IP-backed finance in Luxembourg

Using Intellectual Property Rights as a source of finance







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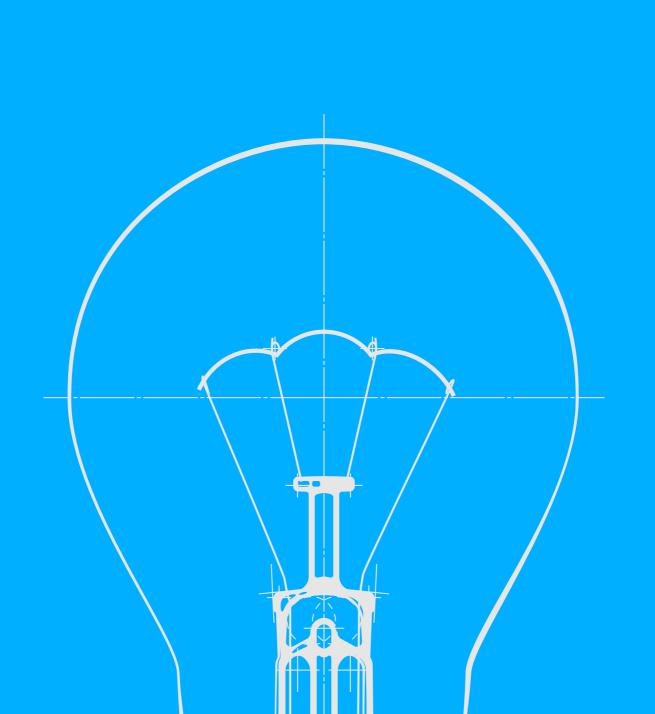
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IP-backed finance in Luxembourg Can Intellectual Property Rights secure finance for SMEs?



Acknowledgments

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In the context of a multi-country analysis, the World Intellectual Property Organization (WIPO) has invited the Government of Luxembourg to perform a study on IP-backed finance in Luxembourg. The study was carried out by the Intellectual Property Office of the Ministry of the Economy, with the assistance of PwC Luxembourg.

Acronyms

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BOIP Benelux Office for Intellectual Property

BPP Benelux Patent Platform

CJEU Court of Justice of the European Union

DCF Discounted Cash Flow

EIG Economic Interest Grouping

EFSI European Fund for Strategic Investments

EIB European Investment Bank
EIF European Investment Fund
EPO European Patent Office
ESA European Space Agency

EU European Union

EUIPO European Union Intellectual Property Office
i-DEPOT Proof of creation filing service provided by BOIP

DIN German Institute for Standardisation

GDP Gross Domestic Product
IT Information Technology
IPOs Initial Public Offerings
IP Intellectual Property

IPIL Intellectual Property Institute Luxembourg – Institut de la Propriété Intellectuelle

Luxembourg

IPO Intellectual Property Office of the Ministry of the Economy, Luxembourg

IPR Intellectual Property Rights

IFRS
 International Financial Reporting Standards
 ISO
 International Organization for Standardisation
 IVSC
 International Valuation Standards Council
 LBAN
 Luxembourg Business Angel Network

LUX GAAP Luxembourg general accepted accounting standards

MC Mutualité de Cautionnement

MPME Mutualité des P.M.E.

SNCI National Credit and Investment Institution – Société Nationale de Crédit et

d'Invest is sement

NWT Net Wealth Tax

R&D Research and Development

SMEs Small and Medium Sized Enterprises

SPV Special Purpose Vehicle
UPC Unitary Patent Court

WIPO World Intellectual Property Organization

Executive summary

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The study aims to assess the existing practices and initiatives as well as the remaining untapped potential for the small and medium sized entities (SMEs) ecosystem in Luxembourg. At the same time, the study provides an overview of the legal, institutional and financial framework for IP in Luxembourg.

The almost 40,000 SMEs¹ established in Luxembourg represent 99% of all businesses and around two thirds of total employment (229,000 employees²). They account for around 70% of Luxembourg's GDP. These figures underline the need for a specific accompanying framework to ensure SMEs can thrive and grow.

Over the past years, a number of measures were taken to create a responsive and supporting environment for stimulating IP management. For instance, subsidies as foreseen by the R&D and innovation state aid scheme created in 2017, as well as tax incentives.

Despite the creation of a supportive framework for developing IP use as well as the presence of a strong financial sector, SMEs still face difficulties to raise finance when providing IP as collateral.

The report provides an overview of the different IP rights and support activities available in Luxembourg that have been developed to help companies fully exploit their potential.

The report also takes stock of the different tools available to access finance, with a special focus on those geared towards supporting IP, the report identifies the main issues that need to be addressed to further develop IP-backed finance in Luxembourg:

- > Conservative attitude of banks towards IP finance
- > Lack of reporting of IP in annual accounts by SMEs
- > The affordability of valuation for SMEs
- > Lack of IP market places

The report concludes with next steps on how Luxemburg can improve access to finance for SMEs, using their intellectual property.

The definition of company size (micro-, small- and medium-sized companies) follows the official Eurostat Structural Business Statistics definitions. Specifically, staff headcount, combined with turnover or balance sheet total were used to determine eligibility and assignment to each of the size classes.

Company category	Staff headcount	Turnover	or	Balance sheet total
Medium	<250	≤€ 50 m		≤€ 43 m
Small	<50	≤€ 10 m		≤€ 10 m
Micro	<10	≤€ 2 m		≤€ 2 m

² https://www.cc.lu/dossiers-thematiques/leconomie-luxembourgeoise

Luxembourg's Experience

INTRODUCTION

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The report aims to assess the existing practices and the remaining untapped potential for the SME ecosystem in Luxembourg.

The relevance of this topic has been recently highlighted in a study published by the European Patent Office and the European Investment Bank which underlines that "Patent protection is vital for the small and medium-sized enterprises (SMEs) that invest in innovation. (...) Favourable financing conditions are another vital precondition for firms developing fourth Industrial Revolution technologies to flourish."³

This report has therefore been carried out at a time in which IP is clearly a topic attracting everincreasing interest from rights holders, businesses, consumers and the general public.

SCOPE AND OBJECTIVES OF THE REPORT

Knowledge-intensive sectors that rely on IP rights represent a significant part of developed and developing economies, in terms of GDP, employment, tax revenues and strategic importance.⁴

For the last 25 years, the global value of intangible assets (which includes intellectual property rights) has increased more than 7-fold reaching an amount of EUR 54 trillion in 2022⁵. In developed economies, the share of intangibles in the total asset base of largest companies listed on the stock market can be as high as 90% (e.g. US, Ireland, and Denmark), while the global share in intangibles is about 48%.

The value of IP rights in the European Union plays a crucial role in its economic development:

- > IPR-intensive industries generated 29.7% (61 million) of all jobs in the EU during the period
- > 39.4% of all employment in the EU (81 million) can be attributed, directly or indirectly, to IPR-intensive industries
- > 47% of the total economic activity (GDP) in the EU is attributable to IPR-intensive industries, worth EUR 6.4 trillion
- > IPR-intensive industries pay significantly higher wages than other industries, with a wage premium of 41% 5

Deep tech innovation in smart connected technologies – A comparative analysis of SMEs in Europe and the United States – April 2022, https://www.eib.org/attachments/publications/eib_epo_deep_tech_smes_en.pdf

⁴ IPR-intensive industries and economic performance in the European Union – Industry-level analysis report, fourth edition October 2022: https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/IPR-intensive_industries_and_economic_in_EU_2022/2022_IPR_Intensive_Industries_FullR_en.pdf

⁵ Global Intangible Finance Tracker (GIFT™) – an annual review of the world's intangible value November 2022, Brand Finance, https://brandirectory.com/reports/gift-2022

IPR-intensive industries and economic performance in the European Union – Industry-level analysis report, fourth edition October 2022: https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/IPR-intensive_industries_and_economic_in_EU_2022/2022_IPR_Intensive_Industries_FullR_en.pdf

In Luxembourg, the almost 40,000 SMEs⁷ established in the country represent 99% of all businesses and around two thirds of total employment (229,000 employees⁸). They account for around 70% of GDP⁹.

