standpoint**. A distinction must be made between management responsibility for large generalist units, which can also be run with less specific IT expertise, and the management of specialist teams, for which specialist IT knowledge is required. Readiness for so-called "shared leadership" is also necessary. However, the most important competency for managers is that they need to understand technological trends and digital ethics in order to reduce their dependence on external consultants or suppliers.

Public servants and administrative staff must develop self-organisation skills, especially when they move to a digital workplace. In the transition from old to new forms of work, it is important to develop communication skills for distributed teams, as well as to implement new project management and implementation practices – such as agile, scrum, iteration. Public servants aiming to implement digital transformation also need to encourage buy-in from key stakeholders, and search for opportunities to show the value of their digital transformation plans.

IT service providers and consultants need an understanding of the logic of the public sector. The customers are both citizens and the administration. The public sector does not follow a purely market-based logic. Private companies must understand that the "One-size-fits-all" business models are neither appropriate nor sustainable for public service delivery.

From the point of view of **citizens**, digital administrative services should be simplified to the extent that citizens do not need any advanced digital skills to use them. One example for the simplicity of design and proactive service provision to citizens, is the Gov.UK Notify service (38). It's a small application, that civil servants can use to automatically or manually push information to citizens.

2.4. Challenges and opportunities for public administration

In general, service delivery by the public sector is often perceived as being too slow, especially when compared to the private sector. Added to this, the public sector is often criticised for blown up bureaucracies and large budgets which are not justified by the level of service delivery.

One way to address these problems, misconceptions or criticism is to work 'in the open', e.g. publish blog posts that explain the steps in developing digital services; or publish data or add software code to public repositories for other public servants to reuse and avoid reinventing the wheel. One such example is sharing software code on GitHub, so that the code developed in one city or municipality can be reused in another. Working in the open might pose risks, among others that sensitive data is accidentally revealed.

Citizens often perceive public service delivery as a "black box": while they have proof that they applied for a service (usually a paper receipt), they do not know where their application stands in the process, and when it will be processed. A proactive way to address this might be to develop tools to track and trace the status of a service. E-business providers have solved this problem by proactively sending out messages or automatically notifying citizens about the status of their applications.

Leaving citizens uninformed or unsure about a service for which they are eligible can create dissatisfaction with the administration and distrust in public institutions and ultimately in democracy.

38 https://www.notifications.service.gov.uk/

One way to address this risk is to resort to **user-centric design approaches**. These practices help public servants understand what their users need and thus enable them to design digital services and products that are based on external needs, instead of the internal logic of public administrations.

2.5. Digital maturity and readiness to scale up

Digital maturity describes the degree of proficiency, preparedness and organisational readiness in public administrations to be able to implement digital transformation projects. This requires above all an understanding of digital issues and trends: How are technologies such as artificial intelligence, blockchain or cloud services currently being discussed? Are any of these technologies helpful in solving policy and implementation problems that public servants face – or is it a management fad? Which new project management formats such as agile, DevOps or cross-functional teams are necessary and useful for the implementation of digital transformation?

In addition to technology questions, digital maturity also focuses on change management approaches. Digital transformation does not happen in a vacuum, it is influenced among others by the type of political system, the capacity for innovation in the public sector, the standing of the private sector delivering IT solutions to the public sector and the legacy systems in the public administration.

In Estonia, 99% of public services are digitally available to its citizens and businesses. This is not the case for most Council of Europe member States. In the case of Estonia, no legacy IT systems needed to be considered. Therefore, decision making about the implementation of all-encompassing IT systems and processes was much easier than in established bureaucracies with deep legacy systems.

At the same time, every year a wave of new concepts and technologies floods the digital space, e.g. smart cities, AI, blockchain, government as a platform or mesh networks. It is not always easy to assess which of these trends and new concepts will have a long-lasting impact. Therefore, government leaders and IT implementers have to continuously evaluate the risk of adopting new technologies or staying with their legacy IT systems. These risks are not only privacy or security concerns, but also political risks: public leaders are increasingly held accountable for the technology choices made during their tenure.

For public administrations or digital leaders, it is therefore important to understand the impact of digital transformation and how to mitigate potential risks these technologies pose.

Some Council of Europe member States are moving towards implementing digital government structures that take modernisation and digitalisation of the public administration one step further. In 2017, all EU Member States and EFTA countries signed the Ministerial Declaration on eGovernment, also known as the Tallinn Declaration (39).

The **Tallinn Declaration** recognises that "*service-oriented, reliable and innovative government at all levels are essential to develop a dynamic, productive and European society. Since 2009, luckily several key milestones have been achieved, such as eProcurement, the deployment of key cross border services funded by the Connecting Europe Facility programme and the electronic identification (eID).*"

[39] http://ec.europa.eu/newsroom/document.cfm?doc_id=47559

The next level of modernisation and digitalisation of public administration centres around five key principles:

1. Digital by default, inclusiveness and accessibility
2. Once only
3. Trustworthiness and security
4. Openness and transparency
5. Interoperability by default

In December 2020, ministers at EU level signed the **Berlin Declaration on Digital Society and Value-based Digital Government** (40). The Berlin Declaration builds on the Tallinn Declaration and takes the principle of user-centricity a step further by strengthening the role of public administration in driving a value-based digital transformation.

The seven key principles stipulated in the Berlin Declaration are:

1. Validity and respect of fundamental rights and democratic values in the digital sphere
2. Social participation and digital inclusion
3. Empowerment and digital literacy
4. Trust and security in digital government interactions
5. Digital sovereignty and interoperability
6. Human-centred systems and innovative technologies in the public sector
7. Resilient and sustainable digital society.

In addition, the OECD Going Digital Policy Note, "**Strengthening digital government**" (41) from 2019 outlines a Digital Government Framework. It highlights the following six dimensions for digital government:

1. From the digitisation of existing processes to digital by design
2. From an information-centred government to a data-driven public sector
3. From closed processes and data to open by default
4. From a government-led to a user-driven administration, that is, one that is focused on user needs and citizens' expectations
5. From government as a service provider to government as a platform for public value co-creation
6. From reactive to proactive policy making and service delivery

The above-mentioned declarations and frameworks are forward-looking and provide an orientation and guidance for Council of Europe member States. While there are some differences in the way policy recommendations are formulated, there are striking similarities in the three examples, above all: at the heart of the declarations are fundamental rights and democratic values. The declarations emphasise that European values come first, and digital technology needs to adapt to the values and not vice versa. Taking such an approach might ensure that the risks inherent in digital technologies are identified, minimised and mitigated.

40 https://ec.europa.eu/digital-single-market/en/news/berlin-declaration-digital-society-and-value-based-digital-government
41 https://www.oecd.org/going-digital/strengthening-digital-government.pdf

Enabling public administrations to embrace digital transformation

Recommendation 1: Conduct a digital maturity assessment

Digital maturity focuses on the readiness of the organization and not the technology used. For this it is vital to understand the drivers behind digital transformation strategies for public administrations. Ultimately, the goal should be to make "digital" part of the overall culture and not leave digital transformation up to a dedicated team of specialists or the "IT department in the basement". A mature digital transformation calls for selective innovation and updates to new technologies. The assessment is about how these new technologies are aligned with policy and organizational goals and how they are supporting the solutions to complex problems public administrations are facing.

Recommendation 2: Integrate agile and user-centred design

To create user-centric digital transformation projects, public administrations should use agile project management approaches when they plan, design, and implement digital services. These are practices that have been introduced by government digital service teams and help to simplify digital service products. Originally hailing from the software development industry, public administrations have begun to design digital services based on user needs. These are the expectations from both internal users (public servants) and external users (business and citizens). The goal of user-centricity is to increase social inclusion and accessibility. This will increase citizen satisfaction and overall trust in service delivery, because they will feel respected.

