

To Change System Settings, Click Here.

Uncovering the blind spots of our digital societies and rewriting the terms and conditions of our digital futures.

**DEMOS
HELSINKI** /

A white paper on equitable, sustainable
and joyful digital futures.

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1

Terms and Conditions

The lost promises of the digital?

The turn of the millennium was a moment of popular optimism in the potential of technology: a borderless world brought together by the internet as a powerful and egalitarian force. The internet, digitalisation and connection promised robust democracies, better jobs, more productivity, efficiency, and creativity.

But how have these promises of progress held up? Fast forward twenty-odd years, and our time feels very different from this expansive moment of potentiality. Against a backdrop of a multitude of concurrent crises — environmental degradation, war, the escalation of nuclear risk, and periods of economic shocks — our relationship with technology and the digital have evolved.

On the one hand, we are more connected than ever. Despite differences in the reach of the internet, digital technologies and the web have weaved people together and offered innovative tools, products and services to more of us. Undersea cables, wires and mined minerals have created digital networked worlds that offer many of us leisure, ease and new opportunities for business and the provision of services.

On the other hand, what many see as efficient services and the blossoming of creativity in their lives, is shadowed by news of data misuse, abuse of power, precarious work and extractive mining of natural resources. The immaterial world of the digital is actually constructed on a material reality of minerals, copper, cables and labour.

And yet, just like with the terms and conditions of the newest app on our phones, worn down by the daunting task of it all, we choose “I Agree”.¹ Historian and philosopher Lewis Mumford nearly 60 years ago described it as **“the magnificent bribe”**: we accept the good provided by the technological system in exchange for using the system and complying with its maintenance.² More often than not, it is easier and more immediately rewarding to acquiesce — to simply click “yes”. Although we know that the system might be based on practices that don’t align with our values in the long run, and by choosing to accept, we become complicit in reinforcing the system itself, we still choose convenience.

However, not all accept the terms and conditions without reviewing them. An increasing number of actors challenge how digitalisation has unfolded so far. As a result, they question our current sociotechnical systems, finding creative ways to intervene to reshape their foundations. Interventions like the ones we will explore below, together with large-scale regulatory pushes that remaster and repurpose technologies, form visions of emerging alternative futures – visions different and counter to Silicon Valley techno-utopia.

In the pages below, we aim to inspire policymakers, regulators, technology developers, companies, practitioners, researchers and citizens to “change the settings” of digitalisation. First, we will explore the most recent indications of why digitalisation as we know it is infused with six blind spots – we will “review the settings”. Second, we will show initiatives, projects and organisations from around the world that challenge the current approach to digitalisation – we will define a way to “change the settings”. Through these initiatives, we identify four sets of interventions that create the conditions for an equitable, sustainable, and joyful approach to digitalisation. Finally, armed with analysis and inspiration, we hope to connect with anyone willing to pursue these actions. We hope this account becomes a catalyst for the essential change ahead of us, showing how the wishful thinking shared by many can translate into willful action.

②

Review System Preferences

The blind side of digital

There are six blind spots blocking a fair, equitable and sustainable digital transformation. These blind spots describe the **foundations** or **consequences** of the established approach to digitalisation that are often hidden. The **foundations** can be both political and material. They concern the dynamics that shape what technologies we envision and affect how we design the technologies we envision. The **consequences** refer to the hidden costs of how technologies are developed and deployed. Shedding light on these blind spots is essential for understanding the reality and societal contexts of our digital transformation so far. Importantly, they do not reflect an exhaustive list, but rather areas in which action is both realistic and practical.³

Nature Behind The Digital

“If the Internet were a country, it would be the sixth biggest electricity consumer on the planet” – Andrae 2020⁴

The digital economy – abstract as it is – is often perceived as ‘immaterial’ or ‘post-material’: an economy of apps and social interactions that only takes place in the digital realm. Underneath the immaterial image of technology, there is another reality. The digital economy is made possible by high levels of toxic waste, extractive mining practices and heavy chemical use.⁵ From the rare minerals that make up smartphones to the coal-dependent data centres and cryptocurrency mining, the seemingly ‘immaterial’ has a real effect on the material.

