



Envisioning a Just and Sustainable Digital Future: Expanding Policy Horizons for a Good Digital Society

Abstract

This report proposes a radical shift in digital policies to prioritise human well-being, environmental sustainability, and participatory democracy. It highlights the limitations of current market-driven approaches and showcases emerging alternative models such as community wealth building, social economy, and regenerative practices. The report shows the narrow focus of current digital policy on either capitalist optimisation or future proofing that seeks to safeguard individuals from the more exploitative aspects of these technologies, arguing instead for expanding policy horizons to support more transformative visions and localised experimentation. The report explores the potential of digital technologies to upscale post-capitalist approaches and outlines key policy areas, including supporting distributed production networks, promoting collective ownership of digital resources, leveraging AI for environmental sustainability, enhancing democratic participatory governance, and fostering open innovation ecosystems. It emphasises the need for a holistic and participatory approach that engages diverse stakeholders in the design and governance of digital technologies. Translating these visions into practice requires navigating complex legal, regulatory, and infrastructural barriers while embedding them within a broader narrative of systemic change. The report highlights the importance of resilient, context-specific policies and the role of grassroots experiments in building a global movement towards a just and sustainable digital society. Realising this potential demands bold imagination, inclusive dialogue, an interconnected multi-level approach, and a commitment to empowering communities in shaping their digital futures.

Keywords: digital society; post-capitalism, community ownership; participatory governance; sustainable innovation

Introduction

The current narratives surrounding the digital future feel trapped in a limiting loop, dominated as much by anxieties about surveillance, control, and exploitation as by optimism that technology can resolve grand challenges such as climate change and inequality.¹ This report proposes a radical shift for expanding the possibilities of a good digital society, grounded in principles of abundance, commons resource sharing, sustainability, and participatory democracy.² Crucial to this is better understanding the evidence-based processes and practices that will allow communities and organisations to leverage advanced technology like AI in a way that prioritises human well-being and environmental flourishing, offering an alternative to dominant techno-capitalist paradigms.³

A just digital future demands policies challenging the status quo. Despite fears that technologies disrupt communities, proper governance can incorporate them as accessible tools for a more sustainable, egalitarian, and inclusive society. This proposal envisions policies guided by the possibilities of:

1. **Distributed production:** Technology enables localised production of essential goods through 3D printing and micro-factories, fostering self-sufficiency and zero-waste.⁴
2. **Collective ownership:** Collectively owning key digital resources, from open-source platforms to publicly owned infrastructure, democratises innovation and allows equitable access.⁵
3. **Environmental Sustainability:** Data-driven monitoring and AI facilitate the transition to renewables, sustainable agriculture, and circular economies in harmony with nature.⁶
4. **Participatory governance:** Direct, secure digital tools empower citizens to shape policies, fostering accountable governance tailored to public needs.⁷

Achieving this demands understanding how localised production, collective ownership, regenerative social economies and participatory democracy can be made tangible through the right policies and governance. It entails researching real-world applications across contexts, identifying ethical frameworks, decision-making structures and funding mechanisms upholding the public good.⁸ Participatory processes centring diverse voices in technology development are key.⁹ With care and creativity, digitally-enabled tools can underscore new social contracts by challenging assumptions and the status quo.

¹ Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Public Affairs. Morozov, E. (2019). *Digital Socialism? The Calculation Debate in the Age of Big Data*. *New Left Review*, 116, 33-67.

² Benkler, Y. (2006). *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. Yale University Press. Kostakis, V., & Bauwens, M. (2014). *Network Society and Future Scenarios for a Collaborative Economy*. Palgrave Macmillan.

³ Mazzucato, M. (2018). *The Value of Everything: Making and Taking in the Global Economy*. PublicAffairs. Scholz, T. (2016). *Platform Cooperativism: Challenging the Corporate Sharing Economy*. Rosa Luxemburg Stiftung.

⁴ Gershenfeld, N. (2012). *How to Make Almost Anything: The Digital Fabrication*

Revolution. *Foreign Affairs*, 91(6), 43-57.

⁵ Scholz, T., & Schneider, N. (Eds.). (2016). *Ours to Hack and to Own: The Rise of Platform Cooperativism, a New Vision for the Future of Work and a Fairer Internet*. OR Books.

⁶ Schwab, K., & Davis, N. (2018). *Shaping the Fourth Industrial Revolution*. World Economic Forum.

⁷ Noveck, B. S. (2015). *Smart Citizens, Smarter State: The Technologies of Expertise and the Future of Governing*. Harvard University Press.

⁸ Ostrom, E. (2015). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.

⁹ Costanza-Chock, S. (2020). *Design Justice: Community-Led Practices to Build the Worlds We Need*. MIT Press.

Realising a just digital future demands novel visions. The move toward a “future of abundance” is possible through micro-factories increasing access to goods while reducing environmental harms.¹⁰ “Equitable commons” of publicly owned platforms can democratise resources and empower collective innovation.¹¹ “Flourishing ecosystems” can emerge from data-driven optimisation of renewables and circular economies. Digital tools enable participatory governance with citizens shaping transparent policies. These possibilities showcase how technologies can transform communities, but solutions must accommodate diverse preferences. These possibilities must be rooted in a commitment to prioritising empowering people over simply protecting them from digital harm: fostering cultures of cooperation and trust; emphasising sustainability through responsible resource management; ensuring equity and inclusion; and building transparency and accountability.¹² Principles must be embedded in funding mechanisms, regulations, and design choices.

