



Future of the Thai startup and venture capital ecosystem

February 2023



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IMPACT THAT
MATTERS
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ACE	Action Community for Entrepreneurship
A*STAR	Agency for Science, Technology, and Research
APAC	Asia Pacific
BA	Bankruptcy Law
Bn	Billion
BOI	The Board of Investment of Thailand
CCC	Civil and Commercial Code
CVC	Corporate Venture Capital
CVL	Corporate Venture Launchpad
DBD	Department of Business Development
DEPA	Digital Economy Promotion Agency
EDB	Economic Development Board
ESOP	Employee Stock Ownership Plan
ESVF	Early Stage Venture Fund
FBA	Foreign Business Act
GDP	Gross Domestic Product
GERD	Gross Expenditure on R&D
GIP	Global Investor Program
GVA	Gross Value Added
IFP	I&E Fellowship Program
ICO	Initial coin offering
IPO	Initial public offering
MAVCAP	Malaysia Venture Capital Management Berhad
Mn	Million
MNC	Multinational corporation
MRANTI	MRANTI Corporation Sdn. Bhd. (Formerly known as Technology Park Malaysia Corporation Sdn. Bhd.)
NIA	National Innovation Agency
NRF	National Research Foundation
NSTB	National Science and Technology Board
NSTDA	National Science and Technology Development Agency
OCS	Office of Chief Scientist
R&D	Research and Development
RIE	Research, Innovation, and Enterprise
SaaS	Software as a Service
SET	The Stock Exchange of Thailand
SGD	Singaporean Dollar
SME	Small and medium enterprise
SSFS	Special Situation Fund for Start-ups
TASE	Tel Aviv Stock Exchange
TED Fund	Technology and Innovation-based Enterprise Development Fund



THB	Thai Baht
TIF	Technopreneurship Investment Fund
Tn	Trillion
TRL	Technology Readiness Level
UHNW	Ultra High Net Worth
UK	United Kingdom
USD	United States Dollar
USSR	Union of Soviet Socialist Republics
VC	Venture capital
XR	Exchange Rate

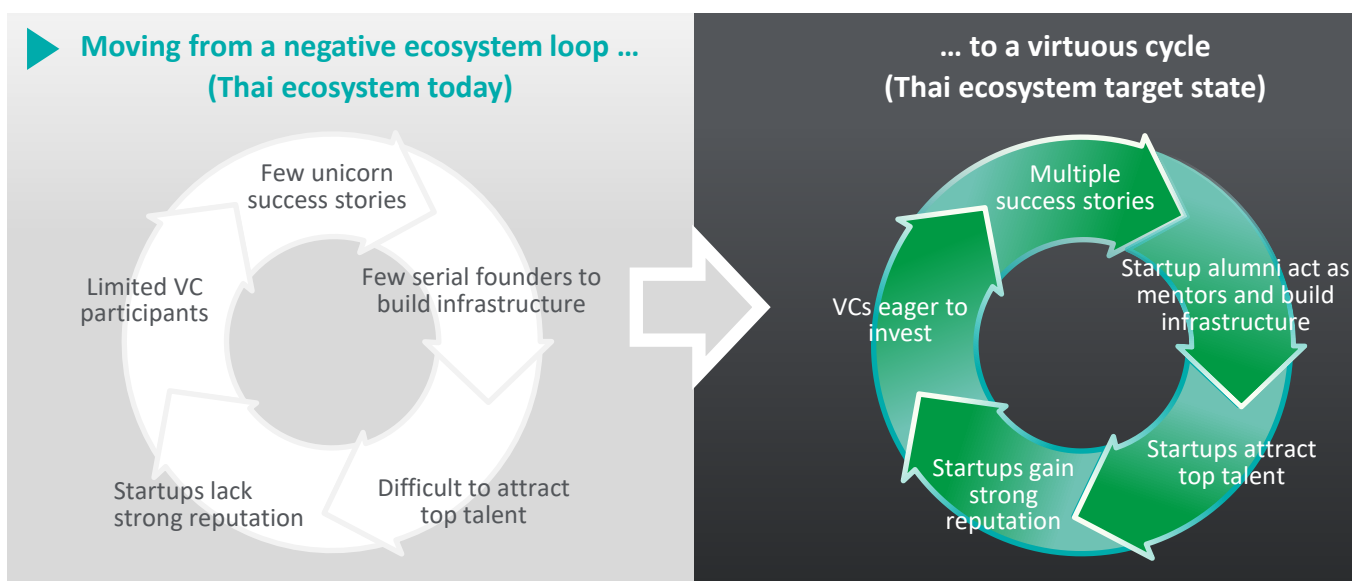
Executive summary

Growing the Thai startup and VC ecosystem requires a bold vision that is supported by empowered government agencies and robust initiatives to drive engagement

There's no shortage of ambitious founders and creative teams looking to solve Thailand's most pressing problems. Oftentimes, however, their successes depend not just on individual capabilities, but also on the broader environment and supporting infrastructure.

Startups simply can't succeed on good ideas alone; they typically need talent, capital, mentors, regulatory clarity, and government support programs and initiatives to ensure the best chance for success.

Today, the Thai startup ecosystem is currently ranked #53 globally and #11 in Asia Pacific.¹ This report outlines a number of challenges Thailand must overcome to improve its rankings — including limited risk capital available, particularly in the seed stage; lack of impactful government programs to drive innovation; and few unicorn success stories to attract top talent into the field. These chicken and egg conundrums often present a negative feedback loop for stakeholders.



So how can Thailand successfully move from a negative loop to a virtuous cycle? In our report, we look at lessons learnt from countries abroad that Thailand can adopt to develop its startup and VC ecosystem.

One of the key lessons is the role governments play to support their respective innovation ecosystems, with varying degrees of success.

In particular, we found that governments that adopt a strong national vision and establish cornerstone innovation programs (particularly equity matching programs) in pursuit of this vision are often able to advance their startup and VC ecosystems.

Source:

1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

Thailand can learn from success and failure cases abroad to address challenges to its startup & VC ecosystem

Our report provides insights into building a robust Thai startup & VC ecosystem. It includes an introductory section plus 4 key chapters:

Chapter 1 – Overview of the Thai landscape: This chapter provides a current state analysis of the Thai startup & VC landscape, as well as key challenges that Thai stakeholders face today. We identified 13 challenges, which are summarised as follows:

- **Economic (Market & Finance) challenges** relate to the difficulties startups face in obtaining early-stage funding (particularly seed stage funding) from VCs and other sources, and difficulties competing with established corporates for business and talent in the Thai marketplace.
- **Infrastructure challenges** refer to a declining number of market enablers (i.e., accelerators and incubators) that startups have access to, as well as nascent ties to academic partners and global platforms.
- **People challenges** relate to difficulties in obtaining local and foreign talent, limited number of successful entrepreneurs who can act as mentors to the next generation of founders, and the tendency of many founders to focus more on domestic rather than global markets.
- **Government & Regulatory challenges** include restrictive regulations that startups face (e.g., complications in offering ESOP schemes, painpoints with licensing applications, etc.); and inflexible regulations that investors face (e.g., VCs not able to register under a GP/LP partnership structure, complications in using preferred shares or convertible debt, etc.).

Chapter 2 – Key learnings from abroad: We studied government activity in the UK, Israel, Malaysia, and Singapore, and produced the below takeaways that may be useful for Thailand:

- **Singapore:** Singapore launched several cornerstone programs that adapted to the evolving government nation-building strategy, capabilities, and innovation needs. Early programs focused on ecosystem growth over financial returns and were coordinated to provide differentiated support to multiple stakeholders in different stages (e.g., seed vs. series A).
- **Malaysia:** While Malaysia could claim to operate multiple government initiatives, they run the risk of fostering high dependency on such aids and creating moral hazards. The Malaysian case studies demonstrate the importance of having a coordinated national view to prevent the launching of disjointed programs with overlapping mandates.
- **Israel:** The “startup nation” produced multiple generations of innovation talent beginning with the Yozma program. Yozma historically incentivised foreign VCs to invest in local startups, and emphasised upside returns rather than downside protections. Israel has also empowered a centralised entity (the Israel Innovation Authority) to help coordinate ecosystem growth.
- **United Kingdom:** As one of the global leaders,¹ the UK government supports local tech firms by promoting their expansion abroad, proactively attracting international talent, and leveraging private sector expertise in government programs through committee-based decision making.

Source:

1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

Moving forward, Thailand can build upon cornerstone programs and ensure alignment with a national ecosystem vision

Chapter 3 – Deep dive into Singaporean programs: Drilling down to a program level, we independently studied two Singaporean government initiatives to obtain additional insights:

- **SEEDS Capital and SG Startup Equity** is an equity matching co-investment program that targets early-stage tech companies. The program succeeds in also providing non-financial value-added support to startups in the form of networking, mentorship, and global expansion efforts.
- **EDB's Corporate Venture Launchpad (CVL) 2.0** is a co-investment grant that incentivises corporates to launch new ventures. The program provides operational support to corporates and promotes agile innovation methodologies (i.e., sprint approach) to build venture concepts.

Chapter 4 – Thailand's way forward: Based on our learnings abroad, we ideated a future state framework that emphasises steady and long-term development in **4 idealised pillars**:

- **Market pillar:** An ecosystem with good markets can provide startups access to both domestic consumers with discretionary spending power, as well as foreign customers.
- **Finance pillar:** Nations with a strong finance pillar are able to provide startups with risk capital across multiple stages—whether in the form of angel investors, VCs, government grants, etc.
- **Infrastructure pillar:** This pillar consists of high-quality incubators, accelerators, startup networking events, and academic programs focused on tech and entrepreneurship.
- **People pillar:** A strong people pillar comprises talented employees, ambitious and risk-taking founders with scalable ideas, and a community of experienced mentors.

In a healthy ecosystem, these pillars are supported and enhanced by **government agencies** that provide supportive regulations for both startups and investors, and well designed and executed programs that target specific market failures and ecosystem needs.

Market leaders such as the UK, Israel, and Singapore are much closer to realising the above ideals, whereas Thailand is lagging—due in large part to the challenges identified in chapter 1. In order to holistically develop the idealised pillars, Thailand can consider the below moves based on lessons learnt from chapter 2:

- **Promote a strong national vision** that drives and inspires startup and VC ecosystem development, and increasingly **empower a government coordinating body** to ensure multiple agency programs work in harmony toward achieving that vision—while avoiding a one-size fits all approach.
- **Open the wallet and continuously build upon cornerstone programs**, such as an equity matching co-investment program, education programs that strengthen ties between academia and the startup community, and enhanced grant programs that provide adequate funding for impactful results (i.e., require sufficient capital to support startup operations for more than 1 year).
- **Commit to the above efforts for the long-term** and avoid constant switching of direction. Over time, government actors will be able to increase their capabilities and provide more value-added support. An innovation ecosystem is not built overnight via a single big-bang program, but rather is built over years or even decades of steadfast and continuous effort.

Executive summary

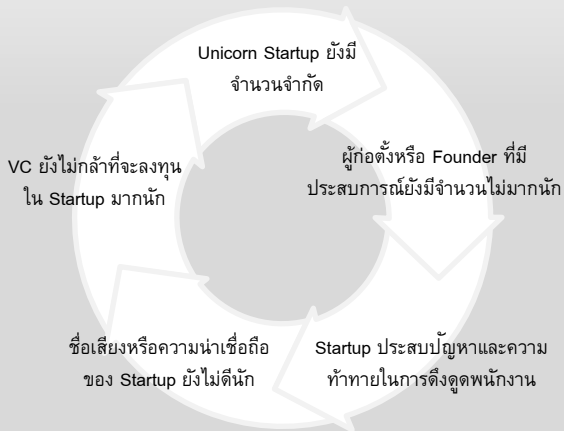
องค์ประกอบที่จำเป็นสำหรับการพัฒนาระบบนิเวศ Startup ในประเทศไทย ได้แก่ วิสัยทัศน์และแนวทางที่ชัดเจน หน่วยงานที่มีความพร้อม และโครงการสนับสนุนที่มีคุณภาพ

ความสำเร็จของ Startup นั้นไม่ได้ขึ้นอยู่กับความสามารถของผู้ก่อตั้งหรือ Founder หรือไอเดียแต่เพียงอย่างเดียว การที่ Startup จะประสบความสำเร็จได้นั้น Startup จำเป็นต้องได้รับการสนับสนุนและความช่วยเหลือจากภาคส่วนอื่นๆ ในระบบนิเวศด้วย ไม่ว่าจะเป็นการสนับสนุนด้านบุคลากร การสนับสนุนด้านเงินทุน การสนับสนุนด้านคำแนะนำ การสนับสนุนด้านกฎระเบียบและกฎเกณฑ์ และการสนับสนุนจากหน่วยงานภาครัฐผ่านทางโครงการต่างๆ อย่างเช่น โครงการร่วมลงทุนระหว่างหน่วยงานภาครัฐและภาคเอกชน เป็นต้น อีกนัยหนึ่งระบบนิเวศที่ดีนั้นเป็นสิ่งที่จำเป็นอย่างมากสำหรับ Startup

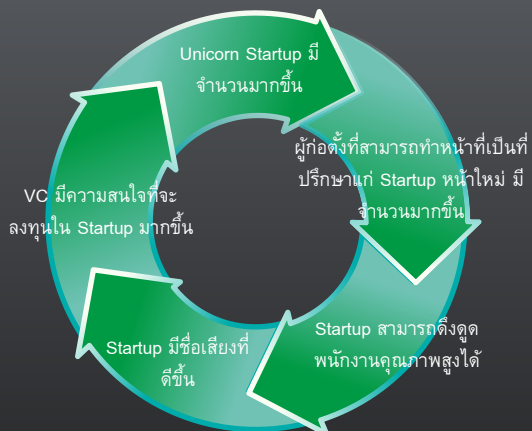
อ้างอิงจากการจัดอันดับระบบนิเวศ Startup ในประเทศต่างๆ ทั่วโลกโดย StartupBlink ระบบนิเวศของประเทศไทยนั้นได้รับการจัดอันดับอยู่ในอันดับที่ 53 ของโลก และอันดับที่ 11 ของภูมิภาคเอเชียแปซิฟิก¹

ในรายงานฉบับนี้เราทำการศึกษาและวิเคราะห์ระบบนิเวศ Startup ของประเทศไทย และทำการนำเสนอปัญหาต่างๆ ที่ประเทศไทยประสบอยู่ ไม่ว่าจะเป็นปัญหาด้านเงินทุนสำหรับ Startup ที่ยังมีจำกัด (โดยเฉพาะอย่างยิ่งสำหรับ Startup ในระยะเริ่มต้น หรือ Seed Stage) ปัญหาการขาดแคลนโครงการจากหน่วยงานภาครัฐที่มีความสามารถในการผลักดันการพัฒนานวัตกรรมและระบบนิเวศ หรือปัญหาจำนวน Unicorn Startup ที่ประสบความสำเร็จยังมีจำนวนน้อย ส่งผลให้ Startup เผชิญความท้าทายในการดึงดูดพนักงาน เป็นต้น ซึ่งปัญหาเหล่านี้ล้วนส่งผลกระทบถึงกันและก่อให้เกิดสิ่งที่เรียกว่า Negative Feedback Loop

ระบบนิเวศ Startup ของประเทศไทยในปัจจุบัน (ระบบนิเวศติดอยู่ใน Negative Feedback Loop)



เป้าหมายของระบบนิเวศ Startup ของประเทศไทย (ระบบนิเวศพัฒนาเป็น Virtuous Cycle)



นอกเหนือจากนี้ ในรายงานฉบับนี้เรายังได้ทำการศึกษาระบบนิเวศในประเทศต่างๆ เพื่อศึกษาถึงแนวทางในการพัฒนาระบบนิเวศในประเทศไทยต่อไป

หนึ่งในบทเรียนสำคัญที่เราได้เรียนรู้จากการศึกษาระบบนิเวศในประเทศต่างๆ ก็คือ หน่วยงานภาครัฐนั้นเป็นส่วนสำคัญในการพัฒนาระบบนิเวศของประเทศ และหน่วยงานภาครัฐในแต่ละประเทศนั้นมีการส่งเสริมระบบนิเวศของตนผ่านช่องทางต่างๆ และในรูปแบบที่แตกต่างกันไป

สุดท้ายนี้ เราพบว่าในระบบนิเวศที่พัฒนาแล้วนั้น หน่วยงานภาครัฐมักมีวิสัยทัศน์และแนวทางที่ชัดเจนในการพัฒนาระบบนิเวศของตน รวมไปถึงหน่วยงานภาครัฐเหล่านี้มักมีการจัดตั้งโครงการที่ถือเป็นโครงการหลัก (Cornerstone Program) ของประเทศเพื่อส่งเสริมการพัฒนาระบบนิเวศ อย่างเช่น โครงการร่วมลงทุนระหว่างหน่วยงานภาครัฐและภาคเอกชน เป็นต้น

Source:

1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

ประเทศไทยสามารถศึกษาและนำบทเรียนจากต่างประเทศมาใช้ในการแก้ปัญหาในระบบนิเวศ Startup ในประเทศ และพัฒนาระบบนิเวศต่อไปได้

ในรายงานฉบับนี้เราจะทำการนำเสนอข้อมูลเชิงลึกในการพัฒนาระบบนิเวศ Startup ในประเทศไทย โดยรายงานฉบับนี้ถูกแบ่งออกเป็น 5 บท ได้แก่ บทนำ (Introduction) และเนื้อหาหลักซึ่งถูกแบ่งออกเป็น 4 บท

บทที่ 1 – ภาพรวมของระบบนิเวศในประเทศไทย: ในบทนี้เราทำการวิเคราะห์สถานการณ์ปัจจุบันของระบบนิเวศ Startup ในประเทศไทย รวมไปถึงปัญหาหลักที่ผู้เล่นในประเทศไทยพบเจอ ซึ่งมีด้วยกันทั้งสิ้น 13 ปัญหาหลัก และสามารถจำแนกเป็น 4 กลุ่มด้วยกัน ได้แก่

- **ปัญหาเชิงเศรษฐกิจ:** ได้แก่ ปัญหาในการเข้าถึงเงินทุน (โดยเฉพาะอย่างยิ่งเงินทุนในระยะเริ่มต้น หรือ Seed Stage) รวมไปถึงความลำบากในการแข่งขันกับผู้เล่นที่มีขนาดใหญ่กว่าในตลาด
- **ปัญหาด้านโครงสร้างพื้นฐาน:** ยกตัวอย่างเช่น การปิดตัวของ Market Enabler (เช่น Accelerator Incubator ฯลฯ) ความลำบากในการเข้าถึงตลาดต่างประเทศ ความร่วมมือระหว่าง Startup กับสถาบันการศึกษาที่ยังมีจำกัดในปัจจุบัน เป็นต้น
- **ปัญหาด้านบุคคล:** ปัญหาในกลุ่มนี้เกี่ยวข้องกับความลำบากในการดึงดูดและจ้างงานบุคลากรของ Startup ปัญหาในการเข้าถึงที่ปรึกษาในประเทศไทยเนื่องจากจำนวนที่ปรึกษาในประเทศไทยนั้นมีจำนวนจำกัด และปัญหาเชิงพฤติกรรมของผู้ก่อตั้งสัญชาติไทยที่มักมองตลาดในประเทศเป็นหลัก
- **ปัญหาในฝั่งของหน่วยงานภาครัฐ และด้านกฎระเบียบ:** ได้แก่ ปัญหาด้านกฎระเบียบที่ Startup ในประเทศไทยพบเจอ (ยกตัวอย่างเช่น ความยากลำบากในการใช้งาน ESOP Scheme ขั้นตอนการสมัครรับใบอนุญาตประกอบธุรกิจที่ซับซ้อน เป็นต้น) ปัญหาด้านกฎระเบียบที่นักลงทุนในประเทศไทยพบเจอ (ยกตัวอย่างเช่น ข้อบังคับในเชิงโครงสร้างของ VC ซึ่งแตกต่างจากประเทศอื่น ความยากลำบากในการใช้งานหุ้นบุริมสิทธิและหุ้นแปลงสภาพ เป็นต้น)

บทที่ 2 – กรณีศึกษาจากต่างประเทศ: ในบทนี้เราทำการนำเสนอกรณีศึกษาที่เราได้เรียนรู้จากการศึกษาแนวทางในการพัฒนาระบบนิเวศ Startup ของหน่วยงานภาครัฐในประเทศสิงคโปร์ ประเทศมาเลเซีย ประเทศอิสราเอล และสหราชอาณาจักร ซึ่งสามารถสรุปได้ดังนี้

- **ประเทศสิงคโปร์:** สำหรับประเทศสิงคโปร์เราได้เรียนรู้ว่า หน่วยงานภาครัฐได้มีการจัดตั้งโครงการที่ถือเป็นโครงการหลัก (Cornerstone Program) หลายโครงการเพื่อส่งเสริมการพัฒนาระบบนิเวศ Startup โดยเป้าหมายของโครงการในระยะแรกนั้นจะเน้นไปที่การพัฒนาแบบนิเวศมากกว่าผลตอบแทนจากการลงทุนใน Startup เป้าหมายของโครงการเหล่านี้มีการปรับปรุงและพัฒนาอย่างต่อเนื่องเพื่อให้สอดคล้องไปกับนโยบายหลักของประเทศ ความต้องการของระบบนิเวศ และความสามารถของหน่วยงานภาครัฐ และสุดท้ายนี้โครงการเหล่านี้ยังได้รับการออกแบบให้ทำงานร่วมกันเพื่อให้ความช่วยเหลือแก่ Startup ในทุกๆ Stage ไม่ว่าจะเป็น Seed Stage Series A หรือ Series B เป็นต้น
- **ประเทศมาเลเซีย:** ในกรณีของประเทศมาเลเซียเราได้เรียนรู้ว่า การที่หน่วยงานภาครัฐเข้ามาทำหน้าที่หลักในการพัฒนาระบบนิเวศ Startup โดยไม่เปิดโอกาสให้ภาคเอกชนเข้ามามีส่วนร่วมอาจส่งผลกระทบในแง่ลบแก่ระบบนิเวศได้ (เนื่องจากการกระทำแบบนี้อาจทำให้ภาคเอกชนไม่มีโอกาสในการช่วยสนับสนุน Startup และอาจทำให้ Startup ยึดติดและหวังพึ่งพาความช่วยเหลือจากภาครัฐมากเกินไป) นอกจากนี้ กรณีศึกษาจากประเทศมาเลเซียยังช่วยย้ำเตือนถึงความสำคัญของนโยบายระดับประเทศ (National Vision) และการส่งเสริมความร่วมมือกันระหว่างหน่วยงานภาครัฐ
- **ประเทศอิสราเอล:** สำหรับประเทศอิสราเอลเราพบว่า โครงการสำคัญที่มีส่วนผลักดันการพัฒนาระบบนิเวศ Startup ของประเทศอิสราเอลคือโครงการ Yozma โครงการ Yozma นั้นเป็นโครงการที่ช่วยดึงดูดให้ VC ต่างชาติเข้ามาทำการลงทุนใน Startup ของประเทศอิสราเอล หนึ่งในกลยุทธ์ที่โครงการใช้และได้ผลเป็นอย่างดีคือ การเสนอโอกาสสร้างผลตอบแทนส่วนเพิ่ม (Upside Return) ให้แก่นักลงทุนแทนที่จะเน้นไปที่การป้องกันความขาดทุน (Downside Protection) นอกจากนี้ประเทศอิสราเอลยังมีการจัดตั้งหน่วยงานที่มีชื่อว่า Israel Innovation Authority เพื่อเป็นหน่วยงานกลางในการทำหน้าที่กำกับดูแลการพัฒนาระบบนิเวศ
- **สหราชอาณาจักร:** ในกรณีของสหราชอาณาจักรเราพบว่า สหราชอาณาจักรมีการส่งเสริม Startup ในประเทศอย่างต่อเนื่อง ไม่ว่าจะเป็นการสนับสนุน Startup ในด้านการขยายตลาดไปยังต่างประเทศ การจัดตั้งโครงการเพื่อดึงดูดบุคลากรต่างชาติที่มีคุณภาพเข้าสู่ประเทศ รวมไปถึงการใช้ประโยชน์จากความสามารถที่ภาคเอกชนมีในโครงการที่หน่วยงานภาครัฐจัดทำร่วมกับภาคเอกชน

สำหรับก้าวต่อไป ประเทศไทยควรทำการต่อยอดโครงการหลัก (Cornerstone Program) ที่ได้รับเริ่มไว้ รวมไปถึงส่งเสริมและตรวจสอบให้แน่ใจว่าโครงการเหล่านั้นมีความสอดคล้องและเชื่อมโยงกับนโยบายระดับประเทศ (National Vision)

บทที่ 3 – กรณีศึกษาจากโครงการในประเทศสิงคโปร์: ในบทนี้เราทำการศึกษาคำแนะนำโครงการส่งเสริมการพัฒนาระบบนิเวศ Startup ซึ่งจัดทำขึ้นโดยหน่วยงานภาครัฐของประเทศสิงคโปร์อย่างละเอียด ซึ่งโครงการที่เราได้ทำการศึกษาค้นคว้าได้แก่

- **โครงการ SEEDS Capital และโครงการ SG Startup Equity:** โครงการร่วมลงทุนระหว่างหน่วยงานภาครัฐและภาคเอกชนใน Early-stage Startup ที่อยู่ในกลุ่มเทคโนโลยี นอกเหนือจากการสนับสนุนด้านเงินทุนแล้ว โครงการยังประสบความสำเร็จในการให้การสนับสนุนทางด้านการอื่น ๆ แก่ Startup อีกด้วย เช่น การช่วยสร้างและขยายเครือข่าย (Networking) การให้คำแนะนำในการทำธุรกิจ การสนับสนุนในด้านการขยายตลาดไปยังต่างประเทศ เป็นต้น
- **โครงการ Corporate Venture Launchpad (CVL) 2.0:** โครงการเงินทุนสนับสนุนจากหน่วยงานภาครัฐเพื่อสนับสนุนและส่งเสริมบริษัทเอกชนในการคิดค้น และจัดตั้งธุรกิจใหม่ (New Venture) โครงการมีการใช้แนวคิด Agile Methodology ในการบริหารจัดการโครงการ และมีการให้ความช่วยเหลืออื่น ๆ นอกเหนือจากเงินทุนแก่บริษัทเอกชนในการจัดตั้งธุรกิจใหม่อีกด้วย

บทที่ 4 – แนวทางสำหรับประเทศไทย: ในบทนี้เราทำการศึกษาค้นคว้าถึงองค์ประกอบที่สำคัญของระบบนิเวศที่พัฒนาแล้ว และนำเสนอแนวทางในการพัฒนาระบบนิเวศในประเทศไทยต่อไป

อ้างอิงจากผลการศึกษาระบบนิเวศในต่างประเทศ เราค้นพบว่าระบบนิเวศที่ดีและพัฒนาแล้วนั้นจำเป็นต้องมีองค์ประกอบที่ดีดังต่อไปนี้

- **องค์ประกอบด้านตลาด (Market):** ตลาดในที่นี้หมายถึงกลุ่มลูกค้าของ Startup ตลาดในระบบนิเวศที่ดีนั้นต้องเป็นตลาดที่มีขนาดใหญ่และสามารถเข้าถึงได้ง่าย ตลาดในที่นี้ครอบคลุมทั้ง ตลาดจากลูกค้าในประเทศ และตลาดจากลูกค้าต่างประเทศ
- **องค์ประกอบด้านการเงิน (Finance):** การเงินในที่นี้หมายถึงแหล่งเงินทุนสำหรับ Startup และความยากง่ายในการเข้าถึงแหล่งเงินทุนนั้นๆ ในระบบนิเวศที่ดีนั้นเงินทุนสำหรับ Startup ต้องมีขนาดที่ใหญ่เพียงพอเพื่อตอบสนองต่อความต้องการของ Startup ในทุกๆ Stage และควรจะเป็นเงินทุนที่ Startup สามารถเข้าถึงได้ง่าย เงินทุนในที่นี้รวมถึง เงินทุนจากนักลงทุนประเภทต่างๆ และเงินทุนสนับสนุนจากโครงการจากหน่วยงานภาครัฐ
- **องค์ประกอบด้านโครงสร้างพื้นฐาน (Infrastructure):** โครงสร้างพื้นฐานในที่นี้หมายถึงผู้เล่นอื่นๆ ซึ่งทำหน้าที่สนับสนุน Startup และระบบนิเวศอย่างเช่น Accelerator Incubator เป็นต้น รวมไปถึงองค์ประกอบอื่นๆ ที่ทำหน้าที่ส่งเสริม Startup และระบบนิเวศอย่างเช่น งาน Networking Event โปรแกรมการศึกษา เป็นต้น ในระบบนิเวศที่ดีนั้นโครงสร้างต่างๆ ต้องเป็นโครงสร้างที่มีคุณภาพและได้มาตรฐาน
- **องค์ประกอบด้านบุคคล (People):** บุคคลในที่นี้ครอบคลุมทั้ง ผู้ก่อตั้ง บุคลากรหรือลูกจ้างของ Startup และที่ปรึกษาของ Startup ในระบบนิเวศที่ดีนั้นบุคคลเหล่านี้ต้องเป็นบุคคลที่มีคุณภาพ และมีจำนวนมากเพียงพอเพื่อตอบสนองต่อความต้องการของ Startup
- **องค์ประกอบด้านหน่วยงานภาครัฐ (Government):** ในระบบนิเวศที่ดีนั้นหน่วยงานภาครัฐจะทำหน้าที่ในการส่งเสริมระบบนิเวศผ่านช่องทางต่างๆ ไม่ว่าจะเป็นผ่านทางกฎระเบียบซึ่งได้รับการออกแบบมาเป็นอย่างดีเพื่อตอบสนองต่อความต้องการของ Startup และนักลงทุนผ่านทางโครงการสนับสนุนที่ออกแบบมาเพื่อแก้ปัญหาในระบบนิเวศ เป็นต้น

จากการศึกษาระบบนิเวศในประเทศไทยเราพบว่า องค์ประกอบทั้ง 5 ในระบบนิเวศของประเทศไทยนั้นยังสามารถที่จะพัฒนาให้ดียิ่งขึ้นได้

ในแง่ของแนวทางในการพัฒนาระบบนิเวศในประเทศไทยให้ดียิ่งขึ้นนั้น เราพบว่าประเทศไทยสามารถพิจารณาใช้แนวทางดังต่อไปนี้เพื่อพัฒนาระบบนิเวศของตน

- **ส่งเสริมการพัฒนานโยบายระดับประเทศ (National Vision) สำหรับ Startup** และส่งเสริมการประยุกต์และนำเอานโยบายเหล่านั้นมาใช้งาน รวมไปถึงจัดตั้งและมอบหมายอำนาจให้หน่วยงานที่มีหน้าที่ในการกำกับดูแลการพัฒนาระบบนิเวศเพื่อส่งเสริมความร่วมมือระหว่างหน่วยงานต่างๆ และกำกับดูแลให้โครงการจากหน่วยงานต่างๆ เดินไปในทิศทางเดียวกัน รวมไปถึงหลีกเลี่ยงแนวคิดในการจัดทำโครงการแบบ One-size Fits All
- **พิจารณาการเพิ่มงบประมาณสำหรับการส่งเสริม Startup** รวมไปถึงจัดตั้งและต่อยอดโครงการหลัก (Cornerstone Program) ที่ได้รับการริเริ่มไว้ ยกตัวอย่างเช่น จัดตั้งโครงการร่วมลงทุนระหว่างหน่วยงานภาครัฐและภาคเอกชน จัดตั้งโครงการส่งเสริมความสัมพันธ์ระหว่าง Startup และภาควิชาการ และพัฒนาโครงการเงินทุนสนับสนุนจากหน่วยงานภาครัฐ เป็นต้น
- **เนื่องจากว่าการพัฒนาระบบนิเวศนั้นจำเป็นต้องใช้เวลา** หน่วยงานภาครัฐและผู้มีส่วนเกี่ยวข้องควรทำความเข้าใจถึงจุดนี้และทำการสนับสนุนการพัฒนาอย่างต่อเนื่อง รวมถึงหลีกเลี่ยงการปรับเปลี่ยนนโยบายที่ไม่จำเป็น

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Introduction

0.1 Introduction to startup, venture capital, and government stakeholders



0

Overview of startup & VC ecosystems

The innovation ecosystem typically comprises startups, VC firms, government, and other market enablers

Innovation ecosystems are interconnected networks of entities that strive to create value for customers and stakeholders. They are complex, diverse, and ever evolving concepts that differ from country to country, depending on national history and economic, political, and cultural context.

But whether we're talking about the more free-dealing Silicon Valley or the technocratic venture programs in Singapore, each innovation ecosystem contains three primary stakeholders that are supported by a few market enablers, which we define in a startup / VC context as follows:

1. **Startups** refer to companies in the first stages of operations. Startups are founded by one or more entrepreneurs who want to develop and sell innovative products or services.
2. **VC firms** refer to companies or funds that invest in startups in exchange for equity.
3. **Governments** set the national agenda, and oversee and support the ecosystem through regulatory policies, frameworks and program activities.
4. **Market enablers** include supporting actors such as **angel investors**, who provide critical early-stage funding and mentorship to startup founders; **incubators & accelerators**, who nurture startups during their early-stages and help with networking and operational support; **trade associations** that help entrepreneurs build community; and other players like **law firms**, **investment banks**, etc., who support startups at different stages.

In this section, we will define and provide additional context for each of the 3 core stakeholders (startups, VC firms, and government); and in Chapter 2, we will look at the comparative advantages that each core stakeholder brings to different ecosystems.

Core Stakeholders

STARTUPS	VENTURE CAPITAL	GOVERNMENT
New businesses working on developing innovative ideas with high growth potential	Main investors in the ecosystem, providing capital and value-added services to fuel startup growth	Provides regulatory guidance and exogenous support to help develop the ecosystem, especially in its early-stages

Supporting Stakeholders

MARKET ENABLERS
<ul style="list-style-type: none">• Angel investors provide important early-stage, high risk capital and often act as mentors to startups• Incubators & accelerators offer financial support and mentorship to startups especially during the early days of operation, and also help to expand startup networks• Trade associations support community connections and helps unify the ecosystem• Other players include law firms, investment banks, family offices, venture builders, etc.

Source: Deloitte Analysis

Definition of startups

Startups refer to young companies with high growth potential, offering unique products or services that meet a market need

‘Startups’ are a broad term, with different organisations defining the business in different ways. Startups differ from other small and medium enterprises (SMEs): While SMEs typically generate revenue early on and continue to have steady growth, startups tend to raise a lot of capital early on and are more focused on growing market share rather than profit. Startups, unlike most SMEs, focus on more innovative products and services, and have higher growth ambitions. Successful startups will be able to scale exponentially, with many expanding globally.¹

For our report, we’ve defined startups as young businesses with the following factors:

- *Breakthrough product or service*
- *High growth ambition and potential to scale*



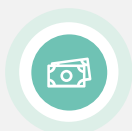
“... Startup is an organisation designed to search for a repeatable and scalable business model ...”

– Steve Blank, author of *Four Steps to the Epiphany*¹



“... Startups are businesses that want to disrupt industries and change the world—and do it all at scale”

– *Forbes*²



“... A startup aims to create a monopoly in a niche market, and then expand to new markets”

– *Tech in Asia*¹



“... Being newly founded does not in itself make a company a startup. Nor is it necessary for a startup to work on technology, or take venture funding, or have some sort of exit.’ The only essential thing is growth ...”

– Paul Graham, *Y Combinator founder*¹



“... Startup is defined as business that (i) has operation which involves technology and innovation; (ii) requires high capital and has high risks, but has the potential of rapid growth and (iii) has an impact on economy and society, in aspects of revenue, investment and employments ...”

– Thai Startup Act (Draft Act)³

Source: Deloitte Analysis

1) TechnAsia, [What is a Startup](#), 2015

2) Forbes, [What is a Startup and how does it work](#), 2022

3) National Innovation Agency (NIA), Thai Startup Act (Draft Act), 2018

Definition of startups

The startup market globally is dominated by tech-related businesses; less than 1% of startups become unicorns

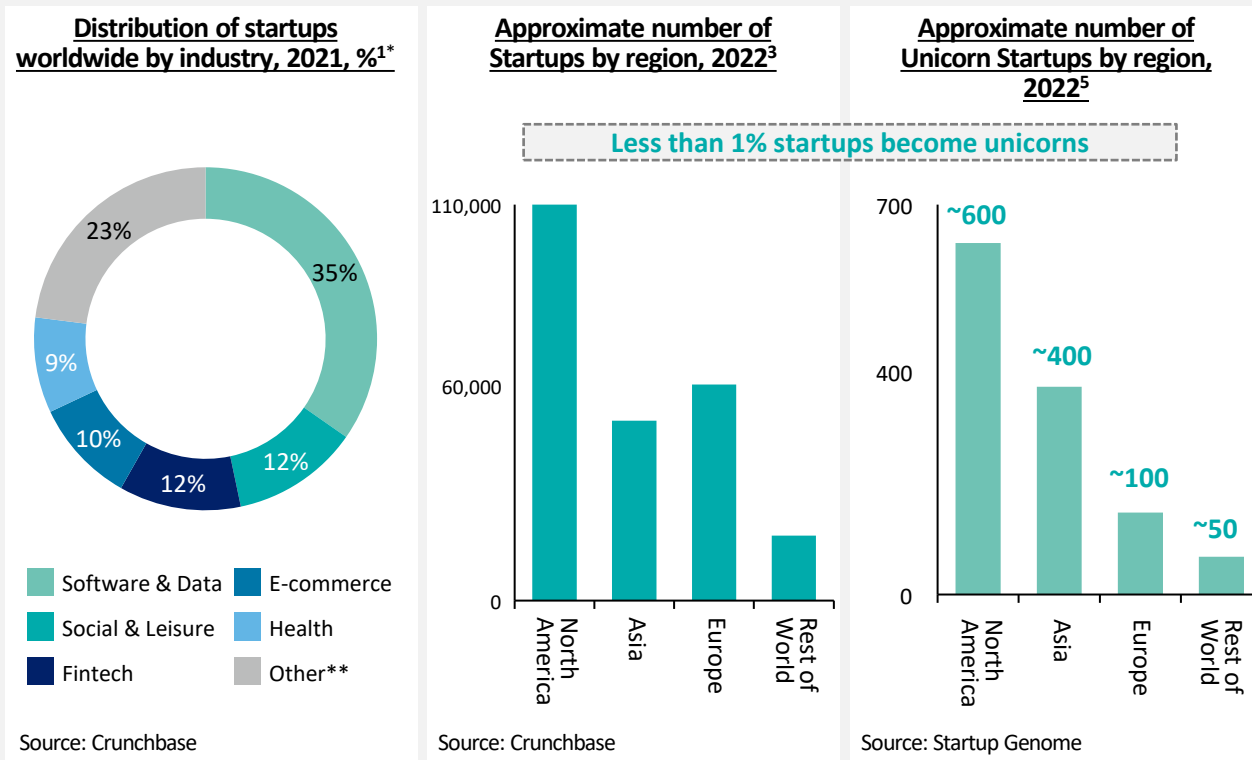
Startups today are **mainly dominated by tech-related businesses**, as the demand for technology-related solutions continues to fill the headlines in the 21st century.¹

Nearly half of today's startups are headquartered in North America, which has the most robust ecosystem with highest numbers of angel investors and VC firms backing the industry.² The remaining startups are mostly found in Europe and Asia.³

The ambition of many if not most startups (as well as of VCs backing them) is to become a unicorn (valued at more than USD 1bn⁴). However, the **rate at which a startups becomes a unicorn is slim**—with less than 1% of startups globally become unicorns.^{3,5}

Asian startups are thriving as well, backed by a number of fast-growing economies. Asian startup ecosystems are home to several large economies such as India and China, and thus are able to produce a higher number of unicorns as compared to Europe—even though the latter has a higher number of startups overall. In addition, several top ecosystems are from Asia, including Beijing, Shanghai, and Seoul.⁵

Global startup landscape by the numbers



*Based on a sample of ~ 100,000 entities, data source from Crunchbase

**Other industries include education, transportation, foodtech, etc.

Source:

1) Crunchbase, [Top Startup Ecosystems](#), 2021

2) TremGlobal, [Startup Ecosystem in the USA](#), June 2021

3) Crunchbase, [Companies database](#), 2022

4) PitchBook, [What is a unicorn company](#), 2022

5) Startup Genome, [The Global Startup Ecosystem](#), 2022

Definition of startups

Startups can obtain funds from a variety of different sources

Startups typically raise funds from several sources such as personal connections, government grants, debt and equity vehicles.

In the earliest stages (pre-seed), entrepreneurs tend to use either their own funds and/or borrow from friends and family (bootstrapping), before reaching out to angel investors, accelerators, incubators, etc., for financial help.

During the **seed stage**, startups will typically raise capital from angel investors and VC firms to support their minimum viable product (MVP) and product-market fit development. In many startup ecosystems, VC firms and government agencies typically collaborate to enable seed funding stage activities.

If successful, seed-stage startups will proceed to Series A and B funding rounds, which are primarily led by VC firms. Startups that reach Series C and beyond are considered to have proven their profitability and are on the lookout for both new sources of funding or exit opportunities (i.e., acquisition or IPO).^{1,2}

Main sources of raising funds for start ups		Funding offered in stages...				
		Types of fund sources	Pre-seed	Seed	Series A,B	Series C +
How can startups raise funds? ²	Personal or internal funding	Personal savings	✓	✓		
		Friends and family*	✓	✓		
		Retained profits			✓	✓
	Government funding	Government programs		✓	✓	
	Debt	Banks loans			✓	✓
		Venture debt			✓	✓
		Public market debt				✓
		Private debt				✓
	Equity	Incubators / Accelerators	✓	✓	✓	
		Family offices		✓	✓	
		Angel investors	✓	✓	✓	
		Venture capital funds		✓	✓	✓
		Private equity funds				✓

*Note: In some cases, friends and family might invest in startups in exchange for equity stake

Source: Deloitte Analysis

1) Forbes, [What is a Startup and how does it work](#), 2022

2) World Bank Group, [Malaysia Assessment of the Startup Financing Ecosystem](#), 2022

Definition of startups

Startups go through different stages of funding and interact with different types of investors throughout their lifecycle

Overview of the startup lifecycle (illustrative; varies market to market) ^{1,2,3,4,5}

~79% of startups fail to raise funds beyond the seed stage^{6**}

	Pre-Seed Ideation; MVP	Seed MVP; Product- Market Fit	Series A Product- Market Fit; Scaling	Series B Scaling, achieve profitability	Series C + Optimise the business	Exit stage IPO Mature
Startup stage	<ul style="list-style-type: none"> Identifying solution to solve customers' pain points Working toward MVP 	<ul style="list-style-type: none"> Improving the MVP Developing product-market fit 	<ul style="list-style-type: none"> Have working product Refining product-market fit Refining business model (path to profits) Scaling up business 	<ul style="list-style-type: none"> Established product-market fit Scaling up the business Growing customer base Working toward profitability 	<ul style="list-style-type: none"> Optimising the business for profitability Putting company on IPO track Consider other exit options 	<ul style="list-style-type: none"> Offering corporate shares to general public No longer a startup
Average funding*	Below USD 1 mn	~Less than USD 5 mn	~USD 5 – 30 mn	~USD 10 – 60 mn	~More than USD 20 mn	• N/A
Funding Sources	<ul style="list-style-type: none"> Startup owners Friend and family Angel investors Incubator Accelerators 	<ul style="list-style-type: none"> Venture capital firms Angel investors Crowdfunding platforms Accelerators 	<ul style="list-style-type: none"> Venture capital firms Accelerators Super angel investors 	<ul style="list-style-type: none"> Venture capital firms 	<ul style="list-style-type: none"> Venture capital firms Banks Private investors (PE firms, etc.) 	<ul style="list-style-type: none"> General public

*Note: The average funding amount is dependent on geographies and market conditions

**Note: Based on data sample of 35,568 start-ups founded between 1990 and 2010, data from Crunchbase

Source: Deloitte Analysis

1) Crunchbase, [The Ultimate Guide to Raise Capital for a Startup](#), 2022

2) Y Combinator, [Stages of startups](#), 2022

3) EQVISTA, [Funding Stages in a Startup](#), 2022

4) Cloudways, [Startup Funding Stages](#), 2021

5) Silicon Valley Bank, [Stages of Venture Capital](#), 2022

6) Sebastian Quintero, Medium, [Dissecting start-up failure rates by stage](#), 2017

Definition of venture capital

Venture capital is a form of private equity investment focused on startups

VC firms provide risk capital to startups in exchange for equity and serve an important role in financing a startups' product development, operations, and economic growth. There are two main types of VC firms, namely institutional VC firms and corporate VC firms (CVCs).

Institutional VC firms raise capital from private investors (such as pension funds, endowments, family offices, etc.) and deploy that capital to startups in exchange for partial ownership of the company. CVCs, on the other hand, invest capital from their parent company—with investments often aligned to the parent company's corporate strategy.

In terms of revenue generation, VC firms usually charge management fees (e.g., 2% of committed capital) and carried interest (e.g., 20% of profits) from their investors.¹

In addition to providing capital, VC firms typically provide other value-added services to the startup, such as advisory services (e.g., management advice, strategic directions, operational consulting, growth strategies) and networking support.^{2,3}

The investment focus of VCs differs from firm to firm—and can vary by target funding stage (e.g., seed or series A, etc.), target industry (e.g., healthcare or fintech), and target geographies (e.g., local or global). Many VC firms have multiple funds, each focusing on different verticals.

► Venture capital funds can be categorised based on...

Target funding stage^{1,4}

Refers to the stages of startups that the fund targets

Seed stage: Funds focused on startups who just started their business

Early-stage: Funds focused on startups in Series A, Series B

Late stage: Funds focused on more matured startups in series C+

Target industry⁵

Refers to the industry of startups that the fund targets

Software & data

Fintech

E-commerce & retail

Healthcare

Other

Target location⁵

Refers to the location of targeted startups

Local: Fund focuses on startups within the country

Regional: Fund focuses on startups in particular regions e.g., Southeast Asia, North America, etc.