Recommendation 3: Building competences toward digital adaptivity

Digital competences in public administrations need to be strengthened. The goal is that public servants understand the most recent technology trends and evaluate whether technologies like blockchain or artificial intelligence should or should not be applied in the public sector. This requires a digital mindset and digital adaptability. Both will enable civil servants to switch between different types of technologies and be able to assess whether they provide an appropriate and inclusive solution to the complex problems public administrations are dealing with.

2.6. Covid-19 as an accelerator of digital transformation

Changes in working methods and service delivery

The lockdowns imposed due to the Covid-19 pandemic have contributed to accelerating digital transformation in the public sector. Many member States have implemented pragmatic digitalisation practices. Activities that were not 'allowed' before were simply implemented (working remotely, using digital signatures, submitting documents by email, using videoconferences, etc.). In some member States these practices were already in place and were now simply scaled up faster than planned.

Countries with well-established public administrations, but little online public services before the pandemic, have quickly introduced digital policies and converted their existing services into digital offerings. This happened in some occasions literally overnight. In Germany for example, new tools were posted online on Friday and on Monday citizens had their Covid-19 relief money paid out.

As member States face second or third waves of lockdown, it is time to assess which digital processes and practices are sustainable and which must be re-evaluated and adjusted. Digitalising the provision of services requires a continuous review and evaluation process based on flexibility, adaptability and responsiveness. In addition, the calls for more diversity and inclusion highlight that while services must work for everyone, they cannot deliver only one-size fits all solutions: flexibility is necessary to ensure that the needs of specific groups of the population are taken into account.

Furthermore, it has become apparent that interoperability across all levels of government and across countries has become a critical issue. Failing to use open standards might lead to risks and increased costs.

Case study

Spain: teleworking in the public administration

The Royal decree 29/2020 of 29 September 2020 establishes urgent measures for teleworking in public administrations in the context of the Covid-19 pandemic. Telework is defined as that modality of provision of distance services in which the content of the job can be developed, provided that the needs of the service allow it, outside the premises of the Administration, through the use of information and communication technologies.

Telework should contribute to a better organisation of work through the identification of objectives and the evaluation of their fulfilment. Its use must be subject to guaranteeing the provision of public services.

It is also established that the provision of the service through remote modality must be expressly authorised. Each competent administration should determine the percentage of the provision of services that can be developed remotely. In any case, direct face-to-face attention to citizens must be guaranteed.

The personnel who provide services remotely will have the same duties and rights as the rest of the public employees, and the administration must provide and maintain the technological means necessary for the activity. A prerequisite will be the assessment of the susceptible nature of teleworking the tasks assigned to the position, the corresponding evaluation and preventive planning, as well as the training in digital skills necessary for the provision of the service.

The Public Administrations that must adapt their telework regulations to the provisions of this Royal Decree-Law will have a period of six months from the entry into force thereof.

Tracing apps

There was also much debate about the risks of mass surveillance, case identification and discrimination inherent in the tracing apps. To be a useful complementary public health tool in the fight against COVID-19, these apps should meet the Council of Europe's data protection standards as laid down in Convention 108+.

In a Joint Statement on Digital Contact Tracing by the Chair of the Committee of Convention 108+ and the Data Protection Commissioner of the Council of Europe, the authors point out that *"The COVID-19 pandemic creates unprecedented common challenges which require our greatest commitment, and caution. (…) Despite the urgency, digital contact tracing raises new questions that cannot be neglected before deciding to implement such population wide measures. Beyond privacy and data protection considerations, digital contact tracing approaches raise questions of inequality and discrimination that also have to be considered."*

The authors also highlight that *"For example, people that do not possess a suitable mobile device will be excluded from such approaches. Furthermore, those tools which rely on the processing of personal data, have an impact on the privacy and data protection, and other fundamental rights and freedoms of individuals. It is crucial, therefore, to ensure that the measures and related data processing are necessary and proportionate in relation to the legitimate purpose pursued and that they reflect, at all stages, a fair balance between all interests concerned, and the rights and freedoms at stake, as the European Convention on Human Rights (Article 8) and Convention 108 + (Articles 5 and 11) prescribe."*

Civil society digital initiatives

During the first lockdowns starting in March 2020, there was an immense solidarity of civil society actors contributing ideas and programming skills to create solutions, for example during the "We vs virus hackathons" (42). Participants created apps or designed digital solutions for problems caused by the pandemic (or by the measures to curtail it).

The Italian government has set up a digital solidarity site (43) to help citizens during the lockdown. Through this site, government agencies, but also private companies and non-profits offered their digital services, including promotions and free services to help citizens get through the lockdown.

3. Artificial intelligence in the public administration

The AI readiness index

In 2017, Oxford Insights created the world's first Government AI Readiness Index, to answer the question: *how well placed are national governments to take advantage of the benefits of AI in their operations and delivery of public services?* The results sought to capture the current capacity of governments to exploit the innovative potential of AI.

As of the latest findings, relating to 2019, amongst the 20 best placed countries worldwide feature the following Council of Europe member States: United Kingdom, Germany, Finland, Sweden, France, Denmark, Norway, Netherlands, Italy, Austria and Switzerland.

An international, commonly agreed definition of artificial intelligence (AI) does not exist. In broad terms, AI refers to systems that, on the basis of large sets of data, can perform various tasks with some degree of autonomy. This includes the use of algorithms to identify similarities and patterns, classify them and utilise the data for predictive purposes. AI also includes different types of automated learning.

42 One example from Germany: https://wirvsvirus.org/

43 https://solidarietadigitale.agid.gov.it/#/

Countries around the world and international organisations such as the European Union, the OECD and UNESCO have understood the tremendous economic potential of AI, which is considered as a strategic technology. The technology is fast evolving which makes it hard to assess its impact or to develop a common coordinated approach.

3.1. National strategies

Council of Europe member States are launching national AI strategies or similar initiatives to lay out their approach to the development and use of artificial intelligence, with a view to fully harness its benefits. These documents are meant to provide an overarching frame and guide the relevant AI stakeholders. They indicate a clear willingness to use AI in the public sector with a view to delivering better public services and improving efficiency, effectiveness, responsiveness and coordination in the public administration. The role of the public sector is either as a leader in pushing for the development and uptake of AI or a regulator that provides the framework in which AI can thrive.

Member State	National AI Strategy or Strategic Document	Date of Publication
Austria	Artificial Intelligence Mission Austria 2030 (AIM AT 2030)	June 2019
Belgium	AI 4 Belgium	March 2019
Czech Republic	National Artificial Intelligence Strategy	May 2019
Denmark	National Strategy for Artificial Intelligence	March 2019
Estonia	Estonia's National Artificial Intelligence Strategy 2019-2021	May 2019
Finland	Finland's Age of Artificial Intelligence - Turning Finland into a Leader in the Application of AI: Objectives and Recommendations for Measures Work in the age of artificial intelligence - four perspectives on economy, employment, skills and ethics Leading the way into the era of artificial intelligence AuroraAI development and implementation plan 2019-2023 National Artificial Intelligence Programme AuroraAI	December 2017 September 2018 June 2019 March 2019 2020
France	AI for Humanity The Villani report	March 2018
Germany	Artificial Intelligence Strategy: AI Made in Germany Key Points for a Strategy on Artificial Intelligence	November 2018 July 2018
Hungary	Hungary's Artificial Intelligence Strategy 2020-2030	May 2020
Italy	Artificial Intelligence at the Service Citizens	March 2018
Lithuania	Lithuanian Artificial Intelligence Strategy: A vision of the future	April 2019

