

1 Introduction to Research & Development
Activities

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### 1. Introduction to Research & Development Activities

In recent years, the R&D industry in South-East Asia has been flourishing, with countries in the region investing heavily to promote R&D activities. Certain countries such as Singapore and Malaysia have been the key players in the region, devoting larger percentages of their Gross Domestic Product ("GDP") to R&D expenditure. According to the UNESCO ranking world-wide based on percent of GDP, Singapore landed in the 15th place for spending 2.20% of its GDP on R&D activities in 2014.¹ On the other hand, Malaysia spent approximately 1.30% of its GDP on R&D activities in 2015, up from a mere 0.22% spent in 1996.² This phenomenal increase reflects the growing commitment and willingness amongst South-East Asian countries to invest in R&D activities, which is indubitably essential for economic growth. This presents opportunities for EU SMES wishing to invest in the R&D sector of the South-East Asian market.

Given the intellectual property rights ("IPRs") that arise from the R&D activities, as well as the potential commercial value attached thereto, it is of utmost importance that care is taken to ensure that such IPRs are well protected, and that their commercial value is maximised. This guide therefore seeks to highlight some important IP issues to consider when EU SMEs embark on R&D activities in South-East Asia, and highlight strategies that may be adopted by the EU SMEs to protect their rights in this journey.

### 2. Considerations in Developing the R&D Strategy

Several considerations should be taken into account when EU SMEs wish to develop a coherent R&D Strategy as they enter the South-East Asian market. The

<sup>1</sup> Asia-Pacific Analysis: R&D spending boosts development (24 October 2016): <a href="https://www.scidev.net/asia-pacific/r-d/analysis-blog/asia-pacific-analysis-r-d-spending-boosts-development.html">https://www.scidev.net/asia-pacific/r-d/analysis-blog/asia-pacific-analysis-r-d-spending-boosts-development.html</a>; Research and development expenditure (% of GDP): <a href="https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?">https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?</a> end=2015&locations=SG-MY&start=1996.

<sup>2</sup> Research and development expenditure (% of GDP): <a href="https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?">https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?</a> end=2015&locations=SG-MY&start=1996.

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following questions serve as useful initial guides for EU SMEs when discussing and formulating their R&D Strategy.

#### 1) Where is your market in your current business model?

It is crucial for EU SMEs to clearly identify the market(s) they wish to enter, and to familiarise themselves with the relevant IP laws in the respective jurisdictions before entering them. Legal advice from local counsel ought to be sought to identify the IPRs that will arise from EU SMEs' R&D venture, as well as the protection that may be conferred under the respective local laws. Expectations from the local business partners should also be taken into account in formulating an effective R&D Strategy. For example, if EU SMEs intend to have an exclusive business partner in only 1 market, the exclusive partner may demand more from EU SMEs, including ownership-sharing of the IPRs or revenue-sharing of the profits arising therefrom, in exchange for assisting EU SMEs in developing the product in the local market. On the other hand, if EU SMEs intend to have more than 1 business partner in more than 1 market, each respective business partner may have less demanding requirements in a bid to compete with the other potential partners for more exclusive rights.

#### 2) Who will be the inventors?

If the primary inventors are employees of the EU SMEs in their home countries, EU SMEs will have much more leverage in deciding how to control the IPRs arising from the inventions. On the other hand, if the inventors are citizens of the local jurisdictions or if the inventions are going to be jointly developed by EU SMEs' inventors and the local inventors, it may not be easy to negotiate for the ownership and transfer of the IPRs arising from the inventions. EU SMEs may have to offer certain rewards and incentives to the local inventors, if the ownership of the inventions is not going to be retained by the latter.



In addition, if the local inventors are employees of the EU SMEs' local partners, there may be existing employment contracts which provide for ownership of the inventions by the employers. In such cases, care should be taken to ensure that the ownership of the IPRs is clearly provided for in the contracts between EU SMEs and their local partners, to avoid any challenges subsequently. Increasingly, more and more EU SMEs are looking into the possibility of research collaboration with local universities, to tap onto the pool of local talents and the research facilities at said universities. This consideration will therefore be relevant to such EU SMEs.

