

AI-Driven Digital Public Infrastructure for Africa

Our role at the Technology & Innovation Office — and how we are turning ideas into scalable DPI across governments.

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Technology & Innovation Office · World Bank Group

Africa's cities are at a pivotal moment.

The question is no longer *if* to act —
it is *how* to scale impact,
fast and responsibly.



Build

AI-ready public
infrastructure



Connect

Open, interoperable
approaches



Scale

Turn standards
into action

A GLIMPSE — BEFORE WE GO DEEPER

This is what scale looks like.

80%+

of Kenya's workforce is in the informal sector — and until now, excluded from pension systems.

Hold that number. We'll come back to it.

WHAT WE BUILT WITH THE GOVERNMENT

KNEST — a national micro-pension DPI, on mobile money.

~15M

workers now able to save

1 tap

contribute by mobile money

National

infrastructure, not a pilot

This is the kind of DPI we build.

The Technology & Innovation Office

A global innovation lab inside the
WBG Information Technology Solutions Vice Presidency — driving
digital transformation
across countries, regions, and sectors.

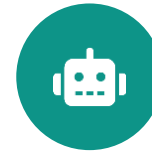
100+ 17+ 4

Use cases
deployed

Global practices
& sectors

Frontier-tech
pillars

From innovation → to implementation → to scale.



Artificial Intelligence

Including next-gen & physical AI



Blockchain & Digital Trust

Trust infrastructure & rails



Spatial Computing

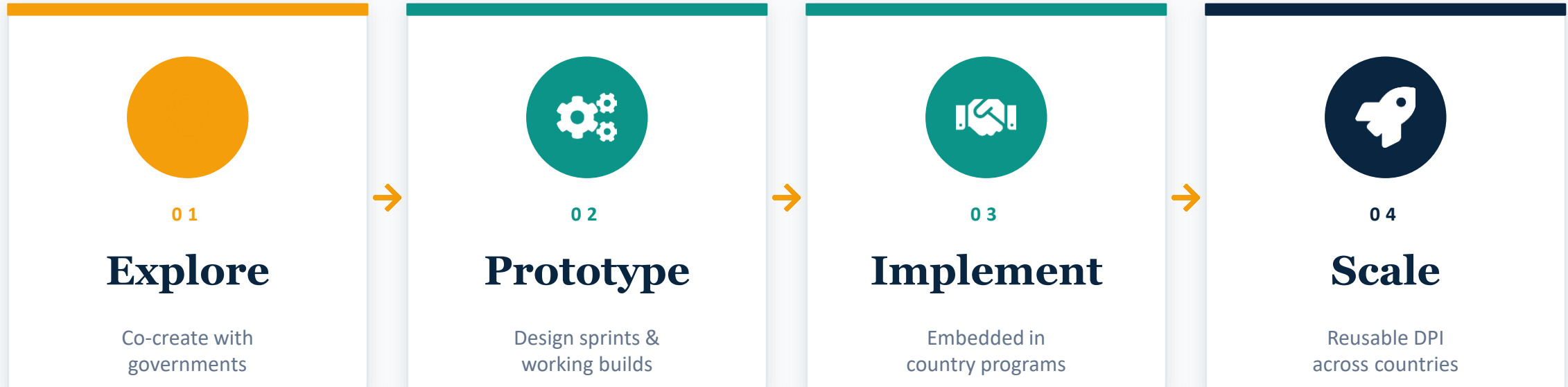
AR/VR & digital twins



Quantum Technologies

Emerging frontier

We don't just advise — we build and deliver.



Embedded in operations · Bridging technology, policy, and implementation · Delivering Digital Public Infrastructure.

PART 01

From Principles to Practice.

Interoperability — the foundation of every AI-ready DPI.

Without these layers, nothing scales.

AI at scale

Trusted, deployed, impactful

DPI

Reusable public infrastructure

AI Governance

Fairness, explainability, oversight

Data Governance

Quality, ownership, stewardship

Interoperability

Open standards & APIs

Enterprise Architecture

Systems, processes, policy

*builds
up to
AI at
scale*

WHY THIS ORDER MATTERS

AI doesn't scale on top of silos.



