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# The impact of digital government on citizen well-being

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## OECD Digital Government Project

# The impact of digital government on citizen well-being

**OECD Working Papers on Public Governance**

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# *Foreword*

*The impact of Digital Government on citizen well-being* assesses the ways in which digital government themes and priorities affect the well-being of citizens.

This Working Paper builds on work of the OECD's Going Digital project, initiated in 2017, to support stronger and more inclusive growth from the digital transformation by building a coherent and comprehensive policy approach. One of the topics covered by the project is 'Well-being'. With the digital transformation impacting every aspect of our lives it is recognised that whilst there are opportunities for this to improve lives there is also a risk of it disrupting things in ways that negatively impact on people's well-being.

The Public Governance Directorate has several teams focused on the Reform of the Public Sector. For all these teams the question of digital transformation is critical to the future capacity of governments to address the concerns of their citizens and none more so than the Digital Government Unit.

This analysis of the relationship between digital government and the well-being of citizens draws on the OECD knowledge base and exchange of good practice, experience and strategies developed through the OECD Working Party of Senior Digital Government Officials (E-Leaders). The Working Paper builds upon the analytic framework provided by the Going Digital Integrated Policy Framework (forthcoming[1]), the OECD Recommendation of the Council on Digital Government Strategies (2014[2]) and the experience of projects conducted over the last 15 years across OECD member countries and other countries.

The Working Paper *The impact of Digital Government on citizen well-being* was prepared by the OECD Directorate for Public Governance (GOV), under the leadership of Marcos Bonturi.

This document was produced by the OECD Reform of Public Sector Division (GOV/RPS), headed by Barbara-Chiara Ubaldi, Acting Head of Division. It benefitted from her strategic orientation and revisions in that capacity and as lead on Digital Government, the Data-driven Public Sector and Open Data work. This document was drafted by Benjamin Welby, Policy Analyst - Digital Government and Data driven public sector. Colleagues from within the OECD including Molly Lesher, David Gierten, Sarah Box, Elettra Ronchi, Laurent Bernat, Fabrice Murtin, Vincent Siegerink, Gavin Ugale, Celine Kauffmann, Miguel Amaral, Alessandro Bellantoni, Claudia Chwalisz, Marco Daglio, Alex Roberts, Jamie Berryhill, Daniel Gerson, Natalia Nolan Flecha, and Cristina Mendes reviewed and provided comments. Raquel Páramo provided editorial and administrative support.

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# *Executive Summary*

Digital cultures, twenty-first century technologies and the power of data are changing the way in which citizens experience government services and participate in the civic space. Informed by the OECD's well-being framework, this paper considers how the experience of civic engagement and governance is being transformed and explores how governments can harness the potential of digital technologies and data to develop better outcomes for better lives.

Building on the work completed under the well-being module of the Going Digital project, this Working Paper considers three areas in which the digital transformation has affected both citizens and governments in their experience of civic engagement and public services.

First, the way in which citizens participate in, and experience, civic and political life has a significant bearing on their well-being. This paper considers the changing nature of our social and civic communities and some of the challenges that exist, for example, in terms of disinformation and online hate speech. It looks at the way in which online communities and digital tools have enhanced the capacity of citizens to engage with political leaders and find a political voice. Furthermore, it considers how those expressions of political participation online move into the offline, physical experience.

Second, digital transformation has changed the nature of digital security threats to which individuals and governments may be susceptible. In considering the responses such change requires, this paper explores how governments understand and guard against digital security threats in order to secure citizens and the services they require in order to safeguard their well-being. A further important area to consider is the importance of citizens' digital rights in respect of privacy, consent and the ethical approach to personal data.

A third strand of the relationship between digital government and well-being considered in this paper is how countries are now approaching the design, delivery and ongoing operation of policies following the advent of digital government practices. In this area, the paper reflects on the opportunities for governments to fundamentally rethink the way in which policies are approached by embedding digital, data and technology practices throughout government. The paper also explores the possibilities of digitally transforming government services to improve citizen well-being both in terms of technology, but also through the role which citizens must play in a 'user-driven' state. This section concludes by considering how greater transparency and openness of governments can be supported by digital government activities and contribute to the overall well-being of citizens.

## Main recommendations

The Working Paper concludes by suggesting that in order to maximise the relationship between digital government activity and citizen well-being, the focus should be on benefits that are not only material in terms of the quality of services, but that reflect the intellectual and emotional benefits derived from a different approach to government interactions with its constituents.

As such, this paper concludes by suggesting that the relationship between digital government and citizen well-being is best encapsulated by the outcomes which follow from

a government that is responsive, protective and trustworthy. This is summarised as followed:

- A **responsive** government that:
  - involves people throughout the design and delivery lifecycle of a policy to ensure that it understands their needs, can evolve to reflect what's learnt from them and proactively react to changing circumstances;
  - makes every effort to engage the public according to their habits and their needs, especially in the design and delivery of public services; and
  - considers the design of government and its end to end services rather than being content with the existing architecture of the public sector, and a focus on implementing particular technologies.
- A **protective** government that:
  - prioritises the protection of the public from external threats and ensures that the services it provides are secure;
  - encourages efforts to distribute trust throughout social networks and the political discourse; and
  - has a far sighted approach to regulation that by focusing on outcomes can reflect and safeguard against the implications of innovation without being focused on specific technologies and which can also establish quality standards for the delivery of government services.
- A **trustworthy** government that:
  - successfully balances the needs of government to be closed and secure, with the needs of citizens for government to be open and responsive by using digital tools to help build public trust and confidence in governments;
  - delivers high quality and reliable services that are characterised by a humility of understanding their users and being open to challenge and feedback;
  - shows citizens what is being done to improve their lives through increased transparency and an ongoing commitment to openness.

# 1. Introduction

In democracies, the relationship between citizen and state is mediated through the trust placed in those who are elected to serve. The activity which takes place at the ballot box sees the temporary transfer of sovereignty from the people of a country as a collective in the expectation that a government will protect their interests. That involvement with the political process on election day, and in between, contributes to the well-being of an individual in terms of their freedom to express their political voice and participate in the life of their country.

The outcome of that political participation is the election of a government which holds authority from the public and is trusted to reflect the will of the people in championing their rights and addressing their concerns, while delivering public value. From that mandate, countries are shaped by political leaders whose focus has increasingly shifted away from the measurement of GDP as an indication of success to a consideration of the broader well-being of their people.

Public policies shape the lived experience of being a citizen in a given country. Governments desire to improve that lived experience and are recognising that digital transformation can support them in this. The culture and technologies of the internet era are increasingly being applied across public services resulting in impacts to the experience of health, education and the economy as well as in rethinking the way in which we make use of the environment around us and the welfare support we provide one another in our communities. Whilst countries are embracing these changes in the hope that nobody is left behind there are risks that a 'digital by default' approach removes face to face or telephone based channels without thinking through the implications for the provision of digital infrastructure or those who lack either the access to the internet or the skills to maximise its benefits (OECD, 2019[3]).

Indeed, the wave of populism experienced by multiple democracies around the world reflects the frustrations of those who feel like they have been excluded from the public sphere. As individuals express their dissatisfaction at the ballot box or in mass demonstrations it is impossible to ignore the role which digital transformation has played in changing the nature of community. There are those for whom it has been empowering, whilst for others their experience of civic life has been negative. In both cases, the impact of digital transformation on the interactions with government, whether in accessing services or expressing their views, contributes to their material and emotional well-being.

The current wave of public sector digital transformation in delivering policy and designing public services follows from the e-government movement which preceded, and informs, it. During the 90s and the 00s, countries around the world began to use the internet in response to the needs of their citizens in a compelling and efficient fashion. The first websites were born, the first online services built and the first forays into areas of electronic identity, canonical data sources and paperless working.

In doing so this reflected the historic association of the state with the development and implementation of different technologies to deliver services with the intent of improving outcomes and enabling the state and its partners to deliver in a more effective manner. However, although technology became part and parcel of delivering government services several problems began to manifest. As governments looked at how they might rapidly shift their analogue processes online they responded to their skills gaps and the promise of cost-

effective delivery by increasingly outsourcing their delivery to third party suppliers. This created longer-term contracts that locked governments into relationships with an oligopoly of suppliers and further diminished internal capability whilst separating policy teams from delivery and operations. This resulted in a divide between what was imagined as the policy intent and the reality of how that came to be delivered at a later date.

The challenge of such outsourced models has become apparent alongside innovations creating ever more capable technology and increasing the opportunities for targeting the well-being of society. Furthermore, citizen expectations of the public sector have been raised by their experience of the tools they use in their day to day lives. As a result, there has been a shift in government approaches away from supporting internal efficiencies and digitising existing procedures and services (e-government) toward redesigning processes and shaping public governance outcomes to increase societal well-being and public trust (digital government). From a digital government perspective, the value of digital transformation is less about the tools used in delivery and more about the way in which governments can now engage with their users to gather their insights and design responses to best address their needs, enabled by an increasing ubiquity of affordable personal technology and a wealth of data.

The Going Digital project aims to help citizens, governments and businesses shape digital transformation so that it benefits society and leaves nobody behind (OECD, 2019[3]). One particular component of the project focuses on well-being in the digital age (OECD, 2019[4]).

This Working Paper complements other Going Digital work by exploring the relationship between citizen well-being and digital government activities. This introduction will summarise the OECD's approaches to defining these two areas. Subsequently the Working Paper will explore how digital technologies and practices have impacted on the experience of government by citizens and the practice of government by the state in three areas: firstly, the way in which citizens experience their role as part of a civic and political community. Secondly, the challenge of online safety and digital security. Thirdly, the capacity of governments to deliver goods and services to their public.

## 1.1. Well-being

There is no universal way of defining 'well-being'. By its very nature attempts to pinpoint exactly what contributes to the health, happiness and positive outlook for people in countries across the planet are always going to be somewhat subjective.

As a result, different organisations can focus on different aspects of life with a view to highlighting things which are potential obstacles to well-being. There are two examples of this just at the start of 2019:

Firstly, Oxfam used the World Economic Forum's annual gathering at Davos to publish 'Public Good or Private Wealth' a challenge to governments that their efforts to improve the quality of life for people hinge on the delivery of tangible public goods such as universal health and universal education. In their eyes, the ultimate improvement in well-being is something that requires governments to commit to funding the infrastructure of society above all else (Lawson et al., 2019[5]).

Secondly, the Edelman Trust Barometer is an annual study attempting to benchmark questions of trust across the world. Whilst the focus of the Oxfam report is the link between the things which are materially impacting on quality of life, the trust barometer is an effort

to consider a mental and emotional perspective. As such, it seeks to understand how much people trust the world around them in terms of their relationships to NGOs, businesses, the media, governments and their own employers (Edelman, 2019[6]).

These examples from 2019 build on long-standing efforts within the OECD to understand both trust and well-being as part of the Better Life Initiative. In 2017, the OECD's Statistics Directorate produced Guidelines to Measuring Trust (2017[7]) whilst in 2011 attempts to understand well-being at an individual level were shaped by a new framework attempting to blend both the material, and the emotional, aspects of lived experience.

It does this by shifting the focus of well-being away from aggregative economic conditions towards an attempt to define and understand social progress. To do this it tries to identify and understand the impact of public policies in terms of outcomes rather than purely on the basis of inputs and outputs. This results in a blended approach that thinks about the objective, and subjective, aspects of life and an approach that considers the distribution of experience across a population, thereby incorporating questions of inequality and sustainability into the definition of well-being.

