

A decorative graphic consisting of several overlapping dashed lines that form a complex, wavy pattern. Scattered along these lines are small blue and teal dots, as well as larger teal starburst shapes containing white checkmarks. The overall design is clean and modern, with a focus on the central text.

Sustaining Digital Public Goods: Moving Beyond Adoption



Digital
Public
Goods
Alliance



Sustaining Digital Public Goods: Moving Beyond Adoption

Author

Max Kintisch

Director of Research & Urgent Global Challenges
DPGA Secretariat

This article was strengthened through collaborative discussions,
stakeholder input, and expert review.

The authors gratefully acknowledge the valuable insights and contributions
of colleagues from **DHIS2** (**Scott Russpatrick, Pamod Amarakoon**),
New America (**Gordon LaForge, Akash Kapur**),
MIT/Linux Foundation (**Frank Nagle**), **Mifos Initiative** (**David Higgins**),
and the **Digital Public Goods Alliance Secretariat** (**Liv Marte Nordhaug**,
Bolaji Ayodeji, Lea Gimpel, Carol Matos, Jameson Voisin).

Workshops and meetings at the Global DPI Summit
and the World Bank Meetings in October also provided important
perspectives that informed this work.

November 2025

Contents

→	Executive Summary	4
→	Why Collective Stewardship Matters	5
→	Why Shared Value Remains Uneven	9
→	Designing for Contribution	11
→	Looking Ahead: Ensuring Contribution not Rhetoric	16

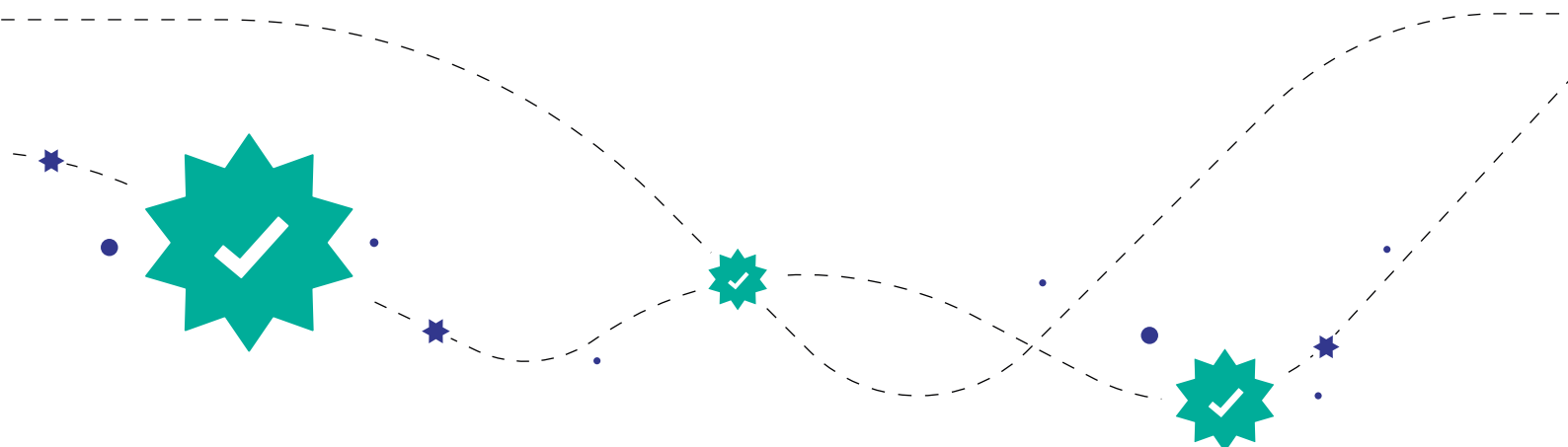
Executive Summary

Over the last decade, governments and development partners have increasingly turned to **digital public goods (DPGs)**, open-source systems designed and developed to accelerate attainment of the Sustainable Development Goals, as an alternative to duplicative, costly, and siloed digital systems. In a period where development finance is tightening, globally official development assistance (ODA) dropped by 7.1% in 2024, and **is projected to fall by 9–17% in 2025**. In the face of this challenge, open and reusable digital solutions can offer an efficient path to building **shared digital infrastructure**. Globally, reusing open-source software saves an estimated USD 8.8 trillion by avoiding repetitive development.

In this context, the promise of open-source and reusable solutions—including but not limited to DPGs—lies not only in avoiding duplication, it lies in collective stewardship: the capacity of countries, institutions, and private actors to collaboratively maintain, extend, govern, and improve shared digital infrastructure over time. **Evidence from a recent cross-country study** suggests that countries collectively benefit when they contribute to open-source ecosystems—alternatively, if no country contributed, the average long-run GDP would be about 2.2% lower.

Yet, contributing back remains the exception rather than the norm. Many governments deploy DPGs but lack the governance frameworks, economic incentives, procurement practices, and capacities to make contributions viable. Many public-sector open-source projects are technically open, yet limited in terms of who can meaningfully participate. Many DPGs remain reliant on small, grant-funded core teams. Global financing for DPGs is not only **fragmented**, but current instruments also prioritise deployment over shared, long-term maintenance, leaving upstream shared digital infrastructure underfunded. Without the right incentives, governance, capacity, and architecture, openness **risks reinforcing dependency** and widening equity gaps in who gets to shape shared digital infrastructure.

