Digital Public Goods: An Overview of Guidance for Development, Governance, and Stewardship

Jeff Behrends, Joshua Simons, Kevin Troy, and Harshita Gupta | July 27, 2021

Across the world, emerging economies are beginning to build core digital infrastructure such as ID and financial transaction systems. Instead of outsourcing the design of these systems to private companies based overseas, governments in emerging economies are increasingly seeking to build these systems themselves, by using openly available digital tools built by philanthropic and international organizations – digital public goods (DPGs). As DPGs become ever more widespread, it is vital to explore ethical considerations about how and by whom these systems are built. We have drafted best practices for organizations involved in designing and deploying DPGs, whether they are technology designers, development agencies, national governments, or philanthropic funders.

Our framework is based on two fundamental insights:

- Deep uncertainties about the future limit what we can know in advance about the benefits and risks of different ways of designing digital infrastructure.

- There is an inherent and desirable dynamism in how and by whom digital infrastructure is used.

Any approach to the ethics of DPGs must be robust to the uncertainties and dynamism associated with digital infrastructure. We believe a risk-benefit approach offers a false sense of certainty about the future. Our framework offers an alternative approach, by building in active and ongoing consideration of underlying values and interests in the design and deployment of digital infrastructure.

We focus on three key decisions in the process of designing and deploying DPGs:

- How DPGs are designed.
- How their implementation is governed.
- How funders use their leverage to shape the design and implementation of DPGs.

THE GUIDING PRINCIPLE OF TECHNOLOGY DESIGN SHOULD BE REVISABILITY

Digital public goods should be designed to be adaptable and built to ensure that governments are not dependent on external actors for necessary changes. Design processes should be integrated with mechanisms of external governance to ensure that as DPGs are revised, decisions about their design and integration are driven by feedback from users and other stakeholders.

KEY GUIDELINES FOR TECHNOLOGY DEVELOPERS INCLUDE:

- Design DPGs to be adaptable to emerging needs, concerns, and technological developments.

- Commit to ongoing support for the revision and maintenance of infrastructural DPGs when committing to build DPGs in the first place.

- Avoid exclusion by enabling access for users who vary across multiple dimensions, including technical literacy, physical traits, identities, and backgrounds.

- Consult directly with the organized advocates of end users at all stages of the technology life cycle.

- Ensure systems do not undermine the practical force of the rights of end users, for instance by performing human rights due diligence with respect to anticipated implementations.

DPG PROCESSES SHOULD BUILD IN DELIBERATIVE GOVERNANCE

DPGs are both experimental and fundamental to the lives of residents. As a result, deliberative governance should be integrated as deeply as is possible at all stages of the design, deployment, and stewardship of DPGs. Deliberation should be a permanent, rather than temporary, feature of the design and deployment of all DPGs.

KEY GUIDELINES FOR POLICYMAKERS INCLUDE:

- Establish ongoing structures of deliberation about how to design and deploy DPGs that include the organized advocates of those who will use them, like digital rights charities, groups who represent marginalised or excluded residents, and/or international human rights charities.

- Ensure those structures are continuous rather than temporary, incorporated within regular reviews of the operation and deployment of the DPGs.

- Conduct rigorous impact evaluations of the human rights implications of implementing DPGs at a population scale and of the different ways of designing DPGs.

- Establish clear legal reform where necessary to protect user rights, transparency, and ongoing structures of accountability over those who design and control DPGs.

PHILANTHROPISTS SHOULD EMBRACE ACCOUNTABILITY MEASURES

Powerful philanthropic actors who support the building of DPGs should build structures to hold themselves accountable to the residents of countries in which those DPGs will be used. Stakeholders involved in the financial support, design, and deployment of foundational DPGs should therefore assemble teams that are prepared to address the interdisciplinary, sociotechnical, and ethical dimensions of the technology. The team's collective expertise must position them to make well-informed decisions that respect the requirements for external governance and engagement with the ultimate stakeholders in the design of public infrastructure, and for possible revision to the technology and corresponding implementation plans.

KEY GUIDELINES FOR FUNDERS INCLUDE:
Support the creation of technological systems that are open, interoperable, and sustainable.

- Build in accountability structures for surfacing the concerns of users.

- Affirm respect for universal human rights as recognized by the United Nations when implementing nation-scale DPGs.

- Identify and support technologists and policymakers with clear commitments to responsible DPG development.

- Consider adopting multidisciplinary ethics committees for ongoing oversight and assistance with navigating uncertain and changing ethical terrain.

While this overview provides actionable guidance to those involved in designing, implementing, and overseeing DPGs, it is critical that all actors establish ongoing structures of governance, evaluation, and monitoring that will themselves surface further ethical considerations over time. We advise that discussions should be convened among philanthropic organizations, international development agencies, civil society groups, and governmental representatives to assess the merits, feasibility, and limitations of these guidelines.

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