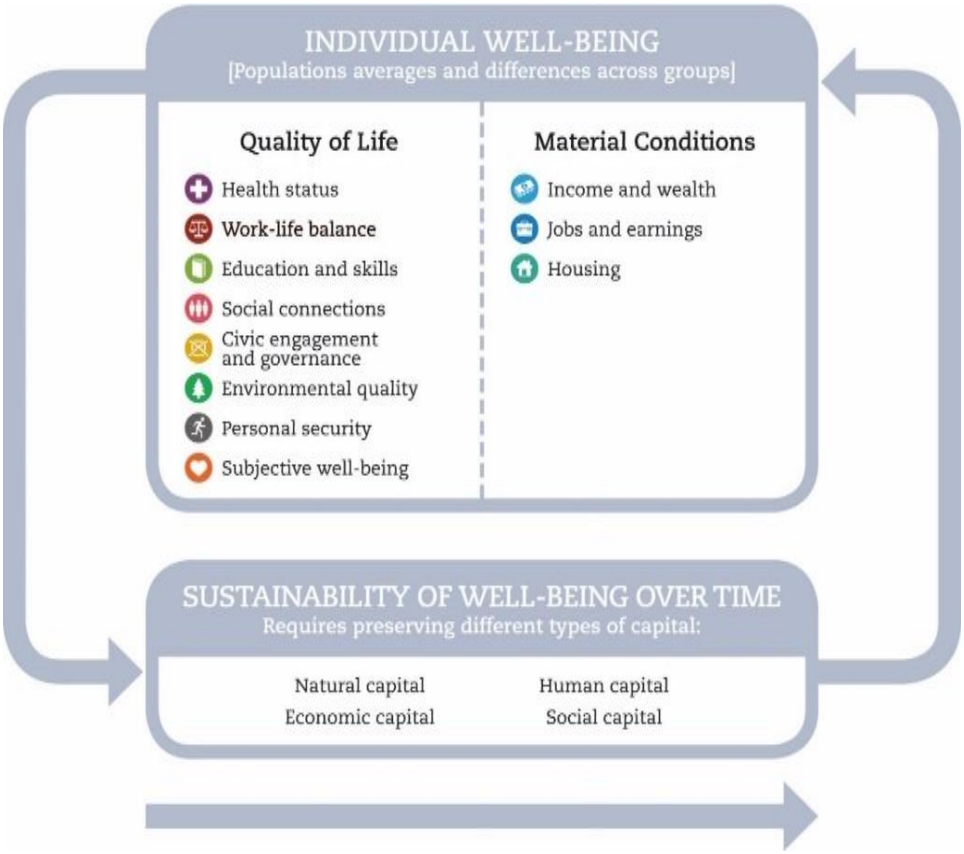
The framework, shown as Figure 1.1 now includes 11 dimensions of well-being:

- Income and wealth
- Jobs and earnings
- Housing
- Health status
- Education and skills
- Work–life balance
- Civic engagement and governance
- Social connections
- Environmental quality
- Personal security
- Subjective well-being

with four sets of resources that generate well-being over time across each of those:

- economic capital
- environmental capital
- human capital
- social capital

**Figure 1.1. The OECD well-being framework**




*Source*: How's Life? Measuring Well-being (OECD, 2017[8])

This conceptual framework is applied to the experiences of OECD countries and partner economies through a dashboard of indicators that are regularly published in the report *How's Life? Measuring Well-Being* and can be explored through the *Better Life Index* (http://www.oecdbetterlifeindex.org).

Building on this well-being framework the OECD has developed the Going Digital Integrated Policy Framework to help governments develop well-suited and resilient digital policies that ensure a coherent and cohesive whole-of-government approach to the potential of digital transformation and address its challenges. The framework, shown as Figure 1.2, includes seven policy dimensions to:

1. enhance access
2. increase effective use
3. unleash innovation
4. ensure good jobs for all
5. promote social prosperity
6. strengthen trust; and
7. foster market openness

**Figure 1.2. Going Digital Integrated Policy Framework**

*Source*: (OECD, forthcoming[1]), "Going Digital: An integrated policy framework to make the transformation work for growth and well-being".

## 1.2. Digital government

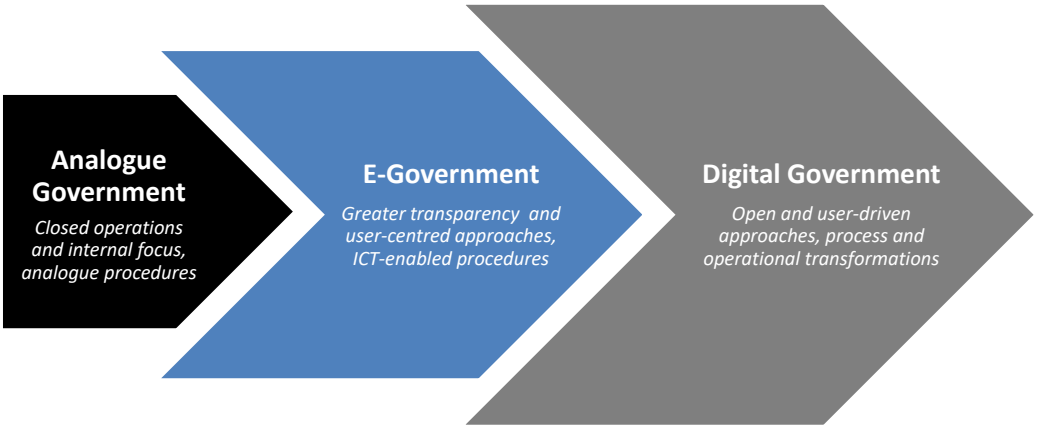
The OECD defines digital government as "the use of digital technologies, as an integrated part of governments' modernisation strategies, to create public value" (OECD, 2014[2]). This reflects an understanding that digital government activity is an enabler of transformation across government and is therefore transversal across several of the dimensions in Figure 1.1. This Working Paper considers how different aspects of the changes brought about by digital government activities and opportunities influence the well-being of citizens.

For some people government, politics and civic participation are not actively recognised or acknowledged in their day to day lives. Of course they may use public services through schooling, transport infrastructure or see political discussion in the news, but by and large their lives are lived without direct exposure, to the public sector, or full awareness of its role. However, for others, the civic sphere is a constant feature in their lives either in the active experience of accessing services or through citizen activism.

Whether they are actively engaged or not, the impact of the digital transformation is felt by citizens, businesses and government itself. As the lives of citizens, businesses and visitors to a country are changed in their personal daily interactions their expectations of government change too. In order to meet these expectations, governments have undergone a paradigm shift in their support and uptake of digital opportunities. The shift happening across governments worldwide is from using technology to digitise existing procedures and services in search of efficiency gains (e-government) to using data and digital technologies to rethink and re-organise how governments deliver public value (digital government) in order to foster open, innovative and collaborative governance, as also mentioned above.

The transition which governments have undergone from an 'analogue' government through the phase of 'e-government' and into the current expectations of 'digital' government are summarised in Figure 1.3.

**Figure 1.3. From analogue to digital government**




*Source*: Based on OECD (2014[2]), "Recommendation of the Council on Digital Government Strategies", OECD, http://www.oecd.org/gov/digital-government/recommendation-on-digital-government-strategies.htm.

This shift has not solely been about the application of technology to support government functions but has been an evolution in the way in which governments consider the needs of their users and the way in which the public is viewed as a participant, rather than solely as a beneficiary.

This is an ongoing transition with different countries at different stages in the evolution. In 2014 the Recommendation of the Council on Digital Government Strategies was adopted by the OECD and subsequently by 10 non-member countries[1]. Over the following years those ideas have crystallised into the importance of six dimensions that help governments leave e-government practices behind. These are:

- **Digital by design** – the intent of a government to approach 'digital' with an understanding of various strategic activities needed to facilitate successful and sustainable transformation. This means taking into account the full potential of digital, data and technology from the outset in order to rethink, re-engineer and simplify government to deliver an efficient, sustainable and citizen-driven public sector regardless of the channel used by the user.
- **Data-driven public sector** – the importance of data as a foundational enabler and strategic asset for the public sector to work together to forecast needs, shape delivery, understand performance, and respond to change
- **Open by default** – the appetite of governments to favour disclosure of data in open formats, collaboration across organisational boundaries, and the involvement of those outside of government is an important marker for a culture built on the principles of transparency, integrity, accountability and participation that underpin digital ways of working and the Recommendation on Open Government (OECD, 2017[9]).
- **User-driven** – an approach to delivery enabled by an open culture and supported by ambitions of digital by design to adopt means for the public to communicate their needs and for government to include, and be led by, them instead of any internal assumptions.

- **Government as a platform** – building an ecosystem to support and equip public servants to design effective policy and deliver quality services that also encourages government to collaborate with citizens, businesses, civil society and others.
- **Proactiveness** – how the application of these five dimensions enables governments to anticipate, and rapidly respond, to the needs of their citizens before a request is made. Transformed government allows whole problems to be addressed from end to end rather than the otherwise piecemeal and reactive digitisation of component parts.

These dimensions have emerged from the ongoing work of the OECD with digital government practitioners around the world which draws on the Recommendation on Digital Government Strategies (OECD, 2014[2]). One of the most important elements that shapes this are Digital Government Reviews where the OECD Secretariat and peers from OECD member countries analyse the experience of a particular country through interviews and a survey with institutions in the country. Additionally, the OECD convenes a yearly meeting of 'e-Leaders' with different thematic groups sharing their experiences of digital government to further refine these concepts and develop a shared understanding.

The digital transformation of government services and civic engagement is not guaranteed to improve quality of life for a population. As this Working Paper will explore the positive impacts have to be considered alongside the unintended consequences and new threats facing citizens, businesses and governments. Nevertheless, this contribution to the debate will emphasise the importance of a user-centred, data-driven and openly collaborative model of government. The Recommendation on Digital Government Strategies provides a framework to ensure that in the design, delivery and operation of policy and services, public servants and elected representatives can maximise the impact of digital, data and technology to improve and enhance the well-being of those under their care.

# 2. Changing the shape of civic participation

*This chapter considers the relationship between well-being and digital government in terms of civic participation and the engagement of citizens in political dialogue within their social communities. It discusses how citizens have not only changed the way in which they share information about their lives but about the changes to their participation in their local, physical community and the way in which people amplify and share their opinions about the quality of governance and decisions over policy.*

## 2.1. Sharing in the life of our communities

One of the most significant changes brought about by the rise in digital tools is the change in the dynamics of our communities. Where once our social interactions were heavily influenced by the places where we spent most of our time and constrained by local geography the internet has allowed us to create global networks and build new communities and friendships that may not require physical interaction.

These digital communities may be general purpose online spaces for sharing 'life' in all its variety (whether mundane or remarkable), or more tailored online spaces focused around a particular niche interest. They exist for us in our workplaces and they exist to build professional connections. They can be entirely open spaces, they can be private spaces saved only for a trusted audience, and they can allow us to be 'ourselves' where that self is tailored according to our own preferences. They can be 'real' or they can be anonymous. And they can be safe and trusted, but they can also facilitate impersonation and fakery.

These developments have been shown to provide liberation. For example, research from the last decade (Wheeler, 2006[10]) highlighted that the advent of digital tools and the progress of technology in the Arab World removed barriers for individuals to freely express views and participate in societal change especially where press and other freedoms were not guaranteed. Indeed, whilst the wave of political action across the Middle East and North Africa region known as the Arab Spring had multiple causes, the role played by the internet, social media and mobile technology was significant in allowing information to be spread and protests to be coordinated. In Egypt, the blending of emerging technologies and traditional channels was crucial during the 25 January Revolution. With cyberspace erupting with hashtags, Facebook pages and blogposts there was a similarly important role played by mobile devices but it was the subsequent amplification of information through television and newspapers which ensured the pervasive impact of the movement (OECD, 2013[11]).

