

Pathways to digital transformation and trade digitalization

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Content

- **Asia-Pacific Digital Transformation Report**
 - Pathways to digital transformation and AP-IS
- **Digital Trade and Investment for Sustainable Development Report**
 - Evolving digital trade regulations in Central Asia and implications
- **Asia-Pacific Trade Facilitation Report 2024 (ADB/ESCAP)**
 - Accelerating cross-border paperless trade and CPTA

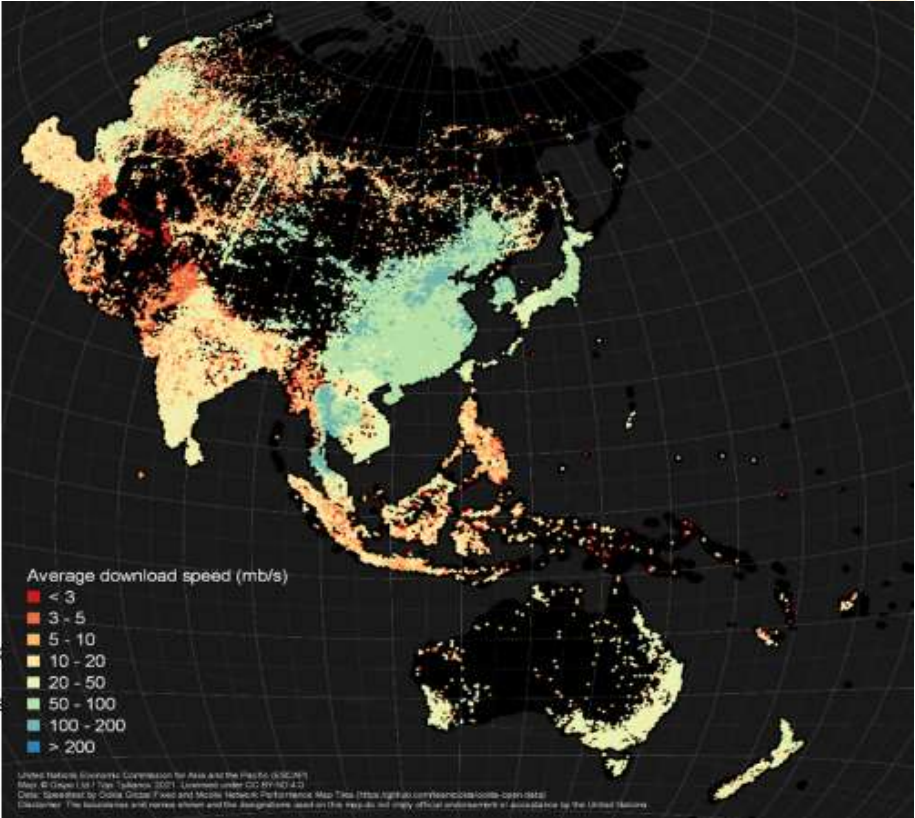
ESCAP Asia-Pacific Digital Transformation Report



Chapter 1: COVID-19 detonates a digital big bang




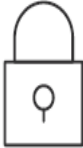

Internet download speed

Note: Map prepared by Gispo Limited based on Speedtest by Ookla Global Fixed and Mobile Network Performance Map Tiles for ESCAP. Disclaimer: The boundaries and names shown here and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



Chapter 1: COVID-19 detonates a digital big bang

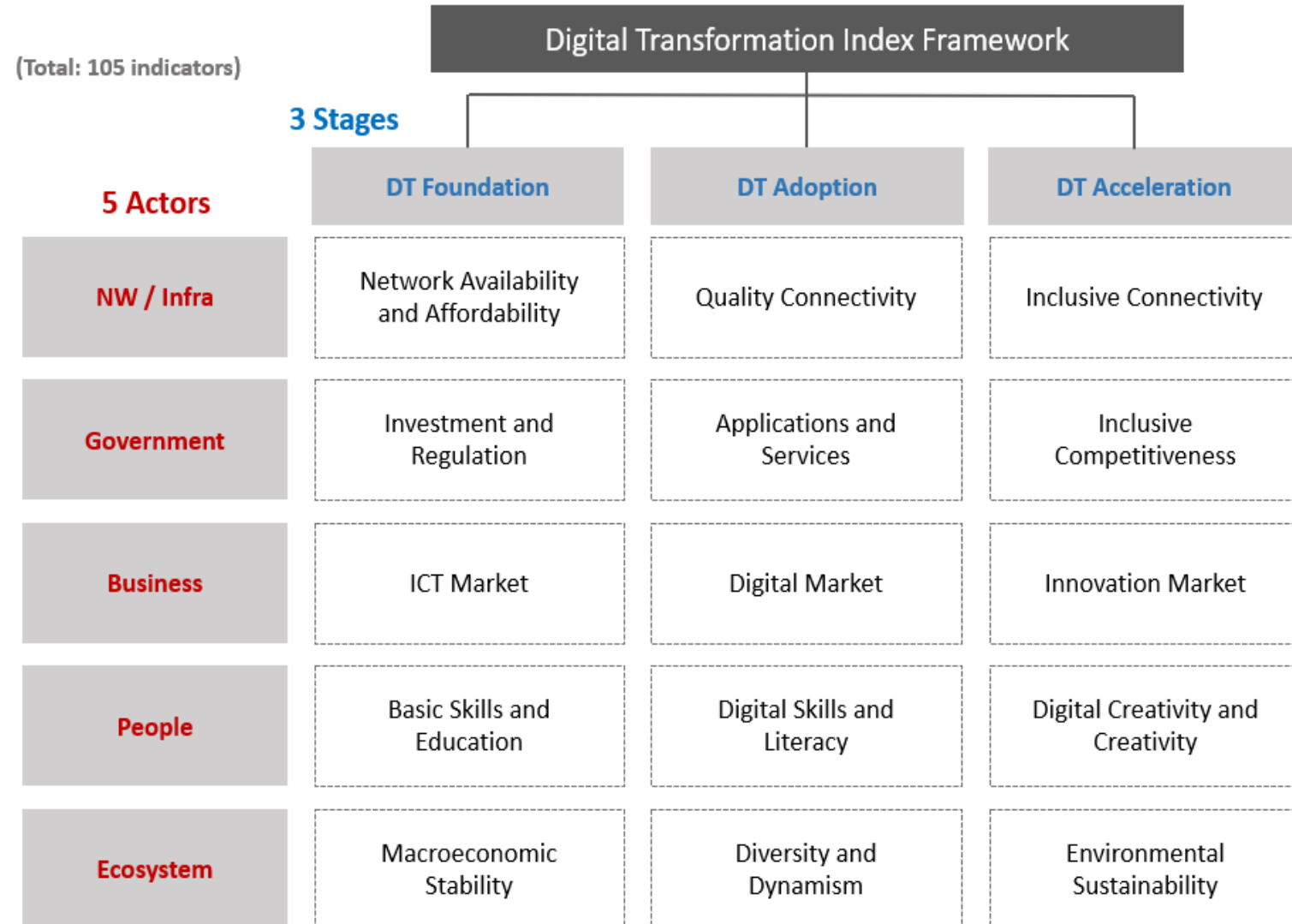
- The big bang has widened the digital divide.
- **Businesses and people without reliable Internet connections and the necessary digital skills are being denied of the opportunities of a digital economy.**

Affordability	Knowledge and digital skills	Relevance	Safety and security	Access
				
Individuals cannot afford devices, data plans or other service fees.	People are unaware of mobile internet and its benefits or do not have the necessary skills to use digital technology.	Local digital ecosystems are underdeveloped, and there is a lack of content, products and services that meet user needs and capabilities.	Individuals and communities are concerned about the negative aspects and risks of the internet, such as harassment, theft, fraud and online security.	Individuals do not have access to networks and enablers, such as electricity and formal IDs, or devices and services are not accessible enough.

