ASEAN Smart Cities Network: A Catalyst for Partnerships

Melinda Martinus*

EXECUTIVE SUMMARY

• Since its establishment in 2018, the ASEAN Smart Cities Network (ASCN) has developed into a collaboration platform for city government participation and autonomy.

• Unlike ASEAN cooperation and partnerships which are generally done at the regional and state level, the ASCN’s new and innovative approach focuses on city-level and scalable solutions.

• ASCN has become a strong basis for external partnerships. Among external partners, The USA, Australia, Japan, China, and the Republic of Korea (ROK) are committed ASCN collaborators.

• The ASCN has proposed to work on six focus areas: (1) civic & social (2) health & wellbeing (3) safety & security (4) quality environment (5) built infrastructure, and (6) industry & innovation. Among those focus areas, the industry & innovation sectors and the safety & security are gaining significant support from solution providers.

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INTRODUCTION

Since its inception during Singapore’s ASEAN Chairmanship in 2018, the ASEAN Smart Cities Network (ASCN) has been promoting a collaborative platform for the ASEAN Member States (AMS) and their local government to work towards sustainable urban development. ASCN was thus developed to manage the urbanisation challenges in the era of industry 4.0.

Today almost 50 percent of ASEAN’s population lives in cities. ASEAN predicts that in 2025 there will be an additional 70 million living across ASEAN cities. While mega-cities such as Jakarta, Manila, and Bangkok keep expanding rapidly, studies project that rapid urbanization will also happen in many middle-tier cities — with populations starting from two hundred thousand to two million — such as Makassar, Johor Bahru, Da Nang, Davao City, Mandalay, and Chonburi to name a few.¹

Realising the urbanisation trend in the region, ASEAN foresees these as both challenges and opportunities. If not managed rigorously, urbanisation would perpetuate socio-economic and environmental problems such as income disparity, pollution, and traffic congestion. However, urbanisation also offers many benefits, for instance, job opportunities, business efficiency, collaboration, and communication networks, allowing urban residents to connect globally.

The ASCN facilitates close-collaboration between ASEAN cities, catalyses bankable projects with the private sector, and channels funding support from ASEAN’s dialogue partners. The network encompasses 26 pilot cities across all ten AMS: Bandar Seri Begawan, Bangkok, Banyuwangi, Battambang, Cebu City, Chonburi, Da Nang, Davao City, DKI Jakarta, Hanoi, Ho Chi Minh City, Johor Bahru, Kota Kinabalu, Kuala Lumpur, Kuching, Luang Prabang, Makassar, Mandalay, Manila, Naypyidaw, Phnom Penh, Phuket, Siem Reap, Singapore, Vientiane, and Yangon.

The ASCN adopted the ASEAN Smart Cities Framework to provide guidelines and reporting mechanisms. Each of AMS is represented by a National Representative and a Chief Smart City Officer in each city. These representatives meet every year, facilitated by the Joint Consultative Meeting (JCM), to report on progress and key achievements to the ASEAN Coordinating Council and the ASEAN Summit. The ASEAN Secretariat through the Integration Monitoring Directorate (IMD) monitors the progress and assists member cities drafting the annual ASCN report, ensuring actions align to the three ASEAN Community pillars; ASEAN Political-Security Community (APSC), ASEAN Economic Community (AEC) and ASEAN Socio-Cultural Community (ASCC).²

ASCN CURRENT PROGRESS

After one year of implementation, ASCN has been impactful in facilitating dialogue. There were two regional meetings conducted in 2019. First was the ASCN Workshop in Bangkok in June 2019, aimed to report the progress of the implementation and knowledge exchange on smart cities solutions and best practices. The National Representatives, Chief Smart City Officers from AMS, and the ASEAN Secretariat discussed the status of each smart cities project as well as various issues on the ASCN implementation.³
The second meeting was the ASCN Reviews Work on Smart Cities held on 23 August 2019 that brought the stakeholders to agree on the ASCN Terms of Reference that would be submitted for notation by the ASEAN Leaders at the 35th ASEAN Summit. In the meeting, the ASEAN’s external partners from the United States, Japan, Republic of Korea, and China presented their success stories from the smart cities project implementation in their respective countries.

