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**RECOMMENDATIONS ON ISSUES THAT MAY BE CONSIDERED IN DEVELOPING AN
INTELLECTUAL PROPERTY STRATEGY FOR LITHUANIA**

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LIST OF ACRONYMS AND ABBREVIATIONS

CMO	Collective management organizations
EIF	European Investment Fund
EU	European Union
ICT	Information and communication technology
IP	Intellectual Property
R&D	Research and Development
TRL	Technology Readiness Level
TTO	Technology Transfer Office
VC	Venture Capital
WIPO	World Intellectual Property Organization
EUR	Euro
K	Thousand
M	Million

EXECUTIVE SUMMARY

Background: The Government of the Republic Lithuania requested the support of the World Intellectual Property Organization (WIPO) for developing a national intellectual property (IP) strategy. In response to this request, a WIPO team undertook a fact-finding mission from September 11 to 15, 2017, during which a series of interviews with specific stakeholders took place, in order to understand their experience with the IP system as it currently operates in Lithuania.

Objective: To reach a detailed understanding, through data collected during the desk review and field visit, of the level of awareness, access to, use and exploitation of the current IP system; identify gaps and challenges and possible areas for improvements and finally make recommendations to the Government for consideration in developing its national IP strategy.

Key findings:

- In general, there is a high-level government commitment to innovation and a number of policies, strategies and laws relating to IP have been put into place;
- IP responsibilities are fragmented among different governmental entities;
- Awareness of IP at all levels and categories of stakeholders is inadequate;
- Human resource capacity in IP is inadequate;
- Private venture capital funds for innovative initiatives are lacking. Private accelerators and business angels tend to invest in more mature and less risky traditional businesses than high risk innovative projects.
- The large number of agencies responsible for a plethora of support programs and instruments make the R&D and innovation support system fragmented and difficult for businesses to access and use.
- Regarding copyright, much of the national efforts have been made with respect to the legislative and organizational aspects, with a particular emphasis on enforcement;
- Cyber-crime is an important concern and efforts are being made to find appropriate solutions including improving the legal framework for preventing and taking action against those involved in IP infringements through the Internet.

Recommendations:

1. Ensure the integration of IP aspects during the formulation and/or revision of policies that seek to promote innovation;
2. Address the fragmentation of IP responsibilities among different governmental entities in order to better rationalize the system;
3. Consolidate institutions that manage innovation and their support schemes where overlaps exist and adopt a more industry- and society need-based approach;
4. Implement IP awareness and training programs for SMEs and universities, including both for faculty and Technology Transfer Offices (TTOs);
5. Implement IP training for all levels of the police force and for administrative officers and judges involved with IP, innovation- and creativity-related policy and administrative initiatives;
6. Integrate IP into education and innovation programs at all levels;
7. Promote an IP system which is easy to use, cheaper, and aligned with business needs;
8. Concentrate judicial competence in the area of copyright under the Regional Court of Vilnius;
9. Increase the number of judges competent in IP and provide for their specialization;
10. Create a police unit with specific competence in IP infringements, including in the monitoring of Internet crimes;
11. Create an administrative body with power to intervene in the notice, take down and block access to illegal websites;
12. Create a stricter collaboration between the CMOs and the public administration with respect to enforcement.

CHAPTER 1 – INTRODUCTION

BACKGROUND

The Government of the Republic of Lithuania requested the support of the World Intellectual Property Organization (WIPO) for developing a national intellectual property (IP) strategy taking into account the Lithuanian innovation development program 2014-2020 and the Lithuanian's progress strategy "Lithuania 2030". After a desk review of the Lithuanian national IP and innovation system, a field visit was undertaken to Vilnius, Lithuania from September 11 to 15, 2017 by:

- Ms. Virág Halgand Dani, Head, Section for Central European and Baltic States Countries and Mediterranean Countries, Department for Transition and Developed Countries, WIPO,
- Ms. Tamara Nanayakkara, Counsellor, SMEs and Entrepreneurship Support Division, Department for Transition and Developed Countries, WIPO,
- Mr. Andrea Basso, Chief Technology Officer, MITO Technology, Milan, Italy and WIPO International Consultant,
- Mr. Vittorio Ragonesi, Legal Advisor, Rome, Italy and WIPO International Consultant,
- Ms. Marija Markova, local WIPO consultant.

During this visit, individual face-to-face meetings were held with a group of preselected stakeholders and relevant information and documents were collected. The objective of these consultations was to understand the IP system in Lithuania, the role and influence of the different actors in the system, their awareness and use of the IP system, the extent of collaboration among them and the role of IP in such collaboration, the nature of available business, financial and technical support for IP and, in particular, the gaps and challenges faced by these actors in making more effective use of the IP system, and to what extent this situation affects the overall developmental objectives of the country.

EXPECTED OUTPUTS

The expected outputs of this initiative were the following:

1. Identify key actors of the national IP system using the information available on-line and collected during the field visit and the follow-on video conference meetings;
2. Raise the awareness of stakeholders of the IP system and its role in strengthening and supporting an innovation-led economy;
3. Develop a report that reviews the IP landscape in Lithuania, including relevant strategies, laws, activities, programs, initiatives and projects, identifies gaps and challenges faced by these stakeholders on making a more effective use of the IP system, and make recommendations on measures that could be taken at the national level on possible ways in which the IP system may be used more effectively for supporting a more innovative economy in Lithuania.

METHODOLOGY

The methodology employed in implementing the project includes the following steps:

1. Desk review - relevant policies, laws and literature related to the Lithuanian IP system were collected and examined in order to better understand the nature and functioning of the IP system in Lithuania, key stakeholders, crucial issues and possible areas for targeted intervention were identified;
2. Interviews - The identified issues were used in designing the interview guidelines for stakeholders that were classified under government bodies: academic and research institutions; business establishments; and IP office and practitioners. The interview guidelines were shared with the stakeholders prior to the field visit. Bilateral meetings with the stakeholders were held for 45 minutes on average, facilitating productive discussions and collecting relevant information. After the face-to-face interviews, a series of follow-up meetings were organized via teleconference;
3. Report - This report is prepared based on the desk review, the information collected during the field visit and the video conference meetings. The report is provided to the Government, which may circulate it to the stakeholders in order to solicit their comments. Such comments and input would serve to further enrich and refine the report and facilitate its implementation.
4. This report consists of five chapters.
 - The first chapter describes the background and the expected outputs and the methodology used in the project.
 - The second describes the context in which the IP system operates.
 - The third presents a summary of the discussions with the interviewed stakeholders.
 - The fourth presents an analysis of the issues presented in the previous chapters leading to suggestions for possible solutions.
 - The fifth chapter proposes recommendations.

CHAPTER 2 – THE CONTEXT

RELEVANT POLICIES, STRATEGIES AND PROGRAMS

The following policies, strategies and programs were found to be relevant in understanding the context in which the Lithuanian IP system operates.

The 2002 **Long-term Strategy on Development of Lithuania** was the first document to recognize the importance of innovation for the future of the country. It focused on knowledge, secure society and a competitive economy with measures dealing with research, innovation, science and education, administrative capacity, ICT infrastructures and science-industry collaboration. The **Long-term Strategy of Economic Development by 2015** was developed in the same year to complement the Long-term Strategy on Development of Lithuania but was never actively implemented.

In 2003, the **Long-term Research and Development Strategy** was approved. It was very ambitious and focused on R&D, with the goal of improving the environment for private investments in R&D and for industry competitiveness, agriculture, construction and services. It recommended an increase of gross expenditure for R&D (GERD) to 3% and business expenditures for R&D (BERD) to 2%, as well as to increase high-tech share of gross domestic product (GDP) to 20% by 2010 (in a window of seven years). Such goals, in retrospective, look not only very ambitious but also unrealistic.

The “**Valleys**” **Programme 2007-13** was a joint initiative of the Ministry of Education and Science and the Ministry of Economy and created five “Valleys”, shown in Figure 1, in 2007-08. It had a pronounced technology-push orientation. Universities were seen as the main stakeholders in this initiative. One of the goals of the programme was to involve business and favor university/industry collaboration, but industry showed little interest in it. The programme eventually focused on universities, their needs and interests.

Eight national programs were also created, which included further infrastructure investment, R&D-intensive businesses and science-industry knowledge transfer. The approach was technology-push and there was a lack of equal effort to connect that technology with industry and market needs. The priority areas were biotechnology, mechatronics, laser technologies, information technologies, nanotechnologies and electronics.

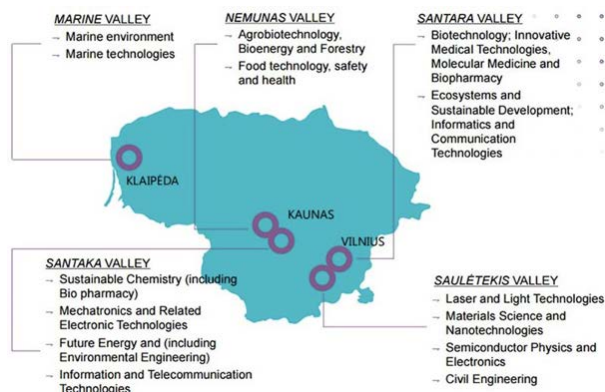


Figure 1 - The 5 Valleys in Lithuania

In response to the economic crisis, the **Economy Promotion Plan 2009-2010** was developed by the Ministry of Economy and focused on benefitting from the European Union (EU) Structural Funds. However, many highly ambitious goals were set and were subsequently not reached. The plan lacked consistency and appropriate indicators.

There has been a misbalance in the policy mix in these years, where infrastructure investments were privileged in contrast to 'soft' capacity building, R&D and human resource development measures. As underlined in the Erawatch report 2016¹ insufficient financial support to ensure IP protection in Lithuania was provided, where the majority of Lithuanian public funds available in the area of IP were spent on buildings and laboratories in the Valleys rather than on support for IP.

On the positive side, these policies had beneficial effects on the capacity of SMEs to absorb technology, whereas on the other side studies show that it is unlikely that these policies had a significant effect on the development of high technology sectors in Lithuania as only a very limited number of technology companies (157) got direct support for business R&D over the 2007-2015 period. In addition, it is unlikely that such support has had any effect on the overall business R&D indicators. The effects were also limited due to the lack of coordination and high fragmentation of IP responsibilities among different entities.

The **Lithuanian Innovation Strategy 2010-20** addressed the coordination and fragmentation issues in the national innovation system with the creation of a new coordination entity, the Agency for Science, Innovation and Technology (MITA) which was established in 2010. The objective was to strengthen Lithuania's presence in the global market by focusing on high value-added, internationally competitive products such as food and drinks, wood products, textiles, chemical products, transport and logistics, as well as biotechnologies, laser technologies, electrical and optical equipment, clean technologies and energy, creative industry, pharmaceuticals, medical and wellness services and medical equipment.

In 2012, the **Lithuania 2030** strategy was approved with the objective that Lithuania should become one of the 10 most advanced EU member countries by 2030. The implementation of the Lithuania 2030 strategy, overseen by the State Progress Council, is realized via the **National Progress Programme for 2014-20**² that replaced the Lithuanian Innovation Strategy 2010-20. The programme provided a basis for the EU Structural Funds (EU SF) support and it has been drafted with the objective of mobilizing the state resources for the improvement of Lithuania's innovativeness and development of a competitive economy based on knowledge, high technologies, qualified human resources and smart specialization. The objectives of the Lithuanian Innovation Development Programme 2014–2020 included the following:

- Develop an innovative society by developing new knowledge and its application;
- Enhance the innovation potential of businesses;
- Promote the creation of value networking, development and internationalization;
- Increase the efficiency of innovation policy-making and implementation and promote innovation in the public sector.

In addition, the programme sought to expand the forms of partnerships between business and science/education institutions, to improve patenting and licensing processes, and the creation of technological centers, seen as accelerators and testbeds of new products.

¹ http://ec.europa.eu/research/era/eraprogress_en.htm

² <https://rio.jrc.ec.europa.eu/en/library/national-progress-programme-lithuania-period-2014-2020>

The **Smart Specialization Strategy 2014-20** has the objective of increasing the impact of high value-added, knowledge-intensive and highly-qualified labor-intensive economic activities and of making structural changes in the economy through R&D and innovation actions. The Program has the following goals:

- Create innovative technologies, products, processes and/or methods and, using the outputs of these activities, respond to global trends and long-term national challenges;
- Increase competitiveness of Lithuanian businesses and their opportunities for establishing themselves in global markets by means of commercialization of the knowledge created in the implementation of the R&D and innovation priorities.

The Research Development and Innovation (RDI) Priority Areas, approved by the Government of the Republic of Lithuania, are: energy and sustainable environment, inclusive and creative society, new production processes, materials and technologies, health technologies and biotechnologies, transport, logistic and information and communication technologies.

The implementation of the Strategy is managed by a coordination group composed by a joint order of the Minister of Education and Science and the Minister of Economy. On the strategic level, the RDI development is managed by the Strategic Council for Research, Development and Innovation formed by the Government. A monitoring scheme has been prepared and approved by the Ministry of Education and Science and Ministry of Economy.

Furthermore, in 2016, the Parliament of Lithuania approved the Guidelines for Changes in Education and Innovation Policy. In order to achieve the goals of the **Lithuanian Progress Strategy 2030** and taking into consideration the findings of the OECD and European Commission, the following goals are set to:

- Reorganize the system of Lithuanian research and to direct it to an expansion of the innovation-based economy and democracy;
- Increase the variety of mechanisms of financial engineering and other economic policy measures aimed at supporting the creation and implementation of innovations and thereby increasing innovations of the public and private sectors;
- Ensure the training and lifelong learning of educators and keep their qualification up-to-date;
- Balance school education, professional education, high education and vocational education;
- Set science progress and innovations as a horizontal priority of the Government's long-term progress strategy implementation;
- Establish principles of science and innovation in research and innovation planning and management systems.

In the area of copyright, the definition of the 2000 Strategy for the Protection of Copyright and Related Rights, as well as the program of measures for its implementation which were adopted over the 2000-2003 period, with technical and financial support from the EU Phare Programme, contributed significantly, in 2008, to the removal of Lithuania from the USTR Special 301 Watch List. This list identifies trading partners of the United States of America presenting the most significant concerns regarding insufficient IP protection or enforcement.

In mid-2018 the draft of the “**Single Innovation Policy**” has been published for official consultations³

IP LAW AND ADMINISTRATION

IP Laws and Membership of International IP Treaties

Lithuania joined WIPO in 1992 and is currently member of the following IP treaties:

- Paris Convention
- Berne Convention
- Budapest Treaty
- Hague Agreement
- Madrid Protocol
- Nice Agreement
- Patent Cooperation Treaty
- Patent Law Treaty
- Phonograms Convention
- Rome Convention
- Singapore Treaty
- Trademark Law Treaty
- UPOV Convention
- WIPO Copyright Treaty
- WIPO Performances and Phonograms Treaty

Furthermore, the following WIPO treaties are in the process of being ratified:

- Beijing Treaty on Audio-visual Performances (Lithuania participates in the preparatory process to determine the common EU position with regard to its ratification);
- Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled (the EU directive in this matter has been very recently adopted and the implementation term in national legislation is not yet expired).

The Government of Lithuania, being an EU member, also adopted the necessary legal acts at the national level to ensure the effective enforcement of IP rights in line with EU acquis (directive 2004/48) and, as a Member of the World Trade Organization (WTO), ratified and implemented the Agreement on Trade-related Aspects of Intellectual Property (TRIPS Agreement). Regarding national legislation⁴, the copyright law was adopted on May 18, 1999, and amended on November 3, 2016. The Criminal Code (Articles 191 to 195) also contains some provisions of law concerning copyright infringement. In particular, it has to be noted that copyright infringement is considered a crime in Lithuania. The Code of Administrative Offences (Articles 122 to 124) provides administrative sanctions for certain copyright infringements.

It also enacted regulations in 2002 to protect confidential product test data that pharmaceutical firms submit for patent and trademark registration. Lithuania also brought its national law protecting biological inventions into compliance with the EU Directive 98/44 of June 2005.

³ http://www.lrs.lt/pls/proj/dokpaieska.showdoc_l?p_id=1305429

⁴ See for a comprehensive listing of national laws <http://www.wipo.int/wipolex/en/profile.jsp?code=LT>

IP Administration

There are several ministries having responsibility (in varying degrees) for IP matters: the Ministry of Justice, for all the activities related to industrial property, including its registration, implemented via the State Patent Bureau; the Ministry of Culture, which deals with issues related to copyright and related rights; the Ministry of Economy, focused on the innovation policy-making, without a specific role on IP; and finally the Ministry of Agriculture for the registration and the protection of plant varieties. The Ministry of Foreign Affairs deals with IP issues only when it relates to trade policy and IP and in representing Lithuania at the international level.

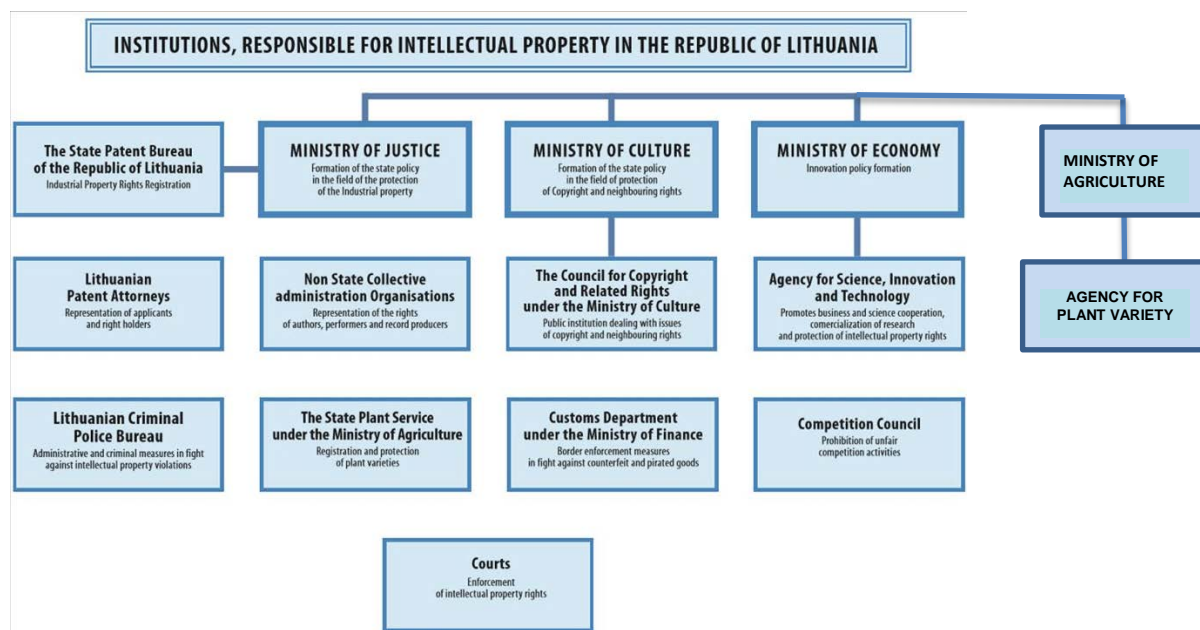


Figure 2 - Institutions Responsible for Intellectual Property in Lithuania

The institutional framework of policy-making is presented in Figure 2. The different actors are described below.

