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Intellectual Property Commercialization for SMEs

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Produced by
Anastasia Gribanova (Ms)
Deputy Head of Regional Integration Division
International Cooperation Department
Federal Service for Intellectual Property
Russia
e-mail: amgribanova@rupto.ru

For
Asia-Pacific Economic Cooperation Secretariat
35 Heng Mui Keng Terrace
Singapore 119616
Tel: (65) 68919 600
Fax: (65) 68919 690
Email: info@apec.org
Website: www.apec.org

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Introduction

Nowadays, small and medium enterprises (SMEs) face a number of barriers in trading in the APEC region. In the field of intellectual property (IP) the main challenges for SMEs, especially in the developing economies, are related to IP utilization. There is a lack of easily accessible information and tools for carrying out effective management and commercialization of IP assets owned by SMEs. In order to reduce the barriers and enhance SMEs competitiveness, APEC economies should facilitate SMEs capacity in building up effective IP management and commercialization.

The project was aimed at exchanging the experience between APEC economies on best practices in IP management and commercialization for SMEs.

The project suggested APEC economies to discuss the ways of solving the problems that SMEs face in certain economic aspects of IP field such as IP commercialization, IP marketing, reduction of innovation risks in IP management, technology transfer, patenting abroad, collaboration of SMEs and large businesses, search and training of personnel.

During the implementation of the project the seminar "IP Commercialization for SMEs" was organized on September 10-12, 2019 in Vladivostok (Russia). 24 persons from 10 APEC economies (Chile, China, Indonesia, Malaysia, Peru, Philippines, Russia, Singapore, Chinese Taipei and Viet Nam) as well as from the World Intellectual Property Organization (WIPO) participated in the seminar.

1. Identified best practices on IP commercialization

Under this project a questionnaire was developed to identify the best practices on IP commercialization by SMEs (see Annex 1). The questionnaire was circulated among the participants of the seminar and showed the following results on IP commercialization by SMEs.

The level of IP utilization by SMEs was evaluated by the participants as 5-6 points on a scale of 1 to 10. At the same time the level of use by SME of digital technologies was scored as 8 points.

The main ways of IP commercialization were identified as embodiment of IP in marketable products available through sales channels. The most frequently used technologies in the course of IP commercialization which are correlated with economic growth, are artificial intelligence and use of online and mobile payments and social networks to increase sales. Due to financial limitations, SMEs use in their activity free software as well as proprietary one.

A number of benefits for SMEs and specific economy related to project in the IP field can be noted:

- increase in sales;
- increase in profit;
- improve of image / capitalization growth;
- business contacts;
- cost saving;
- risk reduction;
- protection from competition;
- acceleration of innovation products commercialization processes;
- obtaining of additional investments (credits) for the main SMEs activity;
- creation of new sphere of activity / business, etc.

When commercializing their IP SMEs face a number of difficulties related mainly to the size of business, particularly: lack of financial and organizational recourses, difficulties in attracting investments for IP commercialization, high costs and duration of IP registration procedures. Several responders also noted that lack of awareness of SMEs representatives on IP issues makes the process of commercialization on a domestic market more difficult. Due to financial limitations the majority of respondents noted that SMEs' representatives have no possibility to involve IP specialists. Often the IP issues are not solved even through involving specialists, which is also related to the limited resources. SMEs usually do not make patent analytics.

In order to eliminate these barriers almost all economies have the following tools for SMEs support:

- government support in the form of subsidies and tax benefits;
- grant funding and crediting of innovation projects at low-interest rates;

- organization of training, dissemination of information, raising awareness in the IP field.

In all economies there are various associations, which support SMEs on IP commercialization issues. They provide consulting support on IP commercialization issues, training of SMEs representatives, and grant funding.

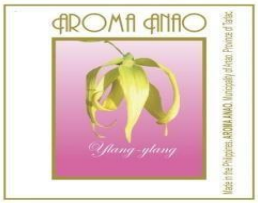
Grants may cover up to 80 % of expenditures on innovation projects, and tax benefits usually related to IP registration procedure. As tax benefits, depending on an economy, applicants can make a return up to 50% of paid registration fees.

Another important form of SMEs support is informing and training. It can be provided by non-governmental organizations as well as in a partnership with domestic IP offices.
Although according to different estimates the share of SMEs in the innovation sector does not exceed 15%[*], SMEs have a need for cheaper and more affordable tools for IP commercialization, in dissemination of information and knowledge about IP, as well as development of existing measures of governmental and non-governmental support and formation of new ones.

The following examples of IP commercialization in APEC economies can be given.

