

THE FUTURE OF DIGITALISATION



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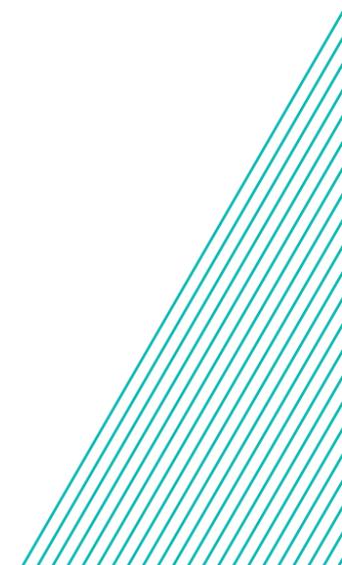
KONRAD
ADENAUER
STIFTUNG

WORKSHOP REPORT

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INTRODUCTION

THE FUTURE/S OF DIGITALISATION

Digitalisation is one of the most important issues of our time. Societies, economies and industries are being reshaped on a scale and speed like never before. Almost every sphere of life – work, finance, tourism, shopping, and our social relations – has been transformed. The added value of digital technologies has become self-evident. They are regarded as a key driver for ensuring future prosperity and therefore politics as well as the business world have placed digitalisation at the top of their agendas.

At the same time, there are growing fears that this digital revolution wields a destructive power.

Furthermore the novel character of the challenges means that traditional institutions, be it government departments, universities or companies, often struggle to adjust. Politics has to keep pace with the dynamics of these technological developments.

In a workshop, we wanted to explore the benefits and challenges of digital transformation and its implications for societies in Asia. What might the future/s of digitalisation look like? What might be the different perspectives of the state and non-state actors involved in building it? How can we use digital technologies to improve the quality of life? What will be the role

of policy makers, industries and citizens in this process?

Using future thinking tools and methods, the participants analysed the complex relations and tensions between the different stakeholders in creating a desired future and recommended some ideas for policy makers for the future.

METHODOLOGY

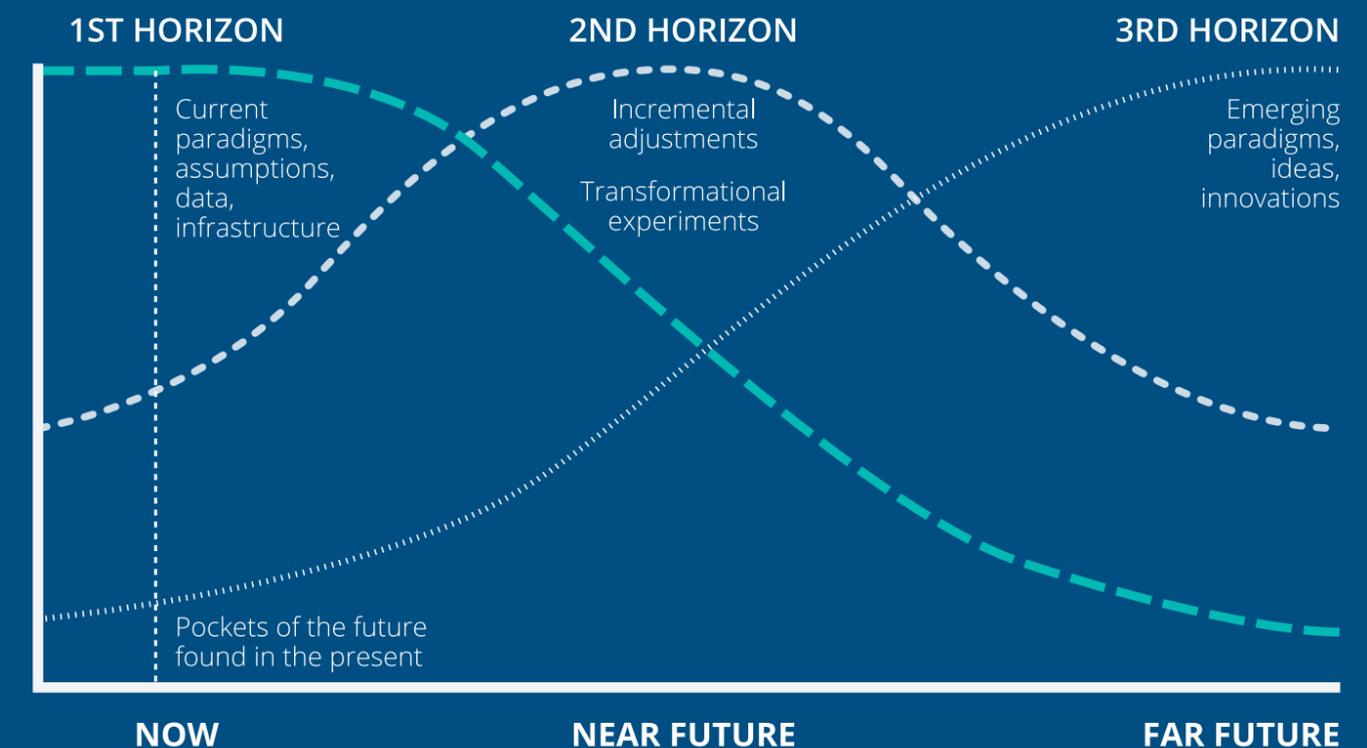
The Three Horizons Model is a tool for thinking about the future that encourages a conversation about the challenges in the present, our aspirations for the future and the kinds of innovation we might need in order to address both at the same time.