Luxembourg	Artificial Intelligence: a Strategic vision for Luxembourg	May 2019
Malta	Malta the Ultimate AI Launchpad: A Strategy and Vision for Artificial Intelligence in Malta 2030	October 2019
Netherlands	Strategic Action Plan for Artificial Intelligence	October 2019
Portugal	AI Portugal 2030	February 2019
Russian Federation	National Strategy for the Development of Artificial Intelligence by 2030	October 2019
Serbia	Strategy for the Development of Artificial Intelligence in the Republic of Serbia for the period 2020-2025	December 2019
Spain	RDI Strategy in Artificial Intelligence	March 2019
Sweden	National Approach for Artificial Intelligence	May 2018
Switzerland	Les lignes directrices pour la Confédération (Guidelines for the Confederation) Le rapport du groupe de travail interdépartemental «Intelligence artificielle» au Conseil fédéral (Report of the interdepartmental working group "Artificial Intelligence" to the Federal Council)	Nov 2020 Dec 2019
United Kingdom	AI Sector Deal A Guide to Using Artificial Intelligence in the Public Sector Government Technology Innovation Strategy	April 2018 June 2019 June 2019

For Council of Europe member States, economic considerations are the main driving factor and the focus of the national AI strategies. The aim is to boost the economy and create jobs.

A reoccurring theme for all national AI strategies is investment in research and development in order to be able to benefit from the technological advances. Some member States have established innovation hubs and labs to foster public-private partnerships and encourage collaboration across sectors.

Most national strategies address the use of AI in the public sector, notably to deliver better public services for the benefit of citizens and enhance efficiency through automating routine government processes, and coordination in the public administration; in fact, as mentioned above, some member States see the public sector as being a leader in pushing for the development and use of AI. Some member States also see potential for AI to help guide governmental decision-making (e.g. in the areas of public safety, public health or policy evaluation).

Member States recognise the fact that they need to invest in capacity building of civil servants and public sector officials. Some national strategies explicitly address "up-skilling" as an issue. Furthermore, investment in the education sector is suggested as a way of ensuring that a qualified workforce will be available in the future.

Access to more and better data is often mentioned as a key element in order to improve the quality of public services. The national strategies contain different approaches to data governance. Some national strategies explicitly mention open data and sharing data transversally as well as with private sector.

Council of Europe member States are devoting an increasing share of human and financial resources to develop, implement and regulate the use of AI. This also applies to the public sector.

Most member States stress the need to embed AI design, development and deployment firmly within an ethical framework. Values and principles frequently mentioned in this context are human centred, trustworthy and responsible AI, transparency and human oversight.

While all member States mention an ethical framework, some also specifically mention the need to regulate AI and see the public sector in the regulatory role. As mentioned above, the Council of Europe Ad hoc Committee on Artificial Intelligence (CAHAI) is currently conducting a feasibility study regarding whether and how AI can be regulated.[44]

Finally, international cooperation is seen as desirable. In their national strategies, many member States have expressed their wish to work together on AI technologies.

3.2. Mapping use of AI in the public sector

The main motivation for digitalisation in the public sector is to increase efficiency and thus reduce costs. In addition, it is believed that digitalisation will free public officials from routine activities that can best be automated, thus potentially increasing the quality of service delivery.

In fact, member States have been increasingly using AI-enabled technologies in public service delivery. A crucial problem, however, is the lack of transparency on the use of algorithmic or automated-decision making (ADM) in the public sector. One way to address this issue is by establishing mandatory public registers for public sector use of automated decisions (see also CAHAI's feasibility study (45)). In the absence of public registers, it is difficult or almost impossible to know where, when, for what purpose, by whom and for how long AI-enabled technologies are being used and who to hold accountable, in case of rights violations.

In 2019, AlgorithmWatch published its first Automating Society Report (46) highlighting some examples of the use of ADM in EU member States. In 2020, the second Automating Society Report (47) clearly shows that the trend towards using advanced digital technologies to deliver services continues and is growing.

Overall, the Report showcases many applications of ADM in the public sector in 16 countries in areas such as social benefits, predictive policing, trading and health. The Report highlights in particular that the use of facial recognition software is on the rise, despite a track-record of flawed results and the danger of undue mass-surveillance.

44 https://www.coe.int/en/web/artificial-intelligence/cahai
45 https://rm.coe.int/cahai-2020-23-final-eng-feasibility-study-/1680a0c6da
46 https://algorithmwatch.org/en/automating-society-introduction/
47 https://automatingsociety.algorithmwatch.org/

In 2020, AI Watch (the European Commission knowledge service to monitor the development, uptake and impact of Artificial Intelligence for Europe) also published a report mapping the use of artificial intelligence in public services in EU Member States (48). The report provides an inventory of 230 cases representing a unique reservoir of knowledge, from which to extract indications, emerging trends, and illustrative examples of current AI usage. The analysis of the initiatives included in the mapping shows a wide range of AI solutions applied to diverse government functions and policy areas.

Factsheet: Examples of the current use of AI in the public sector. *Source: AI Watch, Artificial Intelligence in Public Services, 2020*

AI typology	Description	Example	No. of cases reviewed
Audio Processing	These AI applications are capable of detecting and recognizing sound, music and other audio inputs, including speech, thus enabling the recognition of voices and transcription of spoken words.	Corti in Denmark is used to process the audio of emergency calls in order to detect whether the caller could have a cardiac arrest	8
Chatbots, Intelligent Digital Assistants, Virtual Agents and Recommandation Systems	This AI typology includes virtualised assistants or online 'bots' currently used in not only to provide generic advice but also behaviour related recommendations to users.	In Latvia, the Chatbot UNA is used to help answer frequently asked questions regarding the process of registering a company	52
Cognitive Robotics, Process Automation and Connected and Automated Vehicles	The common trait of these AI technologies is process automation, which can be achieved through robotized hardware or software	The use of self-driving snowploughs in an airport in Norway in order to improve the clearing of snow on runways.	16
Computer Vision and Identity Recognition	AI applications from this list category use some form of image, video or facial recognition to gain information on the external environment and/or the identity of specific persons or objects.	In Estonia, the SATIKAS system is capable of detecting mowed (or the lack of mowed) grasslands on satellite imagery	29
Expert and Rule-based Systems, Algorithmic Decision Making	The reason why these apparently distant AI developments are joined into a single application is their prevalent orientation to facilitate or fully automate decision making processes of potential relevance not only to the private but also to the public sector.	Nursery child recruitment system used in Warsaw. The algorithm considers data provided by parents during the registration, calculates the score and automatically assigns children into individual nurseries.	29

48 AI Watch, Artificial Intelligence in Public Services, 2020

AI-empowered Knowledge Management	The common element here is the underlying capacity of embedded AI to create a searchable collection of case descriptions, texts and other insights to be shared with experts for further analysis.	In the Slovak Republic, an AI system is used in the government to assist in the browsing and finding of relevant semantic data	12
Machine Learning, Deep Learning	While almost all the other categories of AI use some form of Machine Learning, this residual category refers to AI solutions which are not suitable for the other classifications.	In the Czech Republic, AI is used in social services to facilitate citizens to stay in their natural environment for as long as possible	17
Natural Language Processing, Text Mining and Speech Analytics	These AI applications are capable of recognising and analysing speech, written text and communicate back.	In Dublin, an AI system analyses citizen opinions in the Dublin Region for an overview of their most pressing concerns by analysing local twitter tweets with various algorithms.	19
Predictive Analytics, Simulation and Data Visualisation	These AI solutions learn from large datasets to identify patterns in the data that are consequently used to visualise, simulate or predict new configurations.	Since 2012, the Zurich City Police have been using software that predicts burglaries. Based on these predictions, police could be forwarded to check these areas and limit burglaries from happening.	37
Security Analytics and Threat Intelligence	These refer to AI systems which are tasked with analysing and monitoring security information and to prevent or detect malicious activities.	In the Norwegian National Security Authority a new system is used based on machine learning is enabling the automatic analysis of any malware detected to improve cybersecurity	11

The report points out that it is too early to draw conclusions, as the technology is fast evolving and the dataset of cases is not representative. However, it seems that chatbot and intelligent assistants as well as predictive analysis are the most commonly used AI-types in the public sector.

