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SEADS Southeast Asia Development Solutions

DIGITAL TECHNOLOGY FOR DEVELOPMENT

PUBLICATION LAUNCH

Cloud Computing as a Key Enabler for Tech Start-Ups across Asia and the Pacific

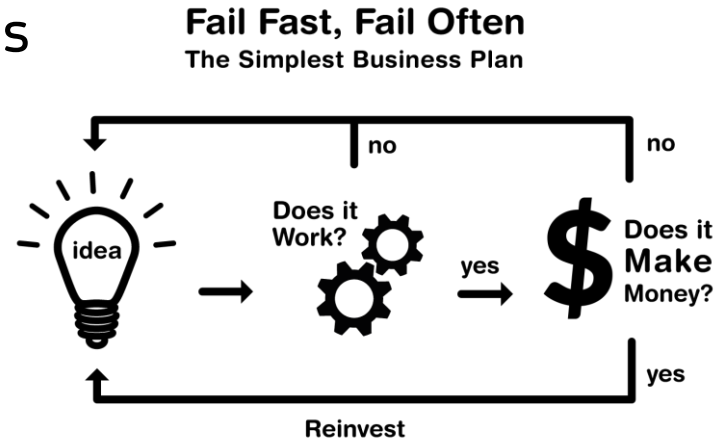
Friday, 10 September 2021 • 11 a.m.–12 noon (GMT+8) • Online

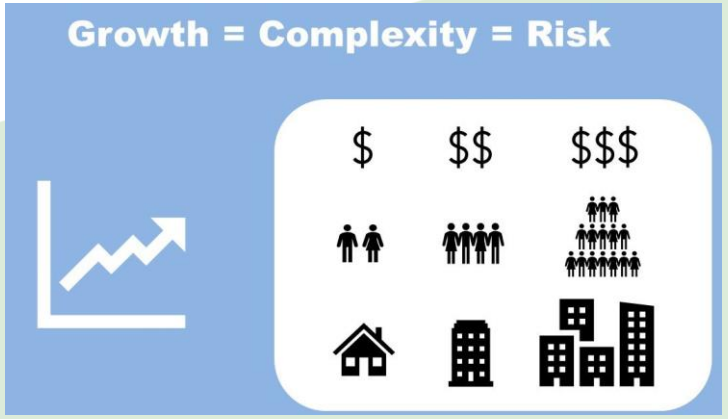
Cloud Computing as a Key Enabler for Tech Start-Ups across Asia and the Pacific

Lim May-Ann
Director, Access Partnership &
Executive Director, Asia Cloud Computing Association
mayann.lim@accesspartnership.com @eilonwy

Who are start-ups? What's the difference between start-up and MSME?

- There are no clear definitions of a tech start-up, although as starting point, it is commonly defined as *"an organization formed to search for a repeatable and scalable business model," typically developed with a strong, central focus on technology, typically equity-funded, and started by a small group of founders."*
- Another characteristic is that it tends to foster innovation based on a fast-paced business model of succeeding or failing quickly.
- This distinguishes venture capital-backed start-ups from traditional small and medium-sized enterprises (SMEs) which tend to be more risk-averse in comparison, and may not be as driven to expand rapidly, given the difference in funding models.





