How Startups Are Disrupting Mobility and What Large Companies Should Do About It

Southeast Asia focus

19 May 2023







Agenda

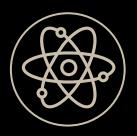




What are the pain points in Southeast Asia, and how can CASE trends alleviate them?

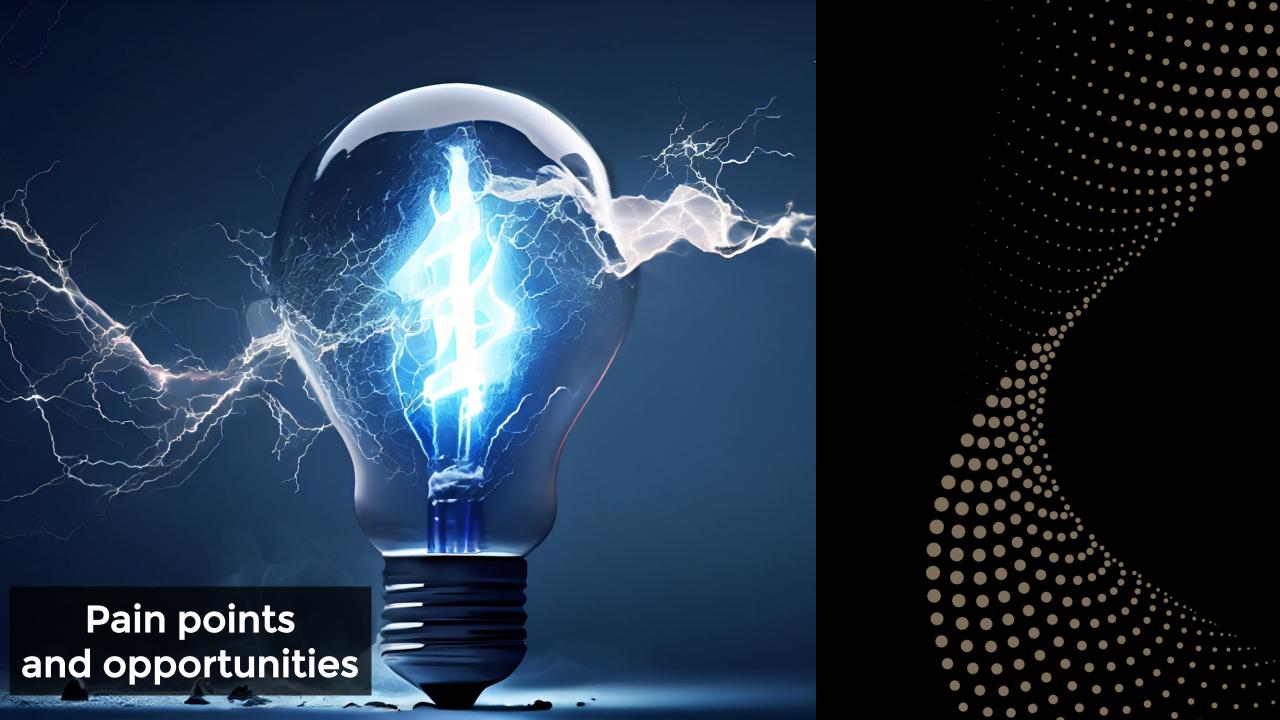


What is the current status of the mobility startup ecosystem in Southeast Asia?



How can large companies play a bigger role in the startup ecosystem?

