

Building a National “Financial Stack”:

From DPI to Ecosystem

May 2025

Mark Straub



Foundational Elements

To build a full Financial Stack and foster a healthy Ecosystem starting with DPI
(Digital Public Infrastructure)

We propose that there are **Three Building Blocks**

And a series of **Key Principles**

"The most dangerous phrase in the language is

'we've always done it this way.'"

- Grace Hopper

FIRST PRINCIPLES



Building Blocks

National ID System /
ID Framework



Instant, "Free" Account-to-Account Payments



Digital Accelerant

Building Blocks

ID



Payments



Magic (?)

Applied Examples (Global)

	India	Brazil	Nigeria
<p>DPI</p> <p>ID</p> <p>Pmts</p>	 <p>AADHAAR</p> <p>+</p>  <p>UPI</p> <p>UNIFIED PAYMENTS INTERFACE</p>	 <p>LGPD</p>  <p>gov.br</p> <p>+</p>  <p>PIX</p> <p>UNIVERSAL TO MONEY CENTRAL</p>	 <p>Nimc</p> <p>+</p>  <p>NIBSS</p>  <p>NIPS</p>
<p>“Accelerant”</p>	 <p>Jio</p> <p>Free Mobile Internet</p>	 <p>ny bank</p> <p>No Fee Cards</p>	 <p>paystack</p>  <p>Moniepoint</p>  <p>flutterwave</p>  <p>OPay</p> <p>Investment in payments Innovation</p>

1st Key Principle – Reliable Infrastructure

The weakest link you build will become the bottleneck for industry

When building infrastructure...

A single monolith is not always ideal → unless you **invest HEAVILY in performance & security.**

The bottlenecks and threats will appear where the highway is weakest

All connected industries will be dragged down to the lowest common infrastructure denominator

1st Key Principle – Reliable Infrastructure

VISUALIZATION OF UPTIME STATUS BY SECOND



2nd Principle – Adapt Locally and Align

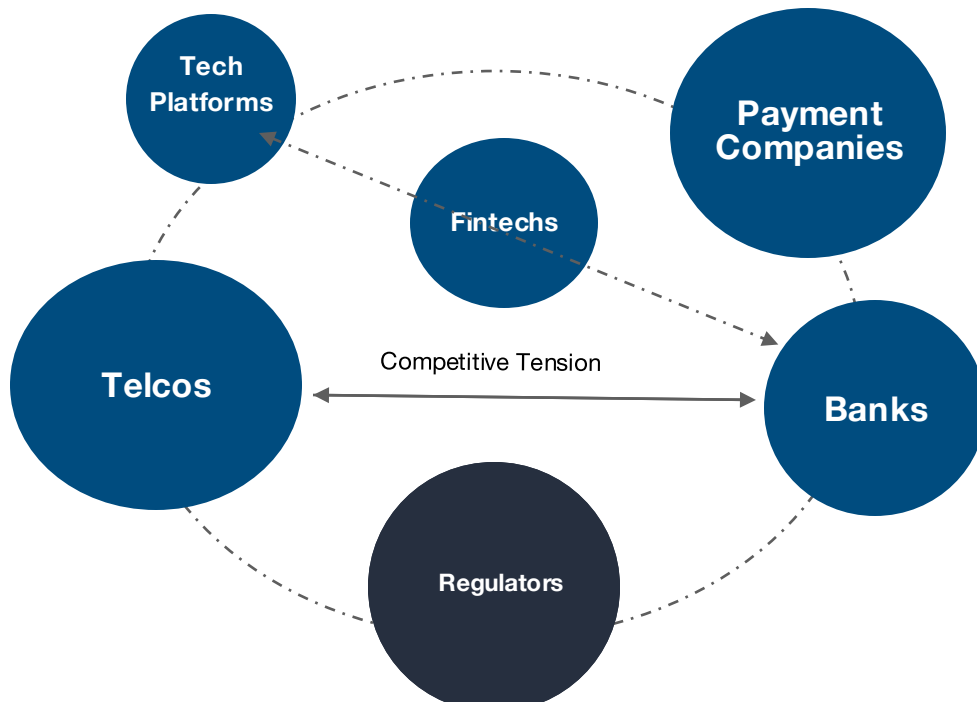
Adapt to your local, private market, align it with your public interests

Regulators should align rules to available infrastructure and local channels that make sense.

