Towards the new normal: finding a balance in the hybrid society

Hybrid society: a seamless blend of physical and online public services

Atos

Foreword

While it is widely acknowledged that the covid-19 crisis has changed our society fundamentally, we cannot yet see all of its consequences or exactly what the future will look like. Yet there are some things we can be sure of: one is the sudden rise in the availability of online services.

The requirements of social distancing have resulted in a dramatic rise in the use of digital services and demand for data. And there's no turning back: the ease of digital ways of working, the increased accessibility of digital services, and new phenomena such as 'Zoom-weddings/-birthdays/-drinks' are here to stay. The seamless blending of your physical world and your digital world – your digital twin, you may say – is the new hybrid society of tomorrow.

The challenge for governments and citizens will be to find the right balance between the physical and the digital. And for that to happen, public services will need to be better, faster, cheaper…and different. This paper explores both the challenges and the opportunities for governments and citizens in the new hybrid society, and how digital technologies and data make different kinds of public services possible.

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Hybrid society: new possibilities

What has become clear over the course of 2020 is that in everyday life, there is now less need for people's physical presence.

In education, for example, even before covid-19, the term 'flipped classroom' was introduced to indicate that a student would study online using digital resources before attending a physical space to discuss with their professor and peers what they had learned in order to deepen their understanding. 'Flipped', in this case, referring to first doing your homework and then going to class instead of the other way around. Now, with covid-19, we are seeing this happen in an extreme way.

In universities all over the world, education has shifted from professors teaching their students in classrooms over hundreds of years to completely remote digital learning in just a few weeks. And it seems to be working, not only for the rest of this academic year but most likely well into 2021 and beyond.

The covid-19 pandemic has opened up almost limitless new possibilities for working and living together. Interestingly, many of these already existed, people just didn't use them intensively. It's fair to say that some people have been surprised at how easy it is to work, study and meet online without having to spend time travelling or waiting in cars, buses and trains. Employers are seeing the benefits of not having to maintain large office spaces; many are already making statements about homeworking becoming a permanent fixture: online will be the new normal.

Data – the fourth dimension

This major shift in society is also impacting the public sector, forcing public administrations to quickly adopt digital ways of working, not only for civil servants working from home, but also for citizens to be able to access their services online.

This has some important consequences. If the functioning of society is going to rely on online services for citizens to fill in their tax returns, or go to lectures, or attend court, then those services must work as well as, if not better, than the physical presence they are replacing.

The physical world is based on atoms and molecules; the online world is based on data – what some people call the 'fourth dimension'. So, as our digital world grows, taking care of the fast-growing volumes of data is of critical importance. Data needs to be stored and it needs to be processed in a secure, fast, sustainable, cost-efficient and resilient way.

An ecosystem of resilient digital platforms

In order to integrate our physical and digital worlds seamlessly, we need to let data and technologies do the work rather than having to keep selecting and securing the data ourselves. Data is stored in what are called data lakes. To secure, hold, manage and run these data lakes, an ecosystem of resilient digital platforms is needed.

These digital platforms must function effectively 24/7, they need to be secure, and they must be accessible by citizens from anywhere at any time. They also need to be smart, or 'intelligent': AI and machine learning technologies (working either at the center or at the 'edge') are needed to process, analyze and deliver all the data needed for the new digital services and apps of tomorrow.

Data and services must be personalized for each individual citizen in order to deliver the right services at the right time, with the right content and an optimal user experience. To explain how that can work, let's look at the interaction between a government and its citizens.

Hybrid society: new possibilities

Does my government really know me?

Do you sometimes get the impression that your government has no idea who you are unless you're voting or sending in your tax return? Each time you approach a public service organization for the first time, you could well be asked to fill in your name, address, age, date of birth, social security number, place of birth, passport number and so on, and so on. You may feel like a proud citizen of your country, but that same country can act as if it doesn't remember you!

Contrast that experience with, say, ordering a pizza online. My local delivery company knows that my preferred order is a quattro stagioni with salad and garlic bread – even before I ask for it. I can click to re-order my favorite, or choose something new, and within a second the order has been paid for and is being processed.