The study concludes that *"governments across the EU are exploring the potential of AI use to improve policy design and evaluation, while reorganising the internal management of public administrations at all levels. Indeed, when used in a responsible way, the combination of new, large data sources with advanced machine learning algorithms could radically improve the operating methods of the public sector, thus paving the way to pro-active public service delivery models and relieving resource constrained organisations from mundane and repetitive tasks".*

Furthermore, the authors stress that: *"There is a high expectation from the use of AI in government – but it is clear from our current exploration that positive impact is far from straightforward and should not be taken for granted."*

Public procurement

A further issue to be mentioned in this context is procurement. In June 2020, the UK Office for AI published a set of comprehensive **Guidelines for AI procurement** (49). *"Artificial Intelligence is a technology that has the potential to greatly improve our public services by reducing costs, enhancing quality, and freeing up valuable time of frontline staff. Recognising this, the UK Government published the Data Ethics Framework and A Guide to using AI in the Public Sector to enable public bodies to adopt AI systems in a way that works for everyone in society. These new procurement guidelines will help inform and empower buyers in the public sector, helping them to evaluate suppliers, then confidently and responsibly procure AI technologies for the benefit of citizens."*

Among others, the procurement guidelines stress the need to consider the **lifecycle management of AI systems** (from the design, testing, deployment, implementation, up to the end-of-life) when taking procurement decisions, in particular as the functionalities and consequences of AI systems may only manifest during or after deployment. The guidelines also stress the need to make explainability and interpretability of algorithms a design criteria.

3.3. Specific challenges linked to algorithmic or automated decision-making (ADM) systems

As discussed above, AI-enabled tools are increasingly being used by the public sector. Much of the debate centres around the use of algorithmic or automated decision making (ADM) systems.

Black box effect and remedies

One of the main concerns regarding the use of ADM is the so-called black box effect. ADM systems often rely on algorithms. The algorithm runs through the data and comes up with a result. However, often neither the programmers nor the public officials can explain how or why the algorithm came up with this particular result. The reasoning and decision making happen in a black box.

Furthermore, algorithms are often developed by private companies and declared a trade secret, they are thus not subject to public scrutiny or peer review. The lack of information on how these systems operate makes it difficult to correct the design and establish accountability.

The black box effect clearly stands in contrast to established public standards such as transparency, openness and explainability. Citizens have a right to have the decision taken about them explained as well as a right of redress. However, in practice this becomes difficult to implement if public officials cannot explain the reasoning and judges cannot scrutinise the basis on which a decision was taken.

The Council of Europe Commissioner for Human Rights published the recommendation "Unboxing AI: 10 steps to protect human rights" (50). Among other issues, it also addresses the question of meaningful remedies. "*Member states must ensure that individuals have access to information in the possession of a defendant or a third party that is relevant to substantiating their claim that they are the victim of a human rights violation caused by an AI system, including, where relevant, training and testing data, information on how the AI system was used, meaningful and understandable information on how the AI system reached a recommendation, decision or prediction, and details of how the AI system's outputs were interpreted and acted on."*

49 https://www.gov.uk/government/publications/guidelines-for-ai-procurement/guidelines-for-ai-procurement
50 https://rm.coe.int/unboxing-artificial-intelligence-10-steps-to-protect-human-rights-reco/1680946e64

Bias, gender equality, discrimination, racism

Recent cases and studies have shown that datasets used for training algorithms are often biased. When the algorithms are thus used by public authorities to support their decision-making processes, e.g. for predictive policing or credit scoring, they tend to have discriminatory impacts and further cement existing inequalities.

Numerous studies point out the risks that artificial intelligence and automated decision-making systems can pose to equality and non-discrimination during the delivery of public and private sector services. Examples of discrimination have been documented in facial recognition software, hiring systems, credit scoring and social benefit assessments.

A gender equality perspective should be integrated in all policies, programmes and research in relation to artificial intelligence to avoid the potential risks of technology perpetuating sexism and gender stereotypes.

In 2018, the Council of Europe's European Commission Against Racism and Intolerance commissioned a study on "Discrimination, artificial intelligence and algorithmic decision-making" (51). The study recommends that equality bodies have a key role to play in awareness-raising, prevention and redress. For equality bodies to be able to seize the potential, key stakeholders and national regulators need to receive specialised training as this is a technically demanding subject.

In 2020, Fundamental Rights Agency in Europe published a comprehensive report 'Getting the future right – Artificial intelligence and fundamental rights in the EU' (52). The report notes a lack of understanding of the impact of AI on fundamental rights in general and a lack of in-depth assessments of discrimination in automated decision making in particular. The report also highlights the importance of awareness raising, capacity building and training for civil servants to help mitigate the potential risks of the use of AI.

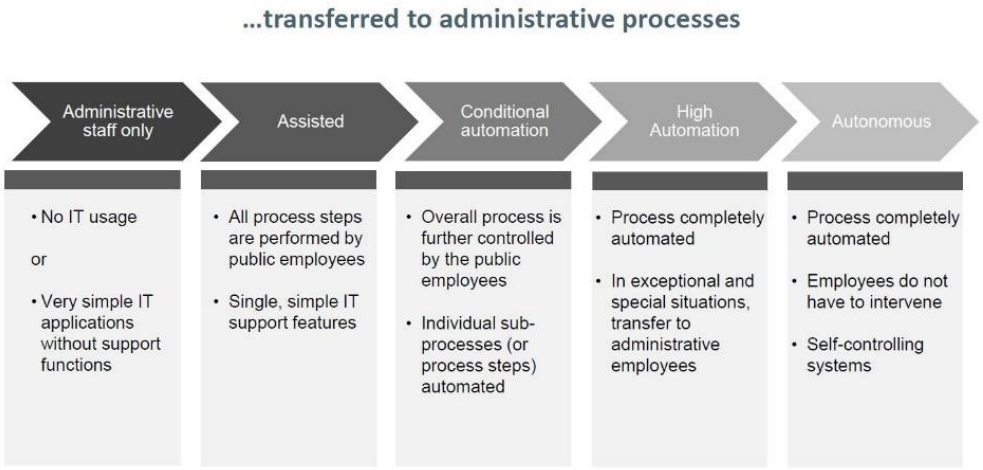
In 2020, due to the Covid-19 pandemic the UK government cancelled A-level exams, attempting to grade thousands of students by algorithm. The algorithm downgraded almost 40 per cent of the A-level grades predicted by teachers in England. This has led to nation-wide protests by students and other groups. The government subsequently had to cancel the algorithmic decision and allow teachers to grade the students. Problems with the algorithm included among others flawed assumptions about data (both individual and group data), too little consideration of the impact of the algorithm as a whole and lack of independent review and oversight prior to the deployment of the algorithm (53).

Levels of automation

Drawing a parallel with self-driving cars, five levels of automation can be distinguished when using ADM systems in the public sector, namely: administrative staff only; assisted automation; conditional automation; high automation and full automation. As illustrated by the diagram:

51 https://rm.coe.int/discrimination-artificial-intelligence-and-algorithmic-decision-making/1680925d73
52 https://fra.europa.eu/sites/default/files/fra_uploads/fra-2020-artificial-intelligence_en.pdf

53 https://www.wired.co.uk/article/alevel-exam-algorithm



Source: Round Table on Artificial intelligence and the Future of Democracy, Council of Europe, 2019

Currently, agencies in the public sector use automated decision making mostly in the category of assisted or conditional automation. In few cases, complete processes or services are automated. There are no fully autonomous systems in use in the public sector.