2nd Principle – Adapt Locally and Align

Adapt to your local, private market, align it with your public interests

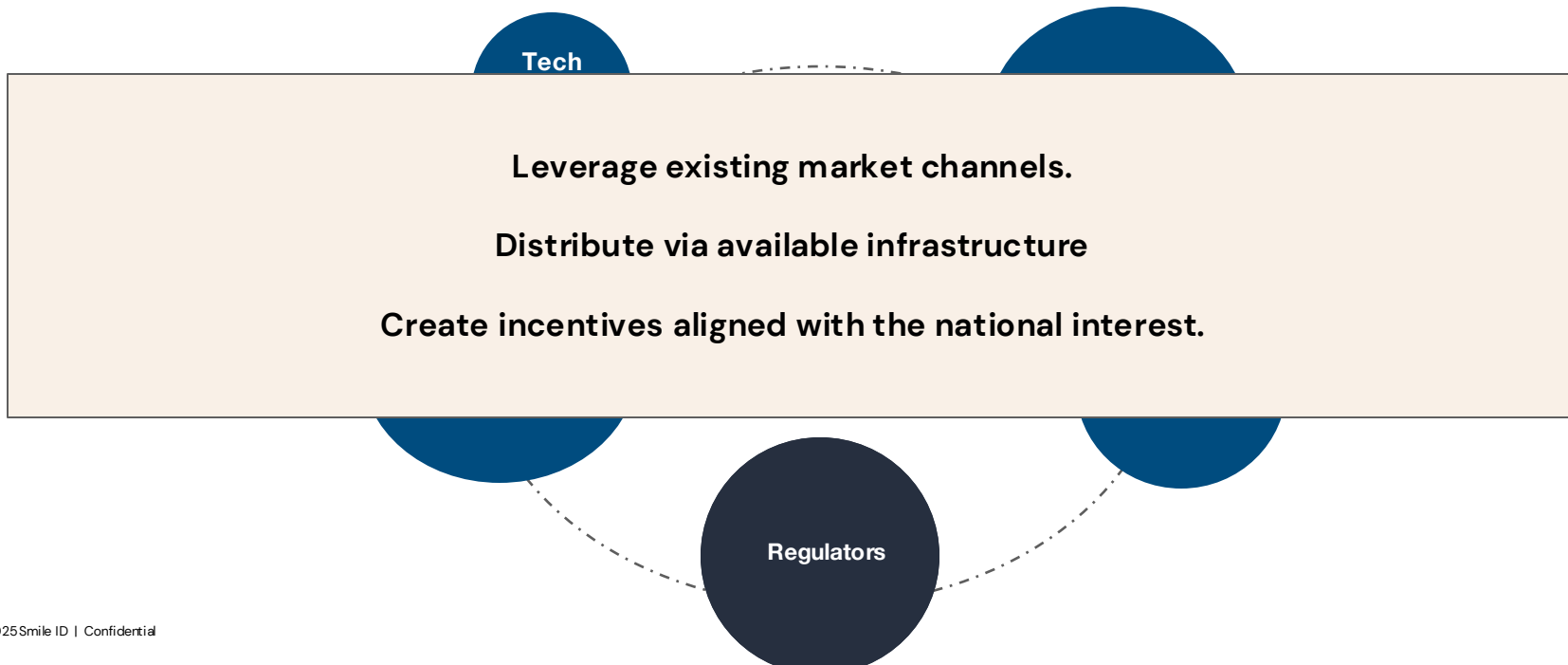
Regulators should align rules to available infrastructure and local channels that make sense.