During the second meeting, the Vietnam delegation led by Deputy Minister of Construction Nguyen Van Sinh, along with representatives from the Ministry of Foreign Affairs, stated that Vietnam’s 2020 ASEAN Chairmanship would ensure the continuation of ASCN. Vietnam would keep facilitating smart urban development in the ASCN community and providing technical and non-technical assistance. Vietnam has been actively developing the organisational scheme to create favourable conditions for exchanging experiences and forming linkages on smart urban development among ASEAN countries, localities, and private enterprises.¹

Compared to the ASEAN cooperation and partnerships that have been established before, the ASCN is a new and innovative approach, focusing on city-level and targeted solutions. Generally, external partners provide support and facilitation to the ASEAN-led initiatives at the regional or state level. However, ASCN is working in the city level to achieve a targeted impact with solutions provided by regional networks, stakeholders, and partnerships. So far, the network has been fruitful in fostering collaboration and building strategic work plan for each pilot cities.

**ASCN AND EXTERNAL DIALOGUE PARTNERS**

At the 13th East Asia Summit (EAS) held in November 2018, the leaders of ASEAN, Australia, China, India, Japan, the Republic of Korea, New Zealand, Russia, and the United States of America expressed support for smart urbanisation in the ASEAN region. The statement welcomed the establishment of the ASEAN Smart Cities Network. ASCN will be complemented by initiatives from EAS participating countries to promote greater cooperation among member cities, the private sector, and external. ASCN appears to be an attractive network for global actors who pose themselves as an influencer of sustainability and technology within the urban development sectors.

At the ASEAN-US Summit in 2018, US Vice-President, Mike Pence announced support for ASCN by introducing the US-ASEAN Smart Cities Partnership (USASCP). This partnership is developed as part of the US commitment to the Indo-Pacific region. Vice President Pence stated that “this effort will spur renewed American investment in the region’s digital infrastructure, advancing prosperity and security in Southeast Asia.”⁵ To start the partnership, the US invested US$ 10 million, targeting private sector engagement in smart city solution and digital economy, sharing best practices to promote collaboration, and strengthening regional cybersecurity capacity at the sub-national level.⁶

Following up on the US’s initiative, Australia pledged to establish an AU$ 20 million ASEAN Australia Smart Cities Trust Fund that will support the masterplan development of digital solutions in ASCN plot cities. This fund is managed by the Asian Development Bank.
(ADB) under the Urban Financing Partnership Facility. Through this effort, Australia is looking to advance its soft influence in ASEAN, especially amidst growing competition from other external partners.  

Japan also shows support for the ASCN. In October 2019, the Ministry of Land, Infrastructure, Transport and Tourism of Japan invited the Ministers in charge of infrastructure development of ASM, ASEAN Secretariat, and the Chief of Smart City Officers from ASCN smart cities to the first ASEAN-Japan Smart City Network High-Level Meeting in Yokohama. The meeting facilitated knowledge exchange on Japan’s know-how and technologies on smart cities and matching up Japanese public and private organisations to ASCN. Japanese support of ASCN complements Prime Minister Shinzo Abe’s vision to promote “Japanese Quality Infrastructure” internationally.

More recently, at the ASEAN-China Summit held in November 2019, ASEAN leaders and China issued a statement on the Smart City Cooperation Initiative. This statement underlines ASEAN and China's commitment to addressing urbanisation challenges while harvesting the opportunities associated with the digital and 4th industrial revolution. The cooperation will focus on eight areas of collaboration, such as exchanging best practices, exploring collaboration, advancing research and technology adoption, supporting private sector collaboration, and city to city partnership.

This statement elevates China’s seriousness in developing connectivity with Southeast Asia, especially after China started realizing the Belt and Road Initiative (BRI) in the regional bloc. ASCN can be a platform for China to complement its grand connectivity project in Southeast Asia.

Further, at the recent 2019 ASEAN-ROK Commemorative Summit in Busan, the Republic of Korea (ROK) stated its willingness to collaborate in smart cities, digital economy, and cybersecurity as part of its New Southern Policy that envisions stronger ROK diplomacy with ASEAN. President Moon Jae-in has consistently raised a smart cities and information & communications technology agenda on ROK bilateral partnership with ASEAN State Members.