Encouragingly, emerging **practices** show that when contribution is intentionally designed and funded; when capacity—not just adoption—is supported; and when governance structures distribute influence rather than concentrate it, openness broadens institutional capability and strengthens shared digital infrastructure. This article explores the value of global DPG collaboration, highlights the barriers and realities that prevent its full realisation. As a result, it suggests practical directions for how governments and funders can strengthen the contribution pathways needed to sustain and govern DPGs.



Why Collective Stewardship Matters

Digital public goods generate value in several ways. Often indicated as the most visible economic benefit is avoiding duplication. Similar to open-source software more broadly, DPGs can **lower the total cost of ownership**, reduce procurement friction, and help governments avoid rebuilding capabilities that already exist. Because their core components are openly available, DPGs can generate scale economies: solutions can be reused, adapted, and extended across contexts at minimal marginal cost. This is especially consequential for DPGs that support core systems such as those used for digital identity, payments, and data exchange, or that advance global priorities like climate action, pandemic preparedness, and disaster response.

Evidence shows these direct fiscal and operational benefits. The World Bank's Global Facility for Disaster Reduction and Recovery, for example, invested in the open-source **GeoNode platform** to help governments manage geospatial data for risk assessment. **An independent analysis** found this investment generated roughly a 200 percent return, as developing equivalent proprietary functionality would have cost an additional USD \$2–3 million. In Rwanda, DPGs such as **DHIS2** and **Mojaloop** have reduced duplication and spurred innovation: locally built DHIS2 modules for malaria and vaccination tracking are now reused across Africa, while **Mojaloop's open APIs** have lowered transaction costs and encouraged fintech entrants. In Kyrgyzstan, the **X-Road**-based Tunduk platform has saved nearly \$20 million in administrative costs while improving transparency and anti-corruption efforts. In the Philippines, the adoption of Mojaloop-based payment systems has reduced transaction **fees by up to 75 percent compared to proprietary alternatives**.

These efficiencies matter, but avoiding duplication is only the entry point to the broader value DPGs can generate. What makes DPGs distinctive is not merely that they are cheaper to deploy, but that the way that they are designed can enable continuous adaptation, shared learning, and compounding improvements across countries. When a module, configuration, or

metadata package developed in one context is shared back, it strengthens the shared core. When that improvement flows to other deployments, it accelerates their innovation cycles. Over time, this can create a cumulative, distributed value-generation process that proprietary systems rarely replicate.

Two characteristics that have been observed in practice shape how value from DPGs accumulates and circulates:

Generativity

The ability of diverse actors to build new functionalities, localise modules, and reuse components in unanticipated ways. **Research on DHIS2** shows how generativity accelerates innovation: a module developed in one context can be rapidly adapted across dozens of countries, with each iteration enriching the shared platform. Generativity multiplies value by turning DPGs into living systems where improvements circulate, compound, and benefit all participants.

Learning from Contribution

Governments that actively contribute—through localisation, documentation, or code—tend to capture **more of the benefits that open systems can foster**. For governments, this underscores that DPGs are not only cost-saving tools but strategic assets for cultivating digital skills, institutional knowledge, and long-term resilience. These benefits arise from multiple forms of contribution, not only code—documentation, localisation, testing, user stories, complementary modules, and institutional roles are equally important. Many have low cost but high systemic value, particularly implementation learnings that improve usability and guide future development.

These are the mechanisms that drive downstream economic and institutional benefits of DPGs, and can serve to differentiate DPGs from proprietary builds.

The Layers of Economic Value Generated by Digital Public Goods

Economic returns can emerge across several layers: directly through avoiding duplication and cost savings but also indirectly through local job creation and

market growth, by shaping innovation ecosystems through network effects, and global value, through cross-border interoperability and shared learning. These different layers of economic value are shaped by several underlying factors – such as how often a solution is deployed in new contexts/countries or the immediate cost savings from shared systems – that determine how benefits grow and are sustained over time.

↓ Type of Value

↓ Impact

↓ Why Does This Happen?

Direct Value	<p>Avoided duplication and cost savings.</p> <p>Research finds that firms would spend globally about 3.5× more on software if open source (including but not limited to DPGs) did not exist, and in some cases, DPG use has cut transaction fees by up to 75% compared to a proprietary solution.</p>	<p>The upfront development cost is shared or already paid for, so you avoid paying for something that already exists.</p>
Indirect Value	<p>Multiplier effects on local economies and job creation. Research found a return of €4–6 in economic value for every €1 invested in open-source software and showed that regulations fostering open procurement in some cases could catalyse the creation of an additional 23 to 42 IT startups per year and up to 90,000 new IT jobs, illustrating clear spill-over effects into national competitiveness.</p>	<p>DPGs allow a community of local service providers to develop in LMICs without overly burdensome or costly licenses or financial obligations back to the platform owner. This allows a low entry cost to market for SaaS providers for DPGs and maximises returns which can be reinvested in the organisation and contributions back to the platform's pool of shared innovations.</p>
Market-Shaping Value	<p>Strengthening innovation ecosystems and public health data markets.</p> <p>The Norwegian Institute of Public Health (NIPH) built national DHIS2 dashboards to unify fragmented data systems, enabling faster, more transparent pandemic response and long-term health system innovation. By standardising open data infrastructure, NIPH reduced duplication, created demand for interoperable digital services, and contributed improvements now used across multiple countries.</p>	<p>It lowers the risk and cost for new businesses, leading to more competition and creative services for citizens.</p>

↓ Type of Value

↓ Impact

↓ Why Does This Happen?

