



Nexus

A BIS Innovation Hub project
to improve cross-border payments

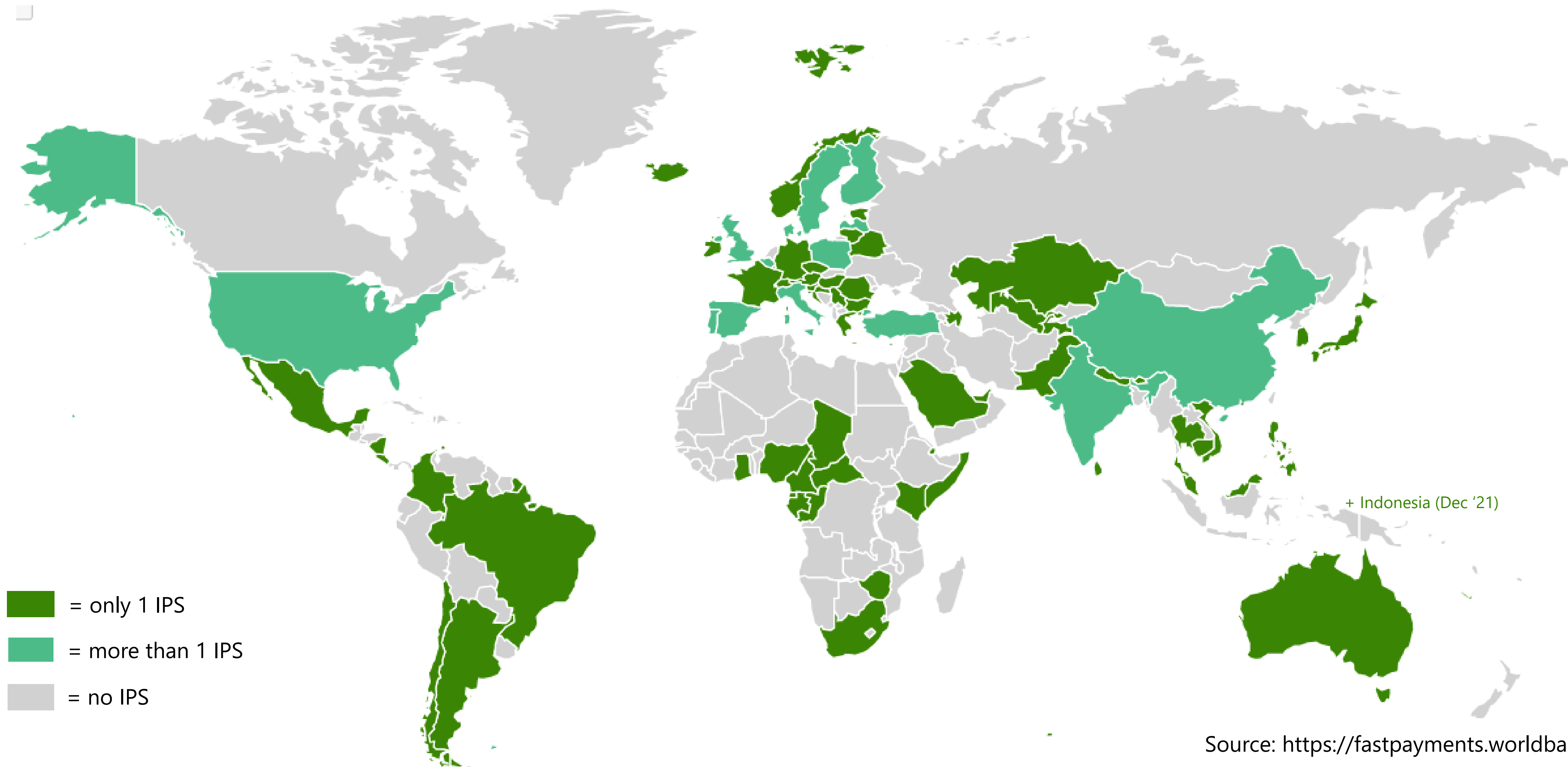
Nexus – Cross-border payments



- **Topic:** Linking instant payment systems across borders
- **History:** BIS Innovation Hub project, started late 2020
- **Why this is important to Mojaloop:** opens possibility of providing cross-border payments to many more countries, without relying on traditional correspondent banking
- **What is the Business Impact:** a new and faster way to send or receive remittances