However, whilst those tools were successful in mobilising popular movements, particularly amongst the youth, during and following the Arab Spring they also served less democratic regimes to identify unwanted opposition more easily and restrict individual freedoms (European Union, 2012[12]). Indeed, the evolution of the internet has increasingly brought up questions of security in terms of suppression, (mis)use of technology in the name of citizen security, and the misleading dissemination of information which will be discussed in more detail in Chapter 3.

Our social media feeds are an important source for expressing our beliefs and communicating personal details that might previously have remained hidden from public view. The easy sharing, and resharing, of views which may support our existing worldviews, irrespective of their veracity, create a sense of commonality which increases our well-being in terms of belonging. Although we may have a greater sense of solidarity with these groups, there are concerns that we risk losing diversity in the people we know and the voices we hear. The resulting 'group polarisation' can then reinforce positions and narrow views within a community, consequently creating the conditions for social conflict (Sunstein, 2002[13]). Changing the shape of civic participation in line with the evolving dynamics and needs of our societies does not mean leaving segments of the population out of the conversation and risks of polarisation need to be properly anticipated, avoided or managed.

These echo chambers and filter bubbles are not limited to particular social, political, economic or geographic groupings. Research from Thailand, Italy, and the USA show that group polarisation is commonplace with information rarely crossing ideological boundaries (Grömping, 2014[14]; Quattrociocchi, Scala and Sunstein, 2016[15]; Quattrociocchi, 2017[16]). People share, validate and link to things they support and which reinforce their own worldviews rather than offering any alternative perspective. This is as true of long form content from newspapers and blogs as it is for shorter status updates or signposting to media sources (Gilbert, Bergstrom and Karahalios, 2009[17]; An, Quercia and Crowcroft, 2013[18]).

Furthermore, our online spaces actually tend to narrow in response to a different perspective. In situations where the social ties are weak, an individual that shares a minority view amongst their friends is not likely to change the balance of opinion but is instead more likely to disappear from that conversation and those in future (Grevet, Terveen and Gilbert, 2014[19]). Furthermore, An, Quercia and Cowcroft (2013[20]) record that showing diverse opinions to people might in fact strengthen unreasonable positions and increase polarisation.

The platforms themselves are not free from influencing the way in which these communities behave. A detailed analysis of various social media platforms including Facebook, Twitter and YouTube shows that they each display varying kinds of bias which contribute to this issue (Nikolov et al., 2018[21]).

Whilst this has implications for the way in which information is consumed, other research downplays its overall significance. Dubois and Blank (2018[22]) conclude that 8% of audiences are at risk of the echo chamber effect. However, they go on to suggest that the overwhelming majority of people are critical of what they read, use multiple sources and are open to changing their mind. Therefore, they argue, social media does not create as extremely politically polarised communities as feared.

The role of misinformation and the messaging which people hear cannot be ignored. According to research by the Reuters Institute (Newman et al., 2018[23]), the self-reported incidence of exposure to completely made up news amongst OECD countries ranges from 1 in 10 people to almost 50%. However, such a question requires an individual to discern what has been falsified, and what has not. Indeed, in certain cases the agreed version of events within a particular tribe might label verifiable truth as disinformation when reported through channels they have been encouraged to distrust. Whilst such a sense of belonging is palpably beneficial to well-being it is clearly problematic if that results in a situation where individuals are unable to trust, or reach a well-informed conclusion about a particular topic. Where trust exists in a community then people are less likely to fact check a statement

leaving them at risk of falling victim to confirmation (or 'myside') bias and not only consuming misinformation but passing it on too, irrespective of intellectual ability. (Jun, Meng and Johar, 2017[24]; Stanovich, West and Toplak, 2013[25])

In the United Kingdom, such a climate of claim and counter-claim has led to the founding of independent charities like Full Fact or specific teams within existing media outlets like Fact Check at Channel 4 News to focus on the essential truth. Elsewhere, a collaboration between academics based in China and the USA, has produced 'Hoaxy', a platform for "the collection, detection, and analysis of online misinformation and its related fact checking efforts" (Shao et al., 2016[26]). Dishearteningly for those investing their energies in correcting falsehoods, their impact is marginal. In one study, fewer than 1.3% of conspiracy news consumers interacted with efforts to fact check their views whilst other research suggests that those who were exposed to such debunking efforts were actually 30 percent more likely to keep reading conspiracy news (Quattrociocchi, 2017[16]; Quattrociocchi, Scala and Sunstein, 2016[15]).

## 2.2. Finding and using our political voice

As our social communities have changed and with it the dynamics of how we share information and build relationships there has been a transformation of what it means to be a citizen in the 21st century in terms of our personal civic activity.

For some people this represents a seismic shift in the way that they understand local politics, access to services and the very functioning of democracy. However, for an increasing proportion of citizens, there is no awareness of this change. For 'digital natives', these new channels and tools for participation in civic and political life are simply the default with participation in the formal mechanism of party political membership on the decline (OECD, 2018[27]).

Recognising this change, some countries have used technology to build on existing processes for citizens to escalate their concerns. Petitions as a mechanism for people to hold government to account pre-date universal suffrage by several hundred years (Dumas, 2015[28]; Brook, 1998[29]). Whilst they played an important role in the pre-Internet age (for example, the global campaign seeking the release of Nelson Mandela drew many hundreds of thousands of signatures from around the world), their proliferation and reach has increased dramatically in the 21st century with the advent of e-petition platforms.

The United Kingdom's Parliament launched its electronic petition platform in 2010. Since then, almost 50,000 petitions have been signed by more than 60m British citizens. Originally, a 'successful' petition would need to generate 10,000 signatures to receive an official government response. However, the popularity of the platform resulted in the pressure to make this more meaningful and today any petition surpassing 100,000 signatures is the subject of a Parliamentary debate which has now happened over 100 times (UK Parliament, 2019[30]). However, recent research of the petitions reaching this threshold suggests that if MPs approach the debate like any other they risk bolting the public's view onto an existing process and disappointing the petitioners rather than reflecting the more distinct characteristics of this form of engagement and advocating on their behalf (Asher, Leston-Bandeira and Spaiser, 2019[31]).

Electronic petitions like this are a formal feature of the political landscape in several other countries including Germany (Dumas, 2015[28]; Schmidt and Johnsen, 2014[32]). However, the biggest impact around the world has arguably not been from these official extensions of the government but from the adjacent rise of Avaaz.org and Change.org where the target

of the action is just as likely to be corporate interests as it is governments. These platforms now play host to upwards of 50m registered users and allow individuals to bring their concerns to the attention of others, generating a momentum that at times becomes truly global.

If the purpose of a petition is to 'change public policy, call for an official statement, or evoke a certain act by a public institution' and their effectiveness is considered on those terms, then not every petition will be successful (Lindner and Riehm, 2011[33]; Morva, 2016[34]). However, research at a personal level indicates that the act of petitioning for change, irrespective of the outcome, can have psychological and therapeutic benefits which include meaning-making, social action, agency and empowerment (Etengoff, 2016[35]).

Whilst digital has enabled personal campaigns to gain greater visibility and spawn new movements it has also enhanced the capacity for pressure groups to use micro-participation in order to pressurise governments (Graaf, Otjes and Rasmussen, 2015[36]). Campaigning organisations can now marshal their supporters to participate in targeted action towards a social media profile or send boilerplate messages at scale to elected representatives and then amplify that messaging further through encouragement for a supporter to share within their social network.

However, the simplicity with which people can send messages to their elected representatives on a given topic raises questions about their efficacy with suggestions that limited offline impact means that this should be described as 'slacktivism' (Christensen, 2011[37]). Being on the receiving end of thousands of emails may amplify a particular cause, but if such volume of contact becomes part of 'business as usual' about a wide range of issues then the likelihood of a recipient adopting similar boilerplate techniques in reply also increases.

Nevertheless, research by the Pew Center (2018[38]) reports 69% of U.S. adults view social media as being very or somewhat important for getting elected officials to pay attention to issues, with a similar share (67%) saying that these sites are at least somewhat important for creating sustained movements for social change. However, the same report identified a similar proportion of people (71%) who believe that social media make people think they are making a difference rather than successfully doing so.

Social media has undeniably altered the nature of participation in political discourse for both citizens and governments in terms of both the content they share and the ease with which they do so (Mickoleit, 2014[39]). As a result, 'clicktivism' is argued to be the most prominent form of political expression in the world (Halupka, 2017[40]). The debate about the legitimacy of that form continues but in Nigeria in 2014, an existing culture of 'hashtag activism' turned a domestic campaign using the hashtag #BringBackOurGirls to express concern about the abduction of schoolgirls by Boko Haram into one which spread to 69 countries and came to the attention of an international audience of millions. Although the vast majority of tweets were from people doing nothing more than showing solidarity in a digital way during a time-limited period of interest, Endong (2018[41]) argues that this activity gave #BringBackOurGirls a higher profile moving those with influence to act. Nevertheless, with over 100 of the girls still missing in 2019 and Boko Haram abducting others, the success of the campaign is clearly questionable.

This underscores the challenge of moving digital civic and political participation online. It is now incredibly easy for someone to sign a petition or share a status on a particular topic, but that does not necessarily mean a person is a committed supporter of a particular issue. Indeed, research from Kristofferson et al (2014[42]) empirically shows that the public

demonstration of 'token' support does not lead to increased meaningful support for a cause. Whilst such slacktivism has negative implications for the effectiveness of a given campaign the feel-good factor caused by participation is valuable to an individual's well-being (Cabrera, E. Matias and Montoya, 2017[43])).

Thus it becomes possible for people to become immune to the calls to action in email or via social media with the result that the campaign is no longer achieving its aims or that people are overwhelmed by a particular issue and as a result see their levels of anxiety increased, rather than diminished. Consequently, the false promise of campaigns which ultimately prove impotent can leave people feeling increasingly helpless rather than influential.

A further challenge to moving digital civic and political participation online is that of demographic representation. In the physical world, it is people who white, older, richer, urban, well-educated and male that participate more in all forms of participation from signing petitions to voting to more active forms of engagement such as policy consultations. Chwalisz (2015[44]) shows that these disparities persist in online expressions of civic and political life.

## 2.3. From digital words to offline action

Online engagement and interaction via digital fora may not forge community and social cohesion in the way that offline interactions do. Traditionally, lasting relationships of trust and support have been built through offline interaction with the internet being viewed with suspicion (Whitty and Joinson, 2008[45]). However, over time, the internet has led to more reliable and trusted relationships, even with little prior interaction. This is seen in the disruption brought to romantic relationships by first platforms like Match.com and then location specific tools like Tinder. It is not only in our personal lives that digital transformation shapes the way in we interact with one another but also in the ways individuals and organisations make their voices heard within their communities and across various topics of interest. Increasingly, there will be opportunities to consider and research what moves people from participating at the micro, casual level online into being motivated towards greater involvement in the offline world.

Whilst historically movements against a particular societal injustice were characterised by offline organisation social media does make it possible for individuals to rally around a particular cause in an ad hoc, bottom-up, virtual way before making that voice heard offline. For example, the April 2018 strikes of teachers across several states in the United States of America built momentum through Facebook and were not initially coordinated by unions. Whilst this meant they were viewed as illegal it didn't stop them gaining momentum. Such activity shows how digital technology enabled these citizens to express agency in terms of the relationship between themselves and the state (Slocum, Hathaway and Bernstein, 2018[46]).

