

von  
Lucie Dani-  
elowitzová

# Singapore as the open innovation and tech hub in South East Asia

The author is currently a student of International and culture studies master degree program at the University of Passau. She spent her last year working partly in Malaysia for a tech start-up company.

The 'Lion City' has transformed itself from a third-world nation with poor infrastructure, low-end commerce and limited capital into one of the four Asian Tigers and finally becoming a first-world metropolis, where smart ideas are born. Hence, Singapore creates a very attractive environment for start-ups and it is no wonder that Singapore is globally well known as Asia's leading innovation and tech hub thanks to its strong state's investment into technology, start-ups and human capital.

In the global arena, the island nation remains highly ranked in the list of start-up ecosystem according to the 2017 *Global Start-up Ecosystem* reported by the *Start-up Genome* project. In addition, the 2016 *Global Innovation Index* reports that Singapore is the sixth most innovative economy in the world and first in Asia for innovation. The digital age, which is shaping the world around us, offers plenty of opportunities and challenges. The leaders of Singapore seem to be well-aware of that and therefore have taken the action to boost the future success of Singapore by transforming into a smart city.

## Smart Nation Initiative

Striving for continuous development of digital technologies and applications is essential for the fulfillment of any ambitious vision. In 2014, the government introduced the *Smart Nation* program which comprises of education and training to enhance Singaporean's skills in using as well as creating modern technologies. In other words, the island nation made a political commitment to innovation and technology for the purpose of creating a better place to live in, taking a big step into the future.

## Data sharing as the key to success

Singapore is the leading country in Asia in terms of supporting innovation like maps, public transport, trade and crime statistics through open data according to the *Open Data Barometer*. In 2011, the Singaporean government launched the open data portal (*Data.gov.sg*) to enable quality research and enhance the public engagement by giving access to publicly available data. The government authorities are keen to create an open data society where data sharing contributes towards establishing smart solutions for sustainable urban living. The Singaporean government is a good example of how to make most of the data for development as well as global progress. They are conscious of the potential in unlocking the data so that the data can be accessible to the public for further utilisation and having a positive impact not only on their civil society but also on the state economy. On the other hand, an important aspect to bear in mind is that the published open data should be relevant and of good quality in order to be easily consumed by the public. This is what the Singaporean government constantly focuses on and ensures by releasing the quality guide to the public for feedback gathering and more importantly, for suggestions where is a space for the improvement.

## Encouraging start-ups

When it comes to ease of conducting business, Singapore rated to be one of the easiest places to do business according to the *Ease of Doing Business* report made by the *World Bank*, which in turn contributes to fast growing community of tech start-ups in the island nation. The government's investment

Singapore  
scenery.  
© Lucie Dani-  
elowitzová



subsidiaries provide special programs to boost the start-up ecosystem in Singapore by creating start-up spaces for networking and exchanging ideas. Moreover, the accelerator and incubator programs offer support emerging start-ups through mentorship, training and education. One of the successful initiatives with a positive impact of open technology on social change is the start-up organisation *FOSSASIA*, founded in 2009 by Hong Phuc Dang and Mario Behling. The free and open source technology organisation is aiming for a positive societal change by bringing talented people together to work on various projects with an essential support of open technologies. Furthermore, they organise open tech events and hack labs such as the annual *FOSSASIA Open-TechSummit* where participants can learn about new developments in software, hardware, science and machine learning attended by skills enhancement oriented tracks. Besides, *FOSSASIA Pocket Science Lab* aims to develop hardware for schools and universities to enable pro-active learning about physics and chemistry.

### Issues of the Smart Nation Initiative

The *Smart Nation Initiative* has made Singapore a living lab for testing smart solutions to urban issues which require a high degree of coordination among government, research institutions and companies. Although the whole initiative empowers the people both ways, it is way too centralised and there is missing freedom of information law. Based on the annual study *Freedom on the Net* published by *Freedom House* organisation in 2016, Singapore is only partly free in terms of freedom, civil liberties and political rights. On one hand, the republic's constitution provides the high-security environment as well as open data for the citizens; on the other hand, it uses legal power to obtain personal data for surveillance purposes in the name of national security by centrally controlled internet monitoring. Hence, Singaporeans have no law which recognises the right to internet privacy. The interesting finding is that even though citizen's privacy is not entirely respected by the state, Singaporeans do not seem to be concerned about the absence of privacy rights, as the government justifies its surveillance actions by providing residents the benefits of high security. Besides that, there is no need for any authorization for the state authorities to gather personal data from any computer, even real time when it's a question of a threat to national security.

The government guarantees open-access to all communication carriers and internet providers without discrimination, however, most of the dominant internet providers are owned by government-linked companies. Furthermore, the fact that large online media companies are closely related to the gov-



Founder *FOSSASIA* Hong Phuc Dang at *Open SOA* conference  
© *Forum Internationale Wissenschaft, Bonn*

ernment, may contribute to the absence of sufficient transparency in the online content regulation, although there are no restrictions on accessing social media or communications apps. Especially bloggers and independent news have experienced restrictions actions against their critical contents and offensive posts.

### Maintaining balance

In spite of this, Singapore managed to develop information and communication technology infrastructure at high-level. One of the projects completed is a governmental initiative of national wireless network, enabling citizens a free public access. Currently, around 82 percent of the Singaporeans have internet access, offering substantially more freedom compared to other types of media. Nevertheless, according to me such a »tracking system« reminds me of a science fiction movie from near future, where using smart technologies and open data helps to tackle the daily life challenges of Singaporean residents with a desire to transform into a smart nation. However, there is a risk that too smart could be easily turned into a real-time dog watcher taking a control over their lives in the name of public good and economic growth. Therefore, a balance should be found between technical progress and respect of fundamental rights and liberties. ■

### Resources

- > Engadget – *Singapore is striving to be the world's first ›smart city‹*, <https://www.engadget.com/2016/11/03/singapore-smart-nation-smart-city/>
- > Freedom House – *Freedom on the Net report 2016*, [https://freedomhouse.org/sites/default/files/FOTN\\_2016\\_Full\\_Report.pdf](https://freedomhouse.org/sites/default/files/FOTN_2016_Full_Report.pdf)
- > OpenGov – *EXCLUSIVE – Innovation and informed-decision making through high quality open data on Data.gov.sg*, <http://www.opengovasia.com/articles/7315-exclusive---innovation-and-informed-decision-making-through-high-quality-open-data-on-datagovsg>
- > SCIENTIFIC AMERICAN CUSTOM MEDIA – *Singapore: A Smart Nation*, <https://www.scientificamerican.com/products/singapore-a-smart-nation/>