Shared Learning & Contribution value

Early evidence shows that shared module and metadata reuse is emerging in systems like DHIS2, and countries that develop local capability to adapt and evolve these modules appear to capture greater value. While research on contribution-driven learning is still nascent, the direction is clear: active contribution transforms use into learning and reuse across contexts.

Mutual, continuous investment
You invest in your own system, but your contribution strengthens the shared core. This creates a perpetual cycle of improvements and long-term reliability for everyone.

These layers of value do not arise automatically. Their emergence depends on practical factors: whether governments and implementers are able to adapt shared components, participate in problem-solving across implementations, and, where feasible, feed improvements back into the shared codebase or documentation. **Early evidence suggests** that countries engaging in these activities often observe smoother deployments and reduced long-term reliance on external vendors, though outcomes vary by context and institutional capacity.

This dynamic also has implications for sustainability. Because many DPGs do not rely on licensing fees or lock-in-based revenue models (given their open-source nature), their core maintenance is organised through a mix of commercial service providers, public budgets, donor contributions, and, in some ecosystems, community participation. There is no single model: different DPGs adopt different arrangements. However, across several well-studied cases, contribution—whether in the form of code, localisation, testing, or documentation—appears to support the stability and usability of the shared core and to build familiarity with the underlying systems within implementing teams.

In this sense, contribution is not an ideological requirement, nor is it presented here as the only viable strategy for sustainability. Rather, it is one practical mechanism observed in open-source ecosystems that can help maintain reliability and relevance over time. The underlying point is that participation in improvement processes can provide teams with technical and institutional learning that is harder to acquire through use alone.

Such learning can, in turn, reinforce generativity: when teams understand the internals of a system, they are better able to adapt or build new modules, some of

which are later reused in other countries. Research on DHIS2 provides examples of this pattern—modules developed for specific national needs have been taken up elsewhere, reducing development time for subsequent implementations. While not universal, these instances illustrate how contributions can lead to shared efficiencies.

A related outcome observed in some DPG ecosystems is what can be described as **digital sovereignty resilience**—the capacity of governments to maintain and evolve national digital systems under changing conditions. This should not be interpreted as guaranteed or inherent; rather, it is a function of whether governments have the skills, institutional arrangements, and vendor relationships that allow them to modify or extend systems without excessive dependence on proprietary providers. DPG architectures can support this, particularly when governments contribute improvements upstream and therefore remain connected to the evolution of the shared core.



Organisations that contribute back to the open-source projects they depend on don't just give — they learn, innovate, and capture more value over time.

— Frank Nagle

Research Scientist, Massachusetts Institute of Technology & Chief Economist,
The Linux Foundation



Public–Private Co-Investment in Digital Public Goods: The Mifos X Example

In consultation for this report, team members from Mifos X, a DPG for financial inclusion, shared experiences that illustrate how contributions can multiply value across systems and borders.

When a global fintech firm replaced its proprietary loan management system of record with Mifos X, it not only reduced licensing costs but co-financed the creation of new modules—most notably a Buy-Now-Pay-Later feature known internally as the Pepper Soup Project. Over three years, the company invested roughly \$6.25 million in this upgrade and contributed the resulting code back to the Mifos X community.

That single act of contribution triggered a cascade of reuse. Other implementers, such as Fiter, integrated the new features into their own deployments, saving an estimated USD \$200 000 per customer and months of engineering time. Across Mifos's 500+ global implementations, the ripple effect continues: the original investment keeps generating savings, performance improvements, and design learning for new adopters. The Mifos case shows how contribution aligns incentives in open source solutions:



The contributor reduces costs and gains new capabilities.



Implementers worldwide benefit from these shared improvements.



The shared core grows stronger without imposing barriers on users.

This model is not without risks. Large adopters may influence the project roadmap toward commercial priorities, or create dependence if most engineering capacity comes from a single firm. Without strong governance, contributions could drift into proprietary extensions or weaken the openness of the core.

The Mifos experience shows that these risks can be managed through upfront contribution commitments, transparent community governance, and modular architectures that keep the core open while allowing customer-specific extensions.

Together, these observations suggest that while avoiding duplication provides immediate fiscal value, the longer-term benefits of DPGs depend on how effectively systems are maintained, adapted, and governed. Contribution—whether through code, documentation, localisation, testing, or shared

learning—is one practical mechanism that can support this. It is not the only pathway, nor uniformly feasible across all contexts, but where it can occur, it helps ensure that DPGs remain interoperable, and useful as shared digital infrastructure evolves over time.



Why Shared Value Remains Uneven

Despite the benefits, the compounded value of contribution currently remains under-realised. Most countries have yet to build the institutional arrangements that make systematic contribution possible. Most funding goes to deployments rather than the upstream open-source cores that make sharing possible, leaving DPGs under-resourced. The adoption of a digital public good is often faster than contributions received back to it—a structural imbalance that threatens sustainability and also weakens shared value over time. And even with funding, many governments struggle to translate openness into capacity. Limited skills, vendor dependence, and weak coordination create a persistent struggle to tap into the benefits of DPGs, especially where documentation lapses and improvements stay siloed. Empirical studies of public-sector open-source projects show that most are run by small, centrally funded teams with limited community participation. As a result, reuse and cross-government learning remain the exception.

