Dong SUN – Secretary for Innovation, Technology and Industry, Government of the Hong Kong Special Administrative Region (HKSAR)

The Blueprint identifies a need for the development of Hong Kong's upstream basic research, midstream technology transfer, and downstream industrial development. This represents a shift from the focus of the past, where only upstream basic research was prioritised before moving [elsewhere] for transformational industrial development.

22.06.2023

Tags: Hong Kong, China, ITIB, Investment, Innovation, Manufacturing, R&D

Hong Kong's Secretary for Innovation, Technology and Industry since July 2022, Professor Dong SUN is a pioneer in robotic manipulation of biological cells and robot control, whose research has led to breakthroughs in the use of robotics combined with various micro-engineering tools. Now with responsibility for developing Hong Kong into an international hub for innovation and technology, Professor SUN outlines what attracted him to the position, the scope and aims of the recently published

Hong Kong Innovation and Technology Development Blueprint, and why Hong Kong has the fundamentals to be globally competitive I&T centre.

What brought to you this position as Secretary for Innovation, Technology & Industry and what is the scope of this role?

I have lived and worked in Hong Kong for a long time, and believe we are living through a critical moment in the city's development. Although well-established as an international financial trading centre, there is a clear need for Hong Kong to create a new economic development engine, and innovation and technology (I&T) has been identified as this engine. Given my deep experience in Hong Kong's existing I&T ecosystem, my connection to mainland China having been born in Beijing,

my significant international connections from various professorships at overseas universities, and my positions on several international bodies, the Chief Executive of Hong Kong John Lee Ka-chiu asked me to take on this important role. Additionally, from January to June 2022 I was a member of the Legislative Council of the Hong Kong Special Administrative Region (LegCo) and had a chance to consider the city's I&T policy and how it could be developed further.

Is your mandate to continue and amplify a pre-existing strategy for I&T in Hong Kong or to set a new course entirely?

Upon taking this position I immediately organised the team to write the Hong Kong Innovation and Technology Development Blueprint. This important work represents the first time that a single, systematic document charting Hong Kong's path towards becoming an I&T centre has been created. Six months after starting – in December 2022 – the Blueprint was published, and it will stand as our guiding document over the next five to ten years.

Could you outline the main points of the Blueprint and the key areas it aims to address?

Hong Kong's traditional strength is as a financial centre, with lower levels of attention granted to I&T. However, based on the experiences of other cities in the Greater Bay Area (GBA) as well as in countries such as Singapore, it has become clear that I&T is a cornerstone of successful development. Therefore, if Hong Kong wants to maintain its leading position in the region, besides the continuous development of its status as an international financial centre, there is also the need to develop a deeper I&T footprint. This is our main motivation.

Additionally, Hong Kong is trying to answer several fundamental questions, including how to provide more job opportunities for young generations as well as increase economic prosperity and compete with other regional and global hubs.

Significantly, the 14th Five-Year Plan of the People's Republic of China also indicates clear support for Hong Kong's development into an I&T centre.

What significance does biopharma hold within the I&T Blueprint?

The Blueprint identifies a need for the development of Hong Kong's upstream basic research, midstream technology transfer, and downstream industrial development. This represents a shift from the focus of the past, where only upstream basic research was prioritised before moving to Shenzhen or other parts of the GBA for transformational industrial development.

In terms of industrial development, there are several key focus areas. The first is life and health technology, the second artificial intelligence (AI) and data science, and the third advanced manufacturing and new energy technology. Other cities such as Singapore and Shenzhen have developed strong advanced manufacturing capabilities, which are able to produce impactful GDP growth. The fourth is fintech, with the aim of consolidating Hong Kong's positioning as an international financial centre.

In terms of developing basic research, technology transfer and industrial development, will Hong Kong look to create its own companies, or bring in already-established players from mainland China and overseas?

We are putting sufficient resources into all three areas. In terms of upstream basic research, we need to consolidate our leading position. This year's budget has earmarked HKD nine billion for basic research; six billion of which will go towards establishing thematic research centres for life and health technology, with another three billion for enhancing basic research in some frontier technology fields such as AI and quantum technology. We hope that this investment will continue to attract top scientists from across the world to come to Hong Kong.

For midstream development, we have launched a new HKD ten billion scheme to support over 100 high-potential university research teams to transform, realise and commercialise their research. This will serve to strengthen and accelerate technology transfer, which represents a practical and cultural shift for Hong Kong. This scheme will begin in the second half of 2023 and many university teams have already prepared their proposals. Moreover, our quangos, with Hong Kong Applied Science & Technology Research Institute (ASTRI) as one of them, have been repositioned to enhance connections with universities and help them transfer research outcomes into technology.