In 2019, a survey published by the European Union Intellectual Property Office¹⁰ stated that only 25% of medium-sized IP right owners have had their intangible assets professionally valued, for both small and micro-sized IP right owners this is even less, 20%. Of the SMEs which own IP rights only 13% have attempted to use IP rights to access finance. Finally, 9% of the SMEs claim to have successfully used their intangible assets to access finance. Notably most of these SMEs are active in biotech and healthcare.

So far, IP rights have played a limited role in direct access to finance for SMEs in Luxembourg and they are rather considered as a bonus or minimal security in negotiations for finance by third parties.

However, in the context of the ongoing green and digital transitions of the EU economy, a further push is needed to promote the commercialization and scale-up of innovative and sustainable products, services and processes. In this context, a mention must be made to the European Green Deal¹¹, set up to address the challenges constituted by climate change and environmental degradation, which aims to transform the EU into a modern, resource-efficient and competitive economy.

To accomplish this transition, growing attention of the European Commission on the need to support Deep Tech start-ups and scale-ups¹². Indeed, Deep Tech companies rely on intensive Research and Development (R&D). Developing new technologies can take a very long time. This can lead to longer development cycles and therefore delay market entry. It can be a financial challenge, especially for this type of company with limited resources.

Efforts to achieve the objectives set by the European Green Deal are also being made by SMEs. A study published by the EUIPO in 2021 called "Green EU trade marks"¹³, which uses trademark filings as an indicator of innovation related to environmental protection, shows the importance of "green" trademarks over the years and that SMEs are active in this field.

Luxembourg has taken numerous measures to create a responsive and supportive environment for stimulating IP management. For example, the government created specific institutional actors to support companies in their development. The Intellectual Property Institute Luxembourg (IPIL), established in 2014 to act as the first point of contact for any company, research center or interested

⁷ The definition of company size (micro-, small- and medium-sized companies) follows the official Eurostat Structural Business Statistics definitions. Specifically, staff headcount, combined with turnover or balance sheet total were used to determine eligibility and assignment to each of the size classes.

Company category	Staff headcount	Turnover	or	Balance sheet total
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Small	<50	≤€ 10 m		≤€ 10 m
Micro	<10	≤€ 2 m		≤€ 2 m

⁸ https://www.cc.lu/dossiers-thematiques/leconomie-luxembourgeoise

⁹ Ibid.

https://euipo.europa.eu/ohimportal/en/web/observatory/sme-scoreboard

https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/environment-and-climate/european-green-deal_en

Deep tech innovation in smart connected technologies, A comparative analysis of SMEs in Europe and the United States, European Patent Office, European Investment Bank, April 2022

https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2021_Green_ EU_trade_marks/2021_Green_EU_trade_marks_FullR_en.pdf

party seeking information and guidance regarding IP rights. The national innovation agency, Luxinnovation supports entrepreneurs, managers of start-up companies and researchers who are interested in launching or scaling-up innovative activities in Luxembourg.

Luxembourg has also put in place an extensive financial aid package for the support of innovation. This covers a range of activities that play a role in generating or marketing IP, although most initiatives do not directly target IP specifically. Two examples of measures that directly take into account IP are the R&D and innovation state aid scheme created in 2017, as well as tax incentives provided by the revised "IP Box" scheme.

These national initiatives are complemented by European policy measures such as the IP action plan put in place by the European Commission.

Based on a stock-taking exercise of the legal, institutional and financial landscape for IP in Luxembourg, the report aims to provide an overview of the existing instruments and practices, identify the current challenges for developing IP-backed finance to the benefit of SMEs and formulate policy recommendations.

IP rights in Luxembourg

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IP rights are the rights given to persons over the creations of their minds. They usually give the creator or inventor an exclusive right over the use of his/her creation for a certain period of time.

IP rights can be divided into two main branches: author's rights and related rights, which protect literary and artistic works, and industrial property, which includes patents, designs and trademarks.

All IP rights are territorial rights; therefore, every country has its own legislation and strategy when it comes to the IP framework.

The main difference between the two main areas of IP is that industrial property rights must be registered with a national, regional, European or international office in order to be protected, whereas no formalities are required for author's rights and related rights provided that the criteria of originality and materiality are met.

Before considering a financing strategy covering IP rights, it is crucial to understand and take into account the different nature of each type of IP right. Indeed, and as explained below, each type of IP right is governed by a specific legal framework based on a distinct objective and a specific logic.

A targeted approach is therefore required to make good use of these intangible assets.

THE ECONOMIC VALUE OF IP RIGHTS

The intellectual property system can be seen as a tool for advancing growth and progress for businesses, the knowledge society and countries as a whole.

The primary function of intellectual property rights is to protect and stimulate the development and distribution of new products and the provision of new services based on the creation and exploitation of inventions, trademarks, designs, creative content or other intangible assets.

The exploitation of intellectual property rights is one of the main methods through which companies, creators and inventors generate returns on their investment in knowledge, innovation and creation.

Indeed, intellectual property rights provide their owners with an exclusive right which results in a legal monopoly over their invention and creation, i.e. the means to decide, for a specific and limited time, how their inventions and creations are to be used, reproduced and commercialized.

Four main advantages for companies can be underlined:

- > Stimulate innovation and creativity: Intellectual property rights incentivise discovery and creativity by providing creators and inventors with a legal monopoly which offers an opportunity to profit from the value of their work. In exchange, the creative work is made public so that others may build on it and benefit from the work of the original creator or inventor once the monopoly has expired.
- > Enhance market value for creations and inventions: intellectual property enables the promotion of creations and inventions with partners and establish notoriety with users.

> Increase credibility: Intellectual property rights ensure a higher credibility before business investors, financial partners and users.

Increase expansion possibilities beyond the national market: regional, European or international protection can offer new and broader business opportunities for companies and rights-holders.

For the last 25 years, the global value of intangible assets (which includes intellectual property rights) has increased more than 7-fold reaching an amount of EUR 54 trillion in 2022¹⁴. In developed economies, the share of intangibles in the stock market value can be as high as 90% (e.g. US, Ireland, and Denmark), while the global share in intangibles is about 48%.

The economic value of IP Rights has already been vastly documented in various studies and in particular by the joint project between the European Patent Office and the European Union Intellectual Property Office "IPR-intensive industries and economic performance in the European Union" published in October 2022¹⁵, according to which:

- > IPR-intensive industries generated 29.7% (61 million) of all jobs in the EU during the period 2017-2019.
- > 39.4% of all employment in the EU (81 million) can be attributed, directly or indirectly, to IPR-intensive industries
- > 47% of the total economic activity (GDP) in the EU is attributable to IPR-intensive industries, worth EUR 6.4 trillion
- > IPR-intensive industries pay significantly higher wages than other industries, with a wage premium of 41%.

These figures underline the importance of creating a specific accompanying framework to ensure SMEs can thrive and grow.

Global Intangible Finance Tracker (GIFT™) – an annual review of the world's intangible value November 2022, Brand Finance, https://brandirectory.com/reports/gift-2022

https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/IPR-intensive_industries_and_economic_in_EU_2022/2022_IPR_Intensive_Industries_FullR_en.pdf

CONDITION OF REGISTRATION AND PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

PATENTS

National patent and European patent

A patent is a legal title that grants the inventor and/or patent applicant an exclusive right over a technical invention – a product or process¹⁶.