To make this vision a reality will necessarily involve new adaptive and dynamic processes. Robust AI regulation demands oversight, multi-stakeholder input and ethical frameworks prioritising society. Participatory governance necessitates accessible platforms enabling engagement. Universal basic income provides stability amid automation. Predictive tools can pre-empt harms, while participatory methods incorporate diverse voices. Processes reflect cultures of continuous learning based on inclusive intelligence and ongoing adaptation. Empowering practises underpin these processes. Public data enables responsible open innovation. Collaborative open-source infrastructure mitigates monopolies through local ownership. Decentralised decision-making allows context-specific solutions. Prioritising marginalised groups in digital skill-building bridges divides. Cultures of dialogue, learning and participation for ethical innovation must centre excluded voices in defining problems and solutions. Leadership must transfer control to communities. Confronting historical inequities can equitably distribute access and influence.

Navigating these obstacles requires a multi-layered approach across governance levels. Internationally, multilateral agreements on data governance, AI ethics and digital rights, along with collaboration between governments, civil society and the private sector, are vital. Nationally, progressive legislation promoting equitable access, open-source innovation and participatory democracy is key. Regionally and locally, communities play a crucial role piloting solutions, building resilience and nurturing community ownership of digital resources.

While approaches such as community wealth building, social economy initiatives, and commoning practices may seem utopian to some, they are increasingly being experimented with at the local level as alternative models of digital development that prioritise social value over private profit. These grassroots efforts, such as community-owned data platforms, open-source software projects, participatory budgeting initiatives, and citizen-led smart city projects, demonstrate the viability and potential of harnessing digital technologies for social good.¹³ However, there is a growing disconnect between these local experiments and the dominant policy frameworks that remain entrenched in traditional capitalist notions of innovation, market competition, and economic growth. This policy gap highlights the pressing need for new, more holistic, and inclusive policy frameworks that can provide the necessary support, resources, and regulatory environment for these alternative models to thrive and scale up. By actively engaging with and supporting these grassroots experiments, policymakers can help foster the development of a truly “good digital society” that prioritises collective well-being, social equity, and environmental sustainability, charting a path towards a more just, resilient, and democratic digital future.

This report, thus, aims to spark conversation on building a good digital society. By critically examining narratives, showcasing alternative visions, and proposing concrete actions, it seeks to empower participation in shaping a just digital future. Through dialogue, collaboration and inclusivity, technology can become a powerful tool for an equitable, sustainable world for all. The path forward lies in expanding our vision of the possible, guided by clear principles and adaptive practices.

Exploring alternative digital futures

The dominant digital policies and visions that shape our current technological landscape are deeply entrenched in existing market paradigms, prioritising economic growth, competition, and profit maximisation. This market-driven approach has led to the concentration of power and wealth in the hands of a few tech giants, exacerbating social inequalities and environmental challenges. However, as the world grapples with the ongoing problems of precarity, austerity, pandemics, and climate change, there is a growing recognition of the need for alternative development perspectives that prioritise social and ecological well-being over economic growth.¹⁴

¹⁰ Rifkin, J. (2014). *The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism*. St. Martin's Press.

¹¹ Benkler, Y. (2006). *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. Yale University Press.

¹² Brià, F., & Morozov, E. (2018). *Rethinking the Smart City: Democratizing Urban Technology*. Rosa Luxemburg Stiftung.

¹³ Micheli, M., Ponti, M., Craglia, M., & Berti Suman, A. (2020). Emerging models of data governance in the age of datafication. *Big Data & Society*,

7(2). Cabannes, Y., & Lipietz, B. (2018). Revisiting the democratic promise of participatory budgeting in light of competing political, good governance and technocratic logics. *Environment and Urbanization*, 30(1), 67-84. Cardullo, P., & Kitchin, R. (2019). Being a ‘citizen’ in the smart city: up and down the scaffold of smart citizen participation in Dublin, Ireland. *GeoJournal*, 84(1), 1-13.

¹⁴ Raworth, K. (2017). *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. Chelsea Green Publishing.

In recent years, there has been a resurgence of interest in “utopian” visions of the future, such as luxury automated communism, which envisions a world where advanced technologies are harnessed to create a post-scarcity society of abundance and leisure¹⁵. While these visions may seem far-fetched, they reflect a growing desire for a fundamental shift in our economic and social systems. More concretely, numerous experimentations with alternative development perspectives are already taking place at the local level, driven by the pressing need to address the challenges of our time.¹⁶

Community wealth building is one such approach, which aims to create a more equitable and sustainable economy by prioritising local ownership, control, and benefit.¹⁷ This approach has gained traction in cities like Cleveland, Ohio, where the Evergreen Cooperatives have established a network of worker-owned businesses in low-income neighbourhoods, creating living-wage jobs and building community assets.¹⁸ Likewise, in Preston, UK, the local government has implemented a community wealth building strategy that includes supporting local cooperatives, encouraging anchor institutions to procure goods and services locally, and establishing a community bank to provide affordable credit to local businesses and residents.¹⁹

The social economy is another emerging paradigm, encompassing a wide range of organisations and enterprises that prioritise social and environmental objectives over profit maximisation.²⁰ This includes cooperatives, mutual aid societies, social enterprises, and community-based organisations that operate based on principles of solidarity, reciprocity, and democratic governance.²¹ For instance, in Quebec, Canada, the provincial government has recognised and supported the social economy as a key driver of sustainable development, with over 7,000 social economy enterprises employing more than 210,000 people.²²

The regenerative economy is another alternative development perspective gaining momentum, particularly in the context of climate change and environmental degradation.