At a bilateral meeting with President Joko Widodo of Indonesia, for instance, President Moon voiced his willingness to share his country’s experience of relocating government offices to the administrative city of Sejong, since Indonesia has now announced plans to move its capital. This commitment is expected to advance further cooperation on smart cities, technology, and green infrastructure projects between Indonesia and ROK.

ROK is also looking beyond traditional areas of cooperation in trade and investment with Singapore. In a bilateral meeting during ASEAN-ROK Commemorative Summit, both President Moon and Prime Minister Lee Hsien Loong agreed to expand collaboration in smart cities, medical and biotechnology, smart grids, intellectual property, and cybersecurity, along with the upgrading of a free trade agreement between the two countries.
Table 1 ASCN Statement of Support from the External Dialogue Partners

<table>
<thead>
<tr>
<th>No</th>
<th>ASEAN Smart City Network Statement of Support</th>
<th>External Partner</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>East Asia Summit Leaders’ Statement on ASEAN Smart Cities</td>
<td>Australia, China, India, Japan, the Republic of Korea, New Zealand, Russia, and the United States</td>
<td>15 November 2018</td>
</tr>
<tr>
<td>2</td>
<td>US-ASEAN Smart Cities Partnership</td>
<td>The United States</td>
<td>15 November 2018</td>
</tr>
<tr>
<td>3</td>
<td>ASEAN Australia Smart Cities Trust Fund</td>
<td>Australia</td>
<td>April 2019</td>
</tr>
<tr>
<td>4</td>
<td>ASEAN-Japan Smart Cities Network High Level Meeting</td>
<td>Japan</td>
<td>8-11 October 2019</td>
</tr>
<tr>
<td>5</td>
<td>ASEAN-China Leaders’ Statement on Smart City Cooperation Initiative</td>
<td>China</td>
<td>3 November 2019</td>
</tr>
<tr>
<td>6</td>
<td>ASEAN-ROK Ministerial Meeting on Smart City</td>
<td>The Republic of Korea</td>
<td>25 November 2019</td>
</tr>
</tbody>
</table>

Source: various media outlets

PARTNERSHIP TREND

Overall, ASCN encourages pilot cities and external partners to collaborate in six sectors: (1) civic & social (2) health & wellbeing (3) safety & security (4) quality environment (5) built infrastructure, and (6) industry & innovation. Among 20 samples of partnerships established between the ASCN pilot cities and partners from 2018 to 2019 (Table 2), the industry & innovation (seven partnerships) and the safety & security sectors (six sectors) are gaining significant support from the solution providers. The industry & innovation sector covers a building masterplan for development, connecting infrastructure, delivering services, and maintaining economic growth in the urban area. Meanwhile, the safety & security sector encourages the utilisation of internet urban control systems and integration, for instance, traffic management, open data, command centre, and cybersecurity. The other focus areas, such as built infrastructure (4 partnerships), civic & social (3 partnerships), quality environment (1 partnership), and health & wellbeing (1 partnership) gain less show of support from partners compared to the former two sectors.

In the industry and innovation sector, for instance, the City of Yokohama provided expertise to assist Amata Smart City Chonburi, one of the largest industrial estates in Thailand, to conduct a feasibility study for an efficient and sustainable industrial estate. Amata is a leading industrial estate that supports the Government of Thailand Eastern Economic Corridor (EEC) programme to attract investment flow into the country. The feasibility study focuses on technology, renewable energy, efficient infrastructure, and sustainable environment management. Also, a Japanese technology firm, Hitachi, invested in an
Internet of Things (IoT) centre in Amata Smart City Chonburi to promote cross-cutting services across the manufacturing and logistics security in Thailand.