Global: Fund is open to invest in startups regardless of their location

Note: VC firms often manage multiple funds to diversify their portfolio





Source:

- 1) Forbes Advisor, [Understanding Venture Capital](#), 2022
- 2) Silicon Valley Bank, [What is Venture Capital?](#), 2022
- 3) Business News Daily, [What Is Venture Capital?](#), 2022

- 4) PitchBook, [What is VC and how does it work?](#), 2022
- 5) Forbes, [The Five S's Of VC Deal Filtering](#), 2021

Definition of venture capital

Venture capital is different from other equity fundraising strategies in the startup space

	Institutional Venture Capital firms ^{1,2}	Corporate Venture Capital (CVC) firms ²	Angel investors ³	Accelerators ⁴
 Investment structure	Institutional venture capital firms (GPs) set up funds to raise and pool capital from investors (LPs) and deploy that capital toward startups	CVC firms are venture arms of large corporations, and they use their parent company's funds to invest in startups	Accredited individual investors make private investments in early-stage startups	Accelerators act as 'mentors' for early startups, and often offer seed funding in exchange for equity
 Investment goal	Focus on generating positive returns for their investors (LPs) and the firm	Usually invest in startups that are strategically important and synergetic with their parent company	Aim to help startups in the early days, with high risk, high reward expectations Investment in exchange for small amount of equity	Investment in exchange for small amount of equity
 Targeted funding stage	Seed, series A, B, C+	Series A, B, C+	Pre-seed, seed, series A	Pre-seed, seed, series A
 Examples of pros / cons for the startup^{5,6}	<ul style="list-style-type: none"> + Valuable management guidance, access to networks, and exposure + Large amounts of capital can be raised without having to repay - Dilution of ownership and control - Extensive resources and support for fast growth - There could be a pressure for startups to perform and grow rapidly 	<ul style="list-style-type: none"> + Access to parent company's resources and connections to grow + Leverage operational capabilities of larger company - Dilution of ownership and control - Idea and operations might have to be aligned with corporate's strategy, less autonomy - Deals could take longer to proceed 	<ul style="list-style-type: none"> + Industry or niche experts for advice + Quicker and more negotiable processes and agreements - Finding and getting connected with angel investors could be challenging - Angel investors expect higher initial equity amounts - Funding might be limited to small amounts - Dilution of ownership and control 	<ul style="list-style-type: none"> + Opportunity to jumpstart seed funding with wide network of investors + Able to benchmark against startups at similar stages - Startups will need to give away a stake for short-term program - There could be limited support provided to startups once the program is completed

Source: Deloitte Analysis

- 1) Crunchbase, [Venture Capitalist Ownership](#), 2018
 2) Silicon Valley Bank, [Stages of Venture Capital](#), 2022
 3) Business.org, [What is an Angel Investor](#), 2022

- 4) Forbes, [How startup Accelerators work](#), 2019
 5) Forbes, [Pros and Cons of Accelerators for startups](#), 2022
 6) Atto, [Pros and Cons of different types of startup funding](#), 2022

Overview of government support program

Governments around the world have formulated their own strategies to drive innovation

Many countries have acknowledged that consistent financial and non-financial investments into their innovation ecosystem can yield long-term benefits in the form of job creation, talent development, GDP growth, quality of life, and the development of new industries.

BENEFITS OF INVESTING INTO INNOVATION ECOSYSTEM

Factors of innovation that spur economic growth



JOB CREATION

Create high-skilled jobs and increase domestic employment rate



TALENT

Convert unskilled workers into uniquely skilled talent



GDP GROWTH

Elevate national output through advancement of more efficient production across businesses



QUALITY OF LIFE

Improve peoples' lives through innovative solutions that existing products and technology have not yet solved



NEW INDUSTRIES

Create new industries through breakthroughs of new and improved products, services, and technology

Governments have also been increasingly active and creative in directly and indirectly supporting startups and national innovation, with various infrastructure support programs, grants, passive investments (fund of funds), co-investment schemes (e.g., equity matching schemes), and direct investment schemes.

Overview of government support program

There are mainly 5 types of programs that governments use to support startups and VC communities

Archetype	Diagram	Description
1) Infrastructure Player	<p style="text-align: center;">Government</p>	<p>The government provides regulatory reforms, platform upgrades, or various other support (e.g., increase R&D spending; support international exchange programs; improve high tech education systems) to help grow startups and VCs</p>
2) Grant Provider		<p>The government provides grants in line with national priorities / programs to incentivise performance from eligible target beneficiaries</p> <p><i>Gov't: Low dollar amount needed; low time commitment; simple capabilities required</i></p>
3) Passive Investor		<p>The government funds VC investors who then allocates, manages, and grows the fund by directly investing in startups (fund of funds)</p> <p><i>Gov't: Medium dollar amount needed; risk adverse; low time commitment; moderate capabilities required</i></p>
4) Co-Investor		<p>The government co-invests alongside private VC firms directly into startups</p> <p><i>Gov't: Medium dollar amount needed; balanced risk appetite; medium time commitment; moderate to complex capabilities required</i></p>
5) Direct Investor		<p>The government actively pursues, manages, and grows its fund by directly investing in startups</p> <p><i>Gov't: High dollar amount needed; risk taker; full time commitment; complex capabilities required</i></p>

Source: Deloitte Analysis

Overview of Ecosystem in Thailand

1.1 Overview of the Thai ecosystem

1.2 Understanding the needs and challenges of Thai stakeholders

1.3 How government supports the ecosystem today

1

Thailand's unique story

Thailand's startup and VC ecosystem, which is still in its development phase, is a key component of its 4.0 national economic initiative

Thailand at a glance

VC history

Thailand's early VC activities date back to at least 1988, when USAID, in partnership with local banks, formed an investment company called "Business Venture Promotion". At the time, the program primarily focused on investing in local SMEs that demonstrated high growth potential. The initiative attracted a diverse set of investors, who later joined forces to create "The Thai Venture Capital Association (TVCA)" in 1994.¹

Using innovation to drive the transformation of the country

In 2017, Thailand launched an economic model called Thailand 4.0, whose goal was to solve key economic challenges that the country faced (e.g., middle income trap, inequality trap, imbalance trap) and transform the nation from a developing to a developed country.

One of the 5 key agendas of Thailand 4.0 is to support the development of a local innovation and startup ecosystem that seeks to "incubate entrepreneurs and develop networks of innovation-driven enterprises".^{2,3}

▶ Thailand by the numbers

Economics

GDP^{4,5} (nominal)

USD **506** bn in 2021, estimated at 3.0 – 3.5% growth in 2022

Credit rating⁶

A **BBB+** rating from Fitch denotes stable outlook in 2022

Inflation rate⁷

1.23% in 2021, below the 3.5% global average threshold

Unemployment⁸

1.4% in 2021, increasing from 1.1% in 2020

Demographics and innovation



Population⁹

71.7 mn people in 2022 - Ranks 20th in the world in 2020¹⁰



Online access¹¹

76% of the total population using the internet in 2020



R&D expense¹²

1.14% of GDP allocated to research and development in 2019

Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development

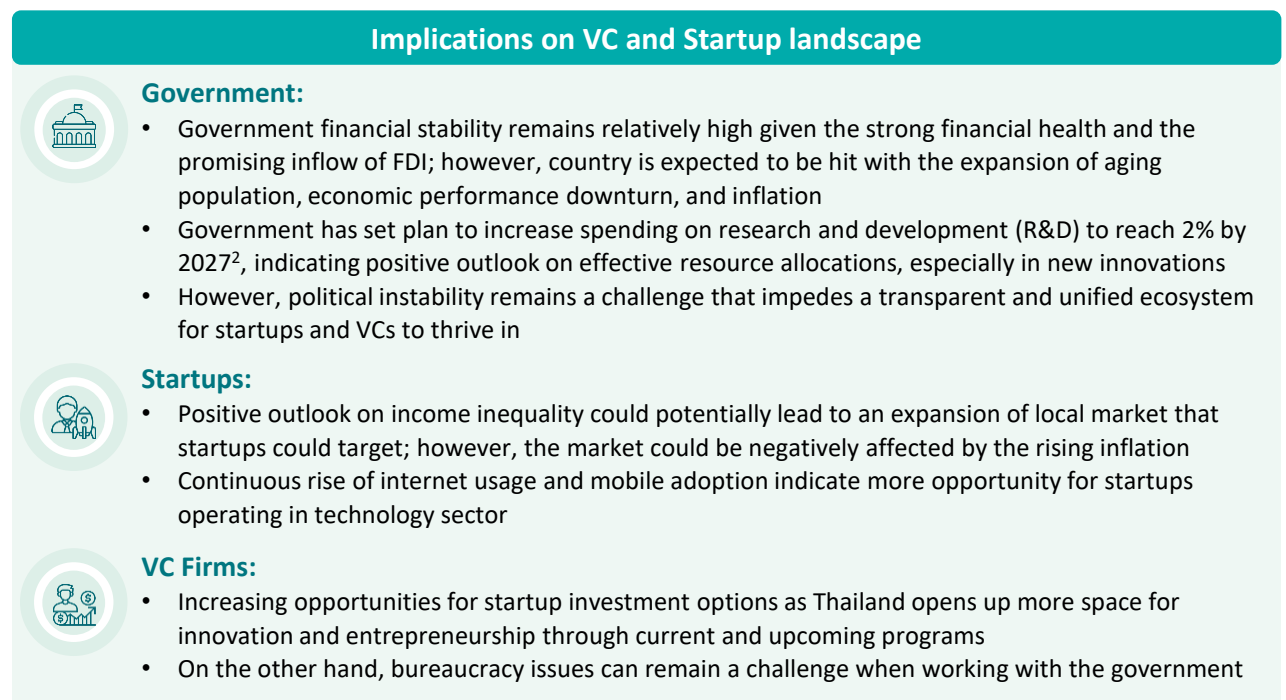
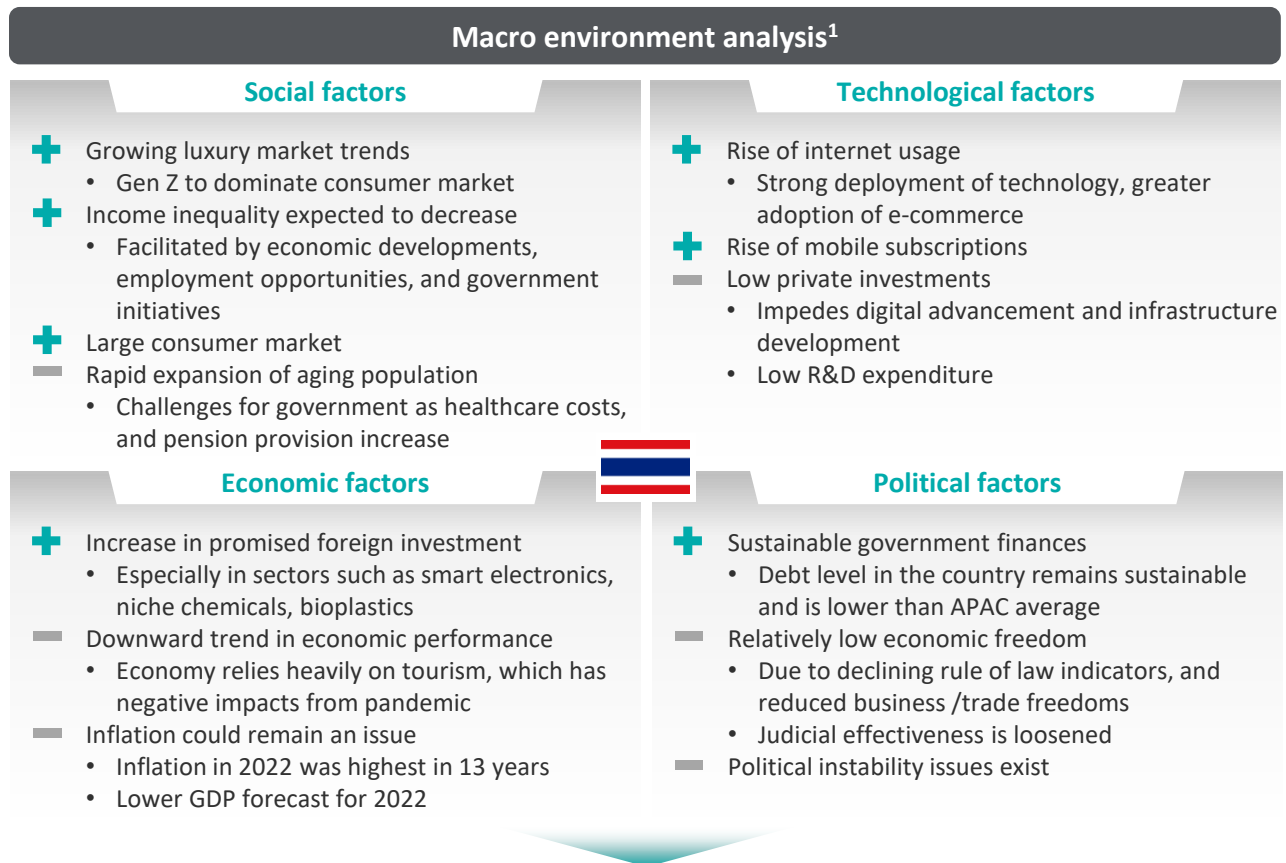
Source:

- 1) Office of SME promotion (OSMEP) [History of Venture Capital in Thailand](#), accessed October 2022
- 2) Royal Thai Embassy at Washington D.C., [Thailand 4.0](#), 2022
- 3) Royal Thai Embassy at Washington D.C., [Thailand 4.0 – Agenda 3: Incubate Entrepreneurs and Develop Networks of Innovation-Driven Enterprise](#), 2022
- 4) Trading Economics, [Thailand GDP](#), 2022
- 5) Reuters, [Thai business group revises 2022 GDP growth outlook to 3.0-3.5%](#), October 2022

- 6) Fitch ratings, [Credit rating for Thailand](#), 2022
- 7) WorldData, [Inflation rates in Thailand](#), 2021
- 8) The World Bank, [Unemployment – Thailand](#), 2021
- 9) Macro trends, [Thailand Population](#), 2022
- 10) Worldometer, [Thailand Population](#) 2020
- 11) Statista, [Thailand: Internet penetration rate](#), 2022
- 12) The World Bank, [Research and development expenditure \(% of GDP\) – Thailand](#), 2019

Thailand's unique story: Macro environment analysis & implications on startup & VC landscape

Thailand is primed to help support the development of a startup & VC ecosystem; however, economical constraints and political challenges could deter such development



Source:

1) Euromonitor, [PEST Analysis: Thailand](#), April 2022

2) Bangkok Post, [Thailand's R&D grows amidst Covid-19 NXPO sets R&D investment target at 2 percent of GDP by 2027](#), May 2022

Thailand's startup landscape

Thai startup ecosystem is a relatively young market with a large number of early-stage participants

The startup ecosystem in Thailand is still relatively young, with only 35 startups that have successfully exited to date.¹ The majority of Thai startups are still in the early-stages, working on their product development and looking for opportunities to bring in their first group of customers.

Thailand's startup market is unique in that many of these startups were established as a spin-off from large local corporates or have SME-like characteristics.

The 3 top sectors that Thai startups are focusing on are in fintech, e-commerce, and business solutions; the fintech sector itself accounts for 60% of total capital funding since 2020.²

▶ Thailand Startup ecosystem

Startup ecosystem index³



#53
Global



#11
Asia Pacific



#4
Southeast Asia

R&D 1.1% of GDP
(global avg. 2.3%)²

Global Index Ranking



#54
Global entrepreneurship⁴



#43
Global innovation⁵



#47
Ease of starting a business²

Source:

1) Innovation Club Thailand, [Baseline Study 2021](#), 2021

2) Startup Universal, [Thailand Startup Ecosystem Country Guide](#), 2022

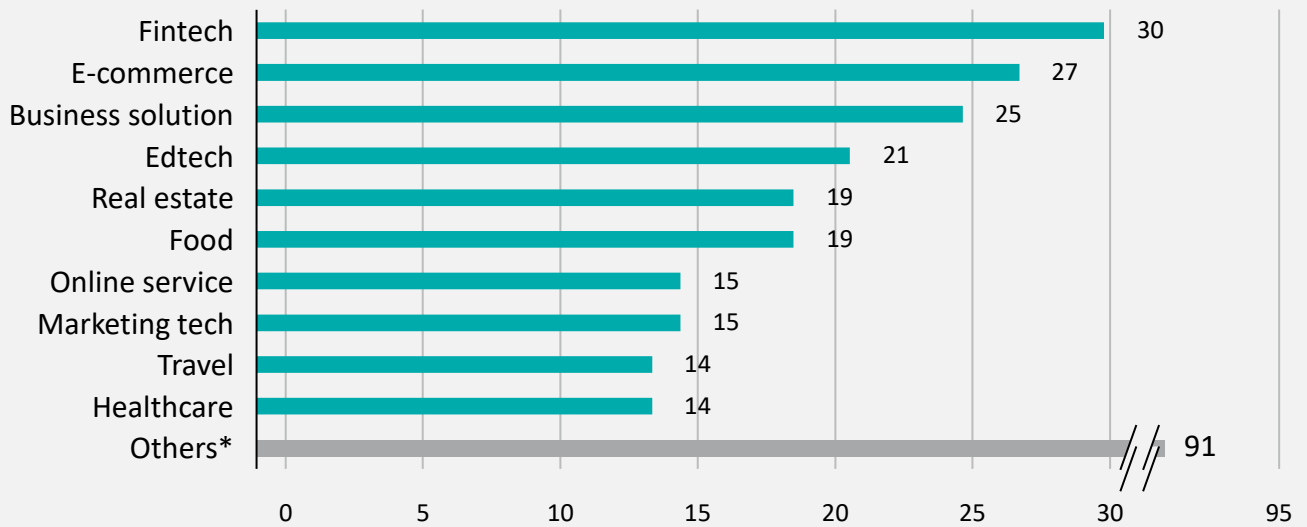
3) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

4) Knoema, [Global entrepreneurship index](#), 2019

5) Global Innovation Index, [Global Innovation Index Report 2022](#), 2022

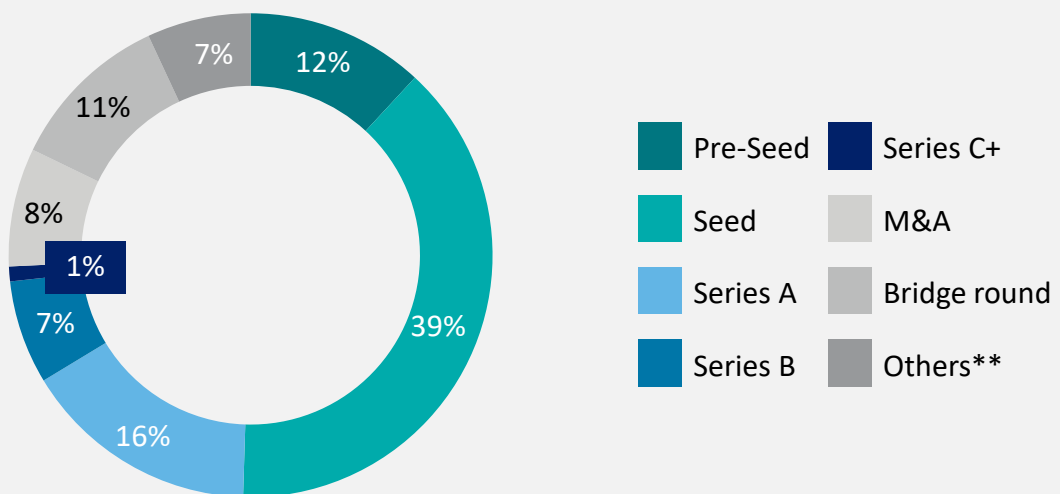
Thailand's startup landscape

► Thai startup breakdown by industry, 2022¹



Source: Techsauce

► Thai startup breakdown by funding stage, 2022¹



Source: Techsauce

* Note: Others include marketplace, blockchain, media, transportation, logistics, insurance, AI, gaming, industrial, retail, agritech, etc.

** Note: Others include ICO, IPO, convertible bond, venture round, and undisclosed deals

Source:

1) Techsauce, [Techsauce Startup Directory](#), 2022

Thailand's VC landscape

Thailand's VC landscape is dominated by CVC firms who typically invest in later stage startups, resulting in an investment gap for seed stage startups

The most active firms in the Thailand market are CVC firms that have nearly twice as many deals compared with institutional VC firms in Thailand, according to Crunchbase.¹

CVCs normally focus on making strategic investments into later stage startups—particularly startups whose businesses align with the CVC parents' corporate strategy.

CVC firms as well as institutional VC firms are more likely to direct their investments into middle or later stage startups (i.e., series A and above) than in seed stage startups.^{2,3}

This has resulted in a funding gap for many startups looking to raise capital in the seed stage.

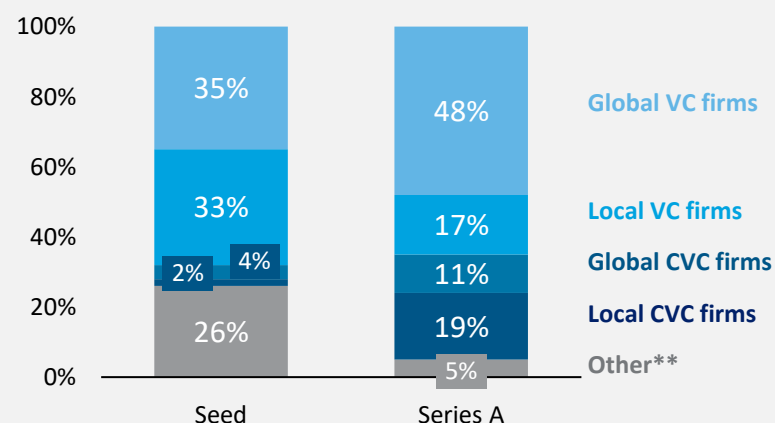
Breakdown of Thai-based VC firms and CVC firms by accumulated number of deals and number of exits up to 2022¹

Firm type	Accumulated number of deals*	Accumulated number of exits
VC firms	63	3
CVC firms	111	10

- Thai-based CVC firms are more active than their counterpart, taking the lead in both number of investments (both locally and globally) and the number of exits they have secured

Source: Crunchbase

Breakdown of investors who invest in Thailand seed stage and series A startups based on 2021 Innovation Club report³



- In Thailand, VC firms play an important role in early-stage startups
- However VC firms in Thailand are less active in terms of their investments compared with CVCs, resulting in limited early-stage funding support for Thai startups

Source: Innovation Club Thailand

* Note: The number of deals includes overlaps between VC firms and CVC firms

** Note: Others include angel investors and accelerators

Source:

1) Crunchbase, [Crunchbase investors search](#), 2022

2) Techsauce, [Techsauce Startup Year-in Review 2021](#), 2021

3) Innovation Club Thailand, [Baseline Study 2021](#), 2021



Understanding the needs and challenges of Thai stakeholders

Challenges key stakeholders face – Overview

Based on our analysis, we have identified 13 major challenges across 4 categories that may impede the Thai startup & VC ecosystem from reaching its full potential

	Economic (Markets & Financing)
1	Affluent corporations dominate local markets , making it hard for startups to compete
2	Startups struggle to break into global markets due to limited global network and support
3	Scarce investor interest and access to funding for seed to early-stage startups
	Infrastructure
4	Thailand's pool of market enablers (e.g., incubators and accelerators) are declining , resulting in a deficit of startup programs and support
5	Thailand's startup community is just emerging and has limited access to academia's support and partnership
	People
6	Limited number of successful homegrown entrepreneurs to mentor the next generation of startups
7	Thai startups face difficulty in hiring talent due to limited talent pool and their general lack of interest in startups
8	Foreign founders and talent face barriers in doing business and in immigration policies
9	Domestic founders can be risk averse , creating localised products focused on local markets
	Government & Regulatory
10	Government financial support for startups is insufficient for early-stage working capital needs
11	Government startup programs have diminished impact due to less-than-ideal design and execution
12	Startups face friction in operating in Thailand – including restrictive regulations and insufficient policy benefits
13	Inflexible investor options and policy challenges make it difficult for investors to operate in Thailand

Source: Deloitte Analysis

Challenges key stakeholders face – Detailed insights

Affluent corporates dominate the market in Thailand, making it difficult for independent startups to compete; and Thai startups struggle to reach global markets due to limited global network and support

Economic – Challenge 1

Affluent corporations dominate local markets, making it hard for startups to compete

- **Thai market is mainly dominated by large corporates, many of them also have successful ventures that spinoff into startups**
- **Corporate-linked startups align with the linked company objectives** and can potentially take advantage of the corporates' resources, reputation, expertise, technology, etc.

List of well known corporate-linked startups in Thailand

Startup	Linked To
SCB Abacus	Siam Commercial Bank
TrueMoney	True Corporation
Ascend Group	True Corporation
Rabbit Care	VGI

“ **Corporations in Thailand are well-established** and many of them diversify into many industries, starting successful ventures that spin-off into corporate-linked startups

– Investment Director, International VC firm

Economic – Challenge 2

Startups struggle to break into global markets due to limited global network and support

- **Thai startups face challenges in networking** with international customers and potential investors, limiting their opportunity to expand their reach globally

Examples of foreign government initiatives to globalize connections

Singapore – SEEDS Capital¹, ESVF²	Program allows for co-investments and partnerships with foreign VC firms
UK – DIT, Investment Support Directory³	Online tool to help international investors set up and expand operations into the UK

Source: Enterprise Singapore, NRF, Gov.uk

“ One of the reasons why Thai startups cannot expand to other countries is the **lack of international connection**

– Investment Director, International VC firm

Source:

1) Enterprise Singapore, [SEEDS Capital](#), 2022

2) NRF, [Early Stage Venture Fund](#), 2022

3) Gov.uk, [DIT launches new tool to drive foreign investment](#), May 2019

Challenges key stakeholders face – Detailed insights

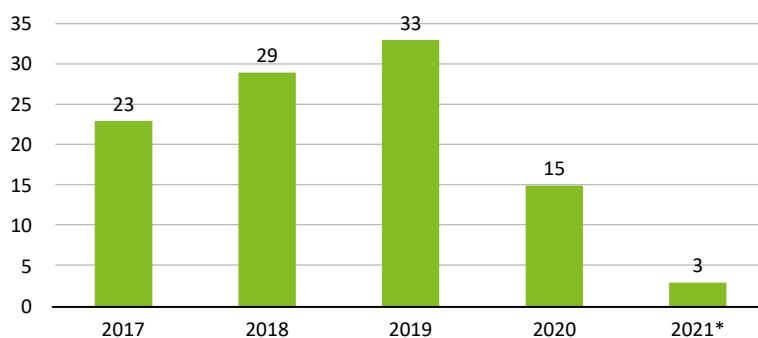
Currently there is limited seed stage capital available for startups in Thailand

Economic – Challenge 3

Scarce investor interest and access to funding for seed to early-stage startups

- There is limited seed stage funding available in Thailand
- The number of seed stage funding rounds in Thailand used to be on an upward trend. However, the number of rounds has dropped significantly since 2019¹, due mainly to the drop in new startups founded and also in pre-seed funding rounds^{1,2}

Number of seed funding rounds in Thailand, 2017 – 2021¹



Source: Innovation Club Thailand



We find it **challenging to get investment deals from VCs in Thailand because they invest more in later stage startups or startups abroad**

– Founder, Thai startup

* Note: The data is as of April 2021

Source:

1) Innovation Club Thailand, [Baseline Study 2021](#), 2021

2) Techsauce, [Techsauce Startup Year-in Review 2021](#), 2021

Challenges key stakeholders face – Detailed insights

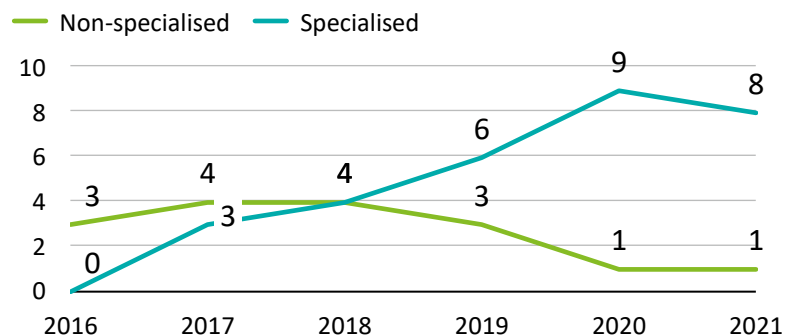
Startups face limited access to early-stage market enablers; and there is limited cooperation between the startup community and academia

Infrastructure – Challenge 4

Thailand's pool of market enablers is declining, resulting in a deficit of private startup programs and support

- **There are a limited number of local enablers** such as accelerators and incubators, and it is highly competitive to make it onto their radar
- **In recent years, there has been a decline** in the number of non-specialised early-stage accelerators* as a result of changes in management and direction of companies sponsoring the programs

Number of Thai accelerators and incubators from 2016 – 2021¹



Source: Innovation Club Thailand



There should be **someone to help equip first time founders with skills and knowledge they need** in doing business

– Investment Director, Thai CVC firm

Infrastructure – Challenge 5

Thailand's startup community is just emerging and has limited access to academia support and partnerships

- **Collaboration between the startup community and academia is still in the nascent stage**
- **For example, Chulalongkorn's iHub startup program²** was launched only in 2017 with 300 registered startups, while Singapore's top local universities have produced thousands of startups starting from 2010³

Leading SEA startup ecosystem, resources available to startups



National University of Singapore has incubated about 25% of all startups in Singapore⁴



Singapore's Block71 is the world's most tightly packed tech entrepreneurial working space, housing over 100 startup participants⁵



Singapore's top universities collaborates with major MNCs such as Mercedes Benz and Tencent to launch programs targeted at startups⁶



If you look at famous startups in Singapore, you can see that **many if not most of their founders participated in the NUS Overseas Colleges (NOC) Program**

– Angle Investor, International company

*Note: Examples of non-specialised early-stage accelerators that closed down include DTAC Accelerate, Spark Acceleration, etc.

Source:

1) Club Thailand, [Baseline Study 2021](#), 2021

2) Chulalongkorn University, [iHub Chula's New Breed of Startups](#), 2022

3) NUS, [Social Venture Lab](#), 2022

4) The Worldfolio, [NUS Interview](#), 2018

5) The Economist, [What entrepreneurial ecosystems need](#), 2014

6) NUS Enterprise, [Corporate Partnerships](#), 2022

Challenges key stakeholders face – Detailed insights

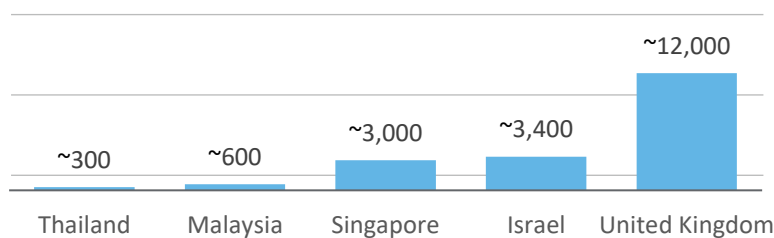
Due to the lacklustre number of breakthrough Thai startups, there is a limited number of mentors; and startups are viewed as less attractive places to work compared with established corporations

People – Challenge 6

Limited number of successful homegrown entrepreneurs to mentor the next generation of startups

- There are a relatively small number of startup mentors within Thailand as there have been few successful local exits (2.3 exits per year between 2007 and 2021)¹
- One of the major hurdles Thai startups face, along with funding, is getting advice from thought leaders about international expansion¹

Total number of tech startup founders by country²



Source: Crunchbase. Note that this number differs from total number of startups in a country, given founders often have multiple startups.



As a result of having **very few successful Thai startup exits**, there is a lack of successful mentors in Thailand to guide the young generation of entrepreneurs

– Investment Director, International VC firm

People – Challenge 7

Thai startups face difficulty in hiring talent due to limited talent pool and their lack of interest in startups

- There is a relative shortage of STEM graduates from Thailand's top universities
- Corporates are often the preferred choice for local talents instead of startups due to the higher compensation and career stability that corporates can offer

Thailand IT Graduates, Ideal Employer Rankings 2022³

1. Google	6. Shopee
2. Microsoft	7. GMM Grammy
3. Facebook	8. Sony
4. Line Corporation	9. PTT
5. Intel	10. Samsung

Source: Universum



Startups and the **entrepreneurial spirit have yet to take off**, graduates from leading foreign universities go to big corporations instead of startups.

– Investment Director, International VC firm

Source:

1) Innovation Club Thailand, [Baseline Study 2021](#), 2021

2) Crunchbase, [Crunchbase Hub Profile](#), 2022

3) Universum, [Universum Top 100 Ideal Employer Rankings 2022 – Thailand Edition](#), 2022

Challenges key stakeholders face – Detailed insights

International talent seeking to create or join startups in Thailand face numerous barriers, while domestic startups often have tunnel vision focused only on local markets

People – Challenge 8

Foreign founders and talent face barriers to doing business and immigration policies

- **Foreign startup founders are confronted with cultural and language barriers** in addition to ownership restrictions when setting up base in Thailand
- **Highly skilled foreign talents are often deterred from working in Thailand** due to foreign visa complications and headcount hiring limitations imposed on local firms

Ease of doing business ranking by country, 2020¹

1. New Zealand	6. United States
2. Singapore	7. Georgia
3. Hong Kong	8. United Kingdom
4. Denmark	9. Norway
5. South Korea	21. Thailand

Source: The World Bank



There are **challenges regarding the ease of entry and doing business** in Thailand for foreign entrepreneurs; this discourages them from setting up business in Thailand.



– Investment Director, International VC firm

People – Challenge 9

Domestic founders are risk averse, and typically create more localised products that focus on local markets

- Founders in Thailand are often more focused on solving local problems compared with regional and global issues, leading to restricted global reach

Startup ecosystem performance by city²

City	Market Reach	Talent & Experience
 Silicon Valley	10	10
 Tel Aviv	10	8
 Singapore	8	5
 Kuala Lumpur	4	4
 Bangkok	1	1

Source: Startup Genome



“Thai startups try to solve problems that are more immediate around them (domestic problems), which limits sizable exits and global expansion”

– Investment Director, International VC Firm

Source:

1) The World Bank, [Doing Business Legacy](#), 2020

2) Startup Genome, [The Global Startup Ecosystem Report 2022](#), June 2022

Challenges key stakeholders face – Detailed insights

Current funding support from government programs are insufficient for startups; also some existing support programs are not optimally designed and run into operational challenges, especially in execution

Government & Regulatory – Challenge 10

Government financial support for startups is insufficient for early-stage working capital needs

- The financial support that today's Thai government programs provide are generally small in value and do not meet the startups' funding needs
- Startups in the early-stages need funds to cover initial ideation, MVP build, product development, business operations, etc.

Comparison of capital needed for early-stage startups to operate for 1-2 years vs actual capital provided by different programs

Working capital needed (1-2 years)	USD ~500,000 – 1.5 mn ¹
Funding provided by Thai programs 	USD ~20,000 – 150,000* (DVenture, Digital startup fund, BOI startup grant)
Funding provided by SG programs 	USD ~350,000 – 7 mn** (Seed capital, ESVF, CVL)



The funding amount is too small; startups need a lot of cash in general, and **the funding from government programs was not enough** for us to cover business operations





– Founder, Thai startup

Government & Regulatory – Challenge 11

Government startup programs have diminished impact due to less-than-ideal design and execution

- Although there are many programs that have been developed and implemented, some of the **programs are not well designed** (e.g., complicated application process, unclear financing conditions with recourse, etc.) and they **often run into operational challenges** such as communication and execution issues

Examples of operational challenges

Design	 Majority of government programs are developed and managed by agencies operating in silos with limited cross-agency collaboration
	 Most of the programs still use paper-based applications , and the re-imbursement process also requires detailed paper receipts
Operation	 There is no centralised channel to market and promote the available programs to startups ²
	 Delay in processing procurement and subsidy processes; Ex: a startup reported that their grant was delayed by years ²



One good thing about Singapore is the well-developed government related process and system

– Venture Capitalist, International company

* Note: Number is converted based on XR of 37.85 THB to 1 USD

** Note: Number is converted based on XR of 1.43 SGD to 1 USD

Source:

1) Y Combinator, [Guide to seed fundraising](#), 2022

2) Innovation Club Thailand, [Baseline Study 2021](#), 2021

Challenges key stakeholders face – Detailed insights

Startups in Thailand face restrictive regulatory challenges and insufficient policy benefits

Government & Regulatory – Challenge 12

Startups face friction in operating in Thailand – including restrictive regulations and insufficient policy benefits. For example:

A Complicated practice to offer compensation benefits that incentivise early employees, e.g., ESOP

- Startups are normally incorporated as a limited company under the Civil and Commercial Code (“CCC”). Currently, there can be a problem in practice when startups issue new shares to those who are not current shareholders, including directors / employees under an Employee Stock Ownership Plan (ESOP)—as the new SEC regulation supersedes requirements of right offering under the CCC.
- Startups interested in implementing an **ESOP scheme need to frequently communicate with Department of Business Development (DBD) officers**, many of whom are not yet well informed of the new SEC regulation.

B Use of rigid frameworks to attract foreign talent, e.g., Board of Investment (BOI) registration requirements

- Smart Visa is currently applicable to companies that receive BOI promotion certificates under the targeted industries (e.g., next generation automotive, smart electronics, food for the future, automation and robotics, etc.)
- Generally, the **BOI promoted company is required to comply with conditions stated in the BOI promotion certificate. If the business deviates from the certificate, the privileges provided by BOI, including Smart Visa privileges, could be revoked**
- Given that startups have a **high tendency to pivot and update their business focus**, they might not be able to fully gain benefits from the BOI visa promotion campaign

C The complex and time-consuming license application process

- Currently, **business operators are required to apply for operational licenses with different authorities without a centralised platform; and there is no streamlined process to coordinate** between the multiple government agencies

D The presence of outdated business regulations

- There **exist outdated regulations that have not been updated and can hinder innovations and business operations**, such as the Postal Act B.E. 2477 (1934) (“Postal Act”), which monopolizes the handling of postal services only to the Thailand Post, a state enterprise
- Startups may end up unintentionally breaching such regulations

Challenges key stakeholders face – Detailed insights

Venture capital firms in Thailand face a number of regulatory challenges surrounding inflexible investor options and policies

Government & Regulatory – Challenge 13

Inflexible investor options and policy challenges make it difficult for investors to operate in Thailand. For example:

A VC license and structures are different from international standards

- In Thailand, VC management and private equity trusts are regulated businesses that require specific licenses
- The SEC requires **VC firms to register as either a company or a private equity trust; this differs from the GP/LP structure that most institutional investors globally are familiar with** when operating VC businesses, which might affect foreign investor confidence in a negative way
- There is also a limitation in terms of eligible investors for VC firms depending on their structure:
 - Eligible investors for VC firms registered as a company: Institutional investors only (which includes any investors having investment in VC firm of more than USD 264,200*)
 - Eligible investors for VC firms registered as a private equity trust: Institutional investors and not more than 10 ultra high-net-worth investors (UHNW)

B Inflexible investment options for investors, e.g., limited ability to use preferred shares or convertible debt

- The scheme of **preferential rights of existing shares cannot be amended once issued**; new series of shares need to be re-issued and approvals may still be required from existing shareholders
- **Investors are not allowed to directly convert financing from loan to equity**; they need to demonstrate fund flow of loan repayment and subscription of shares

C VC operational challenges

- Even though the Bankruptcy Law (BA) has developed over time, some challenges remain:
 - It is **difficult to check for insolvency of person and entity**
 - **Bankruptcy proceedings and enforcements can be time consuming**
- According to “Foreign Business Act: FBA”, **certain businesses are restricted from foreigners in Thailand** (e.g., farming, land trading, domestic transportation, etc.) and **seeking foreign business license is complicated and challenging**
 - As such, international VC firms will need to structure investments so that their portfolio companies remain “non-foreign” under the FBA

* Note: Number is converted based on exchange rate of 37.85 THB to 1 USD
Source: Deloitte Analysis



How government supports the ecosystem today

Examples of existing government programs in Thailand

Thai government agencies have initiated government programs to fund startups—including grants and direct investments

The Thai government has launched and operated a number of startup programs run by various agencies, including: DEPA, NIA, BOI, NSTDA, Revenue Department, and Technology and Innovation-based enterprise Fund.

These programs are mostly delivered as grants or direct investments into startups (in partnership with private entities). The following 3 programs are examples of the type of funding that is currently available:

Programs		dVenture	Digital Startup Fund	BOI Startup Grant (Competitiveness Enhancement Act)
Overview of the program		DEPA works with VC and CVC firms to invest in Thai early-stage and growth stage startups. The program also provides value-added services to support the startups' development.	The program provides funding support to Thai entrepreneurs and startups in various stages in the form of grants and direct investments (with share options)	The program co-pays for startups' human capital expenses – including technology and management talent – as it aims to support their competitiveness through talent employments
Investment archetype		5: Direct Investor*	2: Grant Provider 5: Direct Investor	2: Grant Provider
Investment cap per startup		USD 26,420 - 105,680**	Grant: USD 1,320 – 7,930** Investment: USD 18,450 – 113,600**	USD 132,100**
Government agency		Digital Economy Promotion Agency (DEPA)	Digital Economy Promotion Agency (DEPA)	Board of Investment (BOI)
Startup	Stage	Early-stage Growth Stage	Early-stage Growth Stage	Early-stage Growth Stage
	Sector	Based on investment focus of each round	Based on investment focus of each round	Based on national priorities
VC Firm		Local VCs	N/A	N/A

* Note: The program announced that it is a matching fund program, but there is no information on how the matching scheme works, e.g., matching ratio, matching timing, etc.

** Note: Number is converted based on exchange rate of 37.85 THB to 1 USD

Source: Digital Economy Promotion Agency (DEPA), Board of Investment (BOI), Deloitte Analysis

DVenture: Scheme background

DVenture works with VC firms to invest in startups from VC firms' portfolio, additional support includes introduction to different stakeholders in the market and assistance in business management

dVenture (by DEPA)

Program overview

Background and vision

dVenture was launched in 2021 with the goal of **accelerating the growth of Thai startups** and **supporting Thai startups' global expansion**. For this program, **DEPA works with local VC and CVC firms to select startups from their portfolio and invest in those startups**. DEPA currently works with 4 different VC and CVC firms, namely InnoSpace (Thailand), Intouch, Krungsri Finnovate, and Disrupt Technology Venture.

Investment archetypes and target actors

Investment Archetype 5: Direct Investor*

Government works with VC and CVC firms to invest in startups from their portfolio

Target startups: Thai based, early-stage and growth stage startups

Target sectors: There are 8 target sectors namely 1. Government service, 2. Healthcare, 3. Travel, 4. Agriculture, 5. Education, 6. Service, 7. Financial technology, 8. Smart city¹

Program offering

Financial offering

Items	Program Details ²	
	dVenture for early-stage startups	dVenture for growth stage startups
Investment cap for each startup	USD 26,420** from dVenture	USD 105,680** from dVenture
Number of startups/round	8 startups	3 startups

Value-added services

Additional services provided to startups in the program include:

- Introduction to potential customers and partners
- Introduction to startup community (both locally and globally)
- Introduction and access to government procurement process
- Tax incentives
- Assistance in local and global business expansion

Learnings from dVenture

- ✓ **VC firms' involvement:** Instead of having to evaluate and select startups to invest in by themselves, government works with VC firms and leverages their expertise for portfolio selection
- ✓ **Value-added services:** In addition to providing funding support, program also provides other value-added services to startups, such as business and networking support
- ✗ **Funding amount:** The funding provided to startups is relatively small, and the funding amounts do not cover operational expenses for very long

* Note: The program announced that it is a matching fund program but there is no information on how the matching scheme works

** Note: Number is converted based on XR of 37.85 THB to 1 USD

Source:

1) Digital Economy Promotion Agency (DEPA), [dVenture](#), 2022

2) Digital Economy Promotion Agency (DEPA), [Depa press release: registration for dVenture round 3 of the year 2022](#), 2022

DEPA digital startup fund: Scheme background

Digital startup fund provides funding support in the form of grants and directs investment (in exchange for equity stake) to Thai entrepreneurs and startups

Digital Startup Fund (by DEPA)

Program overview

Background and vision

Digital startup fund was launched in 2018 with the goal to encourage more Thai entrepreneurs to start new businesses and provide funding support to local startups. For this program, participants submit and pitch their projects to DEPA*. DEPA then evaluates and chooses the projects they would like to support. For entrepreneurs, the support is in the form of grants. For startups, the support is in the form of grants and direct equity investment depending on their stages.

Investment archetypes and target actors

Investment Archetype 2: Grant Provider

Investment Archetype 5: Direct Investor

Target startups: Thai based, early-stage and growth stage startups

Target sectors: Sectors vary by rounds. The focus sectors of the latest round are 1. Government service, 2. Healthcare, 3. Travel, 4. Agriculture, 5. Education, 6. Service, 7. Financial technology, 8. Smart city¹

Program offering

Financial offering

Items	Program Details ²		
	S1 for entrepreneurs	S2 for early-stage startups	S3 for growth stage startups
Grant cap for each project	USD 1,320**	USD 7,930**	Not available
Project duration	1 year	3 years	3 years
Investment cap for each project	Not available	USD 18,450** (not more than 70% of the project cost) <i>At the end of the project, startups will need to give their shares to DEPA, value of shares given must be higher than 25% of the investment money that startups received and less than 50% of the total shares</i>	USD 113,600** (not more than 70% of the project cost) <i>At the end of the project, startups will need to give their shares to DEPA, value of shares given must be higher than 50% of the investment money that startups received and less than 50% of the total shares</i>

Learnings from Digital Startup Fund

- ✗ **Funding amount:** The funding provided to startups is too small and does not support the startups operational expenses for very long
- ✗ **Value-added services:** The program only provides funding support to startups, there are no additional value-added services that startups can receive from participating in the program
- ✗ **VC firms' involvement:** The program is mainly operated by government agency and there is limited involvement from external parties such as VC firms

* Note: Projects will be evaluated by committee made up of team from series A+ startups and team from VC firms before they get the final evaluation by DEPA committee

** Note: Number is converted based on XR of 37.85 THB to 1 USD

Source:

1) Digital Economy Promotion Agency (DEPA), [Depa digital startup fund](#), 2022

2) Digital Economy Promotion Agency (DEPA), [Depa press release: digital startup fund \(revision: 2021\)](#), 2022

BOI Startup Grant under Competitiveness Enhancement Act: Scheme background

BOI Startup Grant under Competitiveness Enhancement Act co-pays human capital expenses with startups to enhance their competitiveness through talent employment

▶ BOI Startup Grant under Competitiveness Enhancement Act (by BOI)

Program overview

Background and vision^{1,2}

Startup grant program was launched in 2022 by BOI to support the startup ecosystem, following the Competitive Enhancement Act. The program **co-pays for startups' human capital expenses** – including technology and management talent – **aiming to increase their competitiveness through human capital support**. To ensure the quality of the startups, the program selects the startups that have successfully raised at least USD 132,100* funds from VC and CVC firms.