The model fosters a discussion about:

- Horizon 1 (H1): The dominant system and the challenges to its sustainability in the future, i.e. the case for change;
- Horizon 3 (H3): The desirable future state, the ideal system we desire, and of which we can identify elements in the present that give us encouragement and inspiration;
- Horizon 2 (H2): The nature of the tensions and dilemmas between H3 vision and H1 reality, and the subtle processes of change, new ways of working, new capacities, and perhaps new structures to navigate the transition between them;

The framework helps explore systemic patterns to identify which of the dominant patterns are no longer fit for purpose, how the emerging trends can shape the future, and what visionary action is needed to collectively move us towards a viable future. It draws attention to the three horizons as always existing in the present moment, and that we have evidence about the future in how people (including ourselves) are behaving now.

The THREE HORIZONS FRAMEWORK



CURRENT STATE OF PLAY: WHAT IS BROKEN

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INTRODUCTION

The benefits of digital technologies are manifold; we live in a world with access to information, improved communication, new economic opportunities, empowerment of civil society, access to education, and greater political participation. But these benefits come with numerous challenges today. Often on a global level, government structures, the economy, or society as a whole are challenged by these technologies. With these challenges in mind, a pessimistic mindset oftentimes dominates the discourse, hindering us from realising a positive and common vision for the future.

This begs the following questions:

What is the narrative about the future of digitalisation? Who ought to be setting this narrative? How might we get there?

Before discussing the future, we sought to understand what is broken about the world of digitalisation today. This can be clustered into six areas: industry structure, power, data collection, uneven digital access, norms and culture as well as state capacity. There were points of disagreement in the room, especially when it came to the question of where power should reside: with the government, with the private sector, or with society? This was reflective of the varying governance contexts of the participants, and is an important observation to note.

1. INDUSTRY STRUCTURE

While the digital economy has given rise to many economic opportunities, trends, and start-up ideas, its network effects are creating monopolistic structures and have led to the dominance of platforms that scale across the globe (Google, Amazon, Facebook, and Apple, for example, on the one side and Alibaba, Tencent, and Baidu on the other). This increasing concentration has an effect on incentives to innovate and invest and leads to innovation super-clusters around the few locations of these companies.

There also exists a tectonic rift between the corporate apparatuses of the big tech companies and the open source and creative commons ideals of the “internet of public good”. Reversing this kind of increased concentration would take an immense commitment of political capital and bureaucratic energy.

2. POWER

The duality of the internet, as a disruptive tool to promote democracy and economic opportunities or solidifying power in the hands of a few, or simultaneously both, is a complex puzzle. Some governments have implemented policies that greatly restrict the internet’s political benefits and undermine the self-organizing potential of society to pursue democratic change. Furthermore, technology has allowed some governments to use mass surveillance as an alternative to citizen engagement. Corporates are not immune from this trend—a rise of surveillance capitalism also exploits personal information for profit.