Ministry of Culture – Copyright issues are dealt by the Ministry of Culture. In 2018, the Ministry was reorganized. The functions of the Copyright Division have been incorporated into the “Public Information and Author’s Rights Policy Division”. Approximately 4M EUR are collected annually from the levy on private copying. 25% of this money is spent to finance projects organized by the Ministry. There are discussions currently taking place to reduce this amount to 10% and to share the rest of the money among copyright holders. The Ministry performs functions which are foreseen by the EU Observatory. In terms of IP enforcement, the ministry is working on the establishment of an Enforcement Coordination Commission (under the authority of the Prime Minister’s Office); and the creation of a special institution responsible for enforcement on the model of the State Patent Bureau (VPB).

Ministry of Justice - The Ministry of Justice is responsible for the legislative and policy-making roles on IP matters, that is, patents, trademarks and industrial designs. The VPB is accountable to the Ministry of Justice.

State Patent Bureau (VPB) - The State Patent Bureau (VPB) is responsible for granting of industrial property titles such as patent, design, trademark and semiconductor product topography rights in Lithuania. The VPB currently relies on an annual budget of 2.1M EUR and a staff of 64 employees. The VPB budget comes mainly from the state budget (80%) and 20% from fees. Only 1/6th of the revenues collected remains in the VPB budget, the rest being returned to the state budget. In terms of accessibility, all the VPB services are available 100% online.

Ministry of Economy - The Ministry of Economy is responsible for shaping innovation policy and handling government business in areas of business environment, investment, export, innovation, state owned enterprises, EU support to business, public procurement and tourism. It fosters business and science cooperation, commercialization of results of research and businesses and protection of IP rights by means of the Agency of Science Innovation and Technology (MITA) created in 2010.

Ministry of Foreign Affairs - The Ministry of Foreign Affairs deals with trade policy and IP in representing Lithuania at the international level, for example, in negotiating EU positions and implementation of trade agreements or in the coordination of the OECD accession negotiations (Trade and Investment Committee).

Ministry of Agriculture - The Ministry of Agriculture in mid-2018 established an agency to manage the intellectual property rights of plant varieties. It is responsible for agricultural geographical indications (GIs), as well as GIs for wines and spirit drinks. Lithuania has five registered GIs in the EU, and does not have a separate national registry for GIs. The control of unlawful trade of GI in the internal market is performed via food inspections, while the customs department is in charge of border control on GIs.

Chancellery of the Government - This institution coordinates inter-institutional matters regarding IP.

Ministry of Education and Science - The Ministry of Education and Science approved in 2009 the guidelines on IP management in universities. Before that, all IP belonged to the State. Such guidelines established the main principles regarding the exploitation of IP stemming from research within universities.

RESEARCH AND EDUCATIONAL BASE

There are a several universities operating today in Lithuania. The number of universities is comparable to other EU members given the size of the country. A total of 22 universities, as shown in Figure 2, operate in Lithuania (2015 data from OECD report) of which 14 are public and 8 are private. Universities are primarily funded by the Ministry of Education and Science. The funding of universities has been growing over time. In 2013, approximately 60% of the university funding came from the government, 25% from other domestic sources - including business and nonprofit organizations, and 15% from international sources, including European programs and foreign business which overall tripled in the last few years.

Lithuanian universities are a mix of generalist ones, such as Vilnius University, and more thematic ones, such as the Kaunas University of Technology (KTU) and the Vilnius Gediminas Technical University, specialized in the field of physical and technological sciences, or the Lithuanian University of Health Sciences specialized in the biomedical field.

Name	Type	Location
Aleksandras Stulginskis University	Public	Kaunas
European Humanities University	Private	Vilnius
ISM University of Management and Economics	Private	Vilnius
Kaunas University of Technology	Public	Kaunas
Kazimieras Simonavicius University	Private	Vilnius
Klaipeda University	Public	Klaipeda
LCC International University	Private	Klaipeda
Lithuanian Music and Theatre Academy	Public	Vilnius
Lithuanian Sports University	Public	Kaunas
Lithuanian University of Educational Sciences	Public	Vilnius
Lithuanian University of Health Sciences	Public	Kaunas
Mykolas Romeris University	Public	Vilnius
Šiauliai University	Public	Šiauliai
Telšiai Bishop Vincentas Borisevicius Priest Seminary	Private	Telšiai
The Faculty of Economics-Informatics of the University of Bialystok in Vilnius	Private	Vilnius
The General Jonas Zemaitis Military Academy of Lithuania	Public	Vilnius
Vilnius Academy of Arts	Public	Vilnius
Vilnius Gediminas Technical University	Public	Vilnius
Vilnius St. Joseph Seminary	Private	Vilnius
Vilnius University	Public	Vilnius
Vilnius University International Business School	Private	Vilnius
Vytautas Magnus University	Public	Kaunas

Source: Ministry of Education and Science.

Figure 2 List of Universities in Lithuania

Vilnius University ranks first in terms of R&D funding, receiving almost the same amount as the Lithuanian University of Health Sciences and the KTU put together. The Lithuanian University of Health Sciences is one of the few institutions which train doctors in Lithuania.

Considerable infrastructural development of the top universities took place during the Lithuanian Valleys initiative.

The assessment of performances of individual universities is difficult as there is no tradition in Lithuania of benchmarking research activities. For a given university, international university rankings produce only average indicators and it is therefore difficult to identify high-performing research within a single department or faculty. Vilnius University emerges as the strongest performing university in the country. However, it is at best a moderate performer in the overall European context, on the basis of several published international university rankings.

Universities are free to decide on the structure of their TTOs. In order to receive financing from the EU structural funds, an institution must have a TTO, and nowadays all Lithuanian universities have a TTO. The financing that each institution receives depends on its achievements in the IP field (based on a points system).

There is an on-going discussion at the governmental level on the status of research institutes. These institutes are budgetary institutes and according to the law they are not allowed to create spin-off companies. Not all research institutes have a TTO (approximately 1/3 does not have it).

INDUSTRIAL BASE

The main industrial sectors of Lithuania are electronics, chemical products, machine tools, metal processing, construction material, household appliances, food processing, light industry (including textile), clothing and furniture. The industrial sector contributes 29% of the GDP employing around 25% of the active population. A breakdown of the economic activity by sector is presented in Figure 3. The services sector contributes 68% of the GDP and employs 66% of the active population. The ICT (Information and Communication Technology) sector is the most important contributor to the GDP.

Breakdown of Economic Activity By Sector	Agriculture	Industry	Services
Employment By Sector <i>(in % of Total Employment)</i>	9.1	25.1	65.9
Value Added <i>(in % of GDP)</i>	3.3	28.7	68.0
Value Added <i>(Annual % Change)</i>	-3.5	0.7	3.3

Source: World Bank, 2016. Because of rounding, the sum of the percentages may be smaller/greater than 100%.

Figure 3 Breakdown of Economic Activity

Based on the survey data of Statistics Lithuania, innovative enterprises accounted for 74.3% of the turnover of all enterprises in 2014, compared to 2012 (94.5% of the total turnover of large enterprises with 250 and more employees, 44.7% of enterprises of 10 to 49 employees and 72.5% of companies with 50 to 249 employees).

There is a growing trend and shift in Lithuania towards business based on technological innovations. During the period 2012–2014, innovative enterprises in Lithuania accounted for 40.7% of the total number of manufacturing and service enterprises having 10 and more employees (increase by 10.7%, against 2010–2012). Out of this number, 16.6% were engaging only in technological innovations, 6.4% only in non-technological innovation, while 17.7% were engaged in both technological and non-technological innovation activity. In 2012–2014, against 2010–2012, the proportion of enterprises engaged only in technological innovation grew by 10.4%, in integrated innovation by 7%; meanwhile, the proportion of enterprises engaged only in non-technological innovation decreased by 6.7%. In the same period, technological innovators made up 34.3% of all enterprises, 3.3% thereof introduced only product, 13.9% only process, 15.4% both product and process innovations. Compared to 2010–2012, the proportion of technological innovators grew by 17.4%.

The Startup Ecosystem in Lithuania

There is a growing startup ecosystem that consists, at the time of writing, of 320 active tech startups with over 1,560 startup employees. Over the last five years, they have attracted more than 140M EUR investments of risk capital funds.

The start-up ecosystem consists of venture capital (VC) funds, government agencies/public body (Enterprise Lithuania), accelerators (Start-up Highway, Startup.lt, Start-up Space of Kaunas University of Technology), international companies (Barclays, Western Union), game developers (Nordcurrent, Game Insight), coworking-hubs (Rupert, Hub Vilnius, ISM Innovation Base), universities and research centers (i.e Kaunas University of Technology, Vilnius University, ISM). Lithuania's ambitions are to reach 720 startups operating for more than three years in 2020. This ambitious goal is contrasted with some key issues that the Lithuanian ecosystem is facing:

- **Access to talent** - The Lithuanian startup ecosystem is young; there are not so many experienced and high-skilled profiles for startups. Startup founders are often first-time entrepreneurs without sufficient knowledge and experience in IP matters, business and development process of scaling up and internationalization.
- **Access to capital** - Despite several successful startup funding rounds that came to Lithuanian startups from major international VC funds (Accel Partners, Wellington Partners, Intel Capital, Octopus Ventures, General Catalyst), the current situation of early stage funding availability in Lithuania is weak. The majority of VC funds are JEREMIE backed⁵, organizations, there is a lack private VC funds, private accelerators and the community of business angels is still keener on investing in a more mature and less risky traditional business.
- **Access to market** - there are still plenty of bureaucratic and financial burdens that need to be addressed in Lithuania in order to make market access easier for startups. Entrepreneurs tend to choose alternative ways to develop their business rather than rely on R&D innovations, marketing patents and other IP-based opportunities.

⁵EIF has designed and successfully launched a broad number of debt and equity financial instruments under the JEREMIE initiative (Joint European Resources for Micro to Medium Enterprises), by utilising the European Regional Development Fund (ERDF) resources made available in the period 2007-2013. The JEREMIE initiative offered EU Member States, through their national or regional Managing Authorities, the opportunity to use part of the allocated Structural Funds to finance SMEs by means of equity, loans or guarantees, through a revolving fund acting as an umbrella fund. The EUR 91.5m JEREMIE Holding Fund was set up by EIF in 2008.

INTERMEDIARY INSTITUTIONS AND ACTORS

Agencies Supporting Business and Innovation

The agencies supporting business and innovation are presented in **Error! Reference source not found..** They form a rather complex, fragmented and partially overlapping structure. Four out of the five agencies report to the Ministry of Economy, while the fifth (MITA) reports to both the Ministry of Economy and the Ministry of Education and Science.

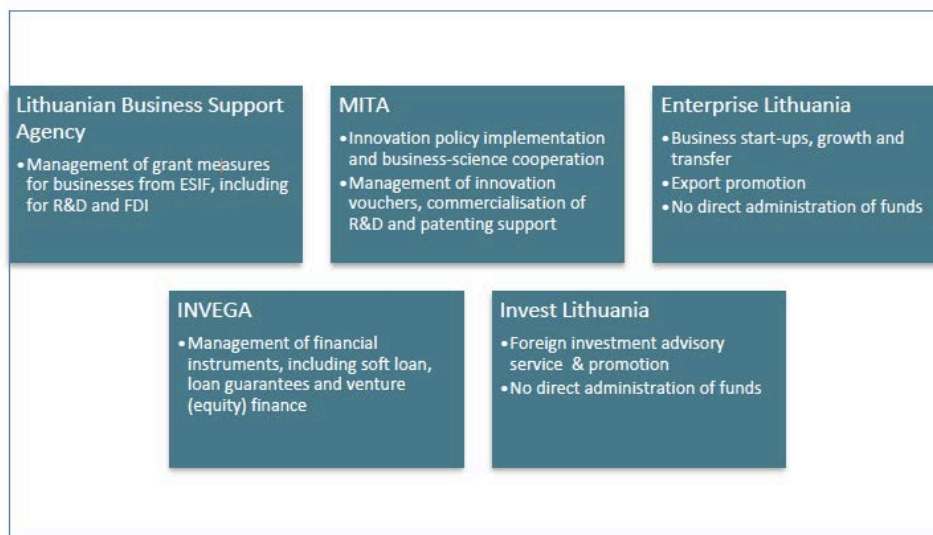


Figure 4 Business Support Agencies in Lithuania.
Source: Specific support for Lithuania: Fit for the Future⁶

The Agency for Science, Innovation and Technology (MITA) is the main governmental institution, responsible for implementing the innovation policy in Lithuania. MITA provides free of charge services for business, science and public sectors, interested in cooperating with international partners and in seeking financial support for research and innovation projects. The main activity of MITA is the coordination of national activities and international programs (HORIZON2020, EUREKA, EUROSTARS) of research, technological development and innovation and other financial schemes (innovation vouchers, protection of industrial property rights). MITA provides national financial support for projects participants. It also promotes business and science cooperation, commercialization of research and protection of IP rights.

INVEGA deals with financial instruments for startups and SMEs. It is currently in the process of creating a fund in cooperation with universities.

Enterprise Lithuania is a governmental institution under the Ministry of Economy. Its mission is to support the establishment and development of competitive businesses in Lithuania and to foster the country's exports by facilitating cooperation with partner networks.

Invest Lithuania provides advice to global companies interested in doing business in Lithuania and introductions to experts on the ground.

The Lithuanian Business Support Agency (LBSA) is a non-profit public institution established by the Ministry of Economy for the purpose of administering EU support and co-financing funds. As the

⁶ <https://rio.jrc.ec.europa.eu/en/library/specific-support-lithuania-fit-future>

executive institution in the structure for the administration of EU funding in Lithuania, LBSA administers EU funding granted for the development of Lithuanian business, R&D, tourism, and the energy sector. The main activities include announcing calls to submit applications for funding, checking and assessing applications, concluding funding agreements, supervising and controlling implemented projects.

The Lithuanian Innovation Centre (LIC) The LIC was established in 1996, as a non-profit organization and reorganized in 1997 as a public organization. The first shareholders and founders of the LIC were the United Nations Development Programme (UNDP), the Lithuanian Ministry of Education and Science and the Lithuanian Stock Innovation Bank. Currently shareholders of the LIC are the Ministry of Economy, the Ministry of Education and Science and the Lithuanian Confederation of Industrialists. It employs a core team of 19 permanent staff members: four project managers, nine project consultants, three project assistants and three people in administration (director, director assistant and CFO).

Its mission is to enable companies develop and implement innovations and to accelerate commercialization of research results with the goal of decreasing the risk of innovation implementation.

On paper, the establishment of MITA was a promising development toward a horizontal coordination of activities. However, the largest programs for innovation, financed through the EIF, are not managed by MITA but by the Central Project Management Agency (CPVA) and the Lithuanian Business Support Agency. This limits MITA's outreach in the business sector. There also seems to be overlaps in funding activities between the Lithuanian Business Support Agency (LVPA), the Central Project Management Agency (CPVA)⁷ and MITA. While they have their own respective mandates, all these organizations manage funding for industrial R&D and innovation. It should be noted that the division of labor in providing business support, in particular between LVPA and MITA, is clear and closely coordinated.

Collective Management Organizations (CMOs)

AVAKA (Audiovisual Authors and Producers Right Association) is the main CMO in Lithuania. It was established in 2008 but did not operate as a CMO until 2011. Since then, it manages producers and authors of audio-visual works (the latter rights were previously exclusively administered by LATGA, now both CMOs are competent). AVAKA has 400 members. It administers cable retransmission rights and private copy (this is the levy that AVAKA collects to distribute to its members) and is accountable to the Ministry of Culture. AVAKA does not grant multi territorial licenses and has agreements to represent foreign rights holders. It does not cooperate much with other CMOs and it must be pointed out that most awareness-raising and other projects are done separately by each CMO. AVAKA has its own tool to monitor the Internet, also using INAC.

LATGA (Collective Copyright Management Association) manages authors of all copyright sectors and audio-visual producers. It has around 4,000 members, out of which 400 are producers. LATGA has around 140 agreements with sister organizations worldwide and is member of GESAC and IFFRO. Rights of public lending of books and reprography are exclusively administered by LATGA.

⁷ The CPVA is a legacy agency from the pre-accession funding period which has a role as a fund management and control agency; it does not have a specific mission to support businesses but rather manages the administrative and financial contracting, etc. for specific ESIF co-financed programmes <https://www.cpva.lt/en/about/history.html>

LATGA employs four staff members in monitoring the use of protected works in Lithuania and in approaching users when needed. The major part of its revenues comes from broadcasting rights.

AGATA (Lithuanian Neighboring Right Association) was established in 1999, this CMO is responsible for collecting the levy for private copying. In particular, it manages the rights of phonogram producers, performers, actors and musicians.

Companies which monitor the Internet

INAC – (Centre for the Protection of Intellectual Property) helps enforce the rights of copyright holders. It monitors the Internet and specific websites as per the requests of IP rights holders. If infringing content is detected, the company sends notices to the administrators of websites. Such notices can be sent worldwide and are not limited to websites registered in Lithuania.