When faced with situations where change is desired the internet can provide individual citizens, who would otherwise be weak in the face of sizeable challenges, with the means of applying pressure to their governments or corporate interests. Moreover, instead of being isolated in doing so, there are new opportunities for seeking solidarity with people they have never, and would never meet in person, potentially around the world. By giving people a means of sharing the response to a problem these tools offer individuals a greater sense of influence than they could achieve by themselves, an important contributory factor to their well-being.

For some citizens this interest in the functioning of their country shifts away from community led or non-governmental activity into the more formal political sphere. Gil de Zuniga and Molyneux (2014[47]) show that the use of social media to seek information and be politically expressive has a direct effect on offline political participation. In May 2018 Priscillia Ludosky created an online petition opposed to a French rise in fuel taxes, six months later after attracting nearly a million signatures the *Mouvement des gilets jaunes* held its first protest on the streets of Paris. Over 14 (and counting) consecutive weekends, thousands of people motivated by a wide ranging set of grievances have taken to the streets, seeking change. This offline manifestation of public dissatisfaction with the political climate has been coordinated and, some argue manipulated, by the sophisticated use of online tools (Broderick and Darmanin, 2018[48]; Martineau, 2018[49]).

The ease with which new groups can form, and organise, is one of the benefits of digital transformation in this space. The lowering of barriers to entry for participation has made it possible to engage disenchanted but politically aware citizens. This approach characterises the Pirate Party in northern Europe, the Five Star Movement in Italy, Yesh Atid in Israel, Alexei Navalny in Russia and Rede Susentabilidade in Brazil (Campante, Durante and Sobbrio, 2013[50]).

Such movements may be labelled ‘populist’ as expressing an ideology defined by Mudde (2004[51]) as considering society to be separated into two homogeneous and antagonistic groups, “the pure people” versus “the corrupt elite”. The arguments of this ideology are that politics should be an expression of the volonté générale (general will) of the people. In giving voice to agendas that might previously have been considered outside the status quo, these movements have successfully used digital technology to amplify and mainstream their agendas.

The 2008 USA Presidential election helped to legitimise the role of the internet in elections whilst also demonstrating its potential (T Heaney, E Newman and E Sylvester, 2011[52]). Barack Obama’s blueprint has offered a model followed by the UK’s pro-Brexit Vote Leave campaign, Donald Trump’s Presidential campaign and Emmanuel Macron’s *En Marche* in France as well as others. They have succeeded in not only galvanising a base of support to fund a campaign but also create a movement that helped amplify messaging along the campaign trail and across the internet. As a result, identification with these campaigns, their politics, and their ultimate victories became a considerable factor in the experience of well-being and the investment people had in the outcome of the vote, and beyond.

Once the drama of an election has faded and politicians have taken office and are focusing on delivering their manifesto pledges this level of participation is no longer expected. Petitions and other lobbying tools may allow for a greater sense of involvement but the approach to governing modern democracies is rooted in the technology of the printing press and not the internet. Partisan politics continues to be the dominant model with representatives elected to serve for years at a time without the involvement of their electorate.

One response to the frustration that digitally aware citizens have found with this model can be seen in Argentina. In 2012, a political movement developed motivated by this question of offering citizens greater influence over the business of government. They developed an open source voting and debating platform called DemocracyOS and formed a new party committed to using it. The Net Party (*Partido de la Red*) publicly committed to vote in Congress in line with the views citizens expressed via DemocracyOS. A 1.2% share of the vote was not enough win a Congressional seat but the City of Buenos Aires subsequently

piloted DemocracyOS and its use led to the creation of a law spearheaded by citizens (Mancini, 2015[53]).

Some countries, such as Switzerland, do make use of direct democracy through referendums to return to the public whilst other countries are following the trend of using randomly selected deliberative panels like citizens' assemblies/juries/panels to involve people in public decision-making more directly. There are examples of governments using civic tech platforms and digital tools to engage citizens in policy making. In France, the drafting of the Law for a Digital Republic (*Loi pour une République numérique*), spearheaded by Axelle Lemaire, was based on consultations carried out entirely online whilst the Government of Jersey has used the civic tech platform Apptivism to carry out six government consultations over the past two years on a wide range of policy issues. Nevertheless, these models of delegative, or liquid, democracy remain experimental and not the default.

# 3. The role of government in the online safety and digital security of citizens

*This chapter considers the relationship between well-being and digital government in terms of the online safety and digital security considerations reflected in the digital transformation of our political lives and service delivery. It discusses how the internet has changed the nature of the threats faced by the public and governments, and the responsibility of government for ensuring that citizens can trust they will be kept safe.*

## 3.1. The internet changes our understanding of safety

Digital transformation has changed the threat profile for both nations and their citizens. In countering these threats governments can look to gain significantly greater access to telecommunications activity including email and browsing history. The handling of this data, as well as the information freely provided by citizens in their ongoing interactions with the state represents a policy challenge to governments around the consent models they employ to ensure citizens feel in control of their information and can trust the state to act in their best interests. The trust which citizens have in their government and their confidence in government to keep them secure, and be prepared to anticipate or manage security related risks in the digital age, are important factors in shaping well-being.

The previous chapter discussed how the internet may have encouraged people to share their views with friends and contacts with a confidence to be open in ways that were not possible without access to the internet and our social platforms. This is not necessarily positive. For people who are newly bold in sharing views that may well once have been niche, debunked or rejected and where correction leads to cementing those views then the narrowing of perspectives may have implications beyond that individual. The memetic quality of a view within a community may damage, rather than reinforce, societal norms. The subsequent fragmentation into potentially polarised groupings can then create the ideal conditions to foment hate crime.

There is no question that the internet is used to spread hateful things, but it is important to remember that people were cruel to one another in person before the internet (Brown, 2017[54]). However, a significant point of difference is in the creation, aggregation and mobilisation of entire communities of hate and the role which financial incentive can play in amplifying their impact (Sunstein, 2007[55]; Jabłońska and Kozak, 2017[56]). Existing legislation is not always suitable for responding to the challenges presented by twenty first century technology and behaviours whilst governments wishing to protect the safety of their citizens online may be constrained by arguments about free speech and the logistical implications of any intervention (Brown, 2017[54]; Saleem et al., 2017[57]). Some of the responsibility may fall to technology companies but the experience of South Asian countries indicates that successful combatting of online hate is more likely found in counter-speech coming from the ground up when individuals show solidarity and present an alternative narrative (George, 2016[58]).

Moreover, recent political campaigns have been shown to be influenced by the use of 'troll farms' to create disinformation and, through the use of bots, spread misinformation and amplify these messages. As a result, many armed forces now contain cyber warfare teams to defend, and pursue, such threats.

While disinformation requires a multi-dimensional approach to address the issue, public communication and government transparency can support governments in their efforts to gain citizen's trust, thereby enhancing their well-being. In fact, effective public communication that focuses on transparent information and participative approaches and uses innovative tools, such as social media, can create an alternative discourse to disinformation.

Aside from the challenges of hate crime and disinformation, there has been a transformation of the criminal threats to which people can be exposed. With greater innovation in technology there have also been innovations in crime and citizens are now exposed to increased threats. Identity theft is now a real danger for many people and their own personal approach to internet security may leave them at the mercy of fraudsters and con artists.

Cybercrime can take several forms including phishing to obtain the credentials to online accounts or your personal information; having devices infected with malware that then takes over some aspect of it like the webcam; malware that locks you out of files until a ransom is paid; or cryptojacking where your hardware is used by a third party to make them money through mining cryptocurrency amongst others. In 2014, companies detected and reported 42.8 million IT security breaches. This number increased by 38 percent in the following year (PwC, 2016[59]).

There are difficulties in accurately measuring the incidence of cybercrime and its associated costs. Nevertheless, in the UK, the Office for National Statistics publishes crime data for England and Wales reflecting 'computer misuse crime'. In 2018 they indicated that there had been approximately 1m crimes relating to computer viruses or the unauthorised access to personal information, this represented a fall of 33% on 2017 (Office for National Statistics, 2019[60]). However, of those 1m crimes, only 24,000 offences were referred to the National Fraud Intelligence Bureau for prosecution. Whilst this data reflects a possible reduction in the direct threat to citizens there remains the challenge of helping the public to be digitally informed and take appropriate measures to protect themselves.

From password management, recognising phishing and smishing attacks to ensuring up to date anti-virus software and how to respond to unfamiliar emails citizens need equipping to respond to security threats. This is particularly the case for those in a society who are not 'digital natives' and who do not have the experience to help guide them through these issues. This becomes increasingly relevant as governments focus on the adoption of digital platforms by as many citizens as possible. As such, many countries are investing in providing support to their citizens, often in partnership with the private sector and civil society organisations, to ensure that not only do people have access to online services, which can improve their lives, but that they are safe when they do so.

Whilst the direct impact on citizens can be mitigated in this way some of the threats occur as customers of businesses or whilst accessing government services. A 2018 report from the anti-virus software company McAfee put the economic cost of global Cybercrime at $600bn, an increase from $500bn in 2014 (McAfee, 2018[61]). They attributed this increase to several causes:

- Quick adoption of new technologies by cybercriminals
- The increased number of new users online (especially from lower-income countries with weak cybersecurity
- The increased ease of committing cybercrime, with the growth of Cybercrime-as-a-Service

- An expanding number of cybercrime "centers" that now include Brazil, India, North Korea, and Vietnam
- A growing financial sophistication among top-tier cybercriminals that, among other things, makes monetization easier

Indeed, the prospect of digital security attacks which cripple infrastructure and damage the ability for citizens to access services is not a hypothetical risk but a reality. In May 2017 the WannaCry ransomware attack affected companies and individuals in over 150 countries including FedEx, Renault-Nissan and the UK's National Health System whilst the following month NotPetya caused an estimated $10 billion of damage. Both attacks exploited a penetration tool known as EternalBlue created, and leaked, by the USA's National Security Agency. Whilst a patch to safeguard against EternalBlue would have mitigated the impact of WannaCry, the evolution of NotPetya meant it was capable of infecting computers which had been patched. Nevertheless, this highlights the importance for governments, businesses and citizens to take their information security seriously.

The OECD's Recommendation on Digital Security Risk Management for Economic and Social Prosperity (Security Risk Recommendation) (OECD, 2015[62]) sets out a risk management policy framework to address digital security issues with three messages:

- Although it is impossible to entirely eliminate digital security risks in a digital environment the risk can be mitigated and reduced to an acceptable level, in light of the context and economic objectives at stake
- Digital security risk is an economic and social risk management challenge rather than only a technical issue
- Businesses and other organisations should integrate digital security risk management as part of their economic and social decision making processes.

## 3.2. Securing continuity of access to public services

Governments have to guard against security threats from a variety of sources in the digital environment. In some cases they will need to be prepared to respond to the activities of hostile nations, international movements of activists without borders, increasingly sophisticated criminal gangs and also from disaffected individuals.

Digital security threats require rethinking the way in which a country understands its essential national infrastructure. In considering the overarching health and well-being of their citizens this must now include protecting access to the digital services which shape their lives, the underlying data entrusted to governments, and the infrastructure and tooling required by public servants in fields as diverse as border controls, education or health care. National infrastructure is no longer bricks and mortar or energy supply, as digital transforms the very nature of the state it has far reaching consequences for every part of life.

