

# Singapore VC: Get smart



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Singapore's smart nation urban development policy has attracted noticeable interest from the VC industry. The plan's broad inclusiveness and lack of hard targets could bode well for its sustainability

Establishing hard targets is an effective planning and execution protocol in the short-term, but for big jobs, it's sometimes best to keep the mission as flexible as possible. If all goes according to plan for US-based venture firm Highland Capital Partners, its latest investment will deliver Singapore the world's first fully automated taxi fleet within two years. As part of the Southeast Asia country's "smart nation" initiative, however, this milestone will only represent a small part of a far less concrete goal.

Highland has led a \$16 million round for US driverless car start-up NuTonomy, which is aiming to set up an app-hailed cab service in Singapore at a time when the autonomous transport sector is dominated by major multinationals. This bid to parallel the progress of larger, better funded competitors typifies much of the smart nation vision - aiming to leverage new technologies as a business building platform that will allow a small country with relatively few resources to become a global leader.

"Support from the Singaporean government was a key component of our decision to invest in NuTonomy," says Bob Davis, a partner at Highland. "They've been committed to autonomous vehicle technology for quite some time and in Singapore the future is here today with multiple grids within the city where our vehicles can be seen driving every day. It's clear that Singapore has become a world leader in smart city technology, and that was a critically important consideration in our decision."

As more foreign companies are attracted by smart nation to set up shop in Singapore, the country seems poised to realize its goal of becoming a major start-up hub. However, the inevitable vagueness of such an expansive government policy has left interested venture capital players with a considerable amount of uncertainty as to how and when this emergence will happen.

## **Policy roll-out**

Singapore Prime Minister Lee Hsien Loong launched smart nation in 2014 as a broadly inclusive directive without formal budgets or timelines to incentivize various government departments and industries to pursue novel technologies that drive urban efficiencies. Financial support was announced earlier this year with S\$19 billion (\$14.1 billion) earmarked for R&D investment, to be shared in unspecified proportions across smart nation and related macro development initiatives, including SkillsFuture and Future Economy. This funding will be distributed over the next five years with about 17% allocated to public-private collaborations, 21% for biomedical sciences and 17% for manufacturing and engineering.

Previous government efforts to jumpstart a technical innovation community have yielded mixed results. In the mid-1990s, Singapore supported a similarly nebulous policy push aimed at developing the "information superhighway," which included financial sweeteners for communications companies and foreign VCs but failed to spark many technology start-ups. While the term smart nation often evokes an updated version of the dubious superhighway branding, cynicism is hard to find among venture players currently experiencing a shift in sentiment for the local start-up space.

"If you look at all the moving parts and all the system dynamics, smart nation is valuable even just as a buzzword because it helps guide decision making" says Meng Weng Wong, co-founder of local incubator JFDI. "If a start-up is able to tell a story about how it is part of the smart nation vision, that tells the investors to say yes rather than no."

Investor confidence in smart nation is fundamentally underpinned by the universal marketing drivers of smart city technology, including escalating demand for more efficient civic management systems and resource use as urban environments globally experience challenges related to rapid population increases and sprawl. These forces are expected to represent particularly severe challenges in Singapore as the world's only true city-state with an effectively 100% urban citizenry and limited access to resources for tackling its sustainability issues.

Besides establishing a heightened sense of urgency for smart city investment, Singapore's city-state status also delivers some unique advantages relative to other jurisdictions. Most notably, these include a more streamlined structural flow for the country's smart city agenda, whereby projects are managed via a top-down federal authority system as opposed to the murkier and often redundant municipally managed systems that complicate similar initiatives in other cities.

Unlike most smart city plans globally, smart nation also benefits from the coordination of a centralized project management office which holds the various agencies involved accountable for their respective contributions. Cultural advantages, meanwhile, include a local tendency - relative to Western competitors - to be more receptive to the arguably privacy violating methods often associated with new urban management technology drives.

## **The VC angle**

Adding interest, AVCJ understands that the government is now in talks with local venture firms as part of an effort to reverse regulations that currently require funds to operate under the same consumer protection restrictions as hedge funds. This development could accelerate the trickle-down effect of corporate smart city investment

interest into the entrepreneurial ranks. However, considering the number of local start-ups is estimated to have doubled during the past 10 years, the early-stage end of the market is expected to be more than capable of seizing the opportunities as they materialize.

"The start-up ecosystem has a big role to play in partnering with the government and some larger enterprises to actually test a lot of this innovation, says Leslie Loh, managing director at local seed-stage investor Red Dot Ventures and formerly a board member of the Infocomm Development Authority (IDA), a Singaporean government agency directing a number of smart nation rollouts.. "Some big companies might get involved in this, but really, in terms of numbers and speed, it's going to come from the start-up sector, which has gained a certain maturity over the last few years."