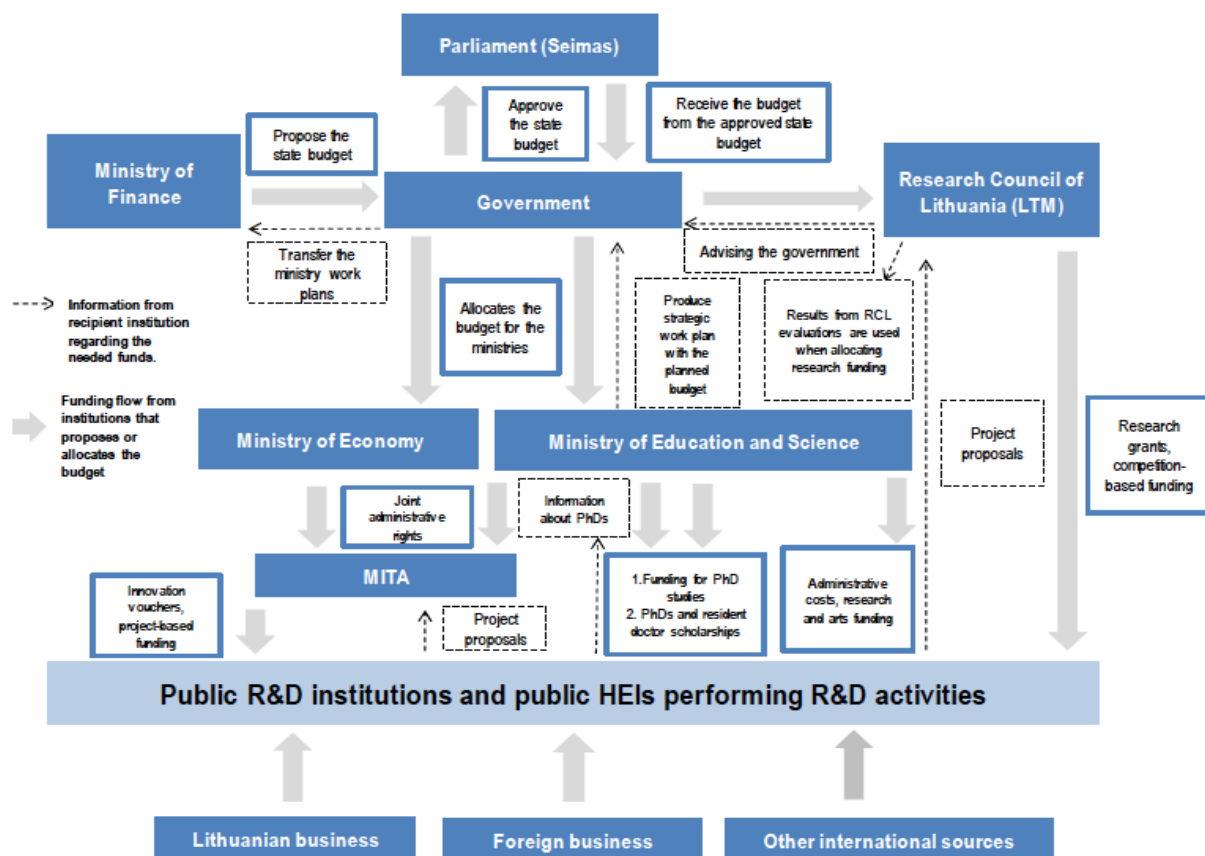
LANVA – (Lithuanian Anti-Piracy Association) LANVA helps IP rights holders to enforce their rights on the Internet. One member of LANVA “Clear digital world” performs monitoring of Internet for infringing content. Sending a notice requesting the removal of illegal content is usually sufficient.

Financial Support and Funding Agencies

Lithuanian Private Equity and Venture Capital Association (LT VCA) - It was established in May 2009 by UAB LitCapital Asset Management, BaltCap UAB and UAB SEB Venture Capital. Private Equity (PE) and VC investments have been present in Lithuania since the beginning of the 1990s. There are currently 25 active companies/members covering different types of VC business activities: fund management companies, consulting firms, lawyers, public institutions, etc., who support and advise investors and entrepreneurs in the structuring and management of their partnerships. There are 10 members and 19 associate members. In addition to the services it provides on behalf of its members (monitoring of legal, regulatory and tax issues, research studies and statistics, training, development and communication, etc.), LT VCA serves as a central platform for representation and promotion of the VC business to institutional investors, opinion leaders, and public policy-makers. The Association helps to improve financing of the economy, in particular for small businesses, as well as to promote economic growth and the entrepreneurial spirit. LT VCA is open to cooperation with VC funds, asset management funds, investment funds, business angels, legal offices, financial consultants and all other players involved in the market of direct investments.

Research funding

In addition to the funding mechanisms presented previously, the mechanisms of research funding are presented in Figure 5.



Source: Arnold, E., J. Angelis and R. Nausėdaitė (2016), *A Review of the R&D and Higher Education Funding in Lithuania and Recommendations for Further Actions*.

Figure 5 Overview of Mechanisms of Research Funding in Lithuania

MITA provides funding for innovation vouchers and other types of project-based funding to support industrial and social applied research. Additional sources of funding for public research institutions are grants awarded by the Lithuanian Research Council (LMT).

IP ENFORCEMENT

On May 20, 2004, the Directive 2004/48/EC of the European Parliament, on the enforcement of IP rights entered into force. Article 20 of the Directive stipulated the duty of Member States to bring into force the laws, regulations and administrative provisions necessary to comply with the Directive by April 29, 2006. There were two objectives to the Directive: first, establishing harmonized laws of Member States and eliminating the disparities in IP rights, and secondly enhancing the level of protection of IP rights.

The World Economic Forum (WEF) Global Competitiveness Report of 2016-2017 indicates that there is a perception that IP protection in Lithuania has deteriorated over the past years. Nevertheless, in the 2014-15 exercise, Lithuania was still ranked higher than eight OECD Members. This constitutes certainly an improvement over the 2008-2009 period when Lithuania outperformed only six OECD countries. However, the 2014 International Property Rights Index (IPRI) maintained by the Property Rights Alliance ranked Lithuania 37th out of 97 countries on its Intellectual Property Rights sub-index, situating it below all but two OECD countries.

According to the (2014) Business Software Alliance (BSA) Global Software Piracy Study, the piracy rate for business software was at 53% in 2013 - which was lower than in 2011 or than the average for Central and Eastern European countries (61%), but still significantly higher than the EU average (31%).

The 2014 Resolution on Protection of Intellectual Property Rights prepared by the representatives of the American Chamber of Commerce in Lithuania, together with the Lithuanian Group of the International Association for the Protection of Intellectual Property (AIPPI), noted that IP rights holders cannot effectively protect their rights in Lithuania.

One initiative was to establish a dedicated Anti-Piracy Center as proposed in a draft concept paper prepared by the Ministry of Culture in 2008 which is still pending. The tasks which had been suggested for the Center included: (a) sharing of collected information on infringements of IP rights with law-enforcement agencies in an operational manner; (b) participation in police inspections; (c) representation of right owners' interests before the appropriate institution authorized by the Government or the court when demanding to apply an injunction to Internet Service Providers; and (d) provision of services in determining the legality of investigational objects, identification of authors of the works, owners of related rights or their authorized representatives.

The Government is currently trying to address some of the above-mentioned issues through various initiatives. In collaboration with the EU Intellectual Property Office (EUIPO), the Ministry of Culture is seeking further ways to strengthen IP enforcement in Lithuania. The adoption of the European Commission's Communication on a European Digital Single Market Strategy, which covers, among other things, the issue of the IP legal framework, is considered by the Lithuanian Government as an engine for further modernization of the national IP rights protection regulation.

For increasing public awareness with regard to IP the Government is implementing a program called the "Creative Activities, Copyright and Related Rights Protection Programme"⁸ through which a variety of projects such as international and national scientific conferences, seminars, workshops and training for law enforcement officers, public education programs, non-formal education projects for children and youth, anti-piracy campaigns via social advertising, media networks, and other events aimed at promoting the legal use of works is being implemented.

In the framework of these programs some economic incentives were also introduced. For instance special tax incentives were put in place over the 2004-2008 period offering the purchasers 33% tax return for legally acquired and declared computer devices.

The Government recognizes the existence of gaps with regard to the implementation and enforcement of IP rights protection, as recently expressed in the Lithuanian Innovation Development Programme 2014-2020. One of the specific targets is to ensure adequate protection of domestically created IP as well as adequate use of IP belonging to foreign businesses to support the creation of innovative products by Lithuanian SMEs, and thus their competitiveness in international markets.

⁸ <https://en.unesco.org/creativity/policy-monitoring-platform/programme-protection-creative>

The Judicial System

The Court system - The Court System of the Republic of Lithuania is made up of courts of general jurisdiction and courts of special jurisdiction.

A District Court is a court of first instance with jurisdiction in criminal, civil and administrative offences. Judges of a District Court also perform the functions of pre-trial judges and enforcement judges, as well as other functions assigned by law.

A Regional Court is a court of first instance for criminal and civil cases assigned to its jurisdiction by law, and with jurisdiction to hear appeals from judgements, decisions, rulings and orders of District Courts. The Chairman of a Regional Court organizes and controls the administrative activities of District Courts and of their judges within the territory of his activities in accordance with the procedure prescribed by law. There are five Regional Courts altogether.

The Court of Appeal is an appeal court for cases heard by Regional Courts as courts of first instance. It also hears requests for the recognition of decisions of foreign or international courts, foreign or international arbitration awards, and their enforcement in the Republic of Lithuania, as well as performs other functions assigned to its jurisdiction by law. The Chairman of the Court of Appeal organizes and controls the administrative activities of the regional courts and of their judges, in accordance with the procedure prescribed by law.

The Supreme Court of Lithuania is the only court of final appeal. It develops a uniform court practice in the interpretation and application of laws and other legal acts.

A Regional Administrative Court is a court of special jurisdiction established for hearing complaints (petitions) in respect of administrative acts and acts of commission or omission (failure to perform duties) by entities of the public and internal administration. Regional Administrative Courts hear disputes in the field of public administration, deal with issues relating to the lawfulness of regulatory administrative acts, tax disputes, etc. Before applying to a Regional Administrative Court, individual legal acts or actions taken by entities of the public administration provided by law may be disputed in the pre-trial procedure. In this case, disputes are investigated by Municipal Public Administrative Dispute Commissions, District Administrative Dispute Commissions and the Chief Administrative Dispute Commission.

The Supreme Administrative Court is a court of first and final instance for administrative cases assigned to its jurisdiction by law. It hears appeals of cases concerning decisions, rulings and orders of Regional Administrative Courts, as well as appeals from decisions of district courts in cases involving administrative offences. The Supreme Administrative Court also hears cases specified by law, concerning petitions for the reopening of completed administrative cases, including cases of administrative offences. The Supreme Administrative Court develops a uniform practice of administrative courts in the interpretation and application of laws and other legal acts.

IP Cases in 2016		
	Supreme Court	All Courts
Copyright	6	39 – 15 in appeal
Trademarks	7	53 – 19 in appeal
Patents	4	
Designs	0	1 – 1 in appeal

- Average length of procedures in trademark cases in courts of first instance: eight months.
- Vilnius District Courts have an exclusive jurisdiction in industrial property matters.
- For copyright issues, five district courts have competence.
- Criminal cases are dealt by all courts (in case of organized crime, only five District Courts have a jurisdiction).
- In case of administrative liability for IP infringements, cases are dealt with by Regional Courts (not Administrative Courts).

Jurisdiction regarding IP infringement - There are no specialized IP courts in Lithuania. However, IP cases are dealt with by specialized judges. A list of such judges is approved by the Order of the President of the Court.

Civil cases - Civil cases regarding infringements of industrial property rights are dealt with by the Vilnius Regional Court (one of the five Regional Courts) which has an exclusive jurisdiction for industrial property cases. The Court of Appeals has a jurisdiction to deal with appeals in this area.

Civil cases regarding infringements of copyright and related rights are dealt with by the regional courts (there are five Regional Courts). The Court of Appeals of Lithuania has jurisdiction to deal with appeals in this field. If there are no “immaterial” issues involved (and only relevant damages are claimed), district courts have jurisdiction to deal with the case.

In the Vilnius District Court two judges are specialized in IP. In the court of appeal two or three judges have such a specialization although it is not formally established.

Criminal cases - Criminal cases regarding infringements of industrial property rights, as well as copyright and related rights, are dealt with by District Courts (if another crime is not involved, for example smuggling, etc.). Regional Courts are the second instance for these cases. The criminal proceedings can be initiated by prosecutors or by the police. The proceedings can also be initiated by custom authorities as well as by the Financial Crime Investigation Service under the Ministry of the Interior. The authorities mentioned may initiate the proceedings on their own initiative as well as in response to complaints (Articles 165 and 166 of the Code of Criminal Procedure of the Republic of Lithuania).

Cases of administrative offences - Cases of administrative offences regarding infringements of industrial property rights, as well as copyright and related rights are dealt with by District Courts. Regional Courts hear appeals against these decisions. There is no possibility provided for an appeal in cassation. Cases of administrative offences of this kind may be initiated by police and customs authorities. They can also be initiated ex officio having the relevant information from the private person.

General Prosecutors' Office - Under the Lithuanian law, the General Prosecutors' Office is responsible for the criminal prosecution of IP law infringements and the filing of public charges. Investigations are usually conducted by the police and in some cases by the Financial Crimes Investigation Unit. There are five regional prosecutors and two prosecutors in the General Prosecutors' Office specialized in IP-related crimes. As regards investigations, the most common crimes are related to counterfeits. In 2016, over 40 cases of this type of cases were dealt with.

IP Lawyers

Lithuanian Bar Association - In total there are 3,000 attorneys in Lithuania. Out of these, 20 are actively practicing in the field of IP. There are two major law firms specialized in IP. Within the Association, there is no special committee to deal with IP: This subject matter actually falls under the Civil Law Committee. Around 10 patent attorneys are also attorneys at law. Only in patent cases do patent attorneys and attorneys at law work together, otherwise they do not have many common aspects of work.

Police

Competences - Pre-trial investigations of criminal offences against intellectual and industrial property (Articles 191-195 of the Criminal Code) committed in cyberspace fall within the remit of the specialized Property Crime Units of the Lithuanian County Police Headquarters (the counties are as follows: Vilnius, Kaunas, Klaipėda, Šiauliai, Panevėžys, Alytus, Marijampolė, Utena, Telšiai, Tauragė). The officers working in these units are not exclusively specialized in investigations of IP crimes, i.e., their expertise also comprises investigations of other crimes against property.

Pre-trial investigations of criminal offences against intellectual and industrial property (Articles 191-195 and Article 204 of the Criminal Code) other than committed in cyberspace are assigned to the expertise of officers of Activity Divisions of Territorial Police Units.

Procedures - Pre-trial investigations of crimes against intellectual and industrial property (Articles 191–195 and Article 204 of the Criminal Code), in accordance with the Law on Criminal Procedure, are commenced: 1) upon receipt of a complaint, statement or report on a criminal offence; or 2) on establishing, by a prosecutor or a pre-trial investigation officer, of a criminal offence (ex officio). However, it should be noted that criminal liability arises, in accordance with Article 192 of the Criminal Code, where the total value of illegal copies exceeds the amount of 100 MSLs, that is, the amount of 3,850 EUR, by reference to the prices of legal copies or, in the absence thereof, the prices of the originals of the reproduced works⁹. In case this amount is not exceeded, administrative liability arises in accordance with Article 122 of the Code of Administrative Offences.

Once it has been established that an offence has been committed, police officers commence, depending on the situation, either administrative proceedings or a pre-trial investigation. Until the administrative or criminal proceedings are resolved, all seized items are stored, at storage sites established by officers. Upon completion of the case, based on a ruling (decision) or a judgement by the court, they are confiscated in accordance with procedure established by the Criminal code or according to Article 122 of the Code of Administrative Offences or, alternatively, the items are returned to the lawful owner or are destroyed.

All decisions/resolutions made by police officers may be subject to appeal (thus verifying their lawfulness and validity) respectively: 1) in the case of administrative proceedings, an appeal is made to a District Court based on the locality of the institution); 2) in the case of a criminal case – to a prosecutor controlling the pre-trial investigation in question, the decision made by the latter is appealed to a higher-level prosecutor, and decision taken by the latter may be appealed against by filing the appeal to a pre-trial investigation judge.

⁹ 1 MSL (minimum standard of living) equals 38.50€

Police closely cooperate with officers of the Customs and the State Border Guard Service, exchange relevant information and participate in IP training courses.

Customs

The Customs Department is divided into three custom offices on a territorial basis. The Custom Procedures Department is the entity in charge of control of counterfeited goods. The main legal act which regulates customs activities is EU Regulation No. 608/2013. Since 2014, the number of detained items has increased from 32,604 to 4,905,736 in 2016. Such a high increase is due to the detention of small food items. The new EU procedure for small consignment is applied in practice and works well.

FRAMEWORK CONDITIONS

Overall, framework conditions for innovation and entrepreneurship in Lithuania are supportive and conducive to efficient resource allocation and many such conditions are highly favorable. These include:

- one of the fastest recent rates of growth among European countries;
- a low corporate income tax rate of 15%;
- one of the most advanced IT infrastructures in Europe;
- relatively few and low regulatory barriers;
- a prized investment location, which was estimated the second most attractive investment environment in Europe in 2014¹⁰;
- increasingly streamlined administrative procedures for starting and running a business;
- Lithuania was 20th in the World Bank's 2016 Ease of Doing Business Index.

There are however a number of problematic areas. In particular, while entrepreneurial dynamism appears satisfactory overall, knowledge of IP matters and the presence of high-growth enterprises is relatively weak. Support for entrepreneurship is quite well-developed but could be strengthened in particular in higher education. Further reforms may be needed, for instance with respect to insolvency. Additionally, in 2015, around 14% of Lithuanian firms considered access to finance to be their most serious problem (as compared with 10% of firms in the EU28), and there is evidence that firms which consider access to finance as particularly problematic tend to be those with higher levels of labor productivity.

¹⁰ According to data from fDi Markets <http://www.fdimarkets.com> in 2014 the number of new FDI projects has increased by 50 per cent, Lithuania ranks second for growth in its attractiveness to foreign investors.

CHAPTER 3 – SUMMARY OF DISCUSSIONS WITH STAKEHOLDERS

GOVERNMENT

Ministries

Ministry of Justice

During the discussions it was underlined that there is a need to provide a high quality, cost effective IP system that is easy to use and that there needs to be a single contact point for IP-related matters. The main reason for the VPB to be under the ministry of justice's responsibility is because it performed registration functions and such functions generally fell under the competence of the Ministry of Justice. The Ministry is of the view that the VPB should become a self-funded agency which would allow for a better planning of its activities and budget expenditure. The decision regarding this issue is pending.

It also highlighted that the institutional framework of policy-making is fragmented and that there is no horizontal and systematic coordination. They also noted that Lithuania does not have specialized IP courts, although they do not see a need for such courts given that the amount of IP disputes is low.

Regarding alternative dispute resolution, they stated that the current trend is to draw more attention to pre-trial dispute settlement mechanisms. There are on-going discussions for such pre-trial dispute resolutions in the IP field to be handled by the VPB in the future via mediation. A large-scale review of arbitration is currently under way.