The first blind spot is that, despite possibilities to utilise emerging technology in creating an environmentally sustainable world, digitalisation has substantial adverse effects on the environment. The perception of the digital economy as immaterial has impeded the governance of the extraordinarily high rates of CO₂ emissions and energy consumption associated with digital technologies.⁶ There is also growing awareness of the dependency on raw materials in digital transformation.⁷ Yet, for years to come, most developers and users may not become aware of the extractive phases of production that are crucial for new digital innovations. Further, the amount of minerals needed for digitalisation might become impossible to obtain, especially when coupled with the requirements of the parallel green transition.⁸ Finally, if we acknowledge the need for materials in digitalisation, geopolitical considerations arise: the materiality of digital transformation forces countries to reconsider their dependence on global supply chains around technology and its development.

Challenges Of Digital Labour

Labour in the digital economy is not only comprised of highly skilled technicians and innovative entrepreneurs. The cosmopolitan paradise, where diverse groups come together and work to produce and invent new technologies, is only one side of the coin.⁹ Indeed, the digitalisation of the labour market carries thrilling possibilities in bringing diverse voices and skill sets together and freeing workers from the mundane tasks technology can take care of.

Unfortunately, these possibilities: (i) are unequally distributed between and within countries, and (ii) frequently reproduce pre-existing power structures found within markets, which may be unfavourable to those in more precarious positions. While the 'immaterial' phases of innovation (such as design and development) have clustered in the global North, the assembly lines and raw material sites, as well as repetitive work, like moderation of dangerous and gruesome content, have been primarily located in the global South.¹⁰ Second, the rise of platform businesses and their algorithmically mediated gig economies have shown that new digital innovations often need cheap and precarious labour relations^{11, 12, 13, 14}) and that societies lack a shared understanding of the position of platform-mediated work.

Dull Side Of Smart Cities

The social relationships and the unintended encounters that cities offer have served as a source of creativity and value from which new technologies grow.^{15, 16} While innovative digital technologies were born in the suburbia and in ‘the garage’, tech giants, technicians, and venture capital have increasingly migrated to the city centres.^{17, 18} Many accounts have focused on portraying the glimmering and progressive potential of ‘smart cities’, ‘creative cities’ and ‘start-up cities’. At the same time, visions of smart cities often present **efficient cities** instead — that, ultimately, if not outright dangerous, turn dull. The **datafication** of the public space not only enables controlling citizens’ behaviour¹⁹ but creates **docile bodies**²⁰ that become willing to produce the right kinds of data.²¹ Smart-city residents become a measurable and calculable mass, as their behavioural variance is not the primary concern of data-driven services and products. This data-induced homogenisation of citizens threatens the very idea of the city as a hub of diversity with possibilities for creativity and unplanned interaction.

Extractive Business Models

Many of the contemporary business models of digitalisation are based on the logic of extraction and commodification of data from human interactions.^{22, 23, 24} Platform capitalism and the commodification of data have led to market failures and digital monopolies by displacing the ideals of the free exchange of information. This stands in contrast to the anti-rival nature of data and digital goods: the more they are shared, the more benefit accrues to all actors in the economic system as a positive externality.²⁵ At the same time, digital companies possess unforeseen power in directing peoples' behaviour through the data they possess.

Following the logic of capital accumulation: what once existed as a 'commons' — as a non-market, collectively governed social good — has now been commodified, quantified and turned into an object of exchange. Social life, interactions, and even our sense of self have become e-commerce opportunities. Not only are they commodified through content creation, making creators rich and platforms richer. Users, while consuming content that is primarily free of charge, end up paying a high price — with their personal data.

The Hostility Of The Digital State

While digitalisation offers exciting opportunities for states and governments to increase openness, inclusiveness and democratic decision-making, there are also tendencies towards the opposite direction.²⁶ On the one hand, various states, from China to Russia, have sought to integrate authoritarian interests into the new digital realm. On the other hand, the dubious use of facial recognition software like Clearview AI by government entities from the US to Europe shows that surveillance is also present in liberal democracies. In addition, while, for example, the European Union's digital strategy forms around the ideas of green transition and human centricity, we often witness that governments lack the capabilities to implement such strategies.