This approach seeks to create closed-loop systems that mimic natural ecosystems, where waste is minimised, and resources are regenerated rather than depleted.²³ A notable example is the city of Amsterdam, which has embraced the concept of the “circular economy” and has set a goal of becoming a fully circular city by 2050.²⁴ This involves a range of initiatives, such as promoting the sharing and reuse of goods, supporting local food production, and developing closed-loop systems for water, energy, and materials.

Digital technologies have been crucial in enabling these alternative development perspectives to emerge and thrive. Platform cooperatives, for example, which are digital platforms owned and governed by their users, have emerged as a more equitable and democratic alternative to traditional platform capitalism.²⁵ Stocksy United, a platform cooperative providing stock photography and video footage, is a notable example. It is owned and managed by its artist-members who share in the profits generated by the platform.²⁶

Community-based organisations are also leveraging digital technologies to support their social and environmental objectives. In Barcelona, Spain, the community-based organisation Guifi.net has developed a decentralised, open-source telecommunications network that provides affordable internet access to over 35,000 people.²⁷ Similarly, in Detroit, Michigan, the Detroit Community Technology Project has collaborated with local residents to build community-owned wireless networks and provide digital literacy training, empowering communities to take control of their digital infrastructure.²⁸

These examples demonstrate the potential for alternative development perspectives to create more equitable, sustainable, and resilient communities. However, for these practices to scale up and become more widespread, supportive policies and frameworks at the local, national, and international levels are necessary.²⁹ This includes policies that prioritise community ownership and control, such as community land trusts and cooperative development funds,

¹⁵ Bastani, A. (2019). *Fully Automated Luxury Communism: A Manifesto*. Verso Books. Frase, P. (2016). *Four futures: Life after capitalism*. Verso books.

¹⁶ Gibson-Graham, J. K., Cameron, J., & Healy, S. (2013). *Take Back the Economy: An Ethical Guide for Transforming Our Communities*. University of Minnesota Press.

¹⁷ Dubb, S. (2016). Community Wealth Building Forms: What they are and how to use them at the local level. *Academy of Management Perspectives*, 30(2), 141-152.

¹⁸ Howard, T., Kuri, L., & Lee, I. P. (2010). *The Evergreen Cooperative Initiative of Cleveland, Ohio*. The Cleveland Foundation.

¹⁹ Whyman, P. B. (2021). The economics of the Preston Model. In *The Preston Model and Community Wealth Building* (pp. 128-149). Routledge. Hanna, T. M., Guinan, J., & Bilsborough, J. (2018). The ‘Preston Model’ and the modern politics of municipal socialism. *Open Democracy*, 12.

²⁰ Utting, P. (Ed.). (2015). *Social and Solidarity Economy: Beyond the Fringe*. Zed Books.

²¹ Laville, J. L., & Nyssens, M. (2001). The social enterprise: Towards a theoretical socio-economic approach. In C. Borzaga & J. Defourny (Eds.), *The Emergence of Social Enterprise* (pp. 312-332). Routledge.

²² Mendell, M., & Neamtan, N. (2010). The social economy in Quebec: Towards a new political economy. In L. Mook, J. Quarter, & S. Ryan (Eds.), *Researching the Social Economy* (pp. 63-83). University of Toronto Press.

²³ Fullerton, J. (2015). *Regenerative Capitalism: How Universal Principles and Patterns Will Shape Our New Economy*. Capital Institute.

²⁴ City of Amsterdam. (2016). *Circular Amsterdam: A vision and action agenda for the city and metropolitan area*.

²⁵ Scholz, T. (2016). *Platform Cooperativism: Challenging the Corporate Sharing Economy*. Rosa Luxemburg Stiftung. Zhu, J., & Marjanovic, O. (2021). A different kind of sharing economy: A literature review of platform cooperatives. Borkin, S. (2019). *Platform co-operatives—solving the capital conundrum*. NESTA: London, UK.

²⁶ Papadimitropoulos, E. (2021). Platform capitalism, platform cooperativism, and the commons. *Rethinking Marxism*, 33(2), 246-262.

²⁷ Baig, R., Roca, R., Freitag, F., & Navarro, L. (2015). *guifi.net, a crowdsourced network infrastructure held in common*. *Computer Networks*, 90, 150-165

²⁸ Nucera, D. (2017). Building Digital Justice: Community-Owned Wireless Networks for Urban Resilience. *Critical Planning*, 23(1), 99-110.

²⁹ Markey, S., & Roseland, M. (2016). *Scaling up: the convergence of social economy and sustainability*. Athabasca University Press. Beckie, M., & Connelly, S. (2016). The role of the social economy in scaling up alternative food initiatives. *Scaling up: The convergence of social economy and sustainability*, 59-82.

as well as regulations that ensure the equitable distribution of the benefits of technological innovation.³⁰ Moreover, a more participatory and inclusive approach to policymaking is needed, one that centres the voices and needs of marginalised communities and recognises the value of local knowledge and experimentation.

