



Technological developments are opening vast opportunities for people to connect, trade, and access services that are currently not available. Technological change drives economic growth and improves standards of living. However, there are also concerns that many jobs are at risk because of the growing sophistication in robotics and artificial intelligence. The challenge for Asia and the Pacific is to capitalize on the opportunities that technology brings, while preparing for and mitigating the risks.¹

To sustain economic growth with employment in a country, the role of entrepreneurs and start-ups is recognized as important, particularly, in developing countries where private sector development is nascent. Among many different types of start-ups, technology-oriented start-ups play a vital role in transforming the traditional economy to the knowledge-based economy or the digital economy by developing new markets with innovation. ADB's developing member countries (DMC) are attaining middle-income country (MIC) status, but often face challenges in progressing into high-income status. To continue progressing in its development path, the digital economy is poised to be the new driver of development.

Realizing the potential contribution of the tech start-ups to economic growth and job creation depends on the enabling environment for start-ups, including the existence of business opportunities, entrepreneurial culture, supportive business and technical infrastructure, and availability of and access to key human and financial resources. To promote tech start-ups and entrepreneurship, many governments have implemented various initiatives to address the issues of shortages in skills needed for the digital economy, weak capital markets supporting start-ups, weak professional networks among digital entrepreneurs, lack of national strategies to develop high-level technologies. For countries that aspire to transform their economies with innovation, the weak ecosystem for start-ups is one of key barriers.

Traditionally, ADB's support for job creation has mainly focused on the financing for Small Medium Size Enterprises (SME), but this approach will not be enough in the knowledge economy where technical skills are more important to compete in the market. The development community, including ADB, should take a more holistic approach to cover broader aspects of the business ecosystem, including regulatory sandboxing, skills development, academia-industry collaboration, incubation, etc., in addition to financing programs.

In this context, ADB will initiate a capacity development program to help its DMCs develop an enabling environment for the digital economy focusing on the technology-oriented start-ups ("Tech Start-ups"), in partnership with a variety of public and private partners. The main objective of the program is to share knowledge and experience, and to discuss potential bilateral or multilateral partnerships on the Tech Start-up support programs among participating countries.

¹ ADB. 2018. *Asian Development Outlook 2018*. Manila.

The key features of the capacity program will include:

- Pursuing mutual benefits for both developed and developing countries. The developing countries can learn from the experiences in developed countries, and the developed countries can take the opportunity to learn about market opportunities across developing Asia.
- Taking a holistic approach to achieve the goal. Traditionally, ADB's SME support programs have focused on SME financing, but this program will cover broader aspects of the ecosystem, including human resource development, academia-industry partnerships, and various public or private-led acceleration programs such as start-up incubation programs.
- Promoting a public and private partnership approach to develop enabling environment for the digital transformation of developing economies. As the program will focus on the digital industry where territorial boundaries are blurred, potential collaboration with globally leading companies will be actively explored.

To start the capacity development program, ADB will organize a joint workshop on "Tech Start-ups Support Program in Asia and the Pacific" on 9–12 April 2019 in Seoul, South Korea. South Korea realizes that entrepreneurship is a key driver of job creation and a strong and innovative economy. The number of start-ups in South Korea in 2017 was close to 30,000 with over 100,000 start-up employees and over 500 million dollars invested in late-stage start-ups per year. There are many accelerator programs, angels, and venture capital firms in South Korea, and some of the big corporations have started their own start-up hubs like NAVER and their Start-up Alliance. Also, there are many start-up communities like Start-up Alliance, which helps foster Korean start-up expansion into the global market. South Korea has the highest government backing per capita for start-ups and the Korean government also assists in programs to help the start-up ecosystem.²

The workshop aims to identify programmatic approaches for promoting entrepreneurship and tech start-ups across the countries participating in the workshop. The participants will learn about opportunities and challenges for developing tech start-up ecosystems through interactive discussions. Around 80 participants from developing member countries, international development partners, academia and the private sector (from developed and developing countries in Asia and the Pacific) will join the workshop. In addition, ADB staff directly related to ADB's operations in industry development, SME financing, skills development and higher education will participate. During the workshop, global ICT companies such as Amazon Web Service, Google and Samsung will share their programs for supporting tech start-ups and technology education, and participants will visit some accelerator and incubation program in South Korea.