Philippines

A) AROMA ANAO



The Aroma Anao Trademark (old)

Aromanao TM (new)

Under the Strategic Use of IP/Patent Information initiative, the Intellectual Property Office of the Philippines (IPOPHL) engaged in activities in advancing Appropriate Technology (A/T) with projects by other government offices (Department of Trade and Industry, Department of Science and Technology and the Department of Agriculture). IPOPHL employed the IP-based approach in advancing appropriateness of the technology/ies to the needs of target local communities. The Ylang Ylang is a fragrant Philippine native flower whose essence is sought by major perfume manufacturers in the world.
IPOPHL set in motion the collaboration on Appropriate Technology project: Essential Oil Extraction for Ylang-ylang Flower, among KIPO, DTI and Local Government of Anao, Tarlac. IPOPHL steered the collaborative motion between the Korean Intellectual Property Office (KIPO) and the Philippine Center for Post Harvest Development and Mechanization or the PhilMech for the design of a mobile (portable) essential oil extractor. PhilMech, the

[*] According to the responses of APEC economies to the questionnaire

think-tank institution under the Department of Agriculture agreed to fabricate the oil extractor following the designs of KIPO. DTI facilitated the meetings and logistic between local community and the KIPO representatives. Further, PhilMech, with IPOPHL support, sought funding from the Korean International Cooperation Agency (KOICA) to expand the Ylang-ylang Essential Oil extraction project. The expansion plan hoped to provide the local community more mobile oil extractors, a livelihood center for Anao residents to further enhance packaging of products and a local R&D center dedicated to Ylang-Ylang.

Photos: Sample perfume bottles and Extraction machines

B) LAGUNDI

Lagundi is a large local shrub in the Philippines and traditionally used in herbal medicine. It was used by the local population to treat such diseases as headaches, fever, toothache, arthritis and superficial bleeding. Recently, modern science has recognized it as an effective medicine for cough and asthma.

Following the successful development of lagundi cough tablets, the National Integrated Research Program on Medicinal Plants (NIRPROMP) researchers worked to also develop the medicine in a syrup form. Children and the elderly people make up a significant portion of the demand for cough medicine, but tablets can be difficult for them to take. NIRPROMP successfully altered the formulation for lagundi cough tablets into a lagundi cough syrup, which retains all the medicinal properties of the tablets, but is in a form that is easier to use.

Because NIRPROMP's research was funded by the Department of Science and Technology (DOST) and was a collaboration between the University of the Philippines Manila (UPM) and the Philippine Council for Health Research and Development (PCHRD), a sectoral council of DOST, all IP is managed and owned by DOST. In order to protect the IP and promote its commercialization, DOST therefore applied for a utility model with IPOPHL for an herbal pharmaceutical composition that is based on lagundi. A patent was granted in February 2001.

Although NIRPROMP was responsible for the R&D and clinical trials of the lagundi cough medicine in tablet form, PCHRD was responsible for coordinating and facilitating commercialization. When the lagundi cough tablet formulation was ready for commercialization, PCHRD organized informational forums to gauge interest from local pharmaceutical companies. The first licensee for the lagundi tablet technology was

Herbafarm, a Philippian pharmaceutical company which used lagundi grown from its own farms and at an in-house manufacturing facility at a DOST compound. Herbafarm launched its lagundi products in 1994. Other licensees soon followed, one of which was Pascual Laboratories (Pascual), a large Philippian pharmaceutical company that would go on to become the most successful licensee of lagundi technology. Pascual's product based on the PCHRD lagundi formula was approved by the Bureau of Food and Drugs in 1996 and continues to be on sale in the Filipino pharmaceutical market.

Until 2009, the technology for lagundi tablets and syrup was transferred through licensing agreements between PCHRD, a government entity, and the private sector.

Peru

In 2016, a team of two students from the University of Lima created a device that is inserted into the fuel tank of a car, thus making it possible to kill the bacteria that cause damages to the car's engine. They established the company GreenTech Innovation and sell the product under the name of "Ecoevol".Currently they work in a strategic alliance with one of Peru's biggest company that provides maintenance services for automobiles. They applied for a first patent in Peru through Indecopi's technical assistance programs and later they apply worldwide through the PCT system (WO2017116240).

After the application for registration was made through the Patent Cooperation Treaty (PCT), national phases have been carried out in the countries of China, Korea, the United States, Mexico, and Chile, as well as a European patent application (EP3232044). On the other hand, in 2019, the company GREENTECH INNOVATIONS S.A.C. has been deserving of the first place in the National Contest of Industrial Inventions and Designs organized by Indecopi, this time for a new invention called "COMPACT PURIFIER OF LIQUID HYDROCARBON FUELS BY PHYSICAL AND CHEMICAL MEANS". The information of all the products of the mentioned company can be found on its website – https://ecoevol.com/.

