



DaaS: Simplifying DPI Implementation

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Kamya Chandra

Chief Strategy Officer, Centre for Digital Public Infrastructure

DPI Advisor, Ministry of Finance, India

kamya@cdpi.dev



Digital Public Infrastructure (DPI) is familiar to many countries!

**Physical
Infrastructure**



**Railways, Roads, Cell
Towers, Internet cables**

Digital Infrastructure
to catalyse digital
services



**Open tech standards &
systems** for Internet, Mobile,
Identity, Signatures,
Payments, Data, Fulfillment,
and beyond



Both
drive
**Public &
Private
Innovation**

5

Foundational Digital Public Infra Categories

within & across sectors



Identities

Authenticating any noun in a digital ecosystem (people, entities, & objects) via Registries



Payments

Making financial transactions with ease



Data Sharing & Credentials

Sharing Data (history, profile, & attributes) or Models peer to peer or publicly



Trust Infra

Enabling trust through signatures, consent, and beyond



Discovery & Fulfillment

Accessing goods and services via open protocols/APIs

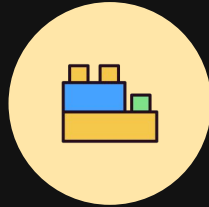
5 DPI Technical Architecture Principles

make digitisation inclusive & scalable



1.

Interoperability
driven by open specifications



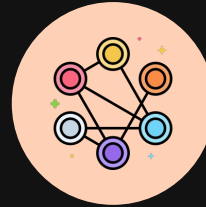
2.

Minimalist, Reusable building blocks
rather than end-to-end solutions



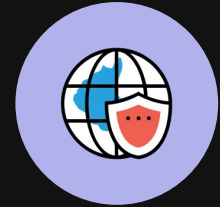
3.

Diverse, inclusive ecosystem innovation by both public + private actors via open & multi-modal access



4.

Federated & Decentralized with a preference for letting data stay where it's been collected



5.