The legal bases for using ADM may vary in member States. E.g. according to German law, automated decision-making can be used only when there is no margin of discretion and when the decision to be made is yes or no. In all cases, it should be possible to opt out, to re-evaluate the process and to explain how the decision was taken.

Judicial cases

With the increased use of ADM systems in the public sector, citizens also increasingly appeal decisions affecting them which have been taken with the help of ADM systems. More case law is expected to emerge in the coming years.

In a recent court judgement, the District Court of The Hague held that the System Risk Indication (SyRI) algorithm system, a legal instrument that the Dutch government uses to detect fraud in areas such as benefits, allowances and taxes, violates article 8 of the European Convention on Human Rights, namely right to respect for private and family life.[54] The judge ruled that the collective, economic welfare interest of preventing fraud weighted insufficiently against the social interest of privacy. The judge further pointed out that the absence of disclosure of the inner workings of SyRI makes its usage insufficiently transparent and verifiable. The case illustrates the potential for discrimination embedded in AI-enabled solutions.[55]

54 https://www.loc.gov/law/foreign-news/article/netherlands-court-prohibits-governments-use-of-ai-software-to-detect-welfare-fraud/
55 https://www.theguardian.com/technology/2020/feb/05/welfare-surveillance-system-violates-human-rights-dutch-court-rules

Case study: Artificial intelligence and good governance principles in the UK

The UK is one of the few member States that has assessed the use of AI in the public sector against the principles of good democratic governance. In the UK, those principles are known under the Seven Principles of Public Life (the Nolan Principles). The principles apply to all those elected or appointed to public office, nationally and locally, and all people appointed to work in the Civil Service, local government, the police, courts and probation services, non-departmental public bodies (NDPBs), and in the health, education, social and care services, as well as other sectors delivering public services.

The Nolan Principles are: Selflessness, Integrity, Objectivity, Accountability, Openness, Honesty and Leadership. It is evident that there is overlap with the 12 Principles of Good Democratic Governance and thus the findings of the study are indicative.

In February 2020, the UK Committee on Standards in Public Life published a report Artificial Intelligence and Public Standards (56) looking at how the Nolan Principles can be upheld when technologically assisted decision making is adopted more widely across the public sector. In the report, the authors note: *"Artificial intelligence has the potential to revolutionise the delivery of public services, creating an opportunity for more innovative and efficient public service delivery. Machine learning in particular will transform the way decisions are made in areas as diverse as policing, health, welfare, transport, social care, and education. This review found that the Nolan Principles are strong, relevant, and do not need reformulating for AI. The Committee heard that they are principles of good governance that have stood, and continue to stand, the test of time. All seven principles will remain relevant and valid as AI is increasingly used for public service delivery. This review found that the Nolan Principles are strong, relevant, and do not need reformulating for AI. The Committee heard that they are principles of good governance that have stood, and continue to stand, the test of time. All seven principles will remain relevant and valid as AI is increasingly used for public service delivery. If correctly implemented, AI offers the possibility of improved public standards in some areas. However, AI poses a challenge to three Nolan Principles in particular: openness, accountability and objectivity."*

3.4. Risks and opportunities of the use of artificial intelligence

AI systems can have a highly positive impact across society for example their potential impact on human health and healthcare systems. The increasing use of AI systems in all areas of private and public life also carries significant challenges for democracy, democratic institutions and processes. Therefore quality of governance and civil society at large could be improved.

As risks to democracy we should be aware of effective, transparent and inclusive democratic oversight mechanisms which needed to ensure that the democratic decision-making processes and the related values of pluralism, access to information, and autonomy are safeguarded in the context of Artificial Intelligence could have negative effects.

56 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868284/Web_Version_AI_and_Public_Standards.PDF

3.5. Requirements for the use of AI in public administration

Explainability

Public authorities` decision-making takes place on the basis of data analytics. The algorithm's explainability is about being able to explain the outcome of the algorithm in clear, understandable language. Technical transparency can contribute to explainability to a certain extent but has its limits when dealing with very complex algorithms. Public authorities that use algorithmic decision-making with specific consequences for individual citizens must be able to explain both the procedures followed by the algorithm and the specific decisions taken. This implies that, as a starting point, government organisations should not, in principle, use algorithms that are too complex to explain.

Accountability

Decisions made by public authorities stakeholders may have a strong impact on the lives of citizens.Therefore open and transparent accountability structures should be developed. In order for accountability to work effectively, governments should make understandable how AI systems are used in decision-making processes. Government authorities are responsible for decisions made by the algorithms they use even if they cannot be explained in detail. Public authorities should therefore be able to provide accountability for those decisions.

Transparency

AI in the public sector should be transparent in the most possible way.

4. Digital transformation to strengthen good governance at the local and regional level

4.1. Smart cities and regions

According to the UN, 60% of the world's population are expected to live in cities or metropolitan areas in 2030.[57] City authorities are facing immense challenges to deliver services to tackle problems such as pollution, traffic jams and crime. Technology, in particular data-driven digital technologies, can play a role in addressing these challenges. Smart city advocates promise that technology will make cities more sustainable, equitable and efficient.

The Congress of Local and Regional Authorities of the Council of Europe has been looking at issues relating to smart cities since 2009 and has published several resolutions to this effect. Furthermore, one of the priority areas for the Congress in 2017-2020 is the improvement of urban life. In its work on smart city concepts, Congress "*recommends actions to facilitate an implementation of the smart city-concept, which also safeguard and promote social and civic inclusion. These recommendations will underline the need to strengthen human rights, social justice and equality, by making sure that smart cities are cities for all*."[58]

57 SDG 11 Factsheet
[58] Smart Cities: democratic and inclusive cities, Governance Committee CG/GOV12(2019)04, Rapporteur: Martin FODOR, United-Kingdom (R, ILDG) Outline report, 3 October 2019 https://rm.coe.int/090000168098351f

The Congress of Local and Regional Authorities of the Council of Europe and smart cities

Congress Resolution 435 (2018) and Recommendation 424 (2018) Transparency and open government

Congress Resolution 417 (2017) and Recommendation 398 (2017) Open data for better public services

Congress Resolution 394 (2015) E-media: game changer for local and regional politicians

Congress Resolution 290 (2009) E-democracy: opportunities and risks for local authorities

Smart concepts

An internationally agreed upon definition of a smart city does not exist. The concept is vague and ambiguous and is used in different ways. For the purpose of this study, a smart city can broadly be understood as an approach to urban planning and service delivery in which infrastructure and services are inter-connected using digital and telecommunication technologies (ICT). So far, smart city solutions have been developed in the context of energy supply (smart grid), urban transport (traffic control), efficient systems to light and heat buildings, detection of pollution levels and improving public health to name a few.

Smart cities and regions as a multi-stakeholder process

The implementation of smart city solutions is a multi-stakeholder process. It requires the cooperation of different agencies of the public sector with private or commercial companies and "the people / the city dwellers".

The multi-stakeholder dimension challenges traditional ways of delivering services and policy making. This has implications for governance models. It calls for organisational and institutional changes to overcome siloes within public administration as well as for mechanisms to enable data sharing based on clear and transparent rules. In addition, in order to be effective in designing and implementing smart city concepts, teams need to be diverse and multidisciplinary. Furthermore, support for smart city solutions and administrative services from the central government and cooperating with the central government can also be effective ways to ensure impact.

