Uniting the region's payment systems to connect to the world

By Vanessa Gomes

In over 70 countries, domestic payments are completed in just seconds at minimal cost to both sender and recipient, thanks to the widespread adoption of instant payment systems (IPS).

But what if these IPS networks could seamlessly connect across borders? The potential is game-changing as it enables international transactions to be completed in under 60 seconds, with simplicity and speed.

Enter Project Nexus, which is a key initiative under the G20's Roadmap for Enhancing Cross-border Payments. It is tackling the complexity of linking IPS networks by creating a standardised, multilateral framework.

Progress is already evident. In 2021, Singapore and Thailand launched a cross-border payment connection, allowing transfers using just a phone number. Similar collaborations are happening in Southeast Asia and globally. Yet, building one-to-one links between countries is resource-intensive, requiring custom technical integrations and regulatory alignment each time.

Project Nexus offers a solution, which is a more streamlined and scalable approach to unite global payment systems, making instant cross-border transactions a reality for all.

Bank Negara Malaysia, alongside the Bank for International Settlements (BIS) and four other central banks, reached a milestone in July last year, advancing Project Nexus to its fourth stage and setting the stage for broader implementation.

Now, the project's participants — the BIS Innovation Hub (BISIH) and central banks from Malaysia, Singapore, Thailand, the Philippines and India — are operationalising the project for live usage and developing the Nexus technology solution.

The next phase also includes establishing the Nexus Scheme Owner (NSO) in Singapore to manage the system and full operations are expected by 2027.

The project has the potential to serve as a benchmark for other regions looking to improve their cross-border payment infrastructure. Its success could pave the way for a truly global network of instant cost-efficient cross-border payments and eliminate longstanding challenges, such as high costs, low speed and lack of transparency.

"As Nexus has global aspirations, we expect interest from countries to participate in Nexus will continue to grow. Thus far, we have welcomed Bank Indonesia and most recently, the European Central Bank, as special observers to explore potential participation in Nexus," says Bank Negara's assistant governor Suhaimi Ali.

The aim is to enhance the efficiency of IPS, such as DuitNow, for seamless cross-border transactions globally.

This means that rather than an IPS operator building custom connections for every new country to which it connects, the operator only needs to make one connection to Nexus. This single connection would allow the IPS to reach all other countries in the network.

The journey has not been without obstacles, such as obtaining commitment from all parties involved to ensure the project can be delivered smoothly and in a timely manner.

"From our bilateral linkage experience, early and active engagement with all stakeholders helps in establishing the appropriate business case, including in identifying the relevant payment corridors or use case to prioritise based on trade, tourism and remittance flows," says Suhaimi.

"Having strong public-private sector partnerships is also key to bringing Nexus to live implementation. While central banks such as Bank Negara can set the tone and vision for

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Nexus while fostering collaboration, the industry will be the one bringing the technical and commercial expertise to ensure this initiative is sustainable over the long term."

Managing differences in policy and regulatory frameworks, such as foreign exchange rules and anti-money laundering and combating the financing of terrorism (AML/CFT) measures, were also challenging as they vary across jurisdictions for cross-border payments. On top of that, with greater adoption of cross-border payment services, the risk profile of the arrangement is also heightened.

"In the case of Nexus, instead of settling for the minimum requirement for regulatory compliance across jurisdictions, it strives to ensure that its arrangement and participants can meet a higher bar on risk management, especially in regard to AML/CFT, fraud mitigation and dispute handling," Suhaimi explains.

"For example, in using Nexus, transactions will undergo AML/CFT sanction screening on a real time basis. This will ensure that the transactions are not only instant but are also safe from risks."

Nexus is also designed to support technologies or arrangements that could further enhance its compliance process. Automation of compliance processes through smart contracts is currently being explored, says Suhaimi, in a bid to reduce the operational burden in adhering to higher compliance standards in the future.

"Broadly, this approach will help to prevent a 'race to the bottom' and foster more effective risk management practices throughout its network, thus preserving trust and public confidence in the Nexus over the long term."

