

Take 5

for business

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Setting a strategy
for Digital Public
Infrastructure
(DPI)

EY

Building a better
working world

Setting a strategy for Digital Public Infrastructure in Malaysia

Today's rapidly evolving digital landscape has elevated the priorities of governments on digital public infrastructure (DPI). The urgent focus on DPI is catalyzed by the scale and scope of national digital transformation, which demand the optimization of opportunities in advancing sustainable innovation.

Designing a comprehensive and robust DPI technology platform with governance frameworks, and public and private collaborations can boost the national development growth curve as experienced by India through its raising of bank account ownerships and by Singapore through its acceleration of business approval rates.

Malaysia's nascent DPI journey includes digital initiatives such as the development of MyDigitalID, DuitNow QR and recently, the Central Database Hub (PADU). For better system integration, there is scope for Malaysia to adopt a coordinated "whole of economy" approach with strategic alliances among stakeholder groups from the public and private sectors, including government ministries and agencies, businesses including those involved in financial services and utilities, as well as relevant sectors and communities.

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The design of Digital Public Infrastructure should aim for a trusted and secure digital ecosystem, which facilitates interactions between individuals and businesses across markets and borders, driving sustainable economic growth, and reshaping both public and private sector activities for the better.



Chow Sang Hoe
Malaysia Consulting Leader,
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DPI unlocks new opportunities, drives innovation and spurs digital transformation



1 Data exchange

Facilitates interoperability between organizations, the democratization of use case development and digital transformation at national scale.

2 Digital payment

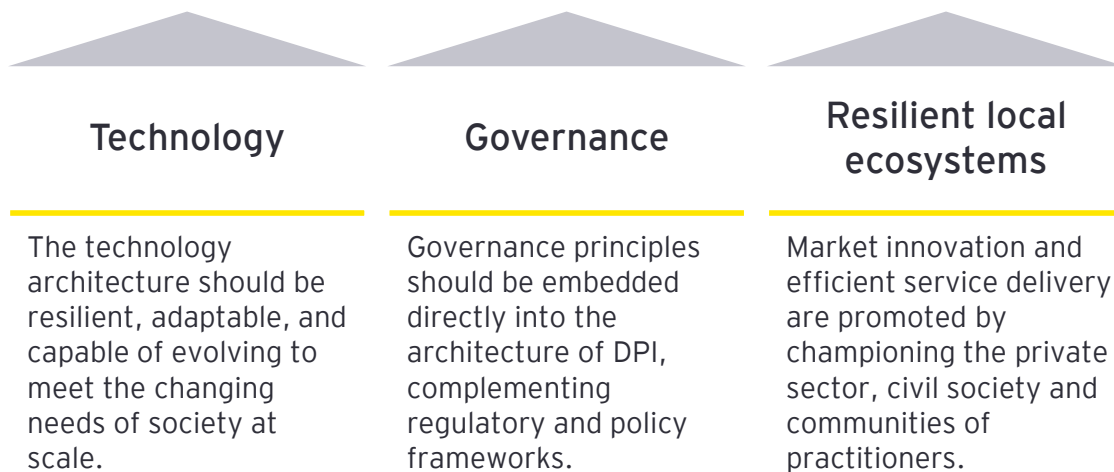
Enables use cases through digital financial transactions, providing benefits such as greater financial inclusion and increased trust and convenience in financial services.

3 Digital identity

Allows individuals to access and interact with digital services online in a trusted, secure and convenient manner.

Transforming the public sector with DPI

DPI principles facilitate digital transformation by addressing the challenges faced by governments in tackling global issues. The principles of DPI are intended to drive market innovation and collaboration between public and private players.