### 3) Will the technology be useful for other areas?

More often than not, EU SMEs seek to introduce or jointly develop with their local partners a technology that is relevant to a particular area of application. In some cases, however, the technology that is going to be introduced or developed may be applied to other areas or sectors as well. In such cases, EU SMEs should strive to ensure that control and ownership over the IPRs arising from the technology is retained with the EU SMEs, so as to enable the EU SMEs to fully exploit the technology in other areas (e.g. through licensing of the same).

# 4) Are you willing to give away your IPR in exchange for equity?

In some circumstances, EU SMEs' local partners may request for ownership of IPRs in exchange for equity (e.g. share and stock options) in the local partners' companies. If EU SMEs are willing to consider this option, they may be able to come up with more creative solutions in their discussion and negotiation with their local partners.

### 3. Ownership of IP

EU SMEs should take care to ensure that the question of IP ownership is properly discussed and addressed duly in advance, when they enter the South-East Asian markets, especially if negotiating with local partners.

### i) The importance of negotiations

If EU SMEs incorporate their subsidiaries in the local markets that will conduct the R&D activities, EU SMEs may register the IPRs in the name of the local subsidiaries. This ensures that EU SMEs can retain control and ownership of the IPRs, in the event that they subsequently wish to exploit such IPRs.

In most cases, however, EU SMEs do not have presence in the local markets and as a result, they have to work with their local partners. In some other cases, EU SMEs may choose to register the IPRs in the name of their local partners to enjoy certain incentives or benefits offered by the local governments. In such cases, EU SMEs should engage in negotiations with their local partners to ensure that their rights are well protected. For example, if IP ownership is not going to be vested in the EU SMEs, the EU SMEs should be compensated in other ways (such as royalties) for their contributions to the development of the inventions or technologies.

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#### ii) Who owns IP when conducting R&D activities?

IP ownership is an important, though often overlooked, issue. Generally speaking, a patent for an invention may be granted to the inventor or joint inventors of the invention, or to the party to which the rights to the invention have been assigned (e.g. employer of the inventors). It is therefore important for EU SMEs to have proper contractual agreements in place that clearly provide for the ownership of the inventions developed through R&D activities.

#### ii) What types of ownership are available for SMEs?

Ownership of IP can come in two different forms, namely sole ownership and joint ownership. Assuming that the IP rights will be granted to the EU SMEs or their local partners from the inventors (whether or not the inventors are employed by the EU SMEs or the local partners respectively), EU SMEs may consider the following forms of IP ownership:

- Sole ownership of all the IPRs by the EU SMEs; or
- Sole ownership of all the IPRs by the EU SMEs' local partners; or
- $\bullet$  Joint ownership of the IPRs by the EU SMEs and their local partners.

IP ownership can be a sensitive issue for EU SMEs in their discussion with their local partners, and disagreements over IP ownership may affect the business relationship between EU SMEs and the local partners. Also, in the event of joint ownership of the IPRs, it may not be easy to clearly outline the ownership of the IPRs. For example, will each party's ownership of the IPRs be determined based on the respective parties' financial contributions to the R&D project, or will it be determined based on the respective parties' contributions to the R&D activities? It is therefore important to have well-drafted contractual documents in place that clearly provide for the ownership of the IPRs during and after the termination of the collaboration, so as to avoid any disputes subsequently.





### 4. IP Licensing

Under certain circumstances, EU SMEs may wish to license their existing inventions and technologies to their local partners, in exchange for royalties or other services to be offered by the local partners. This will most likely form the main part of the relevant R&D contracts between EU SMEs and their local partners.