THE ECONOMIC POTENTIAL OF STRONG COLLABORATION

Nexus is poised to facilitate increased consumer spending and remittance flows between the participating nations as it provides faster, cheaper and more accessible cross-border payment options to both individuals and businesses.

For small and medium enterprises (SMEs), which account for more than 96% of all enterprises and contribute to between 50% and 85% of domestic employment in many Asean member states, the benefits are substantial. Easier access to international markets, reduced transaction costs and improved cash flow would allow SMEs to expand their global reach.

A vendor sets up a QR code for a Touch 'n Go payment system at her food stall in Brickfields, Kuala Lumpur

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This not only drives economic growth and job creation but also enhances the SMEs contribution to gross domestic product (GDP) — ranging from 30% to 53% — and exports, which account for 19% to 31% across the region.

"The project has the potential to significantly boost financial inclusion and economic growth in the region. For instance, currently migrant workers from Indonesia and the Philippines rely on costly remittance services to send money home to their families," says KPMG Malaysia's head of financial services Kevin Foo.

"By offering cheaper and quicker cross-border remittance options, Project Nexus could help ensure that a larger portion of their hard-earned income reaches their loved ones, ultimately improving livelihoods and boosting regional economic activity," he says.

Like any payment system, technological challenges must be addressed to ensure its success. The foremost priority is achieving interoperability among diverse national payment systems while adhering to varying regulatory and security standards.

Foo explains that the systems must be designed to scale effectively and accommodate increasing transaction volumes while maintaining low latency and high performance.

"Legacy technologies within certain countries may pose challenges, as they will require upgrades and integration of sophisticated fraud prevention measures that are essential to safeguard cross-border transactions. Real-time currency conversion and the development of robust dispute resolution frameworks across jurisdictions add layers of complexity to the project," he says.

"Ultimately, users' experience will determine the success of Project Nexus. Ensuring a seamless, intuitive and consistent user experience across all participating countries will be key to driving adoption and achieving its objectives."

While some countries have already taken steps to ensure the security of their domestic payment systems, the immediate challenge now lies in fostering international collaboration to ensure a consistent, if not higher, level of security is standardised across all participating countries.

Some countries have also implemented end-to-end encryption for data protection — another approach that can be scaled regionally. Strong authentication mechanisms, coupled with advanced fraud detection systems utilising artificial intelligence (AI) and machine learning, are critical for preventing unauthorised access and detecting suspicious activities.

To safeguard the expanding payment systems, it is essential to develop robust comprehensive regulatory frameworks, including adopting leading international standards. The International Organization for Standardization (ISO) issues several standards relevant to the security of payment systems, including ISO 20022 for electronic data interchange and ISO 8583 for card-based transaction exchanges, which can be considered, says Foo.

"At KPMG, our Zero Trust framework advocates for the principle of 'never trust, always verify'. This would involve rigorous identity verification via strong authentication mechanisms, enforcing least privilege access, and employing micro-segmentation to protect every transaction within the payment ecosystem," he adds.

In general, upgrading both software and hardware, as well as technological connectivity and infrastructure, are essential to meet the evolving demands of modern payment systems. Foo explains that software requires continual updates for improved security measures, interoperability, processing efficiency and integration of advanced technologies like AI for fraud detection.

For hardware, increased transaction volumes calls for expanded data processing and storage capacity, as well as more robust networking equipment. System redundancy and energy efficiency are also key considerations for hardware to ensure reliability and cost-effectiveness.

"To ensure uptime, it is paramount to provide continued services and maintain customer trust in modern payment systems. As these systems evolve, they must be designed with redundancy and failover mechanisms to prevent service disruptions. This is integral to software maintenance and hardware resilience, which are crucial to system availability," says Foo.

"To meet the increasing user demands, scaling up networking infrastructure is crucial. Providing sufficient bandwidth is essential to handle growing transaction volumes without performance degradation. This ensures a seamless user experience by mitigating bottlenecks that could otherwise impact the speed and reliability of payment transactions."

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