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Task Force 05
INCLUSIVE DIGITAL TRANSFORMATION

Ethical and Inclusive Data Governance: A Cornerstone for Transforming Public Services in the Digital Era

Mariana Rozo-Paz, Policy, Research and Project Management Lead, Datasphere Initiative Foundation (Colombia)

Vinay Narayan, Senior Manager, Aapti Institute (India)

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Abstract

Developing and deploying effective Digital Public Infrastructures (DPIs) hinges on robust, inclusive, and ethical data governance. This policy brief delves into the critical role of ethical and inclusive data governance in shaping DPIs and goes further to explore the potential benefits of open access to data generated by DPIs, drawing insights from the experiences of India and Brazil.

Ethical data governance involves safeguarding privacy, ensuring transparency, and fostering accountability in collecting and using data. Inclusivity in data governance becomes imperative to mitigate biases and ensure equitable access to digital services, considering diverse perspectives and minimizing discrimination. Additionally, recognizing the foundational role of output data from DPIs, it is crucial to frame this data as a public good and establish governance mechanisms for its optimal utilization while rights are respected and people are protected from harm, such as discriminatory practices.

Accessible and transparent use of DPI-generated data enables informed decision-making and can foster an engaged and participatory citizenry and market. Researchers and innovators can leverage this data to develop solutions addressing societal challenges and to create new applications, emphasizing the collective nature of this data and the equitable distribution of benefits derived from DPI-generated data. This abstract contends that ethical and inclusive data governance, both for input and output data, protects individual rights and enhances the effectiveness and legitimacy of DPIs while supporting innovation. It sets a foundation for establishing trust between various stakeholders - a crucial element for the successful adoption and sustainability of digital services. It underlines the significance of cross-sector collaboration, stakeholder engagement, and public participation in crafting policies that prioritize ethical considerations and inclusivity, ensuring a responsible and inclusive digital future.

Digital Public Infrastructure (DPI), as the Indian G20 Presidency notes, can be understood as a set of shared digital systems that are secure and interoperable, built on open standards and specifications to deliver and provide equitable access to public and/or private services at societal scale and are governed by enabling rules to drive development, inclusion, innovation, trust, and competition and respect human rights and fundamental freedoms (UNDP 2023). The notion of DPIs has gained significant momentum in recent years in many ways, as a response to the rapid digitisation that has crept into various facets of our lives and the manner in which this has taken place namely the private corporate ownership or control of most of the digital infrastructure used by society at large even when those are public goods or facilitate essential services. DPIs intend to wrest back control of critical digital infrastructures and place them in the public hands, and enable digital service delivery in a transparent and accountable manner while unlocking societal value to foster development. DPI's proposal also can generate value for private sector innovation, by serving as a platform for new services and products that can be built upon and offered. There are three types of commonly acknowledged DPIs: digital identity systems, digital payment systems, and data exchanges (Eaves and Sandman 2023). A combination of these three systems, if deployed mindfully, can serve to transform and improve public service delivery in numerous ways, embedding efficiency and cost-effectiveness while easing citizens' lives.

X. Road is a great example. X-Road is Estonia's data exchange system and is built on open-source software, facilitating data exchange between various organisations. It has been credited with widespread efficiency in services such as tax filing and business registration (Omidyar Network India 2020).

Aadhaar, India's digital ID, has improved access to government-subsidised food and rations (OECD 2018) and has been central in the Indian Government's Direct Benefit Transfer (DBT) programme, allowing the government to transfer monetary benefits under various welfare

programs directly to the accounts of citizens (Sengupta 2023). Welfare delivery through Aadhaar has also had knock-on effects, including an increase in financial inclusion and gender equity (OECD 2018). India's Unified Payments Interface (UPI) is also an example of a digital payment DPI. UPI is a payment system developed by the National Payments Corporation of India that facilitates instant inter-bank peer-to-peer and person-to-merchant transactions (NPCI).

In India, DPIs , in a few years, have managed to foster digital inclusion and competition in the country by ending a data monopoly from the two companies that dominated the payment space, Visa and Mastercard, while building a system that technically does not have lock-ins to a particular bank or platform.