Smart city projects are often realised by **private public partnerships**. Public bodies have an obligation to follow good governance standards and need to take additional care when involving private or commercial companies in the design, development and implementation of data-driven, AI applications. Procurement procedures need to be open, transparent and fair. In addition, accountability, responsibilities and product liability need to be clearly defined from the outset. Private companies need to comply to the high standards of the public sector.

Civil participation is crucial as smart city solutions are meant to be for the people. When embarking on smart city projects, city authorities should involve residents from the start. This promotes trust and avoids resistance from the residents.

Lastly, smart city projects might reshape the relationship between the public sector and citizens. If public authorities provide data in open data portals citizens can develop applications, too. City dwellers thus become service innovators and are no longer merely passive service consumers.

Many smart city applications rely on data collection and automation, e.g. for managing parking spaces. Some cities have introduced **public registers** and now publish information about the automated decision making and AI-enabled technologies used by the municipality. For example, the AI Register in Helsinki (59) is a window into the artificial intelligence systems used by the City of Helsinki. Through the register, citizens can get acquainted with an overview of the city's artificial intelligence systems or examine them in more detail. Citizens can also give feedback and thus participate in building human-centred AI in Helsinki. Amsterdam has also published a public register (60). From the website users can learn where the city of Amsterdam is currently utilising algorithmic systems for service delivery. Citizens can give feedback and thus participate in building human-centred algorithms in Amsterdam.

Cities are complex eco systems. Understanding them solely through the lens of technology and efficiency ignores the underlying social, economic, environmental and political problems cities grapple with. Technology by itself cannot provide the solution to pollution, traffic jams or crime. Furthermore, digital data-driven technologies do not come for free. They are in themselves resource-intensive and value-laden. Nonetheless, data driven technologies are certainly part of the solution and have potential to improve living conditions.

Very often smart city concepts are applied beyond specific municipalities, to entire **regions**. These strategies aim at harnessing technological development to increase cohesion with a region, equalise access to services and opportunities and bridge the gap between urban centres and countryside.

Finland

Digitalisation and AI use in City of Helsinki

Proactive, not just reactive - Helsinki wants to be the most functional city in the world

Above all else, functionality means a convenient everyday life. By fully harnessing the potential of digitalisation, the City can make day-to-day life easier, both for its customers – residents, visitors, businesses, communities – and its employees and decision makers.

Helsinki has launched an ambitious digitalisation program that will help the City improve its services and renew its operations in many ways. The changes encompass not only new technologies, but also the development culture, organisation, management and staff skills. Helsinki wants to become more customer oriented and agile in its operations and to utilise data to create better services and make better decisions.

Example 1: The City suggests a suitable pre-school for children, meaning that parents no longer need to apply for a place.

Example 2: Based on health information, the City identifies those at risk, invites them for a doctor's examination and helps them take responsibility for their health.

59 https://ai.hel.fi/en/ai-register/

60 https://algoritmeregister.amsterdam.nl/en/ai-register/

Example 3: In participatory budgeting, residents come up with ideas and choose plans for the City to implement.

Example 4: City and traffic planning, as well as construction decisions, can be visualised and tested using a virtual city model.

Example 5: Quick homecare visits can be replaced by new virtual telecare services.

More information: https://digi.hel.fi/english/

Kurob - Municipal robots, City of Jyväskylä & network

The aim of the project is to build an effective network-like operating model for promoting the digitalisation of municipalities and to reform the work culture, operating methods and processes of the participating municipalities by utilizing software robotics.

It is important to identify processes suitable for robotics in different sectors as well as to use extensive networking in results, experiences and best practices across municipal boundaries. Project introduce and train municipal supervisors in software robotics and the utilization of artificial intelligence in their own work and thus support digital change management in the municipal sector and promote digitalisation and automation of information work by training municipal supervisors. One robotization per municipality is implemented from the identified sectors in order to concretize the benefits of robotics. The project improves municipal information management by improving the quality of data underlying information management and lowers the threshold for municipalities to utilize robotics automation.

Other municipalities: Asikkala, Hollola, Hämeenlinna, Janakkala, Kokkola, Nokia, Pirkkala, Riihimäki, Uurainen, Ylöjärvi

City in your pocket, City of Hämeenlinna

The goal of the City in your Pocket mobile application is to renew operating methods and customer orientation, as well as to achieve cost savings. The project aims to develop common solutions developed using more customer-oriented service processes and possibly the utilization of new technologies such as software robotics, artificial intelligence and process automation in the public sector.

The City in Pocket project aims to focus on the following content in a limited way:

• Update and renewal of the technical implementation (including iOS compatibility), common technology that can be utilized by several municipalities or cities (Hämeenlinna in the pocket upgrade to the City in the pocket version and production of the first version of the city of Salo)

• Incorporating features of interest and value-added to citizens and citizens as well as other stakeholders (stakeholder identification) into the new version to be created, which can be customized on a city-by-city basis in terms of features and visual appearance for personal use

• Engaging other municipalities and cities in the use and development of the application - with the aim of creating one app that would be available in all municipalities

• Creating a network and increasing new user communities, involving possible business cooperation in development and maintenance cooperation

Health centre chatbot

The chatbot provides health and illness-related advice easily without queuing. Chatbot directs the users to the right digital health services and advises on questions related to dental, mental health, substance abuse and social services. The service answers the most frequently asked questions and direct to the sources of reliable information based on users' needs. The chatbot is integrated with other digital services of health centres. Through it, customers may be directed to, for example, the city's digital services, Omaolo, Omakanta or social counselling chat. The service enables transactions around the clock anonymously and securely. All health centres use the service in Helsinki, and it covers all services of the health centres.

The clinical guidance of the service is based on national practices of evidence-based treatments, the Current Care guidelines and the emergency care evaluation criteria. The service utilises natural language processing based artificial intelligence to analyse the searches entered by the customer and to identify the intended service need, as well as to find the respective instructions.

United Kingdom

Wakefield Council, West Yorkshire – potholes

One of the main reasons that customers contacted Wakefield Council, through all channels, was in relation to highways, planning and transport issues. Specifically, Wakefield Council's highways service was seeing a high level of 'stage one' complaints relating to the reporting and service status updating of category one defects – potholes.

The project aimed to deliver a fully integrated and automated system linking customer requests via Wakefield Council's website to the back office. This was to be supported through the use of technology and business process re-engineering.

The project has enabled the council to become more efficient and effective. Complaints around lack of communication relating to pothole reports and service requests have dropped by 70 per cent since completion of the initial stages of the project.

Gloucestershire County Council, South West England – access to information through online archives

Gloucestershire County Council's archive team has delivered online registration and document order facilities that give its 10,000 users a year anytime, anywhere access to the catalogue of 800,000 items – delivering an expected £45,734 of annual efficiency savings along the way.

Customers are now able to explore the full catalogue online, at the time and place of their own choosing rather than being restricted to physical visits within office hours. With the collections being available to search 24/7 they are now more accessible to a wider range of people at a time that is convenient to them. Google Analytics have suggested that 47 per cent of users access the online catalogue website between 17:00-21:00 and that use over the weekends (particularly Sunday) is common.

Anecdotal evidence also suggests that users are becoming more aware of the richness of the content in the archives – when they use search terms the results that are returned often open up new lines of research.

Sunderland City Council, North East England – Digital transformation in waste services

In early 2017, the council was receiving hundreds of telephone calls to report missed waste collections – on average around 600 a month. In challenging financial times, the council saw the opportunity to both improve the service and deliver savings by reducing the need to rectify previous failures and encouraging a shift in reporting channel from the telephone to the web.