² Extracted from South Korean Startup Ecosystem by John Yoon, Startup Radar <http://startupradar.asia>

PROGRAM

Day 1 (9 April, Tuesday)

Seoul Business Agency	08:30–09:00	Registration
	09:00–09:20	Opening and Welcoming Remarks <ul style="list-style-type: none"> • Young Seung Chang, President, Seoul Business Agency • Thomas Abell, Chief of Digital Technology for Development, Asian Development Bank (ADB)
	09:20–09:30	Workshop Overview
	Part 1. Ecosystem for Tech Start-ups	
	09:30–11:00	SESSION 1. ECOSYSTEM FOR TECH START-UPS Moderator: Seok Yong Yoon, Principal Public Management Specialist (e-Governance), ADB <ul style="list-style-type: none"> • Presentation on “Five Reasons Why the Korean Start-Up Ecosystem is Booming,” Jungwook Lim, Managing Director, Start-up Alliance https://start-upall.kr • Presentation on “Lessons from Silicon Valley Start-Up Environment,” Thomas Abell, Chief of Digital Technology for Development, ADB • Presentation on “Amazon Web Services: Start-Up Innovation,” Sam Harris, Head of EdTech and EdStart Program in Asia Pacific, Amazon Web Services
	11:00–11:15	Group Photo & Coffee Break
	11:15–12:30	SESSION 2. GOVERNMENT POLICIES AND PROGRAMS Moderator: Dennis De Jesus, Knowledge Management Coordinator, ADB <ul style="list-style-type: none"> • Presentation on “Seoul Metropolitan Government’s Start-Up Policy,” Pan Kyu Choi, Director of Investment & Business Incubation Division, Seoul Metropolitan Government • Presentation on “Supporting Technological Transformation in Indonesia,” Yurendra Basnett, Country Economist, ADB • Presentation on “PPP as a Sustainable Model in Boosting Start-Up Ecosystems,” Mammad Karimov, Head of the INNOLAND Incubation and Acceleration Center, Azerbaijan
	12:30–13:30	Lunch Break

	13:30–15:30	Site Visit <ul style="list-style-type: none"> Seoul Start-Up Hub http://seoulstartuphub.com Presentation on “Intro to Seoul Start Up Hub,” Kim Ji Soo Presentation on “Roadmap of Asia Start-Up Ecosystem Alliance,” Semin Lee, Director of Global
	15:30–18:00	Site Visit <ul style="list-style-type: none"> Tech Incubator Program for Start-ups (TIPS) TOWN http://www.jointips.or.kr TIPS TOWN Tour, Soo Taek Lim, Partner, ENSL Partners http://www.enslpartners.com/
	18:00–20:00	Dinner hosted by Seoul Business Agency

Day 2 (10 April, Wednesday)

Seoul Business Agency	Part 2. Start-up Acceleration and Incubation	
	08:30–10:00	SESSION 3. PRIVATE SECTOR-LED INCUBATION PROGRAMS Moderator: Aimee Hampel-Milagrosa, Economist, ADB <ul style="list-style-type: none"> Presentation on “An Intro to SparkLabs,” by Eugene Kim, Partner, SparkLabs, a Seoul-based accelerator for early-stage Korean start-ups http://www.sparklabs.co.kr/lb/index.php Presentation on “AWS Start-up and Partner Enablement Program,” Smita Roy, Partner Programs and Strategy, Worldwide Public Sector, Amazon Web Services
	10:00–10:30	Coffee Break
	10:30–12:00	SESSION 4. UNIVERSITY-LED INCUBATION PROGRAMS Moderator: Brajesh Panth, Chief of Education Sector Group, ADB <ul style="list-style-type: none"> Presentation on “Leading the Way to the Future: Yonsei Enterprise Support Foundation Program,” by Sung Joo Bae, Associate Professor of Technology Management, Yonsei University School of Business Presentation on “Stimulating Entrepreneurship Activity at SUNY Korea from Scratch: The Case of the Center for Global Entrepreneurship,” Chihmao Hsieh, Research Professor, SUNY Korea Presentation on “AWS Educate & Academy Program,” Shang Gao, Head of Educate Program in Southeast Asia, Amazon Web Services
	12:00–13:00	Lunch Break