On the topic of enforcement, they noted that there is a lack of inter-institutional coordination and also pointed out that enforcement institutions do not always consider IP infringements as serious violations of law. The main reasons for such an approach could be a lack of information and lack of political pressure. The following were identified as the biggest challenges:

- Ensuring better IP enforcement on the Internet;
- Strengthening inter-institutional coordination, especially between institutions dealing with copyright and industrial property rights, in particular, the coordination between the Ministry of Justice, Ministry of Culture and Ministry of Economy should be improved (with potentially a single IP Office);
- Making the VPB a self-funded agency;
- Making IP services more service oriented;
- Creating of a well thought through and well supported IP strategy.

Chancellery of Government

During the discussions it was underlined that fragmentation of responsibilities among several institutions and the lack of coordination among them were important issues. They also felt that an innovative culture was lacking. The Government was currently working on educational reform and on changing the approach towards the IT sector services in the public institutions by increasing the demands and requirements from the institutions' point of view. Agencies responsible for attracting investment are pushing to attract innovative companies to undertake R&D in the country. Although the Government has invested a lot in R&D, including implementing attractive tax incentives and a low corporate tax, the results were not satisfactory. It was therefore necessary to understand where the bottlenecks are.

There are currently a lot of initiatives for R&D companies which get more intensive support from the Government. In addition, various EU-funded support activities are available. However, the question is how to select those that are sustainable. The previous experiences indicated that initiatives to create clusters in sectors were not very successful, while clusters which were successful (e.g., lasers or biotech) appeared spontaneously. The question was how to make the creation of successful clusters systemic. The biggest challenges identified were as follows:

- Lithuania needs to attract foreign talent in specific areas by offering adequate salaries and compensation.
- The education system needs to be changed (Government is currently working on this issue).
- Initiatives should be better filtered and support should be concentrated in the areas which already show a good potential.

Ministry of Foreign Affairs

The current priority for the Lithuanian Government they said is its accession to the OECD. The Ministry does not deal with substantive IP issues, but faces IP issues when they arise in the context of negotiating EU positions and implementation of trade agreements. In June 2017, Lithuania became an associate member of the CERN. As a consequence, some issues related to IP and innovation diplomacy might appear in this area. The biggest challenges identified were as follows:

- Need for a strategic approach to IP-related issues.
- Lack of personnel that can deal with IP questions on a horizontal level.
- Fragmentation of competences of institutions. Currently it is very difficult to identify the specific competence of each institution. That is not a lack of competence in institutions, but rather a lack of shared information. As an example, non-agricultural GIs or traditional knowledge, are protected under the law but they do not share the same denomination in the different institutions which makes difficult to form a national position and to identify the responsible institutions.
- It is also difficult to identify institutions responsible for new initiatives on the international level for example, digital economy issues. Currently, if the positions of various institutions are contradictory, a meeting of all institutions dealing with economic issues is organized. It appears however that such a mechanism is not very effective.
- One of the reasons why consolidation and coordination of competences never took place is political. This issue has been on the agenda for a very long time. Political will and institutional interests have been obstacles to finding a solution to this problem. It seems that the best solution would be to have one single institution responsible for IP matters.
- Ministry representatives believe that the level of legal protection of IP is sufficient.
- It is difficult for business to find their way around the different institutions on IP matters.

Ministry of Agriculture

The ministry of agriculture recently established an agency to handle the IP rights of plant varieties. There are currently 55 Lithuanian varieties and 44 foreign varieties protected. There are very few plant variety applications. The highest number was twenty per year, with an average of five per year, mainly for cereals. Historically, the culture of farmers was not favorable to breeders but it is changing. Payment of subsidies is partly related to payment for breeders so the Ministry has a good view on who uses what.

Big farms are also changing their mentality and starting to understand that using certified seeds is beneficial. The Ministry itself is not responsible for the control of the seed use. It is the Association

of Breeders which performs this function. It is worth noting that the Ministry has not received complaints on this issue, and there have been no cases before courts. Lithuania exports a lot of grain but not seeds, which are imported. In the past only 10% of all the seeds used were certified.

With respect to GIs, control of use of GIs on the market is done by the food inspectors. The Customs Department performs controls at the national borders. The biggest challenges identified were as follows:

- Increase awareness of GIs in society in order to increase the number of applications for GIs;
- A better cooperation with other GI-enforcement institutions.

Ministry of Education and Science

The Ministry does not have a support unit on IP issues for educational institutions. Universities receive training from VPB and from MITA. The biggest challenges identified are as follows:

- There are currently no programs to teach IP in schools;
- There is a lack of IP competences in universities and institutes, especially within TTOs. IP basics are taught during engineering and technical studies but not in humanitarian studies.
- People with knowledge of IP in public institutions leave due to low salaries.

Ministry of Culture

The Ministry was of the view that it should continue to perform its policy making functions with respect to copyright but that the IP enforcement competences could be transferred to another institution. In terms of enforcement of IP rights the issue related to the complexity of the internet environment. The state should tackle commercial piracy as a priority.

In 2008, the Ministry drafted an enforcement strategy which suggested creating a nongovernmental enforcement institution. However, this was not implemented due mainly to the fact that non-governmental organizations prefer to stay independent. The Ministry currently facilitates discussions on the issue of enforcement on the Internet. It proposes that the Lithuanian Radio and Television Commission be nominated as the competent institution for internet monitoring and blocking sites. Under the current rules, the competent authority to perform these functions is the Information Society Development Committee. However, the system does not work in practice as this committee prefers not to be involved in copyright enforcement cases. It was noted that there are too many institutions in the IP coordination and enforcement field. Finally it was regretted that the special police division which used to deal with IP issues is not operating anymore. The biggest challenges identified are as follows:

- there are too many institutions in the IP coordination and enforcement field;
- the state should tackle commercial piracy as a priority;
- An effective institution for internet monitoring and enforcement needs to be identified.

Ministry of Finance

Very favorable tax credits for businesses had recently been introduced¹¹. For example, all expenses related to an R&D project can be deducted three times for all companies. Since 2009, tax revenue has gone down by 8m EUR and 200 enterprises have taken advantage of this deduction. A "patent box" tax incentive is in force. The measure limits to 5% the corporate income tax for the profits received from patents, computer software or exclusive licenses as from 1st of January 2018. R&D costs incurred should be experienced in the Lithuanian territory to be considered for the tax break.

¹¹ <https://investlithuania.com/investor-guide/running-your-business/>

There are also tax cuts for the acquisition of new assets, including IP leading to technological improvements, with up to 50% deduction that could be extended to 100% in the future. Finally, Lithuanian businesses with less than 300,000 EUR in revenue have no tax obligations in their first year of operation. The biggest challenges identified are as follows:

- Make sure that the fiscal and financial measures put in place are known and well used by the ecosystem and can generate a significant impact in its growth.

Ministry of Economy

In the financial period 2007–2013, EU structural funds were directed towards the development of valleys and science infrastructure, which resulted in the establishment of laboratories suitable for modern research in Lithuania.

In the financial period 2014–2020, the Ministry of Economy will be implementing a wide range of measures funded from the EU structural funds to create the conditions to enable business to develop technology solutions, create prototypes and successfully penetrate the market. In order to encourage business investments in R&D, the Ministry of Economy is implementing a wide range of measures. Among them:

- **Innovation Vouchers**¹² - This measure is aimed at encouraging science and research establishments to carry out R&D activities together with businesses. The goal is to encourage the interest of businesses in the practical application of R&D results and to encourage education establishments to direct R&D towards the areas which best meet the business needs. Innovation Vouchers entitles companies to buy R&D expertise or knowledge from research institutions. There are two types of activities supported: (1) early stage research and development and (2) preparation of technical feasibility studies. Applicants may receive up to 5,682 EUR for contracts with research institutions. Companies may choose from a list of 2500 R&D services. Applicants may get funding for up to 70% of total project eligible costs. The appeal of Innovation Vouchers is related to their simplicity and low administrative burden both for beneficiaries and administrators. All private legal entities that are active for more than six months and have turnover of at least 3000 EUR are potential applicants.
- **InoConnect** - Its objective is to promote international partnerships and networking and explore opportunities to be part of international European Union RDI initiatives via the Enterprise Europe Network (EEN). The aim is to help increase the R&D expenditure and R&D services export and attract foreign investments.
- **Pre-commercial Procurement** - Under this measure public authorities are encouraged to procure R&D services. Innovation support will be promoted by carrying out pre-commercial procurement during which a new market will be created or a substantial upgrading of an existing product, service, material or process, aimed at addressing socio-economic challenges relevant for the public, will be carried out.
- **Inopatent** – this measure aims to encourage companies to undertake R&D activities in support of designs and patents for inventions at the international level. The allocated budget is 3,041M EUR.
- **InoTraining** – this program aims to increase the competences and to improve the competitiveness in companies to deal with new technologies and thus create possibilities to acquire the necessary skills from R&D centers abroad.

¹² <https://ukmin.lrv.lt/en/sector-activities/innovation/innovation-support-measures>

Public Procurement

In 2014, the Ministry of Economy published the Guidelines on Innovative Public Procurement approved by the Order No. 4-938 of December 29, 2014. These guidelines describe how public procurers can buy goods, services or works of better quality, more adapted to their needs, services or goods that could enhance performance of public procurers and quality of their services, and increase demand for innovation on the market. During innovative public procurement, the contracting authorities (i.e. buyers) are free to decide on the property rights of the property being acquired and, if relevant, in the descriptive document or technical specification of the procurement object they can indicate whether all or part of the transfer of IP will be required.

The Description of the Pre-commercial Procurement Implementation Procedure was approved by Resolution No 709 of July 1, 2015. It establishes the principles of organization and implementation of the pre-commercial procurement, main rights and duties of the subjects participating in the process and other essential issues related to pre-commercial procurement. IP which is created or arise when participating in a pre-commercial procurement and/or by providing R&D services belongs to the supplier, except in cases where the pre-commercial procurement documents specify otherwise. The supplier who owns IP through a pre-commercial procurement must give the contracting authority an unlimited right to use it and to grant royalty-free licenses.

There are 15 public institutions participating in the measure No. LVPA-01.2.1-V-835 "Project of Pre-commercial procurement LT" approved by Order No. 4-238 of the Minister of Economy on April 18, 2017. The project activities are carried out in Lithuania only. Up to 85% of the total eligible project costs are co-financed from EU Structural Funds (with the remaining 15% being covered by the contracting authority). The project will contribute to the implementation of the Lithuanian Innovation Development Programme 2014–2020 (Actions 4.2.7-4.2.12 under Task 4.2 in the Action Plan 2014-2017¹³: Creating measures which aim to promote demand for innovations in order to tackle social, economic and environmental challenges.

Government Departments and Agencies

State Patent Bureau (VPB)

A clear interest to become a self-financed agency emerged during the meetings with VPB. They felt that this would allow for better planning, especially in the fields of awareness raising and IT. In this regard, VPB supports the idea of merging copyrights and industrial property rights under the VPB. If the two areas were to be merged, a mechanism similar to the EU observatory could be created. They estimate that a limited number of personnel (less than 10 full time) should be employed for this purpose. On the other hand, they were of the view that GIs should probably stay under the Ministry of Agriculture.

VPB is of the opinion that the structure of the Bureau is balanced. In 2016, an IP Awareness Raising Division of VPB was created. Currently 100% of its services are currently available online. In the future, better IT services and awareness raising activities will be two key priority areas.

¹³ Action Plan 2014-2017 for the implementation of The Lithuanian Innovation Development Programme 2014–2020, http://ukmin.lrv.lt/uploads/ukmin/documents/files/Inovacijjos/Strategijos/2016-12-07%20Nr_%204-753.pdf

A patent law reform could potentially be considered for introducing substantive examination to ensure quality patents. However, in such a case, introducing a utility model system would be necessary to balance a new strong patent. There is currently a 50% discount of patent application fees for the inventors and for the time being the Bureau does not see the need to change the fee schedule. As compared with other EU countries, Lithuania uses more national trademark filings.

Agency for Science, Innovation and Technology (MITA)

One of the concerns that emerged during the discussions is that MITA is currently funded by the EU structural funds and once these funds are over the future is unclear but there is a full commitment to provide the same level of support. Relative to IP matters, MITA provides financial support for patenting. A successful applicant can recover up to 75% of patenting costs for a maximum of 30,000 EUR including the cost of the application and the search report. The applicant must be a Lithuanian business, show that it has applied at least for a local patent and that it intends to apply and file internationally. The invention must be in one of the smart specialization domains¹⁴ and must have a potential for commercialization (the assessment is undertaken by an expert).

The startups or SMEs can get advice and consultation on patenting and business management support for up to 200 K EUR over three years. MITA provides innovation vouchers of up to 5 K EUR. They are re-evaluating this amount possibly increasing it to 15 K EUR and the possibility to offer differentiated vouchers. Such schemes have been in force over the last seven years and they are of the view that it has had a big impact. There was a considerable increase in yearly patenting activities thanks to this measure. Over 100 companies have been created in the last four years.

Lithuania Innovation Center (LIC)

The LIC provides innovation support services to enterprises, research institutions, industry associations and business support organizations as follows:

- Interface with the Enterprise Europe Network in procuring or marketing technologies and identifying partners for technological cooperation in Europe;
- Provide consultancy services on absorption of the resources of the EU Structural Funds in developing and implementing innovation, research and development projects;
- Participate in the implementation of European research and development projects;
- Drive the RIS LITHUANIA–INNPULSE project. Its purpose is to prepare a regional innovation strategy for the Vilnius, Klaipėda, Panevėžys, Šiauliai and Telšiai counties;
- Organize the annual national “Innovation Award” contest. The aim of the contest is to foster the entrepreneurial thinking, technological development and to provide a possibility for enterprises to self-assess their competitiveness and innovativeness (www.inovacijuprizas.lt);
- Host the National Technology Platform Centre (NTPC) which supports and promotes the activities of national technology platforms (www.ntplatformos.lt);
- Evaluate company innovativeness through “Innovcheck”. The Method is based on SWOT analysis of innovation processes and is currently under evaluation;
- Participate in the regional innovation support project “TEICO-Net.” The aim of the project is to improve instruments, programs and policies of participating regions in order to promote regional development, knowledge-based regional economies, technological innovation and entrepreneurship;

¹⁴ see <http://ukmin.lrv.lt/en/sector-activities/innovation/smart-specialisation>

Each year the LIC provides, on average, 5,000 services including consultations, trainings, research, technology related visits to more than 1,000 clients (business enterprises and research institutions). Its activities are organized on a project basis. LIC takes part in various tenders, calls for proposals announced by the EU, other international organizations, and by the Lithuanian Government. Since 1996, the LIC has carried out more than 90 projects. From an IP perspective, the volume of request for IP support is very limited, with only five to six cases a year mainly for technology licensing.

Research and Higher Education Monitoring and Analysis Centre (MOSTA)

MOSTA is a limited liability public legal entity, founded and owned by the State. It provides evidence-based information and guidance regarding the adoption of decisions on formation and implementation of research, higher education, and innovation policy relevant to the public. Its areas of activities cover monitoring and evaluation of research, higher education and innovation.

MOSTA does not have an active role in IP. The main issues that were outlined are the following:

- Lithuanian patents are of low value and PCT applications are expensive.
- There was a mismatch between research and industry needs, with businesses needing a higher quality of research. Even in the H2020 program only a limited number of researchers were/have been capable of using all the available resources.
- Lithuania's industry is not knowledge-intensive.
- More investments were needed in science.
- There is a need to reduce the fragmentation among the different Ministries and to raise their competence in the area of IP.

Enterprise Lithuania

Enterprise Lithuania is a governmental institution under the Ministry of Economy. Its mission is to support the establishment and development of competitive businesses in Lithuania and to foster the country's exports by facilitating cooperation with partner networks. In addition, it provides training, consultancy, market analysis, and business-partner search services. It acts as a facilitator for startups, providing guidance for early stage startups as well as legal and tax advice. With respect to IP support, it is limited to the organization and coordination of educational events. According to them there is very little demand for IP services from the start-ups, some 10% of them requiring support, mainly due to their lack of awareness of IP issues.

INDUSTRY

Intellectual Property Reliant Companies

In this section we will report three cases of Lithuanian companies and their approach to IP.

UAB “Ekspla”

Ekspla manufactures and develops innovative technologies in the area of solid state lasers and systems. The company drafts patent applications internally and collaborates with patent attorneys only at the last stage of the patenting filing process. It files national patents just to get the priority date. They patent mainly in the United States of America and in Europe. They do not use Lithuanian patent attorneys, preferring American attorneys or foreign attorneys depending on the market where the patent is applied for. They do not use the PCT, being of the view that the process is too long and unsatisfactory. For patent information searches, they use publicly available sources. They have currently 12 patent families. Two people are involved in the IP management of the company. 30% of the company sales are international. The Company also exports to Asia but does not have patents there as they see no value in protecting their rights due to their perception that IP protection in Asia is insufficient. The UAB Ekspla trademark is nevertheless protected in Asia.

The company has limited experience with selling know-how, with agreement on royalties done on an ad hoc basis. They don't license yet but are exploring the possibility of doing so. The following main issues were outlined:

- They would like to have more agreements with universities, but that this has been difficult because the price the universities demand for licenses is too high. The main issue is that Universities are of the view that their product is already developed and ready to use, while UAB Ekspla usually finds that there is a lot of additional work and investment required and what universities offer as a Technology Readiness Level (TRL) is too low.
- The Company acknowledges that universities now have TTOs, but felt that they are, in most cases, still at an early stage and inexperienced.
- In addition, they felt that there is a cultural problem with universities because scientists are always more eager to publish than to patent. UAB Ekspla also works with other companies, in such cases all parties agree on IP aspects at the beginning of the joint project.
- They feel that, for small companies, patenting is too expensive.

Thermofisher Scientific

This company was formerly called “Fermentas” a Lithuanian company that was acquired in 2010 by Thermofisher Scientific, a US based company and the owner of five global brands. It specializes in research in precision medicine. In the Lithuanian branch the IP team is composed of six people. They provide patent searches for the company worldwide. The branch works extensively with various local universities (internships, supporting curriculum, embedded tools at research labs, etc.). If they need a scientific solution, they usually approach a relevant department of research and if it can offer a solution a contract is agreed with the TTO. They mainly use contract research and, in such cases, all IP belongs to the company. 16% of activities of the Lithuanian branch is research. R&D is demand-driven. For the PhD students that operate in the Lithuanian branch IP rights are shared, however such cases are rather rare. Licensing (in and out) is done by the centralized company department in the United States of America, which has a large team of attorneys. A team of attorneys is also present in Europe, but many tasks are outsourced. The IP team usually first files a provisional US patent to save the priority date. In 2016, 34 new products were developed in the

Lithuanian branch but the company does not use Lithuanian patents. They patent in selected European countries if there is a need, but never all of Europe in one patent. One of the main challenges they identified is that local universities should become more business oriented.