Sunderland's digital transformation of waste services has delivered a significant digital channel shift and change in user behaviour – from just 14 per cent of transactions online in financial year 2016/17 to 55 per cent in 2018. It has reduced missed waste collection reports by 7,000 and delivered £136,364 in savings.

North Lanarkshire Council, Scotland – Sheltered Housing Connectivity Project

North Lanarkshire Council has improved digital inclusion by providing information technology hubs in each of its housing complexes which are specifically designed to support older people to live independently. This project installed wi-fi in such housing complexes to help ensure the tenants and other older people from the wider community who attended social activities in the common areas had access to the range of benefits and opportunities that digital inclusion could provide. It has also improved intergenerational relationships between young people and older people in the community.

Aberdeen City Council, Scotland – support for young people with experiences in social care

An innovative app launched by Aberdeen City Council last year has taken on additional importance in the current pandemic lockdown. The app means that young people can maintain contact with the social work professionals who support them and their families. Since March 2019, the 'Mind Of My Own' app has helped these young people make their voices heard and make decisions on their lives by saying how they are feeling, what support they need and to tell their care worker about the things that are important to them.

The Council's Integrated Children's and Family Services team recognises that the current, unprecedented situation and the social isolation it brings could present challenges for many young people who may be finding the lack of face-to-face contact difficult. With the use of the 'Mind Of My Own' app, users can help overcome feelings of anxiety, isolation or loneliness by sending their worker a statement, which will be received by email, to let them know how the user is feeling and allow the individual to feel connected and digitally close to them at this time.

Blaenau Gwent Borough Council, Wales – using data to target support

As part Blaenau Gwent County Borough Council's response to supporting the most vulnerable during the pandemic, virtual locality response teams mapped local assets and support to enable the community to support itself. The Council also collected data to identify those who may have needed more support, such as those on the shielding lists. Councillors were a vital contributor to the collection of this data given their local knowledge of residents in their ward. The Council were able to match volunteers to individuals to provide the support they needed. It has also helped them better understand the life experience of residents, some of whom have fed back on how they welcomed the interaction in this way.

Bath and North East Somerset Council, South West England – Assistive Technology in the Home

With average residential care costs typically £700 per week, the council wanted to reduce the number of adults entering residential care by using assistive technology to help people to live independently at home. The Council is embedding a range of assistive technology apps and devices, across referral, assessment and care aspects of its reablement and rehabilitation services to help people live well and independently in their own homes.

Partnered by business and the national representative body for technology enabled care services, the project complements health sector strategies, and usage data will help develop a central hub of wellbeing information. Embedding digital technology into the council's care offers will realise a small reduction in residential and non-elective admissions to residential care which in turn will generate savings in the costs of providing support for service-users.

London Borough of Hackney – Predictive in Family Services

London Borough of Hackney wanted to manage demand on its pressured children's services by identifying those families at risk and intervening earlier. It piloted and has now mainstreamed a predictive model which analyses various data sources, including school and health records, to judge families' risk scores. With 80% accuracy, it identifies and alerts social workers to those who need extra support. It includes an information sharing platform, and a secure alert system which sends escalated risk scores to social work teams to support their professional judgement.

Using this model has helped the council achieve savings through increased efficiency in its children's services. The early and effective interventions made available as a result of using this model is also expected to reduce future costs.

Part IV – CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE WORK

Digital transformation, democracy and good governance have a fundamental feature in common: they are **dynamic processes**. They evolve over time, hardly ever at a constant pace, being influenced by a great number of internal and external factors. These processes are closely intertwined and impact on each other in an unprecedented way at the present time which is often referred to as 'the digital age'.

Digital transformation affects all levels of the public sphere - individuals, their associations, public institutions and democracy as whole. It offers opportunities to strengthen democracy and the implementation of the **12 Principles of Good Democratic Governance**. If not adequately framed within these principles, however, digital transformation can undermine the implementation of those very principles.

The digitalisation of the public sector has experienced a rapid acceleration in the context of the Covid-19 pandemic. During such challenging times, the ability to 'go digital' has greatly contributed to the **resilience** of public action, ensuring that democratic institutions could continue to work and public services to be delivered. In parallel, however, digitalisation exposes democracy and the public administration to new **vulnerabilities** at the hands of hostile or ambivalent private and public actors.

To harness the potential of digital transformation to strengthen democracy, governments will need to apply continuous vigilance to identify and address emerging risks. They also need to equip themselves for a cultural change: flexibility, self-evaluation, continuous learning, IT skills will be necessary to enable public officials to use technology and prevent negative consequences.

As regards possible **future work** in this area, the **CDDG** should continue to follow and contribute to the work of the CAHAI and be prepared to complement the work of the latter with guidelines or a compendium of good practice in the area of using artificial intelligence and public administration to strengthen good democratic governance.

The CDDG should also consider digital transformation as a transversal aspect of its work, in any subject it examines. It should promote its Handbook on e-democracy by organising exchanges of good practice between officials of different Council of Europe member States. As a follow-up to the present report as well as to CM Rec (2018) on the participation of citizens in local public life, the CDDG could work on issues arising from the use of new forms of deliberative democracy at the local level**, with an emphasis on digital platforms.**

The Centre of Expertise for Good Governance has already started to work on effective digital transformation and has published a Toolkit on Teleworking in Public Administration. The Centre of Expertise should strengthen its capacity to help member States, at all levels of government, to devise and implement effective digital transformation strategies and action plans and a feasibility study into a specific toolkit for this purpose, addressed to the local level, would be very welcome.

SELECTED BIBLIOGRAPHY

Articles, books and reports

AI NOW Institute (2018) Algorithmic Accountability Policy Toolkit, and 2018 Report on Algorithmic Impact Assessments

AI Watch, Artificial Intelligence in Public Services, 2020

Algorithm Watch (2019) Automating Society – Taking Stock of Automated Decision-Making in the EU

Algorithm Watch (2020) Automating Society report 2020. https://automatingsociety.algorithmwatch.org/

Atlas of Automation: Automated decision-making and participation in Germany https://atlas.algorithmwatch.org/en

Bedingfield Will, 19 August 2020. Everything that went wrong with the botched A-Levels algorithm. Flawed assumptions about data led to the problems impacting hundreds of thousands of students, https://www.wired.co.uk/article/alevel-exam-algorithm

BEUC (2020) Artificial Intelligence: what consumers say: Findings and policy recommendations of a multi-country survey on AI.

Carsten Mann,; Voß Jan-Peter; Amelung Nina; Simons Arno; Runge Till; Grabner Louisa, (2014) Challenging futures of citizen panels: Critical issues for robust forms of public participation https://www.ioew.de/publikation/challenging_futures_of_citizen_panels_critical_issues_for_robust_forms_of_public_participation

Crawford Matthew B. (2019) Algorithmic Governance and Political Legitimacy, in American Affairs, Volume III, Number 2 https://americanaffairsjournal.org/2019/05/algorithmic-governance-and-political-legitimacy/

David Leslie (2019) Understanding artificial intelligence ethics and safety: A guide for the responsible design and implementation of AI systems in the public sector The Alan Turing Institute

Davies Rhodri (2019) Civil society, the missing link as we enter humanity's Fourth Industrial Revolution, January 2019

Garzia Diego and Marschall Stefan, (2019) Voting Advice Applications, Oxford Research Encyclopedias

Green, Ben (2019) The Smart Enough City. Putting Technology in Its Place to Reclaim Our Urban Future. MIT Press.

Helbing Dirk, Frey Bruno S., Gigerenzer Gerd, Hafen Ernst, Hagner Michael, Hofstetter Yvonne, van den Hoven Jeroen, Zicari Roberto V., Zwitter Andrej, Will Democracy Survive Big Data and Artificial Intelligence? February 2017 in Scientific American.

