Digital Public Infrastructure

South Asia Practitioner Roundtable

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Digital Public Infrastructure (DPI)

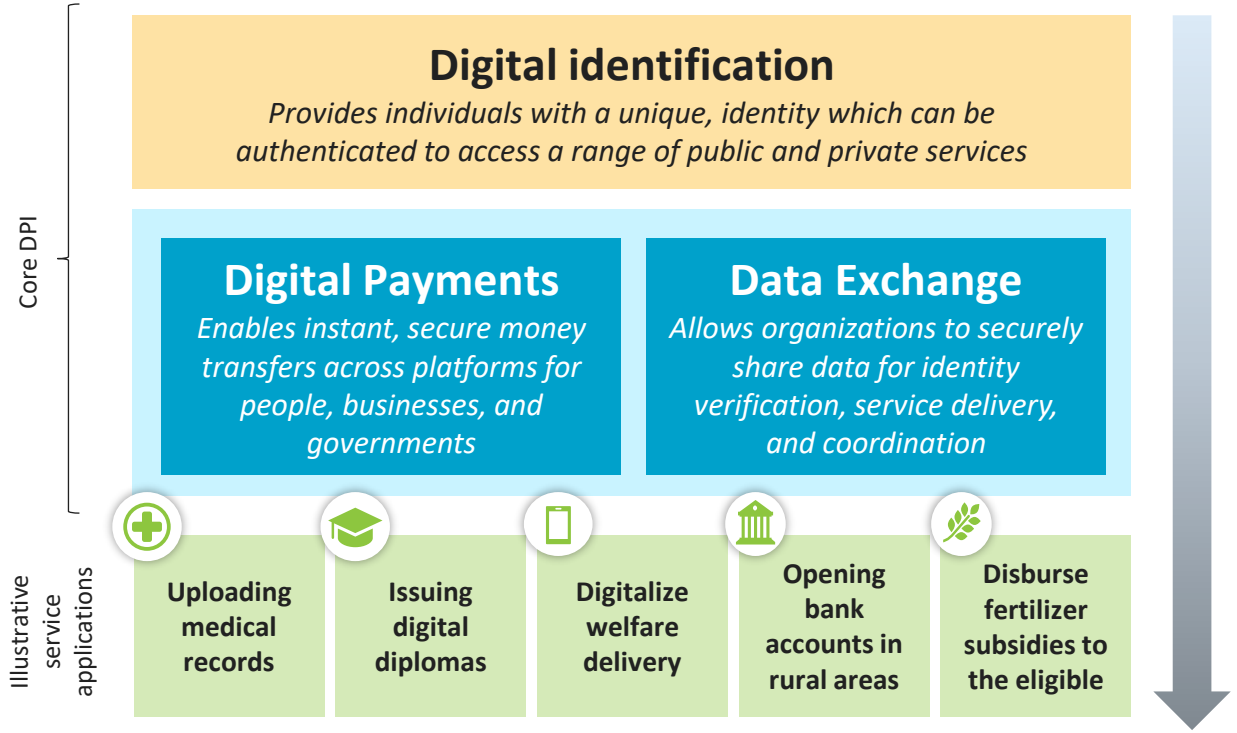
"Digital Public Infrastructure (DPI) refers to **foundational building blocks** for the **public benefit**."

- World Bank, DPI and Development: A World Bank Group Approach, 2025

DPI is built on the following principles:

- Interoperability
- Minimalist, reusable building blocks
- Diverse, inclusive innovation
- Security and privacy by design
- Federated and decentralized

Core DPI consists of identity, payments and data exchange systems, on top of which a range of sectoral service applications can be built



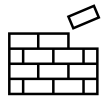
DPI shifts digitalization from siloed projects to scalable, reusable building blocks

DPI is a priority in most South Asian countries; but adoption varies

Summary of findings

Vision and leadership

DPI is a stated priority across most countries; however, enforcement is a challenge due to **lack of internal coordination**



Core DPI

Most countries have launched or are rolling out digital ID and payments, but integration remains uneven. **Data exchange remains nascent, with early use cases** (most notably in India)

Sectoral DPI

Health records related DPIs most common across countries; relatively faster progress in India on scaling integrated stacks in health, education, and transport

Ecosystem participation

Limited private sector participation. Nascent innovation, constrained by rigid procurement, few sandboxes, and low SME readiness

Policy and safeguards

Legal frameworks exist but are **outdated and weakly enforced**; increasing interest from policymakers to define data protection and cybersecurity policies