Chile

The case of technology transfer generated at Concepcion University consists of photoselective meshes for the fruit industry. The mesh prevents damages caused by solar light known as "sun blown". The mesh decreases the stress generated by solar radiation while improving the light usage, which favors the color development and growth of the fruit.

The first license was commercialized by the Technology transfer office of the university and later by the technology transfer hub in Mexico in 2019. The IP is a patent requested first in Chile and then in three other economies: Mexico, Peru and Brazil.

Malaysia

DERMAGS Skin Care – This Skin Care Products were produced from mangosteen skin extracts (alpha-MAGs) which effectively secures the skin more than any other active agent. Act as a whitening agent. It is a research-based product range that uses niosome as a nanocarrier for penetration enhancer of alpha-MAGs in cosmeceutical application and delivery system. DERMAGs Skin Solution is developed based on the inventor research on a new discovery of cosmeceuticals ingredients which is alpha-MAGs (patent filed in 2014). The revenues of this company are exceeding RM 1 million annually.

2. Summary of the seminar held within the project

During the seminar the participants from APEC economies made presentations on the topical issues in the field of IP commercialization and experience of their economies on the matter. The program of the seminar is provided in Annex 2.

a) Mr Guy Pessach, Director of SMEs and Entrepreneurship Support Division (SESD), Department for Transition and Developed Countries, World Intellectual Property Organization (WIPO), presented the activity of SESD aimed at assisting in use of IPR by SMEs. SESD provides support for private sector (SMEs), academia and government.
SESD organizes for SMEs various trainings and seminars in order to raise the competitiveness of SMEs by the use of IP as well as to raise the importance of SMEs in interconnection between sectors. SESD also issues publications for SMEs that could be founded on the WIPO website.

There are special projects for SMEs:

- IP Diagnosis Tool and Guide for SMEs and Support Institutions, which is a software-based tool hosted on the WIPO website. Interested SMEs could make a preliminary determination of the IP assets that it has and how to extract maximum value and competitive advantage from their IP assets. A manual would help SME Support Institutions conduct a face to face evaluation with a SMEs and identify IP assets vested in the company and advice on the appropriate way to manage IP assets.
- Sector (industry) based programs, which represents analysis of IP implications throughout the value chain and lifecycle of the company/product. Currently SESD is working on the development of specific sector/industry programs in agrofood and software industries.
- For academia there are various capacity building activities such as seminars and trainings. SESD assists universities and research institutions in transferring new technologies, including licensing, to parties capable of commercialization, both domestic and international. SESD provides IP toolkit for universities and academic institutions, which includes database of IP Policies and IP Policy Template, guidelines and rules.

As governments are an additional distinct “sector” that is constantly engaged in innovation and the production or funding of IP assets that are largely demand driven by public needs,

there is a program "IP in the government sector". The program is aimed to support governments and state agencies in the management of their IP assets; to enable each economy to define the areas and dimensions in which it requires guidance and support; to develop tools and best practices that will support the management of IP assets by governments and state agencies.

b) Ms Juliya Vasileva, Associate Professor of the Department of innovation management and IP commercialization of RGAIS, made a presentation about the role of IP in SMEs activity and provided the following statistics.

SMEs make up about 90% of all enterprises in the world and provide jobs for about 50% of the working population. They are a source of GDP growth: they account for about 70% of the volume of goods and services. They provide the creation and development of about 50% of all innovations.

The share of medium business with 50-250 employees is relevantly low in the world and comprises 2-5% as growing small enterprises are attractive for takeover by large companies.

According to some researches, in 21 APEC economies SMEs comprises 97% of all enterprises and are the driven force for economic growth of APEC region.

However, SMEs are highly heterogeneous group. Their innovation potential and ability to develop new and innovative products, processes and services vary significantly depending on industry, size, direction, resources and business environment, in which they work.

Special place among small enterprises takes small innovative enterprises (SIE). The development of the small innovative business is a strategic project for any economy as it is small business, which facilitate innovations, support optimal competitive environment, create additional work places, hinder the development of monopolies, increase customer demand and create significant social effects.

13-14 times more patents per one employed person are created in small business than in large corporation[*]. SIE use 2-5% of all funding in the field of science and technology, create up to 50% of major innovations and are licensors to almost 50% of innovations in the world market. Yet SMEs are mainly focused on creation of not new technologies but product innovations.

Many successful enterprises choose export strategy of IP commercialization as the main one. Taking Russia as an example, during the last 5 years 70% of small enterprises participating in the Russian rating of technological development leaders "TekhUspekh" (about 220 companies) brought to the international market at least one new or significantly improved product developed on the basis of their own or acquired R&D results.