Generally, IP licences can be either exclusive or non-exclusive. An exclusive IP licence is used when the EU SMEs only wish to grant the licensed rights to one business partner, with or without the right of this business partner to sub-license the inventions. On the other hand, a non-exclusive IP licence is used when the EU SMEs wish to license the inventions to more than one local partner.

The following key terms are usually provided for in IP licences commonly used in the South-East Asian region:

- Licensed IPRs: It is important to clearly provide for the IPRs that are subject to the licence. Common IPRs that are associated with an invention include patents and copyright. Occasionally, EU SMEs may also license their trade marks to the local partners. Where trade marks are licensed, it is recommended that clear trade mark guides are also provided to ensure proper use of the EU SMEs' trade marks by the local partners.
- Licensed inventions/products/processes: It is also important to clearly define the inventions, products or processes that are subject to the licence. The more well-defined the inventions, products or processes, the easier it would be for EU SMEs to subsequently enforce the licence agreements.
- **Duration of the licence**: It is important to provide for a clearly defined licence period, complemented by an option to renew the licence
- Territory of the licence: The licence may cover a particular jurisdiction, or it may cover a number of jurisdictions at the same time. Some licensors grant the licensees worldwide licensed rights, although this is usually not recommended in practice as it effectively reduces the licensors' control over the IPRs and the exploitation of the same.
- Termination of the licence: It is important to provide for clear

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circumstances under which the licence may be terminated. Common termination events include, for example, bankruptcy or insolvency of the local partners, breaches of material obligations on the part of the local partners, and cessation of business operations of the local partners. Care should be taken to provide for the consequences of termination of the licence. For example, if any confidential information was shared during the licence period, such confidential information should be promptly destroyed or otherwise returned to the EU SMEs.

- Royalties: EU SMEs may either provide for a lump sum payment of the royalties, or recurring royalties based on the usage of the inventions, or a combination of both. Other additional issues such as payment methods, bank details and withholding tax should also be provided for under the licence agreement as well.
- Representations and warranties/indemnity: Most licence agreements provide for certain representations and warranties on the part of the licensors and the licensees. Usually, the licence agreements will provide that the licensors are the rightful owners of the IPRs, that parties have the power and authority to enter into the licence agreement, and that parties will be in compliance with the relevant laws. Depending on the circumstances of the case, EU SMEs may wish to provide for instances whereby they are indemnified from the wrongdoings on the part of the local partners.
- Dispute resolution: This is an important, but often overlooked, aspect of commercial agreements in general, and of IP licence in particular. It is important to provide for the means whereby disputes arising out of the IP licence may be resolved. Increasingly, more and more parties opt for alternative dispute resolution methods including for example mediation and arbitration, given the benefits that these methods offer over the traditional litigation proceedings.
- Other terms: Depending on the specific circumstances at hand, EU SMEs may need to provide for other terms in the licence agreements. Accordingly, it is important to engage the assistance of local legal advisers to ensure that their interests are well protected.



# 5. Building Valuable IP Portfolios

After EU SMEs have agreed on ownership and licensing of IPRs with their local partners, the next consideration is how to build their IP Portfolios in the local markets. Building a good and strong IP portfolio will greatly assist EU SMEs in their attempt to exploit the IPRs. More often than not, EU SMEs will face budget constraints. As such, it is important for EU SMEs to identify the most important IPRs in their possession, and focus their financial resources on obtaining protection for the same. Financial gains from the subsequent monetisation or exploitation of the registered IPRs may then fuel EU SMEs' attempts in registering their other IPRs.

We discuss below some considerations that EU SMEs should take into account when building their IP Portfolios.

#### i) Patents

Patent is one of the most relevant IPR arising from R&D activities. When seeking to apply for patent protection of their inventions, care should be taken in preparing patent documents, to ensure that the scope of the invention is clearly set out in the patent documents and that the claims are well defined. This is important for enforcement of patents subsequently in the event of patent infringement by third parties.