Investment archetypes and target actors^{1,3}

Investment Archetype 2: Grant Provider

Target startups: Thai-based, early-stage (pre-series A) and growth stage startups established less than 5 years ago** who have successfully raised USD 132,100* from VC/CVC firms

Target sectors: There are 13 target sectors namely
1. Agriculture and Biotechnology, 2. Aviation, 3. Tourism, 4. Biofuel and Biochemical, 5. Medical, 6. Intelligent Electronics, 7. Robotics, 8. Digital, 9. Processed food, 10. Automotive, 11. Circular Economy, 12. National Defense, 13. Human Capital development and research

Program offering^{1,3}

Financial offering

Items	Program Details
Program Duration	2 years
Grant cap for each startup	USD 132,100* (not more than 50% of the actual payment to the employee and less than USD 2,642* per employee per month)
Number of participants	30 startups

Value-added services

Additional services provided to startups in the program include:

- Mentoring from partner VC and CVC firms
- Facilitating the import of foreign talent through Investment Promotion Act

Learnings from Startup Grant under Competitiveness Enhancement Act

- ✓ **Promote knowledge transfer from international talent:** The startups hiring international talent must submit the knowledge transfer plan (from foreign to Thai employees) to the program committee
- ✓ **VC firms' involvement:** VC firms are involved in setting up the startup selection criteria and investment KPIs, along with participating in the startup selection with BOI advisors
- ✗ **Funding amount:** The funding provided to startups is relatively small, and the funding amounts do not cover operational expenses for very long

* Note: Number is converted based on XR of 37.85 THB to 1 USD

** Note: The startups established for more than 5 years but less than 10 years will be evaluated on the eligibility criteria by the application committee

Source:

1) Board of Investment (BOI), [Competitive Enhancement for target sectors](#), 2021

2) Board of Investment (BOI), [Competitive Enhancement Fund](#), 2022

3) Board of Investment (BOI), [BOI supporting Thai startups](#), 2022



Key learnings from abroad

2.1 Definition and methodology: Ecosystem value creation model and key questions to be addressed

2.2 Country deep-dives: Startup and VC landscapes, and government programs

2.3 Lessons learned, best practices, and key takeaways for Thailand



2

Definition and methodology

Thailand can learn key lessons from other countries on how best to leverage comparative advantages of core startup and VC stakeholders

Ecosystem – “A community of independent and interfacing entities working together as part of a broader network”

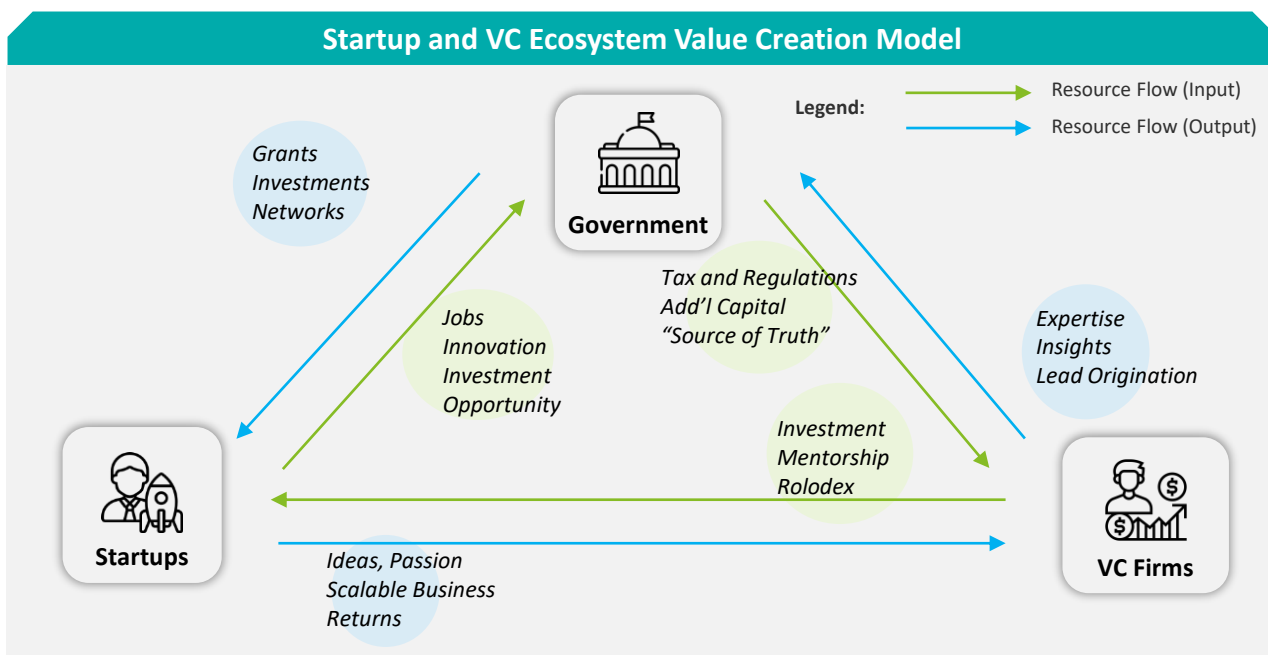
While there are many players involved in the startup VC ecosystem, this chapter puts the spotlight on 3 key actors - government, startups, and VC firms. This model provides a lens to analyse and present the interplay between these actors in various startup & VC ecosystems across different regions and countries in a levelised manner.

Comparative advantage – “the ability to produce an output at lower opportunity cost”

Each actor in the ecosystem inherently has its comparative advantage based on its core competencies and resources available. By leveraging on these comparative advantages, the actor can produce outputs more efficiently for another’s consumption (as inputs). These inputs/outputs comprise a wide spectrum and can be *tangible* and *intangible*; examples include **skills, data, knowledge, processes, products** or **services**.

Scale-up – “to generate output exponentially with only incremental increase in input”

There would be nuances when it comes to the actors’ comparative advantages and how each ecosystem generates value. However, the ability of the actors to propagate this cycle of leveraging on each others’ comparative advantages enables the ecosystem to scale-up sustainably over time.



Note: Incubators and Angel Investors are another 2 important key players in Thailand startup ecosystem











► Guiding questions for each country deep-dive



1. What are the comparative advantages for each of the key actors in different ecosystems?
2. How is the government supporting and scaling up their ecosystem through partnership programs or other initiatives?
3. What can Thailand pick up from what others are doing abroad?

Source: Deloitte Analysis

Country deep-dives: Overview of VC ecosystems

Worldwide, we see that VC is an integral part of nation-building, focusing a country's resources to scale-up their innovation ecosystem

					
Country	Thailand	UK	Israel	Singapore	Malaysia
Rationale for VC agenda	Promoting innovation to overcome middle-income trap <ul style="list-style-type: none"> Developing an ecosystem to spur not just startup formation but also scale-up capabilities and larger exits as part of broader "Thailand 4.0" agenda 	Globalising innovation and trade: Made in UK, sold to the world <ul style="list-style-type: none"> Maintaining diverse talent, vibrant capital market, and an advantageous regulatory framework to facilitate ease of investing at home and overseas 	Military innovation with civilian application for national survival <ul style="list-style-type: none"> VC running on necessity and urgency fuelling its military & civilian-led innovation; risk-taking culture with sparse natural resources, earning it the title of "Startup Nation". 	Strong market and technocracy with conducive business environment <ul style="list-style-type: none"> Driven to transform the country into a smart city, and to develop strong, focused innovation in local startups as part of the tripartite 'Home' innovation strategy 	Digital economy aspiring to be a leading centre in APAC by 2030 <ul style="list-style-type: none"> VC ushering in knowledge diffusion from more advanced markets and establishing cross-boarder access for digital-driven growth.
Startup Ecosystem Rankings ¹	53 rd	2 nd	3 rd	7 th	42 nd
Government Support (Spend, level of activity, programs, etc.)	 <p>Several gov't programs, mostly in the form of grants and infrastructure support--with lack of support particularly for early-stage startups and investments</p>	 <p>Government offers several schemes to support VCs and startups with database platform for investors and entrepreneurs to connect (DIT platform), and schemes to retain foreign founders despite Brexit (e.g., startup visa)</p>	 <p>Mature VC programs tracing ~30 years back with strong emphasis on R&D to create high-tech industry</p>	 <p>Comprehensive ecosystem with gov't co-investment and innovation programs to cater to startups of all industries and sizes with rising gov't expenditure on R&D, from USD1bn in 1999 to USD24bn in 2021</p>	 <p>Plenty of gov't programs that must be streamlined to remove overlaps and crowding out of private sector; remaining funding gaps still need to be addressed</p>
VC Success Story ^{2,3} (No. of exits via IPO or acquisitions from 2017-2021, excluding TH)	35 exits , valued at USD 1.5-38mn per startup <i>Notable startups include Flash Express, Ascend Group</i>	1,441 exits , valued at USD 79bn <i>Notable startups include Skyscanner, Deliveroo, Revolut</i>	431 exits , valued at USD 24bn <i>Notable startups include Waze, BeeWise, Firebolt</i>	224 exits , valued at USD 12bn <i>Notable startups include Grab, Carousell, Ninja Van, Doctor Anywhere</i>	46 exits , valued at USD 4.5bn <i>Notable startups include Carsome, PolicyStreet, Pop Meals</i>

Legend:  Strong  Weak

Note: No. of exits in Thailand are from 2007-2021, and the value is only indicative of ones that are disclosed

1. Selection criteria considered: a. Sample of a leading and developing ecosystems (based on ranking), b. Regional peers with similar context with Thailand, c. Relatively active gov't participation and programs in the startup and VC ecosystem

Source: Deloitte Analysis

1) Startup Blink [startupecosystemreport](#), 2022

2) Innovation Club Thailand, [Baseline Study Annual Report 2021](#), 2021

3) Startup Genome, [The Global Startup Ecosystem Report](#), 2022

Singapore



Singapore's unique story

Singapore has a strong innovation vision, with the 7th best startup ecosystem in the world supported by a consistently high-performing and stable economy

Singapore at a glance^{1,2}




History of VC

Compelled to emulate America's dot-com boom, the Singapore government in 1999 announced a USD 1bn fund to attract venture capital (VC) fund managers with established track records. At the time, Singapore was growing its research hub and wanted to diversify away from foreign direct investment. However, the initiative was ahead of its time, and only 2% of more than USD 40bn of private equity funds catalysed through the program were invested in Singapore. Since then, the government has developed a comprehensive ecosystem and established a wide range of programs to produce founders as well as to fund startups of all sizes.¹

Digitalisation and innovation

Singapore's R&D was quite limited in the late 1980s, with a gross expenditure on R&D (GERD) to GDP ratio of only 0.86% in 1987. However, the government subsequently increased the GERD, and by 2015, Singapore's GERD had reached a high of USD 6.6bn*.²

In addition to increasing R&D expenditure, Singapore also established its the three-part 'Home' strategy: 1. Home for Business to nurture talent and innovation strategies, 2. Home for Innovation entrepreneurial ecosystem to produce startups, and 3. Home for Talent to keep Singapore's talent market relevant to global trends.² Over the past 3 decades, Singapore has developed a world-class startup ecosystem, driven by a series of strategic government programs.

Economics			
GDP (nominal) ^{3,4}	Credit Rating ⁵	Inflation rate ⁶	Unemployment ⁷
USD ~ 397bn in 2021 ranks 35 th worldwide at ~7.6% growth	An AAA rating from Fitch denotes strong and stable outlook in 2022	2.3% in 2021, below the 3.5% global average	3.6% in 2021, lower than 4.1% in 2020
Demographics and Innovation			
Population ⁸	Online Access ⁹	R&D Expense ¹⁰	
 5.9mn people ranks 114th in the world in 2020	 92% of the total population using internet in 2020	 1.89% R&D expenditure to GDP in 2019	

Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development

* Note: Number is converted based on exchange rate of 1.4315 SGD to 1 USD
Source:

1) Enterprise Singapore, [Build it, and they will come: How Singapore forged a startup ecosystem from scratch](#), 2021

2) Singapore Institute of International Affairs, [Innovation Policy in Singapore](#), 2018

3) World Bank, [GDP Singapore](#), 2021

4) World Bank, [GDP Growth Singapore](#), 2021

5) Fitch Ratings, [Fitch Affirms Singapore at 'AAA'; Outlook Stable](#), 2022

6) WorldData, [Inflation rates in Singapore](#), 2021

7) World Bank, [Unemployment - Singapore](#), 2021

8) Worldometer, [Singapore Population](#) 2020

9) The World Bank, [Individuals using internet \(% of population\) - Singapore](#), 2020

10) The World Bank, [Research and Development expenditure \(% to GDP\)](#), 2019



Singapore's startup landscape

Singapore's startup landscape is rooted in its rising middle class, pro-business environment, booming digital economy, and government funding and support

Singapore's startup ecosystem as a role model in the Asia Pacific region¹

Singapore's ecosystem ranks 7th globally and 1st in APAC in StartupBlink's Global Startup Ecosystem report. The nation's index score is 13% higher than China's despite its small population and geographical size. Singapore has become an attractive hub for startups due to its rising middle class, pro-business environment, booming internet economy, and its strategic location as the gateway to trade across Asia.

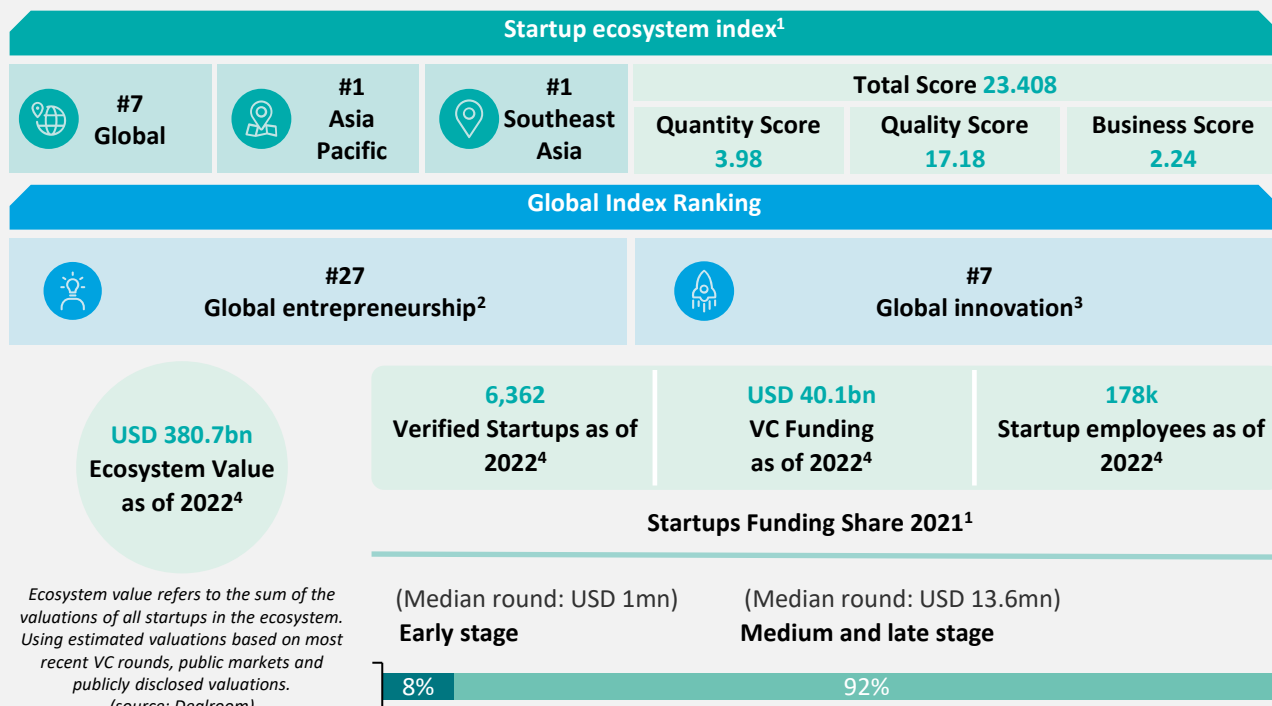
Startups by the numbers⁵

In 2021, Singapore minted 11 new unicorns, and a majority (52%) of equity funding in Southeast Asia was generated from Singapore alone.

Enterprise Singapore, the government agency championing enterprise development, provides support through their investment arm, SEEDS Capital, which has co-invested in at least 160 Singapore-based startups so far.

Additionally, the government allocated about USD 210mn in their 2020 budget to support the growth of tech startups in key emerging sectors, such as Advanced Manufacturing, Life Sciences, and Agtech.

Singapore Startup ecosystem



Note: VC Funding value is aggregated since 2015

Source:

1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

2) Knoema, [Global entrepreneurship index](#), 2019

3) Global Innovation Index, [Global Innovation Index Report 2022](#), 2022

4) Dealroom, [Ecosystem metrics](#), access on 13th Dec 2022

5) Startup Genome, [Global Startup Ecosystem Report 2022](#), 2022

Singapore's VC landscape

Singapore, a regional hub for venture capital, saw an increase in investment over the years, with the fintech sector leading the market in deal count

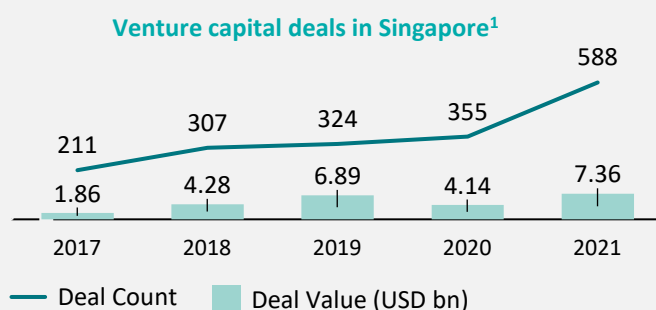
Singapore Venture Capital Ecosystem

Venture capital deals in Singapore increased from 211 deals at USD 1.86bn in 2017 to 588 deals at USD 7.36bn in 2021, an approximately 41% CAGR over 4 years. Fintech has been able to pool the largest number of deals together, with 589 total deals as of May 2022, followed by SaaS at 428 deals, and Crypto at 402 deals.¹

The average funding size of later stage investments is approximately 5.5 times higher than that of early-stages – with USD 60mn for later stage and USD 11mn for early-stage.⁵ Even with lower average funding sizes for early-stage startups, the accumulated early-stage funding in Singapore during 2019H2 to 2021 is approximately 4.5 times greater than the global average, valued at USD 3.2bn for Singapore and USD 0.7bn globally. The value of exit sizes in Singapore is also slightly higher than global average at USD 12bn for Singapore and USD 11.3bn globally.³

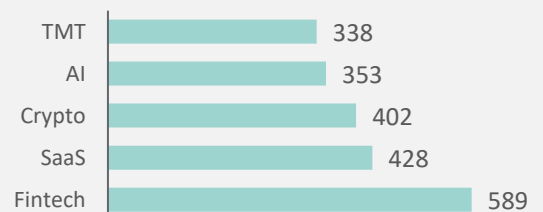
VC firms around the world have chosen Singapore as their regional base due to its political stability, high quality infrastructure, telecommunications linkages, the ease of setting the operation in Singapore, and other business-conducive incentives.

► Singapore Venture Capital ecosystem



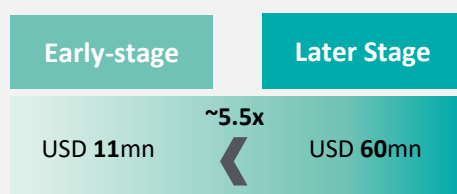
Source: White Star Capital

Number of deal count¹ (as of May 2022)



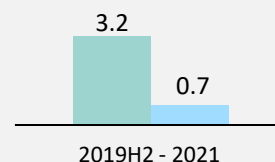
Source: White Star Capital

Average funding size for VC deals (2019)⁵



Source: World Bank

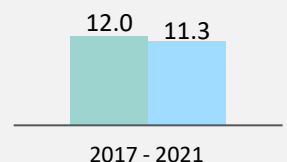
Total early-stage Funding³ (USD bn)



■ Singapore ■ Global Average

Source: StartupGenome, World Bank

Value of exits³ (USD bn)



Source:

1) White Star Capital, [SEA Venture Capital Landscape 2022](#), 2022

2) World Bank, [The Evolution and State of Singapore's Start-up Ecosystem](#), 2021

3) Startup Genome, [Global Startup Ecosystem Report 2022](#), 2022

4) Routledge, [The impact of Institutional Environment on the venture capital industry in Singapore](#), 2002

5) WorldBank, [Assessment of the Start-up Financing Ecosystem](#), 2022

Singapore's challenges and solutions to build a successful startup and VC ecosystem

The Singapore government created and sustained multiple initiatives to address the limited entrepreneurship in pre-2000s Singapore

Country Challenges



Lack of local entrepreneurial talent, know-how, and culture



Lack of deep industry expertise



Limitations on the public sector as a catalyst for entrepreneurial growth



Small domestic market

Government Initiatives and Programs

National innovation vision executed through Singapore's desire to emulate Silicon Valley

- First inspired by Silicon Valley in the 1990s, Singapore's National Science and Technology Board (NSTB, now A*STAR) launched the Technology Entrepreneurship 21 Plan in 1999, aimed at developing VC and infrastructure support to promote entrepreneurship
- Under this plan, a USD 1bn Technopreneurship Investment Fund (TIF) was established to invest in top-tier international VC firms that operate in Singapore and invest in Singapore-based startups¹

Increasingly higher R&D budget reflects Singapore's deepening commitment to growth of innovation

- Numerous initiatives followed over the years, including the Research, Innovation, and Enterprise (RIE) plans – RIE2015, RIE 2020, and the latest RIE2025
- Each of these plans articulate Singapore's 5-year R&D expansion strategy, with an increasingly higher national budget allocated to invest in science and technology research

Government co-investment programs established people-focused business models

- Multiple co-investment programs (e.g. SEEDS Capital, etc.) were created with the aim to develop entrepreneurial talent, culture, and industry expertise, rather than purely injecting capital and focusing on financial returns²
- While the government is involved in the invested startups, they partner with VC firms to co-invest and give autonomy to founders to fail or pave their own success, due to Singapore's long-term goal to spur market-led innovation

Virtuous cycle of attracting more talent and investments, both foreign and domestic, through government's endorsement

- Over the years, Singapore's selection and nurturing of leading startups has earned the country's reputation for top-notch investment standards, in turn attracting even more foreign investments and talent to the local scene²

Source:

1) Singapore Management University, [Venture capital and economic growth](#), 2002

2) Deloitte interview with Singapore Co-investment Program, 2022

Overview of government initiatives in Singapore

The Singapore government actively addresses demand gaps by offering co-investment schemes to stimulate investments in start-ups

Programs		SEEDS Capital and Startup SG Equity ¹	Early-stage Venture Fund (ESVF) ²	Corporate Venture Launchpad 2.0 (CVL 2.0) ³
Overview of the program		The program co-invests with VC firms and investment arm of corporates around the world to feed funds into early-stage startups. The program also provides value-added services to support the startups' development.	Aiming to develop the innovation ecosystem, the program feeds funds into startups, and acts as LPs in the investment—providing an option for VCs to buy out the government's shares at cost plus interest and obtain upside returns	The program aims to encourage corporates to undertake venture building initiatives—supporting them through concept validation sprints and venture build and launch efforts. The program provides matching funds and value-added services, in partnership with venture studios
Investment archetype		4: Co-investor	3: Passive Investor	2: Grant Provider
Gov't agency		Enterprise Singapore	National Research Foundation	EDB Singapore
Beneficiaries				
Startup	Stage	Early-stage	Early-stage	Early-stage
	Sector	Based on national priorities, mostly on tech-based sectors	High-tech companies in any startup sectors and emerging technologies nurturing R&D capabilities	Based on investment concept of each round
VC Firm		Local and foreign VC firms	Local and foreign VC firms	N/A

Source:

1) Enterprise Singapore, [SEEDS Capital](#), 2022

2) NRF, [Early-stage Venture Fund](#), 2022

3) EDB, [Corporate Venture Launchpad 2.0](#), 2022

Singapore's VC and startup ecosystem: Success factors and areas for improvement

Singapore has a top-performing VC and startup ecosystem with strong key actors – but needs to be careful of over-reliance on government support, a limited domestic talent pool, and regional competition

Ecosystem Key Success Factors

Government taking the lead with responsive and agile initiatives / policies¹

- The Singapore government addresses ecosystem gaps by proactively facilitating policies and programs – e.g., the Special Situation Fund for Start-ups (SSFS), an enhanced Start-up SG Founder program established during the COVID-19 pandemic; creation of legal frameworks to enable emerging technologies (i.e., blockchain and cryptocurrency); etc.

Global linkages¹

- 59% of technology multinational corporations established their regional headquarters in Singapore—providing potential synergies with local startups, and enabling them to leverage know-how and larger networks. Furthermore, initiatives such as Enterprise Singapore's Go Global was launched to support the globalization effort.

Strong university involvement catalysing the ecosystem¹

- The A*STAR program links students and researchers with industries; and university innovation funds promote commercialisation of university-led research/tech. Universities also directly support the ecosystem by sending students overseas to cultivate entrepreneurial mindsets (e.g., SUTD Technology Entrepreneurship Program), and conversely attracting international students into Singapore with industry programs (e.g., NUS Technology Access) and incubation programs (e.g., NUS BLOCK71).

Ecosystem Improvement Points

Over-reliance on government support¹

- In 2017, 69% of startups participated in government schemes, an increase from 19% in 2010. The reliance on government support may temporarily prolong the companies' survival but may not help them to effectively scale up and succeed in the long term.

Limited talent pool³

- Singapore's talent pool is limited by its small country size. Moreover, talents are often drawn to corporations, where they often see higher salaries and clearer career trajectories.
- Some regulations and bureaucratic hurdles act as constraints for bringing foreign talent into the country.

Competition with neighbouring countries⁴

- Countries in the same region, like Vietnam and Indonesia, are establishing their own startup ecosystems, which creates more regional competition for Singapore.

Source: Deloitte Analysis

1) World Bank Group, [The Evolution and State of Singapore's Start-up Ecosystem](#), 2021

2) Singapore Management University, [Venture capital and economic growth](#), 2002

3) Startup Decision, [Entrepreneur Pass in Singapore](#), 2022

4) Asian Development Bank, [Singapore Ecosystem for Technology startups and lessons for its neighbors](#), 2022

Malaysia



Malaysia's unique story

In Malaysia, venture capital is investing on the back of multiple national level initiatives

Malaysia at a glance

VC history¹

A key milestone for VC in Malaysia occurred in 1984 – with the formation of Malaysia Ventures Std., a joint venture between 2 foreign firms - Southeast Asia Venture Investment (Singapore) and Advent International (US).




Subsequently, the Malaysian Venture Capital Association (MVCA) was established in 1995. The total capital at that time was estimated to be around USD 667mn, of which 45% came from government agencies. The industry experienced birthing pains, such as government's over-involvement, bureaucracy, policy dissonance, and a dearth of investment opportunities.

VC to catalyse digitalisation and innovation²

Malaysia is hoping its VCs can help the country become a leading digital centre in APAC by 2030. The government's *MyDigital* blueprint outlines a plan to propel technological progress in the country and transform it to a digital economy. Investment plans for the national digital network and VC ecosystem aim to usher in knowledge diffusion from more advanced markets and establish cross-border access that can help grow entrepreneurial activities.

Government support for the VC Ecosystem

The government has created several programs to support the VC ecosystem with the likes of Cradle Fund (grants and accelerators), MAVCAP (Government VC), Dana Penjana Nasional (funding for domestic VCs with foreign partners), etc. The government has recently started streamlining and consolidating some of its agencies and re-aligning their mandates towards national level objectives.

Economics			
GDP (nominal) ^{3,4}	Credit Rating ⁵	Inflation rate ⁶	Unemployment ⁷
USD 372.7bn estimated ranks 37 th worldwide at ~3.1% growth in 2021	A BBB+ rating from Fitch denotes stable outlook for 2022	2.48% below the 3.50% global average in 2021	Below 4.6% in 2021, increasing from 4.5% in 2020
Demographics and Innovation			
 Population⁸ 32.4mn people ranks 45 th in the world in 2020	 Online Access⁹ 90% of the total population using the internet as of 2020	 R&D Expense¹⁰ 1.04% of GDP allocated to R&D activities in 2021	

Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development



Source:

1) University of California, [Report on the Malaysian VC Industry](#), 2007

2) World Bank Group, [Malaysia: Assessment of the Start-up Financing Ecosystem](#), March 2022

3) The World Bank, [GDP Malaysia](#), 2021

4) The World Bank, [GDP Growth Malaysia](#), 2021

5) Fitch Ratings, [Fitch affirms Malaysia at 'BBB+'; outlook stable](#), 2022

6) WorldData, [Inflation rates in Malaysia](#), 2021

7) The World Bank, [Unemployment – Malaysia](#), 2021

8) Worldometer, [Malaysia Population](#), 2020

9) The World Bank, [Individuals using internet \(% of population\)](#), 2020

10) The World Bank, [Research and Development expenditure \(% to GDP\)](#), 2018

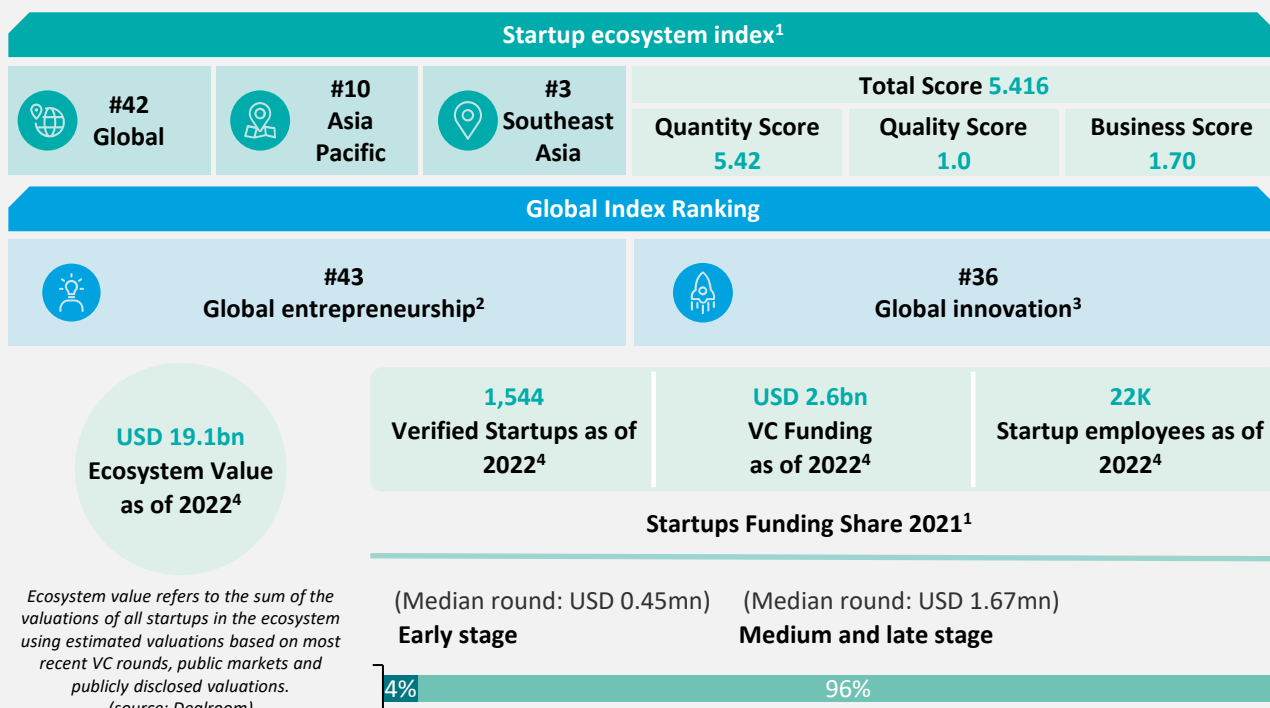
Malaysia's startup landscape

Malaysia's startup ecosystem is growing, but challenges remain, including lack of seed stage funding

In Malaysia, startups median funding round was about USD 1.7mn in 2021, with only 4% allocated to startups in the early-stage.¹ The total startup ecosystem value as of 2021 (period covered 20192H – 2021) was around USD 19.1bn.⁴ The top 3 sub-sectors in Malaysia were Education, Travel, and Transportation (Appendix 2.1). The startup ecosystem has successfully cultivated startups across these sub-sectors.⁴

The overall startup ecosystem includes national initiatives such as the Shared Prosperity Vision 2030 (strategy), MYStartup (networking platform), SUPER (startup ecosystem roadmap), and MyDIGITAL (blueprint).

Malaysia Startup ecosystem



Note: VC Funding value is aggregated since 2015

Source:

1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

2) Knoema, [Global Entrepreneurship Index Report 2022](#), 2022

3) GII, [Global Innovation Index Report 2022](#), 2022

4) Dealroom, [Dealroom.co](#), access on 13th Dec 2022

Malaysia's VC landscape

Venture funding in Malaysia is dominated by the government and foreign VCs, skewing investments to lower risk and later stage companies

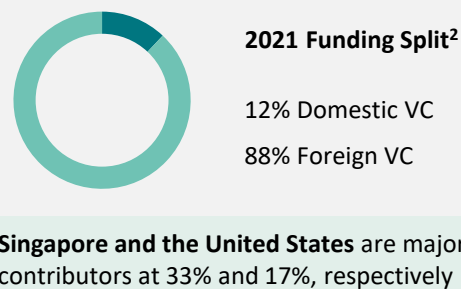
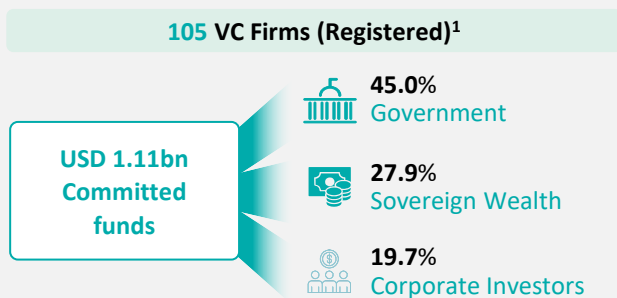
From 2015 to 2020, VC investment activity in Malaysia has shifted from seed and early-stages towards later stage companies due to stagnating deal flow and lack of high-quality investments in the earlier stages, as well as investor preference for lower risk and established investments. This is evidenced by the number of deals and the value of deals, which has grown by approximately 2x and 10x over this period, respectively. The sectors that received most of the funding include medical and biotechnology (63.6%), Information and Communications (25.9%), and Financial Services (4.3%) (see Appendix 2.2).

The VC funding market in Malaysia is dominated by foreign investors, with a tendency to favour businesses in the growth and buy-out stages of the firm life-cycle. These businesses are characterized as lower risk with higher probability of investor returns, and higher potential growth in international markets.^{1,2}

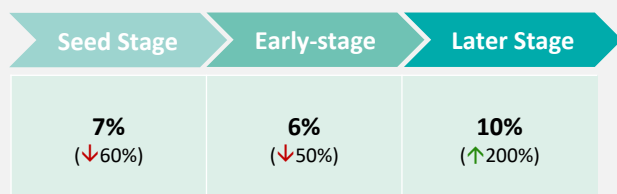
Early Startup Funding Gap²

In terms of regulations, there's neither friction nor barriers for foreign investors to invest in local start-ups, apart from investments in education and healthcare. Like foreign investors, domestic investor sources tend to veer towards later stage startups. This results in scarcity of funds and lack of support overall for early-stage startups.

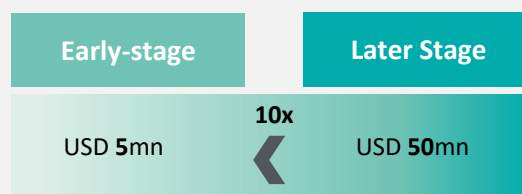
Malaysia Venture Capital ecosystem



% of VC deals relative to Southeast Asia (2015 - 2020)²



Average funding size for VC deals (2019)²



Source:

1) The Malaysian Capital Market, [Capital Market Malaysia](#), 2022

2) WorldBank, [Assessment of the Start-up Financing Ecosystem](#), 2022

Malaysia's challenges and solutions to build a successful startup and VC ecosystem

The government takes an active role in supporting startups by working to attract VCs and providing funding and infrastructure support

Country Challenges



Lack of Success Stories; and Persistent Funding Gap



Private and commercial investors focused on later stage companies



Complexities in a Developing Innovation Ecosystem



Culture, Infrastructure, Regulations, Talent, Expertise

Government Initiatives and Programs

Strategy/Blueprint

Created digital economy 2030 vision to lay out the plan for innovation & entrepreneurship development

Fund-of-Funds

Provided accessible capital for startups across the investing lifecycle, drawing support from domestic and international fund managers

Co-Investments and Direct Investments

Launched co-Investments programs for early and growth stage technology-driven companies to help them develop and scale

Accelerators

Organised global events and mentorship programs for pre-seed and seed stage startups

Malaysia Startup Ecosystem Portal

Consolidated ecosystem information, resources, tools, templates, networking and mentorship accessible via MYStartup¹ portal accessible via the internet

Startup Database

Created MyGOV², which is an online database covering topics related to business and innovation helpful for startups to have a starting point

Source: Deloitte Analysis

1) [MYStartup: Malaysia's Startup Ecosystem Directory](#)

2) [MyGOV - The Government of Malaysia's Official Portal](#)

Overview of government initiatives in Malaysia

The government actively addresses demand gaps through government initiatives to stimulate investments and develop startups

Programs		Cradle Fund ¹	MRANTI ²	Dana Penjana Nasional ³	MLS Capital ⁴	Venture-TECH ⁵	MAVCAP ⁶
Overview of the program		Provides grants and accelerators for technology-based startups across the lifecycle stages and technology readiness levels	Provides accelerators and value-added services in the form of mentorship, founder training, and support to start-up entities	“Fund of funds” program that benefits both the domestic VC firm partnering with foreign VCs and startups through monetary and value-added services	Co-invests and offers both monetary and value-Added Services to develop life sciences industry in the country	Provides monetary and value-added services to founders and investee companies	Provides monetary and value-added services to help tech startups scale globally
Investment archetype		2: Grant Provider	1: Infra Player	3: Passive Investor	4: Co-Investor	4: Co-Investor 5: Direct Investor	4: Co-Investor 5: Direct Investor
Gov’t agency		Ministry of Finance	Ministry of Science, Technology & Innovation	Ministry of Finance	Malaysian Technology Development Corporation	Ministry of Finance	Ministry of Finance
Beneficiaries							
Startups	Stage	Early-stage	All Stages	All Stages	Early-stage	Early and Growth Stages	All Stages
	Sector	Technology-based companies	Smart manuf., biotech, agritech, smart city, green tech	Based on VC’s specialty	Life sciences and Bio-greentech	High Technology, Green Technology, Emerging Technology, Life Sciences	Innovation and technology-related sectors
VC Firm		N/A	N/A	Local and foreign VCs	Foreign VCs	Foreign VCs	Local Foreign VCs

Source:

1) Cradle Fund, [Cradle Website](#), 2021

2) MRANTI, [MRANTI Website](#), 2022

3) Penjana Kapital, [Dana Penjana Nasional Program](#), 2022

4) MLS Capital Fund, [MLSCFI](#), 2018

5) VentureTECH, [VentureTECH Website](#), 2022

6) MAVCAP, [MAVCAP website](#), 2015

Malaysia's startup and VC ecosystem: Success factors and areas for improvement

The government is co-creating a startup and VC ecosystem in Malaysia by learning from past experiences, testing out new things that can add value, and evolving its practices

Ecosystem Key Success Factors

Active government participation to nurture the ecosystem

- The government, through its agencies, plays various roles to help players in the VC ecosystem and nudges them towards the national goal (i.e., Digital economy and digital centre by 2030)

Adaptive and evolving culture

- Continuous effort to do, test, and learn based on experience and building on “what works” instead of blindly copying models from other countries.

Ecosystem Improvement Points

Crowding out private investors

- The government invests directly in startups to kickstart the ecosystem. This has some benefits, but also inadvertently crowds out the private sector. Recently, the government has tried to address this by creating “fund-of-funds” programs and by co-investing with the private sector.

Aversion to risk-taking and entrepreneurship

- Like other developing countries, talent prefer stable jobs, and “failing” is deemed culturally unattractive. 45% of Malaysians said that they can spot a good opportunity but would not take the opportunity because of fear of failure, and 75% of Malaysian are image conscious (i.e., does not want to lose face) ^{1,2,3}

Does not necessarily draw foreign talent

- Malaysian immigration law does not necessarily draw high quality talent into the country

Low commercialisation rate for research and ideas

- Although scientific research output increased by 4.5x between 2008 to 2018, only 8.3% of national research and innovation products implemented in the 9th and 10th Malaysia Plans were commercialized. ¹
- Low number of IPs obtained by Malaysian startups affect the investment potential in the country

Streamlining information and centralization of sources

- The government has launched multiple programs to support the ecosystem and has generated a lot of content and information. However, startups have a difficult time managing this deluge of information—and are often forced to make sense of overlapping sources of information from multiple agencies. Recently, the MYStartup platform was launched to help address this.

Source: Deloitte Analysis

1) Ministry of Science, Technology, and Innovation, [Malaysia startup ecosystem roadmap 2021 – 2030](#), 2021

2) Global Entrepreneurship Research Association, [Global Entrepreneurship Monitor - Economy Profiles: Malaysia](#), 2019

3) OECD, [PISA 2018 Results \(Volume 111\), Chapter 13: Students' self-efficacy and fear of failure](#), 2019

Israel



Israel has become a 'Startup Nation' despite adverse country conditions – including political instability and lack of natural resources

Israel at a glance^{1,2,3}

Israel, the 'Startup Nation', is an entrepreneurial powerhouse despite it being a small country with less than 9 million people. It has successfully attracted global VCs and corporate R&D into its ecosystem. Today, the country has successfully developed 'Silicon Wadi' into one of the most successful high-tech industrial clusters globally.

Innovation from military




Due to the country's challenging security environment, extensive investment has been spent on defense-related research. Israeli military research efforts produced numerous civilian spin-offs staffed by highly skilled former military specialists, such as from the high-tech Unit 8,200.

High skilled immigrants with fearless culture

Israel has historically been the new home of many high-skilled immigrants. For example, many scientists, engineers, technicians, and physicians entered the country after the dissolution of the USSR. The Israeli government took the opportunity to develop and utilize their skills through a technological business incubator program under the Office of Chief Scientist (OCS). Moreover, Israeli immigrants from 70 nations also created a risk-taking DNA for the country – with many becoming entrepreneurs.

Lack of national resources

Israel's lack of national resources make innovation a necessity for survival. With vast deserts and a lack of fresh water, the country has turned itself into world leaders in desert agriculture, irrigation systems, water cycling, and desalination technologies. Due to its small market size, Israeli entrepreneurs generally had goals of expanding their businesses beyond Israel from day 1.

Economics			
GDP (nominal) ^{4,5}	Credit Rating ⁶	Inflation rate ⁷	Unemployment ⁸
USD 482bn estimated ranks 28 th worldwide at ~8.6% growth in 2021	An A+ rating from Fitch denotes a stable outlook in 2021	1.49% in 2021, below the 3.50% global average	5% in 2021, increasing from 4.3% in 2020
Demographics and Innovation			
 Population⁹ 8.7mn people ranks 100 th in the world as of 2020	 Online Access¹⁰ 90% of the total population using the internet in 2020	 R&D Expense¹¹ 5.44% of GDP allocated to R&D activities in 2020	

Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development

Source:

1) Techcrunch, [Israel's startup ecosystem powers ahead, amid a year of change](#), 2021

2) Ntegra, [A Story of Israel Startup Nation](#), 2021

3) Wonglimpiyarat, J., [Government policies towards Israel's high-tech powerhouse](#), 2016

4) The World Bank, [GDP Israel](#), 2021

5) The World Bank, [GDP Growth Israel](#), 2021

6) Fitch Ratings, [Fitch affirms Israel at 'A+'](#), 2022

7) WorldData, [Inflation rates in Israel](#), 2021

8) The World Bank, [Unemployment - Israel](#), Oct 2022

9) Worldometer, [Israel Population](#) 2020

10) The World Bank, [Individuals using internet \(% of population\) - Israel](#), 2020

11) The World Bank, [Research and Development expenditure \(% to GDP\)](#), 2020



Israel's startup landscape

Israel has the highest number of startups per capita in the world—thanks to its tight-knit entrepreneurial community, high R&D capabilities, educated population, and strong government support

Israel has maintained its top position in the Startup Ecosystem Index for the 3rd year in a row – being the only country in the Middle East & Africa on the top 20 list.¹

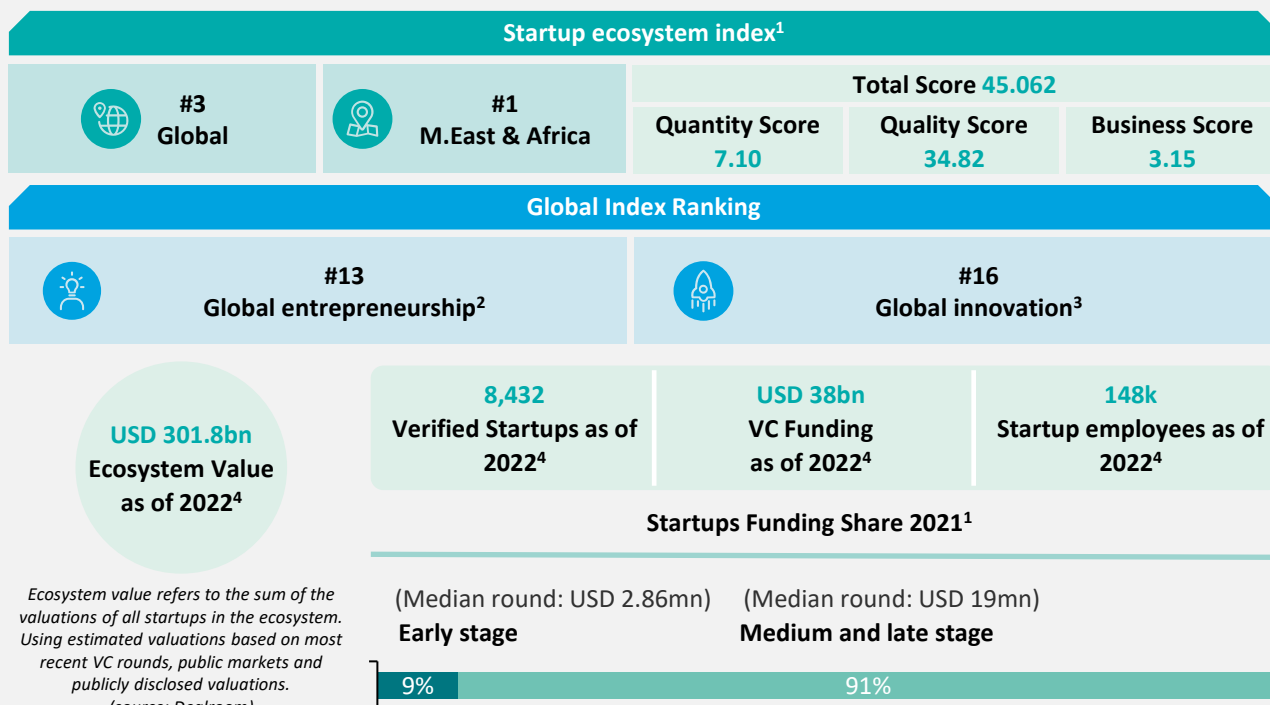
Startups by the numbers

Today, there are about 8,432 verified startups across the country, with a combined valuation of more than USD 300bn.⁴ There were more than 600 rounds of funding in 2021;⁵ and 91% of that funding went to mid- and late-stage startups, with a median value of USD 19mn per investment.¹ Meanwhile, early-stage startups got 9% of the funding, with USD 2.86mn per median investment round.¹ Regionally, 69% of all startup funding in the Middle East & Africa went to Israeli startups in 2021.¹

Startups are an important factor contributing to Israel's low unemployment rate; as of 2022, approximately 148,000 employees in Israel worked in startups.⁴

Security, health, and food were the 3 top startup sectors in Israel in 2022⁴ – Cyber Security has potential to grow in Israel, given strong capabilities gained from military training. Some notable startups in Israel include Cyolo, SecuriThings, and Salt Security in the security sector; Carbyne, Diagnostic Robotics, and Foresight Robotics in the health sector; and Shopic, Aleph Farms, and BeeHero in the food sector⁴ (see Appendix 2.1).