Security & Privacy
by design

**DPI rollouts are
high-friction,
high investment &
high time-commitment
processes**

....even on a small scale



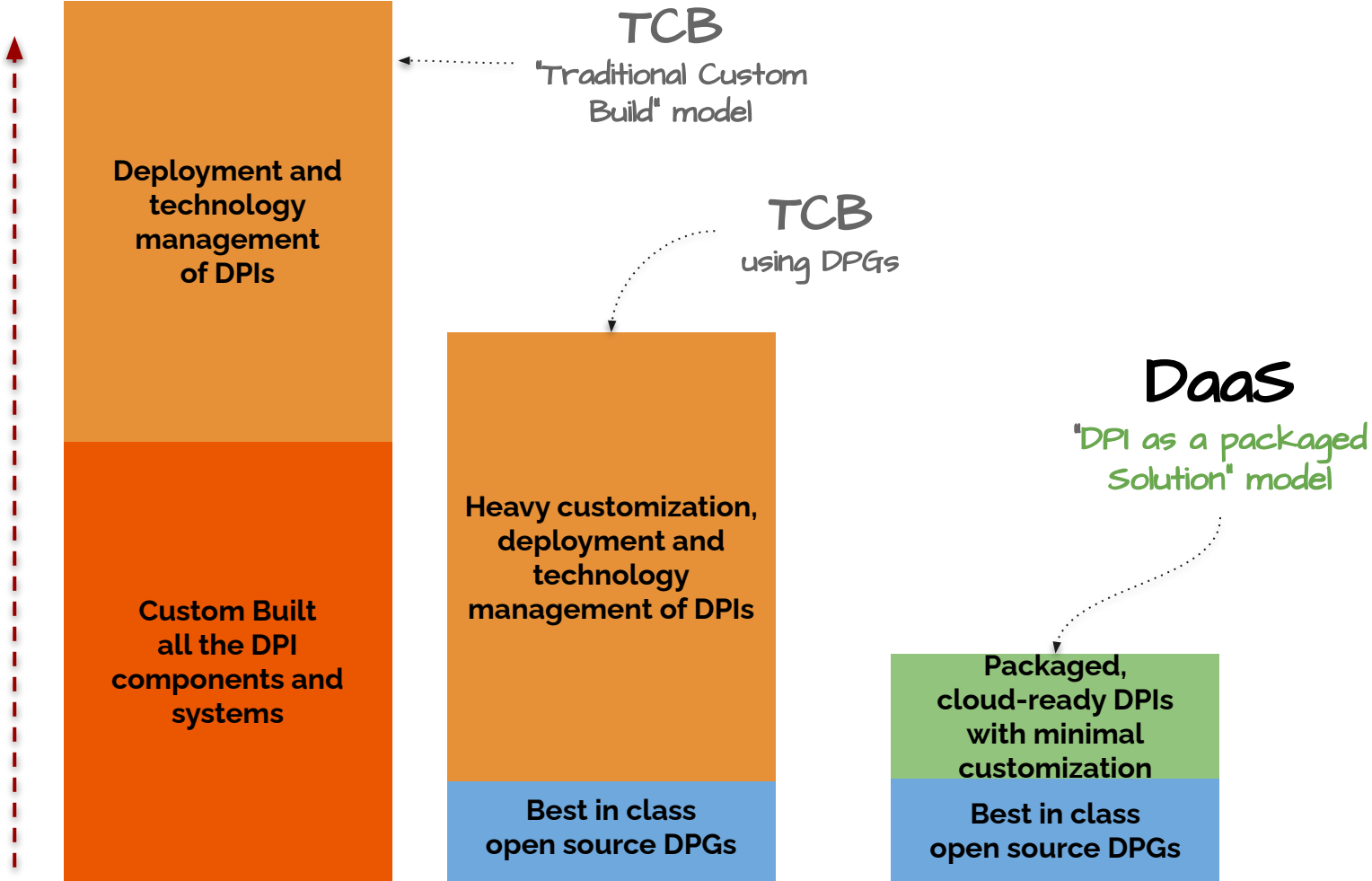


What if DPI pilot rollout could be made simpler?





COST, TIME, CAPABILITY, RISK



It began with a Carnegie paper...

...and is now gaining traction!



RESEARCH AREAS PUBLICATIONS EXPERTS EVENTS

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

The Future of Digital Public Infrastructure: A Thesis for Rapid Global Adoption

PRAMOD VARMA, RAHUL MATTHAN, RUDRA CHAUDHURI, C. V. MADHUKAR FEBRUARY 13, 2024 PAPER

This working paper presents an alternative approach to DPI deployment: the "DPI as a packaged Solution" (DasS) model. It is a new way to think about rolling out solutions that incorporate the DPI approach at scale and speed.

INTRODUCTION

India's presidency of the G20 in 2023 placed digital public infrastructure (DPI) on the global map.¹ Until November 2022, DPI as a term did not exist for most people around the world. In a period of nine months, between December 2022 and August 2023, not only was the grammar and syntax of DPI created, but a suggested framework for DPI was also accepted by the G20 member states.²

There were two tracks in the G20 discussions during India's presidency that dealt directly with DPI: the Digital Economy Working Group (DEWG),³ under what is known as the Sherpa Track, and the Global Partnership for Financial Inclusion,⁴ under the Finance Track. Both tracks arrived at a consensus on the suggested principles for building DPI. To be clear, the use of technology for inclusion is a concept that has existed for a long time.⁵ What is new is that, for the first time,⁶ a framework—marrying technology, governance, and the role of communities—has been agreed upon multilaterally.

In September 2023, the United Nations launched its High Impact Initiative on DPI.⁷ Aid agencies around the world have highlighted the need to deploy DPI in one hundred countries by 2030, thereby helping fulfill the targets of the Sustainable Development Goals (SDGs). The 50-in-5 campaign, described as a "country-led advocacy campaign," was launched by various international organizations in November 2023 as one more step to advance the adoption of inclusive and safe DPI.⁸ It aims to help fifty countries "design, launch, and scale components of their digital public infrastructure."