Where patent documents are drafted in a particular local language, and the same need to be translated for patent registration in other jurisdictions, attention should be given to the quality of the translation, to ensure that the patent documents are translated accurately. Occasionally, when local patent offices raise objections against the patent applications, some of these objections relate to the clarity of the patent claims which may be a result of poor translation.

In the event that EU SMEs wish to apply for patent protection outside of the countries where the inventions are originally produced, care should be taken to ensure that the relevant local regulations are complied with. For example, where the applicant of a patent is a company incorporated in Singapore (which company may be a subsidiary of a EU SME, or a subsidiary of the EU SME's local partner), and the applicant wishes to apply for patent protection in a country outside of Singapore, the applicant will be required to obtain written authorisation (for national security clearance) from the Singapore patent registry before filing a patent application outside of Singapore.

#### ii) Other IPRs

Besides patents, EU SMEs should also consider other forms of IPRs that may be relevant to their inventions, including, for example copyright and trade secrets.

Copyright seeks to protect original literary and artistic works. In particular, it entitles the owners of such literary and artistic works to a set of exclusive rights over their works, including for example copying, adapting and altering, communicating and performing to the public, and distributing the copyrighted works. Copyright is an automatic right that arises the moment the work is created.

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Nevertheless, the proof of ownership that EU SMEs obtain from registering their copyright may prove useful in the event of a copyright dispute. EU SMEs should therefore consider registering their copyright in South-East Asian countries where such a registration procedure is provided for by the local laws.

EU SMEs may also protect their inventions by avoiding disclosure to third parties, thus maintaining their "trade secrets". In this regard, care should be taken to ensure that the appropriate physical security measures as well as contractual arrangements are put in place to protect the trade secrets.

For more information about Patent Protection in South-East Asia, please refer to our Guide to Patent Protection in South-East Asia at <a href="http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN\_patent.pdf">http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN\_patent.pdf</a>

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For more information about Trade Secrets Protection in South-East Asia, please refer to our Guide on Protecting Your Trade Secrets in South-East Asia at <a href="http://www.southeastasia-iprhelpdesk.eu/sites/default/files/page-pdf/EN-Trade Secrets 201704.pdf">http://www.southeastasia-iprhelpdesk.eu/sites/default/files/page-pdf/EN-Trade Secrets 201704.pdf</a>

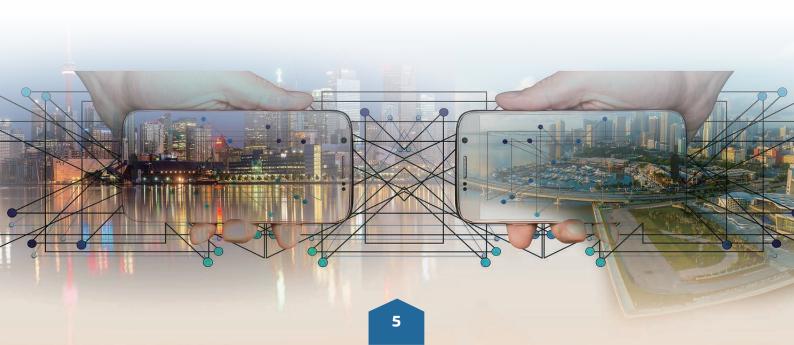
### 6. Enforcement

Enforcement of IPRs can be a costly endeavour. As such, as far as possible, EU SMEs should ensure that ownership of IPRs and the rights granted to their local partners are clearly defined in the relevant contractual documents. This may help to pre-empt certain evidentiary challenges in the event of IPR infringements, when ownership of IPRs is often contested. In addition, protection and registration should also be sought for the relevant IPRs, as in most cases EU SMEs may only be entitled to commence actions for IPR infringements if the IPRs are validly registered.