With greater power residing in governments and corporations, individuals have limited bargaining power and are left out of decision making, especially those on the fringe of society and, thus exacerbating inequality. A further complication is that across the world there is uneven distribution of trust towards governments; some are trusted more, some not at all.

3. DATA COLLECTION: ETHICS AND CAPACITY

Data analytics help governments and businesses make informed decisions and provide opportunities for positive socio-economic change. But the scale and ease with which data can be collected and analytics can be conducted today by governments and large corporations present some concerns. The unethical collection and use of data is one such concern, especially as companies begin monetizing data externally for purposes different from that for which the data was initially collected.

While there is abundant data in some countries, in the Global South, however, there is a relative “data deficit”. Contributing to this is a “data gap” (data needed but it simply does not exist yet) and an “access gap” (data exists but cannot be accessed due to a lack of capacity, resources or agreements). In some countries, there is also an absence of legal, ethical, and regulatory frameworks that enable and regulate the use of data.

A third challenge arises around the sharing of data. While there are numerous benefits in sharing government or scientific data, closed networks and a lack of interoperability hinder the sharing. There are also significant concerns around cyber security risks when data is shared.

4. UNEVEN DIGITAL ACCESS

There is a divide in terms of access to and usage of information and communication technology. The divide however is not just about access. A global digital divide can be seen primarily between developed and developing countries. Within countries it can be seen between rural and urban areas, older and younger generations, as well as between men and women. Inequalities exist between those with varying skills to navigate the abundance of information and services.

Furthermore, in some regions, digital literacy is too low to enable safe navigation of a digital world. This becomes even more obvious when it comes to cyber security as there is a weak digital security awareness among elements of society, leaving vulnerable groups even more at risk. China's heavy-handed blocking of access to its market via data and cyber regulation is another manifestation of unevenness of access driven by market dominance and domestic priorities.

5. NORMS AND CULTURE

Governments, businesses and private citizens across the globe are facing the profound implications of living in a globally connected world where geographical borders do not exist, yet cultural norms remain diverse. As a result, societies struggle to balance the interrelated and often opposing interests of governments, businesses, and citizens both across and within national boundaries.

This absence of agreed common norms in the digital sphere as well as a lack of regulation have given rise to undesirable phenomena proliferating: aggressive behaviour, fake news and echo chambers that are reinforcing existing views; there is great potential for addiction; people can be victims of cyber bullying or online harassment; and the open access for content creation has also led to some very abusive materials. Groups with extreme ideologies such as Alt-Right movements take advantage of the "normalization" of extreme vocabulary to subliminally further their agenda, shaping social discourse in a form and speed never before possible. Furthermore, with information being so easily distributed throughout the world, cultural meanings, values, and tastes run the risk of becoming homogenized.

6. STATE CAPACITY

Governments can shape economies, social policies, and development goals. Hence they are critical to the creation of new policies for a digital age. There is a need for policy innovation and agile policy-making processes and institutions. But governments have difficulties keeping up with the digital transformation; oftentimes the legislation is not in tandem with the realities of technological impact on society. Policy makers in some countries struggle to ensure universal accessibility to an open, free, and affordable Internet for everyone. This is partly a problem of domestic capacity and agencies, partly a lack of international standards in internet governance. Most governments are not capable of preventing or enforcing legislation against (transnational) cyber crime, IP theft or tax evasion, let alone developing new regulatory approaches or strategy-setting for a digitalised world.

WHAT TO TREASURE AND PROTECT FROM TODAY



While challenges today abound, there is a lot that is worth keeping for the future!

We discussed what to treasure and protect from today along three clusters: social commons, tech empowerment, and enabling environment. The future should have a human face, cherishing personal encounters and nature as well as technological advancements and the empowerment that can come with it.

SOCIAL COMMONS

In a world that becomes more and more virtual, face-to-face interactions, unmediated by technology, are ever more important. Accessible common spaces like public squares, parks, and libraries play a significant role to enable these encounters. Arts and the enriching world of culture are vital to gaining a better understanding of society, broadening awareness, and growing tolerance. Cooperation and different cultural backgrounds and perspectives lead to resilient societies and make our world more colourful. All of this should be well guarded in the future.