So, why can't my government recall my history and my circumstances and, based on that profile, pre-fill my data online and suggest some options for a better, more proactive service?

Single version of the truth

This really comes to the fore when I need something new. If, for example, I'm eligible for unemployment benefit or I apply for permission to renovate my house, I have to submit a load of data and the onus is on me to look after my records, maintain multiple passwords and make sure different government agencies are updated. It's hard work for me, inefficient for government, and increasingly anachronistic in this digital era. So, what's the answer – and is it achievable for everyday government?

Using new technologies such as cloud, big data, automation and machine learning, it's possible to hold one 'single version of the truth' about each citizen. Through digital transformation, this is precisely what is now available to governments.

Digital transformation creates major opportunities to improve public services while increasing governments' cost efficiency and productivity. What's more, it's essential if governments are to keep pace with what my chosen pizza delivery company, or travel agent, bank, or supermarket, can achieve.

Digital IDs

Creating and securing a single version of the truth for each citizen requires a digital citizen ID that goes beyond a social security or case number. Many countries already have compulsory ID cards; others (such as the UK and Australia) rely on driving licenses or insurance cards. While many countries have started the process of digitalization by creating 'digital mailboxes' where citizens can register to receive a particular set of government services, none of these go far enough to achieve the kind of joined-up and responsive services we're talking about.

In the private sector, 'unicorn businesses' (highly successful digital disruptors) deliver eye-catching, tailor-made services to individual customers just based on algorithms and vast amount of data. In these cases, digital IDs work based on the customer giving their consent to share their data because they know they will benefit from better and faster services; the more data they share, the better services and the more advantages they receive.

Data sharing and governance

Aligning the new physical and online world in the hybrid society, starts with a proper digital identity – a digital passport who you are as a citizen - just as secure as a physical passport. Implementing digital citizen IDs – together with data-sharing security, governance and capabilities – must all be priorities for governments.

This requires all agencies to understand exactly what data they hold, retain ownership of it even when third parties are delivering digital services, and be willing and able to share that data with other agencies. Blockchain could well be part of the answer to this, to enable a kind of 'ID vault' that secures data about a citizen's status and interfaces with third parties in order to deliver citizen services. With those connections and interfaces in place, algorithms will do the rest (just look at the unicorns).

Giving consent

While sharing data enables governments to deliver better services, there must always be the option for citizens to withdraw consent in accordance with their country's data privacy regulations. These arrangements vary widely in different parts of the world. For instance, in China, it is obligatory by law for citizens to share their data with the national Government; algorithms can then be used to categorize Chinese citizens via China's new social credit system, which dictates access to daily services.

Whereas the Estonian Government is building relationships of trust with its citizens through the exchange of personal data between government agencies and departments in order to deliver effective, efficient and personalized public services. This is works solely on citizens giving their consent based on the question 'what's in it for me?'.

Yet for most governments, data is still a largely untapped resource; and one of the biggest reasons for this is that systematic data-sharing within governments is still quite rare. So, why is that? Decades of history and tradition have something to do with it.

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Transcending government silos

In the era of paper bureaucracies, it was simply not practical to share much of the data stored in dusty archives. Yet the reasons for the lack of data-sharing go much deeper. Even today, many government departments work in silos that make data-sharing difficult, and even unwelcome.

It's fair to say that civil servants have tended to take a conservative approach to sharing data unless explicitly ordered to do so. Risk avoidance is paramount in large bureaucracies; what's more, there may be legal constraints on sharing citizen information.

However now, these cultural norms are rapidly looking out of date – as long as the data is properly secured. These days, citizens want joined-up, easy-to-use public services online and they don't care how these are organized behind the scenes. At the same time, powerful digital technologies mean it's possible to analyze and visualize huge volumes of data to address problems that are simply too difficult to solve in any other way. Increasingly, having data that is incomplete, inaccurate or fragmented is something that no government department can afford.