Israel Startup ecosystem



Note: VC Funding value is aggregated since 2015

Source:

1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022

2) Knoema, [Global entrepreneurship index](#), 2019

3) Global Innovation Index, [Global Innovation Index Report 2022](#), 2022

4) Dealroom, [Israel Startup Ecosystem](#), access on 13th Dec 2022

5) Pitchbook, [European Venture Report](#), 2022

6) Startup Genome, [Global Startup Ecosystem Report 2022](#), July 2022

Israel's VC landscape

Israel's venture capital market is dominated by large foreign-based firms. Looking ahead, Israel sees a strong investment pipeline

The value of venture capital deals in Israel increased from USD 4.54bn in 2020 to USD 11.00bn in 2021, a 142% year over year increase.¹ In 2021, one-quarter of Israeli VC fundings went into the Enterprise Technology sector, while 16.9% went into Fintech and 13.7% into Cyber (see Appendix 2.3).²

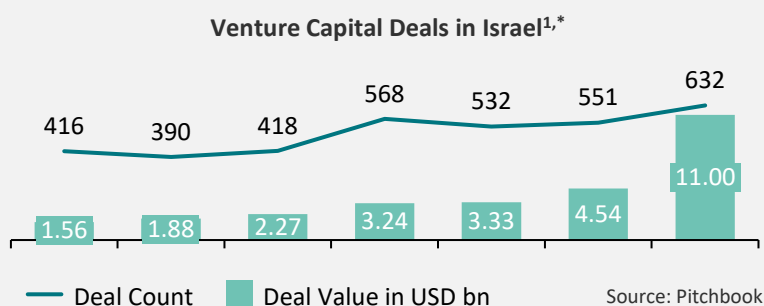
The total amount invested by foreign venture capital firms (USD 10.77bn) into high-tech sectors in 2021 was approximately 3x the amount invested by local VC firms (USD 3.53bn) up from 2x in prior years—indicating an increase in involvement of non-Israel funds in the Israeli high-tech industry. Funding from foreign investors saw an overall increase of 10x since 2015. This shows that foreign investments have had a high impact on the Israeli high-tech and startup ecosystem as a whole.³

Venture Capital Firms in Israel

In 2021, 3 out of 5 of the most active VC firms were foreign firms. According to the Start-Up Nation Finder, foreign firms such as Insight Partners and Tiger Global have increased their activity in Israel in recent years, with the latter becoming a top 10 active investor in Israeli tech for the first time.⁴

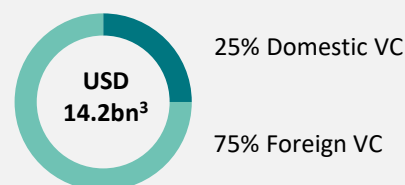
Many founders in Israel are starting their second or third companies. Data from the IVC-Gross Investor Report shows that the number of follow-on investments have exceeded first-investments.³ In 2021, there were 718 first-investments, valued at USD 5.08bn, while follow-ons accounted for 936 investments valued at USD 5.69bn.³

Israel Venture Capital ecosystem



425 VC investors⁵

2021 Funding Split into Israel High-tech ecosystem³



Most active Venture Capital investors in Israel 2021⁴

Investor	Type	# rounds in 2021	# rounds in 2020
Insight Partners	Foreign VC	52	17
OurCrowd	Israel VC	29	21
Entrée Capital	Foreign VC	25	16
Bessemer Venture Partners	Foreign VC	23	17
Vertex Ventures Israel	Israel VC	23	18

* Note: Number is converted based on exchange rate of 1 EUR to 0.98 USD

Source:

1) Pitchbook, [European Venture Report](#), 2022

2) Israel Innovation Authority, [Israeli High-Tech 2022 Situation Report](#), 2022

3) IVC and Gross, [IVC – Gross Investor Report 2021](#), 2021

4) Start-up Nation Central, [2021 Tech Trends: Who are the investors behind Israeli tech's record-breaking year?](#), 2021

5) Dealroom, [Israel Startup Ecosystem](#), 2022

Israel's challenges and solutions to build a startup and VC ecosystem

The Israeli government has launched multiple programs throughout its history to upskill entrepreneurs, attract foreign talent, and promote innovation culture

Country Challenges



Lack of infrastructure support for local entrepreneurial talent



Lack of domestic investor expertise



Lack of innovations

Government Initiatives and Programs

Technological Business Incubator Program¹

- Established in 1991 by the Office of Chief Scientist (OCS) of the Ministry of Industry and, Trade following mass immigration from former Soviet Union countries
- Supports projects proposed by skilled immigrants and Israeli military veterans, helping them to turn ideas into products that can compete in the international market
- Provides financial support, expert business advice, and networking opportunities to entrepreneurs

Programs targeted to attract international investors²

- Yozma program to attract foreign VCs
- International Collaboration Division from Israel Innovation Authority
- International VISA program

Dual Listing Law³

- Enacted in 2000, aimed at expanding the investor base by allowing companies to list in Tel-Aviv Stock Exchange (TASE), as well as in U.S.A., London, Hong Kong, Singapore or Toronto stock exchange markets

Shift direction of R&D towards high-tech industries²

- The government shifted R&D support direction from the defense industry in 1960 - 1970s to high-tech and advanced technology sectors in 1980s

University as research incubators²

- Utilizing university's human resources to collaborate with industries undertaking R&D activities

Source: Deloitte Analysis

1) Jewish Virtual Library, [Israel Science & Technology: Technological Incubators](#), 2022

2) Wonglimpiyarat, J., [Government policies towards Israel's high-tech powerhouse](#), 2016

3) Tel Aviv Stock Exchange, [Dual Listing on TASE](#), 2022

4) Yaron Daniely, aMoon Venture Fund, [Israel's challenging transformation from start-up nation to scale-up nation](#), 2020

Overview of government initiatives in Israel

The Israeli government actively addresses demand gaps by offering co-investment and funding schemes to stimulate the startup ecosystem

Programs		YOZMA I (1993-1998) ^{1,2}	Bilateral R&D Incentive Program ³	Ideation (Tnufa) Incentive Program ⁴	Seed Incentive Program ⁵
Overview of the program		Aimed at creating a competitive base for VC ecosystem in Israel by investing with one foreign and one local well-established financial institution as limited partners. These investments focused on Israel based early-stage startups. Yozma I also invested directly into Israeli startups.	Encourages international collaboration by providing grants to Israeli companies working with international partners on R&D projects. Israeli government will provide grants to Israeli companies, in parallel with grants from foreign governments to foreign partners	Supports entrepreneurs who are interested in bringing an innovative technological concept to R&D stage	Co-investment between the government and Israeli or international VCs & angel investors – to incentivize experienced investors to invest in high-risk, early-stage startups
Investment archetype		3: Passive Investor 5: Direct Investor	2: Grant Provider	2: Grant Provider	4: Co-Investor
Gov't agency		Office of the Chief Scientist (OCS) <i>Prior name of 'Israel Innovation Authority'</i>	Israel Innovation Authority	Israel Innovation Authority	Israel Innovation Authority
Beneficiaries					
Startups	Stage	Early-stage	All stages in R&D phase	New startups and companies in early-stages	Seed Stage
	Sector	High-tech startup fields aiming to develop infrastructure and enabling technologies with multiple streams of products	Sectors based on national priorities with focus on developing or substantially upgrading technologies	All technological fields	Non-specified sectors operating in high-risk areas
VC Firm		Local and foreign VCs	N/A	N/A	Local and foreign VCs

Source:

- 1) Wonglimpiyarat, J., [Government policies towards Israel's high-tech powerhouse](#), 2016
- 2) Ono Academic College, [VC Policy: Yozma Program 15-Years Perspective](#), 2009

- 3) Israel Innovation Authority, [Bilateral R&D Incentive Program](#), 2022
- 4) Israel Innovation Authority, [Ideation \(Tnufa\) Incentive Program](#), 2022
- 5) Israel Innovation Authority, [Seed Incentive Program](#), 2021

Israel's startup and VC ecosystem: Success factors and areas for improvement

The Israeli government plays a key role in creating an ecosystem with both financial and value-added support to VCs and startups

Ecosystem Key Success Factors

Centralised programs from a single agency – Israel Innovation Authority¹

- The centralisation of programs enable the agency to prevent the creation of programs with overlapping mandates, and encourages the agency to support startups throughout multiple stages of their lifecycle (as they graduate from one program and enter into another)

Startup Expansion Ability

- The Israeli mindset of “internationalisation from day 1”, as well as government support such as the Dual Listing Law, increase the potential of Israeli startups to expand and scale abroad

Recycling investments and talent – ‘the serial successful entrepreneurs’^{3,4}

- Large number of successful startup founders with strong technological background and unique know-how return to the ecosystem to start their new startups and invest in other startups – providing both financial and non-financial support to the ecosystem. More than 10% of Israel's entrepreneurs founded more than 1 company and more than 3% founded more than 2 companies³

Ecosystem Improvement Points

High-dependency on foreign investors^{2,5}

- Foreign VC contribution to high-tech sector funding in Israel was approximately 3 times higher than that of local VCs in 2021⁵, and more than 53% of gross domestic expenditure on R&D (GERD) was financed by foreign investors in 2017²

Exit Culture^{6,7}

- Many founders have adopted an ‘exit culture’ wherein young Israelis create startups with the intent to sell to large international companies as soon as possible, whereby affecting job availability for Israelis and reducing potential for IPOs

Battle for talent between local startups and large multinational corporations (MNCs)⁷

- Many Israelis favour working in MNCs rather than local companies or startups due to higher compensations in the former (i.e., ~40% higher compensation than local companies)

Source: Deloitte Analysis

1) Israel Innovation Authority, [Endless Possibilities to Promote Innovation](#), 2020

2) UNESCO, [The race against time for smarter development](#), 2021

3) IVC, [Israel Entrepreneurial Ecosystem](#), 2019

4) Gov.il, [Receive assistance for establishing a startup for new immigrants and returning residents](#), 2020

5) IVC and Gross, [IVC – Gross Investor Report 2021](#), 2021

6) Ministry of Economy and Industry State of Israel, [An introduction to enlightened foreign direct investment in Israel](#), 2018

7) Yaron Daniely, aMoon Venture Fund, [Israel's challenging transformation from start-up nation to scale-up nation](#), 2020

UK



UK's unique story

UK has globalised their startup and VC ecosystem, whereby what's "made in the UK is sold to the world"

UK at a glance^{1,2}




Venture Capital in the UK has been around since the end of the second world war. But it wasn't until 1983 that the industry began to flourish with about 266 investments made at home. The British Venture Capital Association was also established in 1983, giving the industry a boost by driving growth and setting high standards of professional excellence and ethics.¹

VC to enhance UK's trade relationships worldwide

The UK is often referred to as the "unicorn capital", with one of the highest numbers of startups valued at USD 1bn or higher in the world.² The country demonstrated comparative advantages in finance, business, and digital services—and also provided favorable conditions for local innovators to expand internationally.

Government support for the VC ecosystem

The UK government provided various direct and indirect interventions to support and grow the ecosystem. These range from infrastructure support (e.g., Enterprise Investment scheme, Seed Enterprise Investment Scheme) to monetary support (e.g., London Economic Action Partnership), etc.

Economics			
GDP (nominal) ^{3,4}	Credit Rating ⁵	Inflation rate ⁶	Unemployment ⁷
USD 3.19tn estimated ranks 5 th worldwide at ~7.5% growth in 2021	An AA- rating from Fitch denotes low default risk in 2022	2.52% below the 2.55% EU average in 2021	4.5% in 2021, remaining since 2020
Demographics and Innovation			
 Population⁸ 67.9mn people ranks 21 st in the world as of 2020	 Online Access⁹ 95% of the total population using the internet in 2020	 R&D Expense¹⁰ 1.71% of GDP allocated to R&D activities in 2019	

Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development



Source:

1) Bank of England, [Venture Capital in UK](#), 1984

2) Startup Portugal, [UK Startup Ecosystem Report](#), May 2021

3) The World Bank, [GDP United Kingdom](#), 2021

4) The World Bank, [GDP Growth United Kingdom](#), 2021

5) Fitch Ratings, [Fitch Affirms United Kingdom at 'AA-'; Outlook Negative](#), 2022

6) WorldData, [Inflation rates in United Kingdom](#), 2021

7) The World Bank, [Unemployment – United Kingdom](#), 2021

8) Worldometer, [United Kingdom Population](#), 2020

9) The World Bank, [Individuals using internet \(% of population\) – United Kingdom](#), 2020

10) The World Bank, [Research and Development expenditure \(% to GDP\)](#), 2019

UK's startup landscape

UK's startup landscape is a consistently thriving powerhouse worldwide owing to its diversity of talent, mentors, best-in-class infrastructure, accessibility of capital, and advanced regulatory framework

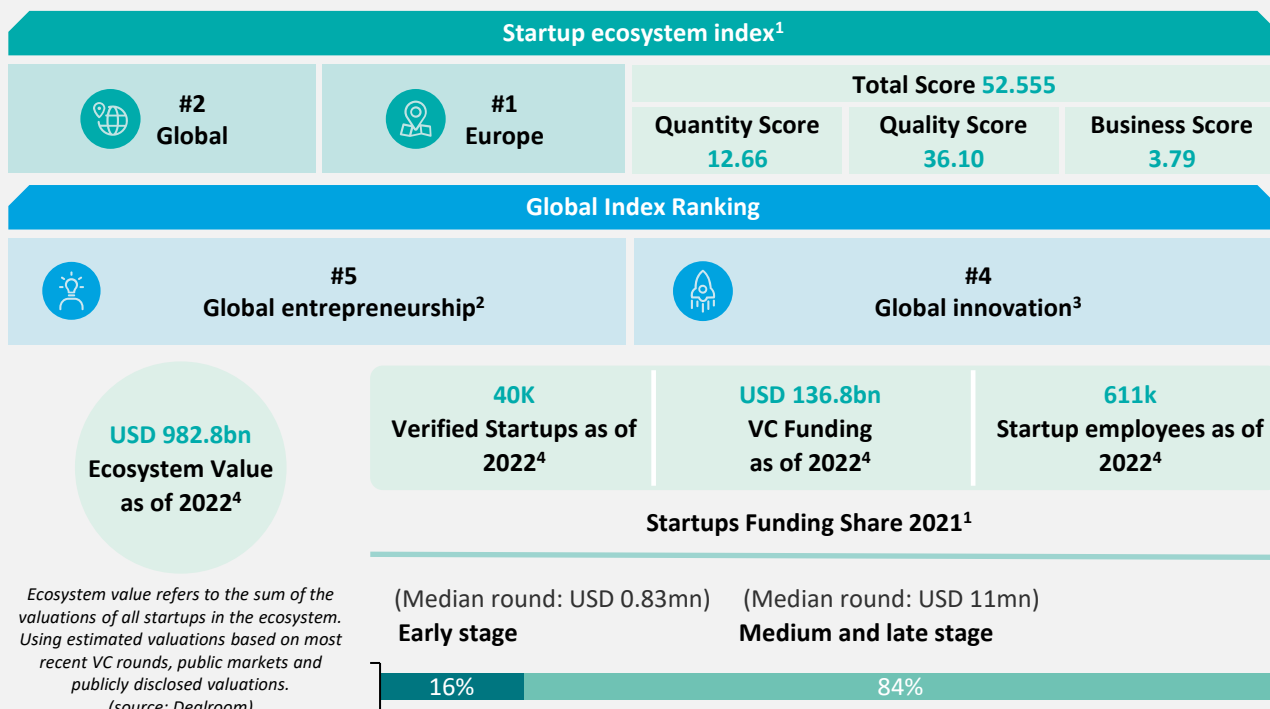
UK is one of the entrepreneurship and technology powerhouses in the world today. In terms of rankings, UK places #2 worldwide and #1 in Europe, and it has a significant lead over Israel who holds the #3 spot, according to StartupBlink. Amongst European cities, London outperforms all cities by a large margin.¹

Startups by the numbers

The startup ecosystem in the UK is large in terms of volume and value. The whole ecosystem is valued at about USD 982.8bn, which constitutes about 40k startups employing about 611k employees as of 2022. The startup ecosystem was able to secure venture capital funding amounting to USD 136.8bn as of 2022.⁴ When it comes to funding rounds, startups were able to raise about 11mn a typical funding round, with majority of funding going to middle to later stage startups.¹

The UK is dubbed as the 'unicorn capital', giving birth to 77 unicorns as of 2021.⁶ This is attributed to its high performance across key sectors such as FinTech, Health, and Enterprise Software (see Appendix 2.1).⁴ Attractive features include the UK's access to global talent, capital, networking, mentorship opportunities, and research and technology infrastructure, as well as its conducive regulatory framework. The government also provides indirect support that benefits the technology business ecosystem—such as global trade programs (DIT's Made in the UK, Sold to the World).⁵

The UK Startup ecosystem



Note: VC Funding value is aggregated since 2015

Source:

- 1) StartupBlink, [Global Startup Ecosystem Index 2022](#), 2022
- 2) Knoema, [Global Entrepreneurship Index Report 2022](#), 2022
- 3) GII, [Global Innovation Index Report 2022](#), 2022

4) Dealroom, [United Kingdom Startup Ecosystem](#), access on 13th Dec 2022

5) Department for International Trade, [Made in the UK, Sold to the World: building an analytical framework \(publishing.service.gov.uk\)](#), November 2021

6) StartupPortugal [UK startup ecosystem report](#), 2022

UK's VC landscape

VC in the UK is thriving due to attractive investment opportunities across various tech-enabled verticals, combined with government's continuous support to attract foreign investors

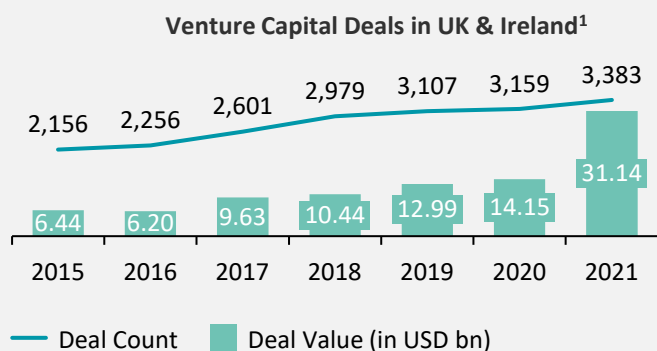
There are approximately 11,770 registered VC investors in the UK, with the majority being international investors.² As of 2020, 63% of investments into UK tech startups were from overseas, while the remaining 37% were sourced domestically.³

The number and total value of deals has been increasing since 2015. However, investment in seed stage companies is decreasing as a proportion of overall tech VC investment, while series B and C investments have increased.³ This shift does not necessarily create adverse funding gaps, primarily due to the availability of adequate support from existing seed / early-stage VCs, government programs, and accelerators—not to mention alternative capital from angel investors, etc. The top sectors that received funding from VC firms include FinTech, Health, and Enterprise Software (see Appendix 2.4).⁵

Most active VC firms⁴

In 2022, 3 of the 5 most active VC firms based in London were focused on seed and early-stages. The rest have more expansive coverage across the full funding lifecycle. VCs generally have support from the UK government through various programs, including tax incentives, co-investments, fund-of-funds, matching program, etc. Through active involvement, UK is not only able to attract talent but also investors from around the world.

UK Venture Capital ecosystem



Source: Pitchbook

11,770 VC investors²

2020
Funding
Split³



37% Domestic VC
63% Foreign VC

% of VC investments in UK startups (2016 - 2020)³

Seed Stage	Series A & B	Later Stage
6% in 2020 (↓8 points)	37% (↓13 points)	58% (↑22 points)

Most active Venture Capital investors in London 2011–2021⁴

Investor	Funding Stage Focus	# rounds in 2021
Ascension	Seed, Early	176
Octopus Ventures	Multi stage	162
Seedcamp	Seed, Early	149
SFC Capital	Seed, Early	148
Index Ventures	Multi stage	126

* Note: Number is converted based on exchange rate of 1 EUR to 0.98 USD
Source:

1) Pitchbook, [European Venture Report](#), 2022

2) Startup Portugal, [UK Country Report](#), May 2021

3) Tech Nation.io, [Tech Nation Report 2021 - Tech Nation](#), 2021

4) Beahurst, [26 Most Active Venture Capital Firms in London 2022](#), 2022

5) Dealroom, [dealroom.co](#), access on 13th Dec 2022

UK's challenges and solutions to build a successful startup and VC ecosystem

UK proactively addresses challenges within the country to continuously develop core stakeholders and expand abroad, despite already being a domestic powerhouse in entrepreneurship and innovation

Country Challenges



Talent and Skills Gap

Allay talent and brain-drain concerns from BREXIT & talent moving out to emerging markets



Flat Economic Growth and Funding Gap

Provide capital to startups and investment opportunities to investors



Complex Innovation Ecosystem

Draw visibility to and develop an agile, inclusive & easy to navigate innovation ecosystem

Government Initiatives and Programs

Visa Opportunities¹

- Frictionless pathways to the UK for top entrepreneurs and digital leaders

Growth Platform¹

- Ecosystem data and insights, events, tools, templates, networking and mentorship

Accelerators¹

- Global events and mentorship for pre-seed and seed stage startups

Startup Local Survival Guide¹

- Guide on local business rules, workspaces, events, job boards, etc.

Tax Relief & Benefits¹

- Tax reliefs to individual and corporate investors to invest in UK small businesses

Fund-of-Funds¹

- Accessible capital to pre-seed, seed, and early-stage startups in London to grow

Research Commercialization Grants¹

- Competition awards grants to winners to develop products, services, & process

Growth & Later Stage Patient Capital¹

- Long-term investments to large, innovation-driven, and R&D intensive businesses

Global Entrepreneur Program¹

- Mentoring and business support to non-UK based founders to set up and scale their business

UK VC Matchmaking²

- Platform to connect the UK's investors with investment opportunities from across Europe & Israel

UK Startup Matchmaking²

- Platform to connect the UK's early and growth stage startups with international investors

Curated Database¹

- Indexed and searchable information covering broad topics related to business and innovation

Source: Deloitte Analysis

1) Startup Portugal, [UK Country Report](#), May 2021

2) Department of International Trade, [The UK government's Venture Capital Unit](#), 2022

Overview of government initiatives in UK

The government actively attracts foreign entrepreneurs and investors, and sustains UK as a technology and innovation powerhouse through funding, soft support, and visa opportunities

Programs ¹		Venture Capital Investment Schemes ¹	Innovator and Startup Visa Opportunities ³	Innovate UK ⁴	Funding London ⁵	British Patient Capital ⁶
Overview of the program		Help small and medium companies raise funds and grow by offering tax reliefs to individual investors who buy new shares in the company	Ensure that there is abundance of talent to allay digital skills gap, build digital technology leaders, and attract entrepreneurs	Support business-led innovation to develop new products, services, and processes needed to grow and scale-up through competition-based funding opportunities	Provide accessible capital to pre-seed, seed, and early-stage business to secure growth capital, address funding gaps, and enable real opportunities for sustainable growth	Provide long-term investments for entrepreneurs with large, innovation-driven, and R&D intensive businesses to further scale-up
Investment archetype		1: Infrastructure Player	1: Infrastructure Player	2: Grant Provider	3: Passive Investor	3: Passive Investor 4: Co-Investor
Gov't agency		HM Revenue and Customs	UK Visas and Immigration	UK Research and Innovation	London Economic Action Partnership (LEAP)	British Business Bank
Beneficiaries						
Startups	Stage	Early-stage	Pre-seed	All Stages	Pre-seed, Seed, Early-stage	Growth, Later Stage
	Sector	Multi sector	Multi sector	Multi sector	Multi sector	Healthcare
VC Firm		Individual investors, Domestic VCs ²	N/A	N/A	Domestic VCs	Domestic VCs

Source:

1) HMRC, [Venture Capital Investment Schemes](#), September 2018

2) MMC Ventures [EIS Funds](#) | [MMC Ventures](#), 2022

3) Startup Portugal, [UK Country Report](#), May 2021

4) UK Research and Innovation, [Innovate UK](#), 2022

5) Funding London, [We are — Funding London](#), May 2021

6) British Patient Capital, [Our History](#), 2015

UK's startup and VC ecosystem: Success factors and areas for improvement

UK government plays a key role by providing financial, regulatory, and value-added support to VCs and startups—to spur the country into becoming a global science and technology powerhouse

Ecosystem Key Success Factors

Fit-for-purpose programs with network effects and de-risking features

- Segmentation of schemes, which provide expansive coverage of different entrepreneur and investor needs
- Program synergies either from within or across agencies, creating a holistic solution with natural progression and step-up throughout the stakeholder journeys
- Review mechanism to keep the program up-to-date and sensitive to current events and situations
- Multi-stakeholder approach capitalizing on partnerships and government's convening power to consolidate effort, yielding substantial resources to effectively deliver to the ecosystem while reducing risks

Idea meritocracy and equity for players

- Budding entrepreneurs and/or startups who have big ideas can access myriad resources to support and develop ideas further
- Various financial support available to fund initiatives from research work to prototyping

Progressive treatment of talent and global market

- Multiple pathways for frictionless entry and mobility of top talent into the UK
- “Made in the UK, sold to the world”. Nurturing at home with sights set on globalising the product/service

Ecosystem Improvement Points

Funding Gaps

- Potential dependency on government to handhold private and commercial investors to invest in seed and/or earlier stage startups and improve access to capital for these high-risk, high-reward companies

Source: Deloitte Analysis

1) Startup Portugal, [UK Country Report](#), May 2021

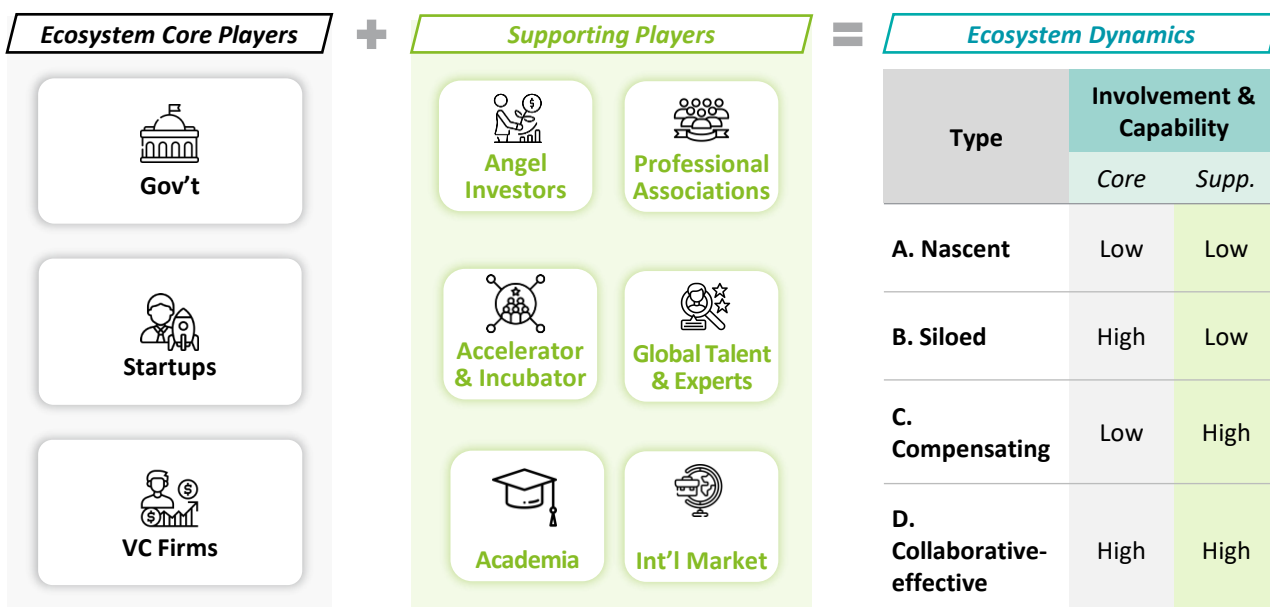


Key Learnings






Insights from various startup and VC ecosystems

Different countries take different collaboration approaches to develop their startup ecosystem based on the relative strength of their key stakeholders—leading to unique ecosystem setups

VC Ecosystem Value Creation Model



Key insights on Ecosystem Players, Comparative Advantages, and Scale-up Factors

Country Dynamics	Ecosystem Players ¹	Comparative Advantages	Scale-up Factors
 Collaborative-Effective	40k Startups 611k Startup Employees 11k VC Investors 37:63 Domestic : Foreign VC ²	Advanced and Adaptive Regulations <ul style="list-style-type: none"> 3 new visa opportunities Investor-friendly regulations (tax, guidelines, process) Growth and Information Equity <ul style="list-style-type: none"> Centralised database 	135 Unicorns ¹ 1,441 exits, valued at USD 79bn ⁶ Entrepreneur ranking ⁷ : #5 Innovation ranking ⁸ : #4
 Collaborative-Effective	8,432 Startups 148k Startup Employees 425 VC Investors 25:75 Domestic : Foreign VC ³	Growth and Information Equity <ul style="list-style-type: none"> Centralised agency Foreign Investor Friendly Programs targeting foreigners (tax, VISA, grants) 	44 Unicorns ¹ 431 exits, valued at USD 24bn ⁶ Entrepreneur ranking ⁷ : #13 Innovation ranking ⁸ : #16
 Collaborative-Effective	6,362 Startups 178k Startup Employees 398 VC Investors ¹⁰	Responsive Government Policies <ul style="list-style-type: none"> SSSF and enhanced StartUp SG Founder program during COVID-19 Strong University Network <ul style="list-style-type: none"> Programs grooming talent 	31 Unicorns ¹ 224 exits, valued at USD 12bn ⁶ Entrepreneur ranking ⁷ : #27 Innovation ranking ⁸ : #7
 Collaborative-Compensating	1,544 Startups 22k Startup Employees 105 VC Investors ⁴ 12:88 Domestic : Foreign VC ⁵	Tailor-made gov't programs and expansive support <ul style="list-style-type: none"> Government programs are tailor-made from learnings 	1 Unicorn ¹ 46 exits, valued at USD 4.5bn ⁶ Entrepreneur ranking ⁷ : #43 Innovation ranking ⁸ : #36
 Siloed-Compensating	614 Startups 12k Startup Employees 164 VC Investors ¹⁰	Government's past ambitions to enhance the ecosystem Push from private sector to boost the ecosystem	5 Unicorns ¹ 35 exits, valued at USD 1.5-38mn per startup ¹¹ Entrepreneur ranking ⁷ : #71 Innovation ranking ⁸ : #44

Note: The number of exits is based on the largest startup ecosystem in the country – London for the United Kingdom, Tel Aviv for Israel, Kuala Lumpur for Malaysia, and Bangkok for Thailand
Source: Deloitte analysis

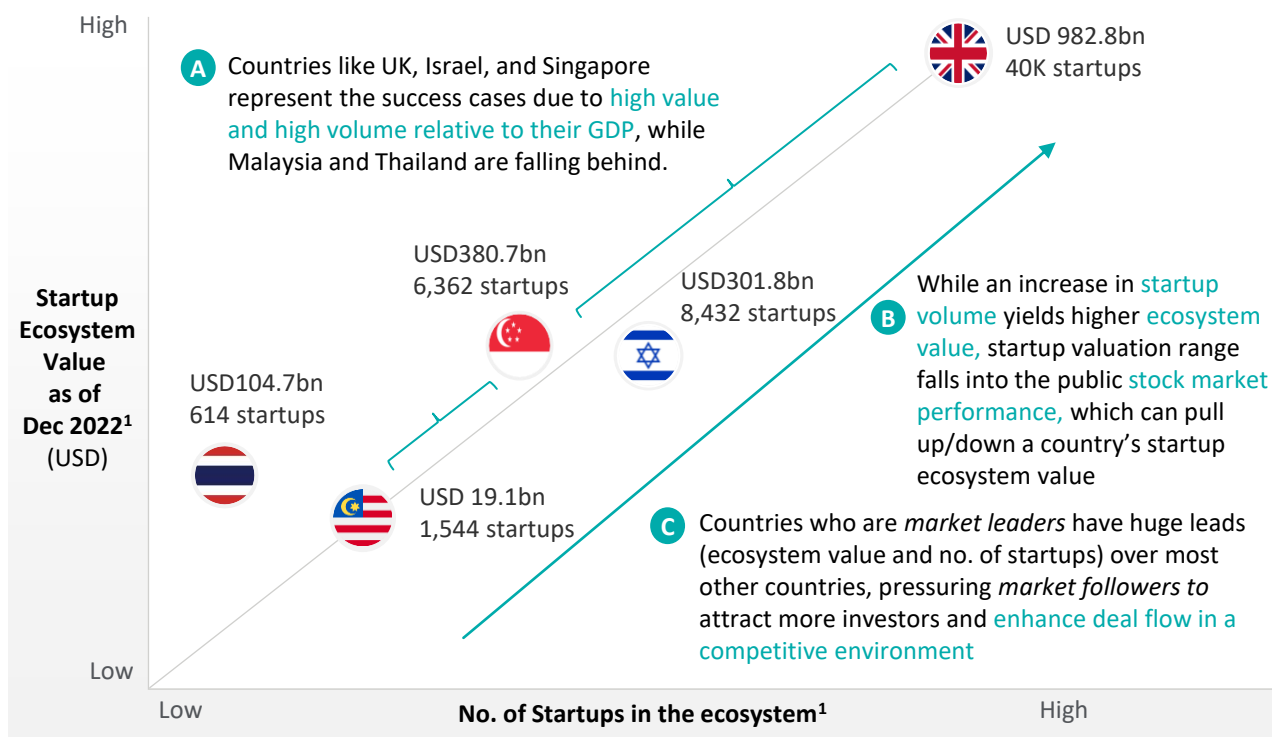
- 1) Dealroom, [Startup Ecosystem](#), access on 13th Dec 2022
- 2) Tech Nation.io, [Tech Nation Report 2021 - Tech Nation](#), 2021
- 3) IVC and Gross, [IVC – Gross Investor Report 2021](#), 2021
- 4) The Malaysian Capital Market, [Capital Market Malaysia](#), 2022

- 5) WorldBank, [World Bank Document](#), 2022
- 6) Startup Genome, [Global Startup Ecosystem Report 2022](#), 2022
- 7) Knoema, [Global entrepreneurship index](#), 2019
- 8) Global Innovation Index, [Global Innovation Index Report 2022](#), 2022
- 9) World Bank, [The Evolution and State of Singapore's Startup Ecosystem](#), 2021
- 10) Crunchbase, [Crunchbase](#), 2022
- 11) Thailand Innovation Club, [Baseline Study Annual Report](#), 2021

Lessons learnt, key takeaways, and best practices for Thailand

Successful VC ecosystems establish coherence with their national strategy, make conscious efforts to invest for the future, and capitalise on both local and international markets

VC Ecosystem comparative graph



Key insights for Thailand to narrow the gap and grow the ecosystem

1 National level strategy anchors and spurs innovation

- National strategy can ensure alignment across multiple government programs and agencies.

2 Long-term investments are consistently part of the national budget

- The portion of GDP spent on innovation and R&D-related activities broadly represents the appetite of the government to support VC and startup ecosystems.
- There is a conscious effort to track investment performance over time vs. global averages and regional peers.

3 Network effects are continuously propagated in the country

- Various local and international barriers are reduced to facilitate ideation, co-creation, and closer inter-agency collaboration.
- Resources from inside (e.g., academia) and outside (e.g., experts, top talent) the country can flow through to create competitive tension and sustainably scale-up the ecosystem over time.

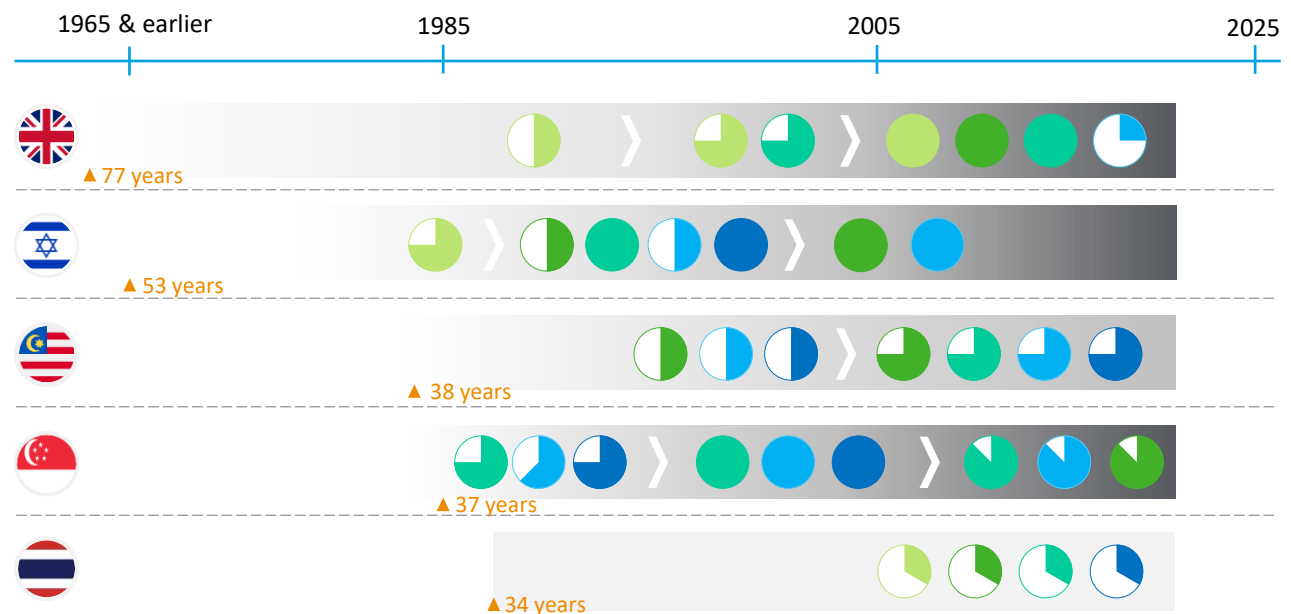
Note: Ecosystem Value represents the sum of the valuations of all startups in the ecosystem. Using estimated valuations based on most recent VC rounds, public markets and publicly disclosed valuations

Source: Deloitte analysis
1) Dealroom, [Startup Ecosystem](#), access on 13th Dec 2022

Lessons learnt, key takeaways, and best practices for Thailand

Despite implementing various programs, Thailand is still in the process of building up their relatively nascent startup and VC ecosystem

Deloitte analysis of government initiatives launched in different ecosystem phases and their evaluated impact



▲ Beginning of ecosystem growth efforts

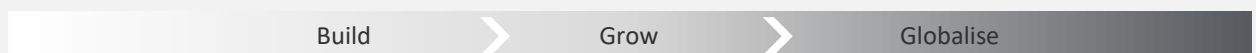
Thailand takeaways

- Different program archetypes are launched to serve different ecosystem purposes at different phases of the ecosystem; their impacts depend partly on funding size as well as on quality of program design and execution
- While Thailand has launched various startup programs, these programs have yet to make strong impact on startup and VC ecosystem growth
- Successful countries adopted Passive Investor and Co-investor archetypes in the early phases of their ecosystem development to stimulate investments and increase liquidity in the ecosystem – e.g., Israel's Yozma program and Singapore's Technopreneurship Investment Fund

Gov't Investment Archetypes

- 1 Infrastructure Player
- 2 Grant Provider
- 3 Passive Investor
- 4 Co-Investor
- 5 Direct Investor

Ecosystem phases



Harvey Balls analysis

- Low impact
 - High Impact
- Impact and quality of the programs is evaluated based on the level of financial support, number of the programs launched, and value-added services for the participants

Notes:

- 1) The investment archetype list is non-exhaustive and include only major programs.
- 2) Harvey balls imply the impact and quality of the programs - take in account the funding amount for the programs, value-added services for the program participants, and number of the program available in the ecosystem.

- 3) Definition of ecosystem phase: (1) Build phase is when the ecosystem is below the global average with few to no startups and VCs, (2) Grow phase is when the VCs and startups start to emerge with the support from government and private sectors, (3) Globalise phase is when the ecosystem is mature, and startups and VCs are becoming the tools for nations' international trades
- Source: Deloitte Analysis

Lessons learnt, key takeaways, and best practices for Thailand

Based on lessons learned abroad, Thailand can consider the below “must do” and “don’t do” factors when partnering with the private sector to launch ecosystem support programs

THAI PROGRAM “MUST-DO”

THINK NOW (0-2 mos.)

1. Effective **coordination between different government agencies** and their respective ecosystem support programs to ensure holistic support and avoid overlapping mandates
2. Implement cornerstone programs like **co-investment / equity matching schemes** that leverage existing comparative advantages (i.e., available government funds, VCs and professional associations expertise in Thailand)
3. **“Open the wallet”** and allocate large amount of resources / capital to ensure program has high impact

MOVE NEXT (3-6 mos.)

4. Develop **supply of local startup talent** through programs that build knowledge and capability (e.g., internship, trainings, immersion, etc.) by working with academia
5. Align on long-term **ecosystem success metrics** across agencies to measure progress over multiple years

INVEST FOR LONG-TERM (beyond 6 mos.)

6. Build and **develop government capabilities** through successful implementation of existing programs, to enable government to provide additional value-added support (i.e., networking, mentorship, etc.) over time

THAI PROGRAM “DON’T-DO”

7. A **one-size-fits-all copy and paste approach**, which will spread the resources too thinly to yield any substantial results and avoid addressing nation-specific challenges
8. A **rationed (i.e., insufficient) amount of upfront resources to support the program** (i.e., fund size, resources allocated), which would limit the amount of impact the new program will have
9. An **overly complex governance structure** involving more parties than necessary, which would prolong decision-making and reduce program efficiency

Deep Dive into Singapore

3.1 SEEDS Capital and the Startup SG Equity Co-Investment Scheme: vision, objectives, governance structure and operational details

3.2 Singapore EDB's CVL 2.0 program: vision, objectives, governance structure, and operational details



3

Overview of Singapore government initiatives

Government efforts to create a VC ecosystem began in 1985 with increased involvement since 1995; today, there are various initiatives run by multiple agencies to achieve the national innovation agenda

Summarised evolution of Singapore's Government programs^{1,2}

1985 Start of venture capital industry in the country

1. Began expanding venture capital efforts in the country in 1985
2. Introduced regulatory reforms and incentives to develop venture capital industry
 - 1985: Economic Review after the recession
3. Pioneered government programs include:
 - 1985: Venture Capital Fund by the Economic Development Board, which provided direct investments

1990 Shift to knowledge economy

- Fostered research and innovation
- 1990: National Science and Technology Board (NSTB) was created to support the Research, Innovation, and Enterprise Council
 - Research, Innovation, and Enterprise Council became A*STAR in 2022

1999 The beginning of VC success in Singapore from Technopreneurship Investment Fund (TIF)

1. Facilitated foreign VC firms to set up their Asian operations in Singapore
 - 1999: Technology Entrepreneurship 21 Plan was created, which led to Technopreneurship investment Fund under the TIF Venture³ (gov't spin-off)
 - 1999: Venture Investment support for startups was launched under TIF Venture
2. Bolstered economic competitiveness by encouraging technology entrepreneurship and developing the venture capital industry
 - 2001: Economic Review Committee ("ERC") was created
 - 2001: SEEDS Capital
 - 2005: Science and Technology Plan⁴ was created
 - 2008: Early-stage Venture Fund (ESVF) was created by the National Research Foundation (NRF)
3. Broadened Singapore's R&D strategy to invest in science and technology (largely inspired by Israel)
 - 2010 – 2020: RIE Plan was created
 - 2021: Corporate Venture Launchpad (CVL) was created to encourage corporate innovation

Present Today, multiple government agencies are tied to Singapore's larger national innovation agenda, with each agency launching various initiatives based on their own goals—and coordinating both informally and formally with other agencies



Note: This is non-exhaustive. It does not include tax incentives, other infrastructure-related incentives, loans (recourse, non-recourse), and private only initiatives

Source:

1) World Bank Group, [The Evolution and State of Singapore's Start-up Ecosystem](#), 2021

2) Singapore Management University, [Venture capital and economic growth](#), 2002

3) Jimmy Hsu, TIF Ventures, [Major Points About Venture Capital in Singapore](#), 2022

4) Embassy of France in Singapore, [The national science & technology plans](#), 2022

5) Enterprise Singapore, [Supporting your startup journey](#), 2022

6) EDB Singapore, [Initiatives & Schemes](#), 2022

7) EDB Singapore, [Global Investor Program](#), 2022

8) NRF, [Programs](#), 2021

9) SGInnovate, [Startup Growth & Funding](#), 2022

10) ACE, [Global Ready Talent Program](#), 2022

SEEDS Capital's Startup SG Equity Co-investment Scheme



SEEDS Capital: Vision and objectives

SEEDS Capital was created to co-invest in early-stage technology startups with a focus on inspiring innovation and stimulating private sector investments



Enterprise Singapore is the government agency championing enterprise development.¹ SEEDS Capital was established in 2001 to address limited innovation and later formalised as the investment arm of Enterprise Singapore—with the goal of catalysing investments in Singapore-based, early-stage technology startups. In 2017, the SG Startup scheme was created, and SEEDS Capital was appointed to manage its **Startup SG Equity co-investment scheme** and co-invest alongside institutional investors around the world, including venture capital firms and investment arms of corporates.^{2,4}

The **objectives of this co-investment program** are related to Enterprise Singapore's agenda for enterprise development, which includes focus on **non-financial, innovation success metrics**^{2,3}:



Develop local talent



Create jobs, as part of Enterprise Singapore's objectives



Develop advanced technology and specialisations in certain tech sectors



Increase deal flows by increasing volume of startups and crowd of private investors



“Our industries are pressing ahead with digitalisation and innovation efforts, not just to overcome the impacts of COVID-19, but to pave the way for a new Startup SG Equity, catalyses private-sector investment for startups through government equity co-investment. Through the co-investments with these private sector partners, we hope to provide the appropriate guidance and resources that will enable deep tech startups to succeed in developing new and disruptive technologies that can help our enterprises emerge stronger.”

