

## ANNEX A – Updates to the IP Hub Master Plan

### EXECUTIVE SUMMARY

- 1 In April 2013, the Singapore Government announced a 10-year master plan to guide the country towards becoming a Global IP Hub in Asia. The IP Hub Master Plan aims to capture opportunities presented by increasing IP activities internationally to drive business and economic growth for Singapore.
- 2 The blueprint identified three strategic outcomes for Singapore, namely, (i) A Hub for IP Transactions and Management; (ii) A Hub for Quality IP Filings; and (iii) A Hub for IP Dispute Resolution. It also identified two enablers to support the three outcomes. These are (i) Skilled manpower resources networked to the region and beyond; and (ii) A conducive and progressive environment for IP activities.
- 3 Over the past four years, we have made significant progress in building a **strong and reliable IP regime that is well plugged into international networks**. Our companies have good access to foreign markets through the many IP partnerships that Singapore has forged with our key export destinations. We have also made headway in providing a support system for Singapore enterprises to level up in terms of IP awareness and management. Innovative enterprises now also have an avenue to monetise their IP through the IP Financing Scheme.
- 4 This has been achieved against a backdrop of sluggish global economic growth and world trade. We are also witnessing technological disruptions that have revolutionised business models and consumption patterns. Governments around the world are increasingly turning to innovation as the next driver of economic progress, and IP has emerged as an increasingly important strategic asset for businesses.
- 5 Not to be left behind, Asia is now at the growth frontier for innovation and IP activities. Asian economies have been increasing their investments into Research and Development (R&D). Asian corporations are seeing strong valuation of their intangible assets, including brands and technologies. Many innovative companies have relied on the IP system successfully to protect and capture value from their investments. Notable examples include Samsung and Huawei, both of which have succeeded in commercialising their IP in various ways. Asia has now overtaken other regions in terms of IP filing activities.

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- 6 Singapore's own innovation journey started in the early 1990s with the development of its R&D sector. We have in place several initiatives to build research competencies and grow start-ups. Our heavy investment into the innovation ecosystem is reflected in our consistently high standing in international studies such as the Global Innovation Index (GII) and the World Economic Forum (WEF) Global Competitiveness Report.
- 7 On the other hand, the same set of studies also highlights the need for Singapore to achieve better economic outcomes that commensurate with the level of our investment in innovation. The Committee on the Future Economy (CFE), which released its report in February 2017, recommended to **strengthen enterprise capabilities to innovate and scale up through building greater capacity for IP commercialisation.**
- 8 Ideas need to be protected before they can be commercialised or give our companies a sustainable competitive edge. In addition, **our innovators and entrepreneurs have to be more adept at managing and transacting IP.** This will ensure that our investments in R&D generate value for the Singapore economy and society. The next phase of the IP Hub Master Plan thus presents an opportunity for us to enable innovative enterprises to actively commercialise and monetise their IP.

### **Ideas to Assets: Recommendations to strengthen our innovation ecosystem through IP strategies**

- 9 Innovative companies should protect their IP effectively to secure and maintain their competitive edge in the global market. IP should not be viewed as a mere legal or technical issue. Instead, corporate leaders need to incorporate IP considerations into their business strategies.
- 10 The Intellectual Property Office of Singapore (IPOS) undertook a year-long consultation in 2016 to find out more about the role of IP in the innovation cycle. This consultation involved key stakeholders from Singapore and overseas for the purpose of understanding gaps and opportunities in our innovation ecosystem. In parallel, IPOS also commissioned a study on the IP Transaction and Management (IPTM) ecosystem in Singapore, which referred to international best practices. The findings, which also considered the imperatives of the CFE report and RIE2020 Plan, cumulate into the set of recommendations in this Update to the IP Hub Master Plan.

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- 11 This Update organises the key challenges and opportunities for Singapore in strengthening our innovation ecosystem along the lines of how businesses would make use of IP throughout the innovation cycle. At each stage of the innovation cycle, we examine how **growing IP expertise, improving the regime, and creating an effective marketplace will enable Singapore to achieve better innovation outcomes through greater success in IP commercialisation.**

### **Growing IP expertise**

- 12 IP expertise is increasingly important in today's innovation economy. It requires knowledge in business, technology and legal fields.
- 13 Our consultations with the innovation community found that more can be done to achieve better commercialisation outcomes. To make sharper and market-driven R&D decisions, we should **grow expertise needed to make sense of technology and business data.** IPOS has started to build expertise in technology foresighting and patent analytics. As patent filing tends to lead market growth, analysis of patent data will enable Singapore to find opportunities and collaborators.
- 14 For companies that have embarked on their R&D journey and require support to protect their IP effectively, we will also **grow a bigger pool of IP expertise able to assist inventors and innovative companies on IP protection** (such as patent drafting, patent litigation, and IP strategy). To train more IP experts, IPOS has started to expand its collaboration with institutes of higher learning while tapping on workforce related policies such as SkillsFuture and Professional Conversion Programmes.
- 15 For innovative companies seeking to expand overseas, a good knowledge of IP protection overseas is critical. More could be done to help businesses understand how to protect their innovations in overseas IP regimes, such as through "on-the-ground" support in the form of IP attaches for major markets. IPOS set up its first overseas IP office in China in 2015. Singapore should continue **to build and deploy expertise to assist companies in understanding the foreign IP regimes** in our key export markets.