Pramod Varma
Pramod Varma is the former chief architect of Aadhaar and India Stack. He is currently the chief technology officer of the Sidgyp Foundation, a not-for-profit creating learner-centric digital public goods under Project SunBird (sunbird.org). In addition, he is the co-founder of FIDEL and the genesis author of the open-source Backdoor (Backdoorprotocol.io). He is also an adjunct faculty member and co-chair at the global Centre for DPI (CDPI.dev).

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The Centre for Digital Public Infrastructure to launch DPI-as-a-Packaged-Solution

By Yogesh Hirdaramani Mar 21, 2024

A new approach to digital public infrastructure (DPI) aims to help countries roll out DPI solutions within three to six months using pre-packaged solutions. Govinsider speaks to the Centre for Digital Public Infrastructure to learn more.



GOVINSIDER SPECIAL REPORTS govinsider.asia

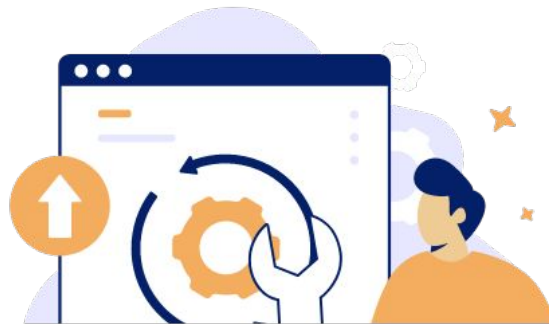
CDPI works with countries to help implement localised DPI solutions. Image: CDPI



There are **two types** of DPI implementations

Greenfield implementations of large scale gov't led infra - fresh ID enrollment project, new P2P/P2M payments switch, etc. **Multi-million \$** cost.

Rapidly upgrading a country's existing digital assets to Digital Public Infrastructure



Focus of
Daas
"DPI as a
Packaged
Solution"



DaaS first focuses on three **high impact, low effort** DPI blocks in Identity, Payments and Data sharing