Source: GSMA (2021) The State of Mobile Internet Connectivity Report

Chapter 2: The Asia-Pacific Digital Transformation Landscape

- Assessment tool to understand status, capacity, gaps and progress of digital transformation correctly
- Digital transformation framework contains three different stages: **Foundation, Adoption, and Acceleration.**
- For each stage, **5 actors** are included on (1) Network and infrastructure operators; (2) government; (3) Business; (4) People; and (5) Ecosystem.
- Total 15 domains and 105 existing indicators from global organizations such as WEF.



Chapter 2: The Asia-Pacific digital transformation landscape

The digital transformation of each country has different drivers and actors

Selected Asia-Pacific Countries	Indicators identify the drivers
Singapore	Government : Business and government investment & Government effectiveness
Republic of Korea	Network: Days to get electricity, Internet users, Smartphone penetration
China	Business: High-tech exports & Number of tech unicorns
Malaysia	People: Pupil-to-teacher ratio in primary education & skills of future workforce
India	Business: Number of tech unicorns Ecosystem: Renewable energy regulation & environmental treaties in force
Philippines	People: Ease of finding skilled employees Ecosystem: GDP per unit of energy use
Viet Nam	Network: Average mobile latency & Fixed-line broadband affordability

Chapter 3: Governing digitally

- A central driver of the digital transformation is **e-government services (i.e. Digital Public Infrastructure)**:
- E-government has far-reaching potential, such as:
 - (1) Strengthen national competitiveness,
 - (2) Improve productivity of industry,
 - (3) Provide values, services and trust that people want and that reach all
- **Consider PPP**: Partnership with private sector can bring finance and new solutions

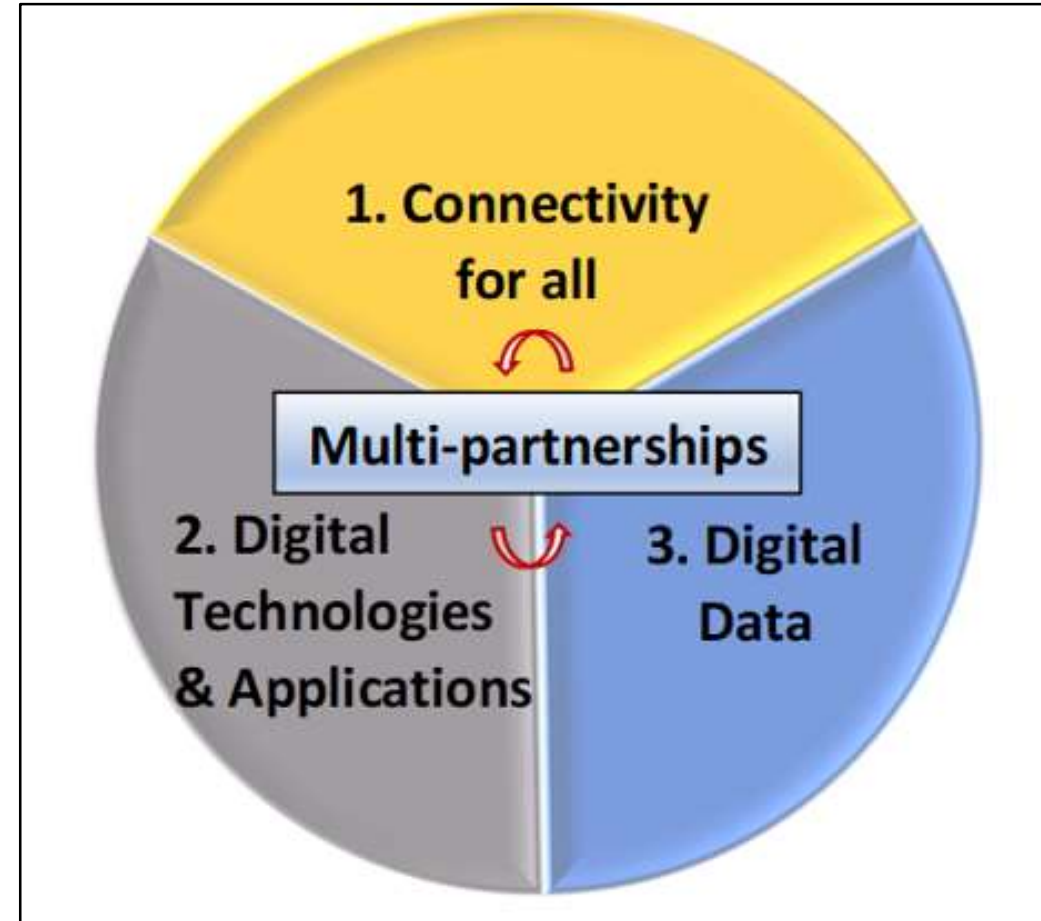
E-Government Development Index rankings, Asia-Pacific countries (top 10), 2020	Global rank	E-Gov Dev Index
Republic of Korea	2	0.96
Australia	5	0.94
New Zealand	8	0.93
Singapore	11	0.92
Japan	14	0.90
Kazakhstan	29	0.84
China	45	0.79
Malaysia	47	0.79
Türkiye	53	0.77
Thailand	57	0.76

Source: UNDESA, E-government Survey 2020.

Chapter 4: Shaping Our Digital Future

- **Digital transformation** aims at **strengthening national competitiveness, boosting the productivity of business and manufacturing, and providing people with new values and services**, while opening up opportunities.
- The **challenge now is to shape new regulatory and policy regimes and frameworks for our inclusive digital future.**
- Asia-Pacific Information Superhighway (AP-IS) action plan 2022-2026 provides overarching framework and regional platform for implementation of actions along 3 digital transformation pathways

Framework of the AP-IS Action Plan



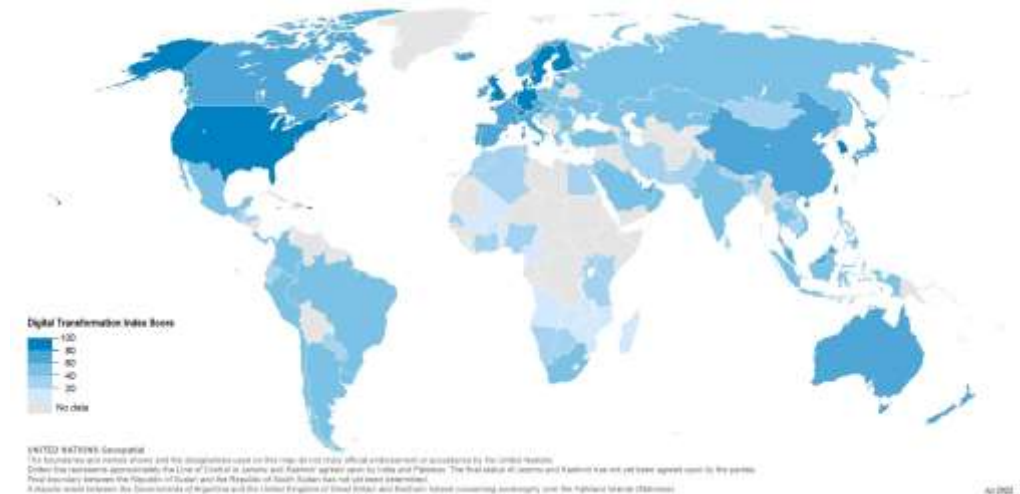
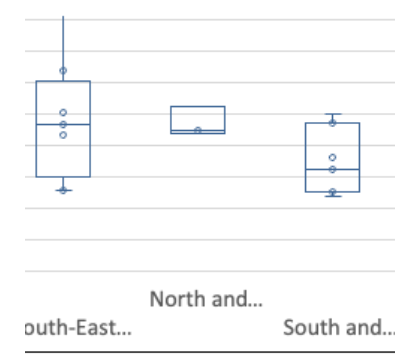
Chapter 4: Shaping Our Digital Future