	13:00–14:30	(Team A) Site Visit. Born2Global Center, Pangyo Techno Valley https://www.born2global.com <ul style="list-style-type: none"> • Introduction of Pangyo Techno Valley and Born2Global Center, Seung Ho Baek, Director • Start-Ups' Showcase: Presentation of Start-Ups at Born2Global Center • Born2Global Tour 	(Team B) Site Visit. NCSOFT http://www.ncsoft.com/ <ul style="list-style-type: none"> • Introduction of NCSOFT, Alicia Kang, Manager, Global Communication Division, Public Relations Team • NCSOFT Tour
	14:30–16:00	Site Visit. NCSOFT <ul style="list-style-type: none"> • Introduction of NCSOFT, Alicia Kang, Manager, Global Communication Division, Public Relations Team • NCSOFT Tour 	Site Visit. Born2Global Center, Pangyo Techno Valley <ul style="list-style-type: none"> • Introduction of Pangyo Techno Valley and Born2Global Center, Seung Ho Baek, Director • Start-Ups' Showcase: Presentation of Start-Ups at Born2Global Center • Born2Global Tour
	16:00	Return to hotel	

Day 3 (11 April, Thursday)		
	Part 3. Academia-Research-Industry Cooperation	
	08:00–10:30	Move to KAIST
KAIST	10:50–12:30	SESSION 5. ACADEMIA-INDUSTRY COOPERATION AT KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) http://www.kaist.edu/html/en/index.html Moderator: Shanti Jagannathan, Principal Education Specialist, ADB <ul style="list-style-type: none"> • Presentation on “Growth of KAIST and Its Development System,” Wonjoon Kim, Director of Center for Innovation and Future Strategy • Presentation on “Entrepreneurship and Innovation of KAIST: Start-up KAIST,” Steve Ahn, Professor of K-School and Director of Division of Start-up Support, KAIST Site Visit: Start-up KAIST
	12:30–13:30	Lunch Break (KAIST Faculty club)
	14:00–16:00	SESSION 6. RESEARCH-INDUSTRY LINKAGE AT ELECTRONIC AND TELECOMMUNICATION RESEARCH INSTITUTE (ETRI) Moderator: Ryotaro Hayashi, Social Sector Economist, ADB <ul style="list-style-type: none"> • “ETRI and ICT Innovation System,” Ilsue Roh, Director, International

		Cooperation Section, ETRI https://www.etri.re.kr/eng/main/main.etri <ul style="list-style-type: none"> • “Technology Commercialization: How it Works in ETRI,” Jong Heung Park, Executive Director, Electronics and Telecommunications Research Institute http://www.etriholdings.com/files/ETRIHoldings-Company_introduction.pdf
	16:00–19:00	Return to hotel

Day 4 (12 April, Friday)

Seoul Business Agency	Part 4. Financing Tech Start-ups	
		SESSION 7. ANGEL AND VENTURE CAPITAL
	09:00–10:20	Moderator: Pei-Chun Tsai, Public Management Specialist, ADB <ul style="list-style-type: none"> • Presentation on “Korean Unicorns on the Rise,” Kihong Bae, Co-Founder & Managing Partner, Strong Ventures (http://kr.strongvc.com/) • Presentation on “Derisking Impact Technology,” Dominic Mellor, Senior Investment Specialist, ADB • Presentation on “MINDs Lab: AI as a Service Firm,” by Taejoon Yoo, CEO and Founder of MINDsLab (http://mindslab.ai)
	10:20–10:40	Coffee Break
		SESSION 8. INNOVATIVE FINANCING FOR SMES AND START-UPS
	10:40–12:00	Moderator: Alexander Joseph Julian, Financial Sector Economist, ADB <ul style="list-style-type: none"> • Presentation on “ADB’s Support on SME Financing,” Seung Min Lee, Senior Financial Sector Specialist, ADB • Presentation on “SME Support Programs and SME Financing Modalities,” Hee-Jun Lee, Senior Manager, Corporate Financing Division, Small and Medium Business Corporation (SBC) https://www.sbc.or.kr/sbc/SH/EHP/SHEHPoo1Mo.do • Presentation on “Managing a Mission-driven For-profits Start-up from Home: Queenrides,” Im Fahima Jachja, Founder and CEO of Queenrides, Indonesia
	12:00–13:00	Lunch Break
		SESSION 9: GROUP DISCUSSION
	13:00–15:30	Facilitator: Marc Lepage, Principal IT Specialist (Technology Innovation), ADB <ul style="list-style-type: none"> • Group discussions and presentations • 1:1 or 1:N tailored meetings (on request)
	15:30–16:30	Wrap-up <ul style="list-style-type: none"> • Closing