However, trade-offs have already been observed in India. The UPI's design as an underlying protocol that can be built on top of has allowed room for private players to build apps that facilitate UPI-enabled payments. Google Pay and PhonePe (owned by Walmart) already account for 80% of the UPI market in India in 2023 (Statista 2023). While this is inherently not a big issue (there exists a government built app for UPI payments as well), what is problematic is the lack of regulation on how financial transaction data can be used and shared. This has allowed private companies to use transaction data to yield valuable customer insight and offer other services for profit. In addition, broadening access to digital banking has also welcomed scams that leverage the UPI platform. By exploiting people's lack of understanding of the digital space, fake money requests and even fake websites are used to facilitate fraudulent money transfers (Gunasekaran 2024).

In a similar vein, the Aadhaar-enabled DBT program is not without its trade-offs either. A number of factors, including erroneous on-ground implementation, duplication errors, errors in digitised data collecting, rigid systems, and inadequate grievance redressal mechanisms, have led to a number of citizens being excluded from receiving welfare (Narayanan 2022).

On paper, DPIs provide the ability to wrest back control of critical digital infrastructures placing them as public infrastructures – thereby potentially enabling digital service delivery in a transparent and accountable manner while unlocking societal value to foster development. However, a lack of forethought regarding data use and access policies constrains the ability to

harness data generated from DPI usage for the broader social good while allowing private entities to benefit from such data (Herrera et. al. 2023). Meaning - access to the public infrastructure and the data it gathers is elevated in the context of redressing not only the differential impact of harms associated with data-driven technologies but also the uneven distribution of opportunities for data value creation. In addition to data use and access, policies around the implementation of DPIs must also consider contextual realities, including problems regarding on-ground skills, deployment and human errors. If enabling elements - skills, innovation hubs for local innovation - are not orchestrated once a DPI is being designed and deployed, the risk of capture and uneven access and distribution of benefits will occur. If designed correctly, with ethical principles and inclusion in mind, these policies can help DPIs transform public service delivery.

Recommendations

Governing data ethically and inclusively has been an ongoing challenge for stakeholders globally. For instance, countries are developing national data strategies (e.g., Germany, Japan, United Kingdom), international organizations are creating frameworks to think about the data economy (e.g., the OECD's Going Digital Toolkit), and countries are agreeing on legislation that portrays their values towards data (e.g., the European Commission recently released the Data Act and the Data Governance Act).

All of these efforts seek to provide guidelines on how to govern several aspects of data to unlock its value responsibly in specific contexts. However, the intrinsic complexity of data – and the ambition to govern data coming out of DPIs and transforming public services – demands an approach that goes beyond opening data across sectors and with all stakeholders. This new approach must consider the contexts in which data is demanded and its potential uses. At the same time, there is a need to transcend narrowed narratives that create excessive restrictions and promote data localization measures. Overall, there is a need to consider the policy questions that governments, companies, and communities should ask to shape a holistic data governance.

The main recommendation for the G20 is to promote and adopt a holistic data governance framework that ensures that data is governed ethically and inclusively and that DPI systems do not allow for exclusive data capture by a few private sector actors. The robust approach presented in this policy brief will enable a robust governance of data to shape effective and responsible DPIs.

Thinking holistically about data governance implies understanding that the interactions between the data, the human groups, and the norms (Porciuncula & de La Chapelle 2022) and values that we share translate into value creation, benefit-sharing, and better uses for data. The value and benefits can be unlocked at the individual, the collective (societal and economic benefits), and at the environmental level. In the end, a holistic, cohesive, and nuanced approach to data governance could foster equity and inclusion while enabling accountability of all actors with the public interest in mind. This holistic framework would help to identify the existing gaps, the siloed treatment of several issues, and the opportunities for coordination to enable innovation, inclusion, and growth.

Data and infrastructure

As part of the framework for data governance, the data element is compounded with the physical and digital infrastructures that are needed to allow for data to be collected, used, and shared, impacting the whole data lifecycle. Data and infrastructure refer to the variety, diversity, and breadth of datasets used with infinite potential recombination as well as the digital and physical infrastructures enabling its life cycle. Infrastructures range from the different digital spaces where data is stored (e.g., clouds, data spaces, or data repositories) to the various physical structures needed to carry data (e.g., undersea cables with transoceanic data traffic).