Thus while the dominant digital policies and visions of our time remain firmly entrenched in market paradigms, there is a growing recognition of the need for alternative development perspectives that prioritise social and ecological well-being. From community wealth building and the social economy to the regenerative economy and platform cooperatives, numerous examples illustrate how these alternative approaches can create more equitable, sustainable, and resilient communities. However, for these practices to scale up and become more widespread, supportive policies and frameworks that prioritise community ownership and control, ensure the equitable distribution of the benefits of technological innovation, and centre the voices and needs of marginalised communities are essential. By embracing these alternative development perspectives and the transformative potential of digital technologies, we can chart a path towards a more just and sustainable future for all.

Expanding our digital policy horizons

Contemporary digital policies, as illustrated by the UK's "Pro-innovation Regulation of Technologies Review"³¹ and the EU's AI Act³², demonstrate a significant deficit in envisioning how digital technologies can be harnessed, developed, and designed to foster alternative social and economic systems that radically challenge the capitalist status quo. Instead, these policies can be broadly categorised into two distinct approaches: (1) Capitalist Optimism, which emphasises the potential of digital technologies to catalyse further capitalist growth and innovation, and (2) Capitalist Future Proofing, which aims to safeguard individuals from the more exploitative aspects of these technologies within the capitalist framework.

The UK's approach, epitomised by its "Pro-innovation Regulation of Technologies Review," is a quintessential example of Capitalist Optimism. The report is characterised by an overarching techno-optimism, predicated on the assumption that technological innovation is intrinsically beneficial and should be fostered. It advocates for the development of agile, innovation-conducive regulations that instil confidence in businesses and investors, while cautioning against premature regulation that could stifle innovation. The report places a strong emphasis on the UK's

ambition to establish itself as a global frontrunner in attracting and nurturing innovative digital companies, particularly in the realm of AI.

Although the report acknowledges public apprehensions regarding privacy, security, and transparency, it prioritises the realisation of the immense potential economic benefits offered by digital technologies. It implies a readiness to accept certain risks and act swiftly to capitalise on opportunities. Facilitating greater private sector access to public datasets is perceived as pivotal to fuelling AI development and enhancing public services through data-driven innovation. The transformation of public services is framed as a key objective, with the private sector seen as a catalyst for this transformation. In essence, the report seeks to position the UK as a global leader in tech innovation through business-friendly, agile regulation, public-private data sharing, and the swift adoption of AI and digital technologies across the public and private sectors, with economic growth and competitiveness taking precedence over a precautionary approach or a deeper interrogation of the underlying economic system.

In contrast, the EU's proposed AI Act exemplifies the Capitalist Future Proofing approach. The Act aims to establish a comprehensive regulatory framework for AI that strikes a balance between innovation and risk mitigation, seeking to create conditions conducive to the development and deployment of innovative AI technology while ensuring safety, transparency, and respect for fundamental rights. The risk-based approach tailors obligations based on the level of risk posed by different AI systems, with the objective of safeguarding fundamental rights and values such as privacy, non-discrimination, and human oversight of consequential decisions. The Act emphasises transparency requirements, such as disclosing when content is AI-generated and informing users when they are interacting with AI systems, to foster trust and empower users to make informed decisions.

The EU's approach reflects a more human-centric vision of AI, with the rules reflecting the belief that AI should be subject to human oversight and serve human interests rather than operating autonomously. The proportionate, risk-based regulation aims to calibrate regulatory burdens to the level of risk while providing a comprehensive framework. The inclusion of provisions on general purpose and generative AI models demonstrates an intent to future-proof the legislation by encompassing advanced AI systems that could pose systemic risks. The establishment of the European AI Office to oversee the Act's implementation and enforcement, along with the emphasis on collaboration with member states, reflects a vision of harmonised AI governance across the EU.

³⁰ Saguier, M., & Brent, Z. (2014). *Regional policy frameworks of social solidarity economy in South America* (No. 6). UNRISD Occasional Paper: Potential and Limits of Social and Solidarity Economy. Vaillancourt, Y. (2009). Social economy in the co-construction of public policy. *Annals of public and cooperative economics*, 80(2), 275-313.

³¹ Vallance, P. "Pro-innovation Regulation of Technologies Review." *Digital Technologies (March 2023)* (2023).

³² See Edwards, L. (2021). The EU AI Act: a summary of its significance and scope. *Artificial Intelligence (the EU AI Act)*, 1. Edwards, L. (2021). The EU AI Act: a summary of its significance and scope. *Artificial Intelligence (the EU AI Act)*, 1.

While the EU's AI Act represents a more proactive attempt to address the potential risks and harms of AI compared to the UK's approach, it nonetheless operates within the framework of protecting individuals and society from the negative impacts of AI within the existing capitalist system. The focus lies on mitigating risks, ensuring transparency and accountability, and fostering public trust in AI technologies, rather than fundamentally questioning the underlying economic and social structures that give rise to these risks and challenges.

Initiatives such as AI4Gov³³, developed by the European Commission, endeavour to transcend this binary of Capitalist Optimism and Capitalist Future Proofing. AI4Gov presents a vision for a digital platform that leverages AI and big data to enhance evidence-based policy making while addressing key ethical, fairness, transparency, and trust challenges. The proposed ecosystem seeks to strike a balance between harnessing the benefits of these technologies and mitigating their potential harms, emphasising the importance of ensuring AI trustworthiness, transparency, accountability, and fairness for citizen trust and the legitimacy of AI-informed policies.

AI4Gov aims to embed these principles through various frameworks and tools, such as bias detection, explainable AI (XAI), and situation-aware explainability (SAX). The approach emphasises “regulatory compliance by design” and aligns with EU values, laws like GDPR, and ethical AI guidelines. Engaging diverse stakeholders, including citizens, in the design and governance of AI systems is seen as crucial for accountability and democratic integrity, with the ecosystem envisioning participatory processes and public awareness efforts.