Three pathways on digital transformation for Asia and the Pacific

Pathways	Policy solutions linked to the AP-IS action plan 2022-2026
Pathway 1: Infrastructure networks and connectivity	<ul style="list-style-type: none">• Co-deployment and infrastructure sharing• Internet Exchange Points• Fair, transparent and rational spectrum policies• Universal service funds• Enhancing resilience of ICT infrastructures to natural disasters (e-resilience)
Pathway 2: Digital technologies and applications	<ul style="list-style-type: none">• Boosting demand through cheaper devices• Leveraging frontier technologies for sustainable development• Digital government and digital economy• Skills for government officials• People-centric skills development• Foundational skills• Ensuring gender equality• An inclusive digital society that takes account of disabilities
Pathway 3: Data about data	<ul style="list-style-type: none">• Evolving principles for data sharing• Data privacy and protection• Establishing digital identities• Addressing data gaps in CSNs

Digital Infrastructure Connectivity Priorities

- Integrate frontier technologies and promote innovative and efficient use of Universal Service Funds (USF) for ICT infrastructure development
- Strengthen e-resilience to disaster risks through SMART (Scientific Monitoring And Reliable Telecommunications) fiber-optic cable systems
- Promote policies for co-deployment of ICT infrastructure with other infrastructures such as transport and energy connectivity
- Improve digital connectivity between rural products and urban markets (smart villages)
- Promote Internet quality and digital connectivity in the subregions through subregional Internet Exchange Points (IXPs)



Digital Technology Applications Priorities

- Enhance awareness and policymaking capacity for ICT infrastructure resilience
- Promote awareness and capacity on digital transformation, including the development of an assessment framework
- Promote strategy for digital transformation and diverse digital solution packages for policymakers to address challenges in digital transformation
- Promote digital policies, strategies, and roadmaps for inclusive and sustainable development
- Strengthen regulatory policies for digital innovative businesses in the framework of public-private partnerships (PPPs)
- Promote digital and frontier technologies for sustainable development



China's Alipay and Wechat Pay

- These mobile payment platforms have revolutionized the way people make transactions, enabling cashless payments for millions of users and businesses across the country.



Kazakhstan's e-Justice

- Kazakhstan has implemented an electronic justice system that allows citizens to access court services online, improving transparency and efficiency in the legal system.

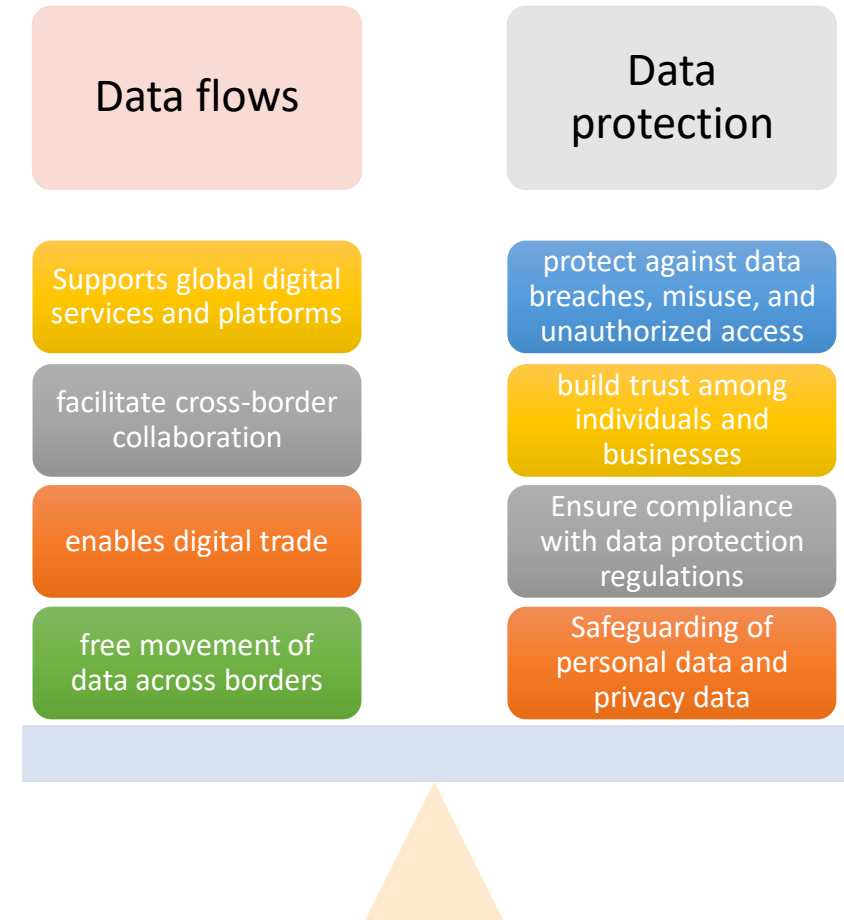


Uzbekistan's e-Visa

- Uzbekistan has introduced an electronic visa system that simplifies the visa application process for foreign visitors, boosting tourism and business travel to the country.

Digital Data Priorities

- Promote integrated management systems of public data for e-government services, particularly in countries with special needs
- Promote the sharing of digital and statistical data among public sector organizations
- Enhance digital knowledge and skills on access to and use of digital content and services, particularly for women and other vulnerable groups
- Strengthen digital literacy and skills of government officials on improved use of digital data among ministries
- Enhance capacity on data privacy and protection



Synergies between AP-IS and CAREC Digital Strategy 2030

- They share common objectives and priorities, providing opportunities for collaboration and synergy. The AP-IS initiative can support the implementation of the CAREC Digital Strategy 2030 through the following areas of cooperation:

Area of Collaboration	AP-IS Initiative	CAREC Opportunity
Digital Infrastructure Connectivity	Promote co-deployment of ICT infrastructure with transport and energy infrastructures (Action 4)	Accelerate the rollout of fiber-optic networks, 5G, IXPs, and data centers by adopting dig-once policies and leveraging existing infrastructure
Cross-Border Data Flows	Enhance capacity on data privacy and protection (Action 24)	Establish harmonized data governance frameworks and promote regional cooperation on data privacy and protection
Digital Transformation and Applications	Promote awareness and capacity on digital transformation, including the development of an assessment framework (Action 11)	Develop a regional framework for assessing and monitoring digital transformation progress in CAREC countries (including using Regional Digital Trade Integration Index [RDTII] framework)
Capacity Building and Knowledge Sharing	Strengthen digital literacy and skills of government officials on improved use of digital data among ministries (Action 23)	Establish a CAREC Digital Skills Partnership to train policymakers, regulators, and trade officials
Digital Connectivity Financing	Promote innovative and efficient use of Universal Service Funds (USF) for ICT infrastructure development (Action 2)	Explore innovative financing mechanisms and public-private partnerships to support digital connectivity projects in CAREC countries
Digitalization of Trade	Strengthen the role of digitalization in other sectors such as economy, trade, transport (Action 18)	Advance implementation and interoperability of single window systems, including through the regional UN treaty on facilitation of cross-border paperless trade in Asia and the Pacific [CPTA]