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- 16 IP commercialisation expertise remains relatively rare all over the world. An emerging skillset, it requires a unique combination of technical knowledge and commercial acumen. IPOS is committed to **developing and centralising whole-of-government IP management (“IPM”) expertise**. These experts can be deployed to public agencies to help manage and commercialise their IP, as well as to formulate IP policies and practices that drive industry growth and innovation outcomes. Companies supported by our economic agencies can also benefit from this pool of IPM experts.
- 17 IP valuation is key to the success of any IP financing scheme. IPOS will work towards **establishing a set of practices, standards and certification on IP valuation**. We will also explore international adoption of these IP valuation practices and certification programmes through overseas partnerships. Valuation expertise will enable investors and financiers to make better financing decisions for IP-rich companies.
- 18 Our study found that IP jobs in Singapore typically command a premium of 30 per cent. With the above initiatives, Singaporeans can look forward to better jobs, as well as reskilling opportunities and training in the innovation and IP sector.

### **Improving the IP and innovation regime**

- 19 Singapore’s IP regime has consistently been rated as one of the best globally. With the emphasis on innovation in the future economy, the government should do more to shape an environment that encourages innovation, and rewards innovators through commercialisation and monetisation opportunities.
- 20 Innovative companies, which are IP-rich but physical asset-light, need support to grow their businesses. We should **align whole-of-government efforts to support innovative companies**. The IPTM study recommended more coherence in the administration of government grants available to businesses. The Ministry of Law (MinLaw) and IPOS are working with SPRING and other economic agencies to include IP considerations clearly within existing grant structures. This will enable us to streamline policy measures designed to incentivise and support IP creation in the innovation cycle.
- 21 However, the value of IP protection is anchored in the ability of companies to effectively and efficiently enforce their IP rights. The study found that the enforcement of IP may at times be too costly and lengthy, especially for small businesses. IPOS will work with MinLaw on increasing access to the IP dispute resolution system. This can be done through streamlining the IP dispute resolution system in Singapore, and **ensuring IP dispute resolution is cost effective**.

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- 22 For innovative companies seeking growth capital investments to scale up and expand overseas, there is now the option of using the IP Financing Scheme (IPFS) to obtain bank loans using patents, trade marks and copyright as collaterals. While Singapore is amongst the first in the world to do so, the traditional banking model may not be entirely suited to IP-based lending. To further help our innovative companies to scale, we will **consider alternative methods of financing for intangible assets**, such as through private equity and insurance.
- 23 The study found that the development of better intangible asset reporting will encourage greater monetisation of IP. Accounting and valuation of intangible assets still lag behind similar treatment for brick and mortar businesses. There is opportunity for Singapore to be a first-mover in tapping on a global economy increasingly driven by the creation of intangible assets. With our global status as a financial and legal hub, the study found value for Singapore **to consider the development of guidelines for intangible asset reporting**. It also recommended for us to explore initiatives that will encourage more companies and service providers to take an active interest in identifying, reporting and realising IP value.
- 24 Singapore enterprises should be given **greater access to publicly funded technologies**. The CFE has recommended for Singapore to push out IP arising from publicly-funded R&D to the market. MinLaw and IPOS, together with other agencies, have started work on drafting a National IP Protocol and updating the Master Research Collaboration Agreement (MCRA) to simplify, standardise and shorten IP negotiations by public research performers with the industry. A key objective is to enable greater commercialisation of government IP.
- 25 In addition, while there are several schemes to develop R&D capabilities and technologies, the consultation suggested that more can be done to **anchor post-R&D economic activities in Singapore**. This includes activities such as the commercialisation of IP and ensuing production, which will create high value jobs and new product/service offerings for Singaporeans. MinLaw and IPOS are working with the economic agencies to introduce the IP Development Incentive (IDI) scheme which will promote the exploitation of IP arising from R&D activities undertaken in Singapore.

### **Creating an effective marketplace**

- 26 To further support IP commercialisation, more can be done to create a network of innovators. IPOS will therefore **bring together a community of IPM practitioners** both from the government agencies, as well as private sector, to enable better IP commercialisation outcomes for Singapore.