Three steps to true transformation

As governments join the digital revolution, innovation is high on their political and operational agendas. Yet many are still investing heavily in consolidating old IT infrastructures based on out-of-date silos and bureaucracies. So, for example, the 'digital mailboxes' we looked at earlier in this paper are – in the main – just a digital way of filling in those same paper forms and waiting in the same queues to proceed to the next (virtual) counter.

Without digital transformation, governments won't be overthrown, but they can become obsolete in the eyes of their citizens. So, how do governments stay relevant to their citizens in the digital age? There are three key steps.

1. Re-design their core services with citizens at the heart of service design. Start small, re-design the services that are in demand, and devise processes and citizen experiences that really make a difference.

2. Classify and hold all relevant data where it is needed to meet the needs of service users (citizens and businesses). Eliminate or cut across silos to put that data in place.

3. Apply big data and analytics to deliver more personalized 'intelligent' services and identify service users' needs and trends. Deploy machine learning to improve services, build in continuous improvement and keep learning.

'Intelligent' digital services

Now let's look at what 'intelligent' digital public services look like. Here, 'intelligent' means not only delivering relevant and personalized services, but also joining up information to see the broader picture.

In the education sector, for instance, schools and universities are already experimenting with using data analytics to address their priorities. Student retention, for instance, is a major driver, not least because any attrition impacts funding. By gaining insights into students' progress using indicators such as their online presence and attendance times as well as their grades, an algorithm can sound an alert if someone looks like they might drop out of the system. If so, appropriate, timely action can then be taken to support the student and help them get back on track.

'Intelligent' services can also help to protect vulnerable families and children. Governments get frustrated when families end up in terrible circumstances because the right signals have not been picked up. The signal comes from the education department that a kid is skipping school regularly or is late in class, plus signals from social welfare, the housing department, police, healthcare and so on; each of these can escalate in its own silo, but not resonate as part of a bigger picture. It is the combination of the signals – the data – that highlights that something is possibly wrong. Generating that insight, using algorithms set by responsible public administrations, can ensure the right action is taken early enough to prevent things getting any worse.

Buying a dog

Intelligent digital services can equally be part of daily life, such as when buying a dog.

Suppose you buy a dog. From the moment you become a dog owner, you have rights and obligations. In many countries you must register your dog, pay taxes on it, and clear its poop when you're out walking or you get fined. Wouldn't it be great if, once you've bought your dog, you automatically get a notice from your council congratulating you on your new pet, suggesting a conveniently located center where you can train it, telling you where you can find a recommended vet and dog-walking services, a note to let you know that the necessary tax will be added to your next local tax bill – and, oh yes, a suggestion for a dog-walking social club in your neighborhood?

Discovering you're pregnant

Now let's assume that, as a proud new dog owner, you discover that you're three months pregnant. Wouldn't it be fabulous if, after being congratulated online by your government, you receive a message suggesting times for an appointment with your doctor, links to the nearest day care facilities, details of pregnancy yoga courses (for both parents), a note to let you know that your tax code will be adjusted accordingly when the time comes, details of the child benefit payments you'll be eligible for, and so on?

Wouldn't that be awesome public service?

Redundancy and new employment

Unfortunately, the next week, your boss tells you that you've been selected for redundancy and you need to find a new job. Wouldn't it be wonderful if your employer automatically notifies the relevant government employment department, the employment department automatically cascades information to all other relevant government agencies (unemployment benefits, pensions, housing and so on), who each calculate the effects on you and your family? From there, you get digital notifications, with links to trigger processing and payments to your bank account. Not only that, the employment agency is triggered to arrange a meeting with you to assess your situation and devise a personalized action plan for re-employment. Analytics match your digital profile with job vacancies and training courses across multiple media (social media, job sites) and give you links to social networks to explore a career change. You get automatic notifications of new opportunities to arrange job interviews and retraining. You find a new job and go online to notify government. You get a digital 'job start' pack, including details of training you need for your new job and travel details and real-time updates on how best to reach your new workplace. The effects on your benefits and tax position are reversed across all government departments.