[*] https://archive.nytimes.com/www.nytimes.com/inc_com/inc1203607378089.html?ref=smallbusiness), https://rdw.rowan.edu/cgi/viewcontent.cgi?article=1011&context=csm_facpub

The main directions of innovative SMEs can be generally described by the following scenario:

- launch of business independently (start-up counts on innovativeness, creating a product or suggesting services with new, earlier unknown features);
- creation by the way of "spinning out" from large scientific and production associations and research institutions (so-called SIE in higher education institutions and research institutions, spin-off or spin-out of company). Such SIEs are one of the methods to commercialize developments of higher education institution, which provide additional work places for teachers, students and postgraduate students;
- creation of SIE on the base of technoparks (they have business incubators for supporting entrepreneurs from among scientists and engineers, teachers and students, innovators and inventors at the early stage of their activity by renting of premises and providing consulting, accounting and legal services);
- cooperation in the field of innovations and technology transfer (creation of joint enterprise or strategic alliance with other small or large enterprise, with a number of enterprises, with international partners).

The successful innovation small and medium companies created a new large market cluster, capitalization of which is approximate to 1 trillion USD. Business models and technical solutions of SMEs became determining trend in industry. It can be noted that rejuvenation of employees of fast-growing technological companies and small high-tech companies is one of the trends of innovation enterprise development.

c) Ms Veronika Smirnova, Head of the Department of Innovation Management and IP Commercialization of RGAIS, made a presentation on IP management and commercialization, IP marketing and reducing innovation risks. Special attention was paid to the modern challenges in the IP field, including:

1. Reducing time period from "birth" to "death" of technology, which at the moment is less than the time period necessary for obtaining IP protection. As the result, the issue of transformation of IP institution is raised more often;
2. Creation, dissemination and use and intellectual product is a more complex life cycle comparing with the turnover of products which embody IP;
3. Increasing complexity of technological development leads to proportional increase in complexity of IP integration chain. "Network" projects in the field of fundamental and applied researches are developed, and as a result a number of participants in the creative process have grown sharply. New forms of interrelations are appearing.

The most important factors in IP commercialization by SMEs are the policy in the IP field and IP management system per se. However, in many cases SMEs do not develop them because of financial limitations and lack of information.

The policy in the IP field is a local document which establishes common principles of protection and enforcement of IP rights and incentives for effective use of the rights in

enterprise's assets. Given that the majority of SMEs have 4-5 employees (according to the survey), SMEs consider that it is excessive to adopt a separate document.
Key aspects of such document are:

- protected objects and their inventory (in accordance with the company's strategy);
- rightholder (contractor, company itself, researchers);
- responsibilities, rights and obligations of all parties in the process of creation of the results of intellectual activity, including the third parties under contracts;
- procedure for the use of IP rights;
- determination of rules for distribution of income from the use of developments.

The participants of the seminar discussed the importance of marketing in the IP field, patent analytics and reducing innovation risks. It was noted that the marketing researches give answers to the following questions, which is essential for SMEs:

- Whether a patent is needed?
- When to patent?
- Whether it is worth to patent abroad?
- Which procedure of patenting to choose?
- When to enter a market?
- Which product to bring on the market?
- What are the risks?

d) During the discussion of collaboration of SMEs and large business Mr Irik Mukhamedshin, honorary professor of the Department of Civil and Business Law of RGAIS, noted that traditionally SMEs are a launch platform for mass production of innovation product. Generally, large business is a customer for innovations.

Also a roadmap for IP commercialization was formulated. It includes the following:

1. inventory of IP;
2. patent and market researches;
3. business planning of innovation activity;
4. assessment of necessity of IP legal protection and selection of its optimal form;
5. advertisement of scientific and technical products;
6. selection of partners and sources of funding of innovation activity;
7. assessment of necessity of patenting abroad and selection of its optimal way;
8. evaluation of IP rights;
9. selection of optimal way for putting into circulation of IP rights or material objects, which embodies IP.

e) One of the problems faced by SMEs is training in the IP field. This topic was discussed with Mr Ivan Bliznets, rector of RGAIS. It is important to search and train personnel of SMEs on IP issues for a number of reasons. For instance, it is necessary not only to increase the speed of bringing of products to the market, but also to promote new methods of commercialization through novelty, scale (YouTube, free applications), transfer of elemental inventions that are part of complex products of intellectual activity, complexity and non-transparency of procedures, etc. It is necessary to establish effective interaction

between co-authors of an IP object working in different jurisdictions. Hundreds of participants from different economies can be involved in creating an intellectual product: the process needs an effective system of control and distribution of remuneration. Therefore, qualified specialists with unique skills are required.

SMEs needs specialists but do not always have financial resources for their hiring and training. In economies various governmental and non-governmental institutions work on raising public awareness in the IP field and carry out seminars for SMEs. In this regard the participants particularly noted the experience of RGAIS.

f) Mr WANG Zhengzhi, Partner of Beijing Globe-Law Law Firm (China) presented the experience in IP commercialization by SMEs in China. It was noted that over the years the Company Law of China was constantly amended reducing the amount of capital contributions of intellectual property to the registered capital of enterprise. At the moment there is no limit on contribution ratio.