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Southeast Asia experiences ongoing pain points that outweigh the impact of the Covid-19 pandemic

Selected major pain points in Southeast Asia



Climate change and poor air quality

288 out of 296 cities in Southeast Asia not satisfying the WHO air quality quidelines



DETAILS

IMPACT

Record-breaking heatwave in Southeast Asia in April 2023

≥120,000

premature deaths every year due to air pollution



Poor road safety

Thailand and Vietnam

with some of the highest world's road death rates

≥125,000

deaths every year due to road traffic accidents



Productivity loss due to traffic

4 SEA countries in the top 25 countries with the worst traffic globally

(out of 81 countries considered)

1.5 - 5%

of country's GDP lost due to traffic jams in ASEAN's cities For comparison:



。Covid-19 ' impact

130,000

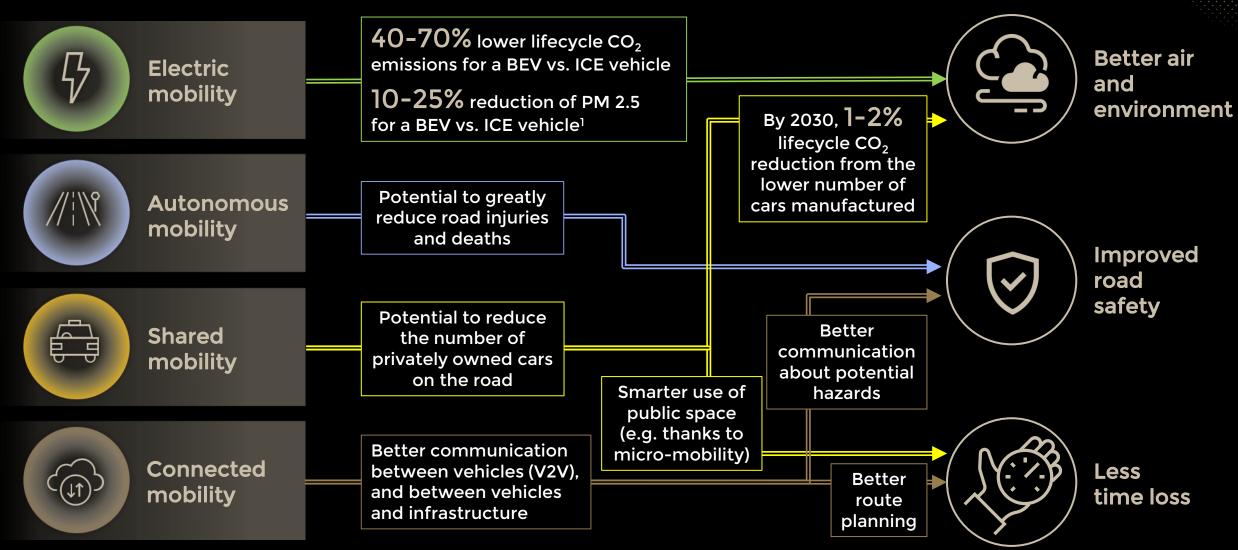
on average, deaths per year in 2020-2022

~2.5%

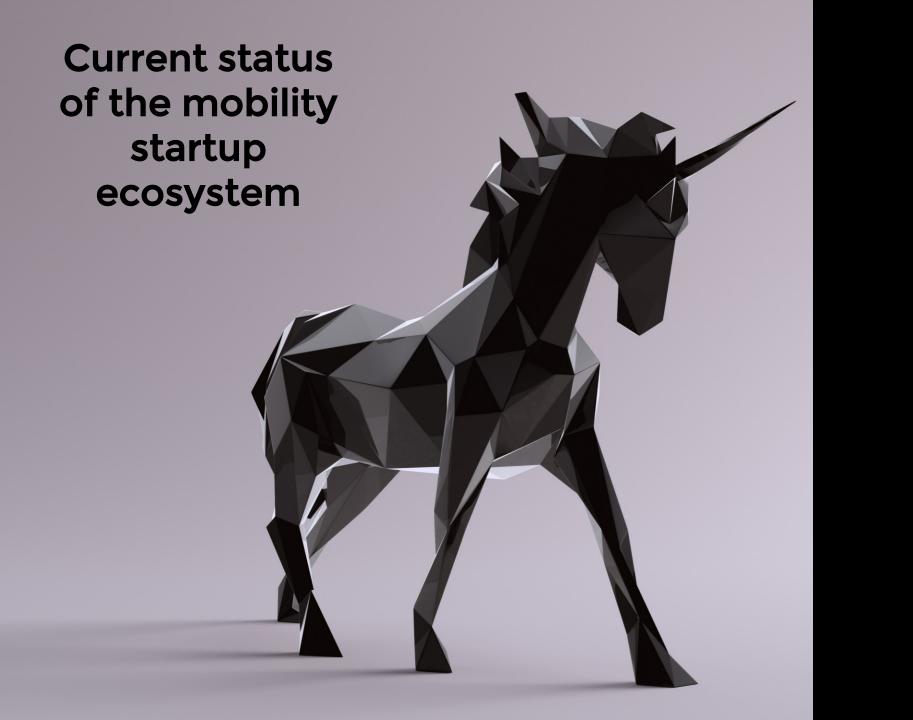
on average, negative annual impact on GDP growth in 2020-2022