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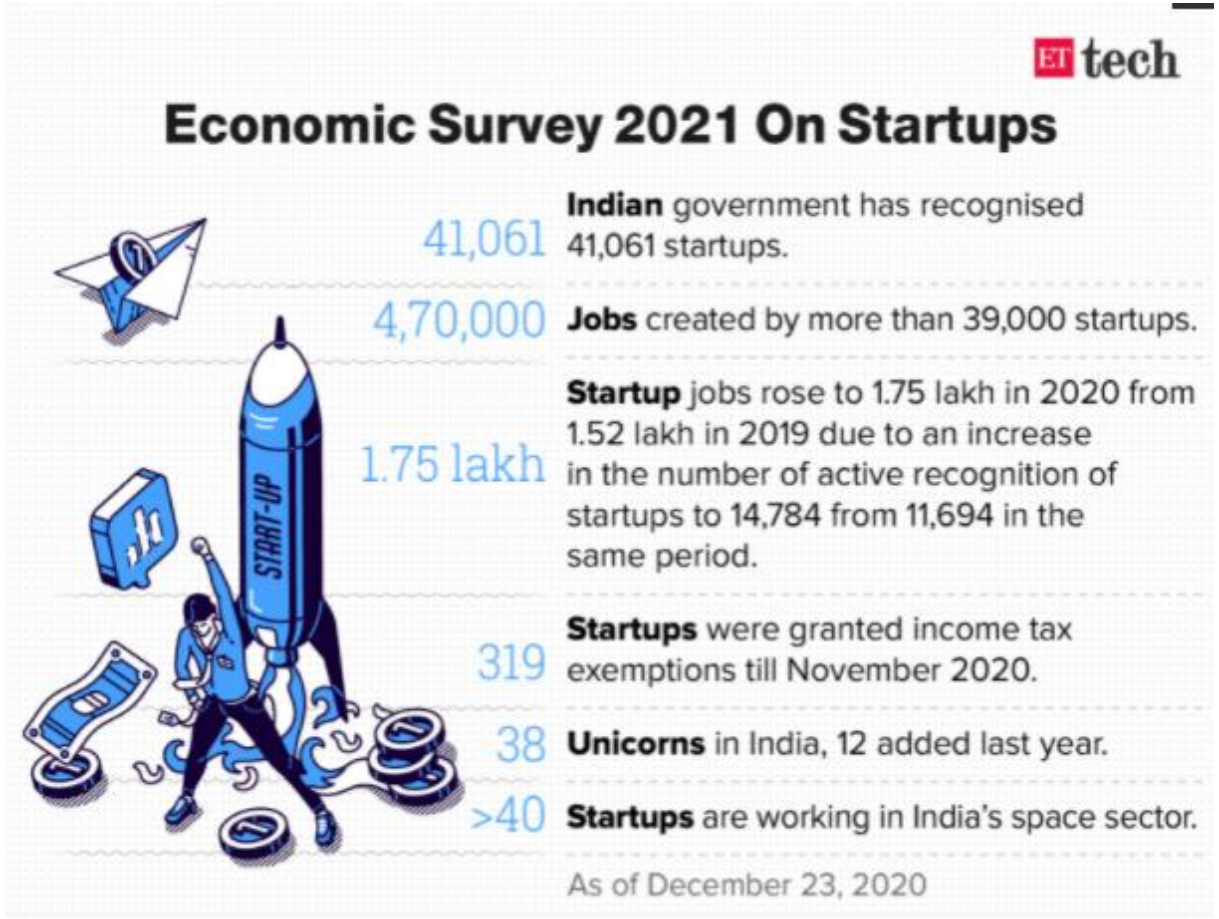
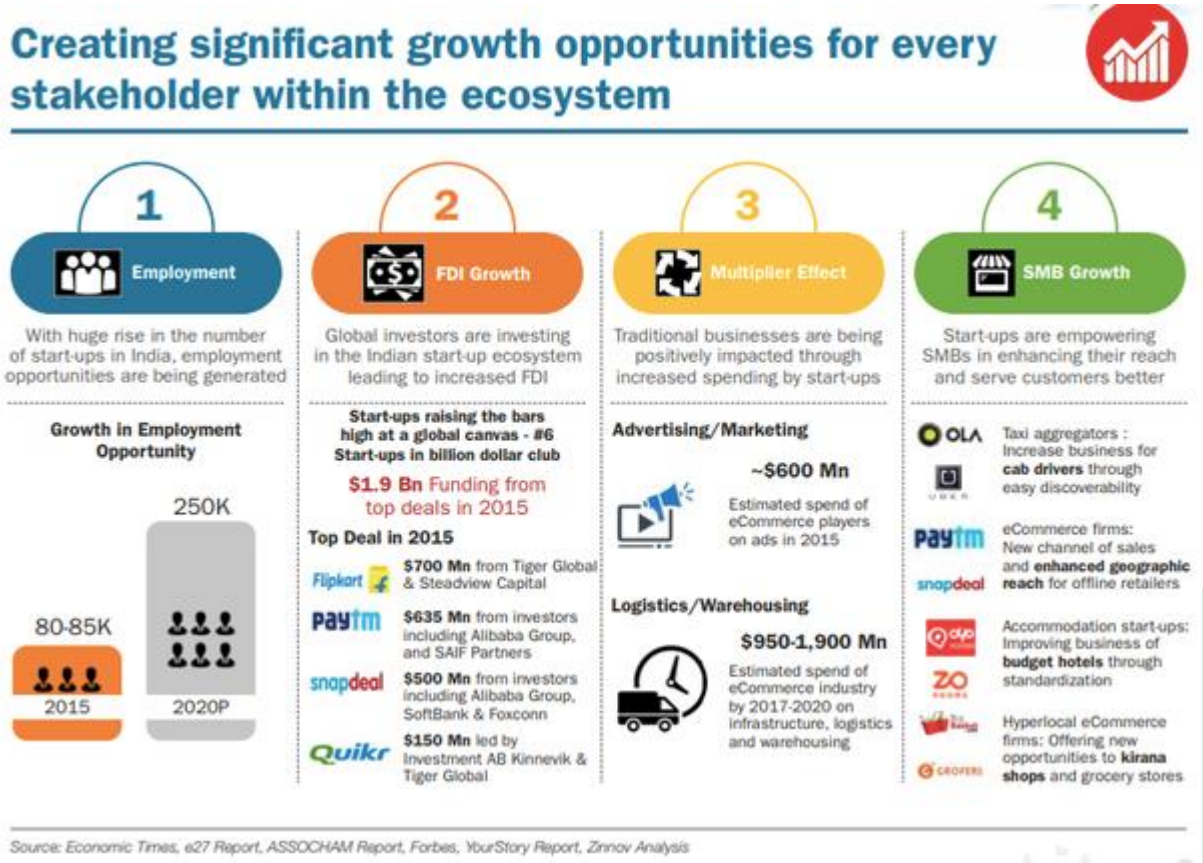
Contributions of Start-ups: Economic, Employment