Henley Jon and Booth Robert, 05 February 2020, Welfare surveillance system violates human rights, Dutch court rules. Government told to halt use of AI to detect fraud in decision hailed by privacy campaigners. https://www.theguardian.com/technology/2020/feb/05/welfare-surveillance-system-violates-human-rights-dutch-court-rules

Höchtl Johann, Parycek Peter & Schöllhammer Ralph (2016) Big data in the policy cycle: Policy decision making in the digital era, Journal of Organizational Computing and Electronic Commerce, Vol. 26

Höchtl Johann, Parycek Peter & Schöllhammer Ralph, Big data in the policy cycle: Policy decision making in the digital era, Journal of Organizational Computing and Electronic Commerce, Volume 26, 2016 - Issue 1-2

International IDEA (2020) Global State of Democracy 2019: Addressing the Ills, Reviving the Promise https://www.idea.int/publications/catalogue/global-state-of-democracy-2019

Katzenbach, C. & Ulbricht, L. (2019). Algorithmic governance. Internet Policy Review, 8(4). https://doi.org/10.14763/2019.4.1424

Kundnani Hans (2018) Digital democracy and the crisis of liberal democracy

Kundnani Hans (2020) The Future of Democracy in Europe: Technology and the Evolution of Representation, Chatham House

Kuziemski Maciej, Misuraca Gianluca, (2020) AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings, Telecommunications Policy, Vol 44, Issue 6, https://doi.org/10.1016/j.telpol.2020.101976

Mergel, Ines et al. (2018) Agile government: Systematic literature review and future research. Government Information Quarterly 35(2):291-298 https://www.sciencedirect.com/science/article/abs/pii/S0740624X18302107?via%3Dihub

Parycek Peter, On artificial intelligence, dystopia, and democracy's digital future (interview), 2015

Pereira, Gabriela et al. (2020). Clearing the existing fog over the smart sustainable city concept: highlighting the importance of governance. https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1145%2F3428502.3428595

Petheram André, Pasquarelli Walter and Stirling Richard (2019) The Next Generation of Anti-Corruption Tools: Big Data, Open Data & Artificial Intelligence. Oxford Insights. https://www.oxfordinsights.com/ai-for-anti-corruption

Reis J., Santo P.E., Melão N. (2019) Artificial Intelligence in Government Services: A Systematic Literature Review. In: Rocha Á., Adeli H., Reis L., Costanzo S. (eds) New Knowledge in Information Systems and Technologies. WorldCIST'19 2019. Advances in Intelligent Systems and Computing, vol 930. Springer, Cham. https://doi.org/10.1007/978-3-030-16181-1_23

Savaget Paulo et al. (2018) Empowering political participation through artificial intelligence, Science and Public Policy. https://academic.oup.com/spp/article/46/3/369/5161215

The Electoral Commission (2019) UK Parliamentary General Election 2019, https://www.electoralcommission.org.uk/who-we-are-and-what-we-do/elections-and-referendums/past-elections-and-referendums/uk-general-elections/report-overview-2019-uk-parliamentary-general-election

Thiel Thorsten (2020) Demokratie in der digitalen Konstellation, In: Riescher, Gisela Rosenzweig, Beate Meine, Anna (Ed.): Einführung in die Politische Theorie: Grundlagen - Methoden - Debatten, Kohlhammer, Stuttgart, pp. 331-349.

Thwaite Alice (2019) Literature review on elections, political campaigning and democracy. Oxford Commission on Elections and Technology

UK Information Commissioner's Office (2020) Audit of data protection compliance by UK political parties" https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2020/11/uk-political-parties-must-improve-data-protection-practices/

UK Committee on Standards in Public Life published a report Artificial Intelligence and Public Standards https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868284/Web_Version_AI_and_Public_Standards.PDF

UK Committee on Standards in Public Life, Artificial Intelligence and Public Standards (2020) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868284/Web_Version_AI_and_Public_Standards.PDF

Wilhelm Robert & Ruhlandt Siegfried (2018) The governance of smart cities: A systematic literature review, Cities, Volume 81, Pages 1-23

Zuiderveen Borgesius Frederik J. et al, (2018) Online Political Microtargeting: Promises and Threats for Democracy, Utrecht Law Review, 14(1), pp.82–96. DOI: http://doi.org/10.18352/ulr.420

European Commission

High-Level Expert Group on AI (AI HLEG) (2019) Ethics Guidelines for Trustworthy AI

EU Strategy: Europe digital for the digital age (2019) https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en

EU White paper on AI (2019) https://ec.europa.eu/info/files/white-paper-artificial-intelligence-european-approach-excellence-and-trust_en
Digital Services Act package (2020) https://ec.europa.eu/digital-single-market/en/digital-services-act-package

Digital Market Act package (2020) https://ec.europa.eu/digital-single-market/en/digital-services-act-package

European parliament

EP study: Understanding algorithmic decision-making: Opportunities and challenges http://www.europarl.europa.eu/RegData/etudes/STUD/2019/624261/EPRS_STU(2019)624261_EN.pdf

A governance framework for algorithmic accountability and transparency, EP study, http://www.europarl.europa.eu/RegData/etudes/STUD/2019/624262/EPRS_STU(2019)624262_EN.pdf

European Parliamentary Research Service, Artificial Intelligence, Data Protection and Elections, 2019

European Union Agency for Fundamental Rights

European Union Agency for Fundamental Rights (2020) Getting the future right – Artificial intelligence and fundamental rights https://fra.europa.eu/en/publication/2020/artificial-intelligence-and-fundamental-rights

European Union Agency for Fundamental Rights (2019) Data quality and artificial intelligence – mitigating bias and error to protect fundamental rights https://fra.europa.eu/en/publication/2019/data-quality-and-artificial-intelligence-mitigating-bias-and-error-protect

European Union Agency for Fundamental Rights (2019) Facial recognition technology: fundamental rights considerations in the context of law enforcement https://fra.europa.eu/en/publication/2019/facial-recognition-technology-fundamental-rights-considerations-context-law

European Union Agency for Fundamental Rights (2018) #BigData: Discrimination in data-supported decision making https://fra.europa.eu/en/publication/2018/bigdata-discrimination-data-supported-decision-making

European Union Agency for Fundamental Rights (2018) In Brief - Big data, algorithms and discrimination https://fra.europa.eu/en/publication/2018/brief-big-data-algorithms-and-discrimination

OECD

Hello, World! Artificial Intelligence and its Use in the Public Sector - OECD Working Paper https://www.oecd.org/governance/innovative-government/working-paper-hello-world-artificial-intelligence-and-its-use-in-the-public-sector.htm

Recommendation of the Council on Digital Government Strategies, OECD, 15 July 2014 http://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf

Going Digital Project, OECD http://www.oecd.org/going-digital/project/

Report *Going Digital: Shaping Policies, Improving Lives, OECD* http://www.oecd.org/fr/innovation/going-digital-shaping-policies-improving-lives-9789264312012-en.htm

Measuring the Digital Transformation: A Roadmap for the Future OECD, March 11, 2019 http://www.oecd.org/publications/measuring-the-digital-transformation-9789264311992-en.htm

A compilation of good practices in digital government, OECD
http://www.oecd.org/governance/digital-government/toolkit/goodpractices/

OECD Council Recommendation on Artificial Intelligence
https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449

World Economic Forum

Agile Governance (2018)
http://www3.weforum.org/docs/WEF_Agile_Governance_Reimagining_Policy-making_4IR_report.pdf and
http://www3.weforum.org/docs/IP/2016/ICT/Agile_Governance_Summary.pdf
AI Procurement in a Box (2020) https://www.weforum.org/reports/ai-procurement-in-a-box