CASE trends have the potential to contribute to building a better future in Southeast Asia

Potential impact of CASE trends in Southeast Asia



1 Assuming a 4-wheeled vehicle complying with EURO 4 fuel emission standards



Defining a mobility startup

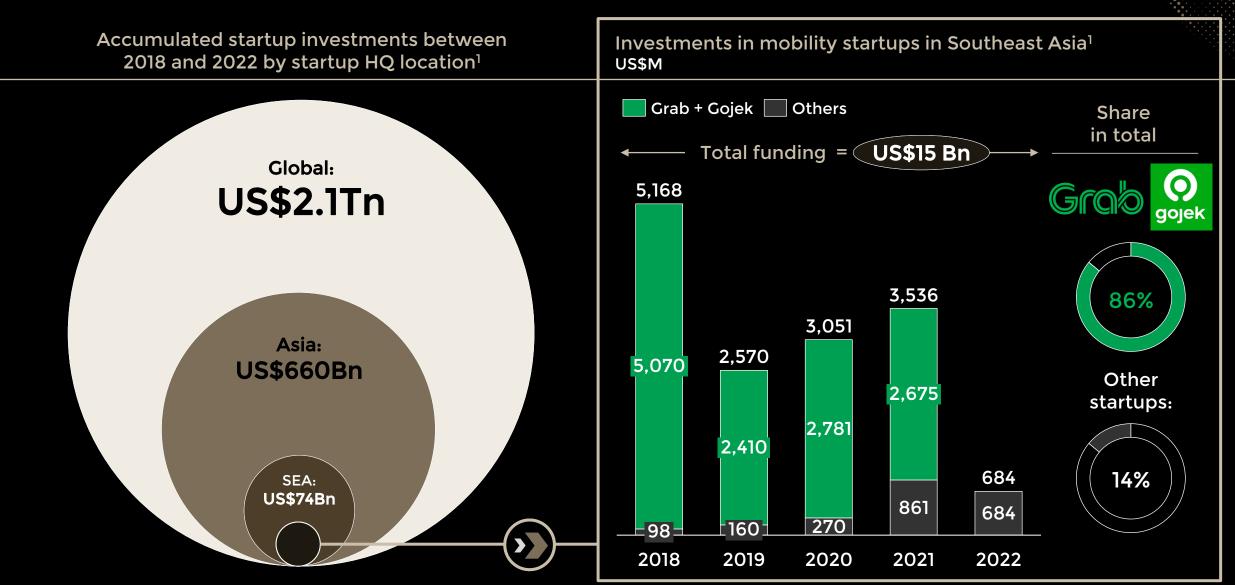
WHAT IS A STARTUP?

A young company that is pursuing an innovative business model or technology with the potential for rapid growth and disruption of established industries, and whose investment needs are at least partially covered in exchange for equity by non-founding investors such as angel investors, venture capitalists, or large companies.

WHAT IS A MOBILITY STARTUP?

A mobility startup is a startup that focuses on providing innovative solutions related to the CASE trends or the main stages of the traditional automotive value chain.