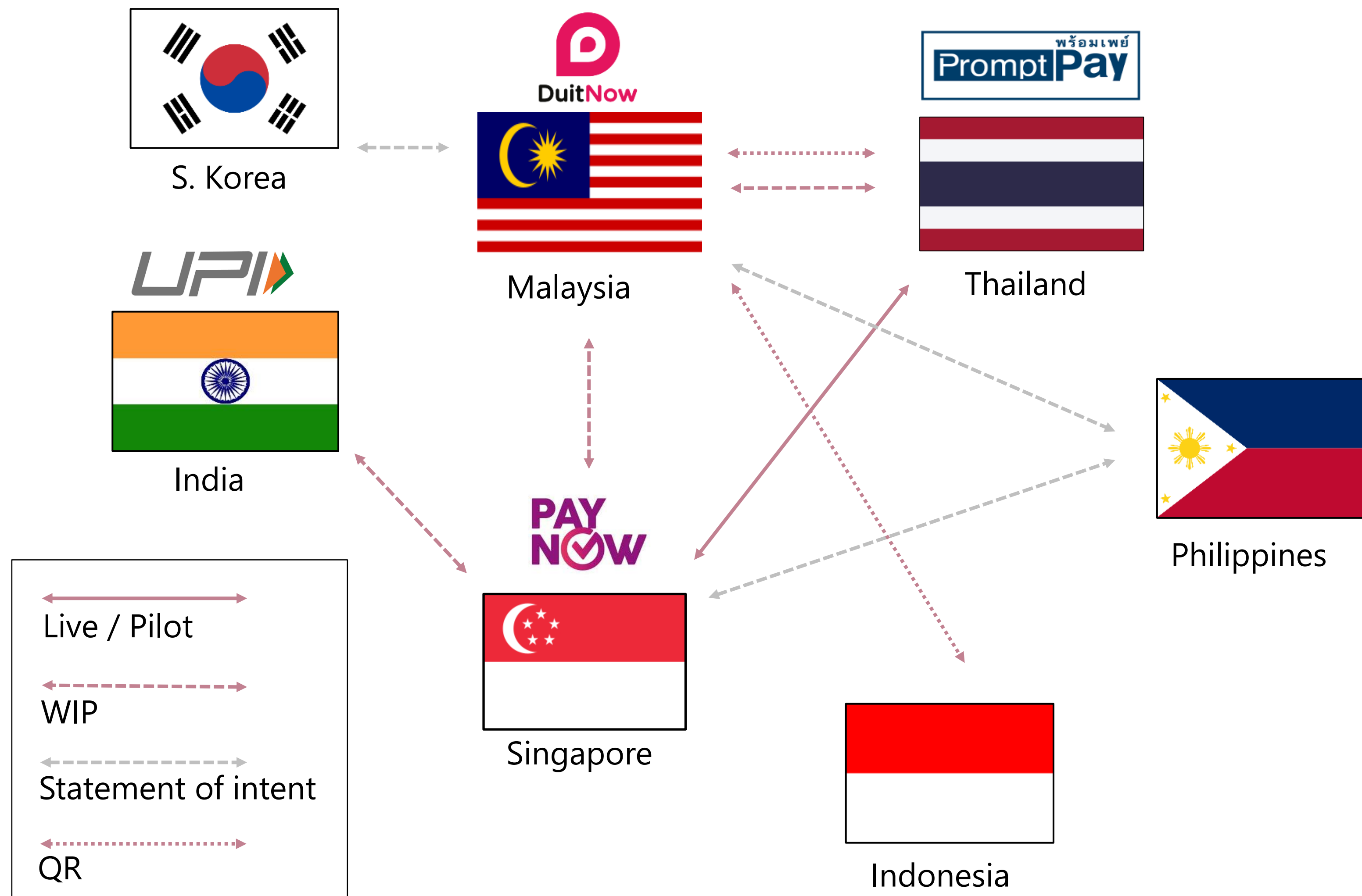
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Vision: Connecting up to 60 existing Instant Payment Systems