Ted Tan, Chairman of SEEDS Capital and Enterprise Singapore's Deputy Chief Executive Officer⁵

Note: This is a generic illustration of the program overview, which can be dynamic and subject to change.

Source: Deloitte Analysis

1) Enterprise Singapore, [Enterprise Singapore](#), 2022

2) Enterprise Singapore, [SEEDS Capital](#), 2022

3) Enterprise Singapore, [Vision & Mission](#), 2022

4) World Bank Group, [The Evolution and State of Singapore's Start-up Ecosystem](#), 2021

5) OPENGOV, [SEEDS Capital calls for partners to invest in Singapore-based startups](#), 2020

SEEDS Capital's Startup SG Equity Co-investment Scheme: Impact of the program

Since 2018, the co-investment scheme continued to grow and yielded up to 700% increase in government and private investments, adding new investment partners along the way

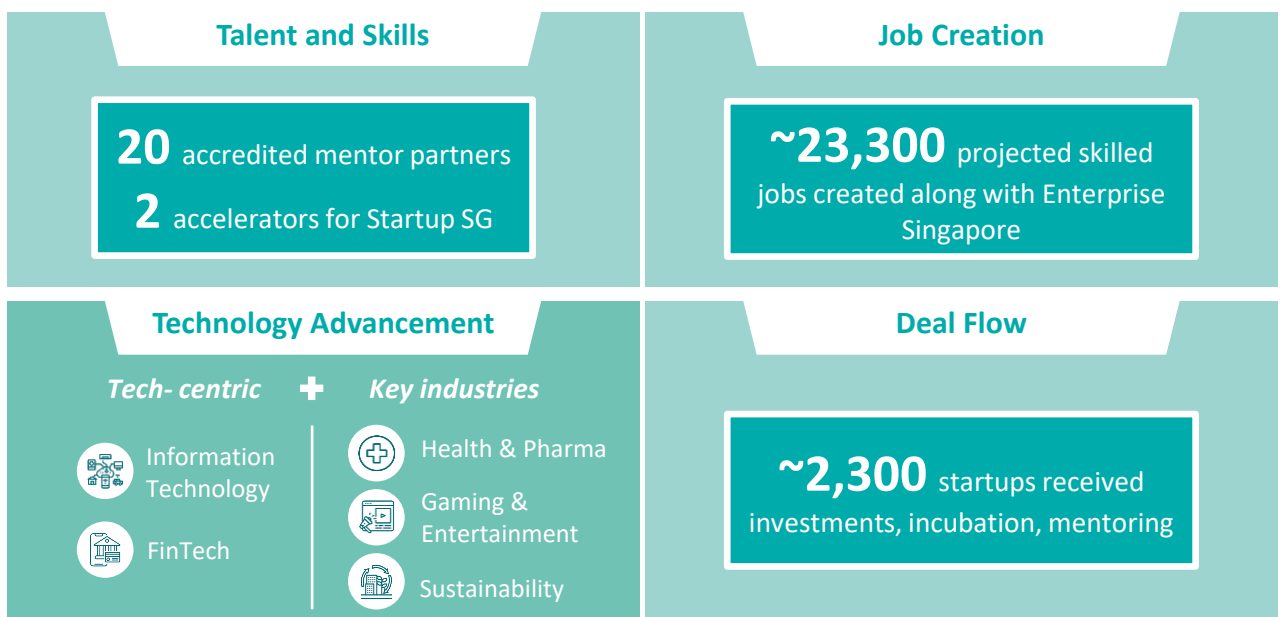
Program success over time^{1,2,3,4,*}



Parameter	2018	5-year Growth	2022
Gov't investments	USD 25mn	+ ~700%	USD 210mn
Private investments	USD 82mn	+ ~500%	USD 550mn
Investment Partners	9	~5x	46
Startups	52	~10x	500

SEEDS Capital doubled their investment cap from ~USD 2.8mn to ~USD 5.6mn per investee company in 2020 to provide more adequate support for deep tech startups

Key impacts of the program in line with the objectives (as part of Enterprise Singapore)⁵



Note: This is a generic illustration of the program overview, which can be dynamic and subject to change.

* Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD

Source: Deloitte Analysis

1) SPRING Singapore, [PRESS RELEASE Report \(nas.gov.sg\)](#), 2018

2) Asian Development Bank, [Singapore's Ecosystem for Technology Startups and Lessons for Its Neighbors \(adb.org\)](#), 2022

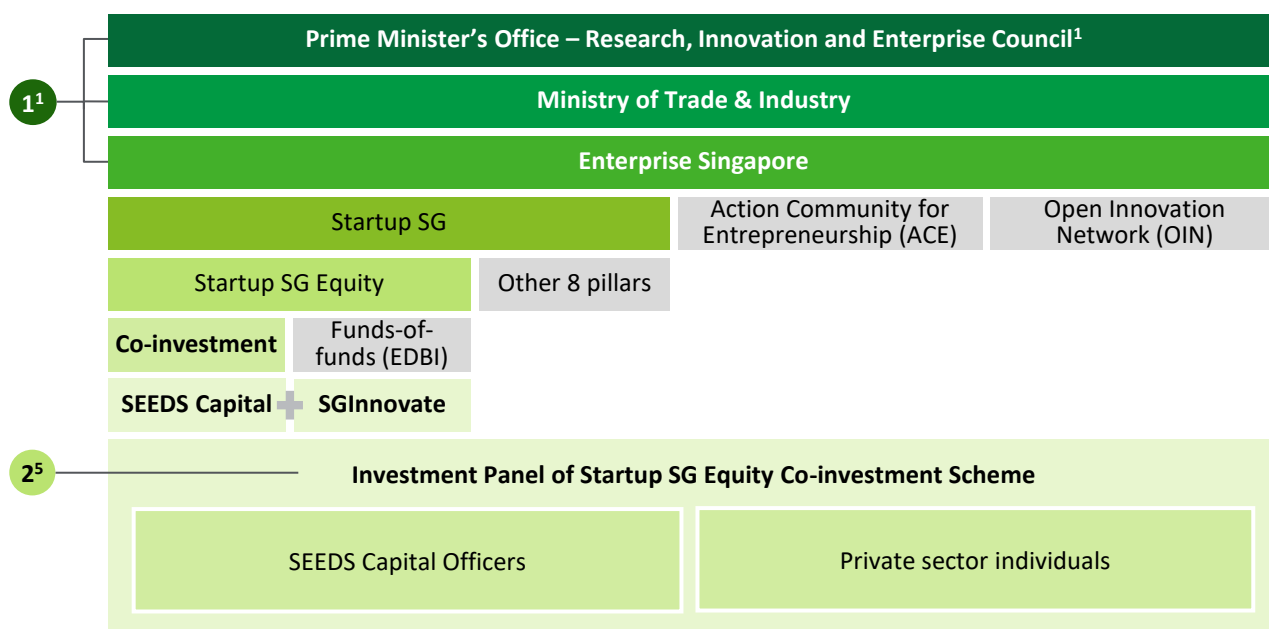
3) The Business Times, [SEEDS Capital seeks co-investors to dole out S\\$150m to deep-tech startups, Garage](#), 2020

4) Enterprise Singapore, [SEEDS Capital | Enterprise Singapore \(enterprisesg.gov.sg\)](#), 2022

5) Enterprise Singapore, [Annual Report 2021-2022](#), 2021

SEEDS Capital's Startup SG Equity Co-investment Scheme: Governance structure

Startup SG Equity co-investment scheme by SEEDS Capital has a governance structure that involves multi-party collaboration to ensure robust investment decisions



1

Enterprise Singapore, under Ministry of Trade & Industry of Prime Minister's office,¹ has 3 main national schemes, one of which is 'Startup SG' to promote Singapore startups through 9 initiative pillars. Co-investment fund falls under the Startup SG Equity pillar, co-managed by SEEDS Capital and SG Innovate.^{2,3,4} The Singapore government's roles and responsibilities are to:


- Determine and communicate national priorities
- Provide monetary support to Enterprise Singapore
- Engage startups through key stakeholders in Enterprise Singapore and its subsidiaries

2

Investment Panel Composition⁵


- **SEEDS Capital Officers** join the program to make important decisions and oversee operations
- **Private sector individuals** comprise the majority of the panel with diverse professional backgrounds; the panel makes some investment decisions along with SEEDS Capital Stakeholders
 - Background of the investment panel includes individuals with venture capital/finance/investment, entrepreneurial, corporate expertise, legal, and senior management skills and experience

The program aims to run strong due diligence, **working to boost Singapore's reputation as a trustworthy and reliable investor** with goals of low to zero fraud cases



Operation management

- Thorough participant evaluations
- Multiple rounds of due diligence



Post-investment control

- Frequent performance checking

Note: (1) Other pillars include Startup SG Talent, Startup SG Accelerator, Startup SG Loan, Startup SG Founder, Startup SG Tech, Startup SG Infrastructure, Startup SG Network, Startup SG Investor (2) EDBI refers to Singapore's Economic Development Board Investments Pte Ltd.

Source: Deloitte Analysis

1) World Bank Group, [The Evolution and State of Singapore's Start-up Ecosystem](#), 2021

2) Enterprise Singapore, [SEEDS Capital](#), 2022

3) Enterprise Singapore, [Supporting your startup journey](#), 2022

4) Startup SG, [Startup SG Equity](#), 2022

5) Enterprise Singapore, [Startup SG Equity: Frequently Asked Questions](#), 2022






SEEDS Capital's Startup SG Equity Co-investment Scheme: Operational overview

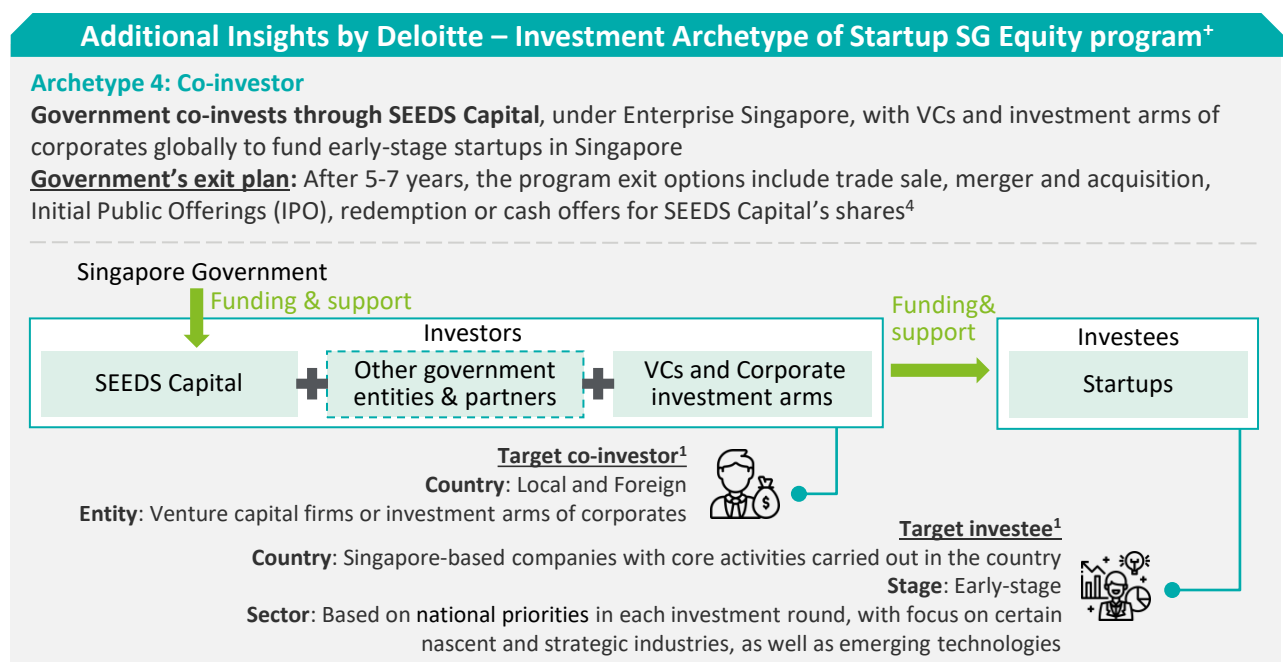
Through the Startup SG Equity Co-investment Scheme, SEEDS Capital works closely with other government entities and partners to invest in Singapore-based, seed-stage startups and provide post-funding support

Financial offerings* ¹		
Items	Scheme Details	
	General tech	Deep tech
Investment cap per startup	USD 1.4mn	USD 5.6mn
Co-investment ratio (SEEDS Capital: Co-investor)	7:3 up to the first USD 175K 1:1 thereafter, up to USD 1.4mn	7:3 up to the first USD 349K 1:1 thereafter, up to USD 2.8mn 3:7 thereafter, up to USD 5.6mn

Deep tech startups generally require more funding than general tech as they are built around proprietary technologies that typically require 5 or more years of product development and commercialisation period, higher technology advancement, and more regulatory complications.³ **General tech startups** are other tech startups that require less developmental efforts from a few months to few years. The categorisation of the startups is based on the technology development and advancement rather than the sector.

Non-financial support^{1,2}

-  **Networking:** Introduce investees to related government entities (e.g. EDBI, SGInnovate, etc.) for further funding and other partners for various purposes (e.g. product testing, customer outreach, etc.)
-  **Mentorship:** Guide investees in detail on how to build and expand the company throughout the program
-  **Business development:** Help investees to realise their sales and business development plans
-  **Commercialisation:** Provide hands-on assistance to help investees fast-track their commercialisation process and reach potential clients
-  **Global expansion:** Support go-to-market expansion efforts beyond Singapore



Note: (1) This is a generic illustration of the program, which can be dynamic and subject to change.

* Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD

Source: Deloitte Analysis

1) Enterprise Singapore, [SEEDS Capital](#), 2022

2) SEEDS Capital, [SEEDS Capital Media Release](#), 2021

3) SG Innovate, [Identifying Deep Tech](#), 2019




4) Enterprise Singapore, [Startup SG Equity: Frequently Asked Questions](#), 2022

SEEDS Capital's Startup SG Equity Co-investment Scheme: End-to-end investment process

Startup SG Equity co-investment scheme's end-to-end investment process is structured to provide funding and comprehensive support

Startup SG Equity co-investment program can be categorised in 4 main stages, from how the programs create awareness to the participants in the origination stage to how the each party exits the program in the graduation stage.

Generic illustration of the end-to-end venture building process¹

	Based on Deloitte analysis ⁺		
	 Key activities can include:	 Implementation challenges and potential risks:	 Implemented solutions:
Origination	<ul style="list-style-type: none"> Marketing and awareness creation Application process over a stipulated timeline, including: <ul style="list-style-type: none"> Submission of documents Due diligence Interviews Shortlisting and selection 	<ul style="list-style-type: none"> Not enough startups applying The startups that apply are not suitable or not ready 	<ul style="list-style-type: none"> Outreach to local universities Public events and media communications In 2022, SEEDS decided to hire a communications agency for better awareness efforts
Onboarding	<ul style="list-style-type: none"> Formalising investment agreement, including: <ul style="list-style-type: none"> Economics / Covenants (e.g. valuation method) Control / Management Legal requirements (e.g. antidilution, termination, etc.) Reporting requirements Matching of mentor to investee / mentee 	<ul style="list-style-type: none"> Longer and more complicated negotiations can arise as startups lack experience drawing investment agreements Lack of suitable matches of mentors to mentees 	<ul style="list-style-type: none"> Provide legal expertise and guidance so startups are aware Collaborate with more co-investment partners and widen the pool of potential mentors
Monitoring	<ul style="list-style-type: none"> Regularly scheduled business reviews Audit Tracking of the use of funds Regular reporting based on the required format and frequency Mentorship check-ins Ensure compliance 	<ul style="list-style-type: none"> Investees face time management issues and/or cannot meet scheduled business reviews Investees face cash flow management issues Investees have administrative or operational issues when scaling up 	<ul style="list-style-type: none"> Mentors check in with investees regularly to answer questions like time management, cash flow management, operational scale-up, and more
Graduation	<ul style="list-style-type: none"> Transition to later stage funding Expand to international markets Disbursement to investors based on agreed: <ul style="list-style-type: none"> Frequency Interest Other conditions (e.g., convertible shares/debt) Buyback by the startup or future investors 	<ul style="list-style-type: none"> Difficulties in internationalisation / expansion, e.g., issues regarding tax, directorship, transfer pricing, labour laws, valuation, etc. Investees become complacent about getting funding and support 	<ul style="list-style-type: none"> Provide further connections in relevant markets Support investees in re-assessing and improving their capabilities e.g. brand development, etc. Keep SEEDS' co-investment scheme competitive for startups to get funding

Note: This is a generic illustration of the end-to-end process, which can be dynamic and subject to change.

Source: Deloitte Analysis

1) Enterprise Singapore, [SEEDS Capital](#), 2022

A photograph of the Singapore skyline at dusk. The Merlion statue is in the foreground, spouting water into the water. The background is filled with modern skyscrapers, some of which are illuminated. The sky is a deep blue.

EDB's Corporate Venture Launchpad 2.0 (CVL 2.0)

EDB's Corporate Venture Launchpad 2.0 (CVL 2.0): Vision and objectives

With an aim to spur Singapore's innovation ecosystem, CVL 2.0 collaborates with experienced venture studios* to help corporates bring new innovative ventures to life

Corporate Venture Launchpad 2.0 (CVL 2.0)

Under
EDB Singapore

Singapore's Economic Development Board (EDB) is a government agency responsible for enhancing the nation's position as a global centre for business, innovation, and talent.¹ The goal of EDB's **Corporate Venture Launchpad** program is to provide strong venture building support and co-sharing of corporate venture building risks for corporates. This encourages corporates to launch new ventures out of their core business from Singapore and strengthen the country's innovation ecosystem.²

CVL 2.0 doesn't seek to get financial returns; the objectives of their corporate ventures co-funding program are mainly to³:



Build new ventures effectively and efficiently



Create innovative growth and new revenue streams to be ahead of disruptions



Join a growing corporate venturing movement with global expansion potential



"Innovation is a key pillar of Singapore's economic proposition and many companies in Singapore have realised that corporate venture building is one important way to get momentum and pioneer new innovation"

Jacqueline Poh, Managing Director of EDB⁴

"(With corporate ventures), there's a lot of discussion which goes into how to use your existing recipes to create something new... and also the expertise which is available within the company really comes in handy to begin with"

Vikash Dhanuka, Chief Executive Officer of Sing Fuels⁴



"One of the advantages of this approach is that in addition to bringing that agility, urgency and independence to the company, we are also bringing market expertise and resources to give start-ups an advantage that most of them don't have"

Michael Pareless, Open Innovation Lead at Bayer Crop Science Asia-Pacific⁴

Source: Interviews from Business Times⁴

Note: This is a generic illustration of the program overview, which can be dynamic and subject to change. The management quotes are from Business Times interview⁴

* A venture studio is a company that builds other companies. The venture studios leverage internal resources and external relationships to guide the startups and ventures to a successful launch. (Definition from Forbes, [Venture Studios](#), 2020)

Source: Deloitte Analysis

1) EDB, [Who We Are](#), 2022

2) EDB, [EDB Expands Corporate Venture Building Program To Support More Companies; Commits Fresh Funding Of S\\$20 Million](#), 2022

3) EDB, [Corporate Venture Launchpad 2.0](#), 2022

4) The Business Times, [Fresh funds of S\\$20m injected to expand EDB's corporate venture program](#), 2022

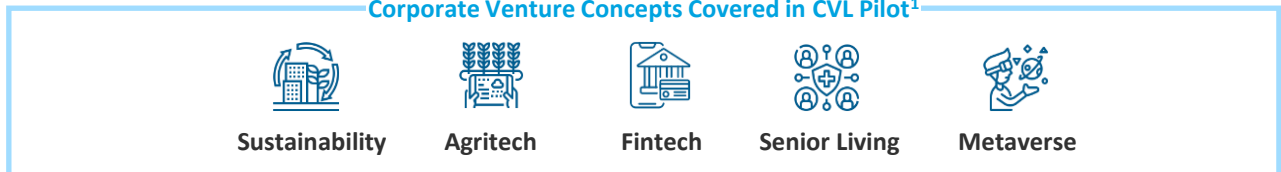
EDB's CVL 2.0: End-to-end investment process: Impact of the program

EDB completed the CVL pilot program in 2021 and launched CVL 2.0 in 2022, expanding the program to support more corporate ventures

Program metrics over time¹

Corporate Venture Launchpad Program		
	PILOT	2.0
Parameter	2021	2022
Funding*	USD ~7mn	USD ~14mn
No. of venture studios	5	6

Corporate Venture Concepts Covered in CVL Pilot¹



Key impacts of the pilot program

13 Participating companies within the first year ¹ (CVL 1.0)	~46% Success rate ¹ (Validated venture concepts)	USD 35mn* Follow-on investments ¹ (Seed investment from corporates)
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Feedback from Corporates



"In less than six months we were able to validate the desirability, feasibility and viability of our new business model. The venture studio brought commercial expertise, market data and new ways of working to the team and EDB enabled us with their industry network across multiple markets"

Swedish Global Appliance Company¹

"We are always looking for new growth areas, and corporate venturing is a way for us to implement new ideas and business models and employ talents who bring new skill sets. We also look beyond just dollars and cents when we embark on corporate venturing. For SATS it is also a rewarding process of learning and experimentation to better benefit the customers and communities we serve"

Leading Airport Terminal Services Company¹



"Not only did the CVL enable Bayer to validate a promising venture idea, but it also helped to drive the venture mindset in our company, particularly in Singapore and our Asia-Pacific operations. What's more impactful is how the CVL has helped us increase C-suite executives and employees' understanding of the venture validation process and how it differs from more traditional corporate project and investment decisions"

Multinational Lifesciences Company¹





Note: ¹The success rate is calculated from 6 out of 13 participating corporates that are able to successfully launch ventures after participating in the program
* Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD

Source: Deloitte Analysis
1) EDB, [Media Release Corporate Venture Launchpad 2.0](#), 2022

EDB's CVL 2.0: Operational overview

Through CVL 2.0, EDB promotes innovation in the established corporate sector by providing financial and value-added support to help them expand outside their core business and build new ventures

Financial offerings ^{1,*}		
Items	Scheme Details	
	Tranche 1: Idea Generation; Concept Validation Sprints ⁽¹⁾	Tranche 2: Venture Build and Launch
Investment cap per corporate	Up to USD 349,284 of each concept validation sprint	Up to USD 349,284 of each pre-seed build
Co-funding ratio (CLV 2.0 : Corporate)	50% co-funding to companies for qualifying costs	30% co-funding to companies for qualifying costs

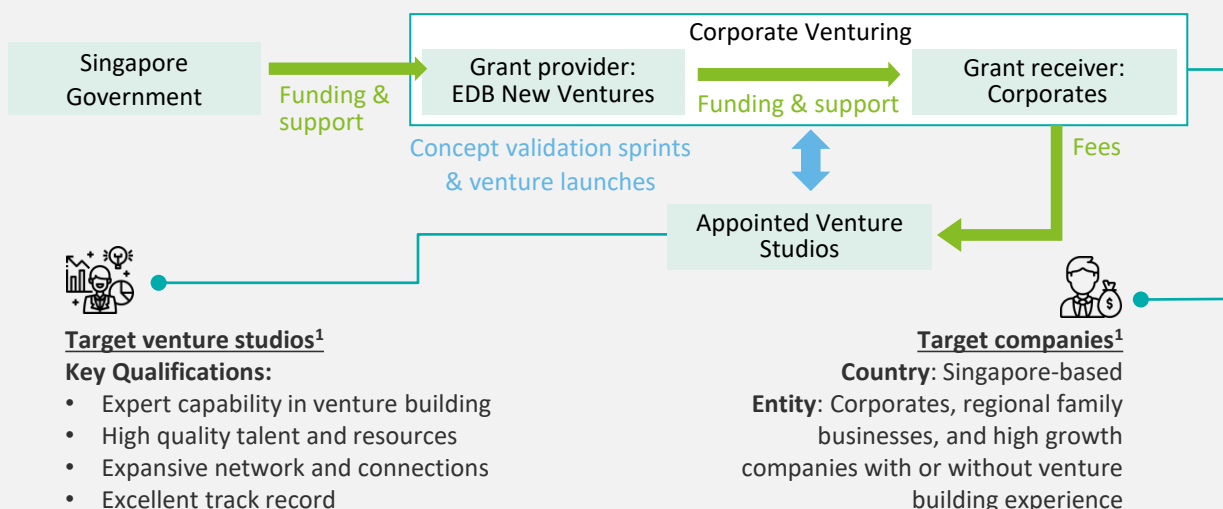
Non-financial support ¹	
	Networking: Introduce investees to other relevant government agencies (e.g. SGInnovate) and external experts that can be leveraged during the concept validation sprint and/or venture launch stages
	Methodology: Sprint approach to validate opportunities to quickly and effectively reach a Go/No-Go decision on the venture concept, with oversight by sprint board advisory members
	Mentorship: Guide investees in detail to ideate venture ideas, incubate venture concepts, and launch successful and scalable business
	Resource Augmentation: Deploy additional dedicated venture builder(s) to support the concept validation sprint and/or venture launch

Additional Insights by Deloitte – Investment Archetype of CVL program⁺

Archetype 2: Grant Provider

Government, through EDB New Ventures, provides grants to corporate ventures to promote innovation by leveraging the support of appointed venture studios.

Government's exit plan: There is no exit plan in CVL program since the government doesn't own shares in the corporate ventures



Note: This is a generic illustration of the end-to-end process, which can be dynamic and subject to change.

(1) Sprint is the time-boxed iteration during the project – the timeline could be from 1 week to 1 month, depending on the project (Definition from Agile Academy, [Definition of Sprint](#), 2022)

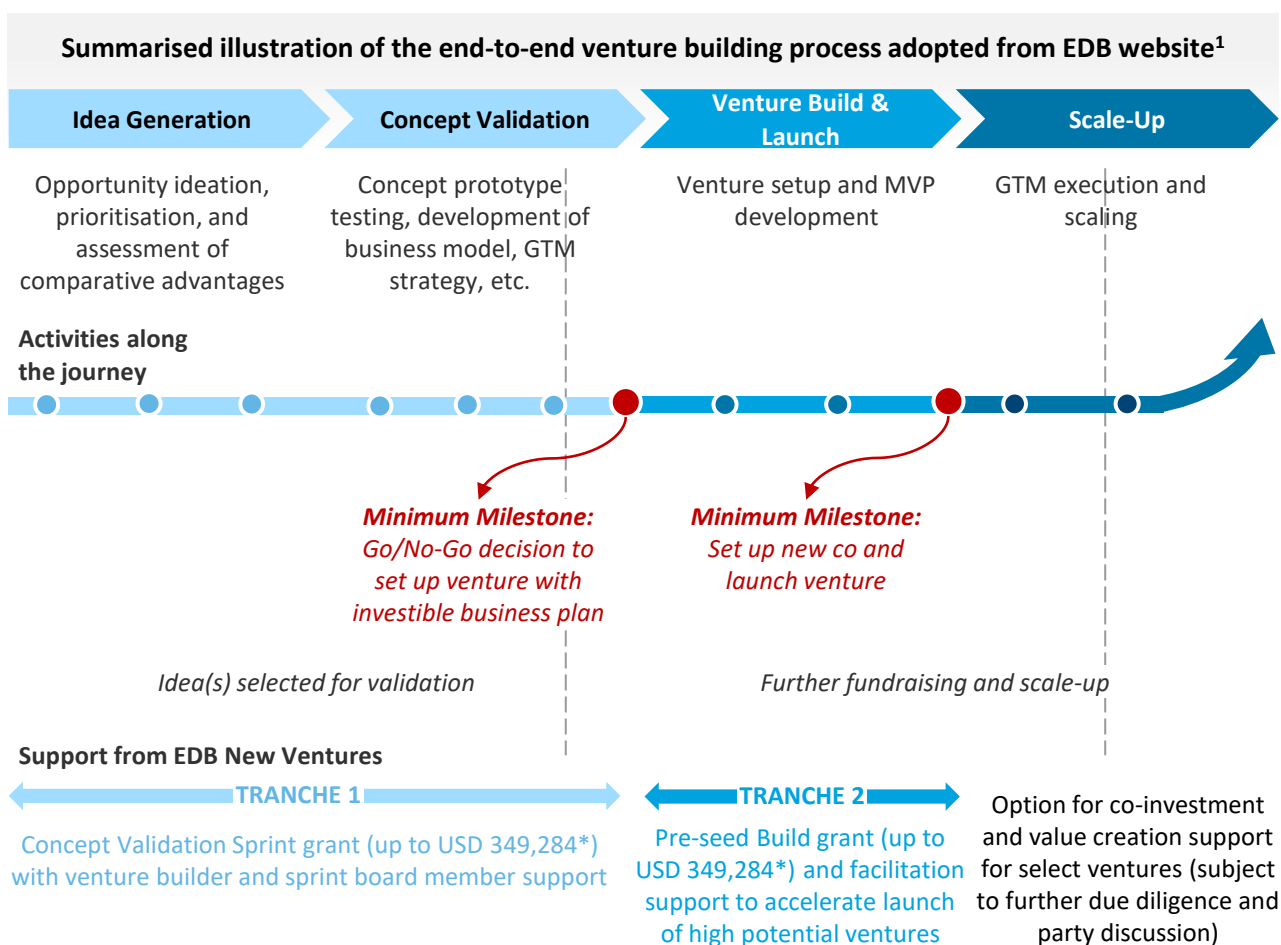
*Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD
Source: *Deloitte Analysis

1) EDB, [Corporate Venture Launchpad 2.0](#), 2022

EDB's CVL 2.0: End-to-end investment process

CVL 2.0 provides financing and other value-added support to investees to develop new ventures in sprints, with oversight from EDB's sprint board advisory members

The program is divided into 2 main Tranches, in which Tranche 1 includes Idea Generation and Concept Validation stages, and Tranche 2 includes Venture Build & Launch. The program runs along 3 stages after the corporates are accepted to join the program – from Idea Generation to Venture Build & Launch. After that, the corporate ventures proceed to the Scale-Up stage, signalling that they are ready for the next stage of growth.



Additional insights by Deloitte⁺

- The fund's reimbursement approach allows the program to monitor how the funds are being used to support the ventures growth as well as to ensure that the fund usage is aligned with the program's objectives
- The CVL 2.0 program is divided into 2 tranches so that they can continue to support the high potential ventures in Tranche 2, and drop off the unsuccessful ones after Tranche 1 – a useful stage-gating checkpoint
- EDB allows the corporates to select their preferred venture studios based on their interests and expected outcomes to ensure the alignment between corporates' goals and venture studios' competencies

Note: This is a generic illustration of the end-to-end process specific to CVL 2.0; it is dynamic and can be subject to change over time.

* Note: Number is converted based on XR of 1.43 SGD to 1 USD

Source: ⁺Deloitte Analysis

1) EDB, [Corporate Venture Launchpad 2.0](#), 2022



Thailand's Way Forward

4.1 Thailand's startup ecosystem mission

4.2 Foundations of a successful ecosystem

4.3 Thailand ecosystem gap analysis

4.4 Options to address ecosystem gaps & challenges

4.5 Potential ecosystem benefits

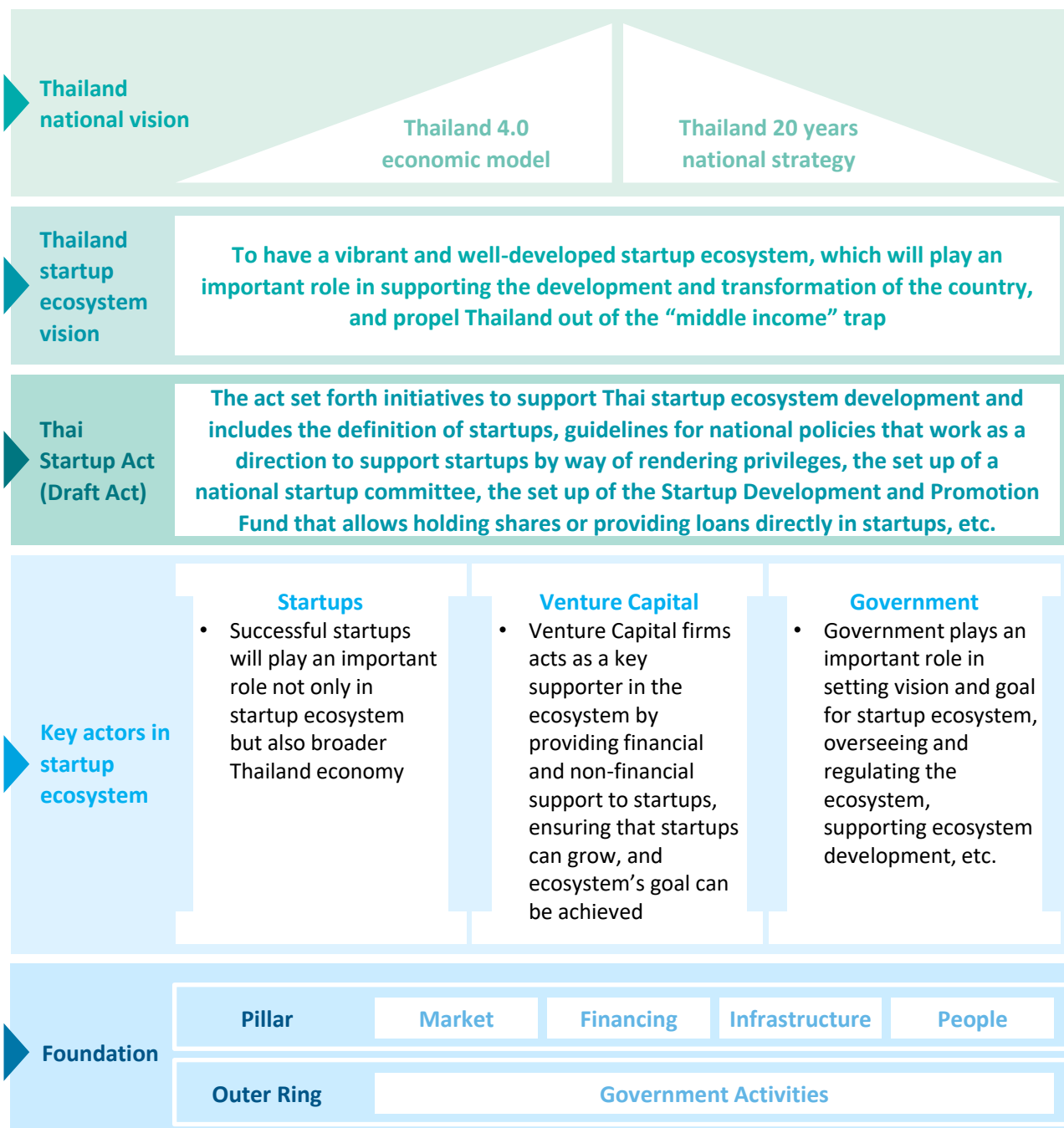


4


Thailand's startup ecosystem mission

Aligning with the national vision, Thailand has set out to develop a vibrant local startup ecosystem

The Thai government has emphasized through the Thai Startup Act (Draft Act) the importance of developing a vibrant domestic startup and VC ecosystem. These efforts align with the broader national goal to solve key economic challenges that the country faces (e.g., middle income trap, inequality trap, imbalance trap) and transform the nation from a developing to a developed country.



Source:
National Science and Technology Development Agency (NSTDA), Office of the Official Information (OIC), Deloitte Analysis



Foundations of a successful startup ecosystem

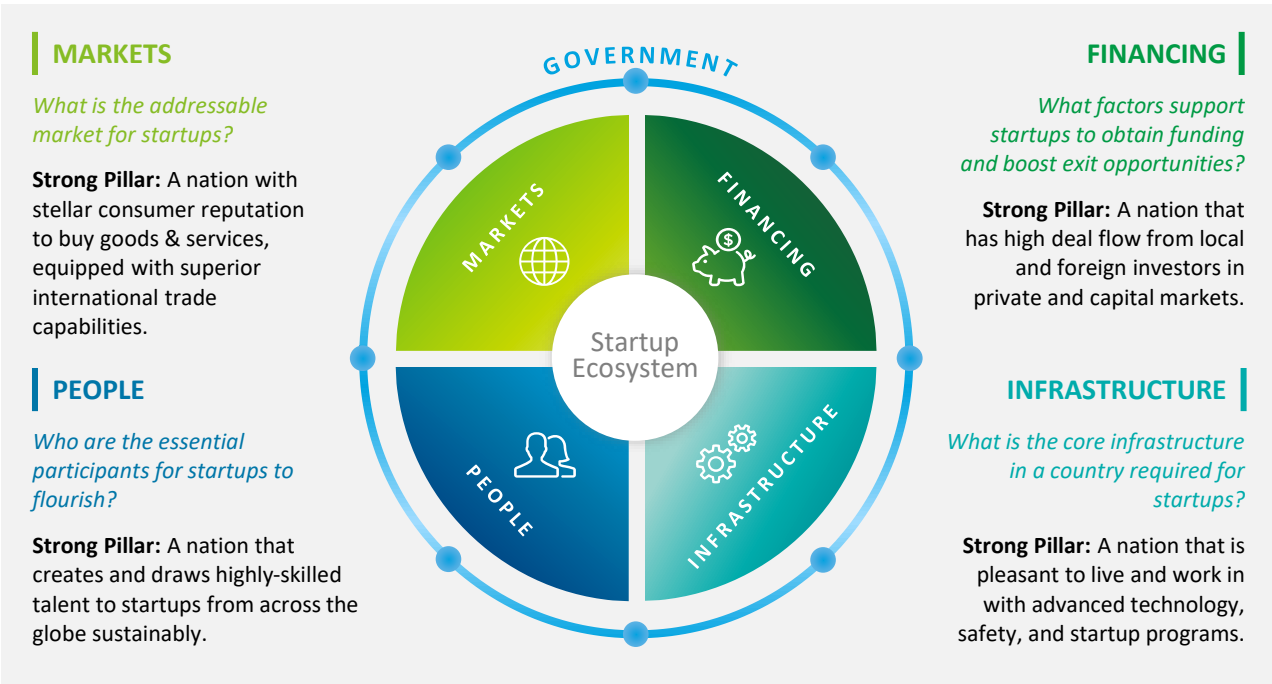
Foundations of a successful startup ecosystem overview

A vibrant startup ecosystem is naturally self-sustaining and growth-enabled by four key pillars, supported by an outer ring representing local governments' initiatives to create a conducive environment

Key pillar-ring model for successful startup ecosystems

A startup's lifeblood and competitive advantage lies in its ability to innovate and to develop ground-breaking solutions, processes, and technologies; this separates startups from traditional businesses and SMEs.

Such an endeavour requires five critical, interconnected factors to thrive and achieve self-sufficiency:



Summary of components in each Key Pillar

MARKETS		
Local Markets Ability to garner interest and trust from local consumers who have discretionary spending power, employment opportunities and a stable economy		International Markets Ability to garner international demand and achieve product-market fit, facilitated by international trade capability
FINANCING		
Local Investors Easy access to unbiased private and public funding investors that leaves control to founders and provide local support		Foreign Investors Diversified access to foreign investors who provide international perspective, network, and resources
INFRASTRUCTURE		
Technology Advancement High adoption and utilisation of advanced technology by businesses and consumers	Business & Living Standards High standard of living and business environment that draws entrepreneurs and talents	Market Enablers Institutional aid for startups with R&D, education, incubator programs and accelerators
PEOPLE		
Employee Talent Top-tier talents skilled in sciences, technology engineering and mathematics	Founder Talent Ambitious leaders and risk takers with a strategic vision for large scale innovation	Expert Knowledge Serial entrepreneurs, thought leaders and industry specialists with international experience

Source: Deloitte Analysis

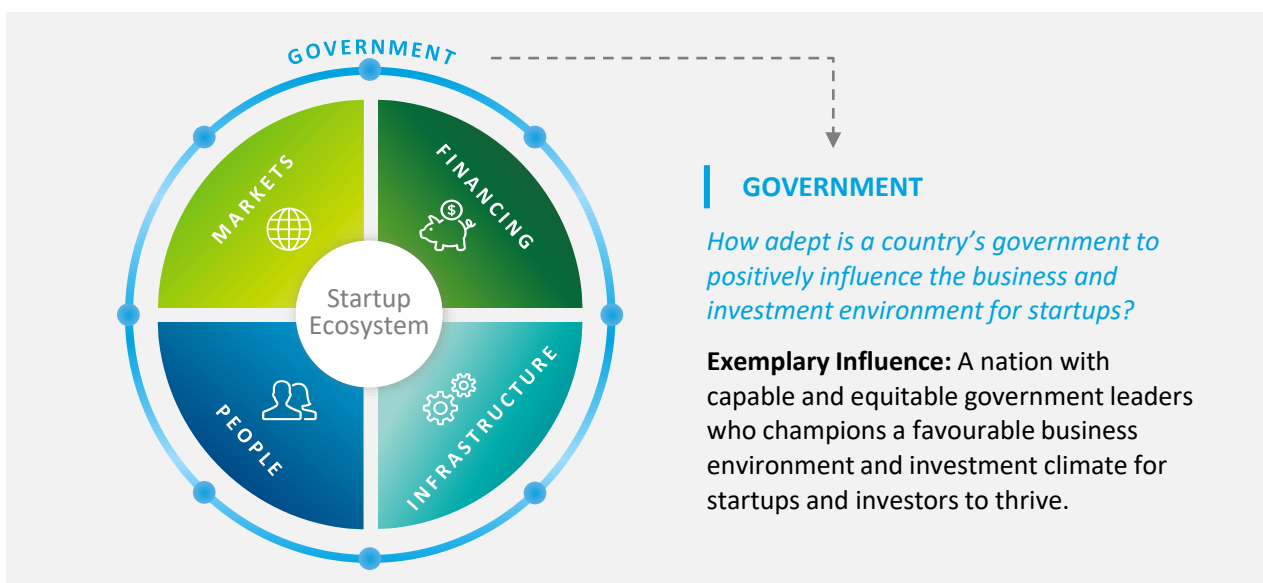
Foundations of a successful startup ecosystem overview

Local governments can influence the startup ecosystem pillars through development of a country's infrastructure, regulations, and direct support programs

Key pillar-ring model for successful startup ecosystems (continued)

Governments play a central role in the startup ecosystem where decisions made can either further economic development or stifle the business environment through overregulation.

The key consideration is to maintain a balance between consumer, social and environment protection versus spurring business and investment activities.



Summary of components in Government Ring

GOVERNMENT

Business Regulations
Influences business environment
The domestic legal and regulatory framework that impacts the ease of setting up and operating a business through legal protection of data, information, and intellectual property within a country

Government Support
The extent of an impartial government's expertise, global network, and veteran leaders to design, execute and operationalise programs and mandates in-line with a national strategy rapidly with seamless communication across inter-government agencies

Investment Regulations
Influences investment climate
The domestic legal and regulatory framework that impacts the ease of local and foreign investors to manage a portfolio of startups through investment incentives or barriers

Business Environment

The business environment includes the internal and external factors that affect how startups do business such as corporate governance, employee acquisition, licensing, and compensation.

The government directly influences the business environment through:

- Pros: Regulations that promote a fair, transparent and competitive free market
- Cons: Restrictive regulations that reduces business efficiency

Investment Climate

In a startup ecosystem, the investment climate includes a wide-range of factors that impact the deal journey where investors source, invest, manage and exit a portfolio of startups.

The government directly influences the investment climate through:

- Pros: Investors' incentives and risk protection
- Cons: Complex investment requirements and slow regulatory processing

Ecosystem pillars: Market pillar

The Markets pillar captures local and international customer demand, in addition to the ease of conducting international trade in a country

Definition of the markets pillar

The Markets Pillar addresses the following question:

“What are the success factors to maximise the addressable market for startups?”

A strong Markets Pillar is represented by:

- A globally-connected, first world country with superior international trade capabilities and worldwide reputation as a producer and consumer of quality goods and services

Pillar components



Local Markets

Local markets tend to be startups' core target audience as founders are more in-tuned with local preferences and benefit from field research

For startups to garner maximum local consumer demand, three major factors of the home country affect consumer behaviour:

- **Economic strength** aids diversity and advancement of industries for startups to venture and expand, wealth distribution parity and full employment
- **Consumer spending** is empowered by national education level and high skilled jobs, all of which boost consumer confidence and discretionary spending
- **Consumer beliefs** of homegrown products and technology moulds consumer trust and adoption rate; a culture of unbiased and informed purchasing decisions across ages will break any stereotypes startups may face



International Markets

International markets represent opportunities for startups to expand beyond the limited size of domestic markets

For startups to garner maximum international customer demand, three major factors determine the success of global market penetration:

- **International trade capabilities** via a cutting-edge supply chain, omni-channel payments and banking services facilitate prompt end-to-end transactions
- **Global connectedness & localisation** capability, to bridge cultural and language gaps, form global partnerships and deliver a localised customer experience
- **Consumer perception**, the trust of goods and services, delivered by the home country and startups' ability to position a product-market fit

Leading examples from abroad



SINGAPORE

Singapore's robust market environment elevates startup success

- **Economic strength:** Strong, with low unemployment and contained inflation rates
 - Seeds Capital program aims to strengthen the ecosystem, as part of Enterprise Singapore's objectives
- **Strong global connectedness & localization:** Active investors in Southeast Asia and other regions target Singapore as an attractive destination for their investments
 - Seeds Capital program co-invests with institutional investors globally, and offers global expansion value-add services for startups

Ecosystem pillars: Financing pillar

The Financing pillar is essential for high-quality startups to succeed by providing them with readily accessible capital from local and international investors

Definition of the financing pillar

The Financing Pillar addresses the following question:

“How does a country establish a favourable investment environment for startups to obtain funding and amplify exit prospects?”