IDENTITY

Digital Auth: Add verifiability on any new/ existing ID



PAYMENTS

G2P Mapper: Send social benefits using an ID to any account

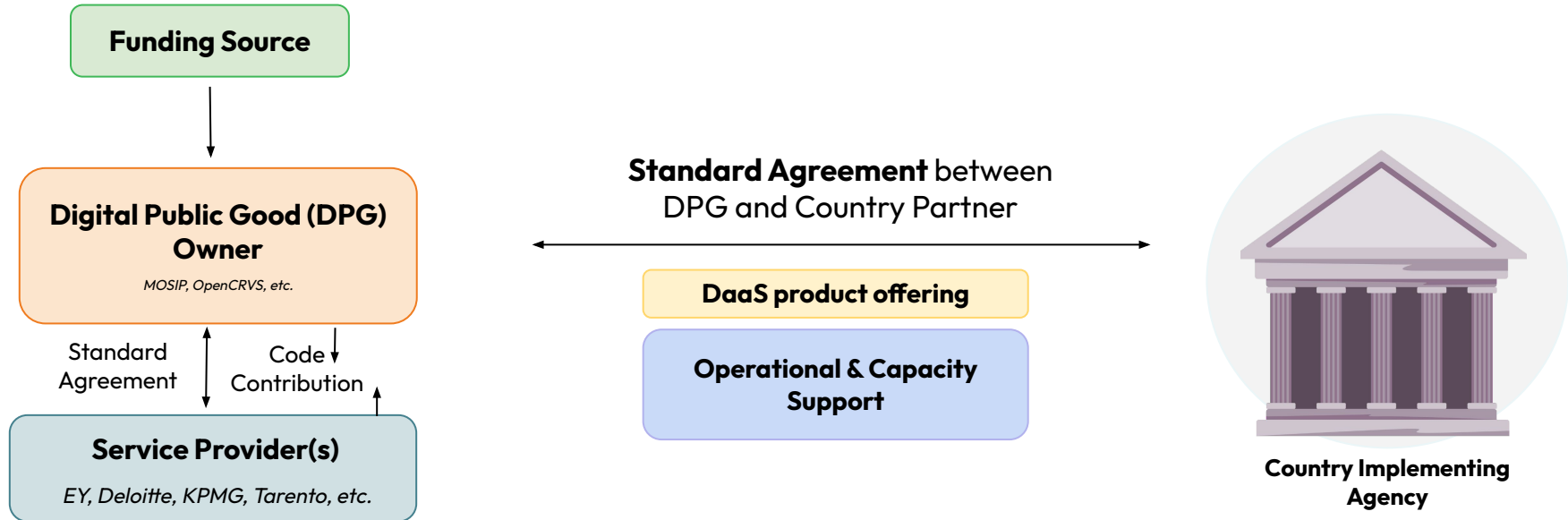


DATA SHARING

Credentials: Convert any certificate into a verifiable credential



How does DaaS work?



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Public Infrastructure



CDPI and EkStep provide **overall DaaS coordination** between the Country Agency, the DPG, and Funders.

DPI as a Packaged Solution: An **easily deployable, pre-packaged, funded, & timed pilot!**