From Analogue To Algorithmic Hierarchies

The first decades of the 2000s have been filled with ‘algorithmic optimism’ in the mainstream — the idea that algorithm-based systems could solve the grand challenges of our era, such as environmental crises, and unpack the social hierarchies. The Arab Spring generated international hype that democracy would grow and flourish within the algorithm-based system.²⁷ During the past years, such optimism has also found less desirable companions. Research has shown that some algorithms that were expected to breed compassionate and inclusive societies have been built on racist and androcentric prejudice.²⁸ While these occasions could constitute isolated incidents and biases, algorithmic hierarchies can also reflect the larger structural hierarchies and stratifications that shape our analogue world. Instead of unpacking the social hierarchies, algorithms perpetuate them. We have witnessed the spread of disinformation, deterioration of teen mental health²⁹ and biases against Black users.³⁰ Opaque classification and comparison practices have generated new forms of social hierarchies, “algorithmic hierarchies”, that are difficult to perceive and contest.³¹

Through public dialogue, there is growing awareness of these blind spots of our established sociotechnical systems that have so far guided our present and future through the process of digitalisation. Now that we have examined the foundations and consequences of this approach, we stand a chance to build a societally led approach to digitalisation; disruptive where it needs to be, but open, fair, and equitable.

3

Change the Settings

Four sets of interventions

Alongside ongoing public dialogue, several organisations, initiatives, and individuals are pursuing digitalisation to support planetary and societal wellbeing. Unfortunately, this is not as simple as a few clicks to refuse the default settings and change preferences. Although new ways of thinking and doing exist, bold and imaginative redesigns that move beyond the foundations and consequences epitomised by the blind spots above need to grow, become stronger and take root. Society can achieve this if we coordinate and push for change at the top while **concurrently** creating new models and spaces to challenge the current technological progress paradigm at the bottom.

We thus propose a combined top-down and bottom-up approach to digitalisation. We collect this approach into **four sets of interventions** directed at **governments, social movements, international organisations, communities, companies, civil society** and **practitioners**. These interventions intend to strengthen, mainstream, and promote a sense of agency in societal stakeholders when co-building a digital society. Interventions are based on Demos Helsinki's work with governments, researchers, businesses and civil society organisations, and case examples around the world. These interventions are thus not a fantasy but realistic and tested actions. This is what changing the system settings can look like.

Within the interventions, there is room for all actors – from regulators and decision-makers to industry and civil society – to contribute. There are no set blueprints for this transformation or for fair technological futures. Right now, it is most meaningful to establish new approaches that are legitimate, collaborative, and inclusive.

Interventions are divided into four sets:

Experiment with a regenerative digital economy

Interventions that build business models and economic practices for digital technology to improve planetary and social wellbeing.

Establish mechanisms of democratic digital governance

Interventions that empower democratic digital governance to steer digital transformation towards democratically validated directions.

Encourage emancipatory technology development

Interventions that enable equitable and participatory technological development and strengthen individuals' and communities' sense of agency in digital transformation.

Develop spaces for collective imagination of digital futures

Interventions towards collective capabilities of imagining, reflecting and visioning alternative digital futures.

Experiment with a regenerative digital economy

Digital technology has the potential to shape the premises of our economic systems. Yet, so far, its potential has remained largely unrealised because we have too often settled for mimicking the structures and interactions of the analogous world in a digital form. Technology could provide the testing grounds for experimental economic policies and practices to move away from extractive business models and unlock the potential for positive contributions to nature and society.

Interventions for a regenerative digital economy:

- Experiment with data-sharing incentives and alternative value-creation models that recognise the positive externalities of digital goods
- Utilise technology to organise economic interactions in new ways, such as with peer-to-peer production models
- Create appropriate public steering mechanisms and incentives to ensure that in both theory and practice, the data and the digital economy function within planetary and societal wellbeing boundaries (e.g. the Wellbeing Economy approach, including models such as Doughnut Economics).
- Develop technology to support and enable 1.5-degree lifestyles and the green transition
- Reform labour regulation to ensure fair compensation and safe work environments and eliminate the wrongful classification of precarious workers on digital platforms

Scientific foundation for anti-rival compensation and governance technology (ATARCA)

Accounting Technologies for Anti-Rival Coordination and Allocation (ATARCA) is a Horizon 2020 research project that introduces the anti-rival nature of data and digital goods. Anti-rival goods gain value when they are shared. However, our current economic models are built on scarcity, often creating artificial scarcity for these anti-rival digital goods. As a result, society misses out on the benefits of effective data sharing. ATARCA develops a new decentralised technology, “anti-rival tokens”, along with proposals for new policies to enable efficient, decentralised, market-style trading and ecosystems for such anti-rival goods. By creating new incentives and sharing mechanisms for anti-rival goods, data economies can overcome their market failures and inequalities while fostering new value-creation models, more participatory economic systems and inclusive measures of economic progress.