Patents are granted only for inventions that are new, involve an inventive step and are industrially applicable. These requirements can be defined as follows:

- An invention is new if it is not part of the state of the art at the date the patent is filed;
- An invention involves an inventive step if it is not obvious to the skilled person in the light of the state of the art;
- An invention is industrially applicable if its object can be manufactured or used in any industry, including agriculture¹⁷.

In addition to these criteria, the Luxembourgish law of 20 July 1992 amending the patent system¹⁸ provides a non-exhaustive list of innovations that cannot be regarded as inventions if they are claimed as such, i.e.: discoveries as well as scientific theories and mathematical methods; aesthetic creations; plans, principles and methods in the exercise of intellectual activities, in games or in the field of economic activities, as well as computer programs (without technical effect); presentations of information.

Patents can be issued on innovative medical products for therapeutic or diagnostic uses. However, the medical practices and methods themselves are not patentable.

This text also provides that plant and animal varieties shall not be regarded as invention. Finally, a patent must not be contrary to public order and morality.

A patent produces its effects in the territory for which it is granted. Depending on the extent of the protection sought by the applicant, it is possible to file a national patent with the Intellectual Property Office of the Ministry of the Economy¹⁹, a European patent with the European Patent Office (EPO)²⁰ or an international patent application with the World Intellectual Property Organization (WIPO)²¹.

In the Luxembourg national patent granting procedure, the patentability of the invention is not being examined by the Intellectual Property Office of the Ministry of the Economy. Only a formal examination of the application is being carried out. The validity of a patent can only be challenged before a court.

https://guichet.public.lu/en/entreprises/gestion-juridique-comptabilite/propriete-intellectuelle/propriete-industrielle/brevet.
html

For more information: https://meco.gouvernement.lu/dam-assets/publications/guide-manuel/minist-economie/2019-brevets-invention-guide-deposant/Guide-Brevet-EN.pdf

https://legilux.public.lu/eli/etat/leg/loi/1992/07/20/n1/jo

https://patent.public.lu/bpp-portal/

²⁰ https://www.epo.org/index.html

²¹ https://www.wipo.int/pct/en/

However, in order to obtain a patent with a maximum duration of twenty years, the applicant must request a search report to be made, which assesses the novelty of the invention. This report is made by the European Patent Office on behalf of the Luxembourg office and is added to the public file of the patent, for information.

If the applicant does not request a search report to be made, the patent will be granted with a maximum duration of six years.

To maintain the patent in force during the maximum 20 years protection period, a fee must be paid annually.

Figure 1: National patent applications filed in Luxembourg which originate from Luxembourg

Source: Intellectual Property Office of the Ministry of the Economy

The number of patent registrations in Luxembourg, originating from Luxembourg has been growing steadily since 2007, which is followed by a slight decline from 2017.

Introduction of the Unitary patent

Efforts to create a common patent applicable across all European countries have been made since the 1960s but for a number of reasons have never been successful.

It was necessary to wait until December 2010 for the Commission to propose, at the request of 12 Member states, including Luxembourg, the launch of an enhanced cooperation in the area of unitary patent protection.

Currently, 25 Member states²² are participating in this procedure to bring about the Unitary Patent system. Luxembourg will be amongst the 17 countries to first implement the system²³.

The unitary patent system, which started on June 1, 2023, completes the aim of offering a fully centralized patent granting and management system in Europe.

The 25 Member states are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia. Sweden

²³ 8 more Member states will have to ratify the Unified Patent Court Agreement and the Protocol on Provisional Application before the system can apply in these countries

In addition to the European patent available since 1978, applicants will be able to request, for newly granted European patents, the unitary effect of their patent. The advantages will be:

- No more national validation procedures required in the UPC countries. For the EPO member states which are not part of the unitary patent system, the existing national procedures for European patents continue to apply
- Central registration of changes to the patent register, managed by the EPO
- Reduced translation requirements for the granted patent. The patent will have to be translated into a second language only, depending on filing language.
- The annual maintenance fees for the unitary patent (covering all UPC member states) will be lower than the sum of the current national annual fees due for a European patent covering the four largest states
- Freedom of choice: The use of the unitary patent is optional. The applicant can still choose to opt for a classic European patent

The objective of the unitary patent system, by lowering the cost of patent protection and centralising the procedures, is to make it more accessible for SMEs and universities to obtain patent protection EU-wide. But it remains to be seen how many applicants of European patents will opt for the new system at the start.

TRADEMARKS

A trademark is a sign capable of distinguishing the goods or services of one company from those of other companies. A trademark may consist of any signs, in particular words, designs, letters, numerals, colours, the shape of goods or of the packaging of goods or even sounds.

To be registered, a trademark must:

- Be distinctive: the sign which is the subject of the trademark must actually serve to identify goods and/or services for which registration is sought as originating from a particular undertaking;
- Not be descriptive: the sign applied for must not consist exclusively of information describing the products and/or services covered by the trademark;
- Not be deceptive: it means that the trademark must not deceive the public as to any characteristics of the goods and/or services in question;
- Not be contrary to public policy or acceptable principles of morality.

A trademark produces its effects in the territory in which it is registered. Depending on the extent of the protection sought by the applicant. It is possible to file a Benelux trademark with the Benelux Office for Intellectual Property (BOIP)²⁴, a European Union trademark with the European Union Intellectual Property Office (EUIPO)²⁵ or an international trademark with the World Intellectual Property Organization (WIPO)²⁶.

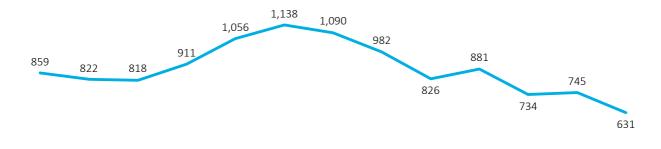
A trademark registration lasts for ten years and is indefinitely renewable for further periods of ten years.

In Luxembourg, it is not possible to request for a trademark valid only for the national territory. The 3 countries of the Benelux (Belgium, Netherlands and Luxembourg) will automatically be covered through one single application. https://www.boip.int/en/entrepreneurs/trademarks

²⁵ https://euipo.europa.eu/ohimportal/en/trade-marks

²⁶ https://www.wipo.int/madrid/en/index.html

Figure 2: Benelux trademark applications originating from Luxembourg





Source: Intellectual Property Office of the Ministry of the Economy

The number of trademark applications in Luxembourg, originating from Luxembourg has been rather stable over the last decade.

DESIGNS

A design refers to the visual and aesthetic appearance of a product. It may consist of three-dimensional features such as the shape of a product, or two-dimensional features such as patterns.

To be registered a design must:

- be new: it means that the design must not yet be known to the public;
- have an individual character: this condition is based on the non-resemblance of the design to a design already disclosed to the public;
- Not be contrary to public policy or acceptable principles of morality²⁷.

A design produces its effects in the territory in which it is registered. Depending on the extent of the protection sought by the applicant, it is possible to file a Benelux design with the Benelux Office for Intellectual Property (BOIP)²⁸, a community design with the European Union Intellectual Property Office (EUIPO)²⁹ or an international design with the World Intellectual Property Organization (WIPO)³⁰.

A design is registered for an initial period of five years, which can be renewed a maximum of four times, for a total period of twenty-five years.

This objection concerns subjective values, but these must be applied as objectively as possible. The provision excludes registration of blasphemous, racist, discriminatory or insulting signs or logos. The concept of accepted principles of morality refers to the fundamental moral values and standards to which a society adheres at a given time. Those values and norms are likely to change over time and vary in space.