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Unleashing digital trade and investment for sustainable development – APTIR 2023/24

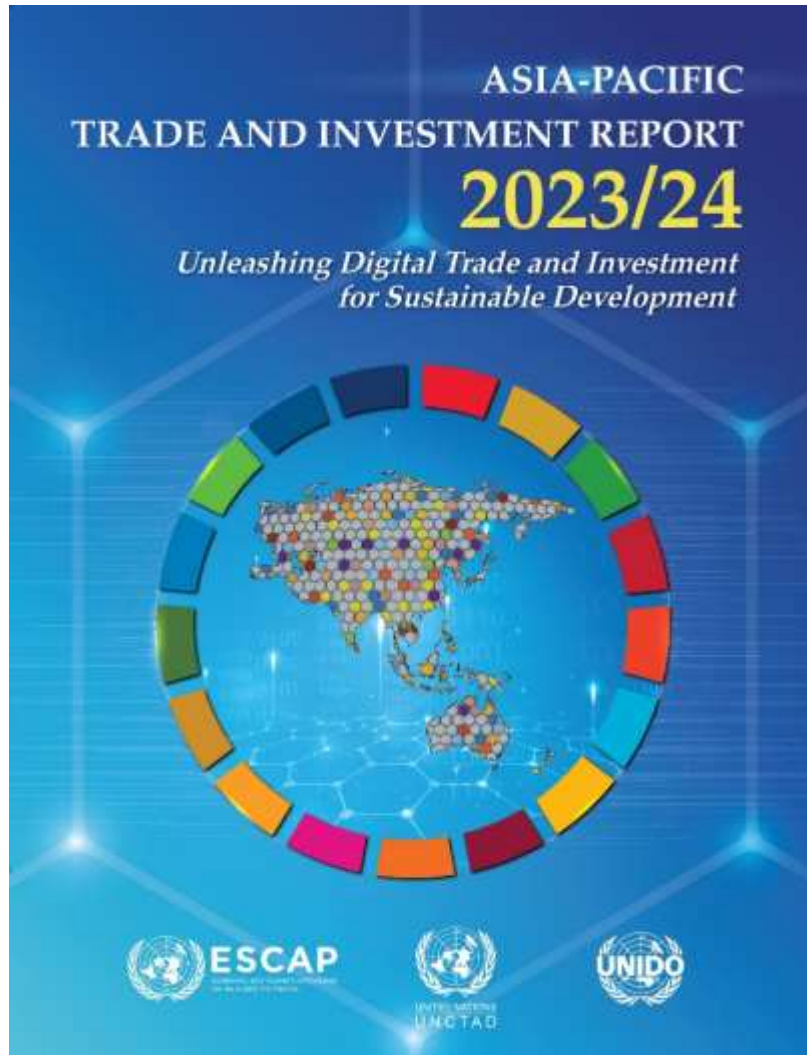
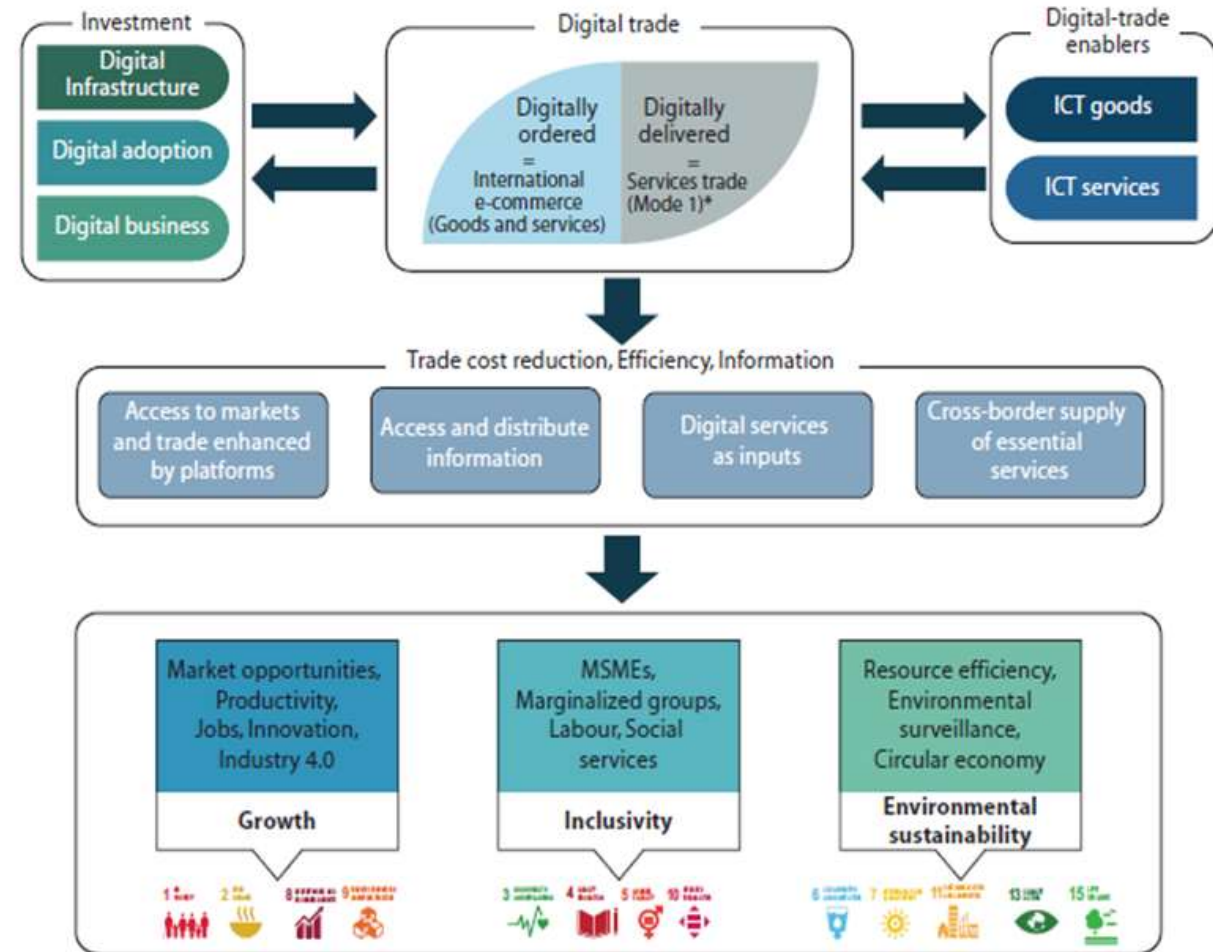


Figure 1. Digital trade and SDGs



Source: ESCAP

Digital trade and investment trends

Digital trade in Asia-Pacific has been growing rapidly, driven by dynamic intraregional demand.