However, while AI4Gov represents a more holistic and multidimensional approach to leveraging AI for public governance, it primarily focuses on utilising data and smart technologies to better address the symptoms of the current system rather than tackling the root causes of these problems, which lie in the underlying principles of the system itself. The emphasis on harnessing technology for sustainability ultimately serves to create policies and frameworks for making the existing system more sustainable, rather than fundamentally challenging or reimagining it.

The pilot use cases described for AI4Gov, while addressing important policy challenges, still operate within the confines of the current economic and social paradigm. The Diputación Provincial de Badajoz (DPB) pilot in Spain aims to use AI tools to optimise water management and identify inefficiencies, supporting decision-making and resource allocation within the existing infrastructure. The Jožef Stefan Institute

(JSI) pilot in Slovenia focuses on enhancing platforms for showcasing AI solutions addressing UN Sustainable Development Goals, developing tools for visualising SDG progress, and analysing national AI policies' approaches to tackling bias. While these initiatives are valuable, they do not fundamentally question the underlying structures and incentives that contribute to unsustainable resource use, inequality, and bias in the first place.

Similarly, the Vari-Voula-Vouliagmeni (VVV) pilot in Greece seeks to use AI to dynamically adapt policies across various domains based on citizen flows and ad-hoc scenarios, optimising the management of citizen and vehicle movements. While this can improve public service delivery and resource allocation, it does not address the deeper issues of overconsumption, environmental degradation, and social inequality that are inherent to the current economic system and exacerbated by mass tourism.

The limitations of the current digital policy landscape, as exemplified by the UK's “Pro-innovation Regulation of Technologies Review” and the EU's AI Act, reveal a significant gap in the existing policy frameworks. These approaches, whether focused on Capitalist Optimism or Capitalist Future Proofing, fail to fundamentally challenge the underlying assumptions and values of the capitalist system or envision how digital technologies could be harnessed to create radically different forms of social and economic organisation. The lack of imagination and ambition in these policies is less a reflection of their specific shortcomings and more a symptom of the narrow and constrained policy climate that currently prevails.

However, it is important to note that some jurisdictions, particularly the European Union, are beginning to explore alternative approaches to digital policy in greater depth, with a specific focus on supporting the social economy. The EU has been developing policies and initiatives that explicitly aim to foster the growth and development of social enterprises, cooperatives, and other forms of social and solidarity economy organisations, recognising their potential to create a more inclusive, sustainable, and resilient economic model.

One such initiative is the European Social Economy Action Plan, launched in 2021, which sets out a comprehensive framework for supporting the social economy at the EU level. The Action Plan includes measures to improve access to funding and markets for social economy organisations, promote social innovation and digitalisation, and enhance the visibility and recognition of the social economy. It also seeks to leverage digital technologies to support the growth and impact of social economy organisations, for example, by promoting the use of digital platforms for collaboration, knowledge sharing, and market access.

³³ See Manias, G., Apostolopoulos, D., Athanassopoulos, S., Borotis, S., Chatzimallis, C., Chatzipantelis, T., ... & Kyriazis, D. (2023, June). AI4Gov: Trusted AI for Transparent Public Governance Fostering Democratic Values. In *2023 19th International Conference on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT)* (pp. 548-555). IEEE.

Likewise, the European Social Economy Regions (ESER) project, which aims to create a network of regions across Europe that are committed to supporting the development of the social economy. The project provides funding and technical assistance to local and regional authorities to develop and implement policies and strategies that promote the growth of social enterprises and other social economy organisations. It also seeks to foster cross-border collaboration and knowledge exchange, and to showcase best practices and success stories from different regions.

Perhaps, most relevantly, the EU has been exploring the potential of digital technologies to support the transition to a more sustainable and circular economy, which is closely linked to the goals and values of the social economy. The Circular Economy Action Plan, adopted in 2020, emphasises the role of digital technologies in enabling the transition to a circular economy, for example, by facilitating the tracking and tracing of resources, optimising resource use, and enabling new business models based on sharing and reuse. The Action Plan also recognises the importance of social economy organisations in driving the transition to a circular economy, and seeks to support their growth and development through targeted measures and funding opportunities.

While these initiatives represent a step in the right direction, they still operate within the constraints of the existing economic system and do not fundamentally challenge the growth-oriented, profit-driven paradigm that underlies it. To truly expand the public imagination and political possibilities for a “good digital society,” policymakers must be willing to engage with more radical and transformative visions that prioritise sustainability, equity, and democratic participation at their core. This requires a shift in the policy climate towards one that is more open, inclusive, and imaginative, fostering dialogue and experimentation around alternative economic and social models that harness the potential of digital technologies for the common good.

Supporting a new vision of a “good digital society”

A new vision of a “good digital society” is needed and, to a certain extent, emerging. It is one that harnesses the

transformative potential of digital technologies to create more equitable, sustainable, and democratic forms of social and economic organisation. This vision is supported by facilitative and multi-level policies that promote the development and adoption of these technologies in ways that prioritise the well-being of people and the planet over the accumulation of profit and power.