What will become more important is the ability to disconnect. In the future, there should be more "detox spaces" that invite people to periodically disconnect from all digital technology and connect physically with culture and with each other.

TECH EMPOWERMENT

Digital technologies have made living easier: communication, shopping, banking etc. are all at our fingertips. It has brought access to knowledge, information, and data. New concepts in education like MOOCs allow remote training and high-quality education. The Internet has the power to raise awareness and create social change through groundswell movements. It has empowered many – be it through access to communication and knowledge, to economic opportunities or to finances. Work can now also be self-realization, as the internet provides space for individual expression. People can become stars on YouTube, influencers on social media, or publishers on Amazon. Along with open-source knowledge and creative commons, these are great achievements that should be kept for the future.

4 PLAYERS IN THE FUTURE OF DIGITALISATION

ENABLING ENVIRONMENT

Peace and stability are basic conditions to achieve a positive future. Good governance and public accountability on a national level as well as international dialogue and agreements, such as those facilitated by the UN, are preconditions for a prosperous future that should be cherished. In the domain of cyber security, researchers, practitioners, firms, and governing bodies are investing resources in surmounting tensions e.g. the Global Commission on the Stability of Cyberspace or the Paris Peace Forum. As for fighting fake news and misinformation, there are a growing number of fact-checking institutions across the globe trying to provide quality information for users, and small but well-meaning efforts to educate users in digital literacy. Some governments have launched advisory bodies to ensure safe and ethical use of AI, e.g. the UK Government set up the Centre for Data Ethics and Innovation and Singapore's Advisory Council on the Ethical Use of Artificial Intelligence (AI) and Data. A balance of regulation and maintaining an enabling environment for innovation will be key.

A healthy economy provides opportunities. Therefore, the mindset of small and medium-sized companies (local embedded, long-term, family-owned, decentralised), the start-up culture, the global movement of talent and venture capital should be kept to enable innovation and promote multiple clusters of innovation instead of a few super-clusters. A paradigm shift from goods-dominant to service-dominant logics, especially in mobility, can help better allocate the scarce resources of our planet.

In this section, we introduce a number of the many possible new players in the future of digitalisation, showing how the different roles state actors play might evolve and what kind of roles might emerge for non-state actors.

To understand and shape the future of digitalization, it is important to consider the players and the roles they will take. We discussed the possible roles of state and non-state actors.

Governments will play a vital part in shaping this future, with varying roles and strategies. To nurture a digital ecosystem and build an innovative and inclusive digital society, governments will need to create enabling environments for technology development, promotion and implementation, while levelling access and adoption across sectors — including that of public services. Governments will also have to regulate technology fairly, while protecting groups from exploitation and harm.

These roles were loosely discussed as: **promoter, enabler, leveller, protector, user, and regulator**, and the group explored how these roles might play out and interact.

Non-state actors will similarly shape the future of digitalisation. Their objectives are based on the group they represent and therefore are more difficult to generalise. We will probably see new roles for existing non-state actors as well as completely new actors. Hence, we listed possible non-state actors, represented through institutional roles, network roles or individual roles.

Non-state actors

- Business entities
- Academia
- Media and journalists
- Think tanks
- Hackers (criminals as well as digital vigilantes)
- Futurists
- Religious actors
- Charities/philanthropies
- Cultural institutions/libraries
- International Organisations
- New multilateral organisations
- Social enterprises
- Investors
- Foundations
- Banks/blockchain

- Organised crime
- Freedom fighters
- Lobbyists and activists
- Terrorist groups

- Citizens
- Indigenous peoples, tribes, clans
- Influencers
- Freelancers
- Leakers/whistleblowers
- Robots

STATE ACTORS

Governments will play a vital part in shaping the future of technology, with varying roles and strategies. These roles were loosely discussed as **promoter, enabler, leveller, protector, user and regulator**.



ALEX

"Trust me. I understand."

- **Role:** Enabler
- **Designation:** Cross-Sector Super Bridge
- **Job description:** Act as an arbiter between the users of technology – the citizens – and the developer of technology – the government departments. This person will act as an architect, designing technology that is relevant and useable. He/she/it will also analyse technology to ensure that it is trustworthy and secure
- **Form:** A gender-fluid person that is at the same time authoritative as well as empathetic. Has a background in technology, design, and behavioural psychology
- **Trends:** Digitisation of government services that are not relevant, private sector is competing with the government, people are developing an app fatigue and not adopting tech



YOYO

"May the force be with you (and good luck)!"