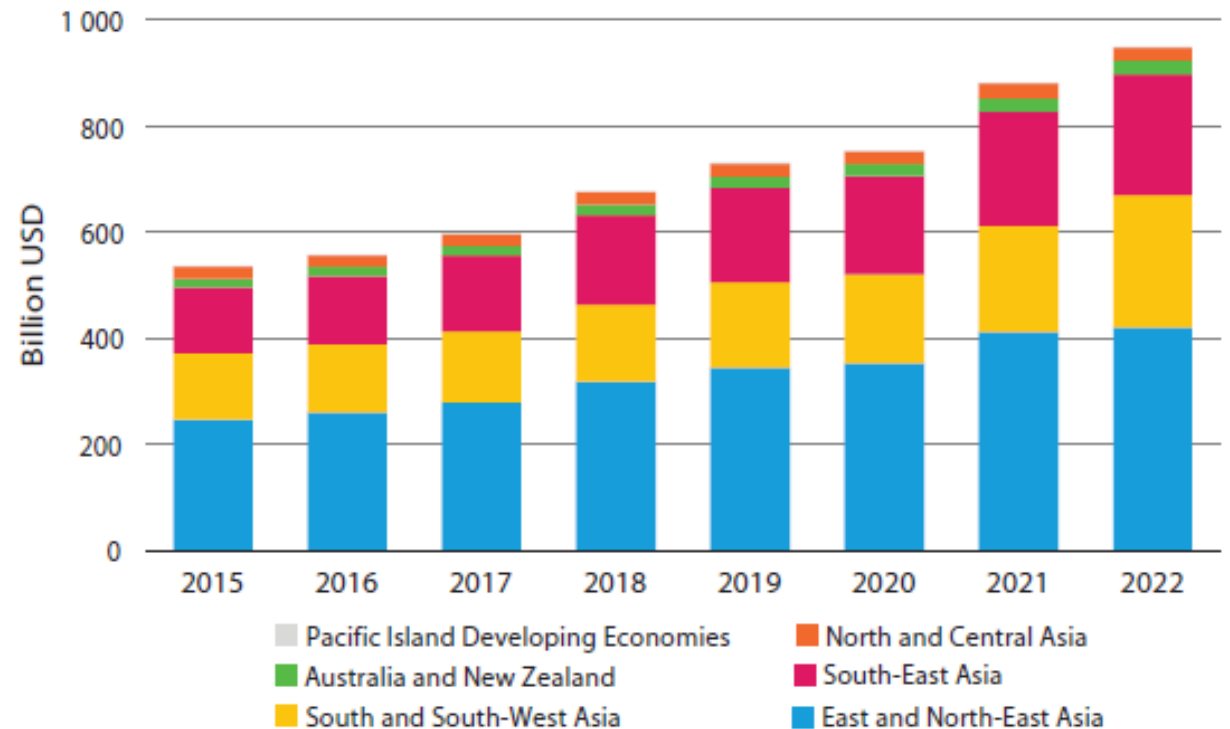
Trade and FDI opportunities are concentrated (East Asia and India).

NCA accounted for about 3% in the region's digital deliverable exports. SPECA accounted for about 0.5%.



6 economies accounted 85%, while 11 LDCs shared <1%!

Figure 2. Digitally deliverable service exports by Asia-Pacific subregions



Source: APTIR 2023/24 available at <https://www.unescap.org/kp/APTIR2023>

National Datasets on Regional Digital Trade Integration Index

The regulatory measures collected in these national datasets are grouped into 12 pillars.

Asia and the Pacific

Scale: 0 = low compliance costs, 1 = high compliance costs



KAZAKHSTAN

Download: KAZAKHSTAN full Dataset



Overall scores for Digital Trade Integration are simple averages of pillar scores. Data for the Regional Digital Trade Integration Index to be updated and finalized. Methodological note to follow.

Click any of the below boxes to show the corresponding pillar description

Pillar 1: Tariffs and trade defense measures applied to intraregional imports of ICT goods	0.14
Pillar 2: Public Procurement related to ICT goods and digital services	0.28
Pillar 3: Foreign Direct Investment in sectors relevant for digital trade	0.65
Pillar 4: Intellectual Property Rights (IPRs)	0.26
Pillar 5: Telecommunications infrastructure and competition	0.72
Pillar 6: Cross-border data policies	1.00
Pillar 7: Domestic data policies	1.00
Pillar 8: Intermediary liability	1.00
Pillar 9: Content access	0.83
Pillar 10: Quantitative trade restrictions for ICT goods and online services	0.27
Pillar 11: Technical standards applied to ICT goods and online services	0.20
Pillar 12: Online sales and transactions	1.00

Assessing digital trade policy gaps in SPECA (Central Asian) countries through UN-RDTII framework:

Kazakhstan

Kyrgyzstan*

Tajikistan*

Turkmenistan*

Uzbekistan*

<https://dtri.uneca.org/escap/home>

ICT regulatory issues

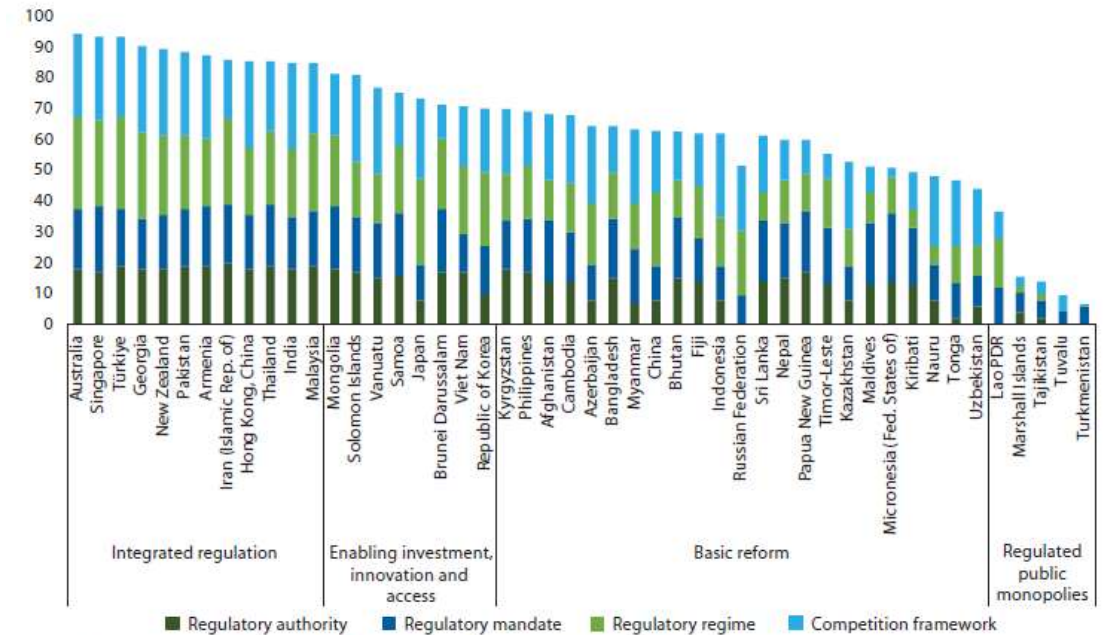
Non-WTO member SPECA are not guided by the WTO Basic Telecom Services Agreement and the WTO Telecom Reference Paper.

State monopolies, the absence of independent regulatory authorities and effective competition policy are quite common across SPECA countries.