DPI can help address the current challenges faced by governments in technology, governance and sustainability, as outlined below:

Technology	<ul style="list-style-type: none"> ▶ High-cost, closed-loop solutions that create barriers for integration ▶ Power concentrations in private entities or the state ▶ Reinforcement of the digital divide, which exclude communities of end-users ▶ Limited protection against harm for users
Governance	<ul style="list-style-type: none"> ▶ Absence of supportive legislation and policy environments for digitalization efforts ▶ Unilateral procedures in setting regulations ▶ Lack of transparency in internal mechanisms for the governance of digital solutions
Sustainability	<ul style="list-style-type: none"> ▶ Lack of well-planned and regulated cybersecurity infrastructure ▶ No clarity on the sources of funding to sustain the long-term use of digital solutions ▶ Unilateral implementation

Sources:

- ▶ EY analysis
- ▶ The DPI Approach - A Playbook, August 2023, United Nations Development Programme (UNDP)

DPI: Features and benefits

DPI features enable a vista of opportunities for governments, communities and businesses:



Data exchange: A standardized set of protocols and guidelines that enable the secure, interoperable and seamless sharing of data across different systems and services.



Digital payment: A foundational platform that supports the frictionless and low-cost electronic transfer of money between parties through digital channels.



Digital ID: Provides individuals with a unique ID that can be used to verify their identity digitally during service access in a secure, auditable way, via robust authentication and data protection protocols.

Benefits of DPI

Data exchange

- ▶ Enables seamless data sharing and integration between different systems and services data through interoperability.
- ▶ Drives innovation through informed decision-making leveraging shared data.
- ▶ Promotes trust and transparency between governments and individuals through enhanced data governance.
- ▶ Empowers individuals by ascribing data ownership, enabling them to decide what data to share and with whom.

Case study: United Kingdom (UK)

UK's Open Banking framework: Connects banks, fintech companies and technical providers with over 9 million UK consumers and businesses, to help them ultimately take control of their finances.

Digital payment

- ▶ Facilitates access to banking services for the unbanked and underbanked populations.
- ▶ Reduces the cost and time of transactions.
- ▶ Stimulates overall economic activity by increasing the velocity of money and enabling new business models.
- ▶ Puts the brakes on corruption by enabling transparent transactions and enhancing fraud and money laundering detection.
- ▶ Increases countrywide sovereignty by reducing dependency on international payment networks.

Case study: India

Unified Payments Interface (UPI): A real-time payment system facilitating inter-bank transactions, enabling Digital Payments, Direct Benefit Transfers (DBTs) and subsidy distribution by the government to citizens which saved approximately US\$32.5b in leakages.

Digital identity

- ▶ Increases coverage and inclusion, granting access to public welfare and services.
- ▶ Allows for the efficient and direct distribution of social welfare and assistance.
- ▶ Reduces fraud and scams during digital transactions.
- ▶ Enhances efficiency in public administration processes.

Case study: Singapore

Singpass has four key elements that drive its nationwide adoption:




- ▶ Contains up-to-date demographic user data, shared among public agencies.
- ▶ Fully remote enrollment, allowing convenient and secure adoption.
- ▶ Access to a centralized biometric store (Identiface) where higher security authentication is required.
- ▶ Facilitates interoperability with the private sector through Open Application Programming Interface (APIs), enabling seamless access to over 2,000 services.

Sources:

- ▶ Financial Inclusion Framework 2023 - 2026: Strategy Paper, June 2023, Bank Negara Malaysia (BNM)
- ▶ Co-Develop: Digital Public Infrastructure for an Equitable Recovery, August 2021, The Rockefeller Foundation

DPI: Malaysia and global exemplary initiatives

Malaysia has commenced DPI initiatives and continues to elevate national digital strategies in line with global best practices:

	Malaysia	Other countries
 <p>Data exchange</p>	<p>Malaysia's data exchange frameworks:</p> <ul style="list-style-type: none"> ▶ MyGDX: Central government data exchange platform enabling data sharing across public agencies. Scope of data is limited to the administrative data of citizens ▶ PADU: Central database system aggregating administrative data from multiple public agencies, enabling citizens to verify and amend data accordingly 	<p><u>Open banking</u></p> <ul style="list-style-type: none"> ▶ United Kingdom (UK): UK's Open Banking ecosystem streamlines lending assessments and expedites decision-making <p><u>Health data hub</u></p> <ul style="list-style-type: none"> ▶ France: France's health data hub offers a unified platform that aggregates administrative data from various sources e.g., hospitals, insurance providers and research institutions <p><u>Climate action</u></p> <ul style="list-style-type: none"> ▶ Global: Global Forest Watch prevents unsustainable deforestation using geospatial data for real-time alerts
 <p>Digital payment</p>	<p>Malaysia's digital payment landscape is diverse</p> <ul style="list-style-type: none"> ▶ DuitNow Transfer: Supports real-time funds transfers between accounts or DuitNow IDs ▶ DuitNow QR: National QR standard to enable transfers between participating banks and e-wallets ▶ JomPAY: National bill payments system, accessible via mobile and internet banking 	<p><u>Centralized digital payment system</u></p> <ul style="list-style-type: none"> ▶ India: Account aggregators built on "Aadhaar" enable better interoperability among banks, as well as easier registration and authentication ▶ Singapore: PayNow is central to Singapore's digital payments, backed by Singapore Digital, a nationwide movement to unify Singapore's digitalization efforts <p><u>Cross-border transactions</u></p> <ul style="list-style-type: none"> ▶ India and Singapore: UPI-PayNow enables collaborative payments processing to improve cross-border funds transfers via an open APIs
 <p>Digital identity</p>	<p>Malaysia's Digital ID to access public sector services</p> <ul style="list-style-type: none"> ▶ MyDigitalID <ul style="list-style-type: none"> ▶ Digitizes existing MyKads via a self-registration kiosk, without storing user data ▶ Enables two-factor authentication and single-sign on for public sector service access 	<p><u>Public services access</u></p> <ul style="list-style-type: none"> ▶ Australia: myGovID app allows secure access to participating government online services <p><u>Electronic identification</u></p> <ul style="list-style-type: none"> ▶ Sweden: BankID offers a personal electronic identification system for bank login, e-government login and access to medical records

Sources:

- ▶ Accelerating the SDGs through Digital Public Infrastructure, August 2023, UNDP
- ▶ EY analysis

DPI: Market opportunities for financial services

National-scale DPI comprises at least three foundational components, e.g., data exchange, digital identity and digital payment, which can build on other value-adding products and services. DPI has the potential to unlock new opportunities, drive innovation and spur digital transformation with financial services as a key beneficiary in the following areas:

- ▶ Digital sustainable environment
- ▶ Digital mobility
- ▶ Digital commerce
- ▶ Digital finance
- ▶ Digital education and skilling
- ▶ Digital agriculture
- ▶ Digital health
- ▶ Digital government

DPI opportunities for financial services

The components of DPI can help financial services explore opportunities in areas such as:



Source: The DPI Approach - A Playbook, August 2023, UNDP

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For better system integration, there is scope for Malaysia to adopt a coordinated "whole of economy" approach with strategic alliances among stakeholder groups from the private and public sectors.



Shankar Kanabiran
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Moving forward

Strategic alliances among public and private stakeholders are integral in advancing Malaysia's national digital transformation. Importantly, the successful implementation of DPI in financial services can extend to numerous sector opportunities.

Key considerations include:

1

Unifying national data standards for sourcing, storage, exchange, integration, security and privacy to address the fragmentation of data protocols.

2

Ensuring consultation with key stakeholders from the various sectors such as financial institutions to ensure the solutions meet industry requirements.

3

Introducing regulations and incentives to drive private sector participation and data sharing, with focus on the health and financial services sectors.

4

Optimizing the functions of the payments network is key as it matures; lowering the barriers to entry for new financial institutions, consumers, and merchants alike.

5

Establishing a robust communication strategy to prevent 'panic-messaging' and ensuring the development of a trustworthy brand, which inspires confidence in private players and end users.

6

Enhancing accessibility via multiple modes of access and more robust telecommunications architecture in underserved regions.

7

Promoting the inclusion of senior citizens and SMEs, through digital and financial literacy programs to build their trust in digital financial systems.

8

Enhancing the trust framework and cybersecurity protocols to build public trust and drive adoption.

Source: EY analysis

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