In contracts or licensees with the local partners, EU SMEs should clearly provide for instances of IPR infringement and indicate the party or parties who will be responsible for commencing actions against such infringement. To fully retain control on the IPRs, EU SMEs should reserve the rights to commence actions to themselves, while providing for the possibility of assistance by the local partners or licensees where such assistance is required.

As a matter of good commercial practice, EU SMEs are advised to clearly stipulate the method of dispute resolution that is preferred by the parties in their contracts with local partners. International arbitration is increasingly popular as an alternative mode of dispute resolution nowadays due to the confidentiality of such proceedings. Additionally, international arbitration is preferred by many international corporations due to the enforceability of such awards as a result of the Convention on the Recognition and Enforcement of Foreign Arbitral Award (or the New York Convention).

For more information about IP Enforcement in South-East Asia, please refer to our Guide on IPR Enforcement in South-East Asia at <a href="http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN">http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN</a>
<a href="mailto:Enforcement.pdf">Enforcement.pdf</a>



### 7. SME Case Study

### Case study 1: R&D Activities and Manufacturing in Indonesia

#### Background

AXZ is an Austrian medium-sized company dealing with the manufacturing of electronic devices, parts and appliances. AXZ decided to enter the Indonesian market to tap into its growing potential. It proceeded to open an office and a manufacturing plant in Indonesia and started manufacturing the electronic devices, parts and appliances shortly after. Manufacturing was supervised by 2 managers from the AXZ headquarter in Austria, however the processes were carried out by local Indonesian employees. Designs of the parts and other essential information were provided to the local employees to facilitate the manufacturing process. One year after AXZ started manufacturing the products and distributing the same in Indonesia, it experienced a decline in sales and was astonished to find that there were products being sold in the market that were very similar, if not identical, to their products.

#### Actions taken

Following the investigation, AXZ found out that some of the local employees had been leaking AXZ's designs and technical information to a local manufacturer who then replicated these products and sold them in the market at a lower price. To make the matter worse, the local manufacturer had applied for and obtained industrial design protection for the products in its name, and now threatened to take action against AXZ based on the registered designs. AXZ was also not able to protect their designs as trade secrets, given that no measures were taken to protect the secrecy of the designs.

#### Outcome

Faced with the possibilities of lawsuits, AXZ was forced to negotiate and acquire the rights to the IPRs from the local manufacturer at a hefty price.

#### Lessons Learned

- EU SMEs should always seek IPR protection for their products and inventions early, even before entering the local markets.
- EU SMEs should put in place appropriate physical measures and contractual agreements to protect important trade secrets.
- EU SMEs should consistently monitor the markets for infringement committed by their inventions and to take action at the earliest possible opportunity.

#### Case study 2: Collaboration Agreement concerning inventions jointly developed in Singapore

#### Background

Water Tech, a company from Germany, wishes to enter into a research collaboration agreement with a local company in Singapore. During negotiations between the 2 companies, the local Singapore company requests to own exclusive rights to all the inventions that will be jointly developed by the parties later. In exchange, they offer to transfer 20% of the shares in their company to Water Tech.

#### Actions taken

Water Tech conducts an extensive due diligence exercise on the local company, and finds that the local company is currently the owner of a large patent portfolio. The local company also appears to have a strong R&D team, impressive research facilities and marketing capability. More importantly, the local company seems to have garnered substantial market share not only in Singapore but also in the other countries in the region, including Malaysia, Indonesia and Thailand.

### Outcome

AXZ decides to take up the offer to transfer all the rights to the inventions that will be jointly developed by the parties during the term of the joint collaboration to the local company, in exchange for equity in the latter, as a form of long term investment in the local company.

#### Lessons Learned

- If resources permit, EU SMEs should conduct proper due diligence on their local partners.
- If EU SMEs are willing to consider the option to exchange IPRs for equity in the local company, they may be able to come up with more creative solutions in their discussion and negotiation with their local partners.