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- 27 To help our innovators and companies better commercialise IP, SMEs need to be equipped with the requisite IP and business strategy tools without the additional burden of high cost. IPOS will be launching a self-help business portal, comprising business guides and diagnostic toolkits for SMEs. IPOS is also partnering SPRING to **enable our innovative companies to obtain subsidised customised one-on-one assistance for IP audit and IP strategy**. These efforts will give innovative companies greater access to IP advice which is central to any successful business strategies.
- 28 Innovation must make a difference in the real world. An effective marketplace is key for companies to monetise their IP. At the outset, R&D ought to be market-driven to enable commercialisation of products and/or services arising from new IP. The study called for better tracking of R&D performance. There is a need to **develop a platform for monitoring indicators pertaining to the commercialisation of publicly-funded R&D**. Beyond patent filings and licensing volume, the data should include information such as the number of spin-off companies created, new products launched and revenue from licensed products.
- 29 To further nurture the IP market place in Singapore, the IPTM study recommended for Singapore to **explore new platforms for increasing transparency and access to IP-related market information**. IPOS will be working with Intellectual Property Intermediary (IPI), an agency under SPRING, to analyse and bundle complementary IP from Singapore and overseas to further help companies access IP.

## Conclusion

- 30 The IP Hub Master Plan of 2013 has enabled Singapore to achieve considerable progress in terms of building a strong IP regime and deep networks on the international front. With progress achieved and the global momentum towards innovation, it is timely for Singapore to devote more resources towards the IP transactions and management aspect of the IP Hub Master Plan.
- 31 MinLaw and IPOS have started working on several recommendations based on the year-long consultation. These initiatives will enable Singapore to capture greater value from her R&D investments. Through more IP transactions and better IP management, we estimate a value add of **at least S\$1.5 billion to the Singapore economy in the next five years**. We seek to achieve the following results:

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Expertise	Regime	Marketplace
<ul style="list-style-type: none"> <li>• Increase the number of experts in IP, especially IP commercialisation. Overall, to increase IP jobs from 500 to 1,000 over the next 5 years.</li> </ul>	<ul style="list-style-type: none"> <li>• Achieve efficiency ratio rank of 65 in WIPO Global Innovation Index in 5 years.</li> </ul>	<ul style="list-style-type: none"> <li>• Help 1,500 companies understand the value of their IP by 2019</li> <li>• Provide customised 1-on-1 IP audit and IP strategy assistance to 150 companies by 2019</li> </ul>

We seek to continue advancing Singapore’s IP regime, grow and deepen IP expertise, and develop a better, more effective, IP marketplace. In all, the update to the IP Hub Master Plan will help Singapore to achieve better economic outcomes in the future economy.

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## Summary of key gaps and recommendations

	Expertise	Regime	Marketplace
<b>IP Creation</b>	<b>Gap 1:</b> Poor application of data analytics (e.g., patent information) to ensure innovation success.	<b>Gap 2:</b> Lack of coordination among agencies to support innovative companies.	<b>Gap 3:</b> Absence of strong collaboration within the innovation community.
	<b>Initiative 1:</b> Develop expertise in technology forecasting and patent analytics.	<b>Initiative 2:</b> Align whole-of-government efforts to support innovative companies.	<b>Initiative 3:</b> Grow and deepen innovation networks.
<b>IP Protection</b>	<b>Gap 4:</b> Lack of access to IP protection advice. <b>Gap 5:</b> Poor knowledge of IP issues in export markets.	<b>Gap 6:</b> High cost of IP enforcement.	<b>Gap 7:</b> Lack of tools for SMEs to understand and protect their IP.
	<b>Initiative 4:</b> Strengthen legal and drafting expertise by introducing multiple pathways to patent agent qualifications. <b>Initiative 5:</b> Build and deploy expertise to provide international advice on IP protection.	<b>Initiative 6:</b> Enable cost effective options for businesses through IP dispute resolution.	<b>Initiative 7:</b> Equip SMEs with IP and business strategy tools.

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<p><b>IP Commercialisation</b></p>	<p><b>Gap 8:</b> Lack of IP commercialisation expertise.</p>	<p><b>Gap 9:</b> Outdated funding models for innovative companies.</p> <p><b>Gap 10:</b> Weak application of intangible assets.</p> <p><b>Gap 11:</b> Need for stronger returns from R&amp;D investments.</p> <p><b>Gap 12:</b> Need to anchor post-R&amp;D economic activities in Singapore.</p>	<p><b>Gap 13:</b> Lack of collaboration and networking between research and industry.</p> <p><b>Gap 14:</b> Absence of an active marketplace to enable IP transactions.</p>
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	<p><b>Initiative 8:</b> Develop expertise in IP commercialisation.</p>	<p><b>Initiative 9:</b> Pilot new financing models for IP assets.</p> <p><b>Initiative 10:</b> Promote intangible asset reporting in Singapore.</p> <p><b>Initiative 11:</b> Develop a national IP protocol and whole-of-government Master Research Collaboration Agreement (MCRA).</p> <p><b>Initiative 12:</b> Refine tax incentives to anchor economic activities in Singapore.</p>	<p><b>Initiative 13:</b> Develop platforms for better tracking of IP and innovation performance.</p> <p><b>Initiative 14:</b> Improve access to IP market information.</p>
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