As a measure for SMEs support, in December 2017, Xiamen Agricultural and Commercial Bank, the first intellectual property bank in China, was established to provide better intellectual property financial services and capital supply to the large number of technology-based SMEs.

GF Leasing (Guangdong) Co., Ltd. under GF Securities Co., Ltd. and Zhongdu Guomai Asset Evaluation Co., Ltd. launched IP financing leasing products in the whole economy. The loan interest rate of this product was nearly 80% in 2018, which is much higher than the 50% loan interest rate of the bank's IP pledge financing.

At the end of the first quarter of 2019, the number of IP pledge lending business of banking financial institutions was 6448, an increase of more than 1200 households compared with the beginning of 2018; the balance of financing was 98.5 billion yuan, an increase of 98% compared with the beginning of 2018.

On August 6, 2019, the State Intellectual Property Office, the China Banking Insurance Regulatory Commission and the State Copyright Administration jointly issued the Notice on Further Strengthening the Financing of Intellectual Property Pledge, which proposed that commercial banks should be encouraged to establish an evaluation system for the scientific and technological innovation capability of enterprises.

g) Ms Jospehina Rima-Santiago, Director General, the Intellectual Property Office of the Philippines presented the experience of Philippines. It was noted that 99,56% of all enterprises are MSMEs, 60% of all exporters in the Philippines are MSMEs and 35.7% value-addition by the MSME sector. IP issues reflected in the Philippine Development Plan 2017-2022 in 2 chapters. Government provides support for SMEs on 3 stages of IP commercialization – IP creation, IP protection and IP utilization.

The government has a number of support initiatives on IP creation such as:

- Patent landscape report – IPOPHL conducts analysis of patent data and patent activity in a given field of technology);
- Testing and Analysis Assistance – DOST grants financial assistance to technologists, inventors and researchers needing laboratory services, analyses and performance testing;
- Industry-Based Invention Development (IBID) Program – DOST supports the development of inventions through its application and adaption to existing industry practices, and the production of the commercial prototype of the invention to be installed in the actual operations;
- Concept Prototyping Program – DOST taps the laboratories and facilities of Research and Development Institutes (RDIs) and Stat Universities and Colleges (SUCs) in the development of an initial working prototype of a potential or actual invention, and strengthen the laboratories and facilities of RDIs and SUCs.
- On IP protection stage the government provides the following programs:
- Inventor Assistance Program – It matches developing economy inventors and small businesses with limited financial means with patent attorneys, who will provide pro bono legal assistance to secure patent protection (free legal advice on how to file a patent to protect their inventions). This program is a collaboration project of WIPO and the World Economic Forum (WEF);
- IPR Assistance Program – DOST-TAPI provides assistance to inventors, researchers, or individuals in securing the relevant IP protection to their invention. Assistance may include funding support for payment of filing fees for applications for utility model registration.
- As for IP utilization IPOPHL has Sector-Focused Technology Pitching initiative. It is a sector-focused business matching activity between technology owners and industry players, which includes mentoring the technology owners on how to do pitches (e.g. elevator pitch-style presentation).
- Another IPOPHL initiative is IP Depot which represents online shopping platform that serves as a free marketing space for IP creators, who may post and promote their IP assets, and for businesses or individuals, who are looking for IP assets to commercialize.
- DOST also provides two programs:
- Venture Financing Program, which accelerates the initial commercialization of new and technologies by providing the necessary funding support for MSMEs for capacity building of seed, start-up and expansion projects;
- Invention-Based Enterprise Development (I-BED) Program, which provides funds to inventors to cover pre-commercialization activities such as pilot-scale testing, field testing, pilot production for market testing and commercialization including raw materials, labor and overhead costs directly related to the production and the purchase of the equipment needed to manufacture new inventions.

There are also a number of initiatives and programs by DTI such as Go Lokal, SME Roving Academy (SMERA), Mentor Me Program, Ripples.

Moreover, the government developed certain initiatives supporting the entire IP commercialization chain like, for example, Innovation and Technology Support Offices, Mind2Market, capacity building activities, etc.

It was noted that although a lot has been already done, at the moment the government can only provide the framework of IP commercialization and utilization.

3. Feedback of participants about the seminar, suggestions on the further steps aimed at meeting the needs of SMEs in the IP field in the APEC region

The participants positively evaluated organization and holding of the APEC seminar on IP commercialization for SMEs.