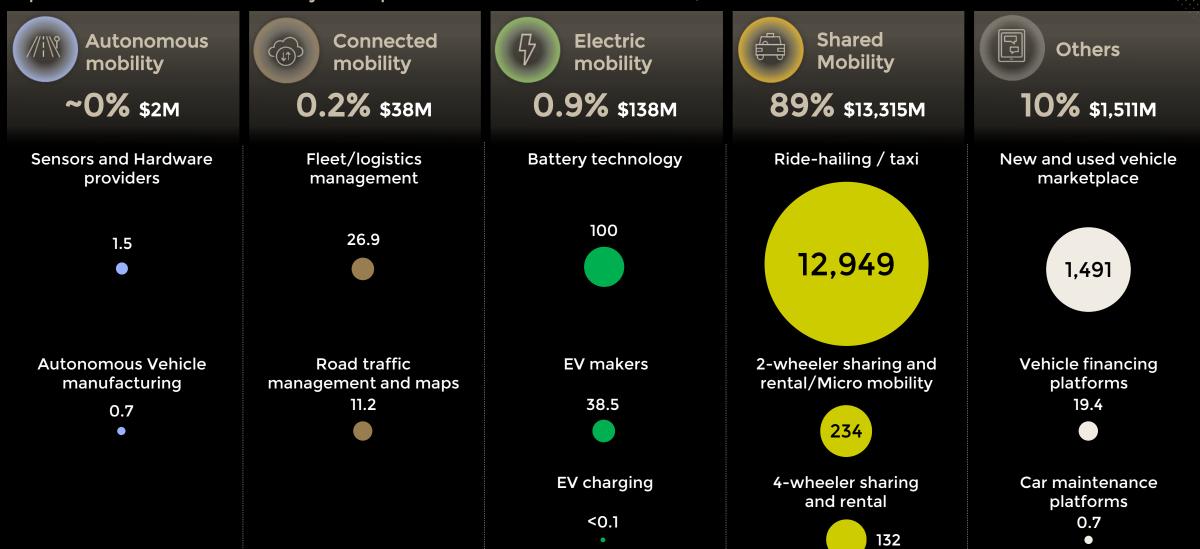
Mobility startups in Southeast Asia received less than 1% of global investment, but around 20% of funding in Southeast Asia, largely due to Grab and Gojek



1 Based on publicly reported data, includes angel investing, early and late stage investing until IPO and debt financing

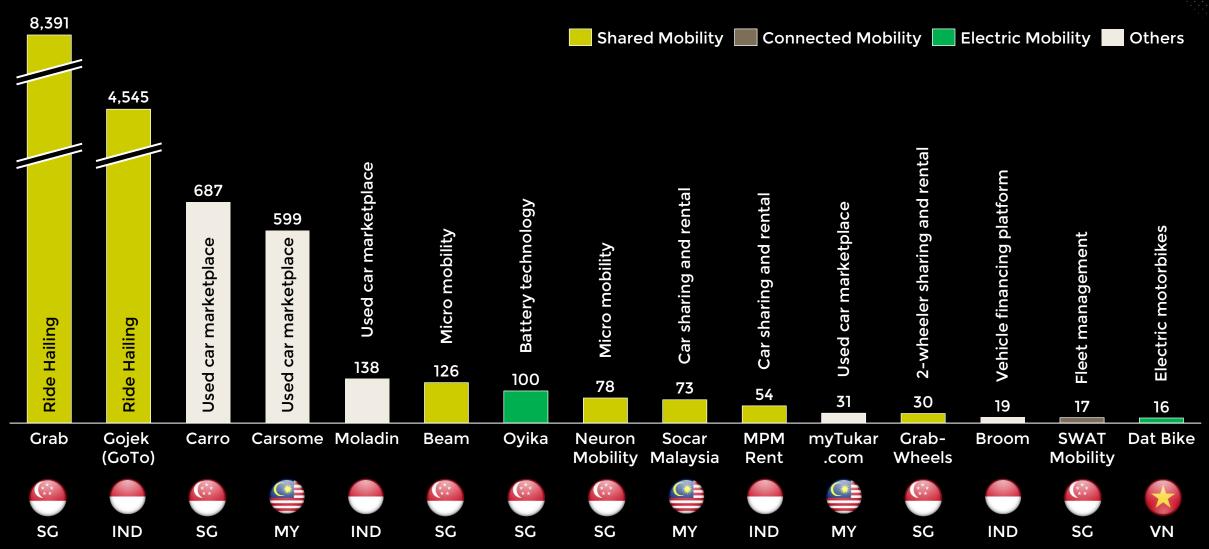
Ride-hailing dominated funding with a 89% share, trailed by digital marketplaces; startups associated with ACE-trends received very little funding