There is a clear relationship between the mechanisms of accountability in a country, the trust of citizens and their consequent well-being, especially in the context of ensuring their protection from external threats. The growth of digital adoption has changed the threat profile facing a country and the consequent response which is therefore required in order to keep citizens safe and secure reliable delivery of public services.

Government must prove effective in its delivery of services. This means not only thinking about the security of data as it passes between citizen and state, and then within the

machinery of that government but about the model it approaches to ensure the reliability of its services.

Although there have been widespread breaches of privacy in digital services, many of these risks can be minimised with the appropriate care and attention. Whilst encryption presents challenges for governments who would like to ensure criminals have nowhere to hide, the technologies that protect them by safeguarding the exchange of information have allowed for the increasing transformation of services that would not previously have been possible. The ability to bank, pay bills, order transport or receive emails on the move is only possible because of advances in the digital ecosystem.

In responding to these issues, some governments have enacted legislation and taken steps to bring access to the internet and its usage under their control. Citizens in several countries around the world have limitations on how they can access the internet with the 'Great Firewall of China' amongst the most famous (Zittrain and Edelman, 2003[63]). Nevertheless, the efforts of governments to restrict online freedoms are not always enacted in ways that prevent people loading websites but in the way in which the government is given access to citizens' telephone, e-mail and financial records as in the case of the United States' Patriot Act (US Congress, 2001[64])

Governments argue that these measures are essential for protecting citizens from much bigger threats than cybercrime. However, these activities raise the debate about the tension between security and freedoms. Concerns about this level of government over-reach have produced movements across the world responding to the perceived threat of an increase in 'Big Brother' like behaviour, citing the dystopian image of George Orwell's seminal work about the behaviour of governments.

When such legislation is discussed, it is perhaps a good indicator of the health of freedoms in a country whether or not civil society organisations are able to raise their concerns. In the United Kingdom, concerns about the extent to which the government was extending their use and control of digital infrastructure saw 14 human rights organisations and privacy groups appeal to the European Court of Human Rights about the Regulation of Investigatory Powers Act. The UK government lost the case and was required to revisit its terms (European Court of Human Rights, 2019[65]).

## 3.3. Respecting ethics and enshrining rights

Threats which have a negative impact on well-being are not all material in the sense that someone feels they are a direct victim of crime. As countries explore the opportunities of digital transformation there will be an increasing need for them to consider the ethical implications of the way that they work and take steps that strengthen the confidence and trust of citizens.

The OECD's Working Paper on a Data-Driven Public Sector discusses the importance of simplifying the sharing and reuse of data within and between government organisations (Ubaldi, van Ooijen and Welby, 2019[66]). A critical aspect of respecting the rights of citizens and keeping them secure is how governments take steps to recognise and protect personal information as it moves through the systems of government. This is not just an area of concern in terms of designing services and maintaining them but also in establishing legal frameworks that cover this area. One of the most significant developments in this field is the European Union's General Data Protection Regulation that establishes a common language and set of expectations across the Member States.

Alongside such legal provisions, countries are especially interested in how they can respond to the implications of new technology in ways that reinforce trust. In the United Kingdom this involves a twin approach. Firstly, there is a Data Science Ethical Framework which acts as the foundation to any work done in the field of data science. Although it is not formally mandated it is the expected best practice for any of those working with data. Secondly, they have created a collaborative forum for civil society experts and public servants that aims to ensure any work done with data is adequately scrutinised and that data protection and privacy regimes are robustly upheld.

Many countries have created specific independent organisations with the responsibility for addressing concerns in this area in part because it is a requirement of being seen to comply with the European Union's General Data Protection Regulation which came into force in May 2018. In Portugal the *National Commission for Data Protection (CNPD)* is an independent body with powers of authority extending throughout the country. It supervises and monitors compliance with the laws and regulations in the area of personal data protection, with strict respect for the human rights and the fundamental freedoms and guarantees enshrined in the Constitution and the law. For instance, public and private entities have to notify the CNPD regarding any personal data treatment made by them.

This reflects how governments respond to their internal handling of personal data but countries are also exploring how to empower citizens by restoring responsibility and control of data to the citizen. The approach which governments take to the security of personal data and the methods by which they allow it to be reused is an important indicator of the quality of trust that citizens can place in their government. Such trust engenders confidence amongst citizens that their data will be used properly and kept safe.

In Spain, *Mi Carpeta*, is a feature of the Digital Identiy solution which shows users an audit of all activity on and around their account. This includes not just the logins performed by users but also the way in which organisations have used their data. *Mi Carpeta* shows information about the exchange of information between public organisations and the condition of consent placed upon it. The list of data that has been requested, and shared with, administrative bodies to complete a formality or query also displays whether the citizen has given explicit, or tacit, consent for its reuse.

One of the areas where the tension between government concerns about security and citizen well-being is most keenly felt centres on the need for citizen identity. Governments wish to have a simple means of confirming the identity of a citizen and in many countries this produces a central database of this information. As digital transformation has enabled the delivery of increasingly sophisticated and necessarily secure services that remove the need for face to face interaction, databases like this have become integral. Nevertheless, such approaches create a hugely attractive target for criminals and other nefarious elements.

In India, the national ID database Aadhaar, contains biometric identity data for more than 1.1billion citizens. Anyone in the database can use their data, or thumbprint, to access private sector services like bank accounts or companies like Amazon and whilst membership is optional, those who aren't enrolled cannot access basic government services. However, against a backdrop of repeated criticism about vulnerabilities in the platform and an inadequate approach to information security the Indian government has so far failed to pass legislation which would establish protections for the data of its citizens (Anusha and Rajkumar, 2017[67]; Dixon, 2017[68]). It is clear that the dangers and risks of capturing such information can lead to a situation where trust in government is diminished and, more broadly, the well-being of citizens compromised due to exposure to threats which they can do nothing to mitigate.

As governments continue to invest in the digital transformation of the way they design policy, deliver services and operate as a state they will need to prioritise ethical considerations. Above all other issues they will need to resolve the challenges around how citizens gain transparent control of their personal data and the consent mechanisms with which they grant permission for its access and reuse.

# 4. Transforming the provision of public services

*This chapter considers the relationship between well-being and digital government in terms of how governments transform the provision of public services. It discusses how digital transforms the way in which governments can think about policy and the way that the services which result from policy can be designed to deliver higher quality and more reliable experiences. There is also a recognition of the important role of public servants and the ways in which digital transformation can help to make government more transparent thereby increasing the citizen's belief in government's integrity and accountability.*

## 4.1. Rethinking policy through a digital lens

Throughout all parts of policy design and delivery there are opportunities to apply the cultures and practices of the digital age to meet the raised expectations of citizens. From education, health and transport to the environment, trade and immigration there is no area of government that cannot be transformed in the way it thinks about its policies due to the impact of digital, data and technology. This may have implications for the way in which a nation structures its economy and approaches its future industrial strategy as well as the skills planning for its future workforce.

Responding to the pace of change and the potential for economies to be disrupted may create momentum for governments to explore ways of encouraging innovation, perhaps through the creation of specific Labs and exploration of emerging technologies to support governments in shifting their cultures towards anticipating the future rather than reacting to the present (Ubaldi et al., forthcoming[69]). The implication of emerging technologies and a more dynamic workforce may require new investment in old industries or greater support for retraining to avoid significant redundancies. In Germany, for example, the government has established a digitalisation fund of €2.4bn to accelerate the digital transformation of businesses (Reuters, 2018[70]).

However, in order to take full advantage of the digital transformation within each of these sectors and in the way in which policy is designed and implemented, governments need to consider how it incorporates the lessons and insights of digital, data and technological transformation internally.

One of the ways in which OECD countries have put the digital agenda at the heart of the government's agenda is to create a focal point for leadership within the government. In some cases this is as a standalone organisation such as *Agência para a Modernização Administrativa* in Portugal or the *United States Digital Service* whilst in others the leadership can be located as unit within the coordinating function in government like the *Government Digital Service* within the Cabinet Office in the United Kingdom. These bodies have the responsibility for identifying best practice and coordinating the activity of government so that the conversation is not about what technology to implement in support of policy but rather about how digital, data and technology can transform the policy from its conception rather than its birth.

By recognising opportunities for breaking down the siloes within, and between, organisations governments increasingly move away from a government-centric view of public service delivery towards one which focuses on the end-to-end needs, and experience, of a citizen. Policy, and the services which result, is seldom limited to a single topic or area of interest and therefore a government which is aware of the relationships within a policy domain becomes less constrained by existing structures of government and allows for the pursuit instead of a service architecture to its functions.

The effective delivery of a policy and its services cannot be guaranteed in a theoretical setting. Criticism of earlier efforts to move away from analogue government practices has centred on the idea that you could specify the requirements of an intervention up front with the expectation that only minimal change would ever be required, even after launch. It has become increasingly commonly accepted by the world's leading governments that it is essential to be able to respond to what you find as you continue the implementation of policy and beyond.

Digital cultures and technologies have transformed the ability with which governments can create policy and understand their impact. The rapid prototyping of a service coupled to a commitment to researching the underlying needs of a citizen means policy can be iterated according to the experience of their users and its impact on the intended outcomes. Where policy is inflexible this constrains the ability for governments to iterate in their approach to the needs of a society. However, where it is expected for policy to be shaped by the participation of their users then, over time, any resulting services can become more effectively attuned to those needs.

Alongside this, the capacity of government to understand whether or not policy is working can be enhanced due to the visibility of usage patterns combined with increasingly sophisticated use of population level data and analytics. This reduction in the time to identify a policy intervention, experiment with it in the real world and then understand its effectiveness allows for government to be responsive to the needs of its societies and to correct course if a policy is shown to be ineffectual. The principles of continuous learning and data-driven performance insights that characterise much of the experience of digital transformation should be understood and internalised to policy teams just as much as service teams. This will prevent the simple launching of policy to be handed over to a delivery partner and ensures that public servants will be interested in understanding the opportunities to adjust, improve and pivot their policy approaches in order to deliver better outcomes.

Digital has transformed the way in which we communicate and the ease with which we exchange information but the application of these technologies in government can bring public servants from across government together drawn from policy, delivery and operational professions, to work in multi-disciplinary teams that collaborate on whole services to transform outcomes. Nevertheless, there is a challenge for governments in accessing sufficient capability and capacity to apply these skills. One route to addressing this shortage is to consider the role of agile procurement methodologies in bringing smaller, more disruptive suppliers into government not only as a route to deliver but as partners to build capability at the same time.

Furthermore, the challenges of bringing public servants together across organisational boundaries reflects some of the issues which governments face when they seek to involve their public in consultation exercises or the designing of government policy. Digital transformation repeats its enabling function for the ways in which government might address the needs of its citizens. There are now greater opportunities to understand,

anticipate, incorporate and address the needs of users in the design and delivery of policies and services that engage citizens in order to increase their well-being and participation.

Digital technologies enable governments to renew their interaction with citizens to an extent and on a scale impossible beforehand. In fact, the digital era encourages a renewal of democracy that puts direct democracy approaches and deliberation at its heart. Online platforms allow governments to interact with citizens from all corners of the country and to widely publish government information, creating new possibilities for stakeholder participation and transparency.

In this sense, governments are moving to what the OECD Recommendation on Open Government calls a "culture of governance that promotes the principles of transparency, integrity, accountability and stakeholder participation in support of democracy and inclusive growth" (OECD, 2017[9]). By adopting an open government culture, civic engagement is put at the heart of government's interaction with their citizens, thereby enhancing their well-being. For instance, large-scale online consultations on legislation and rule-making are a common feature in OECD countries. Citizens are equally called upon to make investment decisions in their communities through participatory budgeting projects, empowering these to be actors in their communities' developments.

