{S} OPEN SOURCE
HONG KONG

5 June 2020

Submission on Innovation and technology development and the re-industrialization policy in Hong Kong from Open Source Hong Kong

In the response to the invitation from the Panel on Commerce and Industry of the Legislative Council in Hong Kong, our organisation 'Open Source Hong Kong' submit this document to describe the open source development in recent year and our opinion on Innovation and technology development and the re-industrialization policy in Hong Kong.

In the success of the Internet and Linux, many technology companies like Google, Apple, Microsoft also make their open source contribution for open collaboration, Microsoft acquired GitHub, the largest open source software platform. Most startup companies use open source software for their product development, and the principle of 'no vendor lock-in' allows more technology innovation, it becomes **the new model of global technology development and market economy**.

International FinTech and Big Data Trend

In recent years, blockchain is developed for FinTech as different virtual currencies, smart contracts, financial services, global logistics, digital identity. The **openness and decentralisation** are its characteristics are similar to the open source philosophy which are trustworthy and secure. It becomes a new technology trusted by international firms and users.

Bitcoin and Ethereum are the famous open source peer-to-peer cryptocurrency. Linux Foundation forms HyperLedger to provide different open source blockchain applications, vendors like IBM, Intel, J.PMorgan, Huawei, Xiaomi joins HyperLedger membership, and IBM releases its open source blockchain project HyperLedger Fabric.

In Artificial Intelligence, Google releases an open source machine learning software library Tensorflow, to foster the development of A.I. applications.

From the above examples, many technology breakthroughs also embrace open source technologies, and the number of open source projects is more than a million. Big giants in information technology like Google, Facebook, Apple also releases some famous and important open source projects, for example, the Android operating system by Google, Swift programming language by Apple. Many vendors join Open Invention Network to grant royalty-free and field-of-use unrestricted licenses for all OIN owned patents and patent applications to other OIN members.

Hong Kong and International Open Source Participations

Our organisation - Open Source Hong Kong (OSHK) is a group of open source professionals and marketing professionals in the industry. We are volunteers to organise local and overseas activities for the open source, open data, I.T. industry, and startups, and make contributions to Hong Kong. Our President is also responsible for a few famous global open source projects as a contact point.

OSHK establish Hong Kong Open Source Conference in 2013, as the location advantages of our city, we invite global open source developers to join the conference in Hong Kong for technology skill exchanges, the conference is open for local and overseas developers, tech companies and startups to participate, and openly collaborate to contribute in technology.

Open Data and Big Data Analytics

OSHK also starts the International Open Data Day Hackathon, data users and developers can develop prototypes to demonstrate the power and possibilities of open data and its benefit to our civil society, startups, and researches in universities. We also invited the government department to join and share, and our participants also give feedback to the government departments.

In 2015, Hong Kong Python User Group establish PyCon HK with OSHK, we invite international Python experts to our conference for technical discussion. In the last 5 years, **data scientist positions are rapidly growing in international financial companies and investment banks in Hong Kong, to work for data engineering and analytics.** Python is an open source programming language and provides the best fit development tools for Artificial Intelligence, Machine Learning, Internet of Things, and other applications for FinTech and startups.

Open Source contributions to Hong Kong Education

Our executive committee member Mr. Kingman Leung is a registered social worker in Hong Kong. In the last 20 years, he develops 2 open source projects with a group of local seniors - Stroke 5 and FreeHKFonts. Stroke 5 is a Chinese input method for disabled persons.

FreeHKFonts is aimed to develop the sets of Chinese fonts referring to the document of 'Hong Kong Chinese Lexical Lists for Primary Learning' published by the Hong Kong Education Bureau. It provides free Chinese font sets for teachers and students for daily class works, so they don't have any budget concern because it is no vendor lock-in in the open source software. Therefore, open source technologies **show a wider vision of technology development and more social benefit and impacts**.

And some educational open source software projects are also developed by other teachers at local International schools and academics.

The outflow of Hong Kong Open Source Talent

In recent years, it is lack of career development path for local-born open source talent. At the same time, companies in Europe and America continue to recruit global talent, therefore these outstanding talents move out of Hong Kong. And the local startups and tech companies in Hong Kong try to recruit talent in Hong Kong and Asia, but it is difficult to look for talent with better global insight and communication. **We should make some changes to keep local-born talent in Hong Kong to maintain the standard of our technology innovation and show the skill and innovation made by local-born citizens to the global market**.

Suggested Policies

To attract more companies and individuals to take part in technology innovation, increasing the use of open source and open data to collaborate in international technology innovation.

Open Source Hong Kong suggests the following policies to encourage companies and individual to take part in technology innovation with open source:

1. Ensure internet freedom and communication freedom, let's open source developers and the industry to freely collaborate and freely communicate with others in the world for technology innovation on different internet platforms.
2. The Hong Kong Government should create and manage a GitHub account and releases the software for public services as open source software, for example, releasing the customised CKAN of data.gov.hk, and encourage the government departments and the industry to collaborate on those government projects freely as open source software.
3. Tax exemption for open source talent who returns from other countries and any cities outsides Hong Kong.
4. Tax exemption for the individual and companies sponsoring open source technology events.
5. Tax exemption for the individual and companies which participate in local and overseas open source technology events.
6. Funding grants for overseas visitors visiting Hong Kong open source events.
7. Open source technology communities can book venues managed by the government departments in higher priorities at no cost or low cost.
8. Funding grants for open source technology communities to organise technology conferences and activities in Hong Kong to cover the venue and exhibition cost.
9. Open data and public contents available on the government website use Creative Commons CC0 or a compatible license, the ownership of online public resources returns to the citizens.

To train more potential open source talents for future, OSHK also suggests the following education policies:

1. Provide additional UGC funding grants to universities and higher education which offer open source courses and university research using open source approach.
2. Educate the basic knowledge of the open source and open data to students in local secondary and primary schools.
3. Build the Open Courseware for workers, university students, and students in secondary and primary schools, let teachers and the public collaborate and share the course materials to improve the education standard and fair learning.

Mr. Sammy Fung
President, Open Source Hong Kong.