- **Role:** Leveller
- **Designation:** The Equalizer
- **Job description:** Empowering the marginalised through tools, education, and resources
- **Form:** Human
- **Trends:** Digital divide, unequal power and development



OMEGA

"Connection error. Access denied."

- **Role:** Protector
- **Designation:** Values Protector
- **Job description:** Detect inappropriate online content (child porn, terrorism, hate speech)
- **Form:** AI algorithm
- **Trends:** Rise of the dark web, machine learning, pattern recognition



SERENA

"Technology paves the way to a sustainable future."

- **Role:** Promoter
- **Designation:** Ambassador of Technology for Sustainability
- **Job description:** Explaining the nature and benefits of technology to the government organisations and society. Socially, politically, culturally literate
- **Form:** AI algorithm and can be incorporated into machines
- **Trends:** Cloud computing, quantum computing, tennis with Serena Williams



KUNTHEA

"With the help of data, I promise you a smooth commute!"

- **Role:** User and delivering services
- **Designation:** Director of Traffic Management
- **Job description:** Monitor roads, manage tolls and traffic lights, managing interactions between different types of vehicles
- **Form:** Lady with the help of AI and data
- **Trends:** Has lots of data, needs signaling systems, creates algorithmic regulation, regulates insurance policies
- **Trends:** Rise of data and IoT sensors, autonomous vehicles, massive urbanization



DPO

"Privacy is dead. But data silos also."

- **Role:** Regulator
- **Designation:** Data Portability Officer aka Platform Cracker
- **Job description:** Ensures that all personal data is stored in commonly used, machine-readable and interoperable format
- **Form:** AI-based alarm system and human
- **Trends:** Power imbalance between platforms and users

NON-STATE ACTORS

Non-state actors will similarly shape the future of technology. We will probably see new roles for existing non-state actors as well as completely new actors.



GEORGINA ORWELL

"Why are you so scared if you have nothing to hide?"

- **Job title:** Small Sister
- **Job description:** Counter-surveillance against governments and politicians
"small sister is watching the watchmen"
- **Form:** Female
- **Trends:** Distrust in the government and higher surveillance



DR. THEODORA AKA COACH TEDDY

"You can talk to me."

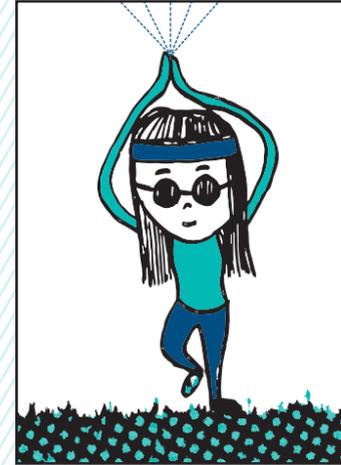
- **Job title:** Robo-Coach/Human-Relations Coach
- **Job description:** An AI coach that teaches and guides humans to be human again, friendly, listening, giving constructive feedback
- **Form:** Machine
- **Trends:** Higher isolation, humans not being able to relate personally



WILLIAM OF THE TRUTH

"The truth is the only way that we can get anywhere. AI doesn't care about the truth!"

- **Job title:** Digital Crusader
- **Job description:** Human Journalist
- **Form:** Human
- **Trends:** Need to fight disinformation, need to fight distrust in media, digital technology used for political activism



AVADINTAV

"If you want to find me, learn how to use a map."

- **Job title:** Hippy
- **Job description:** Yoga teacher off the grid, runs exclusive detox space
- **Form:** Human
- **Trends:** Self actualization and fulfillment using digital tech
longing to disconnect



"PWC" ALGORITHM

"I'll make you trust this code."