Digital transformation has played an important role in bringing together policy design and service delivery to ensure that there are clear overlaps between the intent behind a policy and the experience a citizen has when accessing it. Such services have a significant impact on well-being, especially for those for whom that represents access to new information and other benefits.

## 4.2. Transforming government services

As countries explore the possibilities of digital transformation the bringing together of policy design and service delivery is making services more easily accessible and transforming the outcomes experienced by citizens. Placing digitally enabled service design at the heart of policy implementation represents a significant opportunity to impact the end to end experience of a user's entire journey in addressing a given issue in their life. With its focus on researching the needs of users and understanding problems as they are experienced, a people-centred approach to implementation explicitly involves citizens in the design of the services they consume (Junginger, 2016[71]).

Involving citizens in the design of a service helps government teams to avoid their personal biases or delivering against the use cases they can imagine. In particular, this helps teams to consider the accessibility needs of their users and the additional face to face or offline support that might be required to support those who aren't confident using the internet. Whilst services may be designed with digital in mind, a focus on the needs of users will ensure that they are never delivered to the exclusion of those who continue to need support through other channels.

By approaching services on the basis of user need, and not through the prism of organisational structure, it is possible to consider the structure of government and recognise opportunities to fundamentally rethink the way in which it might work. Instead of silos of policy design, service delivery and operational management the approach now being championed by government practitioners from multiple countries is to consider the experience for both a citizen and the public servants involved in meeting the need covering policy design, service delivery and its ongoing operation.

Focusing on the design of an end to end service ensures the focus is on fully resolving an issue for citizens. Alongside a commitment to user research the adoption of 'agile' methodologies in service delivery mean public services are continuously improving in response to performance data, citizen feedback and the insights of operational staff. Therefore, not only do outcomes improve because services are better in the first place, they continue to increase the well-being of citizens as time goes by due to optimising and refining the experience and subsequently identifying new opportunities to respond to their needs. The experience of the UK in their development of GOV.UK is discussed in Box 4.1 below.

**Box 4.1. "GOV.UK isn't finished" - the ongoing evolution of a single government domain**

In early 2011 a small team began exploring how to rethink the UK government's online presence. Less than 18 months later, in October 2012, GOV.UK was launched as the single domain for all UK government interactions. This public launch of the site saw the closure of two existing websites focused on businesses and citizens.

That was the end of the first iteration as the team expanded to reflect the needs of other users. In early 2013 the websites of 24 government departments had migrated and by December 2014 over 1,500 domains belonging to more than 300 organisations had been closed with the associated 1.8m legacy URLs redirected to new content on GOV.UK or the web archive of the UK National Archives.

In assembling all the information from those organisations GOV.UK attempted to unify and simplify the experience of interacting with government without following a 'one size fits all' approach. Every page of GOV.UK invites visitors to leave feedback and as the team learnt from that, ongoing qualitative research and real-time analytics data they better understood the problems to prioritise. The architecture of the site and development culture of GOV.UK means dozens of incremental changes are made to the site each day.

Responding to the needs of users and making sense of content set certain priorities but so did the shifting nature of the country's politics. GOV.UK has had to handle 'machinery of government' changes, the appointment of new ministers and in 2015 and 2017 the changes brought about by general elections. After previous elections the separate websites would often remove content and start afresh but GOV.UK has made a commitment to providing continuity of information from one government to another, providing an ongoing record of government policy and ministerial activity that would otherwise have been hard to find.

Alongside the central development and management of GOV.UK, thousands of editors in departments and agencies have been trained to use the publishing tools and write content focused on meeting needs whilst delivery teams focused on meeting needs have developed services that sit neatly alongside GOV.UK's content and are in keeping with the UK's Government Service Standard. The collaboration between users, departments and the central team has continued to refine and hone the experience of visitors arriving at GOV.UK with a problem to solve.

Nevertheless, the intention was always more than a simple single repository of content. Putting all government information in one place has helped to meet the needs of users in presenting services and associated information together. It took two years from the initial launch for the team to have everything located in one place but since then the team has been tweaking and improving the search, browse and navigation mechanisms to make it

easier for their visitors to find the information they need. Most recently, the evolution of GOV.UK has resulted in two important developments:

1. The development of a 'Step by step' navigation on GOV.UK to link online content and digital services with offline transactions and the need for personal interactions. This reflects what has been made possible by bringing all the content together in one place.
2. The creation of cross-government 'Service Communities' to bring together individuals from the organisations involved in the end to end meeting of a particular need to work through how those services should best be designed to simplify the user experience.

The combination of step by step navigation and service communities lays the foundations for future development of not just GOV.UK but the multi-channel experience of citizens in their interactions with the state.

This commitment to the use of data in understanding the performance of a service is an important part of the OECD's concept of a Data-driven public sector (Ubaldi, van Ooijen and Welby, 2019[66]). Being 'data-driven' means reflecting the importance of insights to the way in which government operates providing the resource to carry out that research which ensures confidence in knowing your users and committing to understanding what they need. The value of user research complements that of data and analytics in considering the broadest trends across a policy area. Ongoing, machine-led data analysis helps highlight where issues are; research, especially where it involves citizens, equips you to understand what caused them.

Data is a valuable tool to support governments in their ongoing performance management but it is also an enabler for supporting the use of emerging technologies such as Artificial Intelligence in the transformation of how services are implemented. Moreover, a data-driven public sector is one that uses data to consider the future needs of its population and to resolve the internal exchange and sharing of data thereby enabling the development of proactive services that anticipate citizen needs and reduce the amount of duplicated effort and administrative burden they have to manage.

Ensuring that governments deliver high quality services that respond to the needs of citizens is important in ensuring the material well-being of citizens by providing reliable services. Furthermore, the risks of delivering poor quality services is that it damages the social contract with the state, undermining the trust that might otherwise exist. Adopting a 'user-driven' approach to design, delivery and operations that commits to understanding, listening to and engaging with citizens in a more detailed and proactive fashion is an important step in ensuring that quality of outcomes and well-being are improved. A Digital Government, effective in using data and digital opportunities to better respond to user needs is a government better equipped to increase societal well-being.

## 4.3. Recognising the importance of citizens and public servants

The focus of governments on designing policy and delivering services that understand the needs of users from the beginning, to the resolution of a particular problem is an important contributor to better quality government and the increased well-being of the public. However, governments must understand that access to the internet is not always evenly

distributed. Simply building an excellent online service is not going to improve the well-being of those citizens who don't have access to the internet or the confidence to use it.

One way of responding to this is to make access to the internet an inherent right for the citizen, as part of the broader discussion on the changing nature of Digital Rights. This took place in Mexico in 2013 when the constitution was amended to guarantee universal online access (a more detailed discussion of the several ways in which Mexico is approaching digital transformation is in Box 4.2). However, ensuring the benefits of the internet are experienced may not be as simple as enshrining the right to internet connectivity in law. In a study of two rural communities in Rajasthan, India and Gansu, China, Haenssgen (2018[72]) suggests that ubiquity of technology does not equate to fully unlocking the value of the opportunity it might provide. Therefore, just because there is access to technology, whether directly or indirectly through an individual's network, it does not mean that they will be able to take full advantage of what it offers. This highlights the risk that exists where digital government focuses on digital by default, and not digital by design.

**Box 4.2. Mexico's multi-faceted approach to digital transformation**

In April 2013 Mexico established a governance model for coordinating various activities under its Digital Strategy and later that year, on 11 June 2013 The Telecommunications Amendment was published which provided the legal basis for a complete transformation of the way in which the country approaches its digital transformation.

Central to this transformation is the recognition of access to the internet as a fundamental right, established in the Mexican constitution. Through *Mexico Conectado* internet access is being brought to 250,000 public spaces including hospitals, libraries, schools and government offices. However, the approach to digital government in Mexico has a broader focus than internet connectivity:

- The single government website, *gob.mx*, was launched in August 2015 to be a single point of access for all citizens. It provides access to more than 4000 government services and consolidates 5000 federal government websites. Furthermore, it operates as a platform where citizens can provide ideas, report corruption and participate in building better services and policies.
- A new ICT policy for improving the way that federal government acquires technology to maximise public value and access better technology. This included launching 'Fixed-Price Contracts' for software licensing and ICT related hiring.
- An Action Plan for implementing the principles of Open Government with a publicly accessible dashboard detailing progress against the commitments at http://tablero.gobabiertomx.org/
- The creation of datos.gob.mx for publishing datasets and the Mexico Open Network as a supporting network of practitioners discussing and sharing experiences with open data
- The launch of "Innovation Agents" to identify and respond to public problems with digital and technology solutions.
- The launch of "Public Challenges" as a means by which citizens could identify and respond to public problems with digital and technology solutions

- A Digital Inclusion and Literacy Program delivered 710 thousand tablets for the school year 2014-2015 in 6 states within the Mexican territory

Where countries have adopted a digital by default approach it has often been to the exclusion of offline or non-web based channels, often in the name of financial efficiency. The OECD recommends instead an approach that is digital by design – whereby governments recognise the context of their users and develop channel agnostic services that will meet the need of a user regardless of the channel they use to access it. Such approaches are underpinned by a need to simplify internal systems and ensure the interoperability of data (e.g. adopting the necessary steps to enable the implementation of the *once only principle*) so that a user can initiate a request in person and then complete it at home over the telephone, or vice versa.

Designing such interventions means considering the wider ecosystem that supports a public service. Rather than designing a website that might work across different devices it's important to consider how a user might access the service over the telephone or in person. Equally, it may be necessary to think about the additional support that might be useful for any citizen whose preference is to access services in person. In Chile, the *ChileAtiende* network aims to create an inclusive environment providing areas for children to play, mothers to nurse and the ability to access real-time translation services (including sign language). Services that reflect the needs of citizens are fundamental to making government effective and can be instrumental in addressing some of the most persistent indicators of inequality.

Digital transformation is not solely about the citizen experience but is also about helping public servants be more effective in their jobs, equipped to respond to the changing needs of the organisations they work for and the communities they serve. Investing in the user experience of public servants, and their skills, is important in contributing to their increased job satisfaction (and by extension well-being) as well as positively impacting on citizens accessing those services who get a better, more effective, experience as a result. Having greater satisfaction within public administrations is not an insignificant contribution to the well-being of a nation given the contribution to overall employment many public sectors make.

Where digital leadership is not yet present in governments, there is evidence of passionate public servants taking advantage of technology to connect with one another and share their stories openly, thus providing inspiration to their peers. The open broadcast of periodic updates, whether publishing the work in blogs or through livestreaming presentations and the translation of virtual communities into physical movements such as that demonstrated by One Team Government (discussed in Box 4.3), would not have been possible without an openness to explore common problems or the technology to create a community of practice.

Such a movement has the potential to inspire change within the way public servants work and to share knowledge across borders in an organic fashion that can dramatically improve outcomes for citizens. This evolution of an online community into an offline, physical gathering of people with tangible impact on their work and the lives of citizens is an important example of the benefits of working in the open and encouraging the participation of those who might otherwise be neglected.

**Box 4.3. One Team Government**

In the summer of 2017 a conversation between two civil servants in the UK planted the seed for the idea of a gathering that wasn't structured around existing tribes of 'policy makers' and 'service designers' but was focused on bringing civil servants together to talk about shared problems and common goals.

Three months later, 186 people gathered together for the an event called One Team Government. It was expected that this would be a one-off but after the success of the vent those who arranged it were inspired to see it become a community of practitioners shaping the conversation in government.