Architecture first

Align institutions before systems.



Interoperability next

Connect what you already have.



Governance before AI

Trust data before you trust models.



DPI as the platform

Reuse, don't rebuild.

A practical 'How-To' Interoperability Framework

Co-developed by

WBG Governance Global Practice
World Bank Technology & Innovation Office
Liaison Council

Moves beyond theory → to practical, cross-sector, reusable implementation guidance governments can actually apply.



From fragmented systems → to connected, interoperable platforms.



Policy & Legal Frameworks

Data sharing, privacy, institutional mandates



Governance & Operating Models

Who owns, manages, enforces interoperability



Data Standards & Stewardship

Quality, ownership, exchange protocols



Technical Architecture

APIs, platforms, integration layers

Panama — Government Enterprise Architecture

THE CLIENT

Government of Panama · Ministry of Economy & Finance (MEF)

WHAT WE DELIVERED

- Government Enterprise Architecture (GEA)
- Operating model — governance & processes
- Phased implementation roadmap

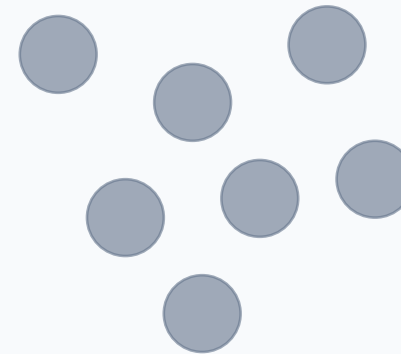
OUR APPROACH

Design sprint methodology · maturity assessment from current to target state · co-creation with government stakeholders.

OUTCOME: Aligned ministries · Unified architecture · AI-ready

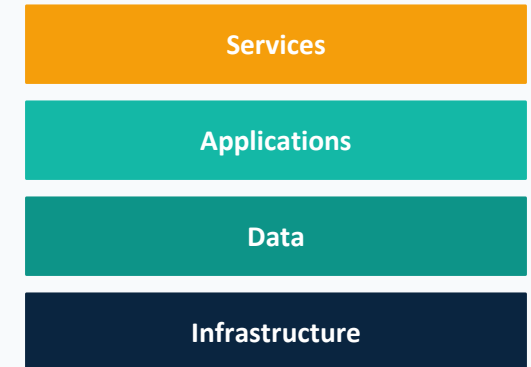
BEFORE

Siloed systems



AFTER

Connected DPI



*Interoperability doesn't happen by accident.
It is designed, governed, and enabled.*

PART 02

DPI Across the Economic Lifecycle.

Six use cases · From public funds → to jobs → to climate.

Reimagining Public Financial Management

THE CHALLENGE

The funds exist.
But visibility and control at the
frontline of service delivery do not.