All participants noted the important role of SMEs in development of domestic economy, its orientation to innovations. Innovatively active and steady in development small and medium companies headed by experienced and competent entrepreneurs are the important requirement for technological movement of domestic economies.

However, in many APEC economies the share of innovative enterprises among SMEs is yet low. To raise competitiveness of SMEs in the APEC region it is necessary to provide them with comprehensive support. Taking into account certain problems which SMEs cannot solve by themselves, SMEs cannot become a driver of innovation development of economy alone without any support of government and large business.

The current environment and potential for stimulating SMEs in the APEC region require improvement and support, especially in the following areas:

- export expansion;
- improvement of the legislative framework and public policy;
- improvement of innovative literacy;
- development of venture capital funds;
- expansion of infrastructure

As a result of analyzing best practices and discussing the experience of APEC economies, the participants of the seminar identified the following main problems of SMEs in IP commercialization:

- search for new clients and customers, including those among large enterprises (31% of those participating in the survey called this problem as the most serious),
- search for new distribution channels for innovative products,
- small businesses often experience the lack of resources and are forced to actively seek additional sources of financing for IP commercialization,
- lack of awareness among SME managers about measures of state support in the field of innovations.

Despite common approaches to solving existing problems of SMEs in the field of IP commercialization, support is needed. Such support should include grant funding, tax benefits, and information and consulting assistance.

In order to solve these problems, the strategic priorities for supporting the innovation development of SMEs in the APEC economies should be as follows:

1. In order to scale up the processes of IP creation and commercialization, it is important to develop additional professional competencies of SME managers, especially in terms of innovative entrepreneurship, strategic use of IP and mechanisms for its commercialization.
2. It is suggested to develop within APEC the training programs on IP commercialization for SMEs, including export-oriented ones.
3. It is important to pay more attention to SMEs awareness about the existing mechanisms of state support: financial, infrastructural, consulting and others.
4. It is suggested to develop within APEC information materials, specifically for SMEs, that contain information on the importance of IP, ways of its protection, its economic advantages for business, and examples of IP commercialization by SMEs. Further, these materials are to be distributed among SMEs in APEC economies.
5. It is advisable to carry out more active exchange of experience between APEC economies on a regular basis.

Steps should be taken to organize thematic seminars and/or round tables to discuss:

- current problems of SMEs with low innovative activity in order to stimulate the processes of commercialization of their IP,
- identification of best practices of fast-growing technology companies of small and medium-sized businesses with high leadership potential;
- the possibilities of using digital technologies in managing a small innovative business.

Annex 1

APEC IPEG
IP Commercialization for SMEs
(CTI 32 2017A)

Questionnaire

The Questionnaire is addressed to the participants of the Seminar under the APEC IPEG Project "IP Commercialization for SMEs", which will be held on September 10-12, 2019 in Vladivostok, Russia, and aimed to identify the best practices on IP commercialization for SMEs.

I. General questions

1) What organization do you represent?
2) How many SMEs are there in your economy?
3) What is the ration of SMEs to large business in your economy?
4) What is the average number of SME employees?
5) What industries do the SMEs work in?
6) What is the key activity of SMEs?
7) How many SMEs use the Internet in their work?

II. Institutional competence of the managers

1) What do you understand by the notions:
«innovation»
«intellectual property»
«management of the IP rights»
«patent search»
«technology transfer»
«intellectual property commercialization»

2) Are there any SME associations/unions in your economy? What assistance do they provide to SMEs?

3) Do you know about SMEs support programs in your economy? If yes, please name the programs and their main points.

4) Do you know about any privileges for SMEs that are engaged in innovate activity? (including tax privileges)? If yes, please indicate which of them are used.

III. Level of innovation activity

1) Are the SMEs of your economy engaged in innovate activity?
If yes:

- what is their motivation for this?
- what innovations are represented in SMEs work: organizational, marketing, technological?
- please define the level of the use of IP by SMEs of your economy (on a 1-10 scale)

- pleasedefine the level of the use of digital technologies by SMEs of your economy (on a 1-10 scale)
- do the SMEs of your economy implement radical innovations and advanced technological solutions?

If no, please specify the reason.

2) Are the SMEs of your economy engaged in R&D?
If yes:
- Do they plan to create or expand the production of innovative products?
- Do they sell finished results of IP or enterprises (startups) as a whole?
- Do they patent R&D products (in the economy and in the international market)?

3) Do the SMEs of your economy use IP in their work?
If yes, do they use proprietary solutions or operate under license agreements?
Please indicate the ratio of own IP objects to the IP objects owned by third parties.

4) What technologies are considered by SMEs as the opportunity to create new products and to endow existing products with new properties?

5) What IP objects are engaged in the work of SMEs in your economy? Please arrange IP objects in order of their importance in SMEs' market success:
- Copyright objects
- Inventions
- Utility models
- Trademarks
- Know-how
- Selection attainments
- Industrial designs
- Computer software

  etc.