Integrated Optics

Established in 2012, Integrated Optics focuses on small laser technology. The current lead product is called Matchbox¹⁵. The company has good IP knowledge; the CEO is a patent attorney with a physics background and has filed local and international patents for the company products. The company had access to local VC funds. In their opinion the local fund managers don't have IP expertise. VC managers ask IP related questions but there is no formal due diligence process nor IP assessment. They received seed investment of 300 K EUR from a government program. They drafted the patent applications themselves for a total of four pending applications and 90% of their patent expenses were paid by MITA. Manufacturing technology was kept as trade secret. The company broke even this year. They mainly sell to Germany, the United States of America and Japan. For their distribution chain, an agent in the Netherlands has helped them. The company prefers to file their IP first in the United Kingdom than in Lithuania. They were of the view that VCs needed more IP education.

RESEARCH

Universities

Vilnius Gediminas Technical University

There are two teams in the university that deal with IP issues; the science committee and the knowledge and technology transfer center. Scientists are encouraged to participate in commercialization activities by a system of receiving points for different achievements including patent granting, filing of patent applications, successful licensing, etc. An evaluation is done every two years and there is a monetary reward. The university tries to encourage spin-offs but it is difficult to calculate the involvement of scientists in such cases. An online platform for disclosure exists and ideas are evaluated by an evaluation commission. They underlined that scouting for ideas is harder with university scientists but is easier with students because they are exposed to IP via optional classes that cover IP management aspects. The university has a patenting fund of approximately 10 K EUR for national patents.

The TTO started its activities in 2014. Usually the inventions of the university are commercialized by signing a license agreement for a specific period with a possibility to renegotiate the contract or buy IP afterwards. In such cases, an IP evaluation commission determines the price. However, the university does not see immediate commercialization of IP as its ultimate goal and encourages students to push forward their inventions supporting Proof of Concepts (PoC). The university has a small fund for PoCs (approximately 10 prototypes per year).

As to commercialization of IP, the issue is that businesses always want to pay a very low price for the licensing or the acquisition of the technology. In case of contract research, there is no fixed percentage that accrues to the TTO. Each time it is individually negotiated depending on the level of the university's involvement in the project. The following issues were highlighted:

¹⁵ see <https://integratedoptics.com/about-matchbox>

- There was not at the time of the interview any way to measure the economic and social impact of the spin-offs and that such measure could be a governmental initiative.
- The capacity of TTOs need to be improved particularly its ability to scout for and evaluate the commercial potential of research outputs.
- The culture of commercialization is still low in the university.

University of Vilnius

The university had, at the time of writing, 4,000 employees (of which 2,000 academic staff), and 20,000 students (half of them in social/humanitarian fields). The annual budget is approximately 85 M EUR. Life and physics/laser sciences are the strongest research areas and most contracts with businesses and related to IP is in the life sciences. Until 2012, there were no technology transfer or commercialization activities in the university. In 2013, the university defined a university IP policy. Some highlights of this policy include a) 30-80% of income from research are returned to the researcher; b) established process of informing the university of new ideas and c) Ideas which have a potential or which are used in the projects with business are tracked from the beginning from the university TTO. The current TTO is composed of six people which include commercialization experts and legal specialists.

With respect to communication with researchers, informal communication channels seemed to work best. If a new idea is identified, the TTO consults with the researcher but the final decision as to whether a patent application should be filed is taken by the relevant faculty. The relevant faculty also pays the costs of patenting. In terms of management of the income from IP after deduction of the legal costs related to the patent process (i.e. application generation and submission, filing and taxes), what is left is divided among the researcher, the relevant faculty and the university. The TTO does not get any percentage from successful IP commercialization. All IP created by students, including PhD students, is the property of students.

The university representatives were of the view that local VCs do not have enough knowledge on technology and as a consequence they tend not to invest in it. The current main field of investment is in the area of IT. In most cases, it is Business to Business (B2B) investment. In the field of biotechnology, the university usually chooses licensing and joint research models to commercialization of its research results. Biotech partners are usually large foreign companies. The university has also some joint patents with foreign universities.

In terms of IP education, IP courses are included in some curricula and, since 2014, are mandatory for PhD students. The following needs were highlighted:

- Create a central fund for patenting so that the faculty budget is not used for this purpose.
- Reduce the tax on income arising from research activities which is subject not only to income taxes but also social taxes, which is high.
- Introduce a scheme to reward the TTO for successful licensing results.
- Increase the staff of the current TTO.
- Create a larger PoC fund (a fund of around 1 M EUR was suggested on the basis of the previous experience the university had with a private fund).
- Provide educational support for local VCs in the areas of IP and technology.
- Provide educational support for university staff and researchers on IP and the value of commercialization of research results.
- Modify the current rules on the use of financial support for spin-offs and patents. There is a *de minimis* rule which precludes the university to receive more than 300 K EUR per year.

Lithuanian Health Science University (LSMU)

The research areas of LSMU are mainly focused around veterinary sciences and biomedicine. The university also works with the Kaunas Technology University in technology areas. It works closely with the University Hospital and some patents are jointly owned. The university has had an IP policy since 2014. In 2014, it had one patent. In 2017, the plan has been to have three national and one PCT applications. The culture of scouting for ideas is still underdeveloped because researchers prefer to publish instead of patenting. The TTO is working to change that culture. It is also trying to scout new ideas at an early stage. The communications between the TTO and the researchers have increased a lot. The university has a rule that new ideas must be disclosed and submitted using special forms which are afterwards evaluated by the Commercialization Department. On average, this Department receives 20 new ideas per year. Three to four of them are considered for further commercialization. In case a decision to patent is taken, the university covers the patenting costs. If the university creates a company, the position of the researcher concerned is not regulated. In theory, the person can still be a university employee and work for both entities.

The representatives of the university indicated that IP policies of all Lithuanian universities are quite similar. The university implements a points system for which researchers get points for ideas which are patented. If an idea is profitable, a researcher receives between 60% (for amounts up to 100 K EUR) and 40% of the profits (for amounts over 100 K EUR).

The university is not engaged in out-licensing but hopes to do so. Although there is no strategy for establishing a TTO, a broader development strategy exists. The relationship of the university with business is not easy because businesses want to receive and use new ideas before they are patented.

LSMU also commercializes its own products, mainly pharmaceuticals. More than 90% of these pharmaceutical products are produced and sold by the university itself, mainly in the domestic market, with some little export to United States of America. The turnover of this activity is approximately 1 M EUR per year. The university representatives highlighted the following issues:

- A better university ranking system is needed: They indicated that the current rating system that ranks universities on the basis of number of patents without checking their quality is not fair and should be changed. They suggested that income from commercialization could be used as an indicator for evaluation.
- IP training for students and doctors: The biggest challenge in their view is to change the mentality of doctors and researchers in order for them to appreciate IP opportunities.

Kaunas University of Technology (KTU)

As regards IP matters the university has had an IP policy since 2013. It currently offers an on-line system to disclose, with an evaluation process managed by the National Innovation and Entrepreneurship Centre which is part of KTU, and which follows on-going innovation projects. Students that want to push their innovative idea can be incubated up to one year before incorporation into a legal entity. The university provides office space, mentoring and pitch training to get investment money from outside investors. If they are university employees, they still get a full salary from the university. As to how the university manages conflicts of interest in the context of spin-outs, a case by case approach is adopted. KTU adopted the model currently in use in Aalto University, Finland. In some cases, the spinouts are not managed by the professors but by their students. The spin-out may pay for usage of the equipment which is the property of the university. The university is currently reviewing the conflict of interest policy. Concerning the university's role in

its spin-outs, the university keeps a consulting role and not a managerial role and the IP is licensed to the spinout with typical royalty rates that go up to 5% with an option to buy out. The option to buy out is set right at the beginning at a given percentage of the total estimated revenue which is calculated in advance on the basis of the patenting cost that the university sustained. The goal is not to get rich but to have an impact on the local economy, and to maximize the number of start-ups. Since 2012, 64 companies have been established mainly by students, not researchers. Of these, 10 have left the university. Economic benefits are shared according to the formula of 60% to the researcher and 40% to the university. If the gains are over 30K EUR then the split is 60% for the university and 40% for the researcher.

KTU employs for its research staff a points system for patents, publications and commercialization. For students on the other hand it is only a monetary return from the fundraising and the spin-out business activities.

In relation to idea scouting there is no active scouting as there is currently a good funnel for new ideas that are systematically presented to the center. They have on average 10-20 ideas per year from around 800 researchers. There is a strong economic incentive as the university takes care of all the expenses for pushing the idea forward. They filter and do a deeper study on about 10 ideas per year and then decide whether to patent or not or to keep it as know-how. Patents are also good for the public image of the university and also contribute to the KPI of the Government evaluation. They also have a mentorship program and these mentors are paid. They use their network of businesses and mentors to get a feel of the business potential. The Technorama is an annual event organized by the KTU where inventions are exhibited, which is a good place to screen new innovative ideas.

IP is part of the syllabus for all faculties. Students have a half-day course on IP. Courses on innovation management and entrepreneurship have IP modules.

With respect to university's relations with external business partners, potential partners sometimes view IP policy as an obstacle. It would be helpful they said if the IP policy was a common European practice that they can present to their partners as such and not something created by them. Patents are fairly well known by the local businesses.

KTU partners with local VCs and business angels, although not formally. There is a strong opinion among investors that if the start-up owns the IP it is better. The university is therefore willing to transfer to them the ownership to facilitate the funding process. Often start-ups go international (they have one in the United States of America to date), they still keep some operations locally and keep their linkages.

The university representatives highlighted the issue that they currently don't have assessment tools for the new innovative ideas and they have asked the Government for funding for getting them.

Other Research Institutions

Center for Physical Sciences and Technology (CPST)

CPST has 500 researchers, focusing on applied research on laser and biotech fields, who have industrial partners. Their objective is to accelerate innovation in industry. In terms of IP, they stand between the German and Swedish traditions, with a model of joint ownership of IP between the researcher and the CPST. They have no IP management structure as yet and do not wish for the CPST to totally own the IP as it is in the universities case, preferring to have a mixed system. They believe they have a different, more flexible culture. Revenues from IP are shared 50% to the researcher, 15% to the Center and 35% is left open for negotiation. They have an international advisory board. From a regulatory perspective they cannot create spin-outs and therefore they focus on IP licensing. They interact with science parks which can facilitate company creation when needed.

INTERMEDIARY INSTITUTIONS AND ACTORS

Industry Associations

Confederation of Industrialists

In their experience, universities consider their IP policies as a purely formal requirement and are not implemented seriously. First hand experiences indicate that the procedures related to university-business relationships are too burdensome and too bureaucratic. Concerning the attitude of SMEs towards IP, it was noted that businesses do not generally understand the risks and the advantages associated with IP. The IP assessment process is taken lightly: even if due diligence is performed, it is done rather narrowly by evaluating the relevant IP registrations but not the risks associated. It is also observed that businesses usually lack an IP strategy and IP related issues are solved on an ad hoc basis. There is almost no IP market in Lithuania, where only laser, biotech and IT sectors are considered truly innovative. Very rarely businesses request an IP evaluation. The following were indicated as desirable:

- Businesses should be better educated on IP matters.
- More consolidated approach from the State toward IP matters.

Chamber of Commerce

There are five regional Chambers of Commerce covering two regions each. The membership is voluntary. The Vilnius Chamber of Commerce, Industry and Crafts (Vilnius CCIC), the largest Chamber of Commerce in Lithuania, is the founder of the Association of Lithuanian Chambers of Commerce, Industry and Crafts, a member of Eurochambres, the ICC and the Association of Hanseatic Parliament. It has more than 450 members (mainly SMEs) from all sectors. Based in Vilnius, it also has two branch offices in Alytus and Ukmerge. The zone of activity of the Vilnius CCIC covers nine regions and three cities in the south-east of Lithuania, representing 23% of Lithuania's territory and where more than 44% of the population lives. Almost 36,000 large, medium and small-sized enterprises (41% of the total number of Lithuanian companies) involved in economic activities are operating in these regions. Vilnius CCIC has had very little involvement in IP matters.

Funding Institutions

INVEGA

INVEGA deals with financial instruments for startups and SMEs. It is currently in the process of creating a fund in cooperation with universities. INVEGA does not generally provide guidelines for fund managers on how to perform an IP assessment, evaluation, etc. Therefore, these processes can be different in each fund. There is no specific audit of IP related aspects. The following proposals were made:

- Universities should have a more uniform position on IP issues. For example, not all universities have the same definition of a spin-off or the same rules on investing in companies;
- An increased interest from universities would help to create scouting teams, assist scientists, etc;
- More education on IP is necessary. This would ensure demand for INVEGA services by prospective and innovative companies.

Lithuanian Private Equity and Venture Capital Association (VCA)

The VC industry is relatively young but it is growing. The Association counts approximately 30 members. Its only IP related activity is in conducting due diligence. In general, members of the Association do not really pay attention to IP and are not very much aware of IP issues, or of how IP can be useful. The association is mainly involved in lobbying and IP is not part of the picture. Auditors and fund managers do not have enough knowledge on IP. The representatives indicated some desired changes as follows:

- Educate business and encourage investing in university R&D.
- Simplify the process needed for businesses to invest in university R&D.

Technology Parks

Sunrise Valley Lithuania

The Sunrise Valley Science and Technology Park is a non-profit organization founded in 2003. The Park supports the development of entrepreneurship, the promotion of business and science collaboration, the provision of infrastructure and other innovation support services to innovative enterprises as well as to other knowledge-intensive business. The Park hosts innovative technological enterprises which aim to commercialize their knowledge, establish and develop businesses and expand their innovative activity.

The Science Park at the time of writing hosted 56 companies, 20 of them are part of their business incubator which is a three-year program. The areas of focus are ICT, which is dominant, space energy and clean tech. Their services include seeking funds and partners. The hosted companies have products or services with a TRL of at least 8. They have good relations with local VC funds and international partners. They have some expertise in IP matters but there is little request for it. The start-ups are not familiar with IP. The representatives indicated that IP awareness and education were important.

Collective Management Organizations

AVAKA

Their main concern was that the police force did not have enough power to monitor the Internet. The Ministry of Culture has created a working group to solve the issue and it was proposed that the Radio and Television Commission could be responsible for these matters. In their view, the most problematic issue concerned the rights of authors of audio-visual works. These authors transfer all rights to producers who in turn transfer rights to TV channels and the authors do not receive equitable compensation for each TV transmission. Another area of concern is the unclear scheme of distribution of levies of private copying between AVAKA and LATGA.

LATGA

Representatives of LATGA specified that some problems exist in collecting the fees for public performances because in most cases users don't announce about the use in advance. The number of court cases regarding unpaid fees has decreased from 200 to 50, but this was mainly due to the fact that LATGA has started using debt collecting services. Representatives of LATGA do not believe that there is a problem of overlapping requests to pay for the use of the same work by different CMOs. Since 2015, LATGA has a tool to monitor the Internet for online piracy and

considers that the situation is now improving because of the increased availability of licensed services. LATGA also participates in the working group of the Ministry of Culture on on-line IP enforcement. Nevertheless, the representatives noted that the relationship with the Ministry is sometimes not easy. LATGA encounters the same problem as AVAKA as regards the insufficient remuneration for authors of audio-visual works (in cases of TV transmissions).

The resale right is applied but is not very popular. They believe that the copyright law on private copying should be amended to include authors of literature and drama, and, scanners and printers should be added to the list of devices for which the levy is paid (currently applied to photocopiers and multifunctional devices). Further, they were of the opinion that educational exception contained in the copyright law should be narrowed down because there is a lot of abuse in the schools. In addition, in conducting awareness raising activities CMOs did not cooperate among themselves.

They also expressed the view that the criminal code of Lithuania should be amended to criminalize downloading. However, the Representatives noted the availability of legal content and its price should be considered before introducing such changes.

AGATA

They noted that there is currently no list of organizations that are qualified as CMOs or independent entities. This causes practical difficulties such as some entities not fulfilling the legal requirements to “manage copyrights”. They underlined that there is uncertainty as to whether the organizations are CMOs or are independent entities.

They consider that Article 192 on copyright infringement in the Criminal Code is outdated as it only covers unlawful distribution, transportation and storage of illegal physical copies. It should be updated by adding actions such as illegal reproduction and making available on-line so that action could be taken against owners of pirate websites. Only by introducing these amendments would this provision be in line with existing treaties.

In this context, AGATA representatives also noted that notice and takedown procedures are outdated and very slow, and therefore rarely used by rights holders. With regard to enforcement, it appeared that copyright infringements are not seen as serious wrongdoings by the police. During the reform of the Police Department, the Department of Copyright Infringement was disbanded. As a consequence, there are not enough officers who have the know how to deal with piracy.

They were of the view that a strategy on raising awareness is needed. Education of IP issues should be strengthened at various levels. Even the Academy of Arts does not currently have a strategical approach to IP teaching. AGATA is involved in various projects on raising IP awareness. Finally, they said that the tax system was very complex and not encouraging of creativity.

Companies Which Monitor the Internet

INAC (Centre for the Protection of Intellectual Property)

In the opinion of the INAC Representative, the system of giving notice of infringement is very effective. In over 90% of cases, the infringing content is removed from the Internet. In cases where the administrators of the incriminated websites refuse to remove the content, INAC threatens them with legal actions. In the majority of cases such tactics are effective. All communications are addressed directly to the administrators of the websites concerned.

Their clients are mainly IP rights holders from Lithuania, but INAC represents some rights holders of international movies in Lithuania. In the latter case, the responsibility of INAC is to monitor Lithuanian domains. As a direct consequence of INAC's actions, there is generally an increase of income from movies (during the period of monitoring) ranging between 10,000 to 30,000 EUR as people who no longer have the possibility to watch the movies on-line go to see them at the cinema.

A new, unlawful trend that is emerging is to make a video of the movie directly in the cinema and to stream it live on Facebook. INAC also monitors the Internet during live broadcast of sport games, with approximately 40 illegal links removed during each game. INAC does not monitor downloads by end consumers. Peer-to-peer sharing is not monitored either. The reason for this is that INAC monitors websites that host torrent files. If infringing content is detected, INAC requests the website to remove the torrent file.

INAC representatives said that police do not monitor the Internet because they have no legislative power to do so. However, they can start an investigation following INAC's request.