Nascent*	Emerging*	Mature*

**Simplified overview of status quo across countries. Detailed nuances captured in the report*

Key opportunities across core DPI, sectoral DPI, and the enabling environment

Opportunities	*Trends*	*Priorities*
Core DPI	1 **Core DPI rails are scaling, but impact is limited by weak integration and low reuse**	1 **Integrate digital ID into "everyday transactions" and high value registries.** Start with small, foundational registries, then link ID to priority public services and payments
	2 **Payments is the strongest rail; interoperability across providers and borders is the next frontier**	2 **Scale interoperable payment use cases.** Focus on (i) G2P & govt collections, (ii) merchant acceptance & shared APIs, and (iii) cross-border corridors
	3 **Data exchange is least mature, but there is momentum for minimum viable approaches**	3 **Build data exchange in phases, starting with 2 to 3 registry linkages**; then scale with standards, consent flows, and governance
Sectoral DPI	**Sector platforms are growing, esp. health & education, but interoperability is limited;** many areas are stuck at apps and portals	**Apply a "+1 rule" to sector transformation.** For every new sector digitization investment, require connection to at least one core rail, plus one reusable building block • **Health +1:** link health records to trusted ID authentication and consented data sharing • **Education +1:** portable learning credentials plus verification, linked to ID • **Agriculture +1:** farmer registry plus payments targeting, linked to ID and payments
Enabling environment	**Trust is a binding constraint across the region**	**Make "trust-by-design" non-negotiable.** Embed privacy, consent, audit, and grievance tooling as non-negotiable components in DPI builds

Roundtable - Topics for Discussion

Making the Business Case for DPI Investments

- *Jordan Sandman, Co-Develop Fund*
- *Dasun Hegoda, Government of Sri Lanka*
- *…*

Leveraging Open Standards and Software, Digital Public Goods (DPGs)

- *Dasun Hegoda, Government of Sri Lanka*
- *Marc Lepage, Asian Development Bank (ADB)*
- *…*

Opportunities for Regional DPI

- *Uttam Kumar Shahi, Secretariat of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)*
- *Nilaya Mitash, SASEC Secretariat / Asian Development Bank (ADB)*
- *…*

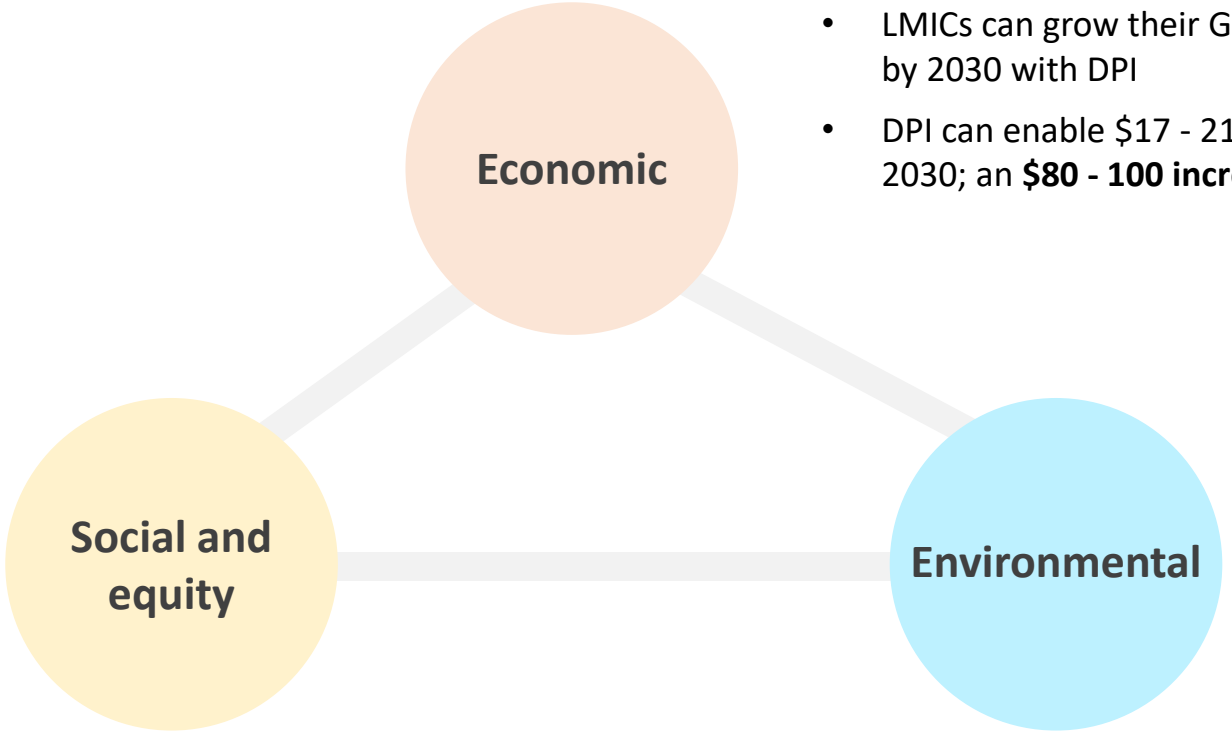
Cross-Country Learning

- *Aafreen Siddiqi, UNDP Regional Hub*
- *Fithya Findie, Centre for Digital Public Infrastructure (CDPI)*
- *…*

DPI investments have delivered large, cross-sector returns across LMIC contexts

Accelerating social development in LMICs:

- DPI could expand access to justice for up to **~60 million additional people** by 2030 – a **10 year leapfrog***
- Payment rails are enabling **scale of low-cost digital transactions;** e.g., BhutanQR accounts for **>43%** of Bhutan's digital transactions



Accelerating GDP growth of LMICs:

- LMICs can grow their GDP by **$200 - 280 billion (1% - 1.4%)** by 2030 with DPI
- DPI can enable $17 - 21 billion in direct benefit transfers by 2030; an **$80 - 100 increase in income per household**

Accelerating efforts to control emissions in LMICs:

- DPG-based deforestation prevention and carbon market DPIs can enable LMICs to **capture ~5GtCO_2e** by 2030 - a **5 - 10 year leapfrog***

In your experience, what types of value mattered most when making the case for DPI?
What has helped (or hindered) in making a credible case?