IV. **Intellectual property management**

1) Do the SMEs of your economy have development plans (strategies) in IP field?
If yes, please select from the following:
- there is a planning document (which one?)
- there is an "idea" developed by top-management

2) Do the SMEs of your economy have employees responsible for IP?
If yes, is it a staff member (indicate his education / specialization) or an outsourcing specialist (indicate, if possible, on which issues and how often)?

3) Do the SMEs of your economy carry out market analysis and marketing research?
If yes, please specify:
- Why is it important?
- What risks were avoided?
- If no, please specify the reason.

4) Do the SMEs of your economy conduct patent search?
If yes, please specify:
- for what purposes?
- whether SMEs do it independently or with the help of third-party organizations?

5) Do the SMEs of your economy possess enough knowledge about IP strategy and IP portfolios of their competitors?
6) Do the SME employees of your economy undergo special training in the field of IP protection, enforcement, evaluation and commercialization?
Please specify: What kind of training? Is it on the basis of higher education establishment or Technology Transfer Centre? Who owns the training initiative?

7) When the SMEs of your economy lack some competences in innovation activity, do they have understanding of where they could address to get them (outsourcing, additional employees, business plan, search for business partners, etc.)?

8) Are the methods for financial and time risks reduction in the field of innovation activity of interest?
Please select from the following:

- yes
- no
- yes, if they don't require financial investments

9) Do the SMEs of your economy use IP for the promotion of their products/services?

IV. Financing

1) Do the SMEs of your economy lack financial resources particularly for innovation activity?

2) What are the sources for the SMEs financial support?

3) Do the SMEs get any support from the government?
If yes, please specify:

- how much?
- for how long?
- as a part of what project?
- what type of support (grants, subsidies, direct financing, favourable terms, etc.)?
- individual support or in consortium with other SMEs?

If no, please provide the reason

4) Do the SMEs of your economy participate in any governmental programs for fostering innovations?
If yes, please specify name of the program, period of time and conditions of participation.
If no, please provide the reason

5) Do SMEs in your economy need additional professional competencies to put into practice the existing instruments of governmental support for innovative entrepreneurship?

- if yes, please specify which competencies
- if no, please provide details

6) Have the SMEs of your economy ever been involved in disputes on IP?
If yes, please provide details of case (if possible)

V. **Intangible assets**

1) Do the SMEs of your economy have IP on the balance as an intangible asset?

2) Do the SMEs of your economy make an inventory of the results of intellectual activity?

3) Do the SMEs of your economy conduct IP evaluation?
If yes, please specify whether SMEs use their own resources or involve third-party organizations?
4) Do the SMEs of your economy receive remuneration for creation and use of IP?

5) What are the main expenditures of the SMEs of your economy on IP?

6) Do the SMEs of your economy receive tax privileges for innovation activity and use of IP?
If yes, please specify what tax privileges they receive.
If no, please provide the reason

VI. IP commercialization

1) In your opinion, do the SMEs of your economy have clear potential for IP market commercialization in the near future?
What ways of IP and innovation commercialization are used by the SMEs of your economy? (please, describe in more detail):

- independently
- by means of large organizations
- by means of Technology Transfer Centers
- by participation in exhibitions, including international ones
- other ways

2) What challenges and difficulties do the SMEs of our economy face when commercializing their IP and entering the market? (please, describe in more detail):

- Financial
- Organizational
- Information
- Infrastructure
- Political
- Legal
- Marketing/market
- Lack of understanding/necessity/experience

3) What became the key factor of success of the SMEs of your economy in the process of IP commercialization?

4) Do the SMEs of your economy take part in export operations?
If yes, please specify with which economies? is it planned to change (reduce/increase) the volume?
If no, please specify whether it is planned to start export operations in the next 5 years?

5) How is the profit from IP commercialization distributed among the SMEs of your economy? Is it regulated or done as circumstances require?

VII. Cooperation

1) Do the SMEs of your economy cooperate with other organizations in developing and launching new products?
If yes, please specify with which:

- with domestic partners, foreign partners, both
- large business, research institutes, project or design offices and etc., SMEs, higher education establishment, Technology Transfer Centre and other consulting centres.
- Who initiated the partnership?

2) Do the SMEs of your economy plan to expand local cooperation with other organizations at the regional level?

3) Please, name the main criteria for the SMEs to consider the partnership opportunities in the field of innovations:

- availability of scientific, technological and human resources;
- knowledge of the target market;
- opportunity for further participation in production cooperation, etc.

4) Do the SMEs of your economy have experience of innovative project implementation with foreign companies? What problems do the SMEs face?