2nd Principle – Adapt Locally and Align

Adapt to your local, private market, align it with your public interests

Regulators should align rules to available infrastructure and local channels that make sense.



3rd Principle – Enable Access

Open Access for Innovation

To flourish, you have to let public and private industry use the infrastructure you build

You may love your infra like a baby, but you can't protect it from the world forever.

You **can** mitigate the risks by creating standards and rules.

3rd Principle – Enable Access

Open Access for Innovation

To flourish, you have to let public and private industry use the infrastructure you build

You may love your infra like a baby, but you can't protect it from the world forever.

You **can** mitigate the risks by creating standards and rules.



LINUX

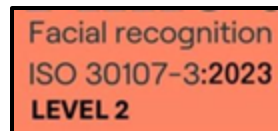
4th Principle – Leverage Tech Standards

The world has invested billions in modern technology with standards and rules:

Rules based on standards should govern access to ID data or Financial data

Use Global Standards...

- ISO
- SOC2
- NIST
- AES-256



Publish Local Rules

- Licenses Required
- Rules for Consent
- Data Protection Processes

4th Principle – Leverage Tech Standards

Adapt locally as needed...

Create policies that empower local private sector to help achieve goals.

(Article 4, section g)



5th Principle – Fraud Management

Proactively Collaborate to Prevent Fraud

AI is Accelerating Fraud.
Leverage Private Sector Technology.

5th Principle – Fraud Management

Proactively Collaborate to Prevent Fraud

AI is Accelerating Fraud.
Leverage Private Sector Technology.



Mid Journey Image Generations Over Time

Face swaps
and Gen AI

6th Principle - Economics will Determine Adoption

Incentives for consumers and private industry will either accelerate or slow adoption

The cost of using the new ways **must be lower** than the old ways for **all participants**.

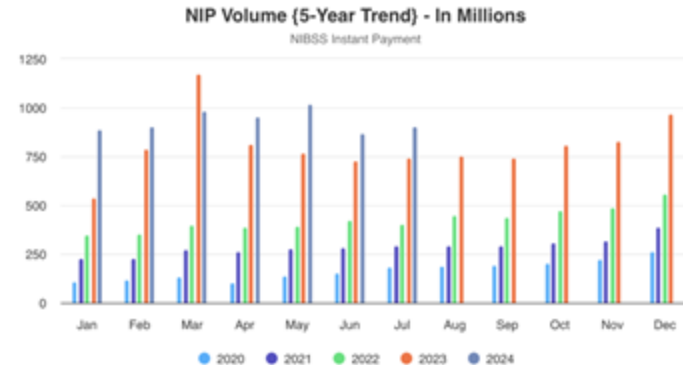
New solutions must be economically better than existing ones.

6th Principle - Economics will Determine Adoption

Incentives for consumers and private industry will either accelerate or slow adoption

The cost of using the new ways **must be lower** than the old ways for **all participants**.

New solutions must be economically better than existing ones.



Summary: Keys to Success

Three Building Blocks

National ID System / Framework



Instant "Free" Payments



Magic?

Summary: Keys to Success

Three Building Blocks

National ID System / Framework



Instant "Free" Payments



Magic?



Key Principles

- Reliable Infrastructure
- Adapted to local channels
- Open Access to Industry
- Tech Standards for data protection
- Leverage Private Sector to Stop fraud
- Aligned Economic incentives

Summary: Keys to Success

Three Building Blocks

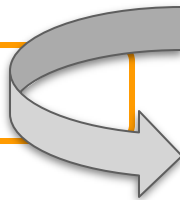
National ID System / Framework



Instant "Free" Payments



Good Policy



Key Principles

- Reliable Infrastructure
- Adapted to local channels
- Open Access to Industry
- Tech Standards for data protection
- Leverage Private Sector to Stop fraud
- Aligned Economic incentives

Panel Discussion



Mark Straub
CEO



Nael Hailemariam
CEO, Founder



Rahul Parthe
Co-Founder



Mosele Baruti
Bankers Association of Botswana