https://economictimes.indiatimes.com/tech/startups/what-economic-survey-2020-21-says-about-indias-startup-ecosystem/articleshow/80586774.cms

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Contributions of Start-ups: Economic, Employment

2019 Challenger Ecosystems and Their 2020 standing

Startup Genome

Search...

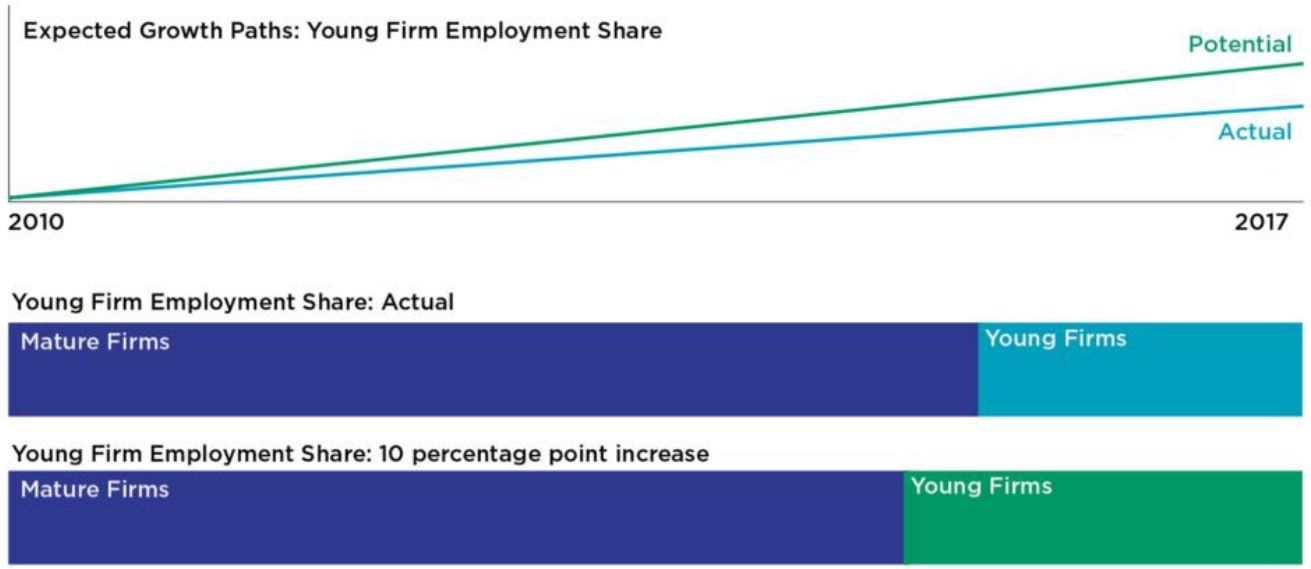
2019 Challenger Ecosystem	Country	Continent	2020 Ranking
Tokyo	Japan	Asia-Pacific	#15, Top Global Startup Ecosystems
Seoul	Korea	Asia-Pacific	#20, Top Global Startup Ecosystems
Shenzhen	China	Asia-Pacific	#22, Top Global Startup Ecosystems
Hangzhou	China	Asia-Pacific	#28, Top Global Startup Ecosystems
Sao Paulo	Brazil	South America	#30, Top Global Startup Ecosystems
Melbourne	Australia	Asia-Pacific	Top 30 Global Startup Ecosystem, Runner-Up
Montreal	Canada	North America	Top 30 Global Startup Ecosystem, Runner-Up
Mumbai	India	Asia-Pacific	#1 Emerging Global Ecosystem
Jakarta	Indonesia	Asia-Pacific	#2 Emerging Global Ecosystem
Greater Helsinki	Finland	Europe	#4 Emerging Global Ecosystem