VIII. Results from the use of IP by SMEs:

1) What positive changes in the work of SMEs of your economy are associated with IP projects, which are already implemented?

- Sales growth
- Profit growth
- Public image/capitalization growth
- Business contacts
- Cost saving
- Risk reduction
- Protection against competition
- Acceleration of commercialization processes of developing innovative products
- Receiving additional investment (crediting) for core activity
- Setting up new business/activity area, etc.

2) In your opinion, what is a key factor of SMEs success: focus on a project team, technology value or other?

3) Please, rate the importance of IP assets for the SMEs success(on a 1-10 scale)

IX. SMEs needs in IP

1) In your opinion, what are the most serious barriers for SMEs to use innovation and IP more widely in their activity?

2) What are the first-priority needs for the SMEs in the IP field?

X. Please provide a detailed example of one IP commercialization/technology transfer project.

Annex 2

APEC IPEG
IP Commercialization for SMEs
(CTI 32 2017A)

September 10-12, 2019
Vladivostok, Russia

PROGRAM

Day 1 – September 10 (Tuesday)

09.30 – 10.00	Registration
10.00 – 10.30	**Welcome remarks** - Ms Anastasia Gribanova, Project Overseer - Mr Ivan Bliznets, rector of the Russian State Academy of Intellectual Property (RGAIS), Doctor of Law, professor - Mr. Guy Pessach, Director, SMEs and Entrepreneurship Support Division, Department for Transition and Developed Countries, World Intellectual Property Organization (WIPO)
10.30 – 11.00	**Presentation about RGAIS**
11.00 – 11.15	Coffee break
11.15 – 12.00	**WIPO presentation about the support of SMEs on IP commercialization** – Mr. Guy Pessach, Director, SMEs and Entrepreneurship Support Division, Department for Transition and Developed Countries, World Intellectual Property Organization (WIPO)
12.00 – 12.30	Q&A Session with Mr. Guy Pessach
12.30 – 14.00	Lunch
14.00 – 15.00	**The role of IP in SME's activity** - Ms Juliya Vasileva, Associate Professor of the Department of innovation management and IP commercialization, PhD in Economics Q&A Session
15.00 – 16.00	**Certain aspects of IP commercialization: IP management, IP marketing, reducing of innovation risks** - Ms Veronika Smirnova, Head of the Department of Innovation Management and IP Commercialization of RGAIS, Doctor of Economics, professor Q&A Session
16.00 – 16.15	Coffee break
16.15 – 17.15	**Collaboration of SMEs and large businesses, transfer of technologies** - Mr Irik Mukhamedshin, honorary professor of the Department of Civil and Business Law of RGAIS, PhD in Law, academic advisor, professor Q&A Session

17.15 -17.30	Summing up Day 1 of the seminar

Day 2 – September 11 (Wednesday)

10.00 – 11.00	**IP protection and enforcement, patenting abroad** - Mr Irik Mukhamedshin, honorary professor of the Department of Civil and Business Law of RGAIS, PhD in Law, academic advisor, professor Q&A Session
11.00 – 11.15	Coffee break
11.15 – 12.30	**Search and training of SME personnel on IP matters** - Mr Ivan Bliznets, rector of RGAIS, Doctor of Law, professor Q&A Session
12.30 – 14.00	Lunch
14.00 – 15.00	**Best practices of IP commercialization in Russia** - Ms Juliya Vasileva, Associate Professor of the Department of innovation management and IP commercialization, PhD in Economics Q&A Session
15.00 – 16.00	**Best practices of IP commercialization in Philippines** - Ms Jospehina Rima-Santiago, Director General, the Intellectual Property Office of the Philippines Q&A Session
16.00 – 16.15	Coffee break
16.15 – 17.00	**Law & Practice: IP Commercialization in China SMEs** - Mr WANG Zhengzhi, Partner, Beijing Globe-Law Law Firm Q&A Session
17.00 – 17.15	Summing up Day 2 of the seminar

Day 3 – September 12 (Thursday)

10.00 – 11.30	**Experience of APEC economies** **(in the format of round table)** The participants will be invited to give short presentations about IP commercialization practices existing in their economies Moderator – Ms Veronika Smirnova, Head of the Department of Innovation Management and IP Commercialization of RGAIS, Doctor of Economics, professor - participants of the seminar
11.30 – 11.45	Coffee break
11.45 – 12.30	**The results of research conducted within the framework of the project implementation**
12.30 – 14.00	Lunch
14.00 – 15.30	**Identification and discussion of the best practices on IP commercialization and further steps to address the needs of SMEs in the IP field in APEC region**

	Moderator – Mr Ivan Bliznets, rector of RGAIS, Doctor of Law, professor - speakers and participants of the seminar
15.30 – 16.00	Summing up of the seminar **Closing remarks**