²⁸ In Luxembourg, it is not possible to request for a design that would be valid only for Luxembourg, in one single request, the 3 countries of the Benelux (Belgium, Netherlands and Luxembourg) will automatically be covered. https://www.boip.int/en/entrepreneurs/designs

²⁹ https://euipo.europa.eu/ohimportal/en/designs

³⁰ https://www.wipo.int/hague/en/index.html

At the European level, there is a possibility offered to creators of designs to benefit from a protection without any registration thanks to the unregistered Community design. An unregistered Community design is given protection for a period of three years from the date on which the design was first made available to the public within the territory of the European Union³¹.

57 49 33 35 35 35 37 19 16 18 13 8 2006 2008 2010 2012 2014 2016 2018 2020 2022

Figure 3: Benelux industrial design applications originating from Luxembourg

Source: Intellectual Property Office, Ministry of the Economy

The number of design applications originating from Luxembourg is rather limited over the last 15 years, which can be explained by the fact that the services sector, including finance, make up for a large share of the economy.

AUTHOR'S RIGHTS AND RELATED RIGHTS

Author's rights protect the creators of original works. This means that any expressed and original works such as for example paintings, photos, drawings, literature, film, music, websites, textbooks, choreography, software, architectural buildings or any original work can be protected by author's rights.

Related rights are similar to copyright in the prerogatives they confer. Their purpose is to protect the artistic or financial contribution that is invested in the literary and artistic creation. In Luxembourg, related rights are granted to producers of phonograms, producers of film, performers, broadcasting organisations and press publishers on their online publications.

A protection by author's rights and related rights implies that using a work is allowed only through the prior written permission of the author or the holder of the related rights, unless the work is in the public domain or its use otherwise permitted by the law.

The purpose of making use of the work subject to the willingness of its author or holder of a related right is therefore to enable them to earn income from the exploitation of their work if they so wish.

https://euipo.europa.eu/ohimportal/en/designs-in-the-european-union

Author's rights and related rights have in common the fact that they do not require any formalities in Luxembourg: author's right and related rights protection come into effect automatically by the mere creation of an original work, and the protection by related rights comes into effect automatically by the execution or production of performance.

However, it may be useful to complete certain formalities that will provide the creators with proof of the date of possession of the work, which may help to prove their authorship. These formalities can include the registration or filing of the work. The proof of date can be provided by any means.

The Benelux Office of Intellectual Property (BOIP) offers a solution to this end called the i-DEPOT³². An i-DEPOT is a proof, provided by the BOIP, of the existence of documents on the date of their receipt. The documents are kept by the Office for a period of five or ten years, depending on the period chosen by the applicant (the retention period may be extended by further five-year periods).

³² https://www.boip.int/fr/entrepreneurs/idees

Enforcement of IP rights

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To fully play their role in promoting investment in innovation and growth, IP rights must be efficiently managed and properly enforced.

IP rights owners have a choice between several options:

- > they can choose either to maintain a complete monopoly on their invention and creation and thus be the only ones on the market to be able to offer a particular type of product, or
- > to share this monopoly with one or more competitors through a license (sharing the monopoly in exchange for the payment of royalties).
- > alternatively, IP rights can also be completely transferred to a third party that will become the right holder of the invention or creation.

The value of IP rights will benefit from a regular monitoring by the right holder of the use of its right and when necessary, the enforcement of said right. It will be up to the owner to protect his or her rights and to act against third parties who infringe them.

Enforcing IP rights also prevents entry into the market of counterfeit goods and ensures that consumers can rely on the quality and safety of genuine products made by the original manufacturer. Counterfeit goods not only cause economic damage and job losses, but they also can potentially create serious risks for consumers.

IP rights enforcement thus contributes to maintaining the value of IP rights which is particularly relevant in light of a hypothetical financing considerations need.

The Luxemburg market and more generally the European market can only benefit from properly managed IP rights.

JUDICIAL LANDSCAPE IN LUXEMBOURG

Luxembourg has two judiciary districts, Luxembourg-City and Diekirch. The Luxembourg tribunal is solely competent for all national litigation on IP rights. It also has the function of the national EU trademark court and EU design court, dealing with litigation concerning EU trademarks and EU designs.

Besides the national court in charge of IP rights, Luxembourg also hosts the Court of Justice of the European Union (CJEU), the General Court and the Court of Appeal of the future Unified Patent Court, which became operational on 1 June 2023.

THE COURT OF JUSTICE OF THE EUROPEAN UNION

The Court of Justice of the European Union is the judicial institution of the European Union (CJEU). The CJEU was established in 1952 and it is based in Luxembourg.

Its task is to ensure compliance with EU law by overseeing the uniform interpretation and application of the Treaties and ensuring the lawfulness of measures adopted by the EU institutions, bodies, offices and agencies. This includes IP law, which has been largely harmonised by EU directives and regulations.

This judicial institution is composed of two courts: the Court of Justice and the General Court.

The Court of Justice deals mainly with requests for preliminary ruling to ensure the effective and uniform application of EU legislation, certain actions for annulment and appeals against judgments and orders of the General Court. It is composed of 27 Judges and 11 Advocates General.

In 2021, 838 cases were brought before the Court³³. As of 31 December 2021, 1113 cases were pending before the Court, including 49 cases in intellectual property law.

The General Court has jurisdiction to hear and determine (in particular, but not only) actions brought by natural or legal persons against acts of the institutions, bodies, offices or agencies of the European Union. The General Court has jurisdiction over actions relating to IP brought against the EUIPO and against the Community Plant Variety Office. The decision of the General Court may be subject of an appeal, limited to points of law, before the Court of Justice.

In 2021, 882 cases were brought before the General Court including 308 cases in intellectual property law. During the same year, the General Court resolved 951 cases including 307 cases in intellectual property law.

As of 31 December 2021, 1,428 cases were pending before the General Court, including 320 cases in intellectual property law.

These figures demonstrate the major role of the Court of Justice in the uniform interpretation and application of intellectual property provisions.

Its valuable case law is an important tool for clarifying the principles derived from European law and for strengthening the convergence of national systems.

THE UNIFIED PATENT COURT

An important new jurisdiction, partly based in Luxembourg, became operational on 1 June 2023: The Unified Patent Court (UPC), which is competent for litigation on European patents and unitary patents.

Before this date, actions for infringement or invalidity of European patents had to be brought before national courts of the states in which the patent was in force. This led to costly parallel procedures and diverging jurisprudence.

https://curia.europa.eu/panorama/2021/fr/judicial-activity.html#key-figures

With the entry into force of the Agreement on a Unified Patent Court, the UPC has exclusive jurisdiction in the participating member states. Seventeen states are part of the system at the start, while 25 in total have signed the Agreement³⁴. However, during a transitional phase of seven years, holders of European patents may decide to opt out of the competence of the UPC by registering a declaration to that effect at the UPC. The opt-out will not be possible when the patent holder has requested unitary effect of his European patent.

The UPC consists of several courts of first instance and an appeal court.

Concerning the first instance, there are two central divisions based in Paris and Munich, which are each competent for patent litigation in certain technological fields. In addition to those courts, the states can also decide to set up a local (i.e. national) division or a regional (i.e. multinational) division. As the number of patent litigation cases in Luxembourg is extremely low, it was decided not to set up a local division in Luxembourg.

The Court of Appeal of the UPC is based in Luxembourg, which also hosts the common registry of the UPC. The case management of the court system is centralised in Luxembourg.

To ensure that the courts are highly competent and jurisprudence is harmonised, the panels of each court have to include judges from several countries as well as legal judges and technical judges.