Digital technologies, such as artificial intelligence (AI), 3D printing, and blockchain, have the potential to upscale post-capitalist approaches to manufacturing, health, welfare, and the environment. For example, distributed manufacturing networks, such as the global Fab Lab network, enable localised production of goods using open-source designs and recycled materials, reducing waste and empowering communities to meet their own needs.³⁴ In the healthcare sector, AI-powered diagnostic tools and telemedicine platforms can improve access to care in underserved areas, while also enabling more personalised and preventive approaches to health.³⁵ Universal basic income (UBI) schemes, such as the one piloted in Stockton, California³⁶, can be more efficiently and equitably administered using digital platforms, providing a safety net for workers displaced by automation.³⁷ Environmental monitoring and management systems, powered by AI and Internet of Things (IoT) sensors, can optimise resource use, reduce pollution, and support the transition to a circular economy.³⁸

To realise this vision of a good digital society, policymakers should explore the following key areas:

1. *Supporting the development of distributed production and manufacturing networks, such as Fab Labs and makerspaces, through funding, infrastructure, and training programs.* There have been an increasing number of initiatives in the EU and across the world, for instance, promoting the expansion of fablabs, makers spaces, and the wider “makers movement”.³⁹ These spaces offer access to digital fabrication tools, such as 3D printers and laser cutters, enabling individuals and small businesses to prototype and manufacture products on demand. Policymakers can support the growth of these networks by providing grants and loans for equipment and facilities, as well as funding training programs in digital fabrication skills. For example, the city of Barcelona has established a

³⁴ Diez, T. (2018). Fab City: The mass distribution of (almost) everything. In J. Walter-Herrmann & C. Büching (Eds.), *FabLabs: Of Machines, Makers and Inventors* (pp. 181-195). transcript Verlag. Walter-Herrmann, J. (2013). ‘FabLabs—A Global Social Movement’. *FabLab: Of machines, makers and inventors*, 33-46. Seo-Zindy, R., & Heeks, R. (2017). Researching the emergence of 3D printing, makerspaces, hackerspaces and fablabs in the global south: a scoping review and research agenda on digital innovation and fabrication networks. *The Electronic Journal of Information Systems in Developing Countries*, 80(1), 1-24.

³⁵ Guo, Y., & Li, H. (2020). The role of artificial intelligence in healthcare: current applications and future perspectives. *Digital Medicine*, 6(1), 1-8. Matmi, M. M., Alnonazi, A. E., Sulaimani, A. M., Alkhalagi, F. M., Asiri, A. M., Alayli, M. H., ... & Shahbal, S. (2023). Application Of Artificial Intelligence In Community-Based Primary Health Care: Systematic Review. *Journal of Namibian Studies: History Politics Culture*, 35, 1269-1292.

³⁶ Daly, M. (2022). Stockton Economic Empowerment Demonstration: A Case Study of Basic Income. University of California, Irvine.

³⁷ Gibson, M., Hearty, W., & Craig, P. (2018). Universal basic income: A scoping review of evidence on impacts and study characteristics. *Edinburgh: What Works Scotland*. Mulvale, J. P. (2019). Social-ecological transformation and the necessity of universal basic income. *Social Alternatives*, 38(2), 39-46. Fouksman, E., & Klein, E. (2019). Radical transformation or technological intervention? Two paths for universal basic income. *World Development*, 122, 492-500.

³⁸ Nižetić, S., Šolić, P., López-de-Ipiña González-de-Artaza, D., & Patrono, L. (2020). Internet of Things (IoT): Opportunities, issues and challenges towards a smart and sustainable future. *Journal of Cleaner Production*, 274, 122877. Sánchez, L., Lanza, J., & Muñoz, L. (2020). From the internet of things to the social innovation and the economy of data. *Wireless Personal Communications*, 113, 1407-1421.

³⁹ Rosa, P., Ferretti, F., Guimarães Pereira, A., Panella, F., & Wanner, M. (2017). Overview of the maker movement in the European Union. Joint Research Centre (JRC) Science for Policy Report.

network of public Fab Labs, called Ateneus de Fabricació, which offer free access to digital fabrication tools and training to residents.⁴⁰

2. *Promoting the collective ownership of digital resources, such as data cooperatives and open-source platforms, through legal frameworks, incentives, and public investment.* The Platform Cooperativism Consortium, based in New York City, has supported the development of hundreds platform cooperatives worldwide, enabling workers to own and govern the digital platforms they use.⁴¹ These platforms, such as Fairbnb prioritise fair labour practices and the equitable distribution of profits among their members. Policymakers can support the growth of platform cooperatives by creating legal frameworks that recognise their unique ownership and governance structures, as well as providing funding and technical assistance for their development. For example, the city of Bologna, Italy, has adopted the “Regulation on Collaboration between Citizens and the City for the Care and Regeneration of Urban Commons,” which enables residents to collectively manage public spaces and digital resources.⁴²
3. *Leveraging AI and data-driven technologies for environmental optimisation and the transition to a circular economy, through targeted research and development, standards, and regulations.* The city of Amsterdam’s Circular Innovation Program has funded a wide-range of innovative projects that use digital technologies to promote sustainable resource use and reduce waste.⁴³ Adopting an innovative “learning by doing” approach, it identified three promising value chains (Construction, Biomass & Food, and Consumer goods) and two instruments (Procurement, and Research, Information provision, and Networks) that are essential for scaling up the circular economy. Policymakers can support the development and adoption of these technologies by funding research and development, setting standards for data sharing and interoperability, and creating incentives for businesses to adopt circular economy practices. The EU, for instance, has put in place policies and legislation like the Renewable Energy Directive to promote and provide a framework for the development of renewable energy communities across member states. This includes giving citizens the right to produce, consume, store, and sell renewable energy, as well as providing guidance for enablers like collective self-consumption and energy sharing. The EU is also funding programs and initiatives aimed at facilitating the creation and growth of renewable energy communities, providing new knowledge repositories and laws for facilitating this transition.⁴⁴
4. *Enhancing participatory governance and citizen engagement in policy-making and resource allocation, through digital platforms, deliberative processes, and capacity-building initiatives.* The government of Taiwan has used the Taiwan platform to engage citizens in the co-creation of policies on issues ranging from Uber regulation to online alcohol sales.⁴⁵ The platform uses a combination of online and offline deliberation processes, such as hackathons and consensus conferences, to gather input from diverse stakeholders and build consensus around policy solutions. Policymakers can support the development of similar platforms and processes by investing in digital infrastructure, such as broadband networks and open data portals, as well as funding capacity-building initiatives that enable citizens to participate effectively. For example, the city of Madrid’s Decide Madrid platform enables residents to propose and vote on local policies, as well as monitor their implementation.⁴⁶
5. *Fostering open innovation ecosystems and collaborative networks, particularly among small and medium-sized enterprises (SMEs), cooperatives, public institutions, and community organisations, to develop AI and digital technologies that address social and environmental challenges.* The city of Barcelona’s BCN Open Challenge program has funded over 20 projects that use digital technologies to address urban challenges, such as air pollution and social inclusion.⁴⁷ The program brings together SMEs, research institutions, and community organisations to co-create solutions using open data and