Startup Genome

Source: www.startupgenome.com

https://economictimes.indiatimes.com/tech/startups/what-economic-survey-2020-21-says-about-indias-startup-ecosystem/articleshow/80586774.cms

ES FIGURE 4: THE IMPACT OF YOUNG FIRM EMPLOYMENT SHARE ON FUTURE EMPLOYMENT GROWTH



https://nvca.org/how-startups-and-entrepreneurs-can-power-the-economic-recovery/

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Cloud + Start-Ups = Success, but why?

- Typically known for **innovation**, often dealing with market or government gaps
  - Market gaps = traditional businesses not moving fast enough
  - Government gaps = development challenges (environment, sustainability)
- **Nimble** ability to adapt and pivot to suit various business environments, situations
- Small but **powerful enablers of digital transformation**, especially for **developing** countries

Cost Comparison for Developing On-Premises Solution against Cloud Solution

Category	On-Premises Solution	Cloud Solution
Set-up costs	Location costs for locating data center and server equipment	Hosted in the cloud and delivery over the internet means no realty, set-up, and maintenance costs, as these are in effect "rented" from the cloud service provider. These do not appear in cloud costings, as these would be considered within the cloud charges.
	Purchasing bare-metal racks, servers, networking, load balancers, initial software purchase and licensing, wiring, power management such as universal power supply and surge protectors, cooling equipment, with capital expenditure to be amortized over the years	
	Set-up and development of initial server architecture(s), networking between other data centers	
Maintenance costs	Maintenance of physical data center, managing upgrades and updates to the physical and virtual systems (e.g., upgrading storage and security patches), management of compliance and audits of the IT environment	

Indonesia's bill payments start-up, **Ayopop**, was able to control costs using its cloud computing provider's automated services, so that only two engineers were needed to maintain the infrastructure, even as operations expanded.

Korea's Kmong was founded in 2012 as a platform to connect buyers and sellers of freelance services. Built on cloud-computing infras, Kmong has grown to become the Korea's first business services marketplace, with 170,000 registered experts in 11 categories, and with more than 1 million transactions as of 2019.

Cashback rewards platform, **ShopBack**, which was launched in **Singapore** and is now expanding across Asia and the Pacific region, reduced its server infrastructure costs by 60% using cloud technologies that allowed the company to scale resources depending on demand.