SITE VISITS

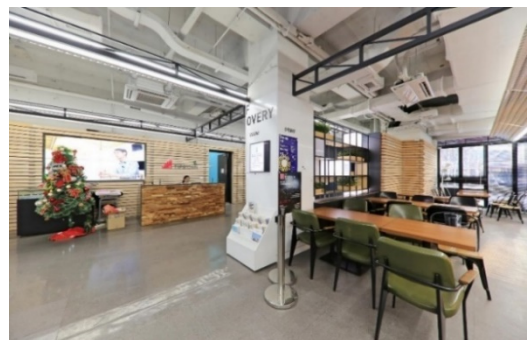
Seoul Business Agency (SBA) is a subsidiary organization of Seoul Metropolitan Government for supporting small and medium-sized enterprises (SME) in Seoul. SBA supports SMEs through projects with digital content, IT, BT, PR & marketing, and exhibitions & conventions, as well as attracting promoting foreign commercial investment.

SBA provides a variety of public services such as support for start-ups (including business of foreign residents in Seoul through Seoul Global Center), R&D, intellectual property, development of market outlet for small businesses, overseas export, SETEC (trade exhibition for SMEs) and so forth. These services aim to help SMEs increase their market competitiveness. Furthermore, SBA strives to create and activate industrial clusters, such as DMC and G Valley, and is actively participating in fostering aspiring future industries such as cultural content industries (web cartoon, animation, game, etc.), and IT and IoT related industries. SBA dedicates to the advancement of the economy of Seoul through strategic industry development plans and SMEs support. We provide services that are ethical and creative, under our management principle that place customers as our priority.



The Seoul Start Up Hub Founded in June 2017, the Seoul Start Up Hub is Korea's largest start-up incubator. The hub aims to cultivate 450 new companies and it also serves as a control center for 24 smaller start-up incubators in Seoul. The hub provides a diverse range of support services such as business model development support, open-space, and preparations for pre-start-up companies.

TIPS Town is located in the center of Korea's start-up scene where start-ups, investors, and supporting organizations work together. TIPS Town empowers entrepreneurs to build strong businesses by connecting start-ups with capital, support, services, and most importantly nurturing community of experts. By creating an environment of collaboration and success, TIPS Town cultivates the country's most disruptive companies, serving as the core of the start-up ecosystem and innovation platform both locally and internationally. TIPS (Accelerator Investment-Driven Tech Incubator Program for Start-up) is designed to identify and nurture the most promising start-ups with innovative ideas and groundbreaking technologies. In order to support them when entering the global marketplace, it appoints and designates successful venture founders—who are now angel investors and leaders of technological enterprises—as their incubators/accelerators. It then offers seamless service



encompassing angel investor networking, incubating, mentoring/professional support and matching R&D funds.