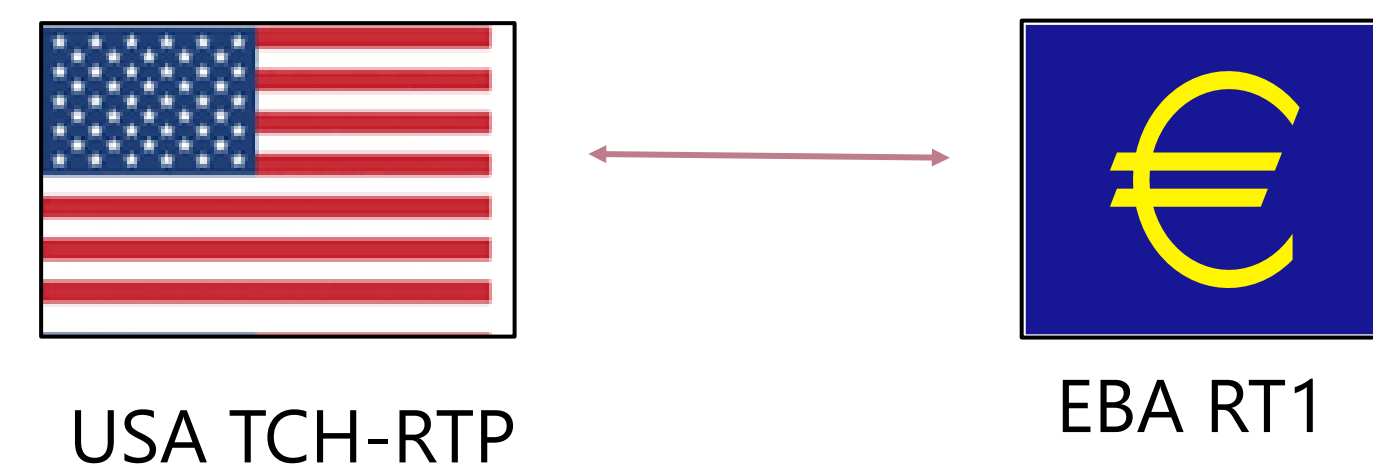


Source: <https://fastpayments.worldbank.org/>

Bilateral linkages are starting to happen...



- Multiple bilateral (country-to-country) initiatives underway
- Non-standard approaches