Reported investments in mobility startups in Southeast Asia in 2018-2022, US\$M



Ride-hailing giants dominated the funding raised, but the used car marketplaces are the most prominent in the top 15

Top 15 startups by reported investments in 2018-2022¹, US\$M

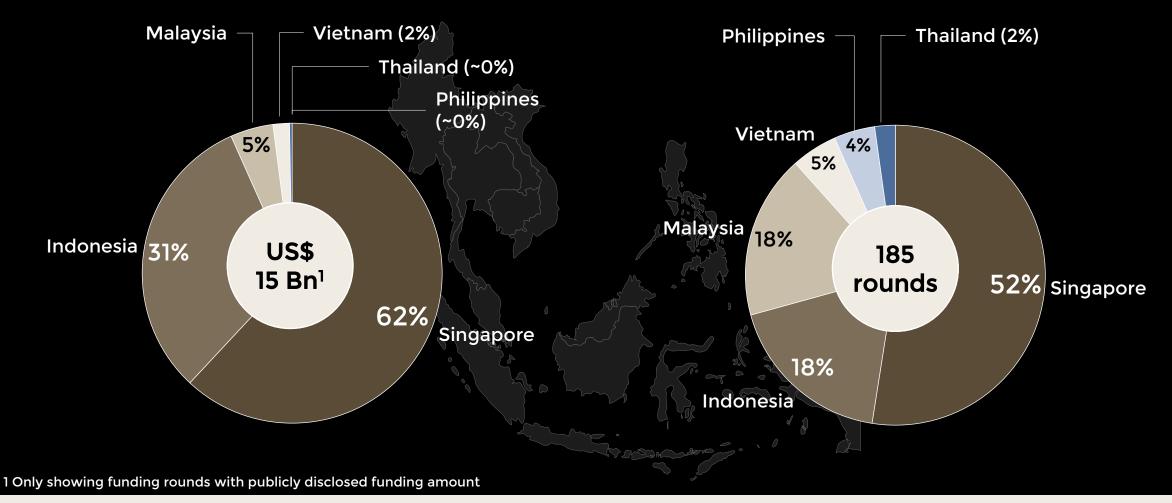


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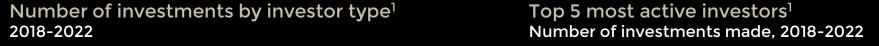
Startups from Singapore received over 60% of total funding and accounted for 50% of all funding rounds