Note: *without DPI adoption, the same would only be achieved X years after 2030; Source: Dalberg analysis, UNDP & DPG Alliance, Bold investments for DPI: Quantifying the Human and Economic Impact, 2022

DPGs reduce time-to-launch and lifetime cost, while improving contestability and resilience, but only when ownership and operating model are clear

*DPGs refer to **open, reusable digital tools** that govts can use to build DPI (e.g., open-source software, open standards), while DPI are **shared national digital systems** (e.g., digital ID systems, digital payments)*

	Proprietary approach *Optimized for delivery by one provider*	DPG-based approach *Optimized for scale, reuse, and long-term public control*
Speed and cost	• High licensing and setup costs • Slow rollout and costly upgrades	• Lower upfront and lifetime costs • Faster rollout
Contestability	• Vendor-controlled, closed systems • High switching costs and risk of lock-in	• Open standards and APIs by default • Multi-vendor participation and healthy competition
Trust and resilience	• Limited transparency and auditability • Reliance on a single provider for continuity	• Transparent, auditable, standards-based systems • Greater resilience through modularity and shared oversight

Case study: CamDX

Cambodia's data exchange platform was built based on Estonia's X-Road open-source architecture

- **Rapid rollout:** Launched within one year, and remains adaptable for multiple use cases (e.g., business registration, COVID-19 entry permits)
- **Trusted infrastructure:** Built using X-Road, a proven, open-source, decentralized data exchange platform

Successful DPG-based approaches require:

- Clear product ownership and sustained operations funding
- Procurement frameworks enabling modular reuse and integration
- Standards setting and enforcement

Do you have an example where modular reuse has cut delivery time or cost? What is preventing adoption today?

Cross-border interoperability can unlock outsized gains in payments, trade, and disaster response

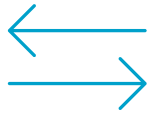
01

Select the corridor use case with highest value and feasibility

Examples include:

- Remittances and merchant payments
- Trade and logistics data exchange
- Disaster early warning and climate data sharing

*The **India-Bhutan UPI corridor** enables Indian users to pay to Bhutanese merchants, supported by **strong user demand** and **proven feasibility***



02

Agree on the minimum common layer for interoperability

Examples include:

- Common technical standards and APIs
- Mutual recognition of identity and trust levels
- Governance for data sharing, security, liability and dispute resolution

*UPI's **standardized APIs, shared technical protocols**, and **centralized governance** enables interoperability across banks and countries*

03

Pilot, institutionalize, and scale successful platforms

Examples include:

- Cross-border sandbox and certification
- Joint delivery teams and operating model
- Phased expansion (e.g., via BIMSTEC, SASEC)

*Following UPI adoption, **Bhutan is negotiating additional payment corridors** (e.g., PayNow, PromptPay) to lower FX costs and expand merchant use*

What has held back cross-border interoperability, policy alignment, governance, or delivery capacity?
What would make a pilot cross-border DPI feasible within the next 12 months?

Structured cross-country learning helps countries avoid predictable DPI pitfalls across the delivery lifecycle

Structured peer learning can support countries from use case selection through governance, procurement, and sustainability

1 Prioritize	2 Design	3 Deliver	4 Sustain
Potential tools			
• **Use case prioritization** tool • **Sequencing** roadmap	• **Reference architecture** and **interoperability** standards pack • **Procurement templates** and vendor management playbook • **Infrastructure requirements checklist** for cybersecurity	• **Privacy impact assessment** template • **Equity and inclusion** checklist • **Policy blueprints**	• **Sustainable financing** scenarios • **Operating model** options • **Sector-specific DPI pilot models**, including integration with core DPI rails

Engagement modes

- **Peer clinics (2–3 days):** *Solve a specific design or procurement problem with experts*
- **Implementation exchanges (1–2 weeks):** *Immerse delivery teams within a live program*
- **Community of practice (monthly):** *Share templates, benchmarks, and lessons learned*

Examples of stakeholders:

- **Policymakers / regulators:** Digital and finance ministries, procurement authority, data protection authority
- **Implementers:** Central bank, digital leads in key sectors, major implementing agencies
- **Ecosystem builders:** Academics, think tanks

Which DPI assets travel best across countries? (e.g., policy templates, reference architectures, procurement packs, operating models)
Which engagement format creates adoption, not just awareness?

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