Positive signs of reform in selected countries.

Figure 3.3

ICT Regulatory maturity index by Asia-Pacific economies, 2022



Source: ESCAP, based on ITU ICT Regulatory Tracker (<https://app.gen5.digital/tracker/metrics>) (accessed September 2023).

Note: The ICT Regulatory Tracker evaluates the maturity of national legal frameworks with scores ranging from 0 to 100. A score of 0 signifies an environment dominated by public monopolies. Scores between 40 and 70 indicate countries that have undergone basic reforms, while scores between 70 and 85 represent environments with integrated regulation. Specifically, within the 70-85 range, the ITU identifies the presence of both telecom and digital regulatory frameworks adhering to best practice.



Complexity of the policy ecosystem

Measures related to NTBs, digital service, and investment in NCA are prevalent

Regulations covering electronic transactions, cybersecurity, and online consumer protection have been established in most SPECA NCA.

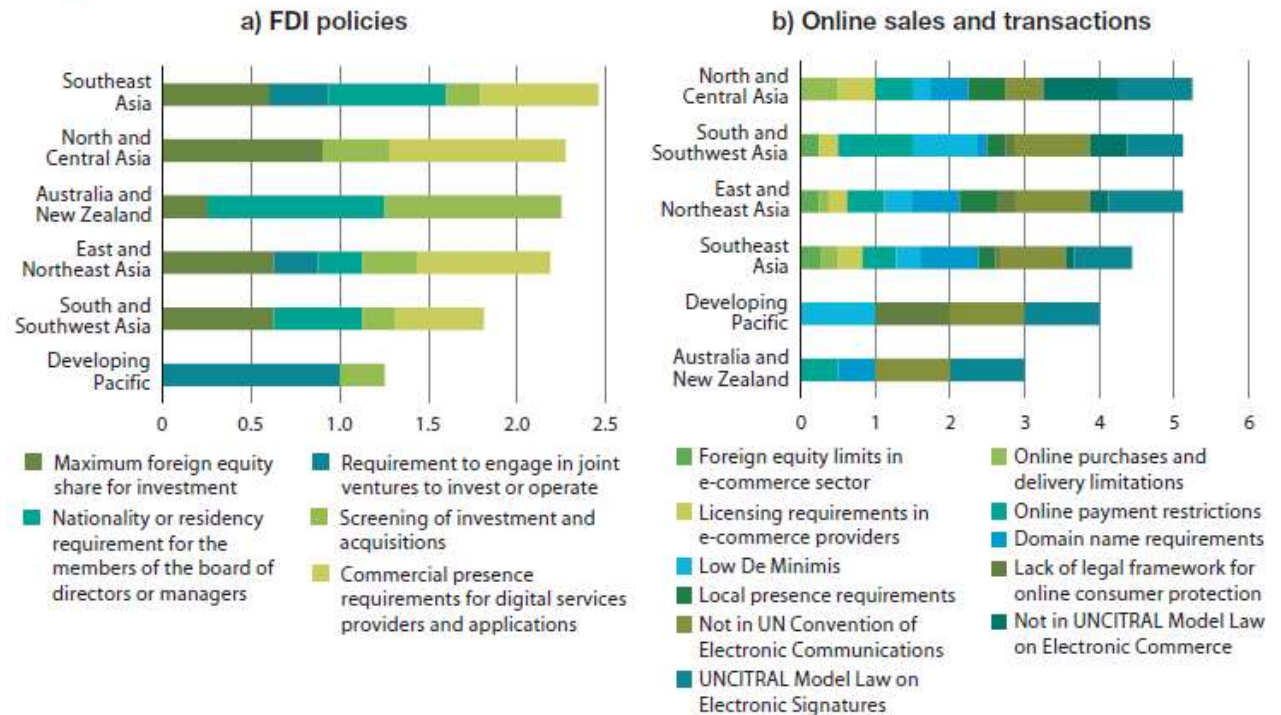
Regulatory environment affecting digital services, e-commerce, online transactions, and investment are significant and diverse.

Small businesses may find the policy environment challenging to navigate.

High compliance cost and rule fragmentation can prevent MSMEs from participating in international markets.

Figure 3.12

Indicators of policies affecting e-commerce and digital business: Asia-Pacific region, 2022



Data regulations

Comprehensive data protection legal framework

Stringent data governance approach

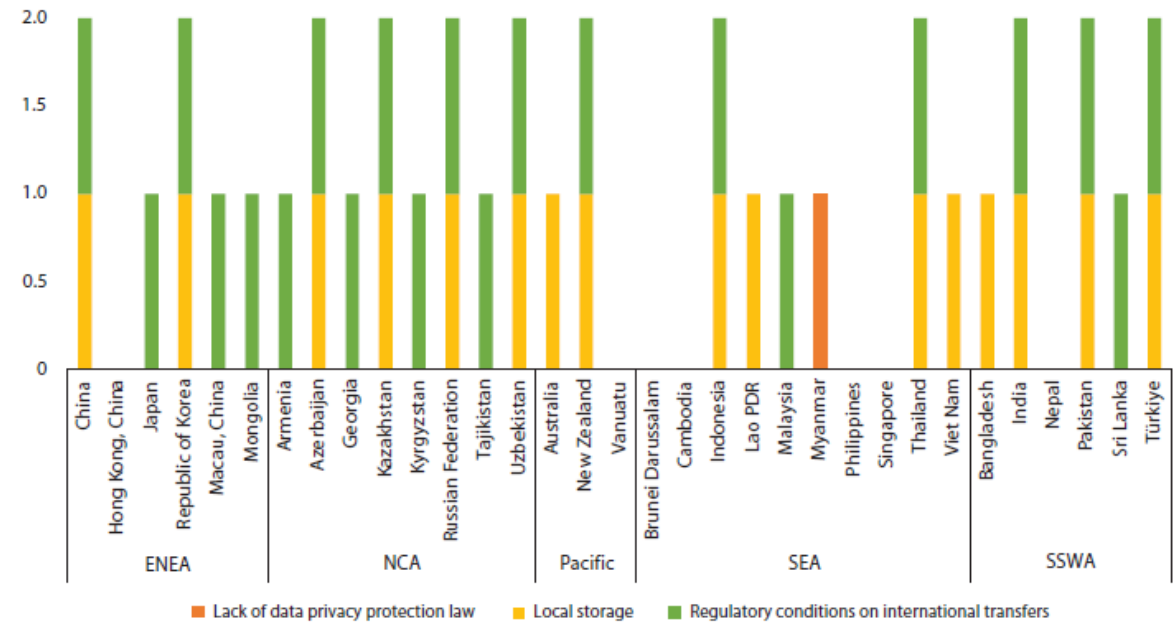
Diverse conditional flow regimes & Undefined scope of adequate data protection

Not in agreements with binding commitments on data transfer

Figure 3.10

Indicators of data policies in the Asia-Pacific region, 2022

a) Data protection, data localization and conditional data flow regimes



Engagement in trade agreements with digital trade provisions

East Asian countries are proactive, though the obligations vary.