Like the national courts, the UPC must refer questions on the interpretation of EU law to the Court of Justice of the European Union.

In this context, the proximity of the European judicial system added to the multilingual expertise in IP that can be provided by Luxemburgish professionals is an advantage for Luxembourg.

³⁴ For the list of states, see this dedicated EPO page: https://www.epo.org/applying/european/unitary/unitary-patent.html

The Luxembourg institutional landscape for IP

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According to the European Innovation Scoreboard 2022³⁵, Luxembourg features amongst the group of Member States qualified as "strong innovators".

Besides, the Global Innovation Index, published by WIPO³⁶, which ranks world economies according to their innovation capabilities, lists Luxembourg as 18th among the 48 high-income group economies. Furthermore, Luxembourg ranks 11th among the 39 European economies analysed in that study.

This conclusion can be explained by some of the main advantages that Luxembourg provides for SMEs, such as the access to an interesting test-bed for developing innovative products, a reliable data hub with world-class connectivity, top-notch cybersecurity and data processing capacities, a primary launch-pad for reaching the whole EU market³⁷ through Luxembourg's central geographic situation, an international environment with a multicultural talent pool, an easy access to public and private decision-makers and a hub for talent attraction³⁸.

Furthermore, since intangible assets play a critical role in business performance and economic growth in knowledge-based economies, Luxembourg has taken numerous measures to offer a responsive and supportive environment for stimulating IP management.

The main objective of IP rights system is to generate benefits that maximise the difference between the value of the IP as it is created and used and the social cost of its creation, including the cost of administering the system.

To be suitable for the valorisation of IP assets, the policy and legislative framework must therefore strike the right balance between the interests of rights holders, users and businesses.

Consequently, IP protection is a field that is constantly evolving and deeply linked to societal and cultural changes.

The ongoing dual digital and ecological transitions of the economy raise new challenges and create new opportunities, such as the need to adapt the legal and the economic frameworks to new ways of innovating, creating and consuming. The aim is to create and preserve framework conditions that guarantee a high level of protection for right holders and to foster an innovative, sustainable and competitive market while ensuring a wide-ranging and simplified access to protected content for users.

European Commission, Directorate-General for Research and Innovation, Hollanders, H., Es-Sadki, N., Khalilova, A., European Innovation Scoreboard 2022, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2777/309907

³⁶ https://www.wipo.int/edocs/pubdocs/en/wipo_pub_2000_2022/lu.pdf

The SME fact sheet 2022 underlines for Luxembourg that "the Economy is well integrated into the Single Market, and companies take advantage. According to Eurostat up to 80 % of the goods produced in Luxembourg are exported (...)

³⁸ The SME fact sheet 2022 states that "Luxembourg is a top performer in attracting talent. Ranked 8th in the 2021 Global talent Competitiveness Index, the country ranks 1st in the world for its ability to attract, and 6th for its ability to retain talent"

THE ROLE OF IP IN THE LUXEMBOURG GOVERNMENT'S ECONOMIC POLICY

The Roadmap for a Competitive and Sustainable Economy 2025³⁹ ("Roadmap 2025") sets out the Luxembourg government's vision for a sustainable and digital economy. The strategy underlines the significant contribution of IP policy to preserving and strengthening technological innovation. IP assets play a significant role in determining the market value and competitiveness of Luxembourg-based companies.

The importance of intangible assets is constantly increasing and IP has been identified as one of the essential elements to help business grow, create jobs, protect and develop what makes them unique and competitive.

Improving the awareness of companies with regard to the importance of IP therefore is one of the key initiatives aiming to ensure a coherent sustainable investment strategy and instruments to achieve sustainability.

More generally, the governmental programme 2018-2023⁴⁰ underlines that any innovative public policy in economic, cultural, research and development, education, etc. must necessarily take into account the tools offered by IP.

In that sense, the governmental programme highlights that IP should be included in a cross-cutting and strategic manner in the initiatives of the various ministerial departments, whatever the sectors of the economy concerned, in order to encourage companies and stakeholders to integrate IP aspects into their research and development strategies. The Intellectual Property Office of the Ministry of the Economy and the IPIL act as the privileged interlocutors in IP matters for all interested parties. Private IP professionals in the field are also available to offer multilingual advice and services.

The "Roadmap 2025" referred to above builds on the digital Innovation strategy for a sustainable trusted data-driven economy⁴¹presented in 2019, which was divided into eight areas.

One of them considers IP rights as a horizontal matter across all sectors⁴², taking into account that, in Luxembourg, the overall contribution of IP-intensive industries to the share of GDP is above 45%.

The third thrust of the data-driven innovation strategy was to ensure a world-class innovative regulation and intellectual property environment coupled with strong investment and financing tools in Luxembourg.

Hence, the development of IP strategies, which will ultimately benefit the Luxembourg economy, has been identified as a key action by the government.

³⁹ "Ons Wirtschaft vu muer" – Our economy of tomorrow https://meco.gouvernement.lu/en/publications/strategie/strategie-ons-wirtschaft.html

⁴⁰ https://gouvernement.lu/dam-assets/documents/actualites/2018/12-decembre/Accord-de-coalition-2018-2023.pdf

⁴¹ https://gouvernement.lu/dam-assets/fr/publications/rapport-etude-analyse/minist-economie/The-Data-driven-Innovation-Strategy.pdf

The government programme identified seven priority sectors in the domain of economy and communications: Information and Communication Technologies (ICT), Manufacturing Industry, Eco-technologies (including Circularity and

THE INTELLECTUAL PROPERTY OFFICE (IPO)

In Luxembourg, all areas of Intellectual Property⁴³ are dealt by a single national Office, the Intellectual Property Office (IPO) (Office de la propriété intellectuelle)⁴⁴, which is based at the Ministry of the Economy. The Intellectual Property Office is in charge of the legal and regulatory framework regarding instruments offered to enterprises and creators, to allow them to protect and value their intellectual property assets.

The tasks of the IPO are to:

- define and coordinate IP policy with public and private actors;
- create and monitor legal framework for all branches of IP (patents, trademarks, designs, author's rights and related rights);
- provide the public with information on legal and practical issues (patents, trademarks, designs, author's rights and related rights);
- ensure the administrative and accounting management of patents and supplementary protection certificates (through the Benelux Patent Platform (BPP));
- represent Luxembourg in European and international organisations and expert committees;
- pursue awareness-raising activities;
- monitor collective management organisations.

THE INTELLECTUAL PROPERTY INSTITUTE LUXEMBOURG (IPIL)

The Intellectual Property Institute Luxembourg ("Institut de la Propriété Intellectuelle Luxembourg" (IPIL)) was created in 2014 in the form of an Economic Interest Grouping (EIG) by the government based on an initiative of the Ministry of the Economy.

To promote the development of IP for the needs of the Luxembourg economy, the government entrusted IPIL with the following tasks:

- coordinate the implementation of the IP policy and to federate the actors involved;
- develop and offer support services for companies, research actors, public institutions and any other interested parties;
- develop and provide training, promotion and awareness-raising activities;
- carry out projects and studies to advise the government.

IPIL's awareness raising and support activities have two main objectives. First, to create a better understanding of IP, its importance and its value. Second, to help interested parties develop an "IP reflex" in order to gradually develop an IP strategy allowing them to fully exploit and actively manage their IP assets.

For example, IPIL offers services such as "Boost IP". Available free of charge, this service aims to raise awareness of Luxembourg companies and other interested people regarding the importance of IP and to improve their level of knowledge and practice in this area. In practice, the "Boost-IP" consists of an individual interview between an expert from IPIL and the company, which allows a privileged exchange of information.