AVCJ research has tracked considerable traction for VC investment in Singapore during the past few years, with annual venture deployments averaging about \$604 million between 2012 and 2015, compared to a mere \$57 million annual average during the prior four-year period. Much of this momentum reflects the country's role as a de-facto hub for Southeast Asia, which is attracting investment in opportunities tied to emerging internet and mobile penetration trends.

Singapore-based Golden Gate Ventures' recent close of a \$60 million fund is not only illustrative of this trend but also points to growing international interest in the local start-up ecosystem. LPs in the fund include groups from the US, South Korea, Thailand, Germany, Belgium and the Middle East. In addition, top management from US-headquartered True Global Ventures recently relocated to Singapore with a view to sourcing early-stage investment opportunities, while Michael Blakey, director of UK-based venture investor Avonmore Developments, is looking to establish a Singapore fund.

"We are attracting a lot of international companies, and many of them have told us they're setting up innovation labs in Singapore specifically to work with us on integrate, innovate and invent," says Hock Yun Khoong assistant CEO at IDA. "They come here because they're able to tackle one of the tech challenges we put up to them and they find it attractive because Singapore has always been a very open market."

The National Research Foundation (NRF) is also pitching in, with the third installment of its early-stage venture program - whereby the NRF matches commitments to funds on a 1:1 basis on the condition that all the capital goes into Singapore-based start-ups - targeting corporate venture capital. A total of S\$40 million will be split between funds established by real estate developer CapitaLand, cloud services provider DeClout, agriculture company Wilmar International and logistics provider YCH Group. The investment is seen as significant in demonstrating the scope of smart nation by capturing a seemingly disparate group of sectors under one, malleable city improvement agenda.

This diversification may represent the policy correction the Singapore government needed after the failure of the overly communications-focused investment incentive program under information superhighway. The unrestrictive nature of smart nation therefore offers an opportunity for the country to benefit from the notion that technological evolutions cannot necessarily be predicted, only embraced as their applications emerge in society.

"Whenever the government announces a new strategic thrust, people will see what they can do to fit that thrust, and sometimes you get a little bit of shoehorning, but

generally, it does help people orient in the direction of the desired industry innovation," JFDI's Wong adds. "When the government says it wants a smart city, that sends a signal to start-ups, enterprises and investors in the domain of IoT [internet-of-things], for example, that Singapore is open for business in IoT."

## **IoT issues**

IoT has served as an unofficial flagship industry for smart nation, given its applications for collecting big data on citizens' behavior patterns offer a potential platform for various civic efficiency improvement efforts as well as a marketplace for analytics companies and sensor technology developers. Singapore's Economic Development Board (EDBI) has made two investments in this space, including US-based software and services company Greenwave Systems.

"Singapore requires a whole eco-system of committed players, including the government, multinationals, local companies and research institutes, with strong synergies to co-create and deploy new or innovative solutions in the industry," an EDBI spokesperson says. "Greenwave's disruptive solutions will empower local businesses and users to seamlessly connect and control multiple intelligent devices and applications at work and home to raise their productivity and efficiency. They will support Singapore's smart nation initiative beyond smart work-home automation across a wide range of IoT verticals such as logistics, transportation, healthcare and hospitality."

One of the keys to smarter smart nation investment, however, may entail maintaining a certain wariness about the tendency to focus on IoT, sensors and big data in the broader smart city discussion. City governments have only a limited range of budgetary means to incrementally implement initiatives and are at risk of ignoring existing infrastructure to put resources into more immediately marketable concepts like IoT and big data. The smartest solution, however, usually involves an economic integration of smart initiatives into existing systems - no matter how uninspiring a revamp of old infrastructure may be to more adventurously minded investors.

"Smart cities are all about doing more with less, enabled by technology," explains Gordon Falconer, the Singapore-based director of smart cities for energy management specialist Schneider Electric. "With limited budgets, any city in the world is looking for creative and innovative solutions to enable them to provide better services at all levels with minimal impact on recurrent funding. Obviously, creative business models and financing structures for any company trying to provide these solutions will be to their advantage."

As Singapore turns the corner on its 50th anniversary, the nation can look back on a growth story that has seen per capita GDP rise from around \$500 in 1965 to the current level of \$55,000. Social progress has also been remarkable, with the former colonial crossroads managing to establish an unlikely sense of purpose, patriotism and unity within a single lifetime. In this context, smart nation is perhaps most encouraging as a sign that the still-young country has not become complacent.

"The question for Singapore is how do we continue along the same exponential growth in economic and social terms while reducing our proportional use of resources," IDA's Khoong adds. "We can only accomplish this objective by using technology as a force multiplier. That's why we continue to look for new business models with smart nation."

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