⁴⁰ Smith, A., Fressoli, M., Abrol, D., Arond, E., & Ely, A. (2016). Grassroots innovation movements. Taylor & Francis. Diaz, J., Tomás, M., & Lefebvre, S. (2021). Are public makerspaces a means to empowering citizens? The case of Ateneus de Fabricació in Barcelona. *Telematics and Informatics*, 59, 101551. Besson, R. (2018). The “Laboratorios Ciudadanos” from Madrid and the “Ateneus de Fabricació” from Barcelona. A new approach to urban innovation?. *Geographie, économie, société*, 20(1), 113-141.

⁴¹ Scholz, T. (2016). Platform cooperativism: Challenging the corporate sharing economy. Rosa Luxemburg Stiftung. Pentzien, J. (2020). The Politics of Platform Cooperativism. *Institute for Digital Cooperative Economy: New York, NY, USA.*

⁴² di Bologna, C. (2014). Regulation on collaboration between citizens and the city for the care and regeneration of urban commons. *Online verfügbar: <http://www.comune.bologna.it/media/files/bolognaregulation.pdf>*. (Stand: 10.01.2016). Foster, S. R., & Iaione, C. (2022). *Co-Cities*. Cambridge, MA, USA: MIT Press. Buemi, M. (2021). The city as a commons: the concept of common goods. In *Solving Urban Infrastructure Problems Using Smart City Technologies* (pp. 543-568). Elsevier.

⁴ Prendeville, S., Cherim, E., & Bocken, N. (2018). Circular cities: Mapping six cities in transition. *Environmental Innovation and Societal Transitions*, 26, 171-194.

⁴⁴ Verde, S. F., & Rossetto, N. (2020). *The future of renewable energy communities in the EU: an investigation at the time of the Clean Energy Package*. European University Institute. Inês, C., Guilherme, P. L., Esther, M. G., Swantje, G., Stephen, H., & Lars, H. (2020). Regulatory challenges and opportunities for collective renewable energy prosumers in the EU. *Energy policy*, 138, 11212.

⁴⁵ Hsiao, Y. T., Lin, S. Y., Tang, A., Narayanan, D., & Sarahe, C. (2018). vTaiwan: An empirical study of open consultation process in Taiwan. *Taiwan: Center for Open Science*. Tseng, Y. S. (2022). Algorithmic empowerment: A comparative ethnography of two open-source algorithmic platforms—Decide Madrid and vTaiwan. *Big Data & Society*, 9(2), 20539517221123505.

⁴⁶ Peña-López, I. (2017). Citizen participation and the rise of the open source city in Spain. *IT For Change*. Royo, S., Pina, V., & Garcia-Rayado, J. (2020). Decide Madrid: A critical analysis of an award-winning e-participation initiative. *Sustainability*, 12(4), 1674.

⁴⁷ Bakıcı, T., Almirall, E., & Wareham, J. (2013). The role of public open innovation intermediaries in local government and the public sector. *Technology Analysis & Strategic Management*, 25(3), 311-327.

open-source technologies. Policymakers can support the development of similar programs by creating innovation funds, providing access to public data and infrastructure, and facilitating collaboration between diverse stakeholders. For example, the The European Commission is promoting the digital transformation of cities and communities through several initiatives: the Living-in-EU movement, a collaborative platform for citizen-centric digital transformation; developing interoperable local data platforms and a data space for smart communities to enable secure data sharing and smart services; and building capacity for local digital twins - virtual models that integrate AI, analytics and real-time data to support urban management and policy decisions. These efforts aim to advance digital innovation while prioritising principles like citizen engagement, ethical data use, and open standards.⁴⁸

Creating a new vision for a good digital society requires a holistic and participatory approach that engages diverse stakeholders in the design and governance of digital technologies. By supporting the development of distributed production networks, collective ownership models, participatory governance platforms, and alternative economic models, policymakers can help to create a more equitable, sustainable, and democratic digital future. However, realising this vision will require significant investment in digital infrastructure, skills training, and research and innovation, as well as a willingness to challenge dominant narratives and power structures. Ultimately, the goal of a good digital society is not simply to optimise existing systems and processes, but to fundamentally reimagine and transform them in ways that prioritise the well-being of people and the planet.