⁴³ According to the World Intellectual Property Organisation (WIPO), intellectual property refers to creations of the mind: inventions, literary and artistic work, and symbols, names, images or designs used in commerce. For the purpose of this report, were considered patents, trademarks, designs or models, author's right sand neighboring rights

https://meco.gouvernement.lu/fr/le-ministere/domaines-activite/propriete-intellectuelle.html

Since 2016, the Institute has conducted an average of 150 sessions of this type each year. The typical duration of a Boost-IP coaching session is 1-2 hours. The sessions cover a wide range of intellectual property rights. For instance, when establishing a company or launching a startup, numerous questions concerning intellectual property can arise, such as the protection of a name and logo through trademark registration or safeguarding creative works under copyright laws. Additionally, website development frequently involves questions relating to multiple intellectual property rights, including author's rights, design, trademark and patents for technical features.

Boost IP sessions also provide information on the trademark registration process, national or international patent filing options and the protection by copyright for creative professionals such as graphic artists and musicians. Strategic aspects such as those related to the territoriality of certain IP rights may also be addressed. Furthermore, participants can gain insights into the various entities involved in intellectual property, such as the Intellectual Property Office of the Ministry of the Economy at national level, the Benelux Office for Intellectual Property at a regional level, as well as all other IP organisations at the European and international levels.

Boost IP service seek to remain strictly neutral and objective in providing information, since the objective is not to offer personalised legal advice. To further assist clients with their specific cases, beneficiaries of the Boost IP service are made aware of the existence of intellectual property professionals in Luxembourg who provide such legal guidance through a range of consulting services.

In summary, Boost IP sessions aim to provide businesses and individuals with comprehensive information and guidance on intellectual property. With a focus on education, coaching, and impartial information, the Boost IP service equips its users with the necessary knowledge and tools to navigate the intricacies of intellectual property with a view to enable them to take informed decisions regarding the protection of their intellectual assets.

IP financing

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The objective of this chapter is to provide an overview of the various instruments that are available today and that have an impact in providing finance – directly or indirectly – with respect to intellectual property.

The stocktaking below distinguishes between instruments available at EU level and national level. Regarding the national level, a difference is made between public support schemes (state aid, loans and guarantees) as well as private financing tools.

EUROPEAN CONTEXT AND STRATEGY

EUROPEAN IP ACTION PLAN

In 2020, the European Union adopted a new Action Plan on IP⁴⁵ to strengthen EU's economic resilience and recovery. The plan comprises measures in five key focus areas to improve the protection of IP:

- to upgrade the system of IP protection;
- to boost the uptake of IP by SMEs;
- to facilitate the sharing of IP to increase the technological uptake in the industry;
- to fight counterfeiting and improve the enforcement of IP rights; and
- to promote a global level playing field.

In this context, the European Commission focuses key initiatives to support SMEs, such as offering financial support via IP vouchers, rolling out IP assistance services in public funding programmes, creating a one-stop shop IP information & filing system.

The European Commission also emphasized the need to make it easier for SMEs to leverage their IP when trying to get access to finance. In this Action Plan, the Commission underlined its will to discuss with the financial community how IP valuation could help them to better take into account SMEs' intellectual assets.

These initiatives are developed in cooperation with all 27 EU Member states and the European Office for Intellectual Property (EUIPO).

SME FUND

In this Action Plan, the European Commission committed to promote an effective use and deployment of intellectual property tools, in particular by SMEs. It offered financial support for SMEs impacted by the COVID-19 crisis, helping them to manage their IP portfolios as well as accompanying the shift towards green and digital technologies⁴⁶.

⁴⁵ Making the most of the EU's innovative potential – An intellectual property action plan to support the EU's recovery and resilience – 25 November 2020: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52020DC0760

⁴⁶ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_181

In 2021 the European Commission, together with the EUIPO, launched the first SME Fund – a grant scheme designed to help EU SMEs by providing them financial support for planning to manage and protect their IP rights within the national, regional, or EU IP system.

It was possible to benefit from:

- > A 75% reimbursement of IP pre-diagnostic services (IP Scan). The services were provided by national and regional IP offices. They examined the SME's business model, products or services and growth plans and helped the SME formulated an appropriate IP Strategy.
- > A 50% reimbursement of national, regional or EU trademark and design application fees.

Following the success of the initial SME Fund, a new SME Fund initiative was launched based on a multiannual programme, which includes financial support for IP rights (this time including patents) within the national, regional, EU or international IP system. The current running period of the initiative is from 2022 until 2025. The SME Fund enables SMEs established in the EU to apply for "vouchers" that will provide access to a partial refund. Owners, authorised employees or representatives can apply⁴⁷.

Once applicants have received a grant decision from the EUIPO, they can apply and pay for one of the activities covered by the Fund.

In 2023, SMEs can obtain a reimbursement covering up to:

- > 90% for IP pre-diagnostic services (IP Scan).
- > 75% of trademark and/or design application fees, additional class fees, and examination, registration, publication and deferment of publication fees at national, regional or EU level.
- > 50% of trademark and/or design basic application fees, designation fees, and subsequent designation fees outside the EU.
- > 75% of patent pre-grant (e.g. filing, search, and examination), grant, and publication fees at national level
- > 50% of plant variety online application fees.

In 2022, the EUIPO received 23 710 applications. More than 17 000 IP rights and EUR 10 million were reimbursed. The joint outreach efforts of the national offices and the EUIPO have been successful in attracting SMEs, the vast majority of which (77%) have been introduced to IP protection through the SME Fund.

In 2022, 90 Luxembourg SMEs sent applications to the EUIPO to benefit from this fund. In total, EUR 42 446 were paid to Luxembourg SMEs over the period and the average grant amount paid per SME is EUR 866. Efforts are being deployed to further promote the use of this facility.

⁴⁷ https://euipo.europa.eu/ohimportal/en/online-services/sme-fund

INVESTEU FUND AND EFSI

For access to finance SMEs in Europe can take advantage of the InvestEU Fund⁴⁸.

The fund is dedicated to finance for SMEs and small mid-cap companies (up to 499 employees), including innovative companies. It also finances R&D and innovation projects. The fund's offering specifically targets companies which are bringing research results to the market and innovative companies in the scale-up phase.

This Fund provides support to final recipients that are deemed economically viable according to internationally accepted standard⁴⁹.

The facility is managed by the European Investment Bank and is rolled out through financial intermediaries (banks and other financial institutions)⁵⁰. They provide direct and intermediated financing solutions for private and public project promoters.

For the period between 2021 and 2027, the EU-wide guarantee amounts made available are EUR 6.9 billion for SMEs and EUR 6.6 billion for R&D and innovation (including digitalisation). The total size of the fund is EUR 26.2 billion and it is expected to mobilise more than EUR 372 billion of public and private investment⁵¹.

Besides the InvestEU Fund, the programme consists of an Advisory Hub and a Portal. The InvestEU Advisory Hub connects project promoters and intermediaries with advisory partners, who work directly together to help projects reach the financing stage. The Advisory Hub assists with the preparation, development, structuring, and implementation of investment projects. The InvestEU Portal allows project promoters to reach investors that they may not be able to reach otherwise.

The InvestEU Fund builds on the experience with the European Fund for Strategic Investments (EFSI), by providing first loss guarantees⁵² and enabling the European Investment Bank (EIB) to invest in more projects that often come with greater risks. The projects approved for financing under EFSI are expected to mobilise almost €390 billion in investments and support 929,000 SMEs in the 28 Member States. It provided guarantees and counter-guarantees on debt financing of between EUR 25,000 and EUR 7.5 million in order to improve access to loan finance for innovative small and medium-sized enterprises and small mid-caps (up to 499 employees).