A set of interlocking barriers—financial, institutional, and community-level—prevents many countries from moving from adoption to contribution:

Financing Constraints

Up-front donors and multilateral development banks (MDB) funding rarely cover the ongoing maintenance required to keep shared open-source systems interoperable. Much of this work—documentation, dependency updates, testing—remains largely unnoticed and is consistently under-resourced, reducing confidence in stability and discouraging pooled investment.

Architectural and Integration Challenges

Many DPGs were built quickly in response to urgent country needs, leaving core architectures more

monolithic and with modular APIs, documentation, and integration pathways still maturing. This places substantial demands on core teams, who must maintain the shared platform while supporting varied national deployments. As adoption grows, improving modularity and developer-facing resources will be important for enabling broader participation by implementers and commercial partners. It is also important to recognise that not all DPGs are designed to be generative; some were built for specific use cases and require intentional design work to become platforms that others can extend and build upon.

Divergent Implementation Pathways

National deployments frequently diverge from the shared core, limiting their ability to benefit from global updates and keeping locally developed improvements siloed. Forked systems can contribute back, but doing so requires deliberate coordination and maintained links to the upstream source. Where these links are weak, deployments may miss essential updates such as security patches, a challenge that is often more acute in smaller markets with limited technical capacity.

Uneven Capacity Bases

Some governments rely on a narrow set of vendors to adapt or maintain open systems, creating forms of “soft lock-in” despite open licences. Where domestic developer communities and institutional capabilities are thin, integrating upstream improvements or contributing enhancements back remains difficult.

Variable Governance and Contribution Practices

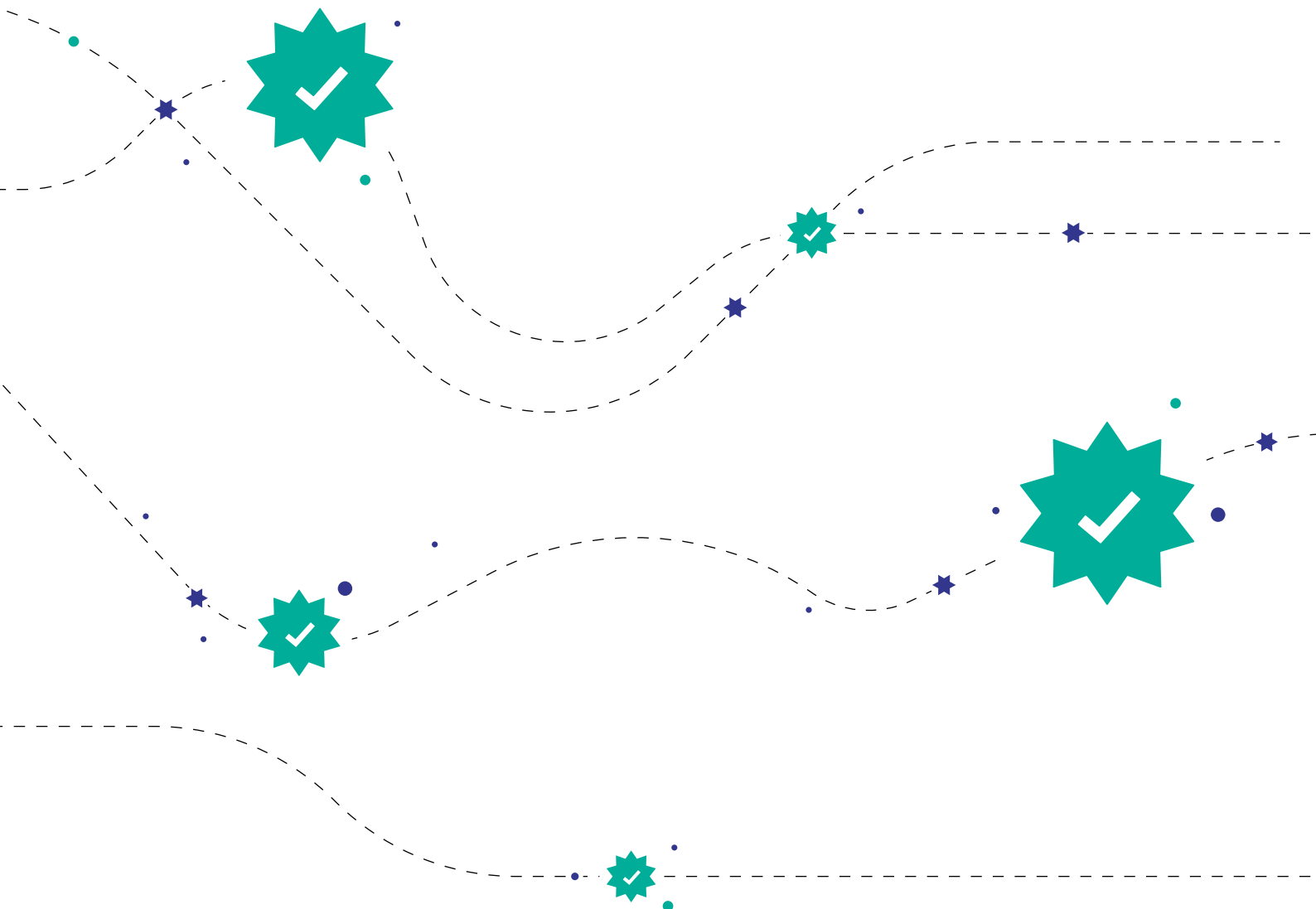
Governance structures and contribution channels vary widely across DPGs, and mechanisms such as contribution tiers, revenue-sharing models, and