A strong Financing Pillar is represented by:

- A nation with a sizable pool of local investors, developed capital markets and an international investment hub for cross-border venture capital investments and foreign angel investors

Pillar components



Local
Investors

Local investors are essential being the primary source of funding with home advantage in knowledge, expertise and on-the-ground support and capabilities

The ideal local investors' profile and necessary foundations are:

- **Robust discovery platforms and stock markets** to connect startups with private and public investors to enable optimal accessibility, competitive price discovery, exit prospects and funding options to a wide coverage of startups
- **Abundant pool of experienced investors** is integral as traditional bank loans are difficult for startups to access; the paradox is that the investor pool size is directly tied to the number of high-quality startups and vice versa
- **Investors are unbiased in selecting startups, leave creative control to founders**, and deliver professional mentorship with expert guidance



Foreign
Investors

Cross-border venture capital investments provide transnational perspective, resources and global network to connect startups with international markets

The success factors and benefits are:

- **Favourable foreign investor policies** enable cross-border investments and syndication which are a substantial part in developed venture capital markets and have a strong positive impact on the innovation of domestic startups¹
- **Global VCs and angel investors** provide a holistic view of the market and international expertise with empirical results showing increased success rates and accelerating development of emerging startup ecosystems²

Leading examples from abroad



SINGAPORE

Singapore is a regional hub for venture capital activities, attracting global capital base

- **Robust local and foreign capital investment resources:** Investments in start-ups grew by more than 45% per annum between 2017 and 2021, with 54% increase in venture funding within the first half of 2022^{3,4,5}



ISRAEL

Israel's VC market is dominated by large foreign-based firms and anticipates a strong investment pipeline

- **Strong presence of foreign investors:** 3 out of 5 of the most active VC firms are foreign firms, and many are increasing their activity in recent years⁶
 - Yozma, international visa, and several other incubator programs are targeted to attract more investors locally and globally

Source: Deloitte Analysis

1) Frontiers, [How does venture capital cross-border syndication spur corporate innovation?](#), 2022
2) Cairn Info, [The benefit of cross-border investments in the Chinese emerging venture capital and private equity market](#), 2022
3) Business Times, [Singapore-based startups raise S\\$11.2b in 9M 2021, more than double the whole of 2020](#), 2021

4) Euromonitor, [STEP Analysis: Singapore](#), 2022
5) Business Times, [Special fund for startups has facilitated S\\$216m in funds raised](#), 2021
6) Start-up Nation Central, [2021 Tech Trends: Who are the investors behind Israeli tech's record-breaking year?](#), 2021

Ecosystem pillars: Infrastructure pillar

The Infrastructure pillar captures crucial long-term capabilities in a country that an innovation-driven startup demands – technology maturity, business & living standards, and institutional support

Definition of the infrastructure pillar

The Infrastructure Pillar addresses the following question:

“What are the core infrastructure in a country required for startups to operate and drive technological innovation?”

A strong Infrastructure Pillar is represented by:

- A technologically advanced nation provides exceptional quality of life, a conducive business environment and institutional support for startups to draw entrepreneurs and world-class talents

Pillar components

 Technology Advancement	Extensive adoption and utilisation of advanced technology by businesses and consumers accelerates technological innovation <ul style="list-style-type: none">• Technology advancement of a country's digital infrastructure and Information and Communications Technology (ICT) accelerates technological innovation• High technology adoption by businesses and consumers, as an integral driver of business operations and daily life, ramps up demand for newer and more sophisticated technology
 Business & Living Standards	A nation that offers outstanding comfort and standard of living is a highly desirable, cosmopolitan destination for entrepreneurs and world-class talents <ul style="list-style-type: none">• High quality of life achieved from a clean environment, recreation facilities, safety, healthcare and social engagement boosts overall citizens satisfaction• A conducive business environment draws startups to set up headquarters in a country with advanced infrastructure in real estate, energy, transportation, political stability, and ease of doing international business
 Market Enablers	Support for startups through research institutions, universities, incubators, and accelerators form the foundations of startup communities <ul style="list-style-type: none">• R&D and education institutions elevate startups reputation, foster entrepreneurship and champion innovation to produce skilled talents• Expert individuals and associations support to kickstart startups with financing and mentorship, foster experimentation and incubation of ideas to spur entrepreneur spirit – such as private associations, incubators, and accelerators

Leading examples from abroad



SINGAPORE

Singapore's leading infrastructure underpins the startup ecosystem success

- **Technology adoption and advancement:** Singapore has a high rate in broadband and mobile penetration, bringing in greater diversity and consumer openness towards new technology; funding for tech startups rose 56% in the first half of 2021¹



UNITED KINGDOM

UK proactively addresses ecosystem gaps with forefront market enablers and infrastructure support

- UK initiates numerous market enablers coupled with technology advancement to elevate the growth potential for startups and related players
 - Innovate UK to support the development of new cutting-edge products; curated databases and VC match-making platforms^{2,3}

Source: Deloitte Analysis

1) Tech in Asia, [Funding for Singapore's tech startups up 56% in first half of 2021](#), says Enterprise Singapore, 2021

2) Department of International Trade, [The UK government's Venture Capital Unit](#), 2022

3) Innovate UK, [Our support for business innovation](#), January 2022

Ecosystem pillars: People pillar

The People pillar captures the key stakeholders – employees, founders and experts – the exemplary qualities they should possess, and the social environment needed for a successful startup community

Definition of the people pillar

The People Pillar addresses the following question:

“Who are the essential participants for startups to flourish?”

A strong People Pillar is represented by:

- A nation that creates and draws highly-skilled talent from across the globe, and supports an active startup community that promotes the essence of entrepreneurship

Pillar components



Employee
Talent

A nation prolific with a high-skill workforce, from technical fields such as STEM, is an immense boom to startups with talent needs for creative problem-solvers

- **Access to talents** from local top-tier universities or drawing foreign talents with pro-immigration policies, accessible work permits and support to transcend language barriers
- **Startups' reputation** as a desirable place to work is crucial to capturing talent from leading MNCs; they should be viewed as lucrative ventures inventing unique solutions that can superscale into huge successes



Founder
Talent

A nation with a startup culture that produces founders who are ambitious leaders and risk takers with a strategic vision for large scale innovation

- **Strategic risk takers** with a clear ambitious long-term vision, relentless in striving for new breakthroughs and sights on international expansion from the outset
- **Deep narrow focus and specialised domain expertise** to develop competitive advantage against established incumbents and position a new vertical niche



Expert
Knowledge

A community that connects startups with serial entrepreneurs, thought leaders and experts with international experience to give unbiased external advice

- **An active community** comprising of corporations, universities, and online forums that connects founders to industry experts and serial entrepreneurs via organised programs, competitions and messaging social channels
- **Industry experts to act as mentors**, providing technical expertise in sector knowledge, corporate functions, or advisory on financing and legal matters

Leading examples from abroad



SINGAPORE

Singapore has a strong establishment of people-focused programs to spur growth in talent needed for the startup ecosystem¹

- Founder and entrepreneurship talent are important factors to the success of Singapore ecosystem
 - Programs such as Seeds Capital were aimed to develop entrepreneurship talent, culture, expertise through importing knowledge from well established ecosystems



ISRAEL

Israel created various programs to increase skilled entrepreneurs and strengthen the startup talent pool

- **Employee and founder talent are enhanced** through several incubator programs initiated by the government
 - Office of Chief of Scientist leverages skilled immigrants by providing financial and non-financial support for their projects such as expert business advice and networking opportunities²

Source: Deloitte Analysis

1) Deloitte interview with venture capital subject matter expert in Singapore, 2022

2) Jewish Virtual Library, [Israel Science & Technology: Technological Incubators](#), 2022

Ecosystem pillars: Government ring

The Government ring captures how local governments can fuel the corporate environment to maximise business and investment activities through a united national strategy

Definition of the government ring

The Government Ring addresses the following question:

“How adept is a country’s government to kindle a favourable environment for startups and investors to conduct innovation-led businesses and investments?”

A strong Government Ring is represented by:

- A government with a cohesive national strategy, seasoned expertise to design and manage startup programs through unified inter-agencies and a systematic minimalist approach to regulation

Pillar components



Business Regulations

Entrepreneurs need an environment where it is easy to conduct business and where the intellectual property (IP) developed are safe from corporate espionage

- **Minimalist approach to regulation** where regulations are regularly reviewed and revised to support the ease of setting up and operating a business across licensing, labour, compensation, operations, and taxation laws
- **Robust laws, institutions, and processes** to ensure stable and corruption-free governance of an equal opportunity free market safe from espionage



Investment Regulations

Investors need an environment where it is safe and easy to invest and manage their portfolio; they also value the investment incentives made available to them

- **Simple, standardised fund and documentation requirements** to increase transparency, operational efficiency, and reduce transaction costs
- **Policies to incentivise and facilitate** local and foreign investment through fund incentives, tax incentives, and investor protection from fraud at both fund manager (for accredited investors) and startup level (for institutional investors)



Government Support

Governments are vital in jump-starting a nascent startup ecosystem through their ability to rapidly deploy well-designed strategic startup programs

- **Seasoned expertise to design, run and scale startup programs** from strategy to operation and hand-off across agencies and startup lifecycles
- **United vision across government agencies** to rapidly deploy programs at scale, in sync with the national strategy, and with anti-corruption measures in place

Leading examples from abroad



SINGAPORE

Singapore’s government prioritises economic development, hence a conducive business environment

- Free-market principle with high transparency and accountability, facilitated by anti-corruption mechanisms and other business-championing policies
- **Favorable business regulations:** Superior IP protection and global financial infrastructure acts as a base for a healthy ecosystem
- **Strong government support:** The government prioritises economic development above all, actively establishing and maintaining programs to co-invest and develop startups of all sizes, e.g., Seeds Capital program, Special Situation Fund for Startups (SSFS), etc.

Source: Enterprise Singapore, Deloitte Analysis

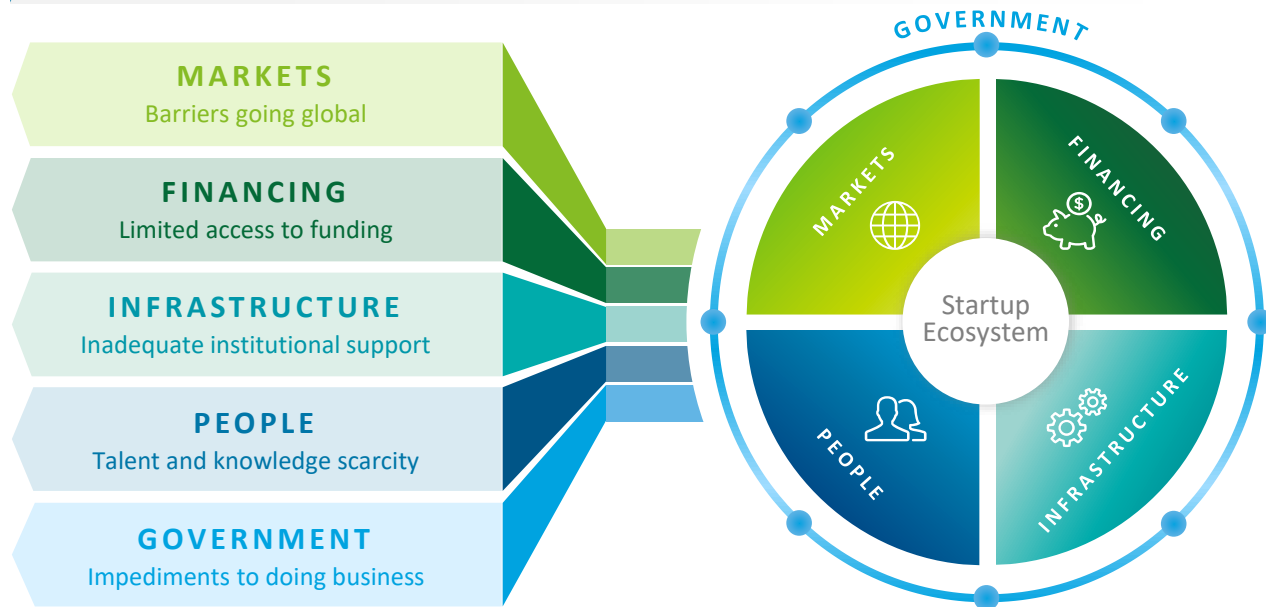


Thailand ecosystem gap analysis

Thailand challenges in the context of key pillars

Thailand challenges run across the startup ecosystem model, many of which inherently stem from unique local culture, perception, and way of doing business

Challenge Summary



Challenge Details

- Affluent corporations dominate local markets**, making it hard for startups to compete
- Startups struggle to break into global markets** due to limited global network and support
- Scarce investor interest and access to funding** for seed to early-stage startups
- Thailand's pool of market enablers are declining (e.g., accelerators)**, resulting in a deficit of startup programs and support
- Thailand's startup community is just emerging and has **limited access to academia's support and partnership**
- Limited number of successful homegrown entrepreneurs** to mentor startups
- Thai startups face difficulty in hiring talents** due to limited talent pool and their lack of interest
- Foreign founders and talent face barriers** in doing business and immigration policies
- Domestic founders are risk averse**, creating more localised products focused on local markets
- Government financial support for startups is insufficient** for early-stage working capital needs
- Government startup programs have diminished impact** due to less-than-ideal design and execution
- Startups face friction in operating in Thailand**
- Inflexible investor options and policy challenges** make it difficult for investors to operate in Thailand

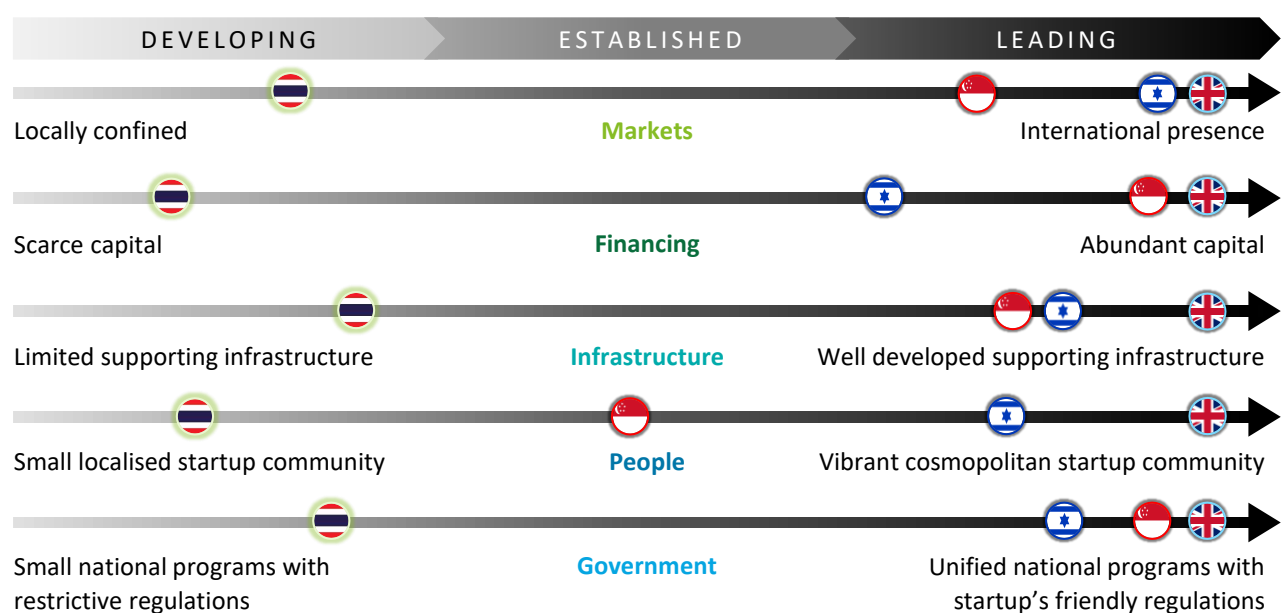
Source: Deloitte Analysis

Thailand's maturity assessment

Leading ecosystems particularly excel in two crucial pillars that Thailand needs to focus development on – startups' ease of access to capital and capable top-tier talent

Maturity Assessment

Current Thailand's pillars ^{1,2}	Leading countries' pillars ^{1,2}
Markets	
<ul style="list-style-type: none"> Newly industrialized country with good economics Has local demand, but weak international presence* Lack of international network and partners* 	<ul style="list-style-type: none"> First world advancement and economic prosperity Substantial demand from local and international customers Globally connected with international partners
Financing	
<ul style="list-style-type: none"> Seed & early-stage startups lack access to capital* 	<ul style="list-style-type: none"> Ample funding for deserving startups across all stages
Infrastructure	
<ul style="list-style-type: none"> Fair business and living standards Startup programs are nascent & smaller in scale* Declining number of market enablers* 	<ul style="list-style-type: none"> Exceptional business and living standards Prolific startup programs backed by partnerships Highly cohesive and vibrant startup community
People	
<ul style="list-style-type: none"> Difficult to hire talents due to limited talent pool* Founders can be risk averse & highly localised* Lack of experts to mentor next gen founders* 	<ul style="list-style-type: none"> Nation that creates and draws skilled global talents Founders are ambitious leaders and risk takers Active community of worldwide experts & mentors
Government	
<ul style="list-style-type: none"> Public programs have diminished success and face red tape and execution challenges* Regulatory barriers for VCs and startups* 	<ul style="list-style-type: none"> Public programs are highly impactful and produce highly successful startups Favourable business and investment environment



* Denotes potential gap in Thailand | Please refer to appendix for assessment methodology

Source:

1) Startup Genome, [The Global Startup Ecosystem Report](#), 2022

2) The Heritage Foundation, [2022 Index of Economic Freedom](#), 2022



Options to address ecosystem gaps & challenges

Illustrative roadmap

A long-term national strategy that anchors across government agencies, and startup programs will be necessary to fill the gaps in Thailand's startup ecosystem

Innovation ecosystems can follow 3 key principles, particularly in the early-stage:

- A. Strengthen the national level vision and empower a coordinating body.** A strong national-level startup agenda that is driven by an empowered coordinating body will inspire confidence and signal to agency stakeholders that leadership is serious about the development of the innovation ecosystem
- B. Establish cornerstone programs.** Countries that built successful ecosystems often commit to cornerstone programs (e.g., Yozma in Israel) that form their backbone and identity for national innovation
- C. Play the long game.** Innovation ecosystems take multiple generations to mature. While resources can be injected in the short term, culture and talent are built steadily over the long term. Success should be measured not in years, but in decades

► Illustrative startup ecosystem development roadmap based on learnings from abroad

High impact, cornerstone initiative to implement first (details in following pages)

ACTOR	BUILD / REIMAGINE	SCALE	GLOBALISE
Government National Policymaker	<p>1) Promote national level startup & VC and innovation vision ●</p> <p>2) Coordination: Empower government coordinating body to promote national vision ●</p>	<p>9) Increase allocation of resources and support programs for various research & development initiatives ●</p>	
Government Innovation Agencies	<p>3) Equity Matching: Launch equity matching co-investment program (simple) ●</p> <p>4) Enhanced Grants: Provide enhanced grant programs (higher funding amounts, fewer conditions) targeting strategic sectors ●</p>	<p>10) Create phase 2 equity matching program (complex -- with targeted sectors; financial targets, etc.) ●</p>	
Government Education Agency	<p>5) Collaboration with Academia: Strengthen collaboration between startups and academia both locally and internationally ●</p>		
Government Regulators & Tax Authorities	<p>6) Address regulatory pain points for startups and VCs ●</p> <p>7) Roll out new tax treatments to benefit startups and VCs investments ●</p>		
Government Immigration Agency	<p>8) Streamline visa programs to attract foreign talent ●</p>		
Government Trade Agency		<p>11) Promote startups abroad ●</p>	

Legend:

- Initiative currently exists in Thailand but can be streamlined / improved*
- Initiative currently does not exist in Thailand*

* Note: Please refer to appendix section for summary of the initiative
Source: Deloitte Analysis

Options to address ecosystem gaps & challenges

Option: Empowering government coordinating bodies to promote vision

Definition of initiative

There is a general perception that government agencies are not well coordinated in their delivery of the various government programs to support startups and VCs, and that these programs do not necessarily roll up toward the national vision.

To address the issue, Thailand can consider empowering a lead government agency / task force whose role is to ensure that all government support programs are aligned to the same national vision without overlapping mandates and duplicated activities, and to facilitate the coordination between different agencies and their programs.

Thailand challenges addressed by initiative

GOV'T & REG



Government startup programs have diminished impact due to less-than-ideal design and execution

This initiative aims to accord more power to lead government agencies to:

- Ensure coordination between different agencies
- Encourage and facilitate communication between agencies
- Ensure program mandates do not overlap and are not duplicated
- Ensure programs are headed in the right direction and towards the national vision
- Resolve issues between agencies when needed

Examples of initiatives abroad

A Israel Innovation Authority – Centralised programs from a single agency¹



The centralisation of programs enable the agency to prevent the creation of programs with overlapping mandates, and encourages the agency to support startups throughout multiple stages of their lifecycle

B UK government program synergies



UK agencies coordinate and work with each other to create program synergies from within or across agencies, creating a holistic solution with natural progression and step-up throughout the stakeholder journeys

C Prime Minister's Office Singapore – The Research, Innovation and Enterprise Council²



The Research, Innovation and Enterprise Council (RIEC) in Singapore, under the Prime Minister's office, is able to coordinate multiple government agencies and formulate 5-year plans and policies

Proposed initiatives for Thailand

- 1 Empowering the coordinating body** by hiring a seasoned chairperson who is well respected by both government and private sector to run the coordinating body; and provide the coordinator with power and resources to succeed (inspired by **A**, **B**, **C**)

Source: Deloitte Analysis

1) Israel Innovation Authority, [Endless Possibilities to Promote Innovation](#), 2020

2) National Research Foundation, [RIE Ecosystem](#), March 2022

Options to address ecosystem gaps & challenges

Option: Launching government-VC equity matching co-investment program (1/2)

Definition of initiative

Government and VC firms co-invest in startups via equity matching scheme (e.g., 1:1 or 2:1, etc.). While both parties provide financial support, VC firms play a larger role in startup selection, mentorship, advisory and other non-financial support.

With the co-investment program, both government and VC firms would benefit from risk-sharing, while able to effectively support startups financially and operationally

Thailand challenges addressed by initiative

MARKET



Startups struggle to break into global markets due to limited global network and support

The initiative can help attract international VC firms with international expertise that startups can leverage to gain access to international markets

FINANCING



Scarce investor interest and access to funding for seed to early-stage startups

The initiative will not only bring in new funding from government but also from VC firms, who will be more willing to invest as their risk is shared

Examples of initiatives abroad

A SEEDS Capital – Startup SG Equity Co-Investment Scheme¹

A public-private co-investment scheme under Enterprise Singapore that provides funding to high potential tech startups. The program has supported more than 2,000 startups with funding and has also provided other value-added services to the startup community



B EDB Singapore – Corporate Venture Launchpad (CVL) 2.0²

CVL 2.0 program aims to co-invest in established Singapore-based corporates to build ventures in new growth areas beyond the corporates' existing core business



C Israel Innovation Authority – Seed Incentive Program³

The Israel government co-fund with international VC firms and angel investors into startups. The program aims to tackle the decline in early-stage investment and expects that around 60% of their participants will be able to raise next funding round within 3 years.⁴



D British Business Bank – British Patient Capital⁵

UK's largest domestic investor in venture and venture growth opportunities, managing both a fund of funds and a co-investment program. The program has invested a total of USD 12.06 bn* since the launch in 2018, in which USD 10.26 bn* comes from their co-investors.^{6,7}



Proposed initiatives for Thailand

- 1 **Launching government equity matching co-investment program** to work with VC firms and invest in local startups (inspired by A, B, C, D)

* Note: Number is converted based on exchange rate of 1 GBP to 1.13 USD
Source: Deloitte Analysis

1) Enterprise Singapore, [SEEDS Capital](#), 2022

2) EDB, [Corporate Venture Launchpad 2.0](#), 2022

3) Israel Innovation Authority, [Seed Incentive Program](#), 2021

4) KrASIA, [Israel launches USD 25 million program to help early-stage startups draw investors](#), January 2021

5) British Patient Capital, [Future Fund: Breakthrough](#), 2022

6) British Patient Capital, [Investing in Innovation – Annual Report and Accounts 2022](#), 2022

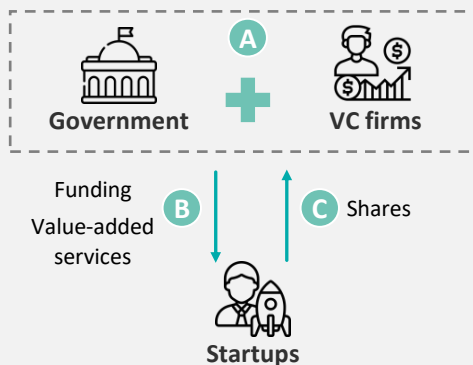
7) British Patient Capital, [Annual Report and Accounts 2022](#), 2022

Options to address ecosystem gaps & challenges

Option: Launching government-VC equity matching co-investment program (2/2)

Concept of the initiative

1 Government equity matching co-investment program



How the initiative works

- Government develops partnership with VC firms that they would like to work with
- Government and VC firms co-invest in the startups at the same time; the funding put in by each party will be according to the agreed matching ratio (e.g., 1:1, 2:1, etc.)
- Startups give out shares to investor (i.e., government and VC firms) in exchange for funding and other support

Note:

When launching the program, responsibilities of government and VC firms could be assigned as follows for each actor:

Government:

- Design the overall co-investment program
- Select VC firms to work with
- Put in funding according to the agreed matching ratio

VC firms:

- Screen and select startups
- Put in funding according to the agreed matching ratio
- Oversee and manage the performance of startups
- Provide startups with value-added services (e.g., mentorship, networking, business guidance)

Guiding principle

What to do

- + **Stakeholder roles and responsibilities:** Roles and responsibilities of key stakeholders should be based on relative comparative advantages to leverage each stakeholder's strengths and prevent duplication and stakeholder conflicts
- + **Program objective:** Program aspire to support the development of startups and the larger ecosystem, and should put less emphasis on financial returns for government

What not to do

- **Program design:** Based on learnings from abroad, downside protection for partnered VC firms should be avoided as it is a favorable option for lower quality VC firms, and program should offer upside potential, which is preferred by high quality VC firms instead
- **Program processes:** From analyzing successful programs implemented in leading countries, we have found out that paper-based and manual processes should be avoided to streamline and simplify the coordination between government agencies, VC firms, and startups

Options to address ecosystem gaps & challenges

Option: Provide enhanced grant programs (higher funding amounts, fewer conditions) targeting strategic industries

Definition of initiative

There is general feedback from Thai startups that the funding received from government programs are typically insufficient to maintain operations, and that the reimbursement process is too complex and cumbersome.

To solve the issue, Thai government can consider launching an enhanced no-strings attached grant program with higher funding amounts, streamlined operations, and value-added services.

Thailand challenges addressed by initiative

FINANCING



Scarce investor interest and access to funding for seed to early-stage startups

The initiative will bring in higher value financial support to startups

GOV'T & REG



Government financial support for startups is insufficient for early-stage working capital needs

The initiative will be able to provide higher funding amounts to startups to ensure that they would be able to fund their operation for 1.5 – 2 years

Government startup programs have diminished impact due to less-than-ideal design (e.g., complex application, unclear financing conditions with recourse) and execution

With the streamlined operations and improved execution, the initiative is designed to make it easy for startups to benefit from government programs (e.g., no recourse grant)

Examples of initiatives abroad

A Israel Innovation Authority – Bilateral R&D Incentive Program¹

The Israel government works with foreign partners to provide grants, which has no investment cap, and which provides value-added services to support Israeli startups with their R&D activities



B EDB Singapore – Corporate Venture Launchpad (CVL) 2.0²

The Singaporean government, through EDB New Ventures, provides grants with value added support to corporates to help them expand outside their core business and build new ventures. The program is divided into 2 tranches so that they can continue to support the high potential ventures in Tranche 2 and drop off unsuccessful ones after Tranche 1.



Proposed initiatives for Thailand

- 1 Provide enhanced grant programs which come with higher funding amounts, improved operations, and value-added services (inspired by A, B)

Source: Deloitte Analysis

1) Israel Innovation Authority, [Bilateral R&D Incentive Program](#), 2022

2) EDB, [Corporate Venture Launchpad 2.0](#), 2022

Options to address ecosystem gaps & challenges

Option: Strengthening collaboration between startups and academia (1/2)

Definition of initiative

Government will facilitate connections between startups and academia (with relevant talent, research and development capability, and technologies).

Startups will thus be able to gain access to talent while receiving knowledge transfer and mentorship from their academic partners. Academia would be able to use their expertise to solve real-world problems, discover new ideas for their research topics, and receive funding.

Thailand challenges addressed by initiative

PEOPLE



Limited number of successful homegrown entrepreneurs to mentor the next generation of startups

Startups will be able to work with and obtain mentorship from highly experienced academic resources such as professors and resident entrepreneurs

Thai startups face difficulty in hiring talents due to limited talent pool and their lack of interest in startups

Startups will gain access to high-skilled local talents from academia, widening their talent pool

Domestic founders are risk averse, creating more localised products focused on local markets

Working with academia would give opportunity for startups to discover new ideas; it would also give academia the opportunity to bring ideas from lab to life

Examples of initiatives abroad

A A*Star – T-Up Program¹

T-Up seconds A*Star scientists and researchers to Singapore based startups. Startups can also apply for a grant to pay A*Star for their service. Past startup participants have received support in discovering new ideas and developing new technologies.



B SG Innovate – Infinity Series Program²

Infinity series is an internship program that sponsors and places students in startups and helps subsidise the interns' salary. The program has helped streamline the hiring process and reduced hiring costs for many startups.



C National University of Singapore – NUS Overseas Colleges (NOC) Program³

NOC is a program that allows students to intern at overseas startups in top global hubs. The program has trained a number of successful future founders.



D Innovate UK – Knowledge Transfer Partnerships (KTPs) Program^{4,5}

The KTPs program connects UK based businesses with academic partners. The program also provides grants to participants. Studies have shown that every USD 1.1* invested by KTP resulted in up to USD 9.0* GVA for the economy.⁵



Proposed initiatives for Thailand

- 1 Launch matching program to connect startups with corresponding academic partners or interns, and to help cover costs of these resources (inspired by A , B , D)
- 2 Expand internship opportunities with overseas startups (inspired by C)

* Note: Number is converted based on exchange rate of 1 GBP to 1.13 USD

Source: Deloitte Analysis

1) Agency for Science, Technology and Research (A*STAR), [T-Up Program](#), 2022

2) SG Innovate, [Infinity Series](#), 2022

3) National University of Singapore, [NUS Overseas Colleges \(NOC\) Program](#), 2022

4) Innovate UK, [Knowledge Transfer Partnerships \(KTPs\)](#), 2022

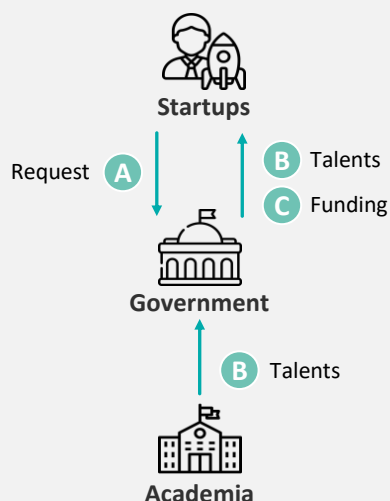
5) Gov.uk, [The Knowledge Transfer Partnership program: an impact review](#), 2015

Options to address ecosystem gaps & challenges

Option: Strengthening collaboration between startups and academia (2/2)

Concept of the initiative

1 Startups and academic partners / interns matching program



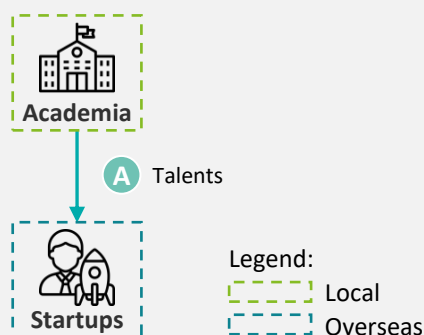
How the initiative works

- A Startups submit talent requests to government matching program
- B Government reviews the requests from startups and matches them with talent pool from academia for deployment
- C Government can further help startups by covering the costs of the resources

Note:

- Startups will be responsible for paying academia for using their talents

2 Internship opportunity expansion



How the initiative works

- A Local academia establishes relationship with leading overseas startup hubs and sends their top students for internship opportunities

Guiding principle

What to do

- + **Government role:** Government should take the role as program facilitator and let startups and academia manage their day-to-day operations to optimize the right capabilities needed for the startups' growth
- + **Type of funding support:** Funding support could be non-recourse and in the form of upfront grants instead of reimbursement to avoid over-complications, prevent delays in payment, and help startups with their cash flow requirements

What not to do

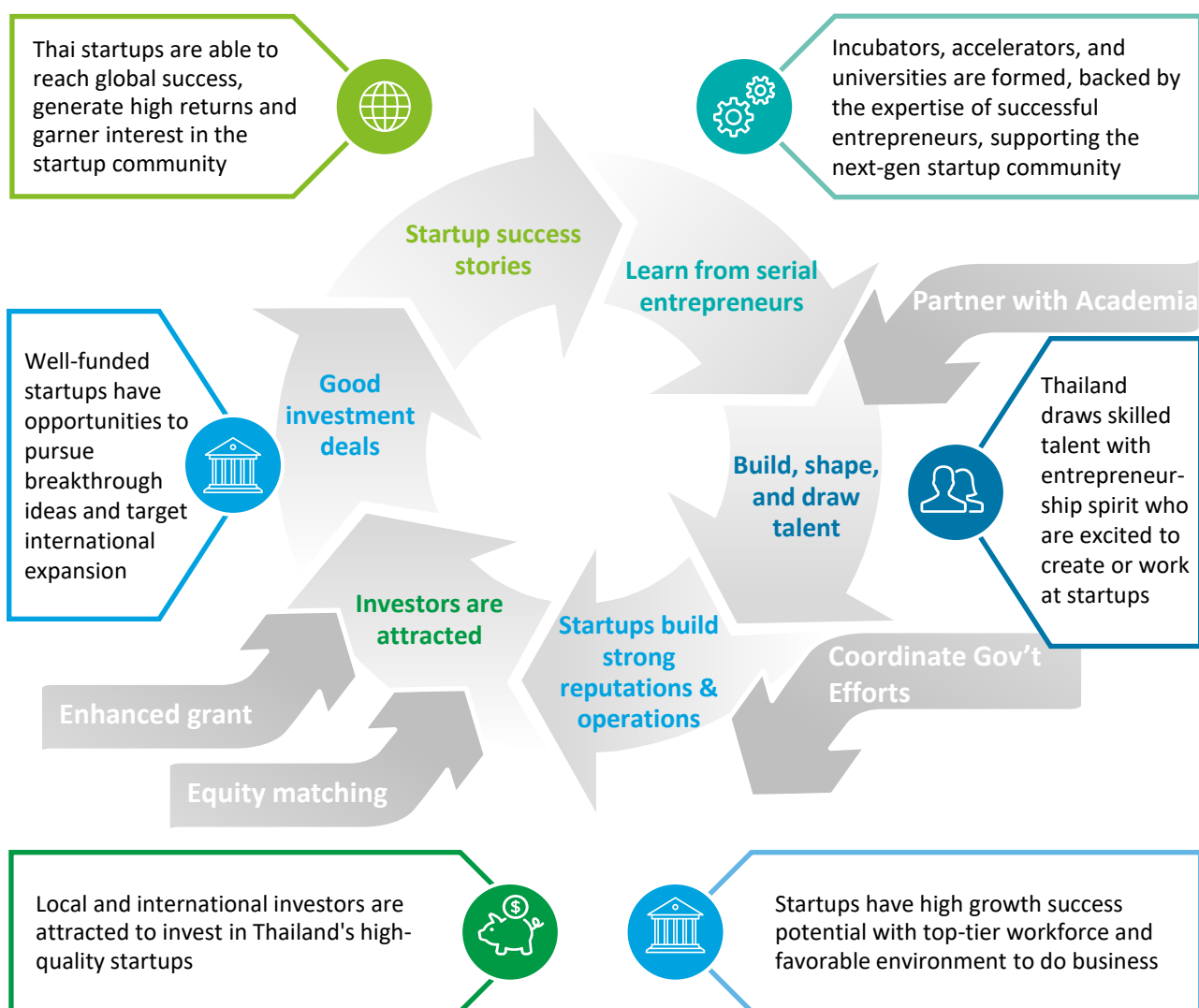
- **Registration and application process:** Complex and complicated process would deter participants from joining the program (e.g., complex registration process, complicated application forms, etc.)
- **Reimbursement process:** Based on insights we have gathered from Thai startups, we have found out that today's processes are often too strict and complicated, making it difficult for participants to enjoy the program (e.g., stringent receipts requirement, outdated payment system, etc.)

Potential ecosystem benefits

Government can help to propel Thailand's startup ecosystem by establishing cornerstone programs

The Flywheel Effect¹ for Thai's startup & VC ecosystem

- Each component of the flywheel should be properly executed, propelling us to the next component
- Flywheel activities strengthen and are strengthened by the ecosystem pillars
- The Thai government can help build momentum for the ecosystem flywheel via their 4 cornerstone initiatives
- These investments and government interventions can help build a virtuous cycle over generations



Source: Deloitte Analysis

1) Jim Collins, [The Flywheel Effect](#), accessed December 2022



Thank you



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Appendix – Chapter 1



Examples of Thai government programs

The table below shows examples of existing Thai government programs that support startups and VC firms (1/2)

#	Government program	Relevant agency	Program overview
1	Capital tax gain exemption	Revenue Department	<ul style="list-style-type: none"> 10 years capital tax gain exemption for investors (i.e., individual investors, VCs, CVCs) investing in Thai startups in target sectors
2	DEPA Digital Startup Fund	DEPA	<ul style="list-style-type: none"> Fund launched by DEPA to provide grants to entrepreneurs, and to invest in early and growth stage startups in the form of grants and direct investments
3	DEPA dVenture program	DEPA	<ul style="list-style-type: none"> Program where DEPA works with VC firms to select startups from their portfolio and invest in the form of equity The 8 focus industries are mainly in technology innovation
4	NSTDA co-investment program	NSTDA	<ul style="list-style-type: none"> Co-investment program between NSTDA and private sector to invest in science and technology businesses that have started commercial operations
5	NSTDA startup program	NSTDA	<ul style="list-style-type: none"> Program that allows partnerships between NSTDA research projects and private companies to develop innovative businesses NSTDA might also invest in the startups established through NSTDA Startup program
6	NSTDA startup investment via PE Trust Fund	NSTDA	<ul style="list-style-type: none"> NSTDA invests in SMEs and startups with high growth potential via PE trust fund
7	NSTDA Holding co-investment program	NSTDA	<ul style="list-style-type: none"> Holding company set up by NSTDA to co-invest/jointly invest in advanced technology businesses
8	InnoSpace fund	NSTDA, DEPA, Ministry of Industry, SET, GSB, etc.	<ul style="list-style-type: none"> InnoSpace is a partnership between public and private sectors set up to support the development of startups in Thailand Using money raised from the investors, Innospace has launched several funds with different focus areas to invest in startups in various sectors
9	BOI startup support program (via competitiveness enhancement act)	BOI	<ul style="list-style-type: none"> BOI provides financial support to startups in the target sectors Funding provided is limited to being used for paying for technology and employees
10	Smart Visa program	BOI	<ul style="list-style-type: none"> Visa program set up to attract foreign skilled talent to work in specific S-curve industries Benefits of the visa include 4-year permission of stay, yearly immigration reports, the exempt from work permit requirement, etc.

Source: Digital Economy Promotion Agency (DEPA), National Science and Technology Development Agency (NSTDA), InnoSpace Thailand, The Board of Investment of Thailand (BOI)

Examples of Thai government programs

The table below shows examples of existing Thai government programs that support startups and VC firms (2/2)

#	Government program	Relevant agency	Program overview
11	TED Market Scaling Up Fund	Technology and Innovation-based Enterprise Development Fund (TED Fund)	<ul style="list-style-type: none"> Grant provided to startups to support their market expansion Grant covers costs associated with market expansion, e.g., product development cost, market testing cost, marketing cost
12	NIA Open Innovation Grant	NIA	<ul style="list-style-type: none"> Grant launched by NIA to support startups in the focused sectors
13	Thai Startup Act (Draft Act – not yet presented to the parliament)	Office of National Higher Education Science Research and Innovation Policy Council	<ul style="list-style-type: none"> Draft Act created with the aim to promote the development of Thailand's startup ecosystem Contents of the act include the definition of startup, the direction to support the startups, details of the National Startup Committee, etc. The act provides privileges to startups similar to BOI privileges (e.g., tax incentives, visa and work permit for expats, etc.) Act also provides funding to startups via Startup Development and Promotion Fund. This fund will be allowed to hold shares or provide loans directly to startups.