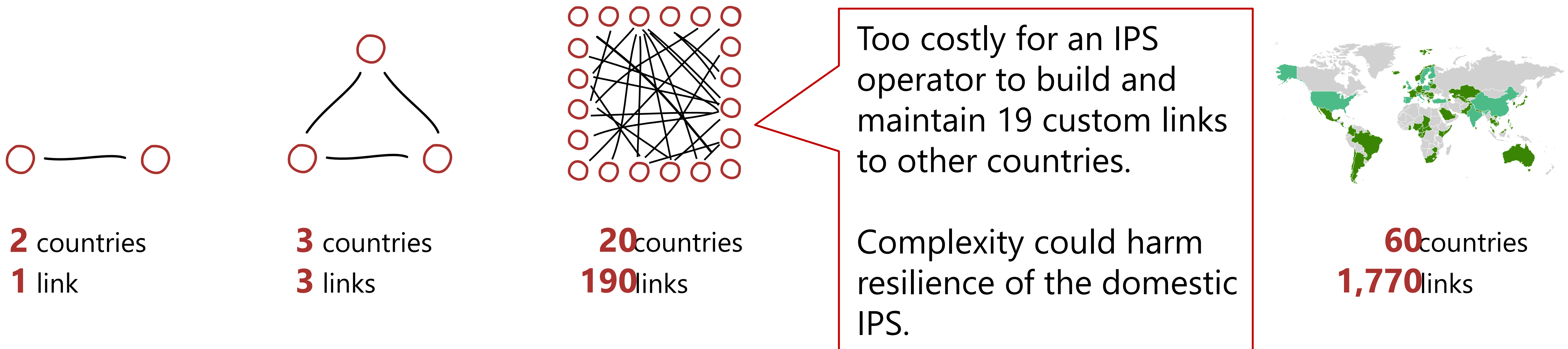


Obstacles to linking IPS

- Need to overcome differences between IPS designs:
 - **data formats**, standards and mandatory fields
 - **processes** and the sequence of steps in a payment process;
 - **scheme rules** around liability, disputes, data protection and privacy
 - **functionality**, including whether aliases are used and whether there is a confirmation of payee service.

So bilateral linking is not scalable

Gets harder and more complex as the network scales:

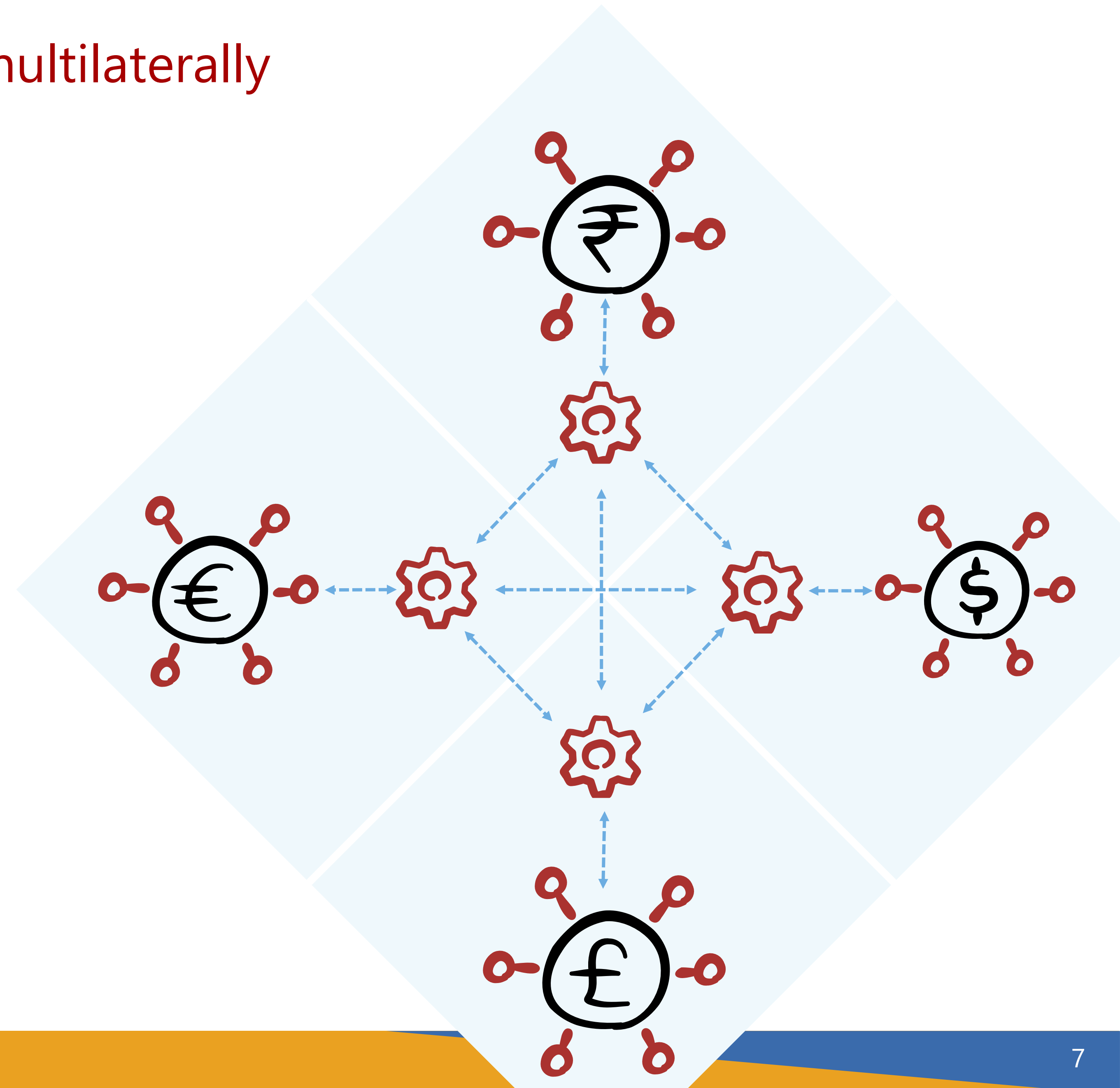


Leads to patchy networks between close trading partners, with majority of countries having no direct connection.

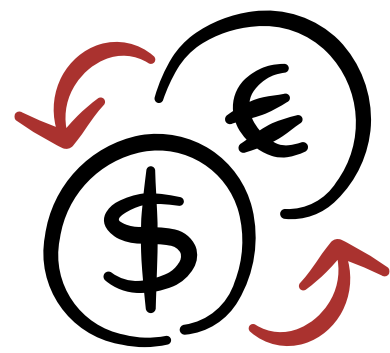
Number of links = $n(n-1) \div 2$ where n = number of countries

Nexus would connect multiple IPSs multilaterally

- Nexus **standardizes** the way IPSs connect, reducing complexity
 - Each IPS integrates **once**, to Nexus, and can then route payments to any other country in the network.
1. Each IPS runs a Nexus Gateway
 2. Domestic payments infrastructure is linked to the local Nexus Gateway
 3. Nexus Gateways speak to each other across borders



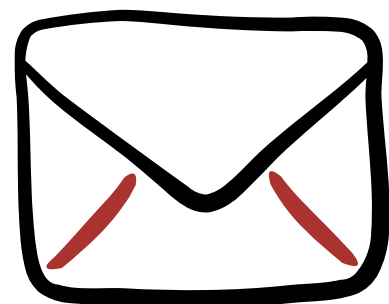
Key functions of Nexus



FX Conversion

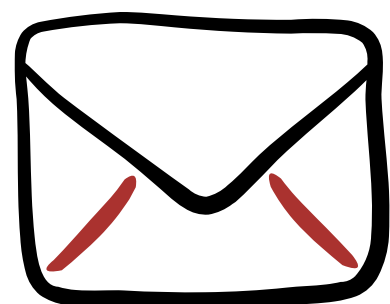
Competitive market of FX Providers

Nexus compiles current rates and provides them to banks/PSPs



Addressing & Proxy Lookup

Any domestic details are also valid through Nexus



Messaging

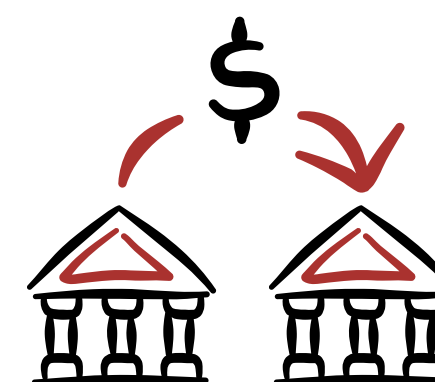
Coordinates process across 2 IPSs and handle failures



Supports sanction screening

Screening is still responsibility of PSPs.