transparent trackers are not consistently in place. With no shared norms for financial or in-kind contributions, each project follows its own approach, creating administrative friction and limiting broader participation. Clearer governance arrangements and more predictable contribution pathways would help reduce transaction costs and support more distributed stewardship of shared digital infrastructure.

These challenges also mirror broader inequities identified in global open-source ecosystems. Large economies and firms are able to internalise more of the productivity spillovers from open collaboration, **while smaller or less research-intensive countries often generate value that others capture**. In this sense, the contribution gap is also an equity gap—reflecting unequal capacities to turn openness into

growth. The governance challenges observed across many DPGs also echo findings from **comparative research**, which shows that clear roles, decision rights, and participation norms are often underdeveloped relative to what is needed for sustained, broad-based contribution.

Importantly, even open systems can develop choke points when a few maintainers or institutions control key repositories or decisions. As **Berjon** warns, concentrated stewardship weakens the resilience and openness promises. Addressing this imbalance requires deliberate investment in local absorptive capacity, coordination mechanisms to share benefits more fairly, and governance models that give contributors a meaningful voice.



Designing for Contribution

As ODA budgets contract, the need to generate greater collective returns from every digital investment is more important than before. Realising this potential demands a shift in how development finance, procurement, and governance frameworks treat DPGs. Though approaches will vary by income level and institutional maturity, the shared objective is to make every investment both nationally relevant and globally reinforcing—through responsible adoption and contribution that strengthen common digital assets over time. This requires development finance, procurement, and institutional design that do three things simultaneously:

- Reduce the cost and complexity of contributing
- Increase the incentives to contribute
- Ensure that contributions are safe

In other words: contribution must become the path of least resistance, not an aspirational ideal. The following section outlines emerging practices and potential approaches that may help move in this direction. These should be understood as evolving considerations rather than fixed prescriptions, and will need to be tested and refined as more evidence and implementation experience accumulate.

Evolving Financing Models for DPGs

Sustaining digital public goods requires financing models and governance arrangements that are predictable and broadly shared. While grant funding has historically underpinned most DPGs, emerging patterns suggest the sustainability model is beginning to diversify. As digital infrastructure becomes more central to state capability and service delivery, recurring financing for its shared components is becoming politically and institutionally more feasible and demanded.

In development finance, a more balanced approach needs to take shape, by dedicating a share of MDB- and donor-financed deployments to upstream maintenance of the core open source project (in this case the digital public good). Blended instruments—grants for cores, loans for rollouts—and newly established multi-donor pooled financing instruments with clear, open mandates could be used to provide grants to digital public goods that are seen as highly relevant to country needs. In light of contracting aid budgets, the DPGA Secretariat has therefore intensified efforts to mobilise collaboration and raise USD 250 million by 2030 to ensure that digital public goods remain secure, interoperable, and accessible to countries implementing digital public infrastructure.

Recent research from Latin America and the

Caribbean shows that the challenge for digital public goods is often not the quality of the code, but the ecosystem that surrounds it. Open-source alternatives frequently struggle not because they lack maturity, but because the enabling environment—visible markets, aligned incentives, procurement pathways, sustained support—is underdeveloped. This suggests that supporting DPGs means investing not only in the software itself but in the market layer, visibility mechanisms, procurement reform, and funding channels that make open systems as accessible and trusted as proprietary ones.

Financing fairness also extends to how private-sector actors engage with and benefit. Sustaining DPGs requires reciprocity across all participants. System **integrators, hyperscalers, and vendors that gain commercial or strategic value from DPGs should contribute back proportionally**—whether through funding, developer time, or infrastructure support. Because open-source collaboration generates cross-border spillovers that disproportionately benefit larger and more technologically advanced actors, sustainable funding must also serve a redistributive function—helping smaller and lower-income countries capture a fair share of returns.





Proposals for a EU Sovereign Tech Fund

Recent proposals around an EU-Sovereign Tech Fund (EU-STF) underscores the urgency of this approach. While open-source software underpins much of Europe’s digital infrastructure, funding remains fragmented, reactive, and insufficient relative to the public value it generates. The study captures this structural imbalance as a “double dilemma”: Europe’s digital economy depends on a commons it does not sustainably fund. The study shows that while open-source infrastructure delivers outsized public value, funding remains episodic, reactive, and insufficient. This same dilemma plays out globally — digital public goods face chronic underinvestment not because they fail to deliver, but because their value is shared across borders, while their maintenance costs remain local. The study recommends a dedicated fund to provide flexible, upstream investment in open digital infrastructure, pooling public and private resources under independent, transparent governance. Similar models could be adopted globally to ensure that financing aligns with contribution — sustaining not only deployment but the shared core itself.