More information can be found [here](#).

National strategic roadmap of successful twin transition in Finland: Artificial Intelligence 4.0

The [Artificial Intelligence 4.0](#) programme’s main objective is to advance the usage of A.I. and other digital technologies in Finland to support the green transition. The programme aims for an environmentally friendly, efficient, and Finnish digital industry by 2030. Citizens will benefit through competitive solutions that decrease their carbon footprint within a globally regulated market. Demos Helsinki has provided strategic and operational support to the project. After facilitating discussions with a comprehensive, cross-sectoral set of participants over two years, the programme produced a final report which presented policy recommendations taking us towards the programme’s vision. There are three policy areas in which Finland should invest, according to the report: (1) the right research and devel-

opment programmes, (2) purposeful innovation that supports sustainable lifestyles, and (3) equity through sharing know-how with other countries.

New indicators for the wellbeing economy

What is the economy for? Technological progress and the climate crisis, together with ageing populations and health inequalities, are shaping our societies and challenging how we see economic growth. A wellbeing economy approach fundamentally sees economic growth not as an end in itself but as a tool for sustainable wellbeing. For example, in Finland, Wales and New Zealand, this has meant putting wellbeing at the heart of decision-making: identifying the impact of policy on the planet's and people's wellbeing, not just using economic indicators as proxy metrics. In Finland, a wellbeing economy approach has been endorsed by the government since 2019. To bolster this, the government contracted SOSTE, the Finnish Federation for Social Affairs and Health and Demos Helsinki to assess what a concrete indicator collection and steering model for a wellbeing economy could look like. Read more [here](#).

Trees as infrastructure

Trees As Infrastructure (TreesAI) is a cloud-based platform establishing nature as a critical part of urban infrastructure alongside bridges, roads and rail, enabling investment, profitability and sustainability. It supports municipalities in transitioning toward resilient urban forest management practices and is developed by [Dark Matter Labs](#), supported by [EIT Climate-Kic](#).

Urban forests regulate a number of ecosystem processes (e.g. water and air quality) and provide tangible and intangible benefits vital for living environments. Trees produce goods such as food and timber, and are deeply connected to our societies and cultures, functioning as powerful symbols. TreesAI accounts for

and values a number of tangible benefits—relating to carbon, water, health, energy, biodiversity and the economy—while acknowledging social and cultural co-benefits. You can read more [here](#).

Establish mechanisms of democratic digital governance

Digital governance is at a crossroads. Societal and industry interests are not easily aligned, leading to tensions which affect the possibilities of collaboration. Governance innovations could nurture trust and promote alignment. As Perez (2002) argues,³² the societal tensions caused by technology prevent its benefits from being equally experienced. This is until new social institutions have been shaped and old ones reformed. To counter the exploitative and extractive digitalisation practices, appropriate governance must breed collective capabilities to steer the transformation towards democratically validated purposes.

Interventions for democratic digital governance:

- Explore new collaborative models to govern platform economy³³
- Build transparent, explainable, accountable and democratically governed algorithms
- Invest in experimental governance and regulation innovations like sandboxes, testbeds and policy prototyping
- Develop human-centric, inclusive smart city projects³⁴
- Include pluralistic alliances and diverse communities to govern and regulate mass digitalisation processes

Towards an experimental governance framework for emerging technologies

Demos Helsinki in collaboration with Open Loop, a global experimental governance programme in emerging tech, has set out to explore and consolidate what experimentalism could bring to the governance of emerging technologies. At the crossroads between technology and society, there is a lack of trust in our societies' ability to steer technological development and in the technology itself to bring about fair and sustainable futures. From this point, Demos Helsinki and Open Loop, together with international experts and stakeholders, have researched and organised discussions about the past, present and future of experimental approaches to the governance of emerging technologies. The project, spanning three events with dialogue, background research, a repository of tools for experimental governance for policymakers and a replicable workshop model for designing experiments, is a first step in thinking about how experimentalism could introduce more inclusion, anticipation and holism into the technology policymaking.