- **Job title:** AI Auditor
- **Job description:** Assess workings of algorithms to ensure compliance to ethical codes
- **Form:** Human with help of algorithm
- **Trends:** Concerns over trust in services due to black box AI

5 ROSY AND HAZY FUTURE SCENARIOS

ROSY FUTURE

We live in a quantum computing revolution. A number of technical challenges in building large-scale quantum computers have been overcome and the technology is exponentially more powerful than previous systems. It is now possible to use digital technologies to solve problems that seemed impossible just two decades ago. Cheap, universal access to the internet enables more people to take part in the steadily growing economy, creating new opportunities and ways for everyone to make a decent living. Automation has greatly improved lives and redesigned our jobs, allowing us to work on meaningful things. Inequality is decreasing. A global movement has redefined the role of business in society and companies now play an active part in shaping common vocabulary and norms. Civil society and big tech work hand in hand to help protect marginalized groups from harm.

Machines and humans are intertwined in a healthy relationship. Machine translation is now 100% accurate, allowing easy, efficient communication across languages, facilitating cultural integration. People today switch easily between a virtual world and the previously so-called "real" world where there is an abundance of beautiful physical spaces and nature. We are less plagued by diseases as data-enabled biomedical innovations target diseases and disability and provide personalised health-care for individuals. Pervasive technology has improved the lives of the elderly, who are also beneficiaries of augmentation

technologies that have enabled them to lead longer, more comfortable lives. Most services today are provided by machines. Compared to previous generations, life is less stressful and people have more time and skills to express themselves. There is a great creative vibe across the globe.

Many of the technological advancements have come out of China, a benevolent technological superpower that does not impose their governance model on everyone else. New international bodies have been installed for managing cyber security, but nowadays, major cyber attacks are largely averted by the advanced capacity of state and non-state actors. Internationally, there is a global representation in rule-making. The tone has changed: Online and offline, citizens, civil society and media use a productive language to advance political discourse and governments are more receptive to criticism. Their main focus is to maintain stability, provide good governance, basic necessities and welfare for all people with the support of technology as well as facilitate innovation. Also, they ensure that technology will not be harnessed to harm others through internationally accepted rules, regulations, and standards. A lot of public funds are invested in beautiful common spaces like parks and libraries as well as "blackout zones" that are mushrooming everywhere to allow people to disconnect from time to time.

HAZY FUTURE

We live in an overpopulated world, lacking resources. Instead of economic opportunities through technology advancement, there is constant conflict between technology and humanity. About two decades ago, automation caused mass unemployment and triggered a philosophical and existential crisis. It also led to extreme inequality and a polarization of income and power, especially since new technological breakthroughs in quantum computing were not shared evenly. That's when power shifted from governments to companies.

Rampant personal identity theft due to the lack of secure frameworks causes another dip in the economy. Only a completely digitalised government can control its people in this environment. Therefore, everyone is scored by AI and lives under constant surveillance with low-scored people facing and fighting disadvantages every day. This surveillance has been introduced in two waves: First, there were only wearable devices distributed to everyone, but now in the second wave, we see a fusion of human bodies and technology for surveillance purposes.

China has shaken up the global order. Advancing rapidly and creating a unique ecosystem, it became the tech hegemon in a world without cyber security rules. The threat of a cyber attacks and militarised AI is constantly there.

Trust in communities and in institutions has eroded. Personal connections are more and more replaced with online interactions or encounters in self-created virtual realities. People are addicted to social media but it doesn't make them happy. There is distrust and suspicion in the current social structures and a general lack of well-being and harmony. Working from home is the new norm, which everyone thought would allow them more freedom and control over their time. However, it has led to public spaces being deserted, and real-life personal connections lost. Arts and languages are dying through a homogenization of cultures.

In this fragmented vulnerable society, people live in deepening echo chambers and constantly criticize each other, always at the cusp of conflict. Digital incarceration was invented; the poor and the deviant are deported to prison-like complexes where they live in a virtual-reality "paradise" (a world akin to that described in Huxley's Brave New World but with VR-helmets), unable to change their digital environment, while the rich scions of previous industrialist dynasties are the only ones to still inhabit the real world, constantly fearing that a rival might overthrow them and that they'd be sent away to share the ordinary people's fate.

6 Policy Recommendations

What policy makers might do in the short, medium, and long term.