Recommendations under the "Data and Infrastructure" component involve building sustainable and resilient infrastructures as well as privileging privacy and system security since the design of these systems. With the ongoing climate crisis, it is fundamental for data systems and infrastructures to be sustainable and resilient, considering issues such as energy and water consumption in data storage. Systems should also consider privacy by design and security

safeguards since the start to ensure that risks are effectively assessed and mitigated. It is thus important to place more emphasis on the protection of both personal and nonpersonal data, and embed cybersecurity considerations into the technical systems that are sustaining the data life cycle.

People and human systems

The People and Human Systems element is about the complex interactions between human groups with data. All kinds of human groups and human communities whose data is being collected can also extract data and value from that data about them and about others. Better understanding and leveraging communities with respect to their data is a fundamental step towards ethical and inclusive data governance. People need to be at the heart of the infrastructures and data systems.

The main way for people to be placed at the heart of data governance demands individuals and communities to have a certain level of agency over their data. From better consent mechanisms to open spaces for engagement, digital public infrastructures should have the right pathways in place to ensure access to information, data management, and agency. Individual and collective rights protections should be considered at all times and throughout the data lifecycle. Additionally, people should have a say in the design of these systems and particularly in the uses and reuses of their data. Participatory data stewards (Aapti Institute 2023) are a means to promote data sharing and to encourage people's agency over their data.

In fact, the lack of access and participation has led to several digital infrastructures becoming exclusive, and leaving communities behind. Several digital identity systems, for instance, are effectively embedding protection and security considerations into the design and implementation of the systems but disregarding notions of inclusion, participation, and access to information (Rozo-Paz et. al. 2023). It is key for these systems to leverage communities and for the data governance behind them to weave inclusion from the design and throughout the data lifecycle.

Norms, values and cooperation

The last component takes into consideration the shared values stemming from different communities, cultures, and regions, which translates into norms, policies and rules that then enable trust and cooperation. Enabling collaboration between actors across sectors is a fundamental trust-building exercise that should sustain ethical and inclusive data governance, as a core basis of DPIs that truly serves the intended public. In fact, bringing that nuance into the conversation and enabling relevant stakeholders to share values is of utmost importance to building governance frameworks that can truly unlock the value of data for all as well as pave the way for trust-building and cooperation across borders.

Thus, we recommend the G20 to promote a multistakeholder governance approach to data and DPI design that does not exclusively rely on governments pushing governance but rather on convening different actors to drive action and enhance the impact of DPIs for the public benefit and that prevents walled gardens. In our current fragmentation context and geopolitical tensions, it is key to adopt nuanced and converging narratives that allow stakeholders' buy-in to drive ethical and inclusive data governance. The G20 is a key space to promote this notion and strive for convergence. This should also promote the interoperability of policies, frameworks , and data governance language. These actions should start paving the way towards responsibly unlocking the value of data for all, through inclusive and ethical data governance.

Scenario of Outcomes

The recommendations presented above draw from a holistic approach to data governance and tackle issues across the data life cycle, the interactions between human groups and systems, and our shared values that translate into norms and rules to enable trust and cooperation. From how data should be collected to who is being included and excluded from the datasets to the infrastructures that need to be put in place to enable data sharing and collaboration and avoid capture or walled gardens. There is also a need to think about what is the best enabling environment that should be built around DPIs and which are the new skills that local companies, universities, communities and people need to develop to innovate and interact on the basis of the DPIs offers.

If the recommendations presented in this policy brief were adopted, a systemic approach to data governance could enable responsible, inclusive DPIs that are fit for the purpose of benefiting the local communities and not only multinational companies that are quick to market. Ethical, inclusive and robust data governance frameworks are then necessary to enhance value creation from input and output data from DPIs. However, adopting such recommendations would require a significant coordination effort from stakeholders within G20 countries and the G20 itself. Promoting a systemic approach to data governance for DPIs would demand the government, the private sector, and civil society to come together to execute the outlined plans and ensure that such data frameworks translate into concrete actions, policies, and services. Ensuring that a variety of stakeholders are effectively included in the drafting and execution of these holistic plans for data governance would be of utmost importance and a significant challenge to address.

Overall, ethical and inclusive data governance would require data reskilling of individuals, communities, and public officials, which , financial and non-financial resources - a collective innovation-enabling environment. The building of such a framework would also require the support of the right policies and technical frameworks so that institutions, stakeholders and resources invest in the DPIs design and deployment.

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