WHAT WE BUILT

**Financial Visibility Layer**
Tracks funds at facility level

**Real-Time Dashboard**
Allocations, spending, performance

**Interoperable Design**
Connects IFMIS + sector systems

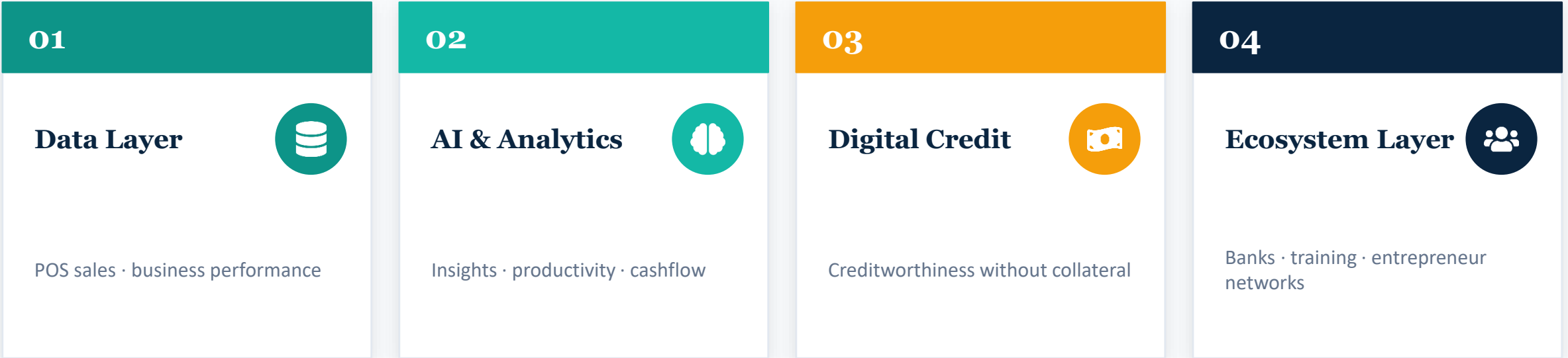
WHY THIS IS DPI

A financial DPI layer — making public funds visible, trackable, and actionable.

- **Foundational**
Core layer for public finance
- **Interoperable**
Works across ministries & systems
- **Reusable**
Prototype → multi-country scale
- **AI-ready**
Forecasting & allocation optimization

Women Entrepreneurs Data & Credit Platform

*Women entrepreneurs generate data — **but cannot use it to grow or access finance.***



Turning everyday business data into intelligence, finance, and opportunity — without collateral.

KNEST — a Micro-Pension DPI

80%+

of Kenya's workforce is in the informal sector
— excluded from pension systems.

~15 million workers.

THE OPPORTUNITY

Mobile phones + mobile money (M-PESA) already at
national scale.



Contribution Layer

Mobile-money contributions — flexible, irregular-income friendly



Administration Platform

Real-time account mgmt · KYC · reconciliation · portfolio tracking



Secure Data Layer

Modern infrastructure ensuring transparency, trust, efficiency

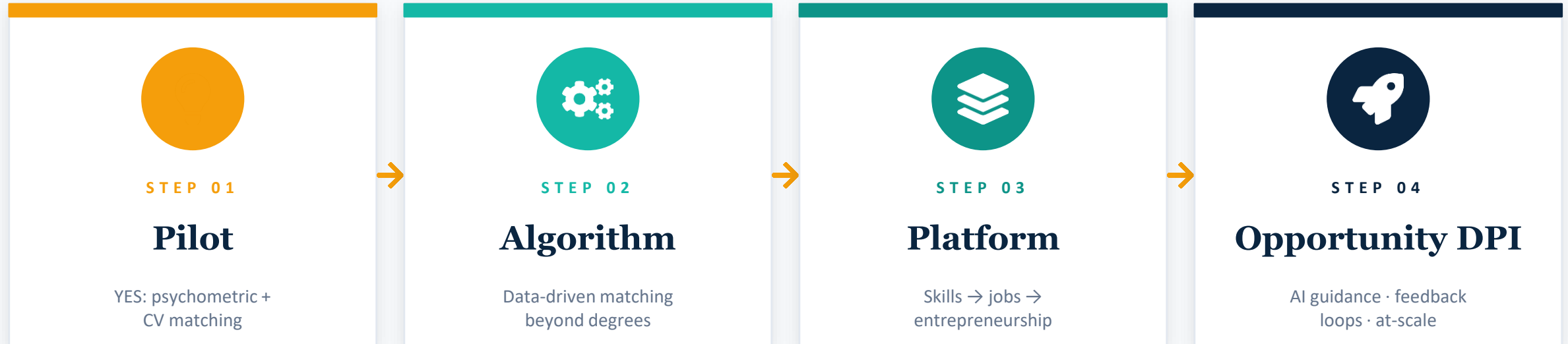


Ecosystem Integration

Government · financial institutions · investment platforms

Turning mobile money into a national savings infrastructure for the informal economy.

From Algorithm → to Opportunity DPI



AI LAYER

Conversational guidance · adaptive pathways · behavioral nudges · continuous learning from outcomes.

A matching tool evolved into a DPI — helping youth navigate skills, jobs, and entrepreneurship at scale.