START NOW:

FIRST, policy makers need to put digital literacy and the roles and responsibilities of digital citizenship onto the policy agenda. State and non-state actors need to be in constant conversation about what their society's desired future of digitalisation might be. In an environment of increasing contestation between the owners of capital against the owners of labour, policy makers need to seek the public good. For example, might policy makers need to oblige players in the gig economy to divert a share of their profits toward the welfare of their gig workers? Might they need to strengthen social protection and redesign current welfare systems to deal with the anxiety and uncertainty arising from disruptive technology?

SECOND, policy makers need to actively build state capacity to deal with the future of digitalisation. Whether this is developing technological foresight platforms to better understand emerging trends, exploring the implications of technology on regulations, conducting studies on the effects of digitalisation on well-being or providing basic training to bureaucrats on the implications of the future of digitalisation, decision makers need to be empowered to consider and develop long-term, sustainable solutions. States might also consider how to build this capacity for citizens as well and work with partners to offer public digital education programmes.

IN 5 YEARS:

THIRD, policy makers need to decide how big tech companies are regulated and what their responsibilities need to be in a digital future that is inclusive and fair. They might, for example, audit tech companies on privacy law compliance as well as the biases of their AI algorithms. Just as policymaking needs to mandate how companies might use data, it also needs to empower citizens to have control over the ownership and use of their data.

FOURTH, policy makers need to maintain and invest in public infrastructure in this digital future. This might be in the form of regulatory infrastructure, like open data access, or in physical infrastructure, like public common spaces, and digital blackout zones that allow people to disconnect and detox.

IN 10+ YEARS:

FIFTH, beyond their domestic concerns, policy makers need to consider how to ensure universal accessibility to an open, free, and affordable Internet for everyone. Might there be a Magna Carta on digital ethics that includes, amongst other things, the commitment to provide a basic universal digital education? Just as the digital access might be a basic human right in the future, might the ability to disconnect from the digital world also be a right through the introduction of "Internet-free Saturdays" (like car-free Sundays)?

Annex

TRENDS

The following is a list of selected trends in the areas of society, technology, economy, environment, and politics (STEEP) that were discussed.

SOCIETY

- Equitable representation of languages online
- Growing digital literacy/self-regulation
- Cultural conservation and understanding through VR
- Cyber Samaritans
- Dying languages
- Increased polarization/divided communities
- Humans spend more time in digital world
- All people are ranked by AI
- Cultural integration through connection
- Gender equality assisted by digitalisation
- Virtual alternative world for “divergent” people
- Digital relationship/marriage/family

TECHNOLOGY

- Remote/universal access to doctors and teachers
- New breakthroughs in quantum computing
- Extremely accurate machine translation
- Building tools for diversity and inclusion
- Humans augmented to empower the disabled and help workers
- Increased surveillance and targeting and fusion between human body and tech for surveillance
- Designer babies
- Cyber attacks
- AI taking over the world

ECONOMY

- Digital education, online education, online degrees increasing
- Gig economy and freedom of work
- New and more exciting jobs created
- Personalisation of services
- No more customer service
- Segment of society left behind due to lack of skills
- Rise of monopolies in business
- More working hours (digitally)
- Automation of manual work leaving time for artistic pursuits
- Universal basic income
- Universal prosperity assisted by digitalisation
- No worker unions /rights and policies

- Mass unemployment
- Capitalism on its way out

ENVIRONMENT

- Many resources will be shared based on digital platforms > optimization of resource use
- More accessible renewable energy
- Common spaces persist and grow
- Climate change mitigation
- Uneven access to cheap and renewable energy
- No sustainable solutions to climate change

POLITICS

- Growing motivation for evidence-based policies around innovation
- New global bodies/institutions
- Interest to apply international law in cyber space
- Governments prioritize digitalisation
- Proliferation of autonomous weapons
- State usage of cyber space to advance political aims
- Spread and rise of extremist views and recruitment on the internet
- Cyber/internet grouping free/non-free
- Reduced developmental divide
- Peace and stability
- Better e-governance
- Power shift away from states to large companies
- Anti-digital movement groups
- Wide-scale cyber warfare
- Rise of China as a tech superpower
- Shifting geo-political power dynamics

PROMISING PROJECTS

The following is a list of initiatives, pilots, and projects that give hope for the future:

- The Moral Machine platform created by researchers at MIT is inspiring. It crowd-sources opinions on the moral decisions that should be followed by self-driving cars. It is interesting to note that the project revealed that the “right” decision varies across various cultures. In recent years there have also been different projects looking into the ethics of AI, as well as governance frameworks for data sharing.
<http://moralmachine.mit.edu/>
- Open Data Day has more countries joining
<https://opendataday.org/>
- Musicoin, a music publishing and streaming platform in which artists are remunerated directly by listeners through blockchain-based smart contracts
<https://musicoin.org/>
- Barcelona Digital City - especially in thinking about digital commons for social inclusion
<https://ajuntament.barcelona.cat/digital/en>
- Medellin Digital, a larger programme around city rejuvenation and transformation included the use of ICT as a common tool for development and social change among its citizens
<https://www.uclg.org/sites/default/files/medellin.pdf>

- gov.uk - UK's digital portal to enable citizens easier and better access to government services
- The Millennium Project connects futurists around the world to improve global foresight
www.millennium-project.org
- Access to Information, Bangladesh, a nation-wide initiative for accessibility
<https://a2i.gov.bd/>
- Taobao Village, China, example of how accessibility brings new opportunities
<https://medium.com/world-of-opportunity/in-chinas-taobao-villages-e-commerce-is-one-way-to-bring-new-opportunities-to-rural-areas-c30a4a0a08e4>
- Emerging collaborative journalism
<https://collaborativejournalism.org/database-search-sort-learn-collaborative-projects-around-world/>
- Sacred Capital, using distributed ledger, is attempting to create new forms of non-monetary wealth which can be accepted by different communities
<https://www.sacred.capital/>
- Inrupt project by Sir Tim Berners-Lee, next-gen of web?
<https://www.wired.co.uk/article/inrupt-tim-berners-lee>
- Tesla underground tunnel for traffic and Tesla solar roof project
- NASA Mars rover

ABOUT KAS



The Konrad-Adenauer-Stiftung (KAS) is a German political foundation. Its mission is the promotion of international dialogue, regional integration, sustainable development, good governance, democratic processes, social market economy and the exchange of information. It is named after the first Chancellor (Prime Minister) of the Federal Republic of Germany, Konrad Adenauer (1876-1967).

The foundation's headquarters is in Berlin. Our more than 100 offices abroad oversee projects in more than 120 countries, organising national and international conferences, conducting research, offering civic education and political trainings, and cultivating international understanding. Through its international activities and projects together with local partners, KAS makes a substantial contribution to international cooperation.

The Regional Programme Political Dialogue Asia, based in Singapore, aims to contribute to the strengthening of regional integration, global governance, and international dialogue among Asian countries as well as between Europe and Asia. Its main topics include foreign and security politics, the opportunities and challenges of digitalisation as well as the future of liberal democracy.

Its main activities include:

- Dialogue among parliamentarians and politicians;
- Dialogue and exchange among representatives of leading think tanks;
- Cooperation with the ISEAS Yusof Ishak Institute and Consortium of South Asian Think Tanks (COSATT) to promote analyses and events on regional integration;
- Political analysis and consultation;
- Training programmes for members of political parties and civil society organisations.

Resulting from this broad range of activities, the foundation publishes books and papers as well as the bi-annual journal Panorama: Insights into Asian and European Affairs.

ABOUT LEE KUAN YEW SCHOOL OF PUBLIC POLICY



Part of the National University of Singapore, the Lee Kuan Yew School of Public Policy was established in 2004 with the mission of educating and inspiring current and future generations of leaders to raise the standards of governance in Asia, improve the lives of its people and contribute to the transformation of the region. With over 2,800 alumni spanning 90 countries, the School's unique Asian focus allows students to form a network of future leaders and experience public policy education in a distinctively global environment. In addition to Masters and PhD programmes, the LKYSPP offers high quality customised Executive Programmes that cater to the needs of time-constrained senior managers and professionals, with the aim of delivering creative solutions to real management and leadership challenges. The School has a number of research centres and institutes that contribute both to scholarly inquiry as well as policymaking, and frequently plays host to distinguished speakers and visiting scholars.

For more information about the School, visit www.lkyspp.nus.edu.sg.