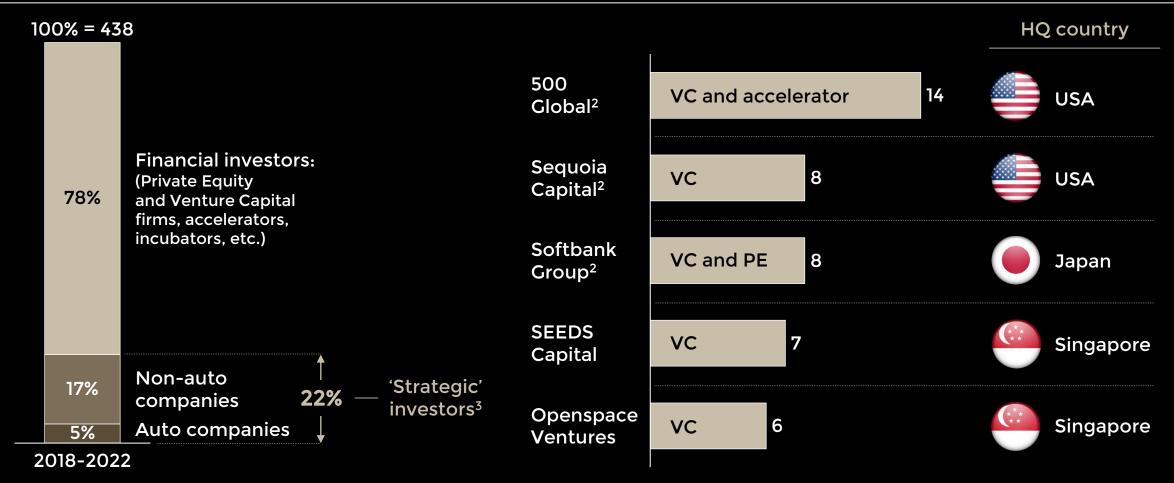
Accumulated startup funding between 2018 and 2022 by startup HQ location¹, US\$M

Number of funding rounds between 2018 and 2022 by startup HQ location



Most of the funding has come from financial investors, with relatively few investments made by automotive companies





1 An investment is the participation of a single investor in a funding round. In the case of multiple investors, one funding round would consist of multiple investments 2 Includes investments from more than one fund 3 Includes investments through Corporate Venture Capital units



Rising business complexity requires companies to repeatedly redefine their vision and approaches for future growth

Selected mega trends

Key steps for players in the mobility ecosystem



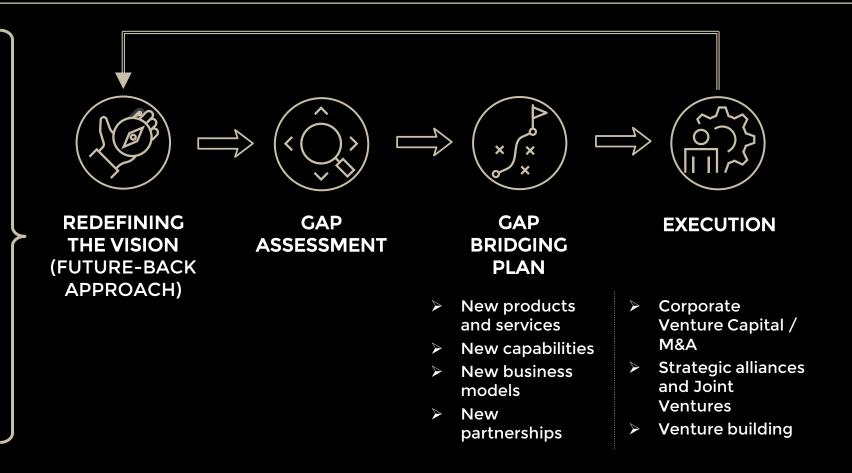
RAPID TECHNOLOGY CHANGES



SUSTAINABILITY REQUIREMENTS



EVERCHANGING COMPETITIVE LANDSCAPE



Large companies have three main approaches to directly participate in the startup ecosystem

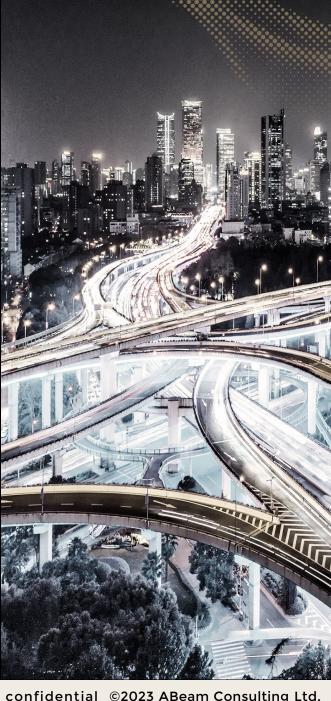


ENGAGE WITH LOCAL STARTUPS

- Support startups with local market access

- Establish strategic partnerships or local joint ventures with foreign startups
- Lead activities related to go-to-market while leveraging the startup's technology