KTIP — a regional innovation platform

WHAT IS OECS?

Organisation of Eastern Caribbean States

A regional intergovernmental body driving economic integration and shared services across Caribbean nations.

THE CHALLENGE

Fragmented innovation ecosystems · weak links between education, private sector, and entrepreneurs · no unified regional platform.

THE SOLUTION

KTIP — Knowledge, Technology & Innovation Platform

A co-designed regional platform connecting the entire innovation ecosystem.



ETS — a global carbon market platform

150+

Countries
participating

3,000+

Active users
on the platform

Open

Built on open
standards

WHAT IT IS

A carbon market simulation platform

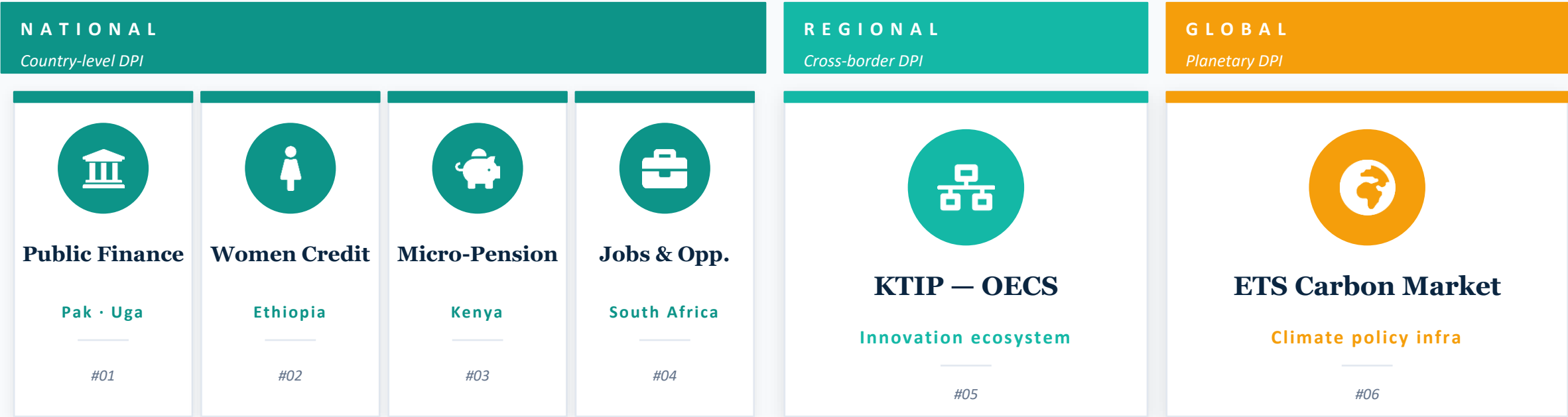
Enables governments, regulators, and practitioners to model, test, and learn ETS design — together, on shared infrastructure.

WHY THIS IS DPI

Global climate policy infrastructure

- ✓ Open — no vendor lock-in
- ✓ Interoperable — across jurisdictions
- ✓ Reusable — shared, not rebuilt
- ✓ Trusted — built for policy-grade use

From national to regional to global DPI.



Country → regional → global. One connected digital ecosystem.

The real power comes when systems are designed to scale across countries — not just within them.

Why DPI and AI fail to scale.

Across our work, the same failure modes keep showing up.



No architecture

Systems can't talk to each other.



No interoperability

Silos stay silos. Nothing connects.



Bad data

Wrong inputs. Wrong decisions.



No AI governance

Biased systems. Lost trust.



No adoption

No trust → no adoption → no scale.

SCALING IS NOT A TECHNOLOGY PROBLEM

It is a systems problem.

Get the foundations right — architecture, interoperability, governance — and AI scales.

THE CALL

Beyond experimentation — toward coordinated scale.



Build AI-ready DPI

Deliver outcomes, not pilots



Design for interoperability

Avoid fragmentation & vendor lock-in



Turn standards into action

Trusted, reusable, scalable

Thank you.

Technology & Innovation Office · World Bank Group

Let's build it together.