Source: Technology and Innovation based Enterprise Development Fund (TED), National Innovation Agency (NIA), Ministry of Higher Education, Science, Research and Innovation (MHESI), University of the Thai Chamber of Commerce

Appendix – Chapter 2



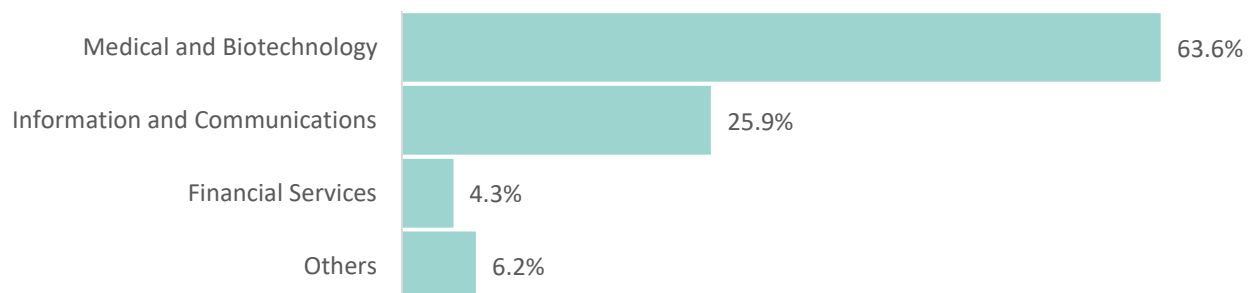
Appendix 2

Appendix 2.1: Top startup sectors and examples of startups¹

Top Sectors in Singapore			Top Sectors in Malaysia		
					
Transportation	Food	FinTech	Education	Travel	Transportation
Grab	foodpanda	ShopBack	RECQA	Speedrent	Carsome
Ninja Van	RedMart	StashAway	Pandai	Tourplus Technology	TravelMaker
TADA	Chope	Atome Financial	FutureLab.my	Katsana	Urban Metry

Top Sectors in Israel			Top Sectors in UK		
					
Security	Health	Food	Fintech	Health	Enterprise Software
Cyolo	Carbyne	Shopic	Revolut	BenevolentAI	Checkout.com
SecuriThings	Diagnostic Robotics	Aleph Farms	Wise	Lantum	OneTrust
Salt Security	Forsight Robotics	BeeHero	Monzo Bank	DoctorLink	Synk

Appendix 2.2: Share of Investments into startup sectors in Malaysia in 2021²



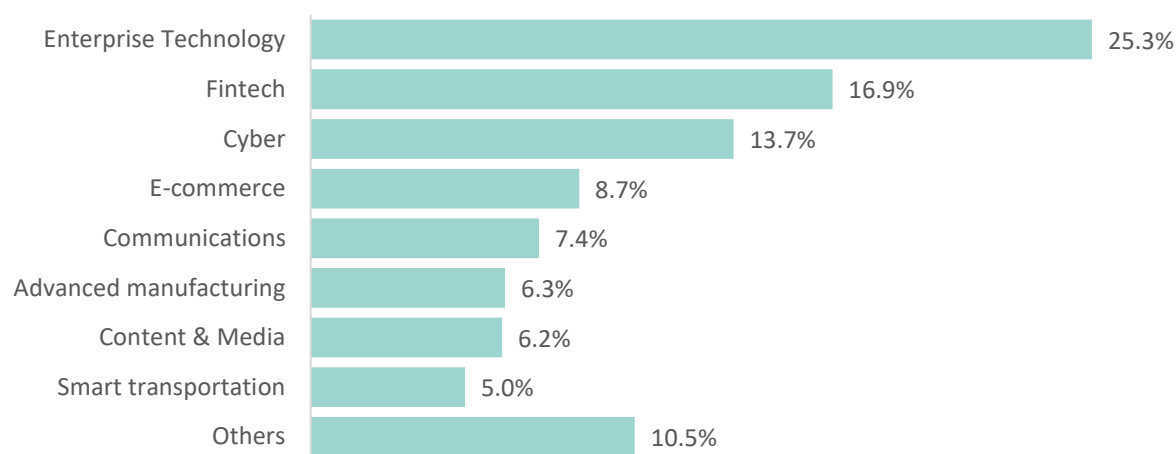
Source:

1) Dealroom, [Startup Ecosystem](#), accessed on 13th Dec 2022

2) The Malaysian Capital Market, [Capital Market Malaysia](#), 2022

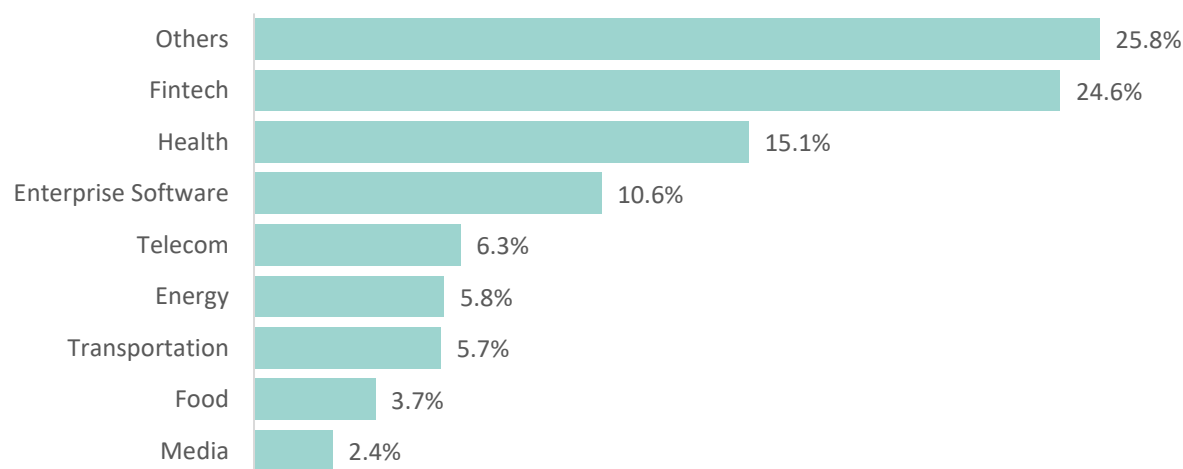
Appendix 2

Appendix 2.3: Investment into startup sectors in Israel (2021)¹



Note: Others include digital health, agrotech/foodtech/water, life sciences, medical devices, government and municipalities, energy, pharma, defense

Appendix 2.4: Top Startup sectors in United Kingdom²



Source:

1) Israel Innovation Authority, [Israeli High-Tech 2022 Situation Report](#), 2022

2) Dealroom, [dealroom.co](#), access on 13th Dec 2022

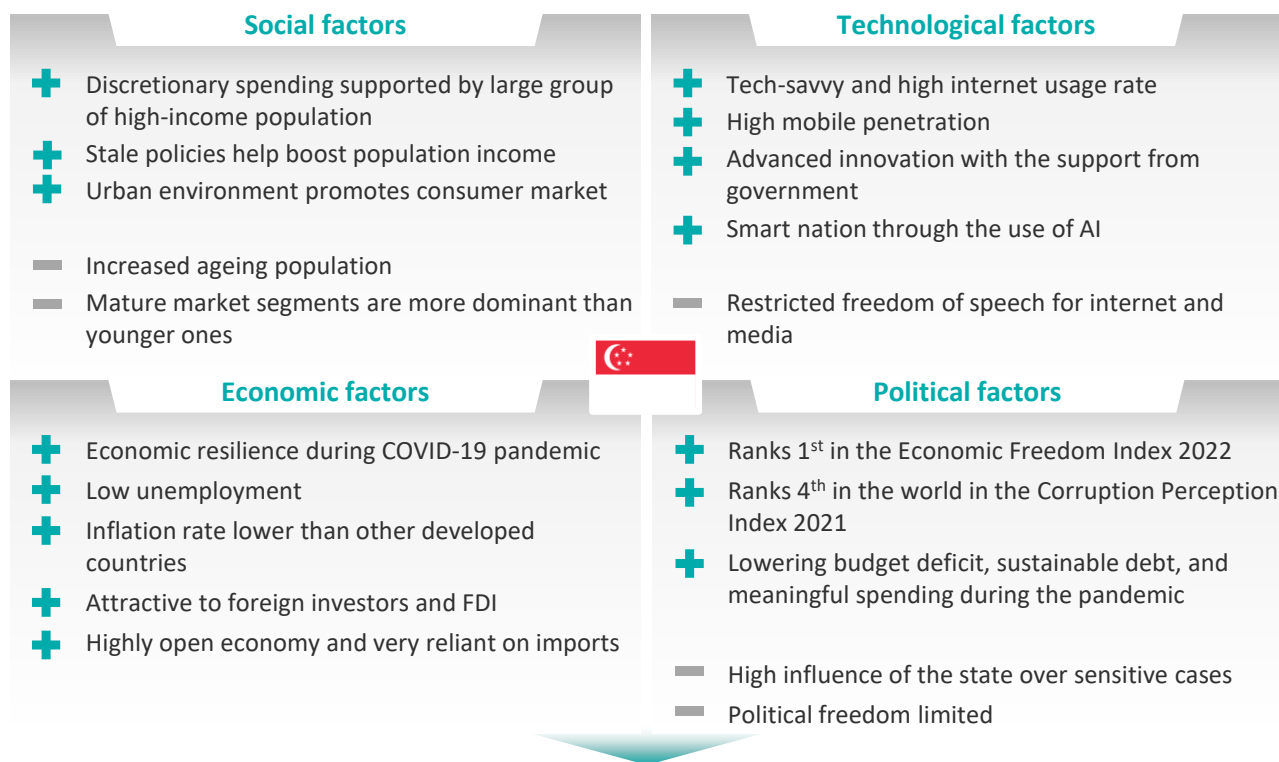


Singapore: Select Public Private Partnership Program Details

Singapore macro environment analysis and implications on startup and VC landscape

Singapore's overall macro environment sustains a highly conducive business environment for VCs and startups

Macro Environment Analysis¹



Implications on VC and Startup landscape

Government:

- Singapore business environment follows free-market principles with high transparency and accountability, facilitated by the government's business-championing policies
- Strong government funding and support from early to late stage
- Overall stable government finances with high but steadily decreasing debt allocated for COVID

Startups:

- Strong economic activity and post-pandemic economic recovery with easier access to capital due to heavy government involvement, e.g. Special Situation Fund for Startups (SSFS) set up in 2020, which facilitated USD 216mn in funding for 25 Singapore startups²
- Even during the pandemic, the funding for Singapore's tech startups up 56% in first half of 2021.³ In 2020, Singapore's GDP contracted by 5.8%, and Singapore-based startups raised a low of USD 5.5bn; however, that figure more than doubled to USD 11.2bn in 2021⁴

VC Firms:

- Investments in start-ups grew by more than 45% per annum between 2017 and 2021, with venture funding within the first half of 2022 reaching USD 6.2bn, a 54% increase compared with the same period last year, according to Enterprise Singapore⁵
- Very low unemployment, majority highly-educated workforce leading to investor-favoured business environment with high availability of skilled labour

Source:

1) Euromonitor, [STEP Analysis: Singapore](#), 2022

2) Business Times, [Special fund for startups has facilitated S\\$216m in funds raised](#), 2021

3) Tech in Asia, [Funding for Singapore's tech startups up 56% in first half of 2021, says Enterprise Singapore](#), 2020

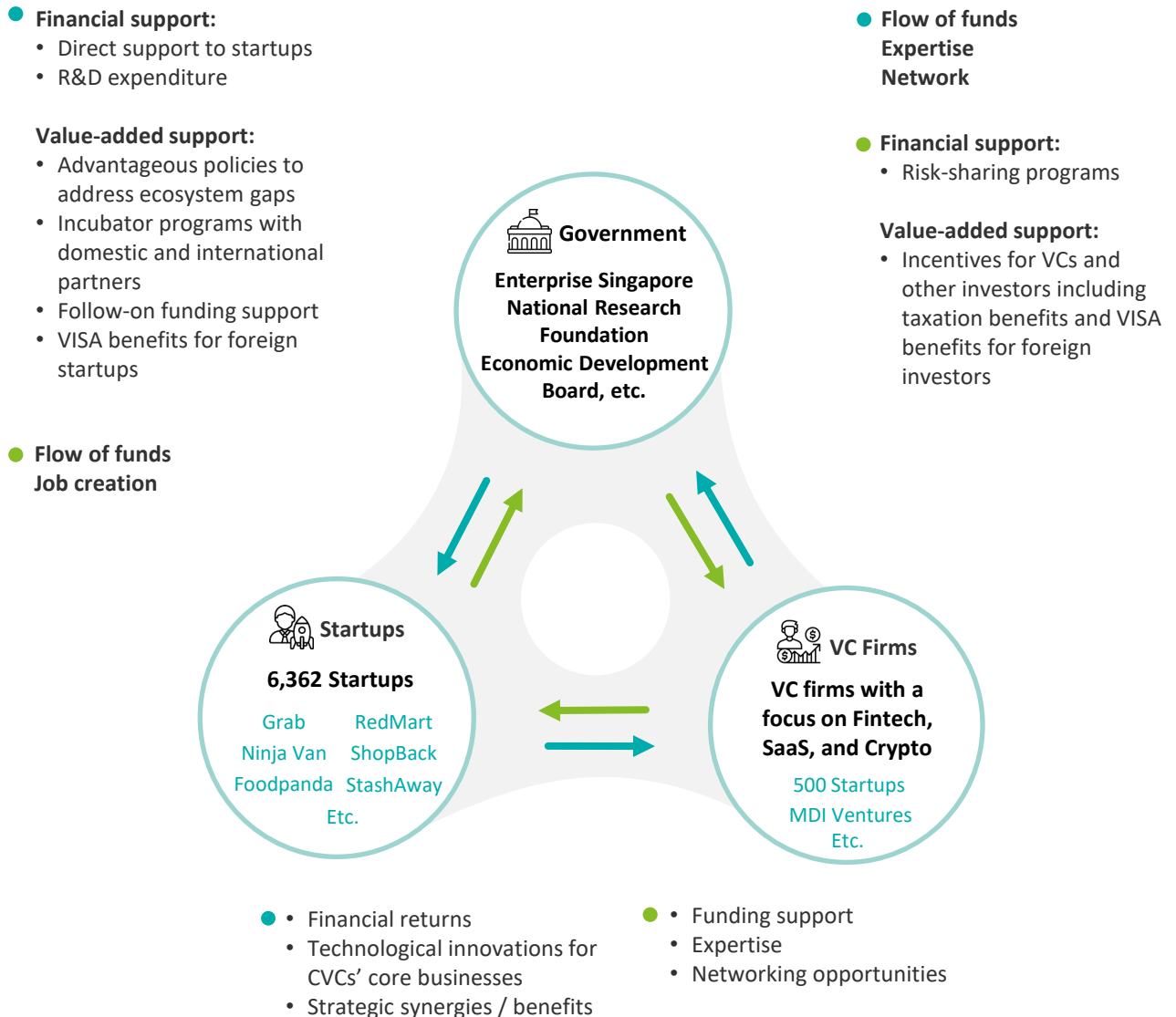
4) Business Times, [Singapore-based startups raise S\\$11.2b in 9M 2021, more than double the whole of 2020](#), 2021

5) Enterprise Singapore, [Investments in startups grew by more than 45% per annum to reach S\\$14.7 billion in 2021](#), 2022

Singapore startup and VC ecosystem key actors' value flow

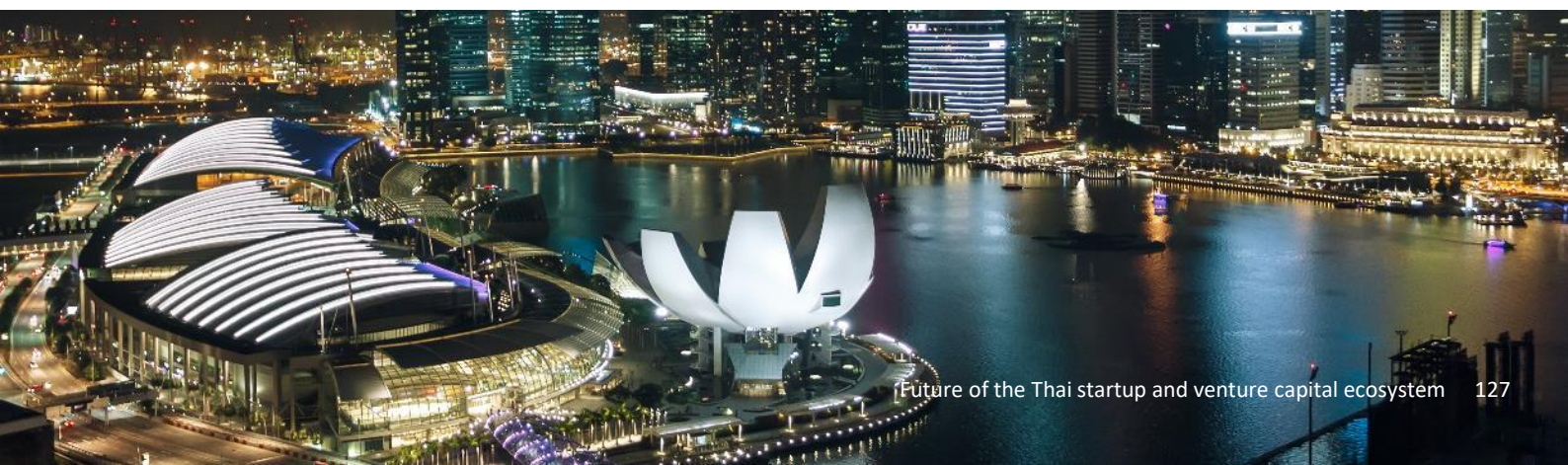
The rich and mature capabilities of the government position them to play an integral and active role in enabling others in the ecosystem

Key Actors in the VC Ecosystem in Singapore



Legend: Resource Flow (Input)
 Resource Flow (Output)

Source: Deloitte analysis



Singapore startup and VC ecosystem key milestones

Government efforts to create a VC ecosystem began in 1985 with increased involvement since 1995

High-level evolution of the Government programs^{1,2}

A Start of venture capital industry in the country

1. Venture capital started in the country in 1985
2. Introduced regulatory reforms and incentives to develop venture capital industry
 - 1985: Economic Review after the recession
3. Pioneered government programs were:
 - 1985: Venture Capital Fund by the Economic Development Board which provided direct investments

B Shift to knowledge economy

- Fostered research and innovation Research, Innovation, Enterprise Council
- 1990: National Science and Technology Board (NSTB) was created to support the Research, Innovation, and Enterprise Council
 - Research, Innovation, and Enterprise Council became A*STAR in 2002

C The kick-off of VC success in Singapore from Technopreneurship Investment Fund (TIF)

1. Facilitated foreign VC firms to set up their Asian operations in Singapore
 - 1999: Technology Entrepreneurship 21 Plan was created which led to Technopreneurship Investment Fund under the TIF Venture³ (gov't spin-off)
 - 1999: Venture Investment support for startups was launched under TIF Venture
2. Bolstered economic competitiveness by encouraging technology entrepreneurship and developing the venture capital industry
 - 2001: Economic Review Committee ("ERC") was created
 - 2001: SEEDS Capital⁵
 - 2005: Science and Technology Plan was created
 - 2008: Early-stage Venture Fund (ESVF) was created by the National Research Foundation (NRF)
3. Broadened Singapore's R&D strategy to invest in science and technology as inspired by Israel
 - 2010 – 2020: RIE Plan was created
 - 2021: Corporate Venture Launchpad (CVL) was created to encourage innovation in the corporate sector

Note: This is non-exhaustive. It does not include tax incentives, other infrastructure-related incentives, loans (recourse, non-recourse), and private only initiatives

Source:

- 1) World Bank Group, [The Evolution and State of Singapore's Start-up Ecosystem](#), 2021
- 2) Singapore Management University, [Venture capital and economic growth](#), 2002

3) Jimmy Hsu, TIF Ventures, [Major Points About Venture Capital in Singapore](#), 2022

4) Embassy of France in Singapore, [The national science & technology plans](#), 2022

5) Pitchbook, [SEEDS Capital](#), 2023

SEEDS Capital: Scheme background

SEEDS Capital invests in Singapore-based, seed-stage startups and provides post-funding support, with the aim of developing talent, uplifting employment, and cultivating an entrepreneurial culture

SEEDS Capital (under Enterprise Singapore)

Program overview

Background and Vision^{1,4}

SEEDS Capital was set up in 2001 as an investment arm of a government-run agency, Enterprise Singapore – operating as a co-investment equity financing model. The goal of SEEDS Capital is to catalyse investments in Singapore-based, early-stage technology startups through co-investment with institutional investors around the world, including venture capital firms and investment arms of corporates

Investment archetypes and Target actors^{1,2,3}

Investment archetype: 4. Co-investor

Exit Options: 5-7 years by trade sale, M&A, Initial Public Offerings (IPO), redemption or cash offers for SEEDS Capital's shares³

Target startups: Singapore based, early-stage startups

Target sectors: Based on national priorities in each investment round. The sectors include nascent and strategic industries with future potential as well as emerging technologies

Startup SG Equity Program offering

Financial offering

Items	Scheme Details ^{**1}	
	General tech	Deep tech
Investment cap per startup	USD 1.4mn from SEEDS Capital	USD 5.6mn from SEEDS Capital
Co-investment ratio (SEEDS Capital: co-investor)	7:3 up to the first USD 175K; 1:1 thereafter, up to USD 1.4mn	7:3 up to the first USD 349K; 1:1 thereafter, up to USD 2.8mn; 3:7 thereafter, up to USD 5.6mn

Value-added services²

Additional services provided to startups in the program include:

- Mentorship and networking opportunities
- Developing business plans
- Fast-tracking the commercialization process
- Global expansion

Learnings from SEEDS Capital

- ✓ **Focused on non-financial success metrics:** To address limited innovation in pre-2000s Singapore, SEEDS Capital was established to develop talent, create jobs, and cultivate an entrepreneurial culture
- ✓ **Close collaboration with other government entities:** SEEDS Capital worked closely with EDBI to provide support and funding (e.g., USD 205** mn through the Special Situation Fund for Startups during COVID)⁵

* Note: Nascent and strategic industries with future potential include Advanced Manufacturing & Engineering (AME), Health & Biomedical Sciences (HBMS), and Urban Solutions & Sustainability (USS), emerging technologies such as Agri-tech, Artificial Intelligence, Blockchain, Quantum Computing and Space Technologies

** Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD

Source:

1) Enterprise Singapore, [SEEDS Capital](#), 2022

2) SEEDS Capital, [SEEDS Capital Media Release](#), 2021

3) Enterprise Singapore, [Startup SG Equity: Frequently Asked Questions](#), 2022

4) Pitchbook, [SEEDS Capital](#), 2023

5) Enterprise Singapore, [Additional \\$285mn Financing Support for Promising Startups](#), accessed January 2023

Early-stage Venture Fund (ESVF): Scheme background

ESVF aims to grow the technology ecosystem by co-investing with other investors into VC funds that support Singapore-based, early-stage high tech companies in any sector

ESVF (under National Research Foundation)

Program overview

Background and Vision^{1,2}

Started in 2008, ESVF is an initiative under **National Framework for Innovation and Enterprise (NFIE)**. The **goal of ESVF** is to **grow the technology ecosystem** by injecting capital. ESVF co-invests with other investors into VC funds that focus on early-stage technology start-ups based Singapore

Investment archetypes and Target actors^{1,2}

Investment archetype: 3. Passive Investor

Government co-invest with investors into VCs and local large enterprises (LLEs) in Singapore

Exit Options: Within 5 years, the VCs have an option to buy out NRF's shares by returning NRF's capital with interest

Target startups: Singapore-based early-stage high-tech companies in any startup sector, which are in the process of nurturing R&D capabilities

Program offering

Financial offering

Scheme Details

Items

General tech

Investment cap for each VC USD 6.9mn to USD 10.5mn as an LP on a matching basis to seed VC funds

Co-investment ratio (ESVF: co-investor) 1:1 matching basis with other investors into the selected VC funds

Value-added services²

ESVF sets certain expectations on fund managers to add value to invested startups as follows:

- Fund managers to develop a **meaningful and value-added relationships** with investee companies
- Provide **support to portfolio companies** to encourage the upscale of the startups

Appointed co-investors are expected to provide **timely updates on startup investees to NRF and other investors**

Learnings from ESVF

- ✓ **Fund of fund approach to catalyse innovation:** this approach provides more autonomy to the VCs and spurs market-led innovation
- ✓ **Encourage VCs to provide value added support to portfolio companies:** The program encourages VCs to not just provide capital but also other types of value added support to their startups by establishing close relationships

** Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD
Source:

1) NRF, [Early-stage Venture Fund](#), 2022

2) NRF, [Early-stage Venture Funding Schemes](#), 2013

3) NRF, [Frequently Asked Questions about Early-stage Venture Funding Schemes](#), 2013

4) Tech in Asia, [Singapore's National Research Foundation to invest another \\$28M in startups](#), 2015

5) Digital News Asia, [Singapore's NRF to launch third instalment of Early-stage fund](#), 2015

Corporate Venture Launchpad 2.0 (CVL 2.0): Scheme background

CVL 2.0 program aims to strengthen the innovation ecosystem by funding corporate ventures

► CVL 2.0 (under EDB Singapore)

Program overview

Background and Vision¹

Started in 2021 as an USD 13.9mn extended program of the **corporate venture building program** from EDB. The **goal of CVL 2.0** is to provide a **stronger venture building support and co-sharing of risks** for companies' corporate venturing efforts to **strengthen the innovation ecosystem**

Investment archetypes and Target actors^{1,2}

Investment archetype: 2. Grant Provider

Exit Options: None

Target companies: Established corporates, regional family businesses, and high growth companies in Singapore

Target sectors: Depending on each round venture concept – the pilot venture concepts covered areas such as sustainability, agritech, fintech, senior living and the metaverse

Program offering

Financial offering

Items	Scheme Details ¹	
	Tranche 1 – Concept Validation Sprints	Tranche 2 – Venture Build and Launch
Capital per company	Up to USD 349,284* of each concept validation sprint	Up to USD 349,284* of each pre-seed build
Co-funding ratio (CLV 2.0: co-investor)	50% co-funding to companies for qualifying costs	30% co-funding to companies for qualifying costs
Activities in each tranche (supported by venture studios)	<ul style="list-style-type: none">In-depth validation of venture concept and business planRecommendations on the next steps for the venture launchParticipation as a sprint board advisory memberDeployment of EDB venture builder(s) to supplement the sprint team	<ul style="list-style-type: none">Develop a minimum viable product (MVP)Set up and launch new venturesPotential follow-on co-investmentValue creation support

Learnings from CVL 2.0

- ✓ **Robust value added support from government and private sector partners:** EDB enlisted private venture studios to support the corporates in developing their venture concepts, leveraging the expertise and comparative advantages of these studios in meeting program goals

*Note: Number is converted based on exchange rate of 1.43 SGD to 1 USD

Source:

1) EDB, [Corporate Venture Launchpad 2.0](#), 2022

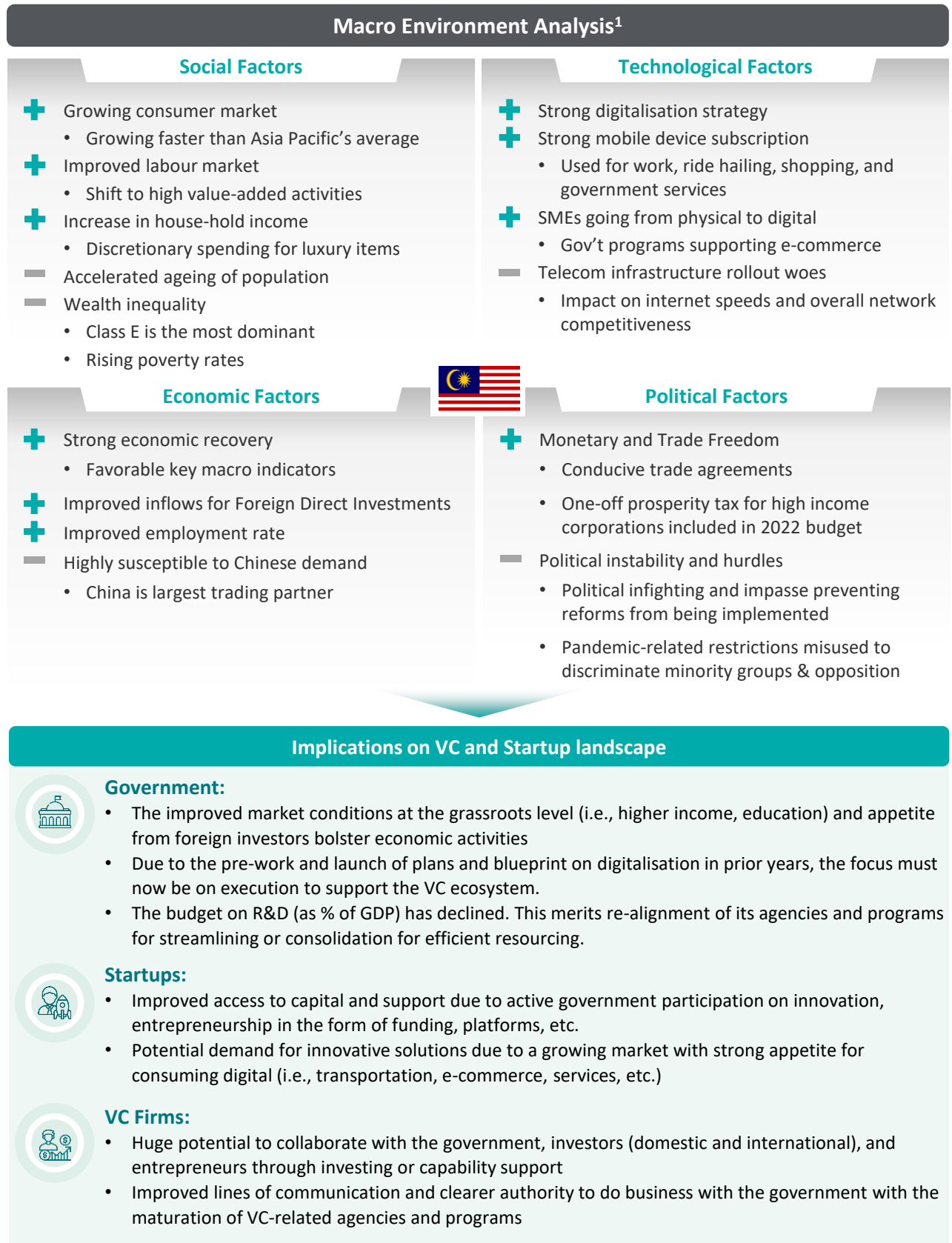
2) EDB, [EDB Expands Corporate Venture Building Program To Support More Companies; Commits Fresh Funding Of S\\$20 Million](#), 2022



Malaysia: Select Public Private Partnership Program Details

Malaysia macro environment analysis and implications on startup and VC landscape

Favourable market factors and trends can become the “tide that raises all boats” for the VC ecosystem



Source: Deloitte Analysis

1) Euromonitor, [PEST Analysis: Malaysia](#), April 2022

Malaysia startup and VC ecosystem key actors' value flow

The government operates in a decentralised model affecting the ecosystem through its various agencies, though their level of involvement is being calibrated to avoid crowding out the private sector

Key Actors in the VC Ecosystem in Malaysia



Source: Deloitte analysis

Malaysia startup and VC ecosystem key milestones

Through its agencies and programs, the government continues to adapt and re-align their effort with the evolving national level strategies

High-level evolution of the Government programs

A Start of venture capital industry in the country

1. Much venture capital activity started in the country in 1984
2. Established government agencies include:
 - 1992: Malaysian Technology Development Corporation
 - 1993: Malaysian Industry for High Technology (MIGHT)
 - 1995: Technology Park Malaysia
 - 1996: Multimedia Development Corporation (MDEC)
3. Pioneered government programs include:
 - Grants from the Technology Park Malaysia
 - Direct investments from MSC Ventures Corporation

B Spur of Government initiatives in the ecosystem

1. More agencies and government programs introduced in year 2000s
 - 2001: Malaysia Venture Capital Management Bhd (MAVCAP) who is mainly involved in direct investments and co-investments
 - 2003: Cradle Fund Sdn Bhd who provides grants and accelerators
 - 2006: MLS Capital Fund by MTDC provides co-investments
 - 2009: VentureTECH provides direct and co-investments
2. Some agencies were graduated to have broader scope
 - The Malaysian Technology Park became the Malaysian Global Innovation & Creativity Centre (MaGIC) until around 2020
 - The Multimedia Development Corporation became the Malaysia Digital Economy Corporation (MDEC)

C Streamline of existing agencies, creation of national strategies, and new programs

1. Launch of national frameworks, strategy and blueprint
 - 2017: Transformasi Nasional 2050
 - 2019: National Entrepreneurship Policy 2030
 - 2019: Shared Prosperity Vision 2030
 - 2021: MyDIGITAL 2030
 - 2021: Malaysia Startup Ecosystem Roadmap – SUPER
2. Graduated agencies to evolve their scope and role in the ecosystem
 - The Malaysian Global Innovation & Creativity Centre (MaGIC) became Malaysian Research Accelerator for Technology & Innovation (MRANTI) in 2021
3. The government launched Dana Penjana Nasional or DPN managed by Penjana Kapital Sdn Bhd, which is a “fund of funds” scheme. This is different from the typical grants and direct investments

Note: This is non-exhaustive. It does not include tax incentives, other infrastructure-related incentives, loans (recourse, non-recourse), and private only initiatives

Cradle Fund: Scheme background

Cradle Fund provides grants and accelerators for tech-based startups at multiple stages

Cradle Fund (under Ministry of Finance)

Program overview

Background and Vision¹

Established in 2003 by the Ministry of Finance, the Fund's vision is to be the "preferred provider of **early-stage** funding to innovate and aspiring entrepreneurs to be recognized and respected for excellence in service and product offerings" with the goal of supporting business-environment and sustainable entrepreneurship.

Investment archetypes and Target actors

Investment archetype: 2. Grant Provider

Target startups: Local startups in the early-stage and more mature lifecycle stages

Target sectors: Technology-based companies

Program offering

Financial offering

Programs	CIP SPARK ²	CIP SPRINT ³	CIP IGNITE ⁴	CIP ACCELERATE ⁴
Cap*	USD 30k	USD 130k	USD 110k	USD 430k
Funding Period	18 mos.	18 mos.	IGNITE I: 12-18 mos. IGNITE II: 16-24 mos.	12-18 mos.
Beneficiary	Early-stage startups	Private Limited Company, Small, Medium Enterprises	Deep-tech (TRL 5-7), Non-Deep-tech (TRL 8-9)	Deep-tech (TRL 8-9)

Value-added services

Cradle empowers early-stage companies through various programs and initiatives:

- Mentoring program for startups and scaleups
- Tax incentives for Angel investors
- Online platform (i.e., MyStartup) to centralise information and resources on VC ecosystem in Malaysia

Learnings from Cradle Fund

- ✓ Expansive schemes to enhance accessibility of grants for various startups
- ✓ Online platform to centralize information and resources to promote startup VC ecosystem in the country
- ✓ Funding tied together with mentorship

*Note: Number is converted based on exchange rate of 4.65 RMB to 1 USD

Source:

1) Cradle Fund, [Cradle Website](#), 2021

2) Cradle Fund, [CIP SPARK](#), 2021

3) Cradle Fund, [CIP SPRINT](#), 2021

4) Cradle Fund, [FAQs](#), 2022

5) World Bank Group, [Malaysia: Assessment of the Start-Up Financing Ecosystem](#), 2022

6) TWI, [What are technology readiness level \(TRL\)](#), 2022

MRANTI: Scheme background

MRANTI supports the commercialization of research from ideation to commercialization by coordinating multiple programs for startups

► MRANTI (under Ministry of Science, Technology & Innovation)

Program overview

Background and Vision¹

Established in 2021, the Malaysian Research Accelerator for Technology and Innovation (MRANTI) was formed by consolidating Malaysia Global Innovation and Creativity Centre (MaGIC) and Technology Park Malaysia (TPM), and is Malaysia's central research commercialization agency that fast-tracks the development of technology innovations from ideas to impact.

Investment archetypes and Target actors¹

Investment archetype: 2. Grant Provider

Target startups: Local startups across the lifecycle stages

Target sectors: Smart manufacturing, biotech, agritech, smart city, green tech

Program offering

Financial offering

Service	Ideation and Research ²	Prototyping and Validation ³	Scaling & Market Ready ⁴
Description	Cultivating Ideas and developing them through Idea Research, Research Prototype, and IP Protection	Testing and assessment for industry feasibility, viability, and relevance for commercialization.	Launching products or scaling products to new markets through regulatory certification, manufacture, and commercial deployment

Value-added services

MRANTI the creation of vibrant and sustainable VC ecosystem through⁵:

- Expand Malaysia's funnel of innovation supply
- Unlock new R&D value by ensuring effective transitions in the commercialization lifecycle
- Partnerships with the academia, industry, and the public sector to streamline market-driven R&D efforts for mission-based outcomes

Learnings from MRANTI

- ✓ Consolidating government agencies with overlapping mandates to combine resources to improve effectiveness
- ✓ Supporting commercialization of research
- ✓ Leverage academia and other sectors to streamline R&D efforts with defined targets and outcomes

Source:

1) World Bank Group, [Malaysia: Assessment of the Start-Up Financing Ecosystem](#), 2022

2) MRANTI, [Ideation and Research](#), 2022

3) MRANTI, [Prototype Development and Validation](#), 2022

4) MRANTI, [Scaling Up and Market Ready](#), 2022

5) MRANTI, [MRANTI LinkedIn Profile](#), 2022

6) MRANTI, [MRANTI Website](#), 2022

Dana Penjana Nasional (DPN): Scheme background

DPN supports domestic startups and VCs by incentivizing partnerships with international investors to create an ecosystem with global mindset

DPN (under Ministry of Finance)

Program overview

Background and Vision¹

Founded in 2020, the Dana Penjana Nasional (DPN) is a “fund-of-funds” scheme launched by the government to accelerate the development of a future innovation economy in Malaysia in line with the MyDigital aspiration.

Investment archetypes and Target actors¹

Investment archetype: 3. Passive Investor

Exit Options: Exit at the end of fund life or earlier (5-7 years) through public market offerings or trade sales. The capital is returned to government at an adequate return

Target startups: Local VC firms and startups across the lifecycle stages including Series A and B stages

Target sectors: Aligned to local and international partner VC firm’s specialization

Program offering

Financial offering

Items	Co-Investment ¹
Fund Size	USD 290mn, USD 145mn committed by the government
No. of equity investments	6 domestic VC firms ² (with 6 international VC partners)

Value-added services

DPN supports the creation of vibrant and sustainable VC ecosystem through:

- Access of bigger pool of fund to support regional or global expansion
- Risk diversification for investors via the 1:1 matching basis
- Knowledge Exchange from International firms

Learnings from DPN

- ✓ Promote knowledge diffusion by incentivizing partnerships with players from more advanced markets (i.e., international VCs)
- ✓ Pre-defined fund matching parameters to achieve optimal fund size (e.g., 1:1 matching)

Note: Number is converted based on exchange rate of 4.65 RMB to 1 USD

Source:

1) World Bank Group, [Malaysia: Assessment of the Start-Up Financing Ecosystem](#), 2022

2) Penjana Kapital, [Dana Penjana Nasional Program](#), 2022

3) Penjana Kapital, [Frequently Asked Questions](#), 2022

Malaysian Life Sciences Capital (MLS): Scheme background

MLS Capital is dedicated to advancing the life sciences sector in the country by reducing transaction costs and fostering open innovation through co-investments with foreign investors

► MLS Capital (under Malaysian Technology Development Corporation)

Program overview

Background and Vision

Founded in 2006, the **Malaysian Life Sciences Capital Fund (MLSCF)** was launched by the government as part of the initiatives in the mid-1990's to strengthen scientific infrastructure in the country. Co-managed with the private sector, this fund aims to facilitate transfer of biotechnologies from more advanced countries to improve farm productivity while reducing **transaction costs** and fostering **open innovation**.

Investment archetypes and Target actors

Investment archetype: 4. Co-Investor

Target startups: MLSCFI – life sciences venture fund specializing in **early-stage** startups¹, MSCFII – diversified portfolio at **all lifecycle stages** of development²

Target sectors: MLSCFI – agriculture, industrial and healthcare biotechnology, MSCFII – biogreentech companies

Program offering

Financial offering

Items	MLSCF I ²	MLSCF II ²
Fund Size	USD 162mn	USD 200 – 250mn
No. of investments	20	9

- MLSCF I has about USD 7mn average capital outlay, which has been fully allocated as of 2022¹.
- MLSCFI is co-managed with Burrill & Co.
- MLSCFII is co-managed with Spruce Capital Partners and Xeraya Capital

Value-added services⁴

MLS Capital adds value to the portfolio companies through its mix local and international managing partners.

Startups and companies regardless of maturity will be able to enjoy **non-monetary offerings**:

- Mentoring and strategic direction (organisation and technology)
- Networking opportunity (local and international industries)
- Serial financing across the maturity stages
- Relationship building with experts and researchers in the field

Learnings from MLS Capital

- ✓ Vertical focused based on strategic industries and/or sectors, but segmentation based on startup lifecycle stage to support companies with varying maturity
- ✓ Combining financial and non-financial support as a solution package to help startups

Note: Number is converted based on exchange rate of 4.65 RMB to 1 USD

** Note: Note: "Biogreentech" refers to plant and animal agriculture; food, feed, and nutrition; bio-renewable chemicals and materials

Source:

1) Department of Human and Community Development University of California, [Malaysian Venture Capital Industry](#), 2007

2) MLS Capital Fund, [MLSCFI](#), 2018

3) MLS Capital Fund, [MLSCFII](#), 2018

4) The World Bank, [Life Sciences Capital Fund Case Study](#), 2014

VentureTECH: Scheme background

VentureTECH aims to support the Shared Prosperity Vision by focusing on local technology-based companies in the areas of bio-based, green, and emerging industries for growth and socio-economic benefits

VentureTECH (under Malaysian Industry for Gov't Group for High Technology)

Program overview

Background and Vision¹

Founded in 2009, VentureTECH was launched by the government under MIGHT (non-profit organization) and geared towards developing **competitive regional and global companies** in strategic and **high value-added industries** in line with the government's aspirations outlined in the Shared Prosperity Vision 2030.

Investment archetypes and Target actors¹

Investment archetype: 4. Co-Investor and 5. Direct Investor

Target startups: Local technology-based companies in the early and growth stage

Target sectors: High Technology, Green Technology, Emerging Technology, Life Sciences

Program offering

Financial offering

Items	Direct Investor ²	Co-Investment ³
Fund Size	USD 280mn	USD 18mn
No. of investments	24	No investment made yet. Focus is on growth stage companies.

- VentureTECH was previously known as A-Bio Sdn Bhd³
- Since 2009, the firm has invested in over 23 companies with aggregate investee net worth surpassing USD290mn³

Value-added services

VentureTECH provides a **value-creating partnership** with its portfolio companies in terms of:

- Business matching
- Strategic Support
- Value Creation
- Networks in Corporate and Government
- Effective Impact investing

Learnings from VentureTECH

- ✓ Direct investor (i.e., GVC) can acquire experience and learning but must be flexible to do co-investments when necessary for its benefits (i.e., expertise, de-risking, etc.)
- ✓ Co-investing generates sizeable fund to help companies scale, which is otherwise difficult or too risky for a single investor to do
- ✓ Investing can also opt for socio-economic benefits (i.e., impact investing)

Note: Number is converted based on exchange rate of 4.65 RMB to 1 USD

Source:

1) VentureTECH, [VentureTECH LinkedIn Profile](#), 2022

2) VentureTECH, [VentureTECH Website](#), 2022

3) TechNode.Global, [Malaysia's VentureTECH and Japan's SBI Ventures to launch \\$18M Private Equity fund](#), 2022

MAVCAP: Scheme background

MAVCAP helps develop the VC ecosystem through local and global public-private partnerships or by directly investing in companies across the life cycle stages in the innovation and technology-related sectors

▶ MAVCAP (under Ministry of Finance)

Program overview

Background and Vision¹

Founded in 2001, the Malaysian Venture Capital Management Bhd (MAVCAP) launched by the government to develop the VC ecosystem in Malaysia with global mindset and championing local techpreneur to the global scale.

Investment archetypes and Target actors

Investment archetype: 4. Co-Investor and 5. Direct Investor

Exit Options: Through IPO, trade sale, and buybacks or redemption of shares²

Target startups: Local technology-based companies across the life cycle stages.

Target sectors: Innovation and technology-related sectors (electronics, information technology, internet, semi-conductor, telecom, networking)

Program offering

Financial offering³

Items	Direct Investor ²	Co-Investment ³
Number of funds	1 of 12 funds	11 of 12 funds
No. of investments	8	+1,000 investee companies

- MAVCAP invests through direct, local, and global public-private partnerships

Value-added Services

MAVCAP supports techpreneurs in terms of:

- Crowding in Global VC firms to Malaysia
- Supporting local VC firms
- Integrating VC firms at the ASEAN level
- Accessing bigger pool of fund to support regional or global expansion

Learnings from MAVCAP

- ✓ Direct investor (i.e., GVC) can acquire experience and learning but must be flexible to do co-investments when necessary for its benefits (i.e., expertise, de-risking, etc.)
- ✓ Co-investing generates sizeable fund to help companies scale which is otherwise difficult or too risky for a single investor
- ✓ Global perspective for tapping investments and helping startups to expand their footprint outside of Malaysia

Source:

1) MAVCAP, [MAVCAP website](#), 2015

2) The Edge, [MAVCAP mulls exit strategies](#), 2009

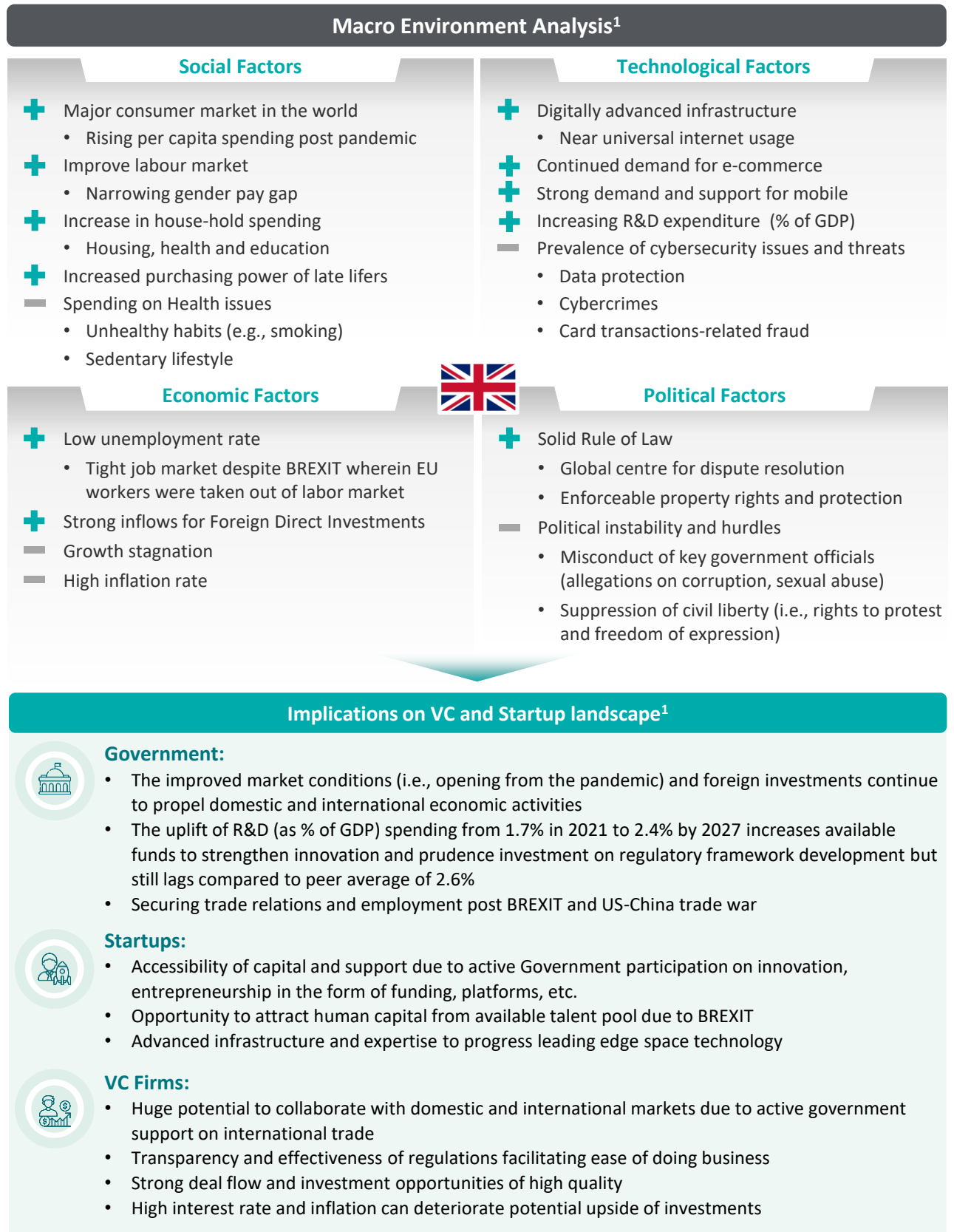
3) MAVCAP, [Funds' Portfolio](#) | MAVCAP, 2022



UK: Select Public Private Partnership Program Details

UK macro environment analysis and implications on startup and VC landscape

UK remains a startup and VC powerhouse by actively managing geopolitical relationships to prevent trade and technology impediments



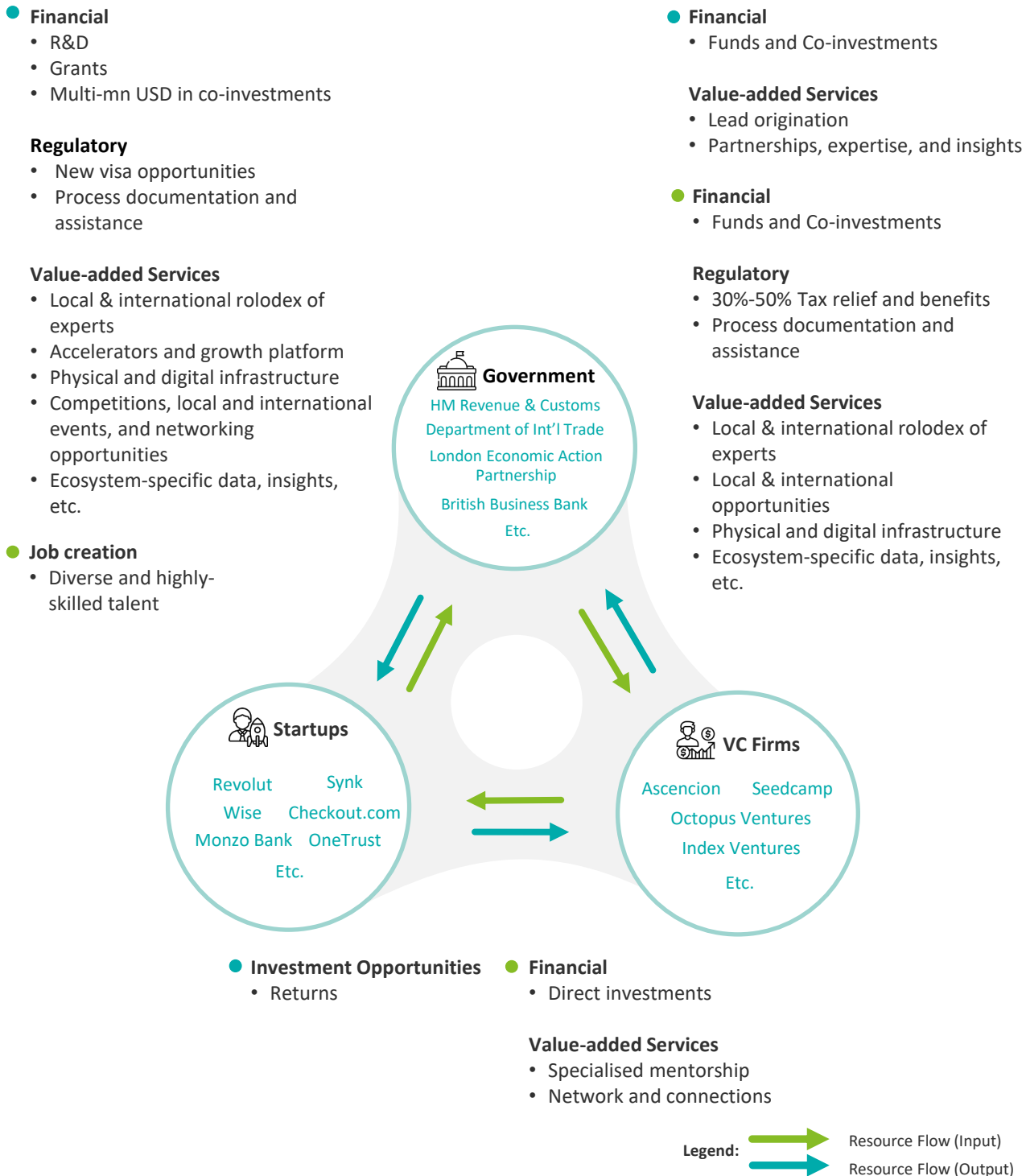
Source: Deloitte Analysis

1) Euromonitor, [PEST Analysis: UK](#), April 2022

UK startup and VC ecosystem key actors' value flow

The government has a decentralised approach to building the ecosystem. However, with advanced capabilities and broad reach, they can tap international funding, talent, etc., for growth opportunities

Key Actors in the VC Ecosystem in United Kingdom



Source: Deloitte analysis

UK startup and VC ecosystem key milestones

Vision that trickles down to sectoral strategies coupled with various entrepreneurship and innovation enablers locally and abroad makes the ecosystem a global leader

High-level Evolution of the Government programs

A Start of Venture Capital Industry in the country

Started in 1945 post the world war but mostly involving private sector

B Launched various initiatives to develop the startup and VC ecosystem

1. Attracted venture capital investments through tax schemes
2. Provided funds to skillful and investment-worthy VC firms, companies, and entrepreneurs
 - 2004: Funding London was launched which is a passive investment scheme where the government works with VC firms to manage investee companies
 - 2004: Innovate UK provides grants to winners of competition to further develop R&D products and/or services along with the academia managed by the UK Research and Innovation
 - 2018: British patient capital was launched for growth/late stage companies as a long-term passive and co-investment, which is managed by the British Business Bank

C Adapted to geopolitical shifts (i.e., BREXIT)

1. Refreshed national level priorities and strategies to respond in changing global environment:
 - 2020: Integrated Review: Global Britain in a Competitive Age
 - 2021: Launched the National Innovation Strategy
 - 2022: Launched the National Digital Strategy
2. Secured access to skilled workers and entrepreneurs
 - 2013: Tier I Visa was provided to skilled workers of different classes
 - 2019: Startup & Innovator Visa was launched to help talented entrepreneurs continue to work in UK in light of BREXIT
 - 2020: Global Talent Visa was launched to facilitate immigration of skilled foreign workers in the knowledge economy
 - 2022: Scale-up Visa provided extended visa for successful startups

Note: This is non-exhaustive. It does not include tax incentives, other infrastructure-related incentives, loans (recourse, non-recourse), and private only initiatives

Venture Capital Investments Schemes: Scheme background

Through the HM Revenue and Customs, UK provides tax-based schemes for investors—incentivizing them to put capital in key companies across different sizes and sectors to enable their growth

Venture Capital Investment Schemes (under HMS Revenue and Customs)

Program overview

Background and Vision^{1,5}

Started in 1995, these are tax-based schemes to help grow UK's economy by supporting new enterprises and promoting entrepreneurship. There are 4 schemes for small businesses and social enterprises. Companies and investors must both meet the conditions of whichever scheme opted for. The schemes benefit the entrepreneurs by improving access to capital, increasing visibility, and linking with experts

Investment archetypes and Target actors

Investment archetype: 1. Infrastructure Player

Target startups: UK based, early-stage startups (small to medium size) to be used for qualifying trade (including R&D)

Target sectors: Multi sector. Knowledge intensive companies (KICs) usually involved in R&D and innovation work

Program offering

Financial offering

Scheme	Seeds Enterprise Investment Scheme ²	Enterprise Investment Scheme ³	Venture Capital Trust (VCT) ⁴
Investor	<ul style="list-style-type: none"> Individual investors only 	<ul style="list-style-type: none"> Individual and corporate investors 	<ul style="list-style-type: none"> Publicly Listed VCT and shareholders
Company	<ul style="list-style-type: none"> UK based 2 years or less 25 employees max USD ~225k gross assets max 	<ul style="list-style-type: none"> UK based 7 or 10 years or less for KICs 250 or 500 employees max for KICs USD ~13.5mn or ~22.5mn (KICs) gross assets max 	<ul style="list-style-type: none"> UK based 7 or 10 years or less for KICs 250 or 500 employees max for KICs USD ~16.9mn gross assets max
Funding*	<ul style="list-style-type: none"> Max limit of USD ~169k overall 3 years to spend 50% initial tax relief Capital Gains & Loss relief 	<ul style="list-style-type: none"> Max limit of USD ~13.5mn overall 2 years to spend 30% initial tax relief Capital Gains (individual only) & Loss relief 	<ul style="list-style-type: none"> Max limit USD ~13.5-22.5mn (KICs) overall 7 to 10 years (KICs) to receive funding 30% initial tax relief Capital Gains, No tax on dividends
Value Added	<p>Advanced Assurance: Support for application and assessment to ensure the investors will be eligible for the scheme's benefits</p> <p>Manuals and Information:</p> <ul style="list-style-type: none"> High-level and detailed information on the scheme Active revision, monitoring, and enforcement of policies 		

Learnings from Venture Capital Investment Schemes

- ✓ Segmentation of schemes provide expansive coverage of different entrepreneur and investor needs and resources
- ✓ Clear and well thought out guidelines for every player involved, which synergizes the schemes to facilitate investment/reinvestment flow and portfolio diversification
- ✓ Adaptive administration of the scheme (i.e., adjust fund size, duration, etc.) with transparent and accessible information (qualitative and quantitative) online
- ✓ Considers and rewards specialised activities (i.e., KICs) and target sectors (i.e., specialised and not spread thinly)

Note: Number is converted based on exchange rate of 1 GBP to 1.13 USD

Source:

1) HMRC, [Venture Capital Investment Schemes](#), September 2018

2) HMRC, [Seed Enterprise Investment Scheme \(SEIS\)](#), 2022

3) HMRC, [Enterprise Investment Scheme \(EIS\)](#), 2022

4) Swoop Finance UK, [SEIS vs. EIS explained - what's the difference?](#), April 2022

5) HMRC, [Venture Capital Trusts: Introductory Note](#), December 2020

Visa Opportunities: Scheme background

The UK government ensures the supply of talent and entrepreneurs in the ecosystem by providing friction-less means to enter the country on a time-bound arrangement, which can be extended based on merits

► Visa Opportunities (under UK Visas and Immigration)

Program overview

Background and Vision¹

In March 2019, the startup and innovator visa routes were introduced. The clause to remove caps on the number of applicants came into effect as replacements for the Tier 1 (Graduate Entrepreneur) visa. This is to cushion the impact of BREXIT and allay concerns of the tech sector for potential **digital skills gap** and anti-immigrant rhetoric forming. Both are positioned to attract foreign entrepreneurs with great ideas to build their business in the UK.