Civil service capacity building in Bosnia & Herzegovina

Demos Helsinki, together with partner [Aspiro](#), designed and organised a capacity-building training programme for ≈300 public officials in Bosnia & Herzegovina aimed at improving capabilities, including in foresight, for the digital transformation. The goals of the training included (i) raising awareness of the current and past successes of utilising digitalisation, (ii) learning about the latest digital tools with tested hands-on methodologies, (iii) building new digital-era capabilities, and (iv) motivating participants to become even more curious, open, exploratory and reflective in work life. After 12 weeks of training, about 300 civil servants were trained on the use of data, digital governance, digital foresight and digital services.

The Transformative impact of distributed technologies in public services (TOKEN)

TOKEN eases the adoption of Distributed Ledger Technologies (DLTs) as pilots for more open, transparent, trusted and efficient public services. Launched in January 2020, TOKEN is an EU Horizon 2020-funded project whose ultimate goal is to develop an experimental ecosystem to enable the adoption of DLTs as a driver for the transformation of public services.

Demos Helsinki is responsible for the TOKEN Policy Observatory, a gathering of practitioners, policymakers, civil servants, thinkers and researchers that together put forward policy interventions to support the societal role of DLT in government. So far, participants have developed policy recommendations ranging from the fair and inclusive development of technologies to mass-scale deployment in government. More information can be found [here](#).

Open-source democratic policymaking

“Polis” is an open-source technology for survey research that leverages data science. It is a real-time system that gathers, analyses and understands what large groups of people think in their own words, enabled by advanced statistics and machine learning. The goal is to provide a space that can bring consensus around a controversial question. [Polis](#) has been used with populations ranging from 40 to 40,000 people. It is ideal for discovering unrealised possibilities in complex, conflicted situations involving diverse perspectives.

Improving policymaking through design

“Policy Lab” brings new policy tools and techniques to the UK Government. It is a creative space where policy teams can develop the knowledge and skills to create policy in a more open, data-driven, digital and user-centred way. This is achieved by

utilising design, data and digital tools as testing and creative grounds to help policymakers rethink and design more open and user-led policies. There is a strong focus on prototyping and experimentation for policy innovation across governments. In 2014, [Policy Lab](#)'s mission started exploring the cutting edge of policy design practice: radically improving policy-making through design. In response to this, a set of virtual cards encompassing different experimental methods has been launched to inspire and trigger grand questions, the answers of which are informing policy formulation and implementation.

“Future(s) of Power – Algorithmic power”

“Future(s) of Power – Algorithmic power” series in association with Somerset House Studios is an experiment with the method of sortition to populate and hold a Citizens Assembly on Algorithmic Power. This is to highlight that alternative democratic methods exist and to contrast collaborative human decision-making with algorithmic decision-making through the citizens' assembly itself.

Encourage emancipatory technology development

Digital technology may, at its best, create opportunities for social emancipation by strengthening individuals' and communities' capabilities to pursue a better life and by creating new collective capabilities for collaboration. However, instead of adjusting technologies at the phase of deployment and regulating their function, individuals' and communities' perspectives should be included in the development and deployment of emerging technology. Technology development should be designed to support harnessing societal goals, for example using AI to promote equality (see case 1). This should not mean mere user preference research but genuine possibilities to control and influence the governance of technology, its development directions and accepted levels of risk. At the same time, from the point of view of governments, emancipatory technology development means boldly harnessing innovation ecosystems towards achieving societally set goals and acting by commonly set rules.

Interventions for emancipatory technological development:

- Develop technologies that unpack the social hierarchies (e.g., equitably built DAOs) and tackle the algorithmic biases
- Promote participatory co-design of technologies with citizens, including vulnerable, marginalised, and minority groups
- Conduct data usage and data-sharing mechanisms (e.g., [data commons](#), [co-operatives and trusts](#)) that empower people and communities to take control of their data to promote their and society's wellbeing
- Create clear accountability structures and liabilities in technology development, design and deployment through regulation and policies

Assessment framework for non-discriminatory AI systems

Demos Helsinki, the University of Turku and the University of Tampere partnered up to help the Finnish Government develop a framework for the ethical and equitable use of AI. AI systems can have a positive impact on education, healthcare, recruitment and many other services. At the same time, biased algorithmic decision-making threatens equality and non-discrimination.