On the downstream side, apart from having made a clear industrial policy, we have established a new office for attracting strategic enterprises from overseas to come to Hong Kong.

What package is on offer for potential international investors?

A HKD 30 billion Co-Investment Fund has been established, and we have some friendly policies regarding provision of land and space. For example, we just began consultation on a new land use policy for the Northern Metropolis, leveraging connections to Shenzhen. Taken together, San Tin Technopole in the Northern Metropolis and the Lok Ma Chau Loop – the proposed development site for the Hong Kong-Shenzhen Innovation and Technology Park – represent 300 hectares and will mostly be used by the I&T industry. Naturally, some research will also take place at these sites, but the primary focus is industrial, which will also create more job opportunities for Hong Kong people.

Other important enabling policies incentivise local industries to improve their manufacturing labour using innovative technology. For example, we provide HKD 15 million per production line to make it 'smart', which is a massive support. There is also support on offer for staff salaries – PhD graduates employed by high-tech companies can get a salary allowance of up to HKD 45,000 per month paid by the government. This can be maintained for three years for up to four employees per company. Bachelor's and Master's level graduates are also funded, but at a lower salary allowance level.

How much is the increasing integration of mainland China and Hong Kong an advantage or a disadvantage in terms of attracting investment to the city?

The 'One country, two systems' constitutional principle is a significant advantage for Hong Kong. We maintain an honest and open business environment with a robust legal system that enshrines the rule of law as common law, strong international connections, and top-quality universities – five of which are in the global Top 100.

Building on these strong fundamentals, Hong Kong is eager to continue attracting talent and investment from overseas and from the mainland. Hong Kong's unique positioning is a gateway to both mainland China and the world. This is a particular advantage of Hong Kong which we will continue to utilise, including in life and health technology.

Are the recommendations contained within the Blueprint already being implemented? What have been the most significant impacts in its first year of existence?

Four broad development directions were outlined in the Blueprint: to enhance the I&T ecosystem and promote "new industrialisation" in Hong Kong; to enlarge the I&T talent pool to create a strong impetus for growth; to promote digital economy development and develop Hong Kong into a smart city; and to proactively integrate into the overall development of the country and consolidate our

role as a bridge connecting the mainland and the world. Beyond these four main directions, we also formulated eight major strategies and set 16 targets with 42 recommendations, and KPIs to hit.

All of this creates a top-level plan for Hong Kong over the next decade. Implementation has already started with many proposals for I&T development based on the Blueprint. For example, we proposed several measures to enhance the digitalisation of Hong Kong. A digitalisation committee (Digital Economy Development Committee) – led by the Financial Secretary – has now been formed, which will work on improving many aspects of digitalisation, from infrastructure to data flow, and talent. In the 2023 budget, the city is proposing that a supercomputing centre be built, further developing Hong Kong's positioning as an international data hub.

How is Hong Kong going about building a biotech ecosystem in the city?

The Hong Kong government has done a good job so far in coordinating biotech development, including through the Science Park, which is a nurturing environment for start-ups and biotechs. Building on this – and our universities' globally competitive research – Hong Kong is now the world's second-largest fundraising hub for biotech companies, behind only Boston. We are therefore and Asia's largest such hub and have raised more than HKD 116 billion.

Many large pharmaceutical companies have already contacted us to learn more about Hong Kong. The potential is clear: the GBA's population alone is 86 million, while Hong Kong is an innovation hotspot for biotech development with good universities, good people, and many good innovation research outcomes.

Continuing to build a biotech ecosystem, as cities such as Boston have done before us, will be critical. While there may not yet be a big international Hong Kong pharma company, we have so many smaller companies with strong innovation outcomes which Big Pharma is very interested in collaborating with. This is coupled with the big mainland companies which see Hong Kong as an important node in their international expansion strategies.

Do you have a final message for PharmaBoardroom's international industry-focused audience, many of whom represent companies that are now starting to engage in clinical trials in Hong Kong?

Clinical data generated in Hong Kong can be used and is recognised internationally, and we will continue to foster good practice and encourage even more clinical trials in the city. One of the most important next steps is to work with the government in mainland China to enable Hong Kong-generated data to be used for more regulatory approvals there, as it already is for bodies such as the US FDA.

Additionally, Hong Kong is looking to enhance its clinical trial ability, and ITIB is working closely with the Health Bureau to bring the city’s clinical trial capabilities in line with its high levels of basic research.

See more interviews