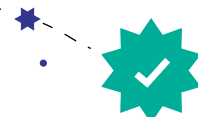
Strengthening Local Capability and Collective Learning Systems

The ability to absorb, adapt, and contribute improvements determines whether openness delivers lasting value. MDBs and donors should pair financing reforms with support for domestic technical teams, local developer training, and cross-country peer learning—so global improvements can be understood locally and fed back upstream.

Institutional models such as Open Source Program Offices (OSPOs) help governments coordinate contributions, manage security, and build internal capability. Global efforts like OSEE from ITU and UNDP provide shared guidance to help countries establish these practices quickly. Evidence from emerging models—Italy’s Developers Italia, the European Commission’s OSPO, the HISP network around DHIS2, Free Software Unit at the French Interministerial Digital Directorate (Direction interministérielle du numérique -

DINUM), or regional support structures like the Estonian e-Governance Academy—shows how dedicated structures can translate policy intent into operational capacity. Training ecosystems need to support both system integrators and independent software vendors. SI training enables reliable deployment and localisation, while Independent system vendors (ISVs) training supports deeper contributions such as bug fixes, extensions, and upstream participation. Both are necessary to reduce pressure on core teams and sustain a broader, more capable ecosystem.

Contribution also depends on governance arrangements that give countries a meaningful voice in how platforms evolve. Shared stewardship—distributing responsibilities for roadmaps, standards, and documentation—prevents fragmentation and avoids concentrating influence among a few technically advantaged actors. Good practice suggests that legitimacy and operational capacity depend on clarifying who makes which decisions, and how stakeholder voice is incorporated. Digital public goods like CKAN, X-Road, and DHIS2 show that shared governance, contribution pathways, and plugin ecosystems can prevent fragmentation while enabling local adaptation.





The HISP Network Model and Contribution Governance in DHIS2

The District Health Information Software 2 (DHIS2) ecosystem provides a widely cited example of how DPGs can sustain distributed contribution while maintaining coherence at scale. The platform's stewardship model is anchored in the Health Information Systems Program (HISP) network — a federated network of regional entities embedded in ministries, universities, and implementation partners across more than 70 low-and-middle-income countries. This structure blends local autonomy with global coordination, supporting continuous adaptation while avoiding uncontrolled forking.

At the core, the HISP Centre at the University of Oslo maintains the generic DHIS2 codebase, documentation, security updates, and platform roadmap. Around this centre, regional HISP groups provide long-term localisation, configuration, and capacity-building support — leveraging language skills, sustained relationships with ministries, and field-level knowledge of service delivery contexts. Implementers external to HISP can also contribute modules or resources through structured governance processes.

This socio-technical model enables a continuous flow of contributions while preserving architectural integrity. During the COVID-19 pandemic, South–South–North collaboration proved its value when the HISP Centre at the University of Oslo transformed locally developed DHIS2 modules from Sri Lanka into two generic toolkits—the “DHIS2 COVID-19 Surveillance and Response Toolkit” and the “DHIS2 COVID-19 Vaccine Delivery Toolkit”. By incorporating common metadata and requirements identified across countries, these toolkits allowed rapid adaptation and reuse in dozens of national contexts. This resulted in greater resilience demonstrating how collaborative app development, interactive prototyping, and transnational support networks can accelerate global digital response capacity while maintaining a coherent core architecture.

However, the same features that enable wide reuse can amplify asymmetries of capacity. Countries with skilled regional HISP groups are better able to absorb updates, contribute back, and influence roadmap priorities. Where local digital capacity remains thin, deployments risk “soft vendor lock-in”: reliance on a small number of external implementers, siloed customisations, and difficulty integrating upstream improvements — despite open licensing.

To address these challenges, it has been shared that the HISP Centre plans to pilot partnership mechanisms in which implementers share flat service fees to support core maintenance, documentation, and training resources. In return, contributing partners receive benefits such as branding, roadmap input, and priority support — aligning incentives toward collective stewardship.

As a result, the HISP model illustrates a possible maturing pattern in digital public goods governance: coordinated diversity. A small core team preserves interoperability, security, and standards, while distributed regional actors contribute localisation, domain knowledge, and context-specific innovation. When capabilities are balanced, this model generates compounding value through shared learning and continuous improvement. When they are not, asymmetries can deepen dependency — underscoring the importance of intentional governance, transparent funding flows, and investments in local institutional capacity.

Reducing the Cost and Complexity of Contributing

A critical next step for digital public goods is to make their components easier to discover, test, and integrate. Across the ecosystem, digital public goods teams are **now decomposing their stacks into well-defined, reusable modules**—registries, credential services, verification APIs—that governments and implementers can adopt without over-reliance on the original developers. Modularisation helps by simplifying integration, reducing dependence on core teams, and enabling private and local actors to build products around smaller, well-defined components. Examples like DHIS2's metadata packages and Mojaloop's interoperable rails show how modularity accelerates both reuse and contribution. Productisation reinforces this by providing clear documentation, stable APIs, versioning discipline, and reference architectures.