Pangyo Techno Valley (PTV) is an industrial complex developed by Gyeonggi Province (contracted out to a local government own enterprise, Gyeonggi Urban Innovation Corporation) in the city of Pangyo, Gyeonggi Province, South Korea. Total investment was about \$4.7 billion including \$1.25 billion). It took about 11 years to complete the PTV since the PTV development plan was approved in 2004. The complex focuses on information technology, biotech, cultural technology and fusion technology. The benefits of the diversity of fields are its location within a major metropolitan area, where PTV can receive various types of support from Gyeonggi Province. Pangyo Techno Valley covers about 454,964 m² in total. 48,417 (10.6%) is allocated for global R&D facilities. 267,450 m² (58.8%) is allocated to the general research site (direct researching facilities, research developing facilities, and school-work linked researching facilities). The research supporting site (guest houses, dormitories, a specialized graduate school, and a job training center) covers about 117,651 m² (25.8%). Compared to the other areas, the lands for R&D sites were acquired with a 40~50% cheaper price. Currently, 1,121 companies with about 73,000 employees (45.3% are researchers) are located in PTV. The PTV produces around \$62 billion revenue per year which is bigger than car exports in Korea.



NCSoft is the world's premier publisher and developer of massively multiplayer online games. Established in 1997 in Seoul, South Korea, NCSoft quickly became the leader in online games with the successful launch of its flagship product Lineage. Today, NCSoft is well positioned for continued success in the Asian, North American and European markets by expanding its influence reach throughout the world with excellent products and franchises. NCSoft stands out in the gaming industry by sticking to the company's mission of focusing on happiness and fun for everyone. Due to the successful history of creating a diverse catalog of MMO games, NCSoft has been able to leave an indelible mark in the gaming industry.



Start-up Campus, the largest start-up complex near Seoul was opened in PTV in March 2016 as part of South Korea's efforts to boost local start-ups and attract foreign companies. Start-up Campus provides stable business space for ICT field start-ups and venture companies to build a start-up hub where VCs, angels, accelerators and start-up supporting institutions can conveniently exchange ideas. Total investments were about US\$143 million. It consists of 3 buildings at total areas of 54,075 m² (8,361 building areas). The "start-up campus" is designed to nurture more than 200 start-ups, offering workspace and consulting services for capital funding. Similar to Silicon Valley, it provides integrated services and functions necessary for start-ups including financing partners, consulting services, prototyping to commercialization, training programs, research facilities, etc. Currently, there are 7 public and 7 private institutions are located in the Start-up Campus.



Born2Global Center, founded in September 2013, Born2Global is a major Korean government agency under the Ministry of Science and ICT (MSIT) contributing to the national start-up ecosystem and beyond. Each year, Born2Global selects over 100 start-ups with high potential for entering the global market. Born2Global provides services such as professional consulting in law, patents, accounting, marketing, investment and business development. Additionally, Born2Global gives training services to start-ups by hosting conferences, seminars and meetings.

Over 50 start-ups are selected to reside in the business space "K-Global Start-up Hub" and receive consulting services at the Start-up Campus. The Start-up Campus in Pangyo is the "Silicon Valley" of South Korea, emerging as the latest hot spot in the thriving start-up ecosystem. The 582K square feet Start-up Campus is the future home for tech start-up stars to connect with the global market.



Korea Advanced Institute of Science and Technology (KAIST)



KAIST is a public research university located in Daejeon Innopolis. KAIST was established by the Korean government in 1971 as the nation's first research-oriented science and engineering institution. KAIST has approximately 10,200 full-time students and 1,140 faculty researchers and had a total budget of US\$765 million in 2013, of which US\$459 million was from research contracts. The institute was founded in 1971 by a loan of US\$6 million (around US\$34 million with inflation as of 2014) from the United States Agency for

International Development (USAID). The institute's two main functions were to train advanced scientists & engineers and develop a structure of graduate education in the country. Research studies began by 1973 and undergraduates studied for bachelor's degrees by 1984.

Electronics and Telecommunications Research Institute (ETRI)



ETRI is a Korean government-funded research institution in Daejeon Innopolis. As of 14 December 2015, ETRI has about 2,000 employees where about 1,800 of them are researchers. Established in 1976, ETRI is a non-profit government-funded research institute that has been at the forefront of technological excellence for about 40 years. In the 1980s, ETRI developed TDX (Time Division Exchange) and 4M DRAM (Dynamic Random Access Memory). In the 1990s, ETRI commercialized CDMA (Code Division

Multiple Access) for the first time in the world. In the 2000s, ETRI developed Terrestrial DMB, WiBro, and 4G LTE Advanced, which became the foundation of mobile communications.