LANVA

This CMO helps IP rights holders to enforce their rights on Internet. One member of LANVA "Clear digital world" monitors the Internet for infringing content, usually, sending a notice requesting that the illegal content be removed which is usually sufficient.

They noted that the question of an IP address is problematic as under the law, an IP address is considered to be personal data. Therefore, given the confidential nature of such data, the identity of the user of an IP address cannot be revealed without appropriate State authorizations. The domestic use of illegal copyright products falls under the administrative law. However, in the opinion of LANVA, this type of liability is also not enforced effectively.

IP ENFORCEMENT

The Courts

The Supreme Court of Lithuania

According to judges, in criminal cases, the lawyers and IP rights holders do not request to use all available measures in pre-trial procedures. Civil procedures are used more often. A reform of the Regional Courts is currently under way. Once it has taken place, there will be 15 courts instead of 54. The Judges of the Supreme Court called for more training and believed that specialization of judges should be better established. In turn, since IP cases are not that numerous, judges in smaller courts with an IP specialization could also specialize in other fields. Judges believe that the police force does not have enough knowledge on IP-related crimes, and prosecutors sometimes lack information. Judges noted that it would be useful to have some training/sharing of best practice on IP enforcement in countries outside of the EU. Additionally, training on the work of CMOs would also be beneficial. Lastly, they called for training for judges dealing with patents (legal-technical duality is difficult) and a better enforcement of IP on the Internet.

Prosecution of Cases

Lithuanian Bar Association

In the Vilnius District Courts there are, as stated before, two judges specialized in IP. In the Court of Appeal, there are two or three, although specialization is not formally established. Knowledge of

judges should be improved, especially for patent cases. The type of cases which are most common are invalidation of trademarks and infringement of copyright and trademarks. Around 40 % of all disputes are settled between parties.

In patent cases it is difficult to request interim provisional measures, requests are usually rejected. It is very difficult to succeed with requests to seize bank accounts. Attorneys face problems with requests for interim provisional measures in cases of absence of judges (in civil cases, as in criminal cases this is not an issue).

In copyright cases, to establish damage, the most commonly used calculation is based on sales, turnover and profits. Calculations based on non-received royalties are not popular because the value of royalties is not public information. Ex-officio criminal cases are very rare, with some cases related to sales of counterfeits on Lithuanian websites. Attorneys are very satisfied with the work of the police in such cases (fast closure of the concerned websites). Attorneys suggested training for judges, especially those in the Supreme Court, because they feel the judges lack the necessary knowledge. Finally, they believe that some decisions which have been taken contradict the EU law, for example on the distinctive character of a trademark.

Patent Attorneys Association

The Association has currently between 40 and 50 members. The average age of a patent attorney is increasing. All patent attorneys must be members of the Association. A new law on patent attorneys came into force in 2018¹⁶. The requirement of professional experience has been reduced from five to two years. The new law has generally simplified accession to the profession. It noted that IP education should be included in the curriculum of programs for non-lawyers. The level of education and knowledge of IP within the Association varies from person to person. In the new law, there is an obligation for continuous training. It also noted that some judges do not possess sufficient knowledge on IP topics, especially patents. The suggestion was made that judges should have a technical background. At the moment, there are no qualified Lithuanian European Patent attorneys. The Association is satisfied with the relationship with the State Patent Bureau.

General Prosecutors' Office

The General Prosecutors' Office is responsible for the prosecution of IP law infringements. IP protection is also established in civil and administrative laws, while the General Prosecutor's Office is only in charge of offenses under the criminal law. Investigations are usually conducted by the police and in some instances by the Financial Crimes Investigation Unit. There are five regional prosecutors and two prosecutors in the General Prosecutors' Office who specialize in IP related crimes.

In recent years, the main infringement issues are on-line. There are very few infringements of IP related to hard copies. On-line enforcement is challenging as servers and domains are usually in foreign jurisdictions. There is also a problem of legal grounds for enforcement of measures related to on-line IP infringements.

Representatives of the Office noted that the legal system lacks an institution responsible for coordinating the investigation of on-line IP crimes with appropriate powers to block the responsible

¹⁶<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/2b71185260a211e7a53b83ca0142260e?positionInSearchResults=0&searchModelUID=2c4aa256-b933-420a-ba13-008fb100486a>

websites. The current legal instruments provide for a right for responsible institutions to block TV channels but there is no such provision which allows blocking Internet sites. They were interested in knowing how these issues are dealt with in other countries.

Another aspect to be noted is the fact that under the criminal code, IP crimes are considered as minor crimes and intelligence services cannot therefore be applied in investigations. Usually, the most common crimes are related to counterfeits and, in 2016, over 40 cases of this type were concluded. They did not feel that the Office is lacking in resources, however, they believed the knowledge of prosecutors on IP crimes could be improved. They would appreciate receiving training and more knowledge on the methodology of investigation. Representatives also noted that, at the moment, the police do not have a special unit dealing with IP crimes, although this is really needed since such crimes require the application of a specific methodology for collecting evidence.

The Prosecutors indicated that there were eight investigative authorities in total and that there was a need for an enforcement coordinating institution. Moreover, it was noted that coordination with the private sector is on an ad hoc basis (for example expert opinions in courts). Such private involvement is not always accepted by the Courts. Should a coordination mechanism or institution be established with a permanent cooperation with the private sector, it would increase the credibility of the private sector experts' opinion and other evidence in the Courts.

Border Control

Customs Department

The new EU procedure for small consignment is applied in practice and works well. If detained goods were for commercial purposes, administrative or criminal liability can be imposed (depending on the threshold established by the law. Goods are destroyed before the court case (if any). After goods are seized, the customs informs the IP rights holder, sometimes even including a picture of the seized goods. The right holder needs to give authorization to destroy the goods. In the past, the right holder had to participate in the destruction, but this is no longer the case. Costs of destruction are borne by the right holder who can in turn reclaim them from the importer. If an importer disagrees with the request to destroy the goods, he/she has a right to apply to a civil court. The biggest problem being that, if the right holder does not react to the notification from customs, customs must release the goods, and this happens in approximately 20% of the cases. Recently, following the introduction of new rules by the EU, customs also have an obligation to detain goods in transit. In the majority of cases, such goods are detained in Klaipeda and are shipped from China to Belarus. The most common goods seized are toys and spare parts for automobiles. A few cases, also involve products with fake GIs, but to a much lesser extent. The Customs Department finds it sometimes difficult to identify the relevant people within the police as there is no specialized unit within the police force. It was believed that it would be beneficial to strengthen the obligation of rights holders to collaborate and called for more training on IP. Training is usually conducted by the internal Customs Division for Training and while most of the teaching is currently concentrated on Trademarks, training on other issues would be useful.

CHAPTER 4 – ANALYSIS

COORDINATION AMONGST INSTITUTIONS AND FRAGMENTATION OF COMPETENCIES

One of the key issues that emerged and one that is already indicated in previous studies¹⁷ is the lack of high profile national coordination of IP related issues. Today IP is administered by several ministries, non-ministerial bodies, the VPB, and a large number of intra-institutional bodies.

According to the stakeholders, the current setup of distributed institutional competence lacks both the political standing and administrative resources to be effective. It is very difficult to identify the relevant competent institutions. One of the reasons why consolidation and coordination of competences did not take place is the lack of political will and institutional interests which have been an obstacle for finding a solution to this problem. The question continues to be raised as to whether it is better to coordinate IP issues or to consolidate competences. In the view of the stakeholders it would be better to have a single institution responsible for all IP matters.

There is no ideal IP infrastructure. Each country must determine what works best for their unique needs and circumstances. The European approach is diverse and range from a 'monolithic approach' such as the UK IPO to a distributed one such as in Italy. In addition, IP offices across the world are evolving from administrative registries to innovation agencies. Over 50% of the offices of the more advanced economies are providing services in addition to the core registry services. It appears that the so called IP non-core services are leading to improvements in the delivery of IP core services. For example, there is evidence indicating that electronic filings speed up examinations, mediation services help to ease trademark backlogs and increased public education on IP helps to justify office budgets. However there is no authoritative study on what could be considered to be the optimal structure of an IP office¹⁸. This would require a further study of the subject matter that is outside the scope of this analysis. The following options were discussed during the interviews with the stakeholders:

1. Centralization of all IP matters in a single agency

This solution could create a system similar to that found in the United Kingdom (UKIPO). It is also proposed that this agency would be self-financing. The strong point of such an approach is that it would provide clarity as to responsibility for all IP matters. In addition, this solution would likely lead to a reduction of costs and the concentration of expert officers in all IP matters in one unique body. GI's however should remain under the Ministry of Agriculture.

The first question that arises regarding this solution is whether this new body should remain under the general control of the two Ministries (Justice and Culture) or only one. The second problematic aspect concerns the fact that industrial property is based on a system of registration which needs an administrative activity of evaluation regarding the existence of the conditions provided for by the law. This activity requires specific and technical studies and investigations. There is no similar requirement for copyright because the right of authors is borne by the creation of the work and no registration is therefore required. In countries where a register of works protected by copyright exists, the registration is based on the request of authors. No specific verification activity is required

¹⁷http://www.invent.it/uploads/1/0/7/4/10744518/mkiskis_ipr_policy_recommendations_1.pdf

¹⁸ <http://www.worldtrademarkreview.com/Magazine/Issue/66>

by the administration in order to register a work. A voluntary register has an information value for the public and may facilitate proof in enforcement actions.

2. Status quo to remain with industrial property matters vested in the VPB and copyright vested in the Ministry of Culture

The first question that arises regarding this solution concerns the control of the CMOs which is administratively heavy¹⁹. As it is well known, the EU directive 2014/26UE on CMOs provides for relevant supervision by the administration regarding the statutory norm of the CMO, the budget, the carrying out of the tasks required by the directive (information to the rights holders, compliance with the time limit for payment etc.). All these activities are also included in the Lithuanian Copyright Law. ‘

A further relevant competence of the Ministry should probably be internet monitoring or at least the control of the public entity that should be charged with this task. In this context, it would also be advisable to create a voluntary register by the Ministry at least of literary works (regarding audiovisual works a public register is administered by the Lithuanian film Center which is an institution under the Ministry of Culture). The registration is indeed an evidence of authorship and is often used in cases where the authorship is contested. It could also be used in the notice to and take down procedure as a presumption of authorship.

The concentration of all these competences in the Ministry of Culture would require an appropriate structure and a sufficient number of staff, adequate equipment as well as a system of controls. This means that at the political level there should be an evaluation of the need to expand the present copyright division in the Ministry by appointing more officers and providing adequate equipment.

3. A separate entity to be created that would exclusively deal with some copyright issues under the authority of the Ministry of culture.

In this regard it is necessary to remember that, according to article 71²⁰ and 71.1 of the copyright law, the Ministry of Culture is the institution in the area of copyright and related rights, authorized to implement the national policy and to coordinate, within its competence, the protection of author's and related rights and to control the activities of CMOs. Furthermore, article 71.1 provides that the Ministry of Culture shall supervise activities of associations of collective administration of copyright and related rights verifying that these associations perform adequately the functions and duties set to them by the law.²¹ Finally, article 72 of the copyright law provides for the creation of the Council

¹⁹ Given the large number of data involved in this process in Italy for instance the competence on controlling the CMOs has been given to the Agency on Telecommunications (AGCOM).

²⁰ According article 71 of the Copyright Law the Ministry has, among the others, the following competences 1). to draft laws and other legal acts regulating the protection of copyright and related rights;2) to implement the provisions of international multilateral conventions and treaties for the protection of copyright and related rights;3) to represent the government in the world intellectual property organisation;4) to exercise the supervision of associations of collective administration of copyright and related rights;5) to mediate at the request of associations of collective administration of rights and (or) users of works and objects of related rights, in the negotiations concerning the conclusion of agreements; 6) to protect the moral rights of authors and performers in the cases provided for by the law ; 7)to provide legal consultations and methodological assistance to collective administration associations ,to associations of users of works and objects of related rights and to law enforcement institutions ;8) to systematize legal acts regulating copyright and related rights; 9) to organise seminars, conferences, practical studies on the issues etc

²¹ In that context the Ministry has ,among the others, the following tasks : 1) to participate through a representative in meetings (of members of such associations as well as in sittings of the management body of such associations ; 2) to request a set of financial statements and an audit report of the association for the previous financial year, approved by the general meeting ; 3) to request other information necessary to determine whether or not activities of the collective

of Copyright and Related Rights that has the function to submit proposals to the Ministry of Culture regarding the implementation of the law and of international treaties and to mediate in the negotiations between CMOs and the associations of users of copyright work and, at the request of CMO and user's rights, to settle disputes regarding exploitation of works as well as infringements of rights, etc. Taking into account this normative framework, it is evident that if the Government decides to create a new autonomous administrative entity charged with the enforcement of the copyright law, a relevant number of the previously listed competences of the Ministry of Culture should be transferred to the new entity. The following in particular could probably be transferred:

- 1) the supervision of associations of collective administration of copyright and related rights;
- 2) the protection in the cases provided for by the law, of the moral rights of authors and performers;
- 3) the provision of legal consultations and methodological assistance to collective administration associations to associations of users and to law enforcement institutions.

In this context, the Ministry of Culture should preserve the competence regarding law making, international copyright negotiations, the supervision of the new entity as well as of the Council of Copyright and of the possible new public entity charged with monitoring the internet (in this last case together with the competent Ministry(ies) on other IP matters. It should also be clarified the difference on competences between the new entity and the Council of Copyright regarding the mediations among the collecting associations and the stakeholders and users which should be left in the exclusive competence of the Copyright Council.

COLLABORATION BETWEEN RESEARCH AND INDUSTRY

It was evident from the discussion with the stakeholders as well the desk review of relevant literature that business needs to be more engaged in the innovation process, invest more and develop tighter connections with research. In order to encourage enterprises to invest in R&D activities and to encourage the development of enterprises and startups, the Ministry of Economy and the Ministry of Education and Science have introduced innovation vouchers. However, acting at the policy level is not sufficient. The stakeholders indicated that there is a mismatch between what is offered by research and what is needed by industry. It emerges clearly that university TTOs are still relatively young and inexperienced in dealing with businesses.

VALUE OF INTELLECTUAL PROPERTY

It emerged from the discussions that Lithuanian businesses are not relying on R&D, innovations, marketing patents or other IP. This trend was also clear from the little success of the valley programs for which industry showed scant interest and was reluctant to engage. There are currently a lot of initiatives for R&D companies which get more intensive support from the Government. In addition, various EU funded activities are also available. However, the question has been how those with promise can be supported. Initiatives to create clusters in certain sectors did not succeed while clusters in certain other sectors, lasers or biotech for example, appeared spontaneously and

administration association comply with the provisions of this law and the statutes of the collective administration association;4) to receive information about court decisions and judicial proceedings in which the collective administration association has participated as a party to the proceedings;5) to receive information about the overall amounts of collected remuneration, the overall amounts of distribution of remuneration to owners of copyright and related rights, the sums deductions designated to cover the costs pertaining to collective administration of rights and collecting and distribution of remuneration.

function well. According to the stakeholders, Lithuania needs to attract foreign talent in specific areas by offering adequate salaries and compensation. Some of the key issues identified are:

- Limited number of national versus foreign patents** - There is a clearly observable trend see Figure 6 and Figure 7, in the low number of Lithuanian domestic patent applications, which is significant in view of the higher number of foreign patent applications which continues to increase. This is especially worrisome in consideration of the modern legal framework, relatively low cost of obtaining and maintaining Lithuanian patents, as well as low patentability thresholds. This is despite the fact that innovation spending doubled from 2010 to 2016. This trend suggests that the current legal framework for the protection of IP has negligible (if any) effect on the local IP production. Figure 7 shows the number of total patent applications for 2016 divided by business and university sectors.

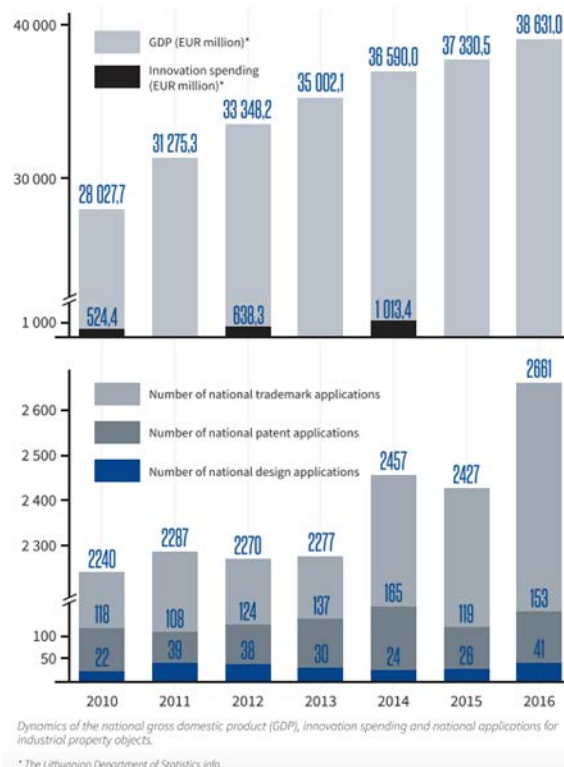


Figure 6: Dynamics of GDP, Innovation Spending and National Applications of Industrial Property Objects. Source: State Patent Bureau of the Republic of Lithuania-2016 report.



Figure 7: Lithuania national patent applications 2016. Source: State Patent Bureau of the Republic of Lithuania-2016 report

- Lack of IP knowledge in business:** A probable reason for this situation is the lack of knowledge and expertise on the role of IP and the opportunities it offers, particularly in an international context. It is noteworthy that Lithuanians do not have a culture of life-long learning, and do not recognize the need and benefits of being trained in IP.

- **High international patenting costs:** International patenting is considered too expensive despite the incentives that have been given.
- **Relatively young TTOs:** Despite the fact that universities now have TTOs, in most cases, they are still at an early stage and sometimes a TTO is a mere formality. In general, scientists are more eager to publish than to patent.
- **Low demand for IP support by SMEs.** Lithuania ranks 25th in the Innovation Union Scoreboard (European Commission, 2015a) and is characterized as a lower income country with specialization in labor-intensive traditional industries. There is little investment by businesses into new product and service development and R&D which in turn leads to lower value-added structure of the Lithuanian economy and thus to low demand for IP support.
- **Structure of the economy:** To transform the economy, a significant increase of R&D activities in companies is needed as well as measures to create incentives for greater economic impact on the development of innovation. The focus should be not only on current innovators, but also on companies in the lower value-added chain, encouraging them to promote new product development and explore new business niches.