To reduce risk, seek external investors after the initial investment and scale-up period





Engaging with local mobility startups while important may not be enough

Opportunities for investment in ...showing some signs of mobility startups are relatively limited... a chicken-and-egg dilemma **Key observations** Number of funding rounds in Not many good Southeast Asia by industry, 2018-2022 investment Innovations in the opportunities mobility sector often require: 1,220 ← **Fintech** High capital The investment landscape investment in mobility is still developing, and - Supporting there are relatively few examples 1.094 E-commerce regulations of successful startups to learn from. It's a tricky situation, with Long time to not many investors willing to Blockchain. mature >6x 884 take risks - especially in the incl. crypto-Counterintuitively, current economic conditions. currencies corporates sometimes - D. Kerneis may be better Co-founder of SiamCarDeal positioned than financial investors to make early-stage investments Not many success Mobility stories, difficult to find capital



With the exception of Singapore, Southeast Asian countries do not have well established startup ecosystems yet but they are large markets

Startup ecosystem by country ¹					Economy size forecast by country		Δ rank,
Rank	Country		Index score		GDP in current prices, 2027	Rank	Startup rank - GDP rank
#1		USA		195.4	30,281	#2	<u>-1</u>
#2		UK	52.6		4,524	#9	-7
#3	\$	Israel	45.1		649	#49	-46
#4	*	Canada	35.3		2,739	#16	-12
#5	 	Sweden	28.5		831	#40	-35
#7		 Singapore 	23.4		886	#36	-29
#38		Indonesia	5.6		5,801	#6	+32
#42		 Malaysia	5.4		1,523	#29	+13
#53		 Thailand	3 .8		1,953	#26	+27
#54 #57		Vietnam Philippines	■ 3.5		1,712	#23 #27	+31

1 Each startup ecosystem is scored based on the number of startups and startup ecosystem enhancing organizations, startup quality metrics, and overall business environment



Southeast Asia is attractive for startups from smaller countries such as Taiwan or Israel who perceive local companies as valuable partners



TAIWAN - KEY HIGHLIGHTS







#24
Global Startup
index



#3
IoT & Hardware
Startup index



US\$0.8 Bn in startup funding in 2022

Examples of startups



A solid-state battery developer, partnerships with Mercedes-Benz, VinFast and others

gogoío

An electric two-wheeler and batteryswapping player, partnering with local companies in Indonesia



ISRAEL - KEY HIGHLIGHTS





#3
Global Startup
index



#∠IoT & Hardware
Startup index



US\$11 Bn in startup

in startup funding in 2022

Examples of startups

Upstream

Cyber security platform for connected vehicles and smart mobility, partnerships with local players for market access



Vehicle-as-a-Service platform to optimize fleet operations, partnerships with local players for market access



Venture building lets corporates use their resources to create and shape new businesses, even when external investment opportunities are scarce

What is venture building?

Creating brand-

new products and

services by

corporates in-

house, with the goal of launching

successful

startups

Stages in venture building

Business Further scale-up or Exit growth Additional investments (internal and/or external) Investment exit (IPO, M&A) Launch & Scale-up New entity setup Team buildup Market launch **Design Phase Business** Business planning Concept Partner search Ideation Prototyping Short-listing and prioritization Time Examples

SERIAL

E-bicycle company started as an internal project in 2018 and spun off as a separate entity in 2020