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# 8. Take-Away Messages

- Care should be taken in developing a clear R&D Strategy, taking into account the ownership of the IPRs, the bargaining power of the respective parties, and the relevance and application of the inventions to other areas of the industry.
- EU SMEs should be willing to consider alternative forms of monetary compensation for the IPRs, such as equity in the local partners, as this may present EU SMEs with more creative solutions in their discussions with their local partners.
- It is important to clearly provide for ownership of the IPRs, whether it is a sole ownership or joint ownership. Where joint ownership is concerned, contractual documents between EU SMEs and the local partners should provide for clear delineation of the ownership of the IPRs.
- EU SMEs should also consider IP licensing as a form of exploitation of their IPRs. IP licence agreements should be drafted carefully to ensure that EU SMEs' rights to their inventions will not be compromised.
- In their contracts with the local partners or licensees, EU SMEs should clearly provide for instances of IPR infringement and the party or parties who will be responsible for commencing actions against such infringement.
- EU SMEs are advised to consider alternative dispute resolution methods for their contracts with the local partners. EU SMEs may consider arbitration, which is becoming an increasingly attractive option due to its confidential nature and the enforceability of arbitral awards thanks to the Convention on the Recognition and Enforcement of Foreign Arbitral Award.

### 9. Glossary of Terms

- Convention on the Recognition and Enforcement of Foreign Arbitral Award (or the New York Convention) –provides for the recognition and enforcement of foreign arbitral awards in member nations, of which there are currently 157. Under the terms of the New York Convention, the courts of member nations must recognise foreign arbitral awards as binding and enforce them, unless the party against whom the award is being invoked can prove that there is reason to refuse enforcement under Article 5 of the New York Convention. (Article 5 of the New York Convention in turn provides for exceptions to the rule of recognition and enforcement.)
- Industrial design External appearance/compositions of lines or colours or any three-dimensional forms which give a special appearance to a product.

- Patent An exclusive right granted for a product or a process that provides a new way of doing something or offers a new technical solution to a problem.
- Trade mark A trade mark or service mark is a distinctive sign which identifies certain products or services as those produced or provided by a specific source/origin allowing the public to distinguish them from goods or services of others.
- Trade secret Any confidential business information which provides an enterprise a competitive edge may be considered a trade secret.

#### 10. Related Links

- Visit our IP Country Factsheets webpage <a href="http://www.southeastasia-iprhelpdesk.eu/en/country-factsheets2">http://www.southeastasia-iprhelpdesk.eu/en/country-factsheets2</a>
- Visit our Guide on IPR Enforcement in South-East Asia <a href="http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN\_Enforcement.pdf">http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN\_Enforcement.pdf</a>
- Visit our Guide on Patent Protection and Enforcement in South-East
   Asia <a href="http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN\_patent.pdf">http://www.southeastasia-iprhelpdesk.eu/sites/default/files/publications/EN\_patent.pdf</a>
- Visit other publications at South-East Asia IPR SME Helpdesk website – www.ipr-hub.eu
- Visit the Helpdesk blog <a href="http://www.yourlPinsider.eu">http://www.yourlPinsider.eu</a> for related articles on IP in South-East Asia and China.









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The South-East Asia IPR SME Helpdesk provides free, confidential, business-focused advice to European Small and Medium Enterprises (SMEs) relating to Intellectual Property Rights (IPR) in South-East Asia.

**Helpdesk Enquiry Service**: Submit further questions to the Helpdesk via phone, email (question@southeastasia-iprhelpdesk.eu) or in person and receive free and confidential first-line advice within three working days from a South-East Asia IP expert.

**Training**: The Helpdesk arranges training on South-East Asia IPR protection and enforcement across Europe and South-East Asia, tailored to the needs of SMEs.

Materials: Helpdesk business-focused guides and training materials on South-East Asia IPR issues are all downloadable from the online portal.

**Online Services**: Our multi-lingual online portal (www.ipr-hub.eu) provides easy access to Helpdesk guides, case studies, E-learning modules, event information and webinars.

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