Translating new visions of a “good digital society” into inspiring policy and praxis

Envisioning and realising an alternative, post-capitalist vision of a “good digital society” represents a formidable challenge, one that requires overcoming significant structural, political and ideological obstacles. However, it is through the very process of translating these ideals into concrete policies and practices at the local, national and transnational levels that the path towards systemic change can be forged.

It is tempting, and indeed understandable, to fall into a “capitalist realist” mindset – a perspective that views the existing capitalist system as the only viable framework within

which to conceive of a good digital society.⁴⁹ This worldview reduces the scope of policy imagination to mere tinkering around the edges of the status quo. Yet, there are emerging examples that challenge this paradigm, demonstrating that more radical alternatives are not only possible but already taking shape. The development of new evidence-based approaches can provide communities, citizens, workers, and governments with the knowledge and tools necessary to transform what may seem utopian into practical and feasible realities. Crucially, this requires a better understanding of the multifaceted technical, social, legal, and political issues that currently hinder progress towards these transitions.

One potential framework for addressing these challenges is offered by “resilient property theory.” This approach recognises that the path towards systemic change is rarely straightforward, and that innovative solutions must be able to withstand and adapt to various forms of resistance and opposition from vested interests.⁵⁰ By designing policies and initiatives with resilience in mind, they can be better equipped to weather the inevitable storms of backlash and co-optation that accompany any significant departure from the dominant paradigm. Furthermore, the process of policy-making, testing, and evaluation itself can serve as a powerful catalyst for mobilising these innovative “disruptive” digital initiatives into a global movement for systemic change. Drawing on the concept of “mobile power” the localised successes and lessons learned from these experiments can be shared, replicated, and amplified across borders, gradually building momentum and legitimacy for alternative models of organisation and governance.⁵¹

For instance, the rise of platform cooperativism – a movement that seeks to create cooperatively owned and governed alternatives to exploitative digital platforms – exemplifies this dynamic. What began as a handful of pioneering projects, such as the online labour platform Faircrowd or the rideshare cooperative Green Mobility, has now grown into a global network of researchers, activists, and practitioners advocating for a more equitable and democratic digital economy. Similarly, the proliferation of community-led initiatives around renewable energy, digital fabrication, and the circular economy demonstrates the potential for grassroots innovation to challenge the extractive and centralised logic of capitalist production. By leveraging digital technologies to enable decentralised, collaborative, and localised forms of provisioning, these projects offer tangible examples of how a post-capitalist digital society might function.

⁴⁸ Paskaleva, K., & Cooper, I. (2022). Have European ‘smart cities’ initiatives improved the quality of their citizens’ lives?. *Proceedings of the Institution of Civil Engineers-Urban Design and Planning*, 175(3), 138-151. Calzada, I. (2020). Replicating smart cities: The city-to-city learning programme in the Replicate EC-H2020-SCC project. *Smart Cities*, 3(3), 978-1003.

⁴⁹ Fisher, M. (2022). *Capitalist realism: Is there no alternative?*. John Hunt Publishing. Fisher, M., & Gilbert, J. (2013). Capitalist Realism and neoliberal hegemony: Jeremy Gilbert A dialogue. *New Formations*, 80(80), 89-101.

⁵⁰ Fox O’Mahony, L., & Roark, M. (2024). Operationalising Progressive Ideas About Property: Resilient Property, Scale, and Systemic Compromise. *Texas A&M Journal of Property Law*, 10(1), 38-79. O’Mahony, L. F., & Roark, M. L. (2022). *Squatting and the state: Resilient property in an Age of Crisis*. Cambridge University Press.

⁵¹ Bloom, P., Jones, O. S., & Woodcock, J. (2021). *Guerrilla Democracy*. In *Guerrilla Democracy* (pp. 119-154). Bristol University Press.

Critically, realising the full potential of these initiatives requires navigating a complex web of legal, regulatory, and infrastructural barriers that often favour incumbent corporate interests. For instance, community-owned energy microgrids may face obstacles in interconnecting with larger utility grids, or maker spaces could be constrained by intellectual property regimes that restrict access to digital designs and manufacturing processes. Yet it is precisely, here, that the role of progressive policymaking becomes crucial. By engaging with these grassroots movements and learning from their experiences, policymakers can craft frameworks that actively support and enable these alternative models, rather than hindering them. This could involve creating legal structures for platform cooperatives, establishing “commons trusts” to steward shared resources, or implementing “data sovereignty” policies that give communities greater control over their digital assets.

Crucially, this policymaking process must be grounded in a deep understanding of the specific contexts and challenges faced by these initiatives, as well as a willingness to experiment and iterate based on real-world feedback and evidence. It is through this ongoing cycle of action, evaluation, and adaptation that the foundations for a truly transformative digital society can be laid. Moreover, by embedding these policy innovations within a broader narrative of systemic change and solidarity, they can serve as powerful counter-narratives to the hegemonic discourse of capitalist realism. As more communities, cities, and nations begin to embrace and institutionalise these alternative models, they can form the basis of a global movement – one that challenges the inevitability of the current system and offers a credible, lived experience of how an inspiring alternative “good digital society” might function and spread.

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