The assessment framework helps developers to establish an equitable journey for the development of AI services in the public sector, from design to deployment: [Assessment Framework \(Excel\)](#).

To put the assessment framework into good use, the project also developed a list of policy recommendations: [Policy Brief \(pdf\)](#)

The assessment framework and policy brief come as part of the VNTEAS-funded [research project](#), Avoiding AI biases: A Finnish assessment framework for non-discriminatory AI systems.

Innovative Solutions Responding to the Needs of Cities & Communities (CommuniCity)

CommuniCity is a new 3-year project (2022–2025) funded by the European Commission's Horizon Europe Framework Programme, building on recognised European and national innovation programmes, methods, living labs, and platforms. The project will be launching 100 pilots using technology to address the needs of cities and communities in Helsinki, Amsterdam, and Porto, through co-creation and co-learning processes. The pilots aim to create living laboratories where solutions can be tested to improve the quality of life of hard-to-reach groups in order to empower them through co-creation and

co-learning and facilitate their connection to their respective cities. CommuniCity will encourage companies, tech providers, and citizens from hard-to-reach communities to work together and develop solutions for digital and urban challenges. Demos Helsinki is responsible for developing an ethics and inclusion framework for the pilot processes, partially applying also the assessment framework for non-discriminatory AI. More information can be found [here](#).

Developing data commons in Barcelona

DECODE (Decentralised Citizen Owned Data Ecosystem) is a project designed to give people more autonomy over their data by developing decentralised technologies such as blockchain and cryptography. The city of Barcelona is an advocate for data sovereignty. Here, data is considered public infrastructure, and citizens play an active role in determining the level of autonomy they would like. This means that citizens, as opposed to big tech, are empowered to decide how their data is used.

DECODE's pilot project, Digital Democracy and Data Commons, looks to discover more democratic ways of governing data that respect people's privacy. More information can be found [here](#).

Inclusive, local and cooperative DAOs

DisCO (Distributed Cooperative Organization) works to create value in cooperative and commons-oriented ways, rooted in feminist economics. They provide an alternative to Decentralised Autonomous Organizations (DAOs), which are blockchain-based entities with the power to make payments, impose penalties and fulfil terms and contracts in an automated manner. DisCOs use aspects of DAO technology but prioritise inclusive, local and cooperative approaches in their application, focusing specifically on social and environmental ends.³⁵

Reflective imagination

Human beings find it easy to imagine an apocalypse or a disaster, but we struggle to imagine the positive alternatives:³⁶ what would a digital world look like in 30–40 years, and how could we make it a good one? When technologies are developed, implemented and used for democratically-validated purposes, we should strategically review and reimagine the ecological, urban, and social impacts. This set of interventions aims to develop and support collective capabilities to envision alternative digital futures and technology usage.

Interventions for reflective imagination.

- Shift from a linear to an iterative view of the innovation processes and recognise emerging technologies as the “product of continual choices made by humans”³⁷ rather than predetermined outcomes.
- Promote educational tools and narratives for societies, organisations and individuals’ capabilities to anticipate and imagine alternative futures and usage of digital technology
- Strengthen the socio-technical approach in digitalisation projects
- Limit the development of simplistic technological solutions to complex societal and political challenges

A global alliance with a mission to re-imagine (Untitled)

Untitled is a global alliance, founded in 2020 and coordinated by Demos Helsinki. It aims to reimagine our society's central institutions and to experiment with how to build them. Untitled brings together an unlikely group of member organisations, activists, and professionals who want to imagine the building blocks of a new kind of society and can initiate transformative experiments to make the change tangible. The alliance includes actors from different sectors and countries, including Japan, Colombia, Mexico, the US, and the UK. The annual Untitled Festival provides a space for imagining together and developing and promoting experiments.

Ability to imagine as one of the key principles in the Public Administration Strategy of Finland

The Finnish Public Administration strategy was initiated to help the Finnish public sector to meet the challenges posed by recent changes in society, such as an ageing population, migration and digitalisation. A consistent and determined renewal of governance, as described in the strategy, will streamline everyday services, ensure legal certainty in society and create new opportunities for businesses and communities. "Ability to imagine guides change" was one of the guiding principles of the strategy.

Demos Helsinki helped prepare a common strategy for public governance and services per Prime Minister Sanna Marin's government programme. The public governance strategy will guide and strengthen the renewal of public governance as a whole from 2020 to 2030.