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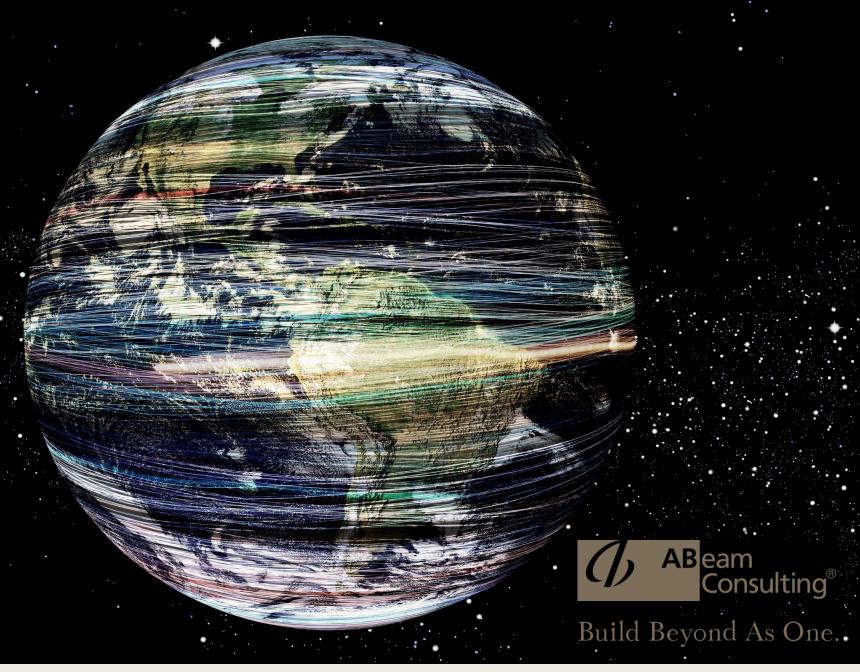
Subscription service offering E2W rental with battery swapping services that started as Bangchak's internal project in 2020 and secured external funding in 2021





Alone We Can Do So Little. Together We Can Do So Much.

Helen Keller · American author



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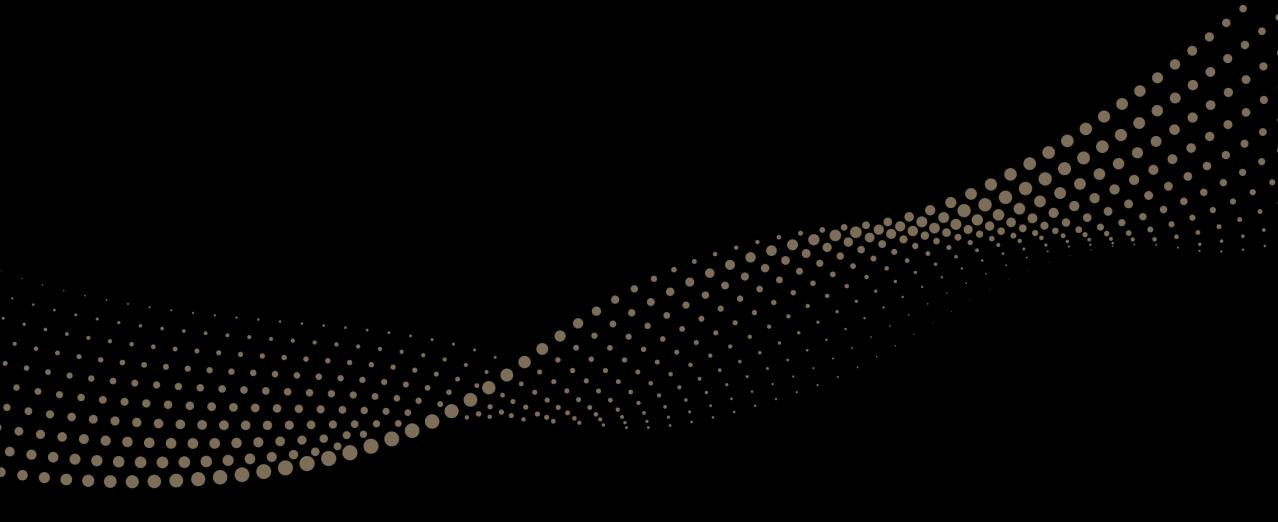


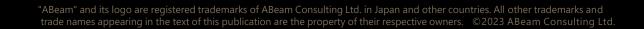
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Build Beyond As One.