The community has seven principles:

1. Work in the open and positively
2. Take practical action
3. Experiment and iterate
4. Be diverse and inclusive
5. Care deeply about citizens
6. Work across borders (professions, departments, sectors and countries)
7. Embrace technology

Following that first event in London in 2017, these principles have been adopted by chapters in countries and governments around the world. The next summer, in July 2018, the first global event was organised. Again taking place in London it saw 700 public servants from 43 countries come together in an unconference format to explore how they might share their knowledge and work together to better meet the needs of their users.

In a demonstration that the movement is now truly international and not simply reliant on the original team in London, the 2019 global event will take place in Canada.

## 4.4. Demonstrating public sector integrity through increased transparency

Digital transformation can play an important role in supporting governments to engage with citizens. Through working with them to deliver higher quality services which are proactive in responding to their needs there is an opportunity to increase their trust, and consequently encourage further participation and solidify the social contract.

One demonstration of openness that can be supported by digital government practices relates to publishing and sharing information that would otherwise be hidden from view. Governments whose inclination is to behave in ways that increase transparency can support greater accountability. One of the most actively explored areas for this opportunity is in the commissioning habits of governments.

This is an area of interest to several different actors within government. It is of interest to those who consider how money is being spent and wish for it to be done as efficiently as possible. It is of interest to the Supreme Auditing Institutions (SAI) that want to tackle fraud and corruption in the spending of public money. It is also of interest not only to civil society organisations interested in the integrity of government but to the business

community too whose confidence in the level playing field of government contracts is important.

In the Ukraine, a transformation to government commissioning has taken place through the introduction of an open sourced, entirely transparent procurement platform called ProZorro. The organisation has as its motto 'Everyone can see everything' and this results in every completed tender having all supporting information disclosed and made available to the public. This demonstrates a complete openness about the use of public money and the contract award process.

Opening government commissioning to scrutiny in this way has the potential for new suppliers to take advantage of previously closed commercial arrangements. The OECD's Thematic Group on ICT Commissioning has developed a playbook that discusses the shifts this subsequently makes possible (currently available in Alpha form: https://playbook-ict-procurement.herokuapp.com). Rather than being constrained by multi-year outsourcing contracts, the transformation of procurement is seen to offer a new dynamic to delivery that is able to use focus on the needs of citizens on an ongoing basis to better respond to their needs and thus improve the quality of their lives.

Beyond government commissioning habits, transparency can be encouraged about the performance of government services and delivery itself. In the United Kingdom, the publication of real-time performance data for any service being launched on the country's single website, GOV.UK. Similar measures exist in other countries with a commitment to discuss the cost and quality of government services not only being a prompt for discussing where improvement efforts should focus but also providing credible insights for citizens as to whether or not their tax is being spent effectively.

One of the most significant interactions which digital transformation has introduced to the experience of government is around information related to the underlying processes and decisions. Historically, citizens have had to trust what they read from government without being able to easily access the legislation behind it. In the UK, all legislation has been published online through a dedicated website (https://www.legislation.gov.uk) whilst in New York State, a Github repository is providing legislative information from the Senate and Assembly to the public in near real-time with a genuine openness to the process of making law (https://github.com/nysenate/OpenLegislation). In those cases it is government which has formally recognised the value of being transparent but in Germany a private citizen uploaded the Bundestag to Github (Mcmillan, 2012[73]). Whilst that disruptive act made headlines the repository has not been touched since 2013 suggesting that there is greater interest in the theory of poring over legislation than in actually making pull requests to change it.

In addition to the legislative basis for governments, an increasing number of governments are opening up the code base that sits behind their websites, digital services and reusable platforms. In France, the Digital Economy Law (*Loi Lemaire*) specifies that algorithms used in public decision-making should be transparent to the public (except where they are involved in detecting fraud). On the popular code software collaboration platform Github there are almost 800 separate organisations representing over 50 different countries (Github, n.d.[74]). This opens up new opportunities for citizens to be directly involved in the delivery of government services. Whilst it requires an existing level of knowledge on the part of the citizen, there are benefits to government teams who work with open code bases. For example, in the United Kingdom, an interested citizen identified a problem and was able to submit a correcting change to the codebase of the national website for his country (Somerville, n.d.[75]).

This commitment to open source allows for the exchange of software from one government to another. Given that interactions between citizen and state have a lot in common from one country to another the opportunity for common approaches to shared problems to be reused can save time, effort and money for another government. This is a powerful marker of a country's willingness to be outward looking and to invest in contributing back to a these communities rather than being tied into contractual relationships where the intellectual property is no longer the property of the state but of the supplier.

However, it is not just governments that are taking advantage of such shared approaches. Increasingly civil society organisations around the world are collaborating across borders to explore how they might hold their governments to account on the back of existing transparency legislation. For example, the Alaveteli platform is now in use in 25 countries facilitating the request, and publication, of freedom of information requests.

That is an example of open source being used in the context of existing legislation but these movements are also equipping citizens to monitor the everyday running of their country. In Tunisia, Greece, Germany, France, Morocco, Yemen, Kenya, Ghana, South Africa, Nigeria, Zimbabwe and United Kingdom the Pombola and ParliamentWatch platforms have been deployed to track the activity of parliaments and allow citizens to subscribe to a feed of information about their elected representatives.

Beyond renewing the interaction between government and citizens, digital technologies are also an enabler for countries to move towards an "open state", where the "executive, legislature, judiciary, independent public institutions, and all levels of government" work towards an open government culture. Thereby, digital technologies allow strengthening trust in public institutions as well as reinforcing civic engagement

# 5. Going Digital: transforming government to increase citizen well-being

*This paper has explored some of the most important themes in the relationship between embedding digital government in the transformation efforts of their countries and the well-being of their citizens. It has shown that the digital transformation of government has impacted on the way in which citizens interact with one another, proactively towards government and in response to government itself. For government this presents opportunities to change the way it works to increase the quality of its services and build trust. This takes place against a backdrop of heightened expectations and greater threat.*

*This concluding chapter focuses on three overarching principles for countries wishing to engender the well-being of the citizens through digital government efforts that are Responsive; Protective; and Trustworthy.*

## 5.1. Responsive

Governments that are responsive to the needs of their communities are better equipped to understand their needs and design and implement policy interventions that respond to them. Whilst increasing the effectiveness of outcomes is important, a responsive government is also open to the possibilities of collaboration and partnership with local communities in ways that develop local connection and build offline relationships too.

Under this umbrella, governments should stimulate participatory forms of interaction; seek out the public; and find ways of showing the public how their tax is being used and their voices are being heard.

### *5.1.1. Involve people throughout the design and delivery lifecycle*

The principles of digital government change the way in which policy is designed and services are implemented with a consequential improvement to well-being. They create opportunities for citizen-driven activity and a resulting service landscape tailored to their needs. These efforts to design and deliver government to citizens are matched by a need to explore approaches to transparency and privacy rights that empower citizens and ensure that they are fully aware of how their information is being used.

Furthermore, the digital transformation of government and civic participation offers new ways for citizens to share their views, collaborate with their peers and express their dissatisfaction. This offers the opportunity for citizens to work together to bring their will to bear on elected representatives and can prove valuable in amplifying their concerns in order to improve policy and services.

By adopting a citizen-centred attitude that is digital by design, driven by data and built on strong foundations, public sectors are well-placed to embrace innovation and rapidly normalise emerging technology where it can add most value. Having a deep understanding of user needs and an openness to citizen involvement in the process of policy design and service delivery mean teams are well positioned to consider all possible opportunities to apply technology and be agile enough to take advantage when new things arrive.

Recognising the importance of citizens throughout the process of transforming services will not only lead to higher quality services but will ensure that access to government remains available to all, underpinning increased well-being.

### *5.1.2. Proactively reach out and go where people are*

In order for governments to be responsive to the voices of the public and to create spaces where their concerns can be heard and their needs reflected the appropriate spaces need to be created for the exchange of ideas. However, governments would be advised to maximise their use of existing networks and existing spaces.

This is not only about having an active presence within social media but in understanding the partnerships that can be formed with community groups and the various ways in which government services manifest themselves in the face to face experience of the public. Recognising the importance of using physical interactions to shape the provision of digitally transformed services is exemplified by the work undertaken by Portugal in updating their Simplex model of service delivery. Undertaking a tour of the regions a team covered 10,000 kms, spoke to 2,000 people and collected 1,400 contributions focused on improving the lives of Portuguese citizens.

These face to face opportunities not only provide tangible evidence of a responsive government seeking to include the voices of their citizens in the design and application of digital government but introduce new opportunities to enhance the technical skills and confidence of the public in using online channels. Supporting citizens to use the internet to access government services has broader benefits in empowering and enabling them to take advantage of other online services.

### *5.1.3. Design government don't just implement technology*

The transformative impact of digital government is not about implementing technology and digitising a particular process. Nor is it about the pursuit of channel shift for users from offline or telephone channels to cheaper online processes. The pursuit of digital government is to embed a 'digital by design' approach throughout the business of government.

Digital government is therefore about a cultural attitude. This attitude sees the role of digital in government as being one that is integral to communicating the possibilities of digital and designing policy and services in such a way that they naturally make use of digital tools and practices to meet the needs of their citizens in pursuit of their well-being.

As a result, governments need to ensure that those responsible for digital in government are not solely focused on the technology that underpins services. Indeed, those who are given the mandate for showing what good looks like and considering how to improve government through the use of digital should not only be siloed in a single organisation tasked with 'digital' separate from ongoing government business. Instead, the importance of establishing a 'digital by design' culture throughout government begins by setting the expectation that digital leadership forms part of the responsibilities and performance metrics for senior public servants throughout the government.

By revisiting the entire ecosystem of policy design, government collaboration, public servant skills, supplier relationships and transparency of performance the expectation of quality increases. However, this should always be with the clear intent to focus on ensuring the foundations are in place. The recognition of service design at the heart of the digital

transformation of government brings with it a focus on understanding how best to meet the needs of a user before the application of a particular technology.

## 5.2. Protective

As discussed in Chapter 3, the digital transformation has changed the nature of threats to citizens and countries. In protecting the well-being of their citizens, responding to these threats is not an optional choice for governments Therefore, whilst their primary concern should be in developing coherent and strategic responses to these emerging digital security threats and safeguarding the reliability of government services, they should also consider how to reinforce the integrity of digital communities and explore the role of regulation in enhancing the quality of public discourse.

### *5.2.1. Keep the public safe from harm*

It is impossible to remove digital security threats from the lives of citizens entirely, and there is an important area of responsibility for individuals to consider their approach to online security and browsing habits. Nevertheless, governments can encourage campaigns that equip people with the necessary skills to minimise the risks they might encounter in their personal lives.

Where governments must demonstrate clear leadership and competence is in securing access to public services and technological infrastructure to safeguard the public from harm. The crippling effect of ransomware on public sector services in recent years due in part to old technology and lapsed digital security practices demonstrates the impact that failure to address these issues can have on the daily life of citizens as patients, students, in their businesses or when accessing services.

A further area of priority for governments in protecting the public is in the attention given to information classification and the handling of the data it holds about the public and the way in which that is used to deliver services. Establishing ethical frameworks for the use of data and government wide policies on what can be done by whom

These practical measures can be tied back to the priority placed on recruitment or on the demonstration of leadership to make difficult prioritisation decisions about where to place investment. One way to support governments in having a clear strategy on issues of digital security in the context of the other digital government activities is to develop national Digital Security or Cyber Security strategies.