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Rethinking public services

This may all sound radical, but with new cloud capabilities, AI, machine learning, big data and automation, we have already seen many sectors (banking, retail, media and transport) reinvent themselves to survive the next decade.

In the public sector, the concept of giving citizens access to all government departments through one unique ID and one consistent user interface becomes really achievable. So the pregnant dog owner and job seeker is supported and enabled by government to get through the realities of life. For governments, this is fundamental to their purpose to meet citizens' needs in their daily lives and at time of crisis. It's time for public sectors to rethink citizen services to make the world a better place for the people they serve.

Privacy and security

It goes without saying that privacy and security must be carefully considered. Agreements on security standards are emerging; there's more discussion – and different views – on data classification – in other words, which data should remain at a national sovereign level and which can be stored in, for example, the public (secured) cloud.

Care needs to be given to clarifying what data can be shared, and not shared, about citizens. This issue of privacy is not a technology problem, it's is a geo-cultural and historical question. Broadly speaking, the American view, for example, is around sharing data for commerce (selling ads), the Chinese is around absolute state control of data (to keep society safe), and the European view is around privacy, based on humanitarian laws.

The new normal

Before the covid-19 crisis, it was common for citizens to physically appear at local council offices for administrative reasons. Now, we are seeing a dramatic rise in the use of chatbots and algorithms to increase access to public services 24/7 for common queries.

Councils now issue online digital permits, where before only paper might have been allowed. Architects and construction companies can submit their plans electronically instead of in an envelope. Getting online allowances, health records/services, even getting online support for elderly care is now supported and even considered a good option.

Across the justice system, online court cases were introduced when courts were closed at the start of the pandemic. Suspects and their lawyers appeared online, as judges presided over courtrooms across multiple screens. While not every court session will now go digital, this new way of working will surely not disappear. For example, the fact that prisoners no longer had to be securely moved from prison to courtroom for each session greatly improved efficiency.

And it goes on. Museums must get creative to give crowds access to their collections. Providing online views is one of the measures they took; and in the digital age, using more sophisticated forms of virtual reality is a way of enabling museums to stay innovative and relevant. As physical visits to museums return (for small groups only), a new balance will emerge between the physical environment and new digital experiences.

Irreversible change

More widely, the dramatic reductions in travel that are needed to address the climate emergency could be achieved through these new ways of working. The same is true of working from home. Saving travel time to the office and doing meetings in your pyjamas was just not imaginable for many employees in all sector. Businesspeople, and also officials, ministers and world leaders, have seen the benefits of videoconferences. Now these changes seem irreversible. While these started as an absolute necessity, it seems unimaginable that business and government leaders will start again to fly halfway around the globe when just as much can be achieved from home.

Perhaps more difficult to envisage right now are the effects on the tourism and events industries of these new hybrid possibilities and necessities. Yet these will undoubtedly materialize. Flying to the moon as a tourist is rapidly becoming a reality, albeit at steep price; at the same time, becoming an online astronaut instead and virtually experiencing space travel is no longer lightyears away.

Towards a better, sustainable future

Kay Hooghoudt
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Kay advises governments, universities and other public bodies all over the world on their digital strategy and transformation. He is a digital visionary, responsible for developing new themes and strategies in the public space. Having worked with public service leaders in Europe, Australia, the US, the Middle East and Asia, Kay advises his clients on their digital agenda and emerging trends and technologies, and benchmarks best practice between countries as they emerge from covid-19 into a new normal in which digital enablers must play a key role.

With his extensive international cross-market network, Kay has knowledge and stories to share about how leading public institutions have navigated their journey to becoming e-states. He advises on platform adoption, hybrid cloud orchestration, access to legacy systems, data classification, security, scalability, resilience, cost, data protection and data sovereignty.

Kay's career includes 15 years in senior management positions within the Government of the Kingdom of the Netherlands. He joined Atos in 2007 as Executive Account Director for Government & (Higher) Education in the Netherlands. Kay has a Masters degree in International Law (LLM) and a BA in Cultural Anthropology & Non-Western Sociology from the University of Leiden.

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