Investment archetypes and Target actors¹

Investment archetype: 1. Infrastructure Player

These visas enable entrepreneurs with **innovative**, **viable** and **scalable** ideas to turn them into reality in the UK for a minimal fee.

Target startups: Entrepreneurs within the European Economic Area (EEA) and Switzerland and outside

Target sectors: Multi sector

Program offering

Financial offering

Visa Type	Startup ^{2,3}	Innovator ^{4,5}
Features	<ul style="list-style-type: none">✓ No educational or funding raised required✓ Apply from outside UK or change (already in UK)✓ 2-year stay✓ Extension path: Innovator visa	<ul style="list-style-type: none">✓ No educational or funding raised required✓ Apply from outside UK or change (already in UK)✓ 3-year stay✓ Extension path: Settlement application
Eligibility and Requirements	<ul style="list-style-type: none">• 18 years old• First time business• Endorsed by an approved UK endorsing body• English Language and maintenance funds	<ul style="list-style-type: none">• 18 years old• USD ~56k available for investment• Endorsed by an approved UK endorsing body• English Language and maintenance funds

Value-added services

Competitiveness¹:

There is no cap in terms of the number of visas that can be granted. This means that UK stands to get most, if not all talented entrepreneurs if they meet the criteria.

Step-up Reward Mechanism

- The visa allows for fixed duration of stay. It helps to create urgency – a “make or break” mentality which weeds out non-performing entrepreneurs from the ecosystem
- High performers are incentivized due to the frictionless extension path available

Learnings from Visa Opportunities

- ✓ Draw international top talent through frictionless entry to the country
- ✓ Intended step-up of duration of benefits (i.e., visa duration) to avoid complacency and ensure slots are provided to deserving entrepreneurs

* Note: There are other available visa routes such as the Skilled Worker Visa and Global Talent Visa which serve as employment path for foreigners to work in the UK.

** Note: Number is converted based on exchange rate of 1 GBP to 1.13 USD

Source:

1) Startup Portugal, [UK Country Report](#), May 2021

2) GOV.UK, [Start-up visa: Overview](#), 2023

3) GOV.UK, [Start-up visa: Eligibility](#), 2023

4) GOV.UK, [Innovator visa: Overview](#), 2023

5) GOV.UK, [Innovator visa: Eligibility](#), 2023

Innovate UK: Scheme background

The UK government fosters innovation through competition-based programs according to key themes, and awards grants to successful researchers or businesses

Innovate UK (under UK Research and Innovation)

Program overview

Background and Vision¹

Started in 2004 and becoming part of UKRI in 2018, Innovate UK acts as the national innovation agency. This council helps UK businesses grow through products, services, processes development and commercialization through an agile, inclusive and easy to navigate innovation ecosystem.

Investment archetypes and Target actors¹

Investment archetype: 2. Grant Provider

Target startups: UK based companies and researchers

Target sectors: Medical and biological sciences to astronomy, physics, chemistry and engineering, social sciences, economics, environmental sciences, and the arts and humanities

Program offering

Financial offering

Grants

Innovate UK Grants²

Overview

Innovate UK provides grants through competitions which will have different eligibility and scope.

Beneficiaries: businesses, research organisations, and public sector organisations or charities

Supported activities: fundamental research, feasibility studies, industrial research or experiments

Funding rates: Dependent on the size and type of the organisation and the role in the project

Noteworthy developments recently:

- Fast Start: Innovation - Grant for micro and small to develop net zero and healthcare solutions from COVID-19
- Strategic Delivery Plan 2022 – 2025 – outlines the objectives, central themes and foundations for the council

Value-added services³

- Innovate UK KTN** (Knowledge Transfer Network) – networking with academia, government, and across the industry
- UK EDGE** – accelerate growth and achieve scale through local and international market entry, intellectual property connections, and becoming investment ready.
- Catapult centres** - connect businesses with the UK's research and academic communities to develop research for commercial use

Learnings from Innovate UK

- ✓ Improve accessibility with fit-for-purpose criteria and foster competition rewarding unique and successful participants
- ✓ Reduce barriers to innovation by leveraging networks and broader ecosystem of experts within UK and abroad
- ✓ Accelerate development and commercialisation of research-based works by closely working with UK's research and academic communities

* Note: This provides grants to researchers and businesses in the UK who are developing products, services and processes aligned to the competition themes (e.g., Net Zero, Healthcare, Digital Technology, etc.) the council (Innovate UK) puts up.

Source:

1) UK Research and Innovation, [Innovate UK](#), 2022

2) UK Research and Innovation, [What Innovate UK has funded](#), 2022

3) UK Research and Innovation, [Supporting Collaboration - Innovate UK](#), 2022

Funding London Scheme: Scheme background

The UK government partners with local enterprises and public funds to provide accessible capital to grow small businesses in London through a holding fund delivered by appointed best of breed fund managers

► Funding London (under London Economic Action Partnership)

Program overview

Background and Vision¹

This scheme was started by the Mayor of London in 2004 with the vision of developing London as fertile ground for entrepreneurs through **SME funding activities**. This was set up as an independent company, which acts as a **holding fund** to attract capital from the private sector, deploying that capital across London on a long-term basis. These funds are administered by **appointed fund managers** to sustainable and ambitious businesses.

Investment archetypes and Target actors^{2,3}

Investment archetype: 3. Passive Investor

This program secures funding from across Europe and UK to grow an evergreen capital base, provide fund managers opportunities to deliver investments to selected small business, and reinvest fund returns.

Target startups: London based, pre-seed, seed, and early-stage startups

Target sectors: Science, technology or digital

Program offering

Financial offering

Funds ⁴	London Co-Investment Fund ^{2,3,4}	Greater London Investment Fund ⁵
Details	<ul style="list-style-type: none"> Launched in January 2015 USD ~280k – 1.7mn invested / round 150 companies funded Fully allocated as of August 2019 	<ul style="list-style-type: none"> Launched in May 2019 USD ~450k – ~1.1mn investment (seed and early-stage) New: <i>Greater London Labs</i> – USD ~56k investment for pre-seed startups <p><i>The debt stream of the fund is not covered above</i></p>
Fund Managers	Downing, Seedcamp, Albion Capital, Concentric and Forward Partners, etc.	MMC Ventures and The FSE Group

Value-added services

Grow Evergreen Capital Base¹:

The LEAP board helps in raising capital from private sectors which allows fund managers to focus on the investees companies

Governance Structure⁶:

Board and Committee-based structure leverages multi-perspective from the private and public sector, promoting diverse representation, and ensuring check-and-balance.

Learnings from Funding London

- ✓ Strategic use of organisational structure with alignment on purpose, accountability, and motivation for all stakeholders involved to realise the overarching vision
- ✓ Centered in the government's convening power, incorporate diversity of viewpoints to co-ordinate and leverage on each other's comparative advantages (i.e., capital raising vs allocation)
- ✓ Key Success Metrics⁷ that goes beyond financial returns, incorporating and tracking measures to maintain vibrant ecosystem (e.g., jobs creation, diversity, internationalization)

*Note: Number is converted based on exchange rate of 1 GBP to 1.13 USD
Source:

1) Funding London, [We are — Funding London](#), May 2021

2) Funding London, [London Co-Investment Fund \(LCIF\)](#), 2015

3) Funding London, [London Co-Investment Fund \(LCIF\)](#), 2023

4) Funding London, [Our funds — Funding London](#), May 2021

5) Funding London, [Greater London Investment Fund](#), 2015

6) Funding London, [The Local Enterprise Partnership for London](#), 2015

7) Funding London, [A fund with a powerful impact](#), 2022

British Patient Capital: Scheme background

The UK government lowers barriers for investors to participate in high potential, capital intensive, long-term deals – with a fund of funds program and a co-investment program

British Patient Capital (under British Business Bank)

Program overview

Background and Vision¹

Launched in 2018, the British Patient Capital, as a direct response to the patient capital review by the government, sought to improve on the access to long-term finance, or patient capital, for homegrown companies with high growth potential to be fully-funded and reach their full potential.

It is UK's largest domestic investor in venture and venture growth opportunities, managing both a fund of funds and a co-investment program.

Investment archetypes and Target actors^{2,3}

Investment archetype. Passive Investor and 4. Co-Investor

Target startups: UK based, growth and later stage companies

Target sectors: Life sciences and R&D intensive sectors (i.e., deep technology and financial services)

Program offering

Financial offering

Funds	Life Sciences Investment Program ²	Future Fund: Breakthrough ³
Overview	Fund size: USD ~280mn + USD 450mn from private investors	Fund size: USD ~420mn Minimum investment size: USD ~34mn Maximum share in an investment round: 30%
Partnership Structure	British Capital attracts investment from private investors to pool funds to provide capital to later stage life sciences companies under the existing portfolio.	Makes equity co-investments with private sector investors into growth stage R&D-intensive UK companies

Value-added services^{1,2,3}

- Develop a deep and long-term partnerships with fund managers to execute high quality co-investments
- Appraising potential funds based on the merits of both historical accomplishments and strategy
- Initiatives to grow specialised industries in the UK through funds and co-investment program
- Seeking venture opportunities with other fund managers based on a co-investment strategy or providing funds to fund managers on a fully commercial basis to maximize returns and manage risk.

Learnings from British Patient Capital

- ✓ Terms that are investor-friendly, which improves the outcome for them when the fund is successful
- ✓ Encourage funds to invest in opportunities, which are not accessible for them on their own (i.e., capital intensive)

*Note: Number is converted based on exchange rate of 1 GBP to 1.13 USD
Source:

1) British Patient Capital, [Our History](#), 2015

2) British Patient Capital, [Life Sciences Investment Program](#), 2022

3) British Patient Capital, [Future Fund:Breakthrough](#), 2022



Israel: Select Public Private Partnership Program Details

Israel's unique story: Macro environment analysis & implications on startup and VC landscape

Despite having unstable political conditions and low economic freedom, government initiatives with high-quality workforces are attracting FDIs into Israel

Macro Environment Analysis

Social Factors

- + High income per capita
 - Israel's gross income will increase by 66.8% from 2022 to 2040, marking the highest growth rate in the MENA region
- + Risk-taking culture
 - This leads to numerous startups in the country
- Aging population
 - Old-age dependency ratio will rise to 23.9% in 2040, among the highest regionally

Technological Factors

- + Highly innovative country
 - Supported by R&D expenditure equating to 5.44% of GDP in 2020² – the highest in OECD rankings, with over 350 R&D centres established by large MNCs in Israel³
- + High internet usage
 - The percentage of the population using the internet is expected to increase from 89.8% in 2021 to 94.9% in 2026
- + Strong push for connectivity
 - Israel is expanding its fibre-optic network

Economic Factors

- + Low unemployment rate
 - Israel unemployment rate is at 5.0% with more than 10% working in high-tech industry in 2021⁷
- + Well-diversified economy
 - The country has an advanced tech-driven economy, without being overly dependent on any one sector
- + Highly appealing FDI climate
 - FDI inflows of 6.1% of GDP in 2021

Political Factors

- + Low corruption
 - This allows for the smooth running of business and keeps costs associated with bribery low
- + Close relationship with USA
 - US firms established more than two-thirds of R&D centres in Israel⁴
- Low economic freedom, and political instability
 - Israel ranks 43rd in the Index of Economic Freedom 2022

Implications on VC and Startup landscape

Government:

- Israel's strong relationship with the US opens doors for Israeli companies to expand abroad. The Dual Listing Law allows Israel high-tech companies to pursue exits in NASDAQ, NYSE, and AIM.
- Strong push for connectivity and internet usage allows Israel to become a hub for testing new applications

Startups:

- Israel government takes continuous initiative to remove trade barriers and encourage FDIs
- The ecosystem is enhanced by the entrance of R&D centres from large global companies – including Visa, Google, Bosch, AOL, Salesforce, PayPal, SAP, etc.⁵

VC Firms:

- Foreign investors are attracted by a highly educated labor force, entrepreneurship, and innovation – marking the high FDI inflow to the country
- The low economic freedom and country's political instability affects the investment attractiveness of the country to foreign investors

Source:

1) Euromonitor, [PEST Analysis: Israel](#), Oct 2022

2) The World Bank, [Research and Development expenditure \(% to GDP\)](#), 2020

3) Israel Innovation Authority, [The Israel Innovation Authority](#), 2022

4) U.S. Department of State, [2022 Investment Climate Statements: Israel](#), 2022

5) Israel 21c, [Tel Aviv counts 107 international R&D centers, aims to entice more](#), 2020

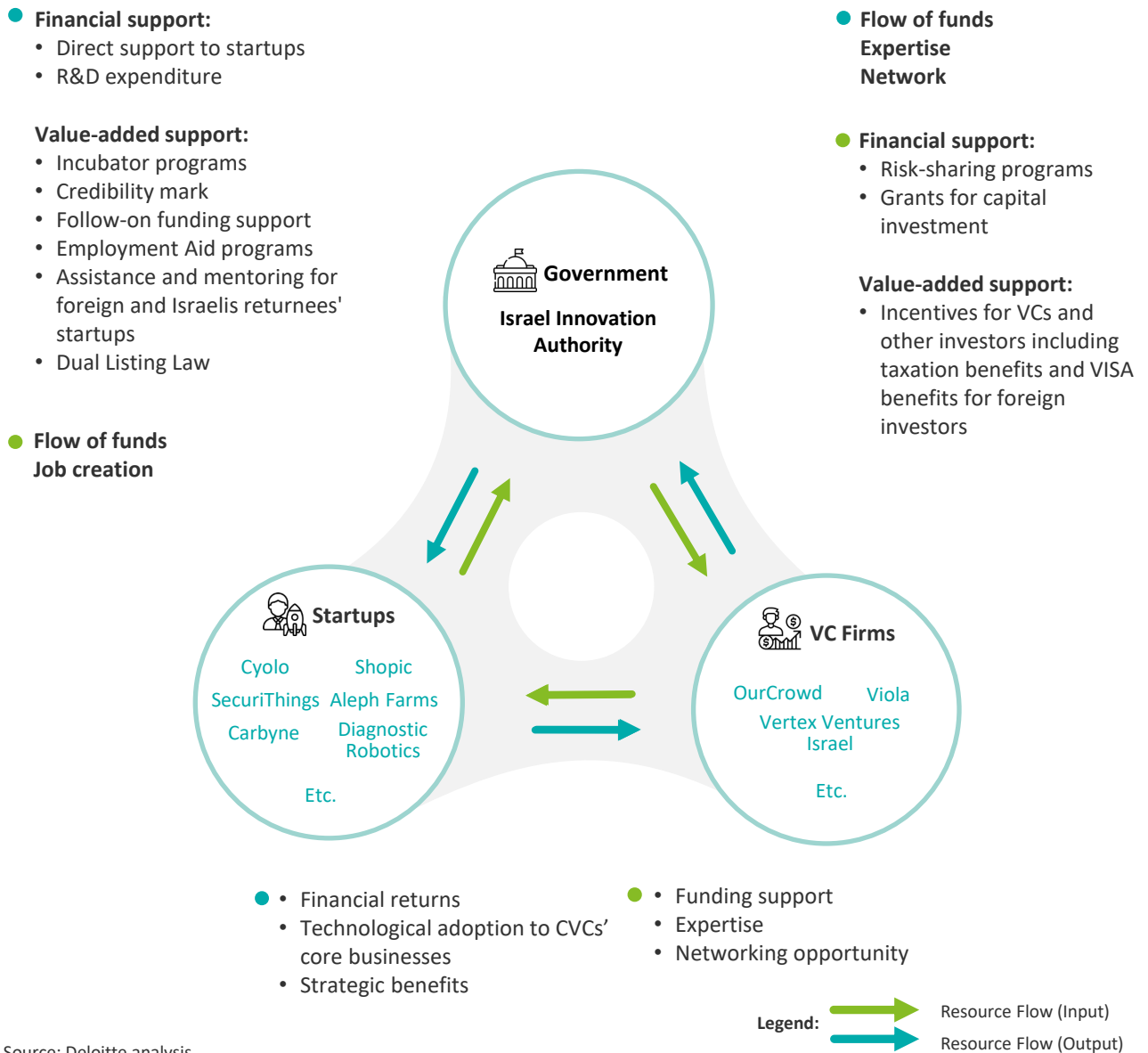
6) Wonglimpiyarat, J., [Government policies towards Israel's high-tech powerhouse](#), 2016

7) Israel Hayom, [Israel is world leader in number of high tech employees](#), 2022

Israel startup and VC ecosystem key actors' value flow

The government operates in a centralised model whereby the resources and control are consolidated in one agency allowing focus and follow through of effort

Key Actors in the VC Ecosystem in Israel



Source: Deloitte analysis



Israel startup and VC ecosystem key milestones

Israel Innovation Authority works to coordinate multiple government innovation programs; Yozma, a government VC-targeted program, kick started the success of the ecosystem in 1993

High-level Evolution of the Government programs

A Israeli government shifted its focus towards supporting the business sector^{1,2}

1. 1965: Israel Innovation Agency was created under the Office of the Chief Scientist (OCS)
2. 1969: Israel's Innovation and Technology Policy (ITP) shifts the focus towards business sectors as a national priority

B Supported the creation of high-tech sector through R&D spend³

1. 1984: The R&D law was amended with added flexibility to the government initiatives
2. National Authority for Technological Innovation (NATI) was authorized to establish government programs and manage the incentives system

C Created targeted programs to develop the startup and Venture Capital industry^{4,5}

1. The Israel Innovation Agency launched VC-specific programs: Inbal and Yozma
2. 6 divisions are active to support the development of the industry
 - Seed Incentive Program is a co-investment scheme for startups
 - Ideation (Tnufa) Program is a grant scheme for startups
 - Growth division supports R&D and technological innovation through grants
 - Technology infrastructure division supports grants for MAGNET consortiums
 - International Collaboration division supports bilateral R&D programs through grants
 - Advanced Manufacturing division supports MOFET or R&D in manufacturing industry through grants
 - Societal Challenges division supports human capital for high-tech organisations/entrepreneurs through grants
3. Streamlined agencies and regulations
 - 2016: Israel Innovation Authority was moved under NATI
 - 2016: 7th Amendment to R&D Law
 - 2019: Join C4IR (as a part of Gov't resolution No. 4481)

Note: This is non-exhaustive. It does not include tax incentives, other infrastructure-related incentives, loans (recourse, non-recourse), and private only initiatives

Source:

1) DRUID, CBS, [Vc policy: Yozma program 15-years perspective](#), 2009

2) Crunchbase, [Israel Innovation Authority](#), 2023

3) Law.co.il, [Amendment to Israel R&D Law](#), 2016

4) Wonglimpiyarat, J., [Government policies towards Israel's high-tech powerhouse](#), 2016

5) Israel Innovation Authority, [Endless Possibilities to promote innovation](#), 2022

Note: ¹A Government owned Insurance company giving partial (70%) guarantees to traded VC funds. The program failed and led to the successful design of Yozma program

YOZMA I Program: Scheme background

Yozma I aimed to target foreign investment into Israel early-stage startups to leverage foreign knowhow and networks – the program brought about 10 private VC funds within a few years of operation

► Yozma I (under Office of the Chief Scientist)

Program overview

Background and Vision¹

Originated in 1993, under Yozma I, Yozma's goal was to support the establishment of domestic Limited Partnership VC funds and create a base for a competitive VC industry in Israel by attracting foreign fundings into Israeli businesses, learning from a network of foreign limited partners, and building up international contacts.

Yozma I is widely known as the catalyst for the emergence of Israeli venture capital

Investment archetypes and Target actors^{1,2}

Investment archetype: 3. Passive Investor and 5. Direct Investor

Exit Options: Call options on government shares at cost plus 5-7% interest rate, for a period of 5 years

Target startups: Israel based, early-stage startups

Target sectors: High-tech startup fields including Communications, IT and Medical Technologies; emphasis was placed on the companies that develop infrastructure and enabling technologies

Program offering

Financial offering

Items	Passive Investor ¹	Direct Investor ¹
Investment Cap	Up to USD 8mn per fund (Total of USD 80mn for 10 funds)	Up to USD 20mn
Co-investment Requirements	40% of the capital raised	40% of the capital raised

In 1998, there was a 'Privatization' of Yozma Venture Funds and its hybrid funds.

Fund-of-fund investments: 10 new private VC funds partnering with one foreign institution together with a well-established Israel financial institution in a Limited Partnership. Direct investments: investments made through 'Yozma Venture Fund'

Value-added services¹

- Knowledge transfer
- Networking opportunity
- Exit Incentive for VCs: Upside incentive by providing call options on government shares at cost plus 5-7% interest rate, for a period of 5 years

Learnings from Yozma

- ✓ The program provided the opportunity for highly skilled domestic VC entrants to learn from reputable foreign partners
- ✓ Yozma I encouraged foreign knowledge transfer for Yozma Venture Fund managers (OCS officers) through the compulsory participation of foreign financial institutions in all board meetings of Yozma funds
- ✓ Incentive of high upside potential attracted professional VC teams – in contrast to programs with a downside guarantee, which are more favoured by lower quality VC firms

Note: Number is converted based on exchange rate of 3.58 NIS to 1 USD

Sources:

1) Israel Institute of Technology, [Evolutionary Venture Capital Policies](#), 2003

2) Yozma, [Yozma Strategy](#), 2022

3) DRUID, CBS, [Vc policy: Yozma program 15-years perspective](#), 2009

4) Wonglimpiyarat, Jarunee, [Government policies towards Israel's high-tech powerhouse](#), 2016

Bilateral R&D Incentive Program: Scheme background

Bilateral R&D Incentive is a co-funded program between Israeli and foreign governments to support both Israeli companies and their foreign partners on joint R&D activities

Bilateral R&D Incentive Program (under Israel Innovation Authority)

Program overview

Background and Vision¹

The program aims to help Israeli companies to grow with strategic international partnerships, get access to knowledge and technology outside Israel, scale up their products in international markets, and increase global competitiveness. In this program, the Israeli government works alongside foreign governments to support Israeli companies and their foreign business partners on R&D activities.

Investment archetypes and Target actors¹

Investment archetype: 2. Grant Provider

The funds are given by Israel Innovation Authority in parallel with funds from foreign entities. Funds go to Israel companies and their foreign partners, to support the joint R&D processes

Exit Options: Repayment in form of royalty from product sales

Target startups: Israel based, all-stage startups working on R&D with international partners

Target sectors: Sectors of national priority

Program offering

Financial offering

Items	Scheme Details ¹
Investment Cap	No limit
Grant Requirements	20 - 50% of the budget approved by the research committee in parallel with support from foreign government (varies according to the specific government) Additional 10% for Development Area A and 25% for Gaza Envelope operating area

Value-added services¹

- **Access to the international resources:** knowledge, technology, foreign markets to test out products
- **Quality Mark Support:** comprehensive professional assessment of the project which can be used as reference
- **Repayment method for startups:** The repayment of the grant will be in the form of royalty payment from product sales

Learnings from Bilateral R&D Incentive Program

- ✓ In cooperation with foreign government agencies, the program could leverage the foreign government network to attract foreign partners to Israeli companies
- ✓ The program offers an attractive funding repayment model by collecting the royalty of the product sales only after the startups generate sales

* Note: Number is converted based on exchange rate of 3.58 NIS to 1 USD

Source:

1) Israel Innovation Authority, [Bilateral R&D Incentive Program](#), 2022

2) Israel Innovation Authority, [Endless Possibilities to promote innovation](#), 2022

Ideation (Tnufa) Incentive Program: Scheme background

Ideation (Tnufa) Incentive Program helps companies by granting funds for R&D, with follow-on funds awarded to high-potential companies

► Ideation (Tnufa) Incentive Program (under Israel Innovation Authority)

Program overview

Background and Vision¹

The program aims to support the entrepreneurs and startups interested in formulating and advancing innovative concepts to the R&D stage by granting funds for building an initial prototype, intellectual property protection, and business development. Follow-on funds will also be offered for high-potential companies

Investment archetypes and Target actors¹

Investment archetype: 2. Grant Provider

The program provides the grant directly to new startups and entrepreneurs to proceed to the R&D stage – the usage of the grant is clearly specified by the program.

Exit Options: Repayment in form of royalty from product sales

Target startups: Israel based, new startups and companies in early-stage projects

Target sectors: All technological fields

Program offering

Financial offering¹

Items	Scheme Details
Program duration	2 years
Investment Cap	Up to USD 55,819 over the program period
Grant Requirements	85% of the approved budget Funds are to be used for building an initial prototype, intellectual property protection and business development (not intended for salaries and overhead expenses).

Value-added services¹

- **Credibility Mark:** Support from the program to raise capital in the following funding rounds
- **Follow-on funding by the authority:** Subsequent investments upon completion of the program
- **Repayment Method for startups:** The repayment of the grant will be in the form of royalty payment from product sales

Learnings from Tnufa Ideation Program

- ✓ The program offers an attractive funding repayment model by collecting the royalty of the product sales only after the startups generate sales
- ✓ The grant usage is specified clearly to avoid the misalignment of the usage with the original objectives of the program

* Note: Number is converted based on exchange rate of 3.58 NIS to 1 USD

Source:

1) Israel Innovation Authority, [Ideation \(Tnufa\) Incentive Program](#), 2022

2) Israel Innovation Authority, [Endless Possibilities to promote innovation](#), 2022

Seed Incentive Program: Scheme background

Seed Incentive Program co-invests with Israel and international investors into high-risk startups, and expects the partner-investors to provide non-financial support to the startups as well

Seed Incentive Program (under Israel Innovation Authority)

Program overview

Background and Vision^{1,2}

Seed Incentive Program aims to expand the funding sources available for startup companies operating in high-risk sectors. The program co-invests alongside Israeli and international venture capital investors and angel investors, with the expectation that these investors provide value-added services to the startups

Investment archetypes and Target actors^{1,2}

Investment archetype: 4. Co-Investor

Exit Options: Call options on government shares at cost plus 5% interest rate for a period of 3 years

Target startups: Israel based, seed-stage startups

Target sectors: Startups conducting R&D activity with high-risk of failure – e.g., challenging regulations, long time to market, new markets, and few VCs offering market. The startups must already have the memorandum signed by VCs with experience in high-risk investments

Program offering

Financial offering²

Items	Scheme Details
Investment Cap	Up to USD 976,835
	40% of the total investment round
Investment Requirements	Under certain conditions, the research committee has the authority to approve funds at a ratio of 1:1 with a maximum amount of up to USD 976,835

Value-added services³

- **Quality Mark Support:** comprehensive professional assessment of the project which can be used as reference
- **Exit Incentive for VCs:** Upside incentive by providing call options on government shares at cost plus 5% interest rate, for a period of 3 years. If the warrant is not exercised, the repayment will be in form of royalty payments from the sales revenues

Learnings from Seed Incentive Program

- ✓ Incentive of high upside potential attracted professional VC teams – in contrast to programs with a downside guarantee, which are more favoured by lower quality VC firms
- ✓ Attractive funding repayment model via royalty payments only after the startups generate sales (assuming warrant is not exercised)

* Note: Number is converted based on exchange rate of 3.58 NIS to 1 USD

Source:

1) Israel Innovation Authority, [Seed Incentive Program](#), 2021

2) Israel Innovation Authority, [Incentive Program No. 46 – A Program to Encourage Seed Capital Investments in Companies at High Risk Sectors](#), 2021

3) Israel Innovation Authority, [Seed Track](#), 2021

4) Ctech, [Israel Innovation Authority launches \\$25 million seed incentive program](#), 2021

Appendix – Chapter 4








Maturity assessment methodology

We have combined data from different sources with our analysis to assess the countries' maturity level

Assessment methodology

The assessment is developed based on data from Startup Genome, and The Heritage Foundation, combined with our analysis. The detail of data used for each metric is as follows:

Metric	Data source
Markets 	Startup Genome: Markets metric is evaluated based on “Market Reach” score presented in “Startup Genome: The Global Startup Ecosystem Report 2022”
Financing 	Startup Genome: Financing metric is evaluated based on “Funding” score presented in “Startup Genome: The Global Startup Ecosystem Report 2022”
Infrastructure 	Startup Genome: Infrastructure metric is evaluated based on “Connectedness” score presented in “Startup Genome: The Global Startup Ecosystem Report 2022”
People 	Startup Genome: People metric is evaluated based on “Talent” score presented in “Startup Genome: The Global Startup Ecosystem Report 2022”
Government 	The Heritage Foundation: Government metric is assessed based on business freedom, government integrity, judicial effectiveness, and investment freedom index scores presented by “Heritage Index: 2022 Index of Economic Freedom”

Sources: Startup Genome, The Heritage Foundation

Day 1 activities for government roadmap items

Thai government can consider the below day 1 activities to address gaps in existing initiatives and achieve impact (1 of 2)

KEY TAKEAWAYS

- Thailand needs to obtain buy-in from multiple agencies on their national level innovation vision. This requires strong display of leadership, a strong coordinating body, and a significant allocation of resources.
- Government should also address perception (from startup & VC community) that it has challenges in efficiently executing its programs (i.e., need to streamline the process, reduce red tape, etc.)

#	Government Roadmap Initiative	Relevant Agency	Current Gaps in Thai Initiatives	Day 1 Actions to Achieve Impact
1	Promote national level startup & VC and innovation vision	National Policymaker	<ul style="list-style-type: none"> • While national vision exists, perception from startup & VC community is that government is not taking concrete steps to achieve the vision (“We have heard the talk, but have not seen any impact or the impact is limited so far”) 	<ul style="list-style-type: none"> • Set the tone from the top: Top leadership to publicly reaffirm and pledge support to national level startup and innovation vision • Increase resource allocation: Pledge significantly higher amount of resources (both financial and human capital) to signal commitment to vision • Emphasise execution over planning: Put more focus on executing the planned vision, ensure that actions have been taken to achieve such vision
2	Coordination: Empower government coordinating body to promote vision	National Policymaker	<ul style="list-style-type: none"> • See chapter 4 for details 	<ul style="list-style-type: none"> • See chapter 4 for details
3	Equity Matching: Launch equity matching co-investment program (simple, focus on growth)	Innovation Agency, Investment Entity	<ul style="list-style-type: none"> • See chapter 4 for details 	<ul style="list-style-type: none"> • See chapter 4 for details
4	Enhanced Grants: Provide enhanced grant programs (higher funding amounts, fewer conditions) targeting strategic industries	Innovation Agency, Investment Entity	<ul style="list-style-type: none"> • See chapter 4 for details 	<ul style="list-style-type: none"> • See chapter 4 for details
5	Collaboration with Academia: Strengthen collaboration between startups and academia both locally & internationally	Ministry of Education	<ul style="list-style-type: none"> • See chapter 4 for details 	<ul style="list-style-type: none"> • See chapter 4 for details

Sources: Deloitte Analysis

Denotes cornerstone initiatives (as detailed in Chapter 4)

Day 1 activities for government roadmap items

Thai government can consider the below day 1 activities to address gaps in existing initiatives and achieve impact (2 of 2)

KEY TAKEAWAYS

- Multiple agencies (including Immigration Bureau, Revenue Department, Department of International Trade Promotion) can contribute to startup and venture capital success in Thailand
- National policymaker needs to significantly increase resource if they want their programs to make impact and inspire confidence among private stakeholders

#	Government Roadmap Initiative	Relevant Agency	Current Gaps in Thai Initiatives	Day 1 Actions to Achieve Impact
6	Address regulatory pain points for startups and VCs	Regulators	<ul style="list-style-type: none"> • <i>See appendix for details</i> 	<ul style="list-style-type: none"> • <i>See appendix for details</i>
7	Roll out new tax treatments to benefit startups and VCs investments	Revenue Department	<ul style="list-style-type: none"> • Currently, there is confusion as to which government entity investors should register with to benefit from tax exemptions 	<ul style="list-style-type: none"> • Clarify registration agent: Publish and share step by step processes to help VCs and investors obtain tax benefits • Consider tax treatment for future VC structures, for example, limited partnership structures
8	Streamline visa programs to attract foreign talent	Immigration Bureau	<ul style="list-style-type: none"> • Perception is that it is not easy for foreign talent to obtain visas and work in startups • BOI Smart Visa program prevents the startups from being able to easily pivot to new business program 	<ul style="list-style-type: none"> • Align with immigration office: Identify talent gaps and introduce ideas to streamline visa application processes for foreign talent
9	Increase allocation of resources and support programs for various research & development initiatives	National Policymaker	<ul style="list-style-type: none"> • R&D spending in Thailand as a percentage of GDP is lower than other countries (see chapter 2) 	<ul style="list-style-type: none"> • Propose increase in R&D spending to be aligned with innovation-focused nations
10	Create phase 2 equity matching program (complex, with targeted sectors and financial targets, etc.)	Innovation Agency, Investment Entity	<ul style="list-style-type: none"> • Non-existent in Thailand 	<ul style="list-style-type: none"> • Learn from the phase 1 equity matching programs
11	Promote startups abroad	Department of International Trade Promotion	<ul style="list-style-type: none"> • Perception is that there is limited support from Thai government in promoting startups abroad (whereas many other governments more actively promote their startups) 	<ul style="list-style-type: none"> • Engage with economic officers & diplomatic corps to create programs that promote market entry for Thai startups abroad

Sources: Deloitte Analysis

Options to address ecosystem gaps & challenges

Option: Addressing regulatory pain points for startups and VC firms (1/5)

Definition of initiative

Startups and VC firms face multiple regulatory pain points when operating in Thailand.

Thailand can consider addressing these pain points via both short-term solutions, to streamline processes within the existing framework, as well as long-term solutions, to amend existing regulations and frameworks to align with international standards.

Thailand challenges addressed by initiative

GOV'T &
REG



Startups face friction in operating in Thailand – including restrictive regulations and insufficient policy benefits

- The initiative can help increase awareness and streamline processes for startups to utilize ESOP
- The initiative will improve ease of doing business in Thailand for startups (e.g., by streamlining the license application process)

Inflexible investor options and policy challenges make it difficult for investors to operate in Thailand

- The initiative will align the structure of VC firms in Thailand with international standards, and remove the limitations that current structure faces
- The initiative can provide clarity on how VCs and startups can structure convertible debenture fundraising options

Examples of initiatives abroad

A Singapore government – Startup ESOP Scheme¹

Singapore government has enabled the use of ESOP scheme by startups based in the country to help startups attract and retain top talent



B Singapore government – GoBusiness licensing portal²

GoBusiness licensing portal is a one-stop shop portal for businesses in Singapore to register their business, apply for licenses, keep track of the existing licenses, and renew/amend licenses when needed. The portal features more than 200 licenses administered by different authorities. The portal also provides guidance on licenses that businesses need.



C Singapore government – Limited partnership structure and other forms for VC firms³

The limited partnership structure was introduced in Singapore in 2009 as a new structure for PE/VC firms who would like to set up in Singapore. Limited partnership structures' advantages over other structures include the limited liability of LPs, the unlimited number of LPs, etc., as well as tax benefits.



Proposed initiatives for Thailand

- 1 Improving the communication between government agencies and the public to promote the use of ESOP scheme and convertible debentures by startups (inspired by A)
- 2 Establishing one stop service center/portal to streamline the licensing process for startups (inspired by B)
- 3 Broaden eligibility criteria so that more investors can invest in VC firms
- 4 Enabling a partnership or other structures for VC firms to improve VCs' ease of doing business (inspired by C)

Sources: Deloitte Analysis

1) Singapore Academy of Law, [A guide to employee incentive schemes and Employment legislation in Singapore](#), May 2020

2) GoBusiness, [Government s-Services for your business](#), 2022

3) National University of Singapore, [Private Equity in Singapore](#), February 2019

Options to address ecosystem gaps & challenges

Option: Addressing regulatory pain points for startups and VC firms (2/5)

Concept of the initiative

1 Improving communication between government agencies and the public

Current issues

Intragovernmental communication

- Startups have found it difficult to incorporate ESOP programs for their employees, partly because government officials they work with may not be aware of such programs
- VCs and startups also have challenges utilising convertible debentures due to similar reasons

Public communication

- Startups are required to register and join the program run by OSMEP before they can use ESOP and convertible debentures
- Due to the lack of effective promotion, the program is not widely known to startups, resulting in small number of participants

Proposed solutions

Improving intragovernmental communication

- Issuing internal guidelines prior to the launch of new campaigns (e.g., ESOP or convertible debentures)
- Incorporate systematic guidance for officials to be able to support ESOP and convertible debentures

Launching marketing campaign and increasing public awareness

- Launch marketing campaign to increase public awareness of the program
- Relevant government agencies (e.g., DBD, OSMEP) to host workshops with startups or partner with advisory firms to communicate and promote the program

2 Establishing one stop service center/portal to streamline the licensing process

Current issues

There is no centralised portal for license and permit applications, for example:

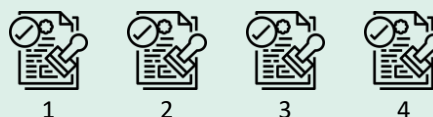
License/Permit	Place of filing	Process time
E-commerce license	<ul style="list-style-type: none">• Online• District office• Local administration office	1 day
Construction permit	District / municipal office	45 days
VAT registration	Revenue department	45 days

- The current licensing process can be complex and time-consuming, as the requirements are not standardized and can vary by agency
- Due to the lack of a centralised platform, startups may not have clear visibility on the licenses required, making it difficult to fully comply to requirements or even to track application statuses

Proposed solutions

To set up one-stop service portal for license and permit application

One-stop service centre/portal



- Having the one-stop service centre/portal would allow startups to:
 - Have clear understanding of business licenses requirements
 - Apply for different licenses in one go
 - Track the status of application
 - Have clear visibility on existing licenses that they have

Options to address ecosystem gaps & challenges

Option: Addressing regulatory pain points for startups and VC firms (3/5)

Concept of the initiative

3 Broaden eligibility criteria of VCs investors

Existing

Currently there are two structures for VC firms in Thailand, company structure and PE trust structure, and their **eligible investors** are:

Company structure's eligible investor types:

- 1 Institutional investor

PE Trust structure's eligible investor types:

- 1 Institutional investor
- 2 UHNW investor
(limited to not more than 10 investors per trust)

Proposed new

Thai regulators can consider broadening the type of investors who are allowed to invest in VC firms under company structure and PE Trust structure. By allowing a wider range of eligible investors, this will give access to larger number of investors to invest in VC firms.

The proposed updates for eligible investors are as follow:

Company structure's eligible investor types:

- 1 Institutional investor
- 2 UHNW investor
(without no. of investors limitation)

Newly eligible

PE Trust structure's eligible investor types:

- 1 Institutional investor
- 2 UHNW investor
(without no. of investors limitation)

Updated

Options to address ecosystem gaps & challenges

Option: Addressing regulatory pain points for startups and VC firms (4/5)

Concept of the initiative

4 Enabling a partnership or other structure for VC firms to improve ease of doing business

Existing

Currently there are two structures for VC firms in Thailand, company structure and PE trust structure:

Company structure



Issues

Company is required to comply with a set of stringent corporate laws:

- Articles of Association must be filed with DBD
- At least one director needs to be an individual
- Requires creditors' consent before undergoing M&A
- Company can only distribute returns to investors in the form of dividend, and returns must be distributed proportionally among all common shares or set specifically for preference shares
- Preference shares cannot be simply amended
- Company's return from investment is subjected to corporate tax

PE Trust structure



Issues

- Setting up PE Trust can be complicated as it involves multiple stakeholders and additional processes compared with setting up a company or partnership
- Trustee is subjected to more stringent fiduciary duties and is under more scrutiny by regulators than stakeholders in company or partnership
- Settlor must enter into trust deed with trustee for the creation of trust and for transferring money to trustee. All trust units must be treated equally.
- In case trustee does not perform their duties, criminal liabilities can be imposed on them
- Must issue unit trusts for collective investment constituted under trust deed

Options to address ecosystem gaps & challenges

Option: Addressing regulatory pain points for startups and VC firms (5/5)

Concept of the initiative

4 Enabling a partnership or other structure for VC firms to improve ease of doing business

Proposed new

Thai regulators can consider introducing new structures for VC firms in Thailand:

Private Fund structure



Benefits

- Setting up Private Fund can be more simple than setting up a company or PE Trust since Private Fund has no separate legal entity, and it is set up based on Private Fund agreement between LPs and GPs
- Governance can be flexibly designed
- More internationally recognized structure for VCs
- To support the use of Private Fund structure as a new VC structure in Thailand, SEC could consider exempting the VC Private Fund from obtaining a traditional Private Fund Management License
- With such exemption, implementing this new structure would require no amendment to be made to the existing CCC or SEC Act

Limited Partnership (LP) structure



Benefits

- Limited Partnerships include limited liabilities for LPs and unlimited liabilities for GPs (under corporate law), which can only be in a juristic entity form
- Setting up a Limited Partnership can be more simple than setting up a company or PE Trust (e.g., no need for Articles of Association; shares / units of investment are not required; and can use partnership agreement that, with amended laws, would not require registration with DBD)
- Investor liability is limited to capital contribution; GP's liability is unlimited
- Returns are distributed in the form of investment returns tailored for each LP per the partnership agreement
- Governance can be flexibly designed
- Commonly used structure globally



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