In Luxembourg, through EFSI, the results⁵³ are as of March 2022:

- > €114 million in total financing
- > set to trigger approximately €406 million in investments with some 1570 SMEs and mid-cap companies expected to benefit from improved access to finance
- > 7 approved agreements with intermediary banks meaning the main Luxembourg commercial banks or funds financed by European Investment Fund (EIF) with EFSI backing

⁴⁸ https://investeu.europa.eu/what-investeu-programme/investeu-fund_en

⁴⁹ https://investeu.europa.eu/what-investeu-programme/investeu-fund/how-get-financing en

⁵⁰ https://investeu.europa.eu/what-investeu-programme/investeu-fund en

⁵¹ Ibid

⁵² https://www.bil.com/en/bil-group/pressroom/news/Pages/PME-FEI-BIL.aspx

https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/investment-plan-europe/investment-plan-results/investment-plan-luxembourg_en

The guarantee scheme provides banks with a de-risking mechanism at 50% of their loan commitment to finance SME's projects with no tangible or intangible assets. This is a very efficient scheme to provide finance to companies to produce new intangibles assets and IP but do not yet generate revenues.

The European Investment Bank (EIB) plays a key role in creating financial instruments accessible to EU SMEs.

The main instrument for the EIB to finance innovative businesses and entities is InnovFin. Operational since 2014, InnovFin is the successor of the Risk-Sharing Finance Facility. InnovFin is designed to take higher risks than traditional investments by providing loans, guarantees and equity. Since 2021 InnovFin is thematically focused on energy demo projects, infectious disease and sector-specific investment platforms, such as the circular bioeconomy.

Although InnovFin was initially open to financing intellectual property, the EIB experience has shown that trading in intellectual property after a default has been cumbersome for the EIB. Therefore, the EIB has decided to cease financing Intellectual Property Rights as a collateral through InnovFin.

LUXEMBOURG PUBLIC FINANCING TOOLS AND INITIATIVES

FINANCIAL AID FOR SME INNOVATION

The law on research, development and innovation⁵⁴ covers the costs of the whole innovation chain. Currently, it is the only State aid scheme that is, in part, directly targeted at financing access to IP protection – in the context of a broader scheme aimed at promoting R&D and innovation in general.

With respect to IP, the costs for the generation of IP rights (procedures, fees, but also consultancy, advisory and/or prior art search costs), the costs for purchase of IP rights and the costs for filing of IP rights are all eligible costs in the financial aid package for research and development (R&D) projects⁵⁵.

The R&D activities can be part of experimental development or industrial research. Eligible costs are those of acquiring, combining, shaping, and using scientific, technological and commercial knowledge and skills with a view to developing new or improved products, processes or services (experimental development). Costs of planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for significantly improving existing products, processes or services (industrial research) are also covered.

All costs related to research and development projects and programs are eligible and cover all staff costs including researchers, technicians and support staff. This holds also for the expenses for contract research or research services, the purchase of knowledge and patents or licences from external sources (under conditions of full competition) as well as costs of consultancy and equivalent services used exclusively for the project or programme. This means that external experts can be co-financed for companies that are new to innovation.

⁵⁴ https://www.luxinnovation.lu/tradeandinvest/wp-content/uploads/sites/3/2018/01/140917-aides-rdi-en_ld.pdf

⁵⁵ https://guichet.public.lu/en/entreprises/financement-aides/aides-recherche-developpement/rdi/aides-rdi.html

Included in the eligible costs are the expenses for instruments and equipment, insofar as they are being used for the research and development projects and programmes. If these instruments and equipment are only partly used, the depreciation costs based on the duration of the project, calculated according to generally accepted accounting principles (GAAP), are eligible for the subsidy. The maximum level of support depends on the nature of the research and innovation activities and the size of the company. The table below provides a summary of the maximum percentages which can be granted.

Table 1: Maximum percentages of amounts of aid available

	Large companies or large private research organisations	Medium-sized company or medium-sized private research institute	Small business or small private research institute
Experimental development	25 %	35 %	45 %
Experimental development & supplement	40 %	50 %	60 %
Industrial research	50 %	60 %	70 %
Industrial research & supplement	65 %	75 %	80 %**
Fundamental research	100 %	100 %	100 %

Additional financing is available under the programme when the resulting knowledge or innovation is widely shared, through conferences, publications, open access repositories or free or freely accessible software. The fund also provides additional support when the project is the result of collaboration, either between businesses located within the EU with research institutions.

FIT 4 INNOVATION

Launched in 2018, the Fit 4 Innovation programme⁵⁶ is a State aid scheme that supports SMEs during the first steps on the innovation path. It helps them optimise their operations and frees up resources with the assistance of external experts. These resources can be human as well as financial, and they can be reassigned to medium- and long-term innovation projects. The program aims to eliminate inefficient processes, increase productivity and quality, and identify areas of innovation.

In many of the areas covered by the scheme, IP rights can be obtained through the support of external consultants. The program finances 50% of the related fees, up to a maximum amount of 15,000 EUR ex. VAT for the initial analysis. The implementation phase should follow the recommendations identified by the consultant and should lead to new work processes. In the implementation phase the consultant has to commit to improvements and the Ministry of the Economy supports 25% of the costs of the consultant in this phase.

⁵⁶ https://www.luxinnovation.lu/innovate-in-luxembourg/fit-4-performance-programmes/fit-4-innovation/

LUXEMBOURG FUTURE FUND

Set up in 2015, the Luxembourg Future Fund is an equity investment instrument which plays an important role in the financing of start-ups in Luxembourg. It invests directly or indirectly in Venture Capital funds and SMEs to foster the sustainable development of key strategic sectors for diversification of the economy, like ICT, cleantech and other technology sectors. The Fund plays an important role in the generation of new IP rights in Luxembourg.

To be eligible, the potential investment must have a spill over effect in Luxembourg. Such an effect could be produced by generating new turnover or revenues generated, by demonstrating an efficiency gain through cost reduction, attracting or training new key skills, or by creating employment.

The Luxembourg Future Fund was set up as a fund-of-funds together with the EIF. With an overall volume of EUR 150 million, it aims to stimulate the diversification and sustainable development of the Luxembourgish economy by attracting Venture Capital fund managers and early to later stage innovative businesses into Luxembourg. It was set up by the EIF and the Société Nationale de Crédit et d'Investissement (SNCI) and combines a EUR 120 million contribution from SNCI with EUR 30 million from the EIF. In parallel to the investment into LFF, SNCI invested EUR 25 million into a dedicated life sciences fund.⁵⁷

LUXIMPULSE FOR SPACE

LuxIMPULSE is the national capital investment tool dedicated to the support of R&D activities by Luxembourg space companies. It is funded by the Ministry of the Economy and managed by the European Space Agency (ESA). The Luxembourg Space Agency selects the entities to receive the funding based on an economic assessment of the project including the expected revenues and other business aspects.

As Luxembourg is a member to ESA, Luxembourgish space companies can also benefit directly from the ESA programmes.

LUXEMBOURG IP BOX

Luxembourg introduced a preferential tax regime⁵⁸ for income resulting from IP rights generated locally. The Income Tax Law provides an 80 percent exemption on income derived from the commercialisation of IP rights. The law also provides a 100 percent exemption from net wealth tax (NWT) for IP rights.

To qualify for the tax exemption the taxpayer has to account for the incurred qualifying research and development (R&D) expenditures that gave rise to the IP income and the taxpayer has to have significant economic activities in Luxembourg. The taxpayer must also track and trace expenditure and income to IP assets to justify a claim that IP expenditure qualifies under the regime.