The Japanese enterprise is interested in investing in city-wide infrastructure in Southeast Asia. In Yangon, the Japan International Cooperation Agency (JICA) is collaborating with the Yangon Downtown Conservation Project to assist the city government of Yangon in mitigating traffic congestion and improving the urban environment in Yangon. The collaboration has further expanded into the technical assessment towards rehabilitating drainage facilities, removing bottlenecks on major roads, improving the streetscape to restore the city liveability, and advancing the socio-economic development in Yangon Central Business District.\textsuperscript{15}

In the safety and security sector, a Japanese multinational technology corporation, Fujitsu, has assisted the Jakarta Regional Disaster Management Agency (BNPB) in developing the Disaster Information Management System (DIMS) for anticipating severe flooding that hit Jakarta.\textsuperscript{16} Through this technology, BPNP Jakarta is now able to provide a web portal to disseminate information to the public using digital maps and to send out messages to the related disaster-management organisations.

While Japanese enterprises provide comprehensive solutions that encompass sectors such as industry and innovation, built infrastructure, and security & safety, the ROK started by exploring smart city partnerships in ASEAN through the education sector. The ASEAN-Korea Centre, which has served in advancing cooperation between ASEAN and the ROK for ten years, actively conducts seminars, training, and capacity-building programmes on urban innovation and creativity-driven growth in various ASEAN cities.\textsuperscript{17} This strategy has put the ROK as an active partner for exploring collaborations to nurture mutual benefit.

Recently, Korea’s Ministry of SMEs and Start-ups (MSS) signed an MOU with Enterprise Singapore to launch the first Korea Start-up Centre (KSC) in Singapore. This centre offers physical workspaces as well as services on the business set-up, facilitating South Korea SMEs and start-ups to arrange business in Singapore. With this centre, start-up firms from both countries can utilise resources and networks to expand their market in South Korea and ASEAN.

The initiative to launch a resource centre is not only proposed by the ROK. Following up after the issuance of ASEAN-China Leaders’ Statement on a smart city cooperation initiative, a Chinese technology company, Huawei, launched the first Artificial Intelligence (AI) centre powered by 5G capabilities in Singapore with a total investment of US$ 10 million.\textsuperscript{18} The centre serves to harness research and development on AI to harness urban safety and security system. It allows Singapore’s government agencies, research institutes, and small-medium size enterprises to use the facilities as a learning hub for digital transformation.

ASCN does not only forge collaboration between pilot cities and external solution partners, but also creates inter-collaboration between regional solution partners and pilot cities. The International Enterprise Singapore (IE), for instance, signed an MOU with the City Government of Makassar to build Makassar’s digital service platform which includes smart cards, intelligence transportation, flood detection, and intelligent street lighting. With this MOUs, the City of Makassar invites more Singapore companies to be involved in providing
A Singaporean blockchain company, Pundi X, also stated an interest in working with the City Government of Phnom Penh in building a 100-hectare business district supported by blockchain infrastructures that include public safety systems, water & power network, road traffic and commuting command.