Using Procurement as a Tool to Support Long-Term Sustainability

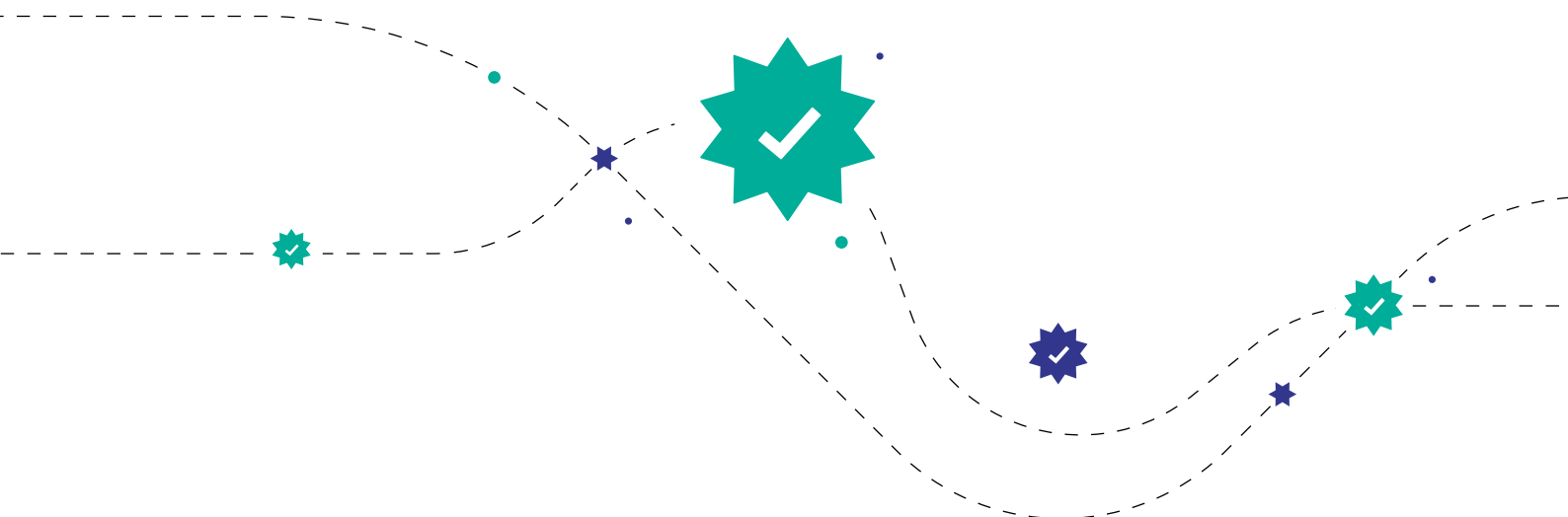
Procurement is an important lever governments have to shape digital markets. The goal is not to mandate open source or DPG use, but to create fair conditions where open, shared, and proprietary solutions compete on equal terms. Small policy shifts—such as open-first evaluation criteria, contribute-back clauses, and modular contracting—can prevent duplication and reward value creation. **IDB experience shows** that these approaches lower switching costs, expand

market participation, and make systems easier to maintain and reuse.




Procurement reform should also extend beyond acquiring tools to supporting standards governance, certification, and community participation. X-Road's contributor obligations illustrate how procurement can be reshaped around ongoing stewardship rather than one-off deliverables. By embedding openness in procurement design rather than mandating it in technology choices, governments can promote innovation, avoid soft lock-in, and ensure that public funds strengthen shared systems instead of recreating them.

Building Regional Mechanisms for Shared Maintenance and Support

Regional digital public good hubs, which could pool capacity for maintenance, security, and training, would allow for countries to share costs and expertise. This collaborative model could be particularly valuable for smaller and lower-income countries that face resource constraints, though even advanced economies benefit from shared governance arrangements that reduce fragmentation across jurisdictions. By centralising maintenance, documentation, and training functions, regional hubs can mitigate both the small-market penalty, enabling faster access to updates, reducing duplication, and ensuring that improvements from one deployment benefit others. Funders could play a critical role in making this model viable. Rather than financing projects in isolation, they can co-finance regional contribution portfolios—dedicated pools that support the upkeep and enhancement of shared DPG components across multiple countries.