ACCA Findings: SMEs in Asia Pacific

Asia Pacific SME Statistics

Economy	No. of SMEs	SME Employment	SME Contribution to GDP
Australia	2,076,068	7,241,000	55.70%
China	40,478,200	651,984,000	60.00%
Hong Kong	316,432	1,296,003	54.00%
India	36,200,000	101,200,000	6.20%
Indonesia	56,534,591	107,657,510	23.20%
Japan	4,115,830	65,280,000	53.00%
Malaysia	645,136	8,460,971	32.70%
New Zealand	468,100	584,000	42.00%
Philippines	816,759	3,872,406	35.70%
Singapore	407,298	2,460,000	50.00%
South Korea	3,351,404	13,059,372	47.30%
Taiwan	1,306,729	8,484,000	30.23%
Thailand	2,913,167	10,995,997	36.60%
Vietnam	242,453	32,505,242	40.00%

The Asia Pacific SME Cloud Computing Market Attractiveness Index 2015
Asia Cloud Computing Association | http://www.asiacloudcomputing.org

https://www.slideshare.net/accacloud/smes-in-asia-pacific-the-market-for-cloud-computing-case-studies-of-14-markets-in-apac-227579703

finding: SMEs spend money to make money
They don't spend money to save money

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What's next?

- Many start-ups are cloud-native – many innovative companies are literally "born in the cloud" – in fact, many founders are from cloud companies
- However, there are critical resource constraints – staff, training, capacity, ability, finances etc
- Core question for governments – how can we create a better, stronger ecosystem for the start-up community? How can we create a better environment for nurturing innovation?

How can governments support their start-ups?

Design and implement enabling policies focused on digital infrastructure

Encourage education institutions to teach cloud-related skills

Lead by example in adopting a cloud-first policy

Support tech start-ups directly and indirectly

Lay the groundwork for start-up expansion and growth

Evolve context-aware data privacy and cybersecurity policies

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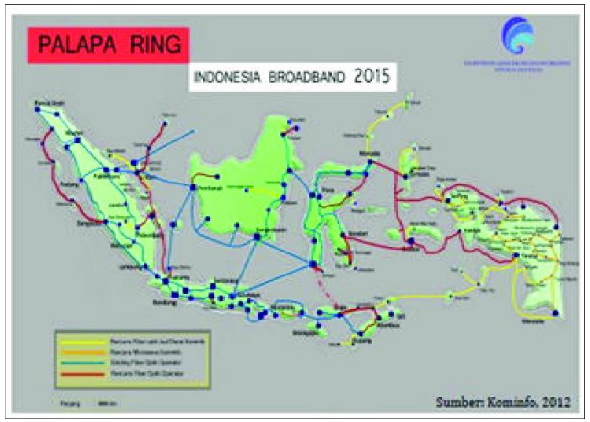
How can governments support their start-ups?

Design and implement enabling policies focused on digital infrastructure that will expand reliable internet connectivity and develop secure digital identity and payment solutions. This will increase the demands for technology and cloud-based services by start-ups and other ventures.



Connectivity – Indonesia Palapa Ring Project

Digital Identity – PNG Digizen

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How can governments support their start-ups?

Encourage education institutions to teach cloud-related skills and leverage cloud computing platforms for student projects and services. Schools can partner with cloud service providers for students to have access to these platforms. This can improve the quality of talents available for start-ups.

Cloud for Education, Cloud in Curriculum

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How can governments support their start-ups?

Lead by example in adopting a cloud-first policy across all government agencies and departments, which is what the United States, the United Kingdom, Australia, Japan, and other developed countries are doing. It is a strong indicator to innovative ventures that their government is encouraging cloud adoption.

Bahrain Cloud Transformation: Cloud First in eGovernment

Harikrishnan Sugumaran [1] and Dr. Khalid Ahmed Al-Mutawha[2]

IT Governance Architect [1] and Director of EA & IT[2]

Information eGovernment Authority, Kingdom of Bahrain

Abstract

In Information and Communications Technology (ICT), we are having been talking about how ICT is supporting innovation, driving change and transforming the way we work. This is as true for the both public and private sector. The Kingdom of Bahrain understand very well that the customers expect government services to be responsive to their needs and available where and when they want them. Key to realizing this vision is the effective use of ICT by government, including the adoption of cloud services.

To do this, government agencies/ entities to think and act smarter when it comes to investing in ICT. The availability of cloud services offers an opportunity for government to deliver services more efficiently, as well as providing services that are more responsive to business and community needs. A let of exclusive features such as high functionality and low cost have made cloud computing a valuable technology. These remarkable features give users and companies, countless opportunities to reach their goals spending minimum cost and time.

Kingdom of Bahrain aims is to drive a greater take up of cloud services by government agencies by adopting a **'cloud first'** approach. Agencies/ entities now must adopt cloud where it is fit for purpose, provides adequate protection of data and delivers value for money.