Table 2 ASCN Sample of Partnership in Pilot Cities from 2018 to 2019

<table>
<thead>
<tr>
<th>No</th>
<th>ASCN Partnership</th>
<th>Partner</th>
<th>ACSN Pilot Cities</th>
<th>Focus Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Republic of Korea's Ministry of SMEs and the Enterprise Singapore</td>
<td>ROK</td>
<td>Singapore</td>
<td>Industry and Innovation</td>
</tr>
<tr>
<td>2</td>
<td>City Government of Banyuwangi and John Wiley &amp; Sons</td>
<td>USA</td>
<td>Banyuwangi</td>
<td>Health and Well-Being</td>
</tr>
<tr>
<td>3</td>
<td>Taiwan’s Ministry of Economic Affairs, Asia-Pacific Telecom Group (APTG) and True Digital Park, Bangkok</td>
<td>Taiwan</td>
<td>Bangkok</td>
<td>Industry and Innovation</td>
</tr>
<tr>
<td>4</td>
<td>ING Holdings Cambodia, Causeway Bay Group HK, Sino Bay Construction HK</td>
<td>Hong Kong</td>
<td>Phnom Penh</td>
<td>Industry and Innovation</td>
</tr>
<tr>
<td>5</td>
<td>Pundi X and City of Phnom Penh</td>
<td>Singapore, Phnom Penh</td>
<td>Industry and Innovation</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Cambodia’s Ministry of Land Management, Urban Planning and Construction (MLMUPC) and Korea’s Ministry of Land, Infrastructure and Transport on ICT for City Planning</td>
<td>ROK</td>
<td>Phnom Penh and other cities</td>
<td>Built Infrastructure</td>
</tr>
<tr>
<td>7</td>
<td>Cambodia’s Ministry of Land Management, Urban Planning and Construction (MLMUPC) Japan’s Ministry of Land, Infrastructure, Transport and Tourism</td>
<td>Japan</td>
<td>Phnom Penh and other cities</td>
<td>Built Infrastructure</td>
</tr>
<tr>
<td>8</td>
<td>Amata City Chonburi, Hitachi. City of Yokohama, and Yokohama Urban Solution Alliance</td>
<td>Japan</td>
<td>Chonburi</td>
<td>Quality Environment</td>
</tr>
<tr>
<td>9</td>
<td>ABB and Ho Chi Minh City on Smart Cities</td>
<td>Switzerland, Sweden</td>
<td>Ho Chi Minh City</td>
<td>Safety and Security</td>
</tr>
<tr>
<td>10</td>
<td>Cisco and City of Hanoi on Smart Utilities</td>
<td>USA</td>
<td>Hanoi</td>
<td>Safety and Security</td>
</tr>
<tr>
<td>11</td>
<td>Alibaba and City Government of Kuala Lumpur</td>
<td>China</td>
<td>Kuala Lumpur</td>
<td>Safety and Security</td>
</tr>
<tr>
<td>12</td>
<td>Dassault Systèmes and Virtual 3d Singapore</td>
<td>France</td>
<td>Singapore</td>
<td>Civic and Social</td>
</tr>
<tr>
<td>13</td>
<td>Siemens and Bangkok Railways</td>
<td>Germany</td>
<td>Bangkok</td>
<td>Built Infrastructure</td>
</tr>
<tr>
<td>14</td>
<td>Jakarta Regional Disaster Management Agency (BNPB) and Fujitsu</td>
<td>Japan</td>
<td>Jakarta</td>
<td>Safety and Security</td>
</tr>
<tr>
<td>15</td>
<td>Yangon Downtown Conservation project and JICA</td>
<td>Japan</td>
<td>Yangon</td>
<td>Built Infrastructure</td>
</tr>
<tr>
<td>16</td>
<td>MPI Centre Makassar and International Enterprise Singapore</td>
<td>Singapore, Makassar</td>
<td>Industry and Innovation</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Davao Public Safety and Security Command Centre, IBM, and Huawei</td>
<td>USA, China</td>
<td>Davao</td>
<td>Safety and Security</td>
</tr>
</tbody>
</table>
Source: various media outlets

**CONCLUSION**

ASCN has been providing a network for channelling resources from external partners to build stronger and pragmatic cooperation at the local level. For ASEAN, ASCN is a new way to explore and deepen cooperation, i.e. at the city instead of at state level. Through this network, ASEAN has defied the so-called “ASEAN top-down approach” by embracing regionalism while allowing local government autonomy and participation. It encourages ASEAN cities to be proactive in tapping capital opportunities for social and economic impacts, accessing global market, connecting global experts, and exchanging knowledge within ASEAN cities.

ASCN has become a strong pull for external partnerships, attracting the US, Australia, Japan, China, and ROK to collaborate. To further sustain the network, ASEAN must uphold its centrality to maintain equal relations with these partners. The relationship should be balanced by consistent internal and external dialogues to understand each external partner’s specialisation. Further, ASCN should ensure that the participating cities specify their needs, so that resources from external partners can be channelled accordingly.

Among the six focus areas that have been proposed by the ASCN, the industry & innovation and safety & security are the most attractive sectors for solution partners. There are a few proposals made by pilot cities on improving environment quality, and health & wellbeing, however these sectors have not been optimally tapped by the solution partners.

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7 Natalia Grincheva, “The Soft Power of Smart Cities: The Giant Missing Bit - AIIA - Australian Institute of International Affairs,” accessed January 10, 2020,


13 Centre for Liveable Cities, “ASEAN Smart Cities Network.”


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