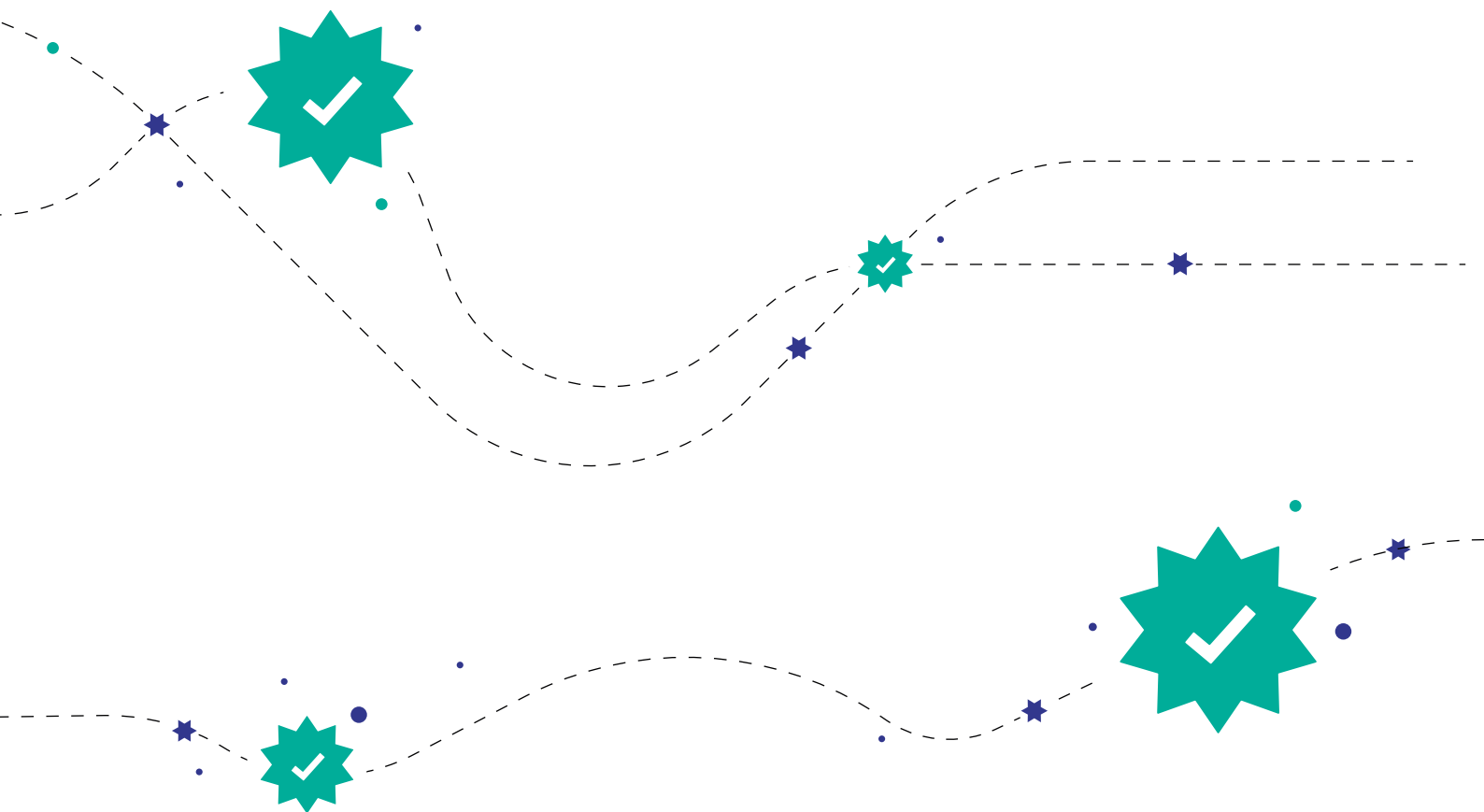
Procurement Levers to Empower DPGs

 Procurement Instrument / Clause	 How it Delivers Spillover Effect	 Examples from Country / Policy*
"Open First" Clauses / Mandating Open Source	By mandating open source as the default, an open-first clause directly prevents different government agencies from building the same system from scratch, leading to immediate cost savings and allowing for the code to be reused and improved upon by a wider community.	Canada: Open First Policy (2021) UK: Digital, Data and Technology Playbook (2021)
"Contribute-Back" Clauses	Contribute-back clauses explicitly require vendors or developers to share any improvements, bug fixes, or new features back to the original DPG project. This ensures that the contracting country not only benefits from the DPG but also contributes to its global improvement, which in turn enhances its own ability to absorb and utilise future improvements from the global community.	Inter-American Development Bank: OSS Procurement Guidance (2021)
Modular Contracting	This approach breaks down large IT projects into smaller, manageable parts. By allowing different vendors or agencies to work on various modules, it promotes a pooled financing model where resources and expertise are contributed by multiple stakeholders, leveraging the initial investment and increasing the total value of the project.	United States: Federal Source Code Policy (2016)
Intellectual Property (IP) and Licensing Clauses	By clearly defining IP rights and licensing, these clauses prevent a single vendor from claiming ownership of the code, which ensures it remains a shared, public asset. This also helps to combat the risk of project decay by enabling a broader community to maintain and improve the DPG over time, even if the original vendor is no longer involved.	Inter-American Development Bank: OSS Procurement Guidance (2021) *For access to the policies, see here .

Looking Ahead: Ensuring Contribution not Rhetoric

The future of digital public goods will depend not only on deploying systems, but on whether countries and partners are able to sustain and incrementally improve the shared platforms they rely on. Contribution can support this by spreading maintenance effort, strengthening core components, and enabling learning across contexts, but it is rarely straightforward. It requires time, resources, and institutional arrangements that many governments and implementers do not yet have. Making contribution feasible therefore involves

practical steps—such as clearer funding models, predictable governance processes, and mechanisms for sharing knowledge and improvements—rather than broad appeals to collaboration. As DPGs mature, countries are better positioned to draw value from DPI and from the shared digital infrastructure they rely on and to influence how it evolves, reducing the risk that systems become isolated or difficult to maintain over time.





Sustaining Digital Public Goods: Moving Beyond Adoption

A decorative graphic consisting of several overlapping dashed lines that form a complex, wavy pattern. Scattered along these lines are small blue and teal dots, as well as larger teal starburst shapes containing white checkmarks. The graphic is positioned in the background, framing the central text.

Sustaining Digital Public Goods: Moving Beyond Adoption



Digital
Public
Goods
Alliance