Keywords

Bahrain Cloud Transformation, Cloud Computing, Bahrain Cloud, Bahrain Cloud First Policy, Bahrain Cloud First, eGovernment and Cloud Computing, Cloud Benefits, Cloud Challenges;

Introduction

Kingdom of Bahrain **VISION 2030** and Information eGovernment Authority strategy has led to the creation of common ICT infrastructure such as Government Data Networks (GDN), National Data Centres (NDCs) and Common Service Centres as well as development of guidelines and standards to ensure interoperability, standardization and integration of various services to provide a single face of the government to the people.

The Government Cloud is envisaged to be established initially on national data centre assets (adapted for the cloud through virtualization) and connected through existing network infrastructure such as the **GDNs**, as well as the internet. Based on demand

Bahrain Cloud Transformation: Cloud First in eGovernment Page 1 of 34

Bahrain – Cloud First Policy

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How can governments support their start-ups?

Support tech start-ups directly and indirectly by backing incubators, hubs, venture capital firms, and accelerators through cloud-ready network infrastructure and targeted incentives. For example, the Australian government offers an incubator grant that helps start-ups succeed in international markets.

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How can governments support their start-ups?

Lay the groundwork for start-up expansion and growth by developing international partnership agreements with other markets. These agreements pave the way for start-ups to grow and expand by providing platforms that enable them to springboard into the global market.

- Singapore-Australia Digital Economy Agreement (SADEA)
- Memorandum of understanding between the Council of the Arab Economic Unity (CAEU) and the UK's Digital Government Services
- Tripartite Cooperation Agreement in 2018 between Kazakhstan's Astana Financial Services Authority (AFSA), Astana International Financial Centre Authority (AIFCA) and the Monetary Authority of Singapore (MAS).

MAS Monetary Authority of Singapore

AIFC Astana International Financial Centre

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How can governments support their start-ups?

Evolve context-aware data privacy and cybersecurity policies that inspire public confidence in digital services and consistently adapt to the fast-evolving technology landscape.

Data Governance, Data Management

- Control mechanisms (GDPR, standards)
- Technology policies – Zero Trust
- Risk-Based Approach: Risk assessment vs Risk Tolerance

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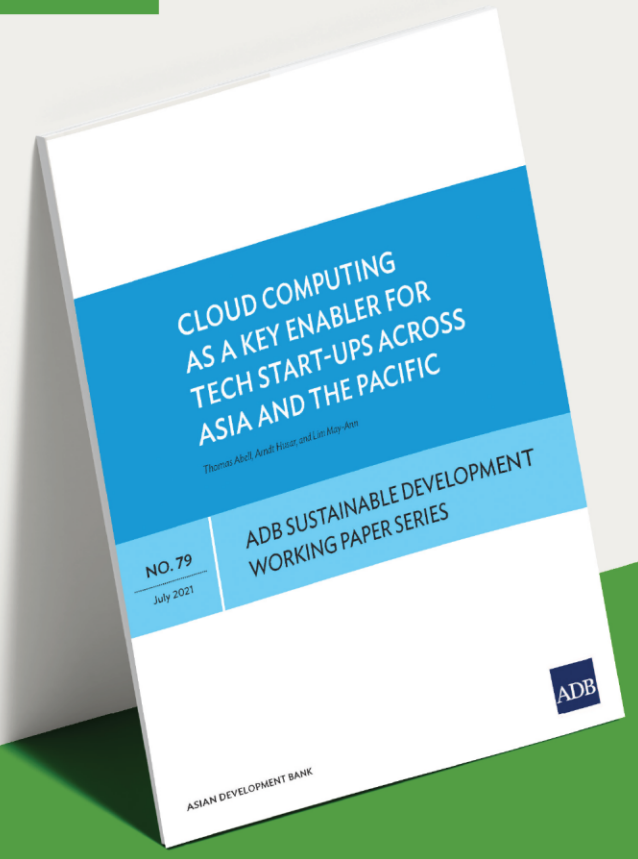

Lim May-Ann
Director, Access Partnership &
Executive Director, Asia Cloud Computing Association
mayann.lim@accesspartnership.com @eilonwy