Valuable breakages: Repair and renewal of algorithmic systems (REPAIR)

The strategic research project REPAIR of the Strategic Research Council at the Academy of Finland promotes societal-oriented technology visions and aims to be a new kind of intervention force. The multi-disciplinary consortium, led by the University of Helsinki, develops organisational and regulatory models and practices for algorithmic systems so that they would fulfil the promises of increased productivity and versatile provision of public services while respecting the basic principles of the Nordic welfare state: openness, equality, autonomy and inclusion.

Demos Helsinki is responsible for the interaction and societal impact of the research project and, together with the stakeholders, will develop new methods, metaphors and capabilities to imagine alternative ways of designing and implementing algorithmic systems.

Immersive exhibitions that demystify technology

The Glass Room is a series of public interventions and spaces that aim to demystify technology through immersive, thought-provoking, self-learning exhibitions. The first version of the Glass Room was a travelling exhibition started in 2016 that was designed to look like a high-end technology store, but in reality, was a space for learning and discussing technology understandably and critically. The space included objects that explored how technology is intertwined with our daily lives. Further Glass Room projects have been co-created, for example, with young people: a current exhibition called “What the Future Wants” is a project and exhibition that empowers young people to define their own digital futures. The exhibitions are also available [online](#).

4

Save, But Don't Close

**Fair, equitable and sustainable
digital futures require action**

Can we — as individuals and as groups, communities, organisations and societies — refuse **“the magnificent bribe”** and instead choose to review the settings of our “digital” world to configure them differently? As showcased by the examples above, we can. The rapid evolution of digital technology urges society to re-think how technology, sociotechnical systems and innovations are developed and who benefits from them. Breaking the mould, the defaults of a singular digitalisation model that rests on blind spots can create shifts and sometimes conflicts in economic, political, and sociocultural spheres. These cannot be tackled with a single new model for innovation and technological development or a ready-made blueprint. Instead, we’ve suggested the interventions to create the conditions for a more equitable, fair and non-extractive digital transformation — not a blueprint, but multiple pathways to deliberate action.

Unfortunately, this is not as simple as a few clicks to review the default settings. This is why it is up to all of us — technology companies, governments, cities, researchers, users and citizens — to act as vehicles and catalysts for change. By acknowledging the blind spots of our digital transformation and renegotiating the terms of our digital futures, we can develop technology that serves all.

Once that change starts to emerge, remember to click “save”, — but don’t close the settings. This is work that never stops. ■

Contact

Demos Helsinki's mission is to intentionally build equitable, sustainable, and joyful digital futures. We do this by empowering governments, organisations, individuals and companies to lead with conviction in the 21st century.

To explore how your digital vision can become a reality, get in touch with one of our experts on the societal impact of emerging technology:

Johannes Anttila

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Johannes' policy, innovation, and research work revolve around the future of public governance and technology that works for society. He has worked with and led consortiums of partners ranging from various sectors of government, some of the world's largest technology companies, Universities and civil society actors in Finland and globally.

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Vera's work focuses on foresight and innovation policy. Most recently, she has led projects in social innovation, digitalisation and other future-oriented policy realms, including convening actors for Finland's AI 4.0 programme. Vera specialises in the analysis and evaluation of the interface between policy and communication.

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Johannes leads Demos Helsinki's project portfolio of digital transformation. The projects focus on societal impact of emerging technology and in collaboration with governmental institutions, universities and private companies on co-creating visions and experimental practices for both grasping the opportunities and mitigating the risks of emerging technology. He has led strategic digital transformation processes in public administration in Finland and beyond.

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Atte's work focuses on research projects and proposals related to the societal effects of emerging technology and deliberative democracy. Most recently, he coordinated the creation of an Assessment Framework for Non-Discriminatory A.I., which assists developers in establishing an equitable journey for developing AI services in the public sector, from design to deployment.

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About

Demos Helsinki is a globally operating, independent think tank. We conduct research, offer a range of services, including capacity-building and training, and host a global alliance of social imagination called Untitled. Since day one, our community has been built on the idea that change can only happen together. That is why we carry out direct engagements and research projects with hundreds of partners around the world. Unlike many think tanks, we are predominantly project-funded and fully independent, without any political affiliations.

Read more about Demos Helsinki [here](#).

Notes

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