Countries get -



Product kit

Software, Protocols,
System Architecture,
APIs, Scripts etc



Program kit

Roll out plan &
playbooks, checklists,
Training



Policy kit

Sample policy strategy
paper for publication;
policy guidance



**Funded Service
Provider** for DPI
roll out

DPG support

**Tech advisory
(CDPI)**

Program Co-Convened by



kStep

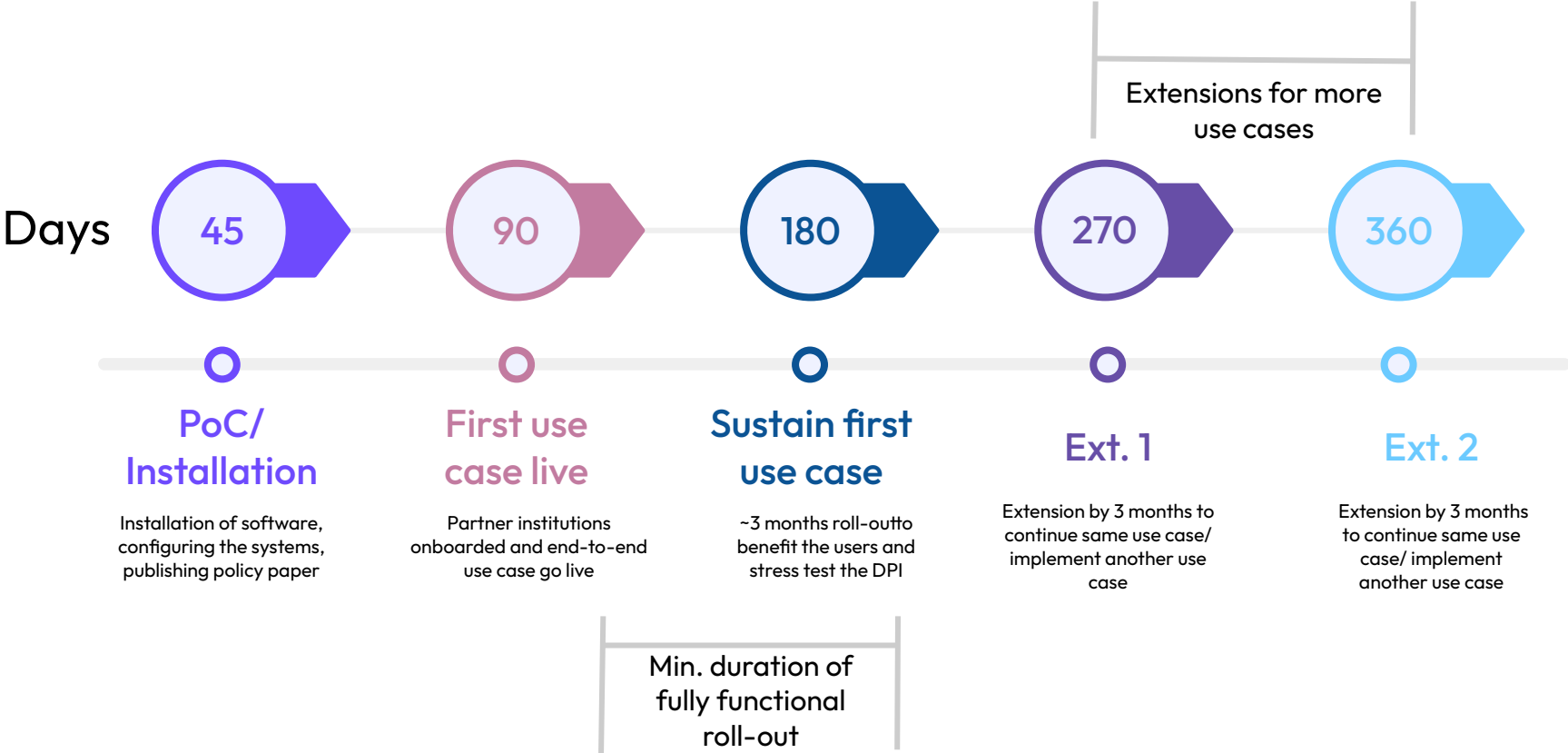
Funding Partner



CO-DEVELOP



Go-live in 90 days, implementation for 6 months: High quality, self sustainable & useful on ground!



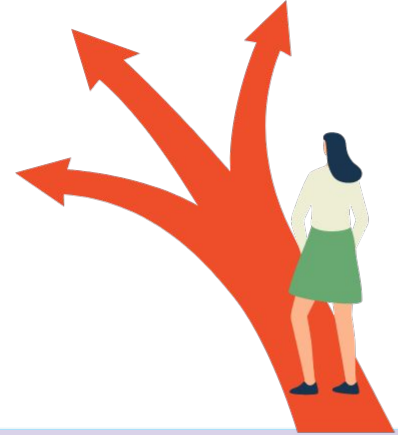


DaaS can be hosted anywhere.

Public cloud

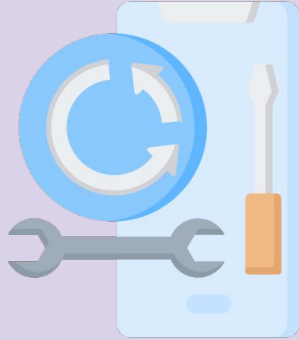
Private cloud

On-prem*
(Data Centre)



At the core of a DaaS pilot is **portability**; Countries are **not locked in** to any design decisions/ vendors used in the pilot!

*Core infrastructure will be made available by country to enable service providers to install/manage the DaaS package



**Is DaaS
customisable for my
country's use?**

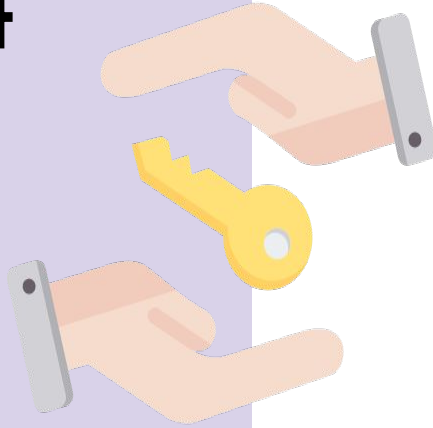
OS Package is built in a way to meet **95% of your needs**

Extensibility allows you to add modules based on your needs using your vendor

Control and sovereignty

The country dep't is in control

of data & the instance,
regardless of their choice
of cloud!



Country will **own core IP**,
cloud instance, data, and
management.

**SLAs and ops can be
designed & enforced**



First set of DaaS pilots

Malawi is piloting
Govt to Person (G2P)
payments

For post-cyclone
social support

Use Case : **Cash transfer** to citizens
affected by cyclone; Implemented using
ID-Account Mapper

Trinidad & Tobago is
implementing
Verifiable Credentials

To help graduates apply
for jobs

Use Case : University of T&T **academic
certificates** as VCs for **job application**
on **Employ T&T**

If you are a country looking to build or a DPG looking to co-create,

Let's Talk.

info@cdpi.dev





Thank you!

Q&A



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Public Infrastructure**