INNOVATION IN INDUSTRY

It is crucial for Lithuanian SMEs to convince the market with innovative products and services. Several factors can be considered to reach this goal.

- a) *Develop awareness, appetite and activity* with respect to innovation.
 - i. Awareness: conscious of the need to innovate and innovation is at the forefront of their thinking.
 - ii. Appetite: To have the motivation and the will to innovate, as well as a clear 'why' driving their innovative activities. This could include 'adapting to changing customer needs' or 'staying competitive in the market'.
 - iii. Activity: To have the desire to innovate, and the knowledge and capacity to make innovation happen.

It is key for SMEs to allocate resources to turn vision into reality and to have a supportive environment to drive innovation: company leaders need to have an effective combination of awareness, appetite and activity. For instance, leaders tend to have flexible structures defined by open lines of communication where all ideas are welcomed or there is a company framework where new ideas are discussed, evaluated and realized.

- b) *Cooperation is crucial.* Businesses cooperating in business-oriented networks will grow faster, be more competitive and internationally oriented than if developing on their own. In addition, cooperation among SMEs is an efficient way to deal with limited resources. Through cooperation, SMEs can access external resources and by combining efforts SMEs can together perform better than they can individually. SMEs face competition from large international or national companies. For SMEs, creation of clusters is one of the ways to survive. International clusters, in particular, are gaining importance. Enterprises operating in a cluster have access to information about a business environment; they can assess their capacities, as well as get better access to suppliers and companies providing specialized services. Moreover, clustering fosters intellectual capital growth in SMEs.
- c) *Internationalization is crucial* when raising SMEs' productivity. SMEs should go beyond the local market to realize their next stage of growth. To go international, the lack of critical resources - such as access to finance, knowledge and capabilities - has to be overcome among non-internationalized SMEs. Unlike major firms, SMEs do not have departments that can analyze potentially interesting foreign markets and their regulations. During the day to

day business it is very hard for a small company to get this information and they need to be supported in this process. This is where the regional innovation system should come into play.

EDUCATION

The Government is actively working on improving the situation on several fronts. Measures span from education reforms to improving the quality of teaching and encouraging the transfer of technology from research to industry. As an example, in universities, in order to receive financing from the EU structural funds, an institution must have a TTO. All Lithuanian universities now have one. In addition, the financing each institution receives depends on its achievements in the IP field (based on a points system).

Scientists are encouraged to participate in commercialization activities by receiving different points for different achievements (patent, patent application, license, etc.) and this also affects their salaries. Such points obtained for IP “research” outputs such as utility model and patent applications persuade researchers to apply for patents so as to obtain points and through these points research funding. Such a system may not be the right solution. The motivation is not the potential for commercialization of the research output. Therefore there is a push for patents for the wrong reasons.

The following are some of the key issues that need to be addressed:

- **Attract international expertise:** There are several weaknesses in the outcomes of higher education, related to quality and innovation²² such as complicated and bureaucratic procurement procedures; language barriers; as well as the fact that low wages make it difficult to recruit high quality international experts.
- **Quality of teaching:** Teaching methodologies are not up to date, development of competencies is not systematic, low salaries and work load affect the quality of teaching.
- **Skill Development:** Several Lithuanian employers report problems in finding job candidates with the necessary or matching skills, in particular in ICT, transport and logistics, manufacturing and health care. Employers also report that graduates lack key soft skills such as critical thinking, problem solving and teamwork.
- **Low number of patents from academia:** Considering the large number of universities (22) and the allocated R&D budget, the number of patents is very low compared with EU standards. There are a variety of reasons for this low number. On the one hand this relates to the lack of an innovative culture and the lack of skills as discussed above, but on the other hand it relates also to motivation of faculty. If the university owns the IP but has no effective commercialization infrastructure, IP may end up in never being commercialized. If faculty members generating IP have neither financial return nor incentives and do not own the IP, their choice is likely to be to publish. The universities all have now a TTO infrastructure that is still quite new and need to build up their capacity to be effective.
- **Lack of IP competencies in academia:** It is commonly understood by businesses and Government that there is a lack of IP competence in universities and institutes, especially within TTOs probably due to the fact that they have been established fairly recently. Building capacity of the TTOs is needed to become competitive in the international area. For

²² Education and Training Monitor 2016 Lithuania https://ec.europa.eu/education/sites/education/files/monitor2016-lt_en.pdf

example, until 2012 at the Vilnius University there was no technology transfer or commercialization activities and the IP policy of the university was only defined in 2013.

- **Change of attitude by staff and researchers toward IP:** A solid commercialization infrastructure is necessary to motivate faculty.
- **Education of IP professionals:** The level of education and knowledge of IP within the different associations is still not regulated and varies from person to person.
- **Education on IP** should extend beyond the higher educational institutions to the public at large and to primary schools. In this respect, the Lithuanian Government could adopt a general policy of information to explain what IP is and why its protection is very important, and extend this education to the schools. For example, the importance of copyright to culture in general could be demonstrated and that talented people would not engage in creative activity if there was no adequate protection. Another important means of creating awareness is through advertising campaigns in all media (radio, TV, newspapers) in order to explain to all the importance of IP. In this context, it would also be extremely relevant to inform the public that IP infringements are crimes. Consistent and firm enforcement of administrative sanctions will raise awareness of the public of the illegal character of piracy and of counterfeiting works protected by copyright.
- **Education for SMEs:** Special attention needs to be put into training of individuals and SMEs engaged in creative/innovative activities (e.g., training for students). As a prerequisite for obtaining state/municipal financial support, one consideration could be to make IP awareness a mandatory training requirement.

ACCESS TO FINANCE

The following issues emerged during the discussion with stakeholders and from the desk analysis:

- **Consolidate supporting agencies:** The large number of agencies responsible for a plethora of support programs and instruments makes the R&D and innovation support system fragmented and difficult for businesses to access and use. The effectiveness of the policy support can be increased by consolidating existing institutions, by support schemes, where overlaps exist, and by adopting an approach that is more relevant to industry and society.
- **Lack of attention to IP by investors:** In general, local VCs do not pay attention to IP. Associations themselves are not involved in IP-related activities. Only fund managers invest and take decisions, however, they do not have much interest in IP either, which is due to culture and lack of knowledge on the issue.
- **Lack of knowledge of IP:** Auditors and fund managers do not have enough knowledge of IP.

COLLECTIVE MANAGEMENT ORGANIZATIONS

The competence in the management of rights seems to be equally distributed among CMOs.

AVAKA collects money for producers and authors of audio visual content. LATGA manages all the authors and also some of the audio-visual producers, while AGATA manages the related rights of phonogram producers and performers. There is some partial overlap between the competences of AVAKA and LATGA regarding audio visual producers and authors of this sector. In fact, private copies and cable transmission rights are collected by AVAKA that shares the revenue with LATGA. Public lending and reprographics are distributed by LATGA. The following issues arose in the discussions:

1. *Unclear distribution of private copy revenues between AVAKA and LATGA* - A possible solution to this problem could be the creation of a Commission composed by the representatives of the two CMOs that would decide about the sharing of the revenues.
2. *Overlapping requests to users for payment of the same work by different CMOs* - AGATA pointed out that there are independent entities collecting money for rights holders which are not part of an official list recognized by the Government. According to the information provided by the Ministry of Culture, only two independent entities have been registered by the Commission of Copyright and Related Rights of Lithuania.
3. *Actors transfer their rights to producers who thereafter transfer all their rights to broadcasters which do not pay any equitable remuneration to performers* - A possible solution to this problem would be to introduce a right to equitable remuneration, as foreseen in several national laws and in Article 11 paragraph 3 of the Beijing Treaty; in favor of performers whose performances are fixed in audiovisual fixations for the use of their performances for broadcasting or other communication to the public. We appreciate that the ratification of the Beijing Treaty is under discussion at the EU level. It may be noted that according to the EU Directive 2006/115/EC, the performers whose performances are contained in commercially published phonograms and the producers of such phonograms benefit from a right to equitable remuneration when the phonogram is used for broadcasting or other communication to the public. They cannot give up their right to equitable remuneration or transfer this right²³. This option could be introduced with regard to audio visual performers and producers when introducing this new protection in the law.
4. *Insufficient enforcement of certain rights, in particular resale right and private copy* - Regarding resale rights, it is up to the CMOs to contact and to check the auction houses and the art galleries in order to verify the payment of this right for each sale of a work of graphic or plastic art (following the first sale). The adequate enforcement of this right is extremely important for the fine artists since it is the unique income they can get through the years. Regarding private copy, it is up to the Government to determine the applicable devices on which payment for private copy has to be made. It seems rational that this decree should include scanners and printers as the function of these machines is exactly that of making copies²⁴.
5. *Efficiency of CMOs in monitoring the territory in order to obtain the payment of author's rights and neighboring rights for each public event where music is played or works are performed* -

²³ See also Article 84 Italian copyright law regarding performers of audio visual works)

²⁴ It should be noted, however, that the amount of the private copy levy must reflect only the use of such devices by natural persons for private use and for ends that are neither directly nor indirectly commercial (see Hewlett-Packard Belgium SPRL v Reprobil SCRL Court of Justice of the European Union, Case C 572/13, ECLI:EU:C:2015:750).

It appeared that the fees are not easy to collect because users do not announce the performing of works in advance. Furthermore, LATGA stressed that it has only four people working on this monitoring activity, although it was specified that in order to get payment they had started using debt collecting services. In this respect, it is recommended to increase the numbers of inspections and to try to go to all the events where music is played or works are performed. Ideally, a specific office should be created by way of a one stop shop, possibly with the participation of all the interested CMOs, where the users are able to go before each event in order to get the required license. The existence of a specific office could increase the awareness of users about the need for the previous authorization of the rights holders. It must be recalled that according to the EU CMO directive, the CMOs have to be given a mandate for multi territorial licenses regarding the work in their repertoire.

6. *Taxation system that is unclear and often changing* - They asserted that it was the responsibility of the competent Ministry to take action on this subject-matter. In this regard, the Ministry of Economy clarified that amendments to the Law on Corporate Tax were proposed which included the provision of a “patent box” that implies a lighter corporate tax regime (5% instead of 15% on a company’s profit earned from the marketing of the IP).

THE JUDICIAL SYSTEM AND IP ENFORCEMENT

An issue of general concern was that there is no inter-institutional strategy for fighting piracy and counterfeiting in Lithuania, even though, according to the Government, the issue is being actively discussed among the responsible institutions (Ministry of Justice, Ministry of Internal Affairs, Ministry of Culture and State Patent Bureau).

The Courts

The structure of the Court system is similar to those of many other European systems, comprising two degrees of judgement on merit and a third degree of legitimacy. The duration of proceedings seems to be reasonable and in general shorter than in many other European countries. As for regional obligations within the EU system, the EU regulations 40/94CE and 6/2002CE provided for the creation at national level of courts specialized in European trademarks and European designs. The Lithuanian civil jurisdiction system looks to be consistent with the EU legislation as far as the first degree competence on industrial property right cases (patents, trademarks and designs including EU trademarks and designs) is concerned and is concentrated in the regional Court of Vilnius.

Regarding copyright cases, these are dealt with by the five regional courts in Lithuania according to the territorial jurisdiction. The appeals are all concentrated in the unique Court of Appeal.

During the meetings at the Supreme Court and at the Bar Association, it emerged that the main challenge is in creating a critical mass of well-trained judges in the area of IP. However, given that the number of cases pending before the Courts is very low, it is difficult for civil judges to build expertise in the different IP domains. According to the data obtained during the meetings, it seems that only two judges in the Court of Vilnius and two in the Court of Appeal have a relatively good experience in these domains.

A possible way to increase the experience and the knowledge of judges in the field of IP could be to centralize in the Court of Vilnius the copyright cases which for the moment are spread over the five

Regional Courts and to create a unique court of first instance with IP competence, with a sufficient number of cases to be shared among four or five judges. This would permit the creation of a small group with expertise that could share their experience and have a useful exchange of views. This should be complemented with specialized training courses. The same problem exists regarding the criminal courts.

As noted before, the jurisdiction regarding criminal cases belongs to the District Courts. Taking into account the low number of pending cases (39) and the actual number of District Courts, it means that each judge deals with a limited number of cases, which negatively impacts on their ability to strengthen their expertise. It is relevant to underline that the criminal infringements are based on the same elements as civil infringements: the illegal behavior in fact is the same and it is relevant both in civil and in criminal law.

A request was made during the meeting at the Supreme Court for trainings and sharing of best practices on IP enforcement, in EU countries as well as in countries outside the EU, including some training on the work of CMOs.

Finally, with respect to alternative dispute resolution, the Bar Association stated that around 40% of all IP disputes are settled between the parties, normally when their value is fairly low. It could be useful to provide incentives to the parties to seek recourse to the mediation system before the Commission of Copyright and Related Rights of Lithuania.

Investigation of and Prosecution of IP Crimes

Prosecutors office

Representatives of the prosecutor's office noted that the legal system lacks an institution responsible for coordinating the investigation of on-line IP crimes and which would have appropriate powers to block websites. The current legal instruments provide for a right to block TV channels but there is no provision for blocking internet sites.

Infringements are increasingly taking place on-line and it creates challenges because servers and domains are usually in foreign jurisdictions. There is also a problem of legal grounds for enforcement of measures related to on-line IP infringements. Further, under the criminal code, IP crimes are minor crimes, therefore intelligence services cannot be applied in investigation.

The Prosecution Office noted that the knowledge of prosecutors on IP crimes should be improved. Additional training and knowledge on methodology of investigation would be appreciated. There was also a call for the police to have a special unit dealing with IP crimes as such crimes require the application of a specific methodology for collecting evidence. There was an expressed need for an enforcement coordinating mechanism. In total, there are eight investigative authorities. More and better coordination is needed. Lastly, the need for better coordination with the private sector, based on *ad hoc* procedures, was stressed. With regard to the challenge of increasing the level of the prosecutors' experience, the suggested solution is the same as the one proposed for judges, namely, if the criminal IP cases are only concentrated in the Regional Courts, the prosecutors could deal with a bigger number of cases and in this way would increase their level of experience. Furthermore, a small group of specialized prosecutors dealing with IP cases could be created within the Prosecutor's Office. As with the judges, it would be appropriate to organize trainings for

prosecutors, including in foreign countries, to give them the opportunity to compare their system with other different investigative experiences.

Police

During the reform of the Lithuanian Police Department, the Department of Copyright Infringement was disbanded. Therefore, there are currently not enough officers with the necessary know-how to deal with copyright infringement. Moreover, some CMOs consider that copyright infringements are not seen as serious wrongdoings by law enforcement officers. As is well-known, copyright infringements concern two main aspects: the pirated copies of works on material supports (CD, DVD, e-books, etc.), and Internet piracy. According to the data received from the Police, the competence in pre-investigations regarding Internet piracy belongs to specialized units of the Lithuanian County Police Headquarters, yet the officers working in these units are not exclusively specialized in IP crimes investigations. Their expertise also includes investigations of other crimes against property in general. Taking this into account, it is important to create a special unit operating at a central level (most likely in Vilnius) for pre-investigation related to Internet piracy cases. The reason is that copyright cybercrimes are committed in a complex technological context, and investigation in that field requires specific skills and experience.

With respect to criminal offences regarding infringing goods (hard copies of CD, DVD, etc.), the pre-investigation competence belongs to the officers of the relevant divisions of the regional police units. Regarding these criminal offences (but also regarding goods bearing infringing trademarks), it is important to know the possible channels of production and distribution as well as to be in contact with the customs in order to get information about infringed goods. It is true that the phenomenon of copyright infringing hard copies is losing importance in the face of increasing cybercrime, but is still quite significant. It is therefore necessary to have officers with expertise in this area too.

The stakeholders stressed that the knowledge of prosecutors on IP crimes should be improved and would require training on investigation methodology. Representatives also regretted that the police do not currently have a special unit dealing with IP crimes which they felt was really necessary because such crimes require the application of a specific methodology for collecting evidence.

Customs

During the discussion with the Lithuanian customs, it was said that there are no specialized units on IP in the customs. A creation of such units would be beneficial. We were informed that the training currently done by the internal Customs Division for Training concentrates on trademarks. Trainings on other IP issues, in particular on copyright would be necessary. A number of international organizations including WIPO are providing specialized training for customs officials including on copyright issues.

Another issue raised was that it is difficult to identify the person to contact in order to get the authorization to destroy infringing goods. According to the current EU law, goods cannot be destroyed without the approval of the right holder. However, the experience of the customs is that it is difficult to contact the right holder to get their approval. It is therefore suggested that administrative procedures should be improved so as to obtain the necessary approval.

Infringements of IP on the On-line Environment

One of the main problems raised during the national consultations relates to the monitoring of on-line IP infringements. The notice and take down system is currently based on private monitoring of the Internet. This specific task is carried out by private companies (INAC and LANVA) or by CMOs (in certain cases using private companies). The system seems to be working rather well. If some illegal content has been found, a notice is sent to the website asking for its removal and, according to the interviewed companies, in 90% of the cases the removal takes place. Notwithstanding that, several related problems seem to persist according to the stake holders, in particular:

- IP rights holders are not active enough and do not monitor the Internet;
- there is no legal provision regarding the presumption of authorship which should be sufficient for the purpose of removing infringing content from a website;
- the IP address is a problematic aspect because, according to Lithuanian law, it is considered to be personal data and thus cannot be revealed without appropriate state authorizations;
- domestic use of illegal copyright products falls under the administrative law, although this type of liability is not enforced effectively;
- legal enforcement mechanisms must include different instruments simultaneously;
- the State should be more involved in the enforcement of IP rights on the Internet (this type of enforcement is currently left entirely in the hands of the rights holders), a dialog between the State and IP rights holders should be created; and
- there are too many institutions involved in enforcement issues and this situation creates confusion and coordination problems.

Taking into account the observations raised by the rights holders, one of the main problems occurs where an on-line operator does not remove the infringing work from its website notwithstanding a notification given by the right holder. In this situation, the only possibility for a right holder is to start a civil case asking for an urgent provisional measure or to report the fact to the police in order to get a criminal pre-investigation initiated. These proceedings take time and an intervention by a public authority charged with monitoring the Internet, with the power to order the website to stop the illegal activity or to block its access, would probably be more effective.

Another problem raised in many interviews is the absence of administrative institutions and police with responsibility to monitor the content on the Internet. The consequence of such lack is the absence or the insufficient number, not only of criminal investigations and criminal prosecutions, but also of administrative sanctions where this measure is provided for.