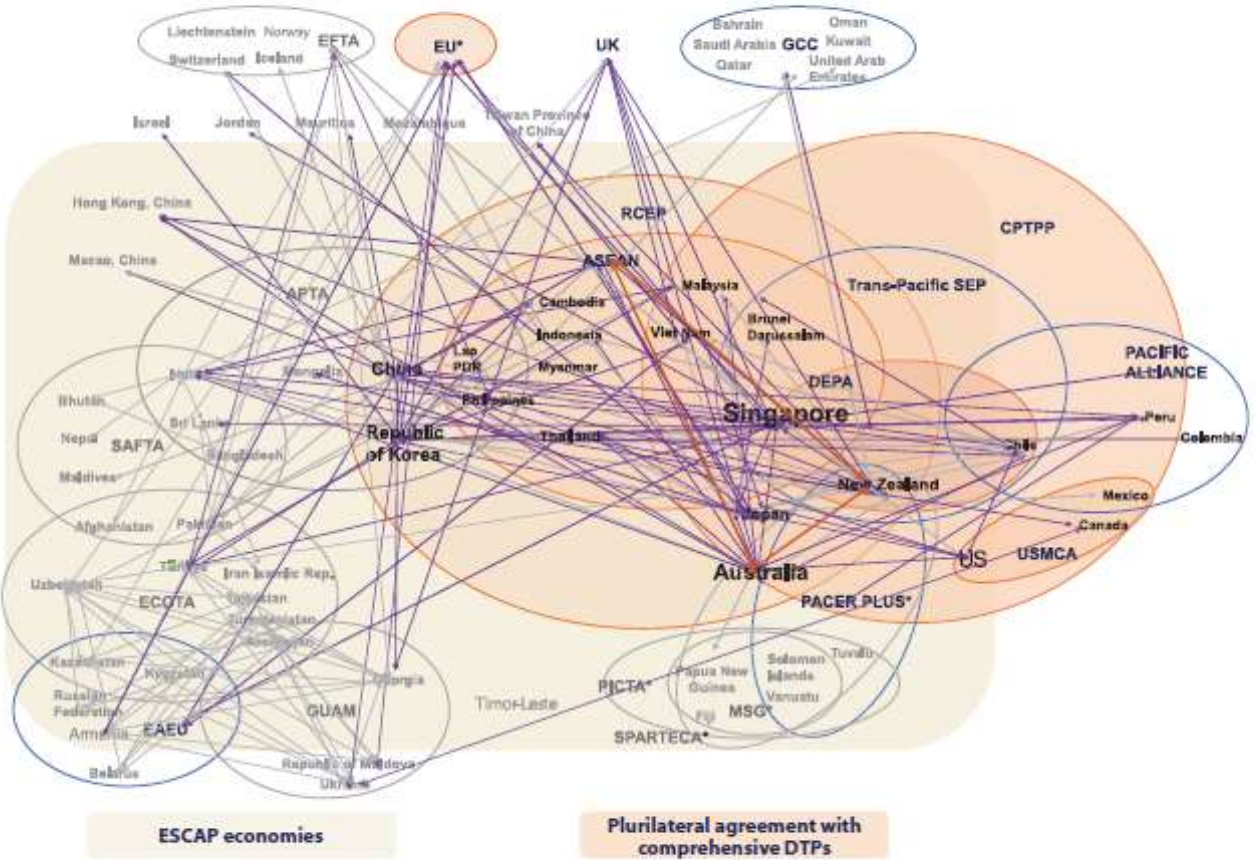
Agreements are increasingly comprehensive and include SDG aspects

SPECA countries are at risks of exclusion.

creating a new 'noodle bowl' of inconsistent agreements should be avoided.



Figure 4. PTAs with and without Digital Trade Provisions (DTPs) signed by Asia-Pacific economies, 2023



*Not all members shown
 — Signed and enforced agreements with DTPs
 — Signed and enforced agreements without DTPs
 Blue circle: plurilateral agreement with DTPs; Grey circle: plurilateral agreement without DTPs.
 Economy that have signed larger number trade agreements with DTPs is presented in a bigger font.

Overarching recommendations

Align digital trade and investment policy with WTO principles

- Refer to existing WTO agreements and provisions to guide digital trade and investment policies: GATT, TBT, GATS, TRIPS, TRIMS, TFA, ITA, Telecom Reference Paper, etc.
- Adhere to the principles of transparency and non-discrimination.

Leverage agreements, instruments and standards to accelerate regional digital trade cooperation

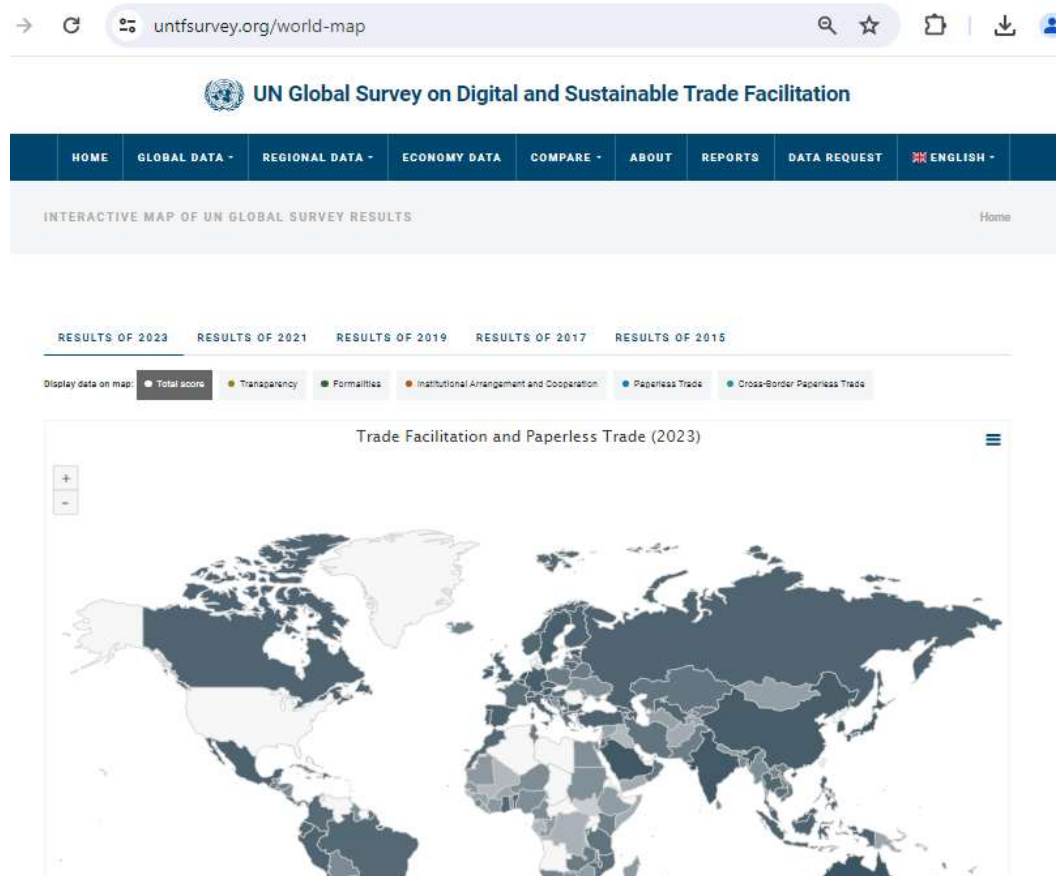
- Establish mutual recognition of 'equivalence' in standards or procedures.
- Promote regulatory cooperation guided by international standards.
- Integrate capacity building into trade agreement design and implementation.