Nexus tries to get verified information from PSPs (rather than from the Sender), reducing false positives and manual intervention

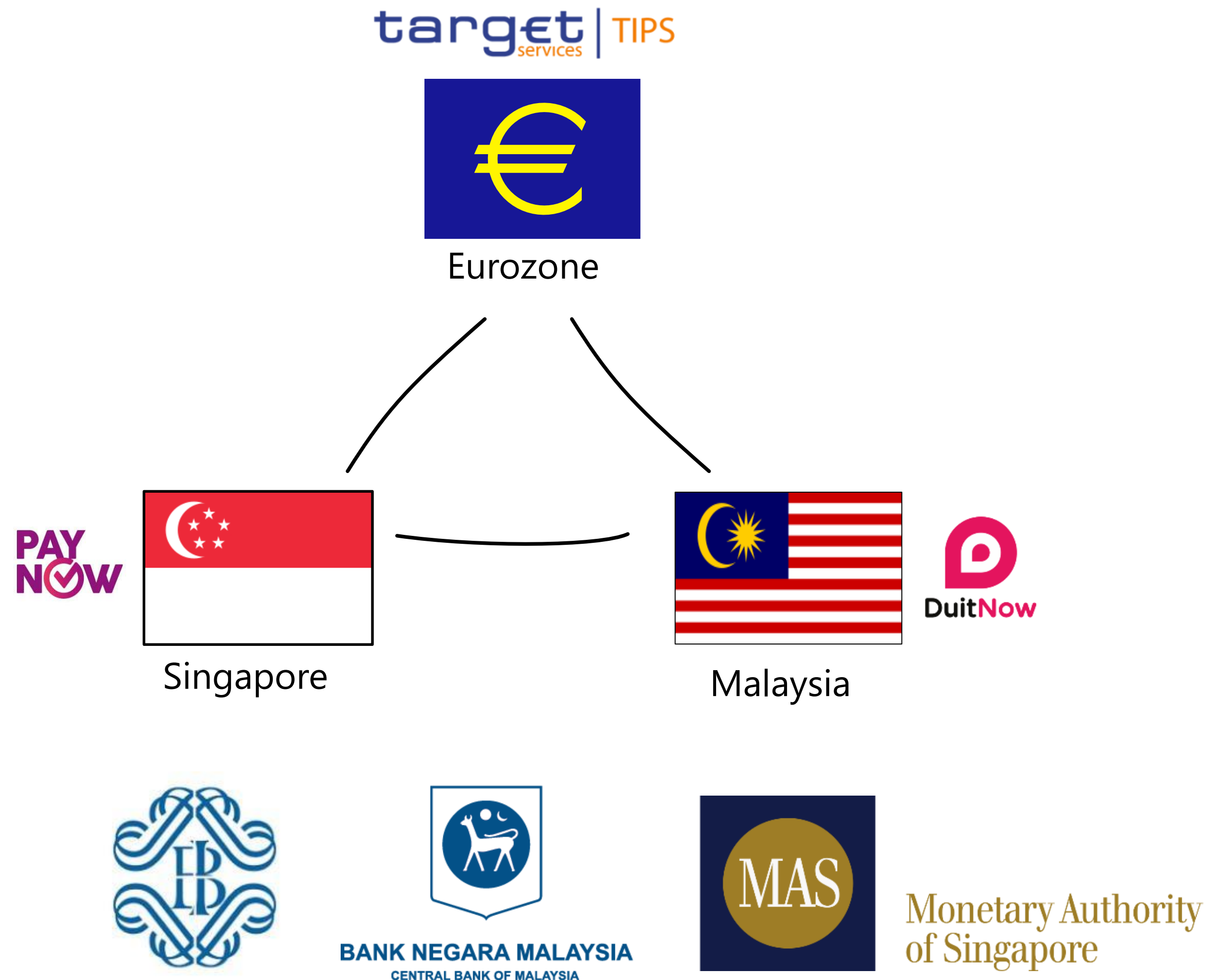


Settlement not required

Relies on existing IPS settlement processes and risk management

No reliance on central bank's RTGS

Technical Proof-of-Concept (Jan-Dec 2022)



Outputs

- **Technical standard** (open API specs, message specs, best practices)
- **Draft scheme** (rules and processes, filling gaps in domestic schemes)
- Working **software**, managing cross-border communication between IPSs