According Article 192 paragraph 1 of the Lithuanian Criminal Code²⁵, illegal behavior is the reproduction, the distribution, the transport and the storage of works protected by copyright for commercial purposes. This would appear to omit willful infringements on a commercial scale of the

²⁵ "1. who unlawfully reproduces a literary, scientific or artistic work (including computer software and databases) or an object of related rights or a part thereof for commercial purposes or distributes, transports or stores for commercial purposes illegal copies thereof, where the total value of the copies exceeds, according to the prices of legal copies or, in the absence thereof, according to the prices of originals of the reproduced works, the amount of 100 MSLs, shall be punished by community service or by a fine or by restriction of liberty or by arrest or by imprisonment for a term of up to two years.

2.. A person who commits the act indicated in paragraph 1 of this Article, where the total value of the illegal copies exceeds, according to the prices of legal copies or, in the absence thereof, according to the prices of originals of the reproduced works, the amount of 250 MSLs, shall be punished by a fine or by restriction of liberty or by arrest or by imprisonment for a term of up to three years.

3.. A legal entity shall also be held liable for the acts provided for in this Article."

exclusive right of communication to the public. Article 61 of the TRIPS Agreement requires that all willful acts of piracy on a commercial scale shall be the subject of criminal sanctions. It is suggested that article 192 Paragraph 1 should be clarified in order to include communication to the public ("making available").

It should be considered whether the value threshold of 3,850 EUR is an adequate implementation of Article 61 of the TRIPS Agreement. It is noted that a strict interpretation of Article 192 requires that it be established that the value threshold has to be achieved in relation to each infringed work. This is particularly problematic in relation to the making available of works, where the infringing act is complete without there being any actual downloading of infringing copies.

The definition of "commercial scale" within the meaning of Article 61 of the TRIPS Agreement was to some extent clarified by the WTO Panel Report, China – Measures affecting the Protection and Enforcement of Intellectual Property Rights, WT/DS/362R. The Panel considered that the concept of "commercial scale" should be "assessed not solely according to the nature of an activity [activity carried out for profit] but also in terms of relative size, as a market benchmark. [...] In quantitative terms, the benchmark would be the magnitude or extent at which engagement in commerce, or activities pertaining to, or bearing on commerce, are typically or usually carried on, in other words, the magnitude or extent of typical or usual commercial activity. [...] [What] is typical or usual varies according to the type of commerce concerned" (see para. 7.545). It follows that a rigid threshold of the current type may not be consistent with the TRIPS requirement.

In addition to the criminal sanction of Article 192 there is the administrative sanction provided for by Article 122 (paragraphs 1 and 2) of the code of administrative offences already referred to. This article makes clear that all types of uploading to and downloading from the Internet for personal and not commercial purposes are subject to administrative sanctions as the words at the beginning of the article (and another use by any means) includes also the Internet illegal activity.

As for the issues of the IP address, according to the EU Court of Justice, revealing an IP address to private persons depends on the legal rules of each Member State. In many EU countries, IP addresses fall within data considered personal and are therefore protected. This does not concern criminal investigations or the administrative activities, so it should be clear that police and prosecutors, in carrying out their activity, are permitted to search for and discover the IP address.

With regards to the intervention of public authorities to enforce IP rights on the Internet, the representatives of the Ministry of Culture affirmed that, under the current rules, the competent authority is the Information Society Development Committee. However, the system does not work in practice because the Committee refuses to be involved in copyright enforcement cases. For this reason, the representatives of that Ministry propose that the Lithuanian Radio and Television Commission could be nominated as a competent institution for Internet monitoring and blocking sites. Such a solution could be viable even if its success depend on the enforcement powers attributed to the Commission and on the creation of a dialog between the Public Administration and IP rights holders.

As mentioned before, the rights holders, by means of private specialized companies or CMOs, monitor the Internet. When they find websites that illegally make available their works, the companies send a notice to the hosting provider and in 90% of cases, the illegal material is removed. In, any case the rights holders can immediately inform the Commission as well as the

police or the prosecutor in order for them to start their investigations, while retaining at the same time the possibility to institute civil action in order to ask for damages.

In this context, the Commission could be provided with the possibility of repeating the notice and, in case of contestation by the website owner or the Internet Service Provider, to give them the possibility to explain their reasons for using the material. Should the reasons submitted be considered inadequate, it could directly order the web site or the Internet Service Provider to stop the illegal activity with the possibility, in case of massive infringements, to order the Provider to block the access to the web site. In all cases, the Commission should have the possibility to inform directly the police and the prosecutors in order to apply, according to the case, administrative sanctions or to start pre-investigations and/or other possible alternatives.

Finally, there is a need to create a specialized unit within the police which constantly checks the activity related to copyright and intervenes in case of administrative infringements, or to initiate pre investigations in case of criminal offenses.

Companies which Monitor the Internet

INAC

The Representative noted that there is little cooperation with similar organizations in foreign jurisdictions because there is no real need to communicate. The only problem raised is that IP rights holders are not active enough and do not monitor the Internet.

LANVA

This type of enforcement is currently entirely in the hands and on the initiative of the rights holders and the view was expressed that the State should be more involved with IP enforcement on the Internet. The following proposals for improvement were made:

- State involvement in enforcement;
- Presumption of authorship should be sufficient for the purpose of removing an infringing copy from a website;
- Dialogue between the State and IP rights holders;
- Legal and enforcement mechanisms should include different and simultaneous instruments.

CHAPTER 5 – RECOMMENDATIONS

In this section we will provide recommendations on the issues that we identified in the analysis section and provide in Annex 2 some guidelines on programs that can be put in place to mitigate them.

1. Ensure integration of IP during the formulation or revision of innovation related policies.
2. Improve coordination and reduce fragmentation of responsibilities - There are several options to address the coordination and fragmentation issues. It is recommended that the Government evaluate the different options and identify what is the best fit for its specific needs. In doing so it is important to keep in mind the multi-sectorial and cross cutting nature of IP. Therefore, should the option of creating of a single institution with responsibility for all the different IP rights be chosen, that institution would act as the central focal point for all IP matters. If however two institutions, one for industrial property and the other for copyright is preferred it is important that they both have the autonomy and independence and is well resourced to effectively implement their program of activities. .
3. Consider developing programs to stimulate the innovative potential of SMEs - Practical measures are needed beyond policies to change the attitude of Lithuanian businesses with respect to R&D innovations, exploiting patents or other IP and its, engagement with universities. It is also important to encourage SMEs to engage in experimentation and apply knowledge to create new technologies and new competitive products. It is therefore recommended that a program for SMEs that helps them to foster awareness, activity and appetite is developed. In addition, it is recommended that from a policy perspective more emphasis on the creation of effective clusters and internationalization is considered. In developing such programs for stimulating their inventing capacity, in promoting collaboration or in encouraging internalization the IP aspects continue to be relevant and need to be addressed. In this regard, measures may be considered for supporting SMEs file international patents.
4. Support SME intermediaries integrate IP into their services. There are a number of SME intermediaries that were identified during this exercise who may be considered for targeted support so that they may integrate into IP into their existing support services. These intermediaries include the various government agencies such as MITA, LIC and enterprise Lithuania that provide innovation support as well as those intermediaries such as VCs and funding institutions that could add a lot of value to their existing services by integrating IP advisory support services to their existing support services. IP for business content could be developed and adapted to their respective needs and made available to them and through them to the SMEs that seek their services. They could also benefit from targeted training programs to enable them to include IP into their services. This is the most effective way to expand the reach of business support services. The IP office cannot realistically reach all the SMEs that they need to reach but by integrating IP into existing support services this objectively could be more effectively met. Such support may include understanding the IP aspects of product development, market access, access to IP information, licensing-in technologies, IP issues in export and international trade in general, IP strategy support etc.
5. Integrate IP teaching into courses and curricula of business, arts, and engineering and science faculties – In order to create a general innovative climate, students need to understand the workings of the IP systems and its role in innovation. Many universities had integrated IP into their teaching programs (KTU in particular) already and this needs to be applied more widely and if possible extended to schools.

6. Improve the capacity of TTOs - Despite significant steps in terms of putting systems in place for managing the IP in research output by establishing university IP policies university TTOs need assistance in building their capacity to perform their job effectively. In order to accelerate the process, the Lithuanian TTOs can take advantage of the activities of the H2020 project such as PROGRESS-TT²⁶ and to develop national capacity building programs to boost the capacity of the TTOs.
7. Undertake a review of university IP policies and determine if there are areas that would be better served by a uniform position across the country.
8. Improve the confidence of faculty members that there is a well-supported path to commercialization - The boost in university IP production depends not only on the capacity of faculty to innovate but the confidence that they have that a research output with promise will make it through to commercialization or in any case have an opportunity to benefit society. In this regard, creating a central fund in the university to bear the costs of patenting, setting up a PoC fund and reducing the tax on income arising out of research activities may be helpful. Some universities reported that they do have such funding in place in the university
9. Consider the following for improving the copyright and enforcement related issues:
 - a. Introduce a register of works;
 - b. Introduce and organize an efficient mediation system;
 - c. Concentrate the copyright jurisdiction in the Regional Court of Vilnius;
 - d. Consider concentrating the IP crimes in the Regional Courts;
 - e. Adopt adequate measures to increase the number of judges and prosecutors competent in IP cases and provide for their specialization by way of adequate trainings;
 - f. Create a police unit with specific competence in IP infringements, which, among its tasks, includes the monitoring of internet crimes;
 - g. Consider modifying Article 192 paragraph 1 of the criminal code to penalize willful infringements on a commercial scale of the exclusive right of communication to the public;
 - h. Increase training opportunities for enforcement officials, police, prosecutors (methodology of investigation), judges and customs officials;
 - i. Create an administrative body (could be the Lithuanian Radio and television Commission) with the power to monitor the Internet, in cooperation with the private sector, and to intervene in the notice and take down system, also providing for blocking the access to the illegal website;
 - j. Evaluate the possibility of giving to rights holders the right to access information regarding IP address;
 - k. Introduce the right to an equitable remuneration in favor of performers whose performances are fixed in audiovisual fixations for the use of their performances for broadcasting or other communication to the public.
 - l. Support the CMOs in their activity of collecting the fees in the national territory, and suggest the creation of a one stop shop for the payment of fees by the users;
 - m. Take into consideration the possibility of adequate changes to the tax regime;
 - n. Implement IP awareness programs and support with the assistance of WIPO, if required.

²⁶ <http://www.progresstt.eu>

ANNEX 1 – LIST OF STAKEHOLDERS INTERVIEWED

No.	Institution	Participant details
1.	Ministry of Justice	<ul style="list-style-type: none"> Mr. Paulius Gričiūnas, vice minister Mr. Algis Baležentis, advisor of the department of Legal Institutions
2.	Government Chancellery	<ul style="list-style-type: none"> Ms. Milda Dargužaitė, Chancellor of the Government of the Republic of Lithuania
3.	Ministry of Foreign Affairs	<ul style="list-style-type: none"> Ms. Lina Viltrakienė, director External Economic Relations Department; Mr. Donatas Tamulaitis, head International Economic Organizations Division, External Economic Relations Department; Mr. Donatas Vainalavičius, First Secretary, International Economic Organizations Division, External Economic Relations Department; Ms. Miglė Simniškytė, advisor, International Economic Organizations Division, External Economic Relations Department;
4.	Prosecutor General's Office	<ul style="list-style-type: none"> Mr. Zenonas Burokas, Mrs Jolita Kančiauskienė and Ms. Vida Ramanauskienė
5.	Invega - financial instruments designed to help with starting up or expanding a small or medium-sized business (founder - Ministry of Economy).	<ul style="list-style-type: none"> Ms. Viktorija Vaitkevičienė, head of projects at the management of measures unit.
6.	Lithuanian Confederation of Industrialists	<ul style="list-style-type: none"> Mr. Raimundas Balčiūnaitis, department of Business Environment and Educational Policy, expert Representative of the attorney at law office
7.	Lithuanian Private Equity and Venture Capital Association	<ul style="list-style-type: none"> Ms. Ausma Bartkutė, director of Lithuanian Private Equity and Venture Capital Association; Ms. Vilija Viešūnaitė, partner of the Attorneys at Law Office "Triniti"
8.	Vilnius Gediminas Technical University	<ul style="list-style-type: none"> Mr. A. Čenys, vice-rector for science and innovations; Ms. V. Purienė, director for the centre of knowledge and technology transfer; Mr. V. Vaišis, director of science directory
9.	UAB "Ekspla"	<ul style="list-style-type: none"> Mr. Kestutis Jasiunas, CEO Dr. Andrejus Michailovas, Science Director
10	Thermofisher Scientific	<ul style="list-style-type: none"> Mr. A. Čenys, vice-rector for science and innovations; Ms. V. Purienė, director for the centre of knowledge and technology transfer; Mr. V. Vaišis, director of science directory
11	Centre for the Protection of Intellectual Property (INAC)	<ul style="list-style-type: none"> Mr. Vytautas Simanavičius, head of INAC
12	Kaunas technology University	<ul style="list-style-type: none"> Mr. Mindaugas Bulota, head of the national and innovation centre; Mr. Donatas Smailys, head of the unit for entrepreneurship and entrepreneurship

		<p>development</p> <ul style="list-style-type: none"> • Mr. Robertas Armonaitis and • Mr. Tadas Prasauskas, heads of projects for technology transfer.
13	Lithuanian University of Health Sciences	<ul style="list-style-type: none"> • Ms. Laima Matusevičienė, head of expansion unit
14	Ministry of Agriculture	<ul style="list-style-type: none"> • Mr. Rolandas Valatkevičius, Agricultural Production and Food Processing Department, Quality Policy Unit, (GIs), chief specialist; • Mr. Vidmantas Ašmonas, Agricultural Production and Food Processing Department, Crop Production Unit, head Depending on availability; • Mr. Arvydas Basiulis, State Plant Service, deputy director; • Ms. Sigita Juciuvienė, State Plant Service, Plant variety division, head
15	Audiovisual Authors and Producers	<ul style="list-style-type: none"> • Mr Darius Vaitiekūnas, director
16	Ministry of Finance	<ul style="list-style-type: none"> • Ms. Audronė Misiūnaitė - Fiscal policy department, director; • Ms. Jūratė Laurikėnaitė - Fiscal policy department, senior consultant, interim head of fiscal law division; • Mr. Mindaugas Mažylis - Fiscal policy department, fiscal law division, chief specialist
17	UAB "Integrated Optics"	<ul style="list-style-type: none"> • Evaldas Pabreza, CEO
18	Patent Attorneys Association	<ul style="list-style-type: none"> • Mrs Aušra Pakėnienė, Patent attorney
19	Ministry of Science and Education	<ul style="list-style-type: none"> • Mr. Albertas Žalys, director, study, science and technology department; • Ms. Kristina Babelytė-Labanauskė, head of technology and innovation division, study, science and technology department; • Ms. Vilma Popovienė, head of science division, study, science and technology department; • Ms. Renata Razmaitė, specialist, science division, study, science and technology department; • Ms. Daina Denisovienė, chief specialist technology and innovation division, study, science and technology department.
20	Engineering Industries Association of Lithuania LINPRA	<ul style="list-style-type: none"> • Mr. Linas Eriksonas, member of LINPRA presidium, National Center for Physical Sciences and Technology, project manager; • other members of National Center for Physical Sciences and Technology
21	Ministry of Culture	<ul style="list-style-type: none"> • Mr. Gytis Andriulionis, vice-minister • Ms. Nijolė Matulevičienė, copyrights division, head
22	Agency for Science, Innovation and Technology (MITA)	<ul style="list-style-type: none"> • Mr. Gintas Kimtys, deputy head of MITA; • Mr. Ričardas Valančiauskas, head of MTEPI programmes and international relations unit
23	Association LATGA – Collective Copyright Management Association	<ul style="list-style-type: none"> • Ms. Radvilė Bieliauskienė, lawyer • Mr. Marius Kuzminas, head of the section for music art • Ms. Laura Baškevičienė, head of legal department;

		<ul style="list-style-type: none"> • Mr. Paulius Sartatavičius, lawyer
24	Lithuanian Anti-Piracy Association (LANVA)	<ul style="list-style-type: none"> • Ms. Vytautė Ladigaitė-Balčiūnienė, chair
25	Lithuanian Neighboring Rights Association (AGATA)	<ul style="list-style-type: none"> • Ms. Martyna Gudaitė – Gulbinienė, vice deputy; • Ms. Raminta Selenienė, chief lawyer; • Ms. Aušra Sadaunykaitė, chief lawyer • Mr. Linas Ežerinis, lawyer
26	National Courts' Administration	<ul style="list-style-type: none"> • Mr. Rimvydas Norkus, president; • Ms. Janina Januškienė, interim head of the section for civil law cases; • Ms. Dalia Vasarienė, judge, civil law case section; • Ms. Danguolė Klimkevičiūtė advisor to the head of the section for civil law cases Participants from the National Court's administration • Ms. Lina Girškevič, head of the legal division; • Ms. Ligita Velykienė, chief specialist of the legal division.
27	Lithuanian Bar Association	<ul style="list-style-type: none"> • Ms. Ausra Pakeniene
28	Vilnius University	<ul style="list-style-type: none"> • Ms. Monika Kavaliauskė, head of innovation unit
29	Customs of the Republic of Lithuania	<ul style="list-style-type: none"> • Mr. Audrius Budrys and • Ms. Violeta Stripeikienė, Customs department, customs procedures division, chief inspectors

ANNEX 2 – GUIDELINES ON MITIGATION PROGRAMS

Outcome - A clear central coordinating mechanism for designing and implementing an intellectual property strategy established and working

Output - A central national coordinating mechanism for developing and implementing an IP strategy established

- Activity - Conceptualize the coordinating mechanism and determine its members and how it would function
- Activity - Undertake an analysis of what activities should be undertaken in the short, medium and long term, having regard to the objective of achieving high impact within the resources available

Outcome – Strengthened capacity of SME intermediaries to better support SMEs Use the IP System

Output 1 - Promising sectors for more focused IP support identified

- Activity - Undertake a survey of innovative SMEs and determine priority areas, potential benefits of the IP system, use and awareness of the IP system, problems and challenges in using the IP system

Output 2 - Capacity of SME intermediaries to provide IP support strengthened

- Activity - Define a pilot group of SME intermediaries and develop capacity building activities for enabling them to provide better IP support to SMEs
- Activity – A self-assessment tool developed

Outcome – Increased intellectual property based commercialization activities

Output 1 - Capacity of TTOs to support the commercialization of research results strengthened

- Activity - Undertake an audit of all TTOs in the country review of existing policies. Determine their strengths and challenges including their ability to scout for and assess ideas, match make with industry, identify promising projects, proof of concept and access to finance and develop a coaching program to assist