Expedite implementation of trade facilitation and digitalization agreements

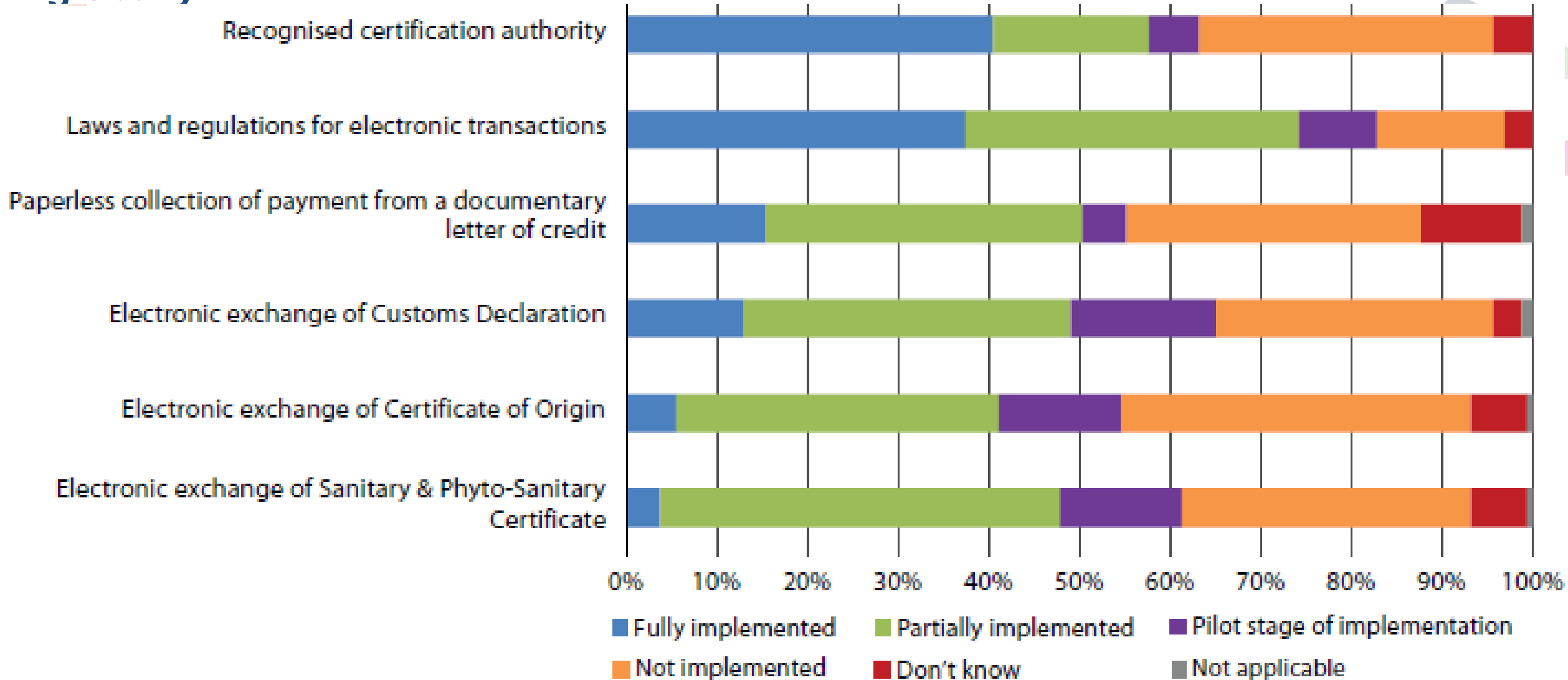
- Complete the implementation of the WTO TFA.
- Accelerate the accession and implementation of CPTA.
- Align with UNCITRAL Model Laws.



ADB-ESCAP Trade Facilitation Report 2024



Very low implementation of cross-border paperless trade measures globally



Source: UN Global Survey on Digital and Sustainable Trade Facilitation (2023)

*Note: 'percentage' refers to the proportion of countries that have either partially or fully implemented these measures, or are currently in the pilot testing phase for their implementation (163 countries in the Survey 2023).

Expected trade cost reduction from cross-border paperless trade implementation (Asia-Pacific region)

Trade digitalization can help to significantly *reduce trade costs in the Asia-Pacific region by approximately 11%*

Asia-Pacific region: trade costs model	WTO TFA (binding only)		WTO TFA (binding + non binding)		WTO TFA+ (binding + non binding + other paperless and cross-border paperless trade)	
	Partially implemented	Fully implemented	Partially implemented	Fully implemented	Partially implemented	Fully implemented
Model 1						
Overall trade facilitation	-0.59%	-2.68%	-1.15%	-4.61%	-5.15%	-11.05%
Model 2						
General trade facilitation measures	-0.46%	-2.05%	-0.61%	-2.94%	-0.86%	-3.42%
Digital trade facilitation measures	-	-	-0.50%	-1.12%	-4.10%	-6.95%

Source: United Nations ESCAP, based on data from www.untfsurvey.org and ESCAP/World Bank Trade Cost database.

Challenges to Moving forward on Cross-border Paperless Trade



Adoption of common international standards



Harmonization of legal frameworks



Capacity gaps among the parties (infrastructure & HR)



Cooperation between public and private sectors



Lack of intergovernmental coordination mechanism

Supporting the CBPT: Framework Agreement on the Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA)

❑ A UN Treaty: enabling and action-oriented

- ✓ Open to interested (53) ESCAP member states (voluntary) to become parties

❑ Objective

- ✓ To facilitate cross-border paperless trade (data exchange) among willing ESCAP member states by providing a dedicated intergovernmental framework to develop legal and technical solutions
- ✓ Complementary to the WTO Trade Facilitation Agreement (TFA) as well as (sub)regional efforts



<https://www.unescap.org/projects/cpta>

CPTA – Update: 7 CAREC countries acceded, more expected

100% growth in number of parties in 2022 (YoY)

Kyrgyzstan and Russian Federation joined in 2023

More countries expected to join in 2024

Work on-going on model protocols for data exchange and identification of pilot projects

Next session of the Paperless Trade Council: June 2024; part of the Paperless Trade Week in Bangkok

Participant	Signature	Ratification, Acceptance(A), Approval(AA), Accession(a)
Armenia	22 Sep 2017	
Azerbaijan		2 Mar 2018 a
Bangladesh	29 Aug 2017	13 Oct 2020
Cambodia	29 Aug 2017	
China	29 Aug 2017	22 Nov 2020 AA
Iran (Islamic Republic of)	29 Sep 2017	29 May 2020
Kyrgyzstan		20 Dec 2023 a
Mongolia		27 Jul 2022 a
Philippines		23 Dec 2019 a
Republic of Korea		28 Nov 2022 a
Russian Federation		18 Aug 2023 a
Tajikistan		8 Dec 2022 a
Timor-Leste		5 Apr 2022 a
Turkmenistan		4 May 2022 a
Tuvalu		8 Dec 2022 a

Call to Action and Way Forward

- Foster greater synergies between AP-IS and CAREC to mobilize financing, strengthen technical cooperation, and develop enabling regulatory environments
- Collaborate on harmonized rules, interoperable systems, and seamless connectivity, including through CPTA and pilot projects
- Create open, integrated, and trusted digital markets to empower SMEs, create jobs, and accelerate progress on SDGs

Forthcoming events:

- Paperless Trade Week, 3-7 June, Bangkok, Thailand
- Ministerial Conference on Digital Inclusion and Transformation, 3-5 Sep, Kazakhstan

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