The commitment of funding and political capital to a holistic approach to thinking through the skills required by citizens, by the public sector and by businesses as well as the formal recognition of the security threats facing government and its activities can help to embed a baselined approach to security that keeps the public, and the country, safe.

### *5.2.2. Encourage efforts to restore and distribute trust throughout digital communities*

Citizens are facing unprecedented challenges in terms of being able to trust the information that is distributed online and the stories which they share within their communities. Whilst there are important benefits to feeling a sense of belonging with peers the destabilising influence of polarised views pose risks to the cohesion of twenty first century societies.

Whilst governments are not in a position to police and censor information that is shared online there are important contributions to the safety of their communities that can be

considered. One of these is to openly communicate with clarity the full picture related to policy. Indeed, as governments explore increased ways of being open with the public about the evolution of policy and delivery this allows for sharing failure, as well as successes. This commitment to speaking the truth, no matter its perceived consequences is an important statement about restoring confidence in public discourse.

Such a commitment to transparency in messaging will be supported by other activities that this paper has discussed in terms of demonstrating transparency to the public over the use of their data and developing effective consent mechanisms whenever their data is being used. This helps shift the balance of power and control from the state to the public.

Alongside the direct contribution which governments can take to their own messaging and content, there is an incredibly important role to be played by the private companies on which our digital interactions are built. The behaviours of Google, Apple, Facebook, Amazon, Netflix, Ali Baba, Weibo, Microsoft and any other private company do not come under the direct control of governments. However, their governance structures and the products they design have a huge bearing on the shape of public discourse and debate in ways that ultimately influence the safety and well-being of society. The United Kingdom has begun the process of legislating to intervene into this discussion with the publication of a White Paper on Online Harms (UK Department for Digital, Culture and UK Home Office, 2019[76])

Nevertheless, governments must work with companies to find a healthy balance where the rights of citizens can be protected. Throughout history, society has developed mechanisms to regulate and shepherd industry to meet certain societal obligations and the United. As multinational companies boast active userbases that exceed the populations of many countries, multilateral efforts to distribute trust throughout digital communities are urgently required.

### *5.2.3. Rethink regulation*

It is a long-standing role for governments to establish regulatory regimes and design enforcement activities which keep citizens safe. In the preceding section we raised the question over whether the regulation of social networks and the companies which shape our social interactions in the twenty-first century require international collaboration but digital transformation impacts on the regulation of country specific activities too.

To keep people safe as they use emerging technologies and newly developed businesses requires existing regulatory practices to change. Digital, data and technology innovation cannot be treated as static when it comes to setting expectations for its usage. Instead, regulatory efforts should consider the intent behind, and the outcomes imagined, by a particular actor or industry. Clearly the digital transformation of industry and government activity introduces new challenges to those interested in its regulation so it is important to find ways of augmenting and evolving existing practices rather than introducing new, onerous, overheads on either those being regulated or carrying out the regulatory activities. As such, enforcement and compliance methodologies should increasingly put users at the centre, be they individuals or organisations (OECD, 2018[77]). One way of supporting these efforts is to build partnerships between academics, the private sector and innovation labs to explore the implication of emerging technology and facilitate spaces for working closely together with implementing organisations that will test thinking in practice, not in theory.

Within the OECD, the Regulatory Policy team will be considering this area in more depth with forthcoming analysis of the opportunities offered by big data in the implementation,

and evaluation of regulation as well as the increased possibilities for governments and regulators to better target inspections and enforcement activities.

Whilst regulation of industries and businesses taking advantage of digital technologies is an area which governments need to engage, the activity of digital government itself faces similar challenges. Whilst legal frameworks and acts of legislation can be helpful they can also introduce constraints on the flexibility and agility of governments to respond to changing circumstances. Instead, countries are exploring how they can set standards, create frameworks and produce guidance that equips and prepares public servants and their supplier bases to safeguard the quality of interactions between citizen and state.

One important area for this consideration are the ethical frameworks developed to shape the environment in which data and technology is used and how countries begin to think about Digital Rights. Whether this is in the right to internet access or the way in which governments handle data and the consent of citizens this is still a relatively nascent area. Nevertheless, as governments and citizens work through these issues it will require a more sophisticated response. We have discussed how some government activities have resulted in civil society organisations bringing, and winning, legal action and so these dynamics would benefit from the involvement of citizens and these organisations at an early stage to ensure that outcomes can focus on the well-being of citizens. The European Commission is currently developing a set of 'Ethics guidelines for trustworthy AI' which reflects a growing focus on ensuring any technology is deployed in a way that responds to the needs, and protects the interests, of citizens.

Finally, several countries including Australia, France, New Zealand and the United Kingdom, have developed standards and principles against which the delivery of public servants and delivery partners is assessed to assure the design and delivery of interactions between citizens and state. These mechanisms are not only focused on assuring how money is being spent within government but are part of an integral approach to protecting the security of citizens. This is due to the benefit of such approaches in ensuring that the delivery of government services is regulated in ways that prioritise security and design out damaging consequences.

## 5.3. Trustworthy

Trust sits at the heart of the social contract between citizens and their governments. The digital transformation of our personal and societal relationships has had a significant impact in where we locate our trust with the Edelman Trust Barometer charting a shift in the twenty first century from trust in institutions towards one where our trust is rooted more locally, in our physical connections and human interactions (Edelman, 2019[6]).

Governments that are responsive and protective of their citizens can encourage trust but this shift means that the tangible experiences of government are important in shaping our trust in public institutions and our consequent confidence in government to deliver against our needs and champion our well-being. This concluding section considers several ways in which digital government activity can help create trustworthy governments through balancing government needs with citizen needs around security; considering how to design government rather than simply implement technology; and finally, considering the quality of how services themselves are designed.

### *5.3.1. Find the balance between safety and freedom*

This paper suggests that an important contributory factor to the well-being of citizens is having governments which are responsive and open. It has also highlighted the importance of governments being able to secure their citizens and their countries against digital security threats. However, sometimes government activity has to be closed to the public, and sometimes the decisions about how best to safeguard the public from a particular threat may create circumstances which are viewed negatively by the public.

To counter emerging digital security threats governments have taken steps to limit access to the internet and to secure access to the records of Internet Service Providers and other companies. Whilst these measures are negatively received as impinging on civil liberties and freedoms this is particularly problematic in situations where there is already a loss of trust and confidence.

This may be a tension that is impossible to resolve but there are four ways in which digital government cultures and practices may help to mitigate some of these concerns by supporting an environment in which citizens can engage their government with trust.

The first concerns the overall cultural behaviours of a government. Where governments are committed to opening data for scrutiny and incorporating the voice of the public there is already an opportunity to build a positive relationship.

Secondly, countries can take steps to govern in the open. It is encouraging to see many countries embracing the promise of open source software but the opening up of the statute book and the legislative underpinnings of how a country functions to scrutiny and reuse and interaction before it becomes law and on an ongoing basis is powerful.

Thirdly, it is important to encourage citizens to ask difficult questions. The introduction of Freedom of Information legislation around the world has been an important step towards acknowledging the rights of citizens to access and understand the inner workings of government. The global movement of civil society organisations using open source software to make this possible is a powerful indicator of the appetite for members of the public to interrogate, participate and understand how government functions.

Finally, governments should be providing the tools which allow citizens to control their data and see who has accessed it. It is good for governments to exhibit an open culture in the way that they work at a conceptual level. However, to provide a tangible experience of government's trustworthiness at a personal level then the way in which data is handled is critical and should lead governments to explore approaches that place the citizen in control of their personal data.

### *5.3.2. Deliver with quality and humility*

For governments designing policies with the intention of creating the conditions for their citizens to lead better lives the approach to delivery of the services that result is of critical importance in establishing trust in government, and directly influencing the well-being of the public.

This Working Paper suggests that the design approach taken to those services is fundamental in securing positive outcomes. It is therefore imperative that digital government efforts consider the importance of developing a deep understanding of the needs of their users and their existing journeys with the expectation that transformation means designing a service based on an end-to-end model that recognises the role of public servants and not just digitisation of interstitial processes or a shiny front-end. In this way,

governments will reflect the different channels and contexts through which citizens and public servants handle the resolution of a particular problem. Furthermore, doing the hard work in this area becomes an enabler to exploring and experimenting with emergent technologies, creating opportunities to embed innovation in enhancing the well-being of citizens.

Equally important to this initial understanding needs journeys is an ongoing commitment to evolve that insight and continue learning about the problem and the user's experience. Firstly, how and whether the service and policy are addressing the original problem and secondly, the specific ways in which any given service is being used and could be improved. The role of measuring the performance of a service and a policy should allow space for the team to keep asking questions about the problem that's being solved as well as understanding whether or not the technical solution is simple to use and effectively accessed. Thus, any learning from qualitative and quantitative sources should support iteration of both policy and service in response to what is learnt.

Covering the design, implementation and operation phases of a given policy in this way should remove the risk of government making assumptions about their users and the problem they're trying to solve. By doing the hard work to understand the needs of citizens, government services will deliver better outcomes and prove more inclusive, thereby stimulating the confidence of the public.

The use of digital technologies within the experience of government services can have a significant bearing on a citizen's well-being due to the efficiency and efficacy of the services they receive. In tackling this issue it is important to recognise the need to bring together the entire policy lifecycle from its original inception, through the delivery of any associated changes and beyond into the ongoing operation and assessment of the service(s) which result.

### *5.3.3. Show citizens what you're doing*

Transparency of data, process and decision making within government is an important area that can be enhanced through digital transformation efforts. Showing citizens what is being done plays an important role in enhancing the sense of accountability and trust that exists between citizen and state in ways that are essential to the well-being of populations.

Governments can do this in multiple ways. It can be done by policy teams openly discussing the data, insights and intent that sit behind their decision-making and policy forming activities. It can also be done through the regular broadcast of 'Show and Tells', the dissemination of 'week notes' and the publication of the results of assurance processes by the teams developing new services. And it can manifest itself through the ongoing publication of performance data empowering citizens to judge for themselves the effectiveness of a particular approach.

These activities sit neatly alongside efforts to create space for the direct involvement of citizens in shaping associated outcomes. Nevertheless, even the simple opening up of operational information plays an important role in changing the perception of accountability and trust amongst the public.

Furthermore, the question of transparency and accountability can be applied to issues that are less directly impacting on the public. For example, efforts to combat fraud and corruption are not immediately obvious to the public but efforts to publish the detail of government contracts and the associated performance of any partner companies and organisation demonstrate an important commitment to opening up the conversation.

Fundamental to these efforts is embedding a culture of making things open. This 'open by default' attitude within governments is one of the six core dimensions to the OECD's digital government work. A preference for open exchange and public dissemination helps to bring to light things that might otherwise stay hidden and builds a working relationship between government and its stakeholders that comes naturally rather than feeling forced. It is in this context that digital government efforts in service design, citizen safety and digital rights will be more effective.

**Box 5.1. Policy recommendations**

The relationship between digital government and citizen well-being is summarised according to nine recommendations in three areas:

- Responsive governments:
  - involve people throughout the design and delivery lifecycle to understand their needs
  - proactively reach out to where people are and involve them in the design and delivery of services
  - design government and the end to end experience of services, they don't just implement technology
- Protective governments:
  - prioritise the protection of the public from external threats and ensure that the services it provides are secure
  - encourage efforts to restore and distribute trust throughout digital communities
  - rethink regulation to focus on outcomes not specific technologies
- Trustworthy governments:
  - find the balance between online safety and democratic freedoms to build public trust and confidence
  - deliver high quality, reliable services that understand users and are open to challenge and feedback
  - show citizens what you're doing

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