⁵⁷ https://www.luxinnovation.lu/news/snci-injects-yearly-average-95-million-euro-luxembourg-economy/

⁵⁸ The law passed by the Luxembourgish parliament on the 22nd of March 2018, introducing a new article 50ter into the Income Tax Law

The IP assets which qualify under the preferential tax regime are:

- > Patents;
- > Utility models;
- > Author's rights on computer software;
- > Supplementary protection certificates for medicinal and plant protection products;
- > Extensions of supplementary protection certificates for paediatric medicine.
- > Orphan drug designations

Excluded are IP assets such as author's right (not related to computer software) and related rights, trademarks and domain names.

The income derived from these IP assets can be:

- > Royalties, revenues resulting from the usage of the IP assets by a third party
- > Income included in the sales price of a product or service, which is related to the IP assets
- > Income resulting from the disposal of the IP assets
- > Indemnities obtained from judicial or arbitration proceeding related to the IP assets

ACCESS TO PRIVATE FINANCING

Corporate banking revenues from commercial banks in Luxembourg are growing. The Luxembourg Bankers' Association⁵⁹ estimates the total revenues in 2020 at EUR 3.0 billion, which is 58.8% more than in 2016 (see Figure 4).

Bilateral loans and syndicated loans are the most predominant financial instruments in Luxembourg, collectively accounting for approximately 76% of revenues and 81% of profits of corporate banks.

⁵⁹ ABBL, Corporate Banking Survey 2020/2022, https://www.pwc.lu/en/banking/docs/corporate-banking-survey-2022.pdf

⁶⁰ Syndicated loans are financing offered by a group of lenders for a single borrower. This are often used to support larger projects or when expertise is needed in a specific asset class from a specialized lender.

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Figure 4: Estimated Corporate Banking Revenues 2016-2020

Source: ABBL Corporate Banking Survey Results

■ Estimated revenues from remaining banks

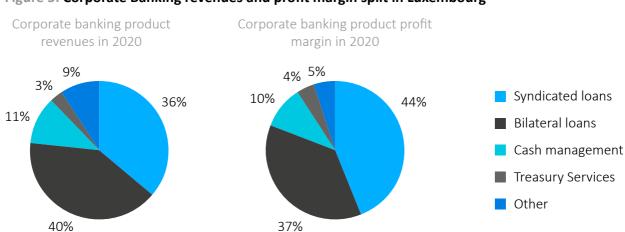


Figure 5: Corporate Banking revenues and profit margin split in Luxembourg

Total revenues from survey respondents

Source: ABBL Corporate Banking Survey Results

The share of syndicated loans is no surprise as Luxembourg banks are involved in financing multinationals, which seek financing across borders.

In the coming years the commercial banks expect that loans will still drive further growth of revenues and profits. Especially for SMEs, there is a growth expectation for cash management, in which 15 % of commercial banks believe it will contribute to revenue growth and 12% of commercial banks believe it will contribute to contribution margin.

It is notable that Luxembourg banks do not participate in business set-ups, business transfers or in supporting companies going public, such as Initial Public Offerings (IPOs).

In Luxembourg the five major commercial banks provide loans to businesses and SMEs in particular: BIL, BCEE, ING, BGL BNP Paribas and Raiffeisen.

Access to finance through IP

FINDINGS ON PRACTICES AND AVAILABLE SCHEMES

EUROPEAN INVESTMENT BANK PRACTICES AND INSTRUMENTS

The European Investment Bank (EIB) plays a key role in creating financial instruments accessible to local SMEs.

The EIB's main instrument to finance innovative businesses and entities is InnovFin. Operational since 2014, InnovFin is designed to take higher risks than traditional investments by providing loans, guarantees and equity. Since 2021 InnovFin is thematically focused on energy demo projects, infectious disease and sector-specific investment platforms, such as the circular bio-economy.

Although InnovFin was initially open to provide financing using IP as collateral, the EIB experience has shown that trading in IP after a payment default has been cumbersome for the EIB. Therefore, the EIB has decided to cease financing IP rights through InnovFin.

PRIVATE BANKING SECTOR

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Commercial banks are currently not very active in financing intangible assets as collateral for loans. The largest commercial banks in Luxembourg (BIL, BCEE, BGL BNP Paribas, Raiffeisen) mention the following barriers:

- 1. Difficulty to trade in intangible assets. In case of credit default, banks are more used to trading in tangible assets, lacking the capacity to trade in intangible assets. Commercial banks have a lack of dedicated human resources to value IP rights and they also lack the capacity to readily monetize intangible assets.
- 2. Lack of relationship between revenues and intangible assets. In case companies do not keep a dedicated management on their R&D costs and the related revenues, a commercial bank cannot directly trace the relevant income.
- 3. <u>Valuation of IP assets is complex.</u> In the case of a relationship between revenues and IP rights, the valuation of the IP rights is complex in the absence of a third-party evaluation. Banks do not have their own capacities to assess the value of IP rights.
- 4. Lack of incentives to finance intangible assets. The market for corporate banking is growing fast in Luxembourg, even without including financing based on intangible assets as underlying security. Currently there is no state guarantee scheme for financing intangible assets in Luxembourg, resulting in a lack of incentive to include intangible assets in SME financing unattractive for commercial banks.

BUSINESS ANGELS AND OTHER ALTERNATIVE INVESTMENT SOURCES

Business angels in Luxembourg are organised in the Luxembourg Business Angel Network (LBAN). The association has more than 100 members who invested more than EUR 8.3 million in 2021, including EUR 4.4 million in Luxembourg.

Over the past decades, the entrepreneurial and start-up landscape was strongly focused on service innovation due to the importance of the financial sector. Business angels were at that time traditionally more interested in the service portfolio and business model of such start-ups, rather than in the technologies used. With the recent development of high-technology and research-intensive sectors such as aerospace or life-sciences in Luxembourg, a stronger interest of business angels for technologies and its intellectual property protection can already be observed.

A business angel may be interested in financing a project only if the start-up can prove that it owns all IP rights, that they are free of any encumbrance and that the company owns the rights to the creations produced by its employees and founders.

To stimulate the access to finance to innovative SMEs by business angels, a broader incentive scheme is needed. The mitigation of potential risks of business angels investing in high-tech start-ups, e.g. by tax advantages or other means, could potentially lead to encourage investors to invest in young and innovative companies.

PLEDGES

A company searching for external finance may consider its IP portfolio to obtain finance.

In Luxembourg this is feasible if the IP rights are used in a product or service and are generating income through direct sales or through licence royalties. The secured creditors will request access to the IP portfolio of the debtor, to ensure payment in case of default.

IP can be used as a collateral for external financing. The common way to enforce the use as collateral is by means of a pledge agreement. In Luxembourg a pledge agreement is regulated by the Civil Code and the Commercial Code. Article 2074 of the Civil Code prescribed that the asset to be ensured, has to exist and has to be carefully identified. Article 113 of the Commercial Code allows a commercial pledge to be extended to all current and future assets.

A pledge can be established if the IP right is registered. For unregistered IP, the difficulty is to establish its value, especially when the IP rights are enforceable in various jurisdictions.

For patents, a pledge must be in writing and be registered with the Intellectual Property Office of the Ministry of Economy. A pledge of a Benelux trademark or a Benelux design must be in writing and should be registered with the Benelux Office for Intellectual Property (BOIP). As author's rights are not registered, a pledge cannot be concluded, since these rights are not registered. However, royalties resulting from these rights can be covered by a pledge.

TRANSFER OF PROPERTY

The alternative to a pledge is the transfer of property.

The transfer of ownership of an IP right takes place into two stages: once the creditor receives the title and again when the debt is paid back. Other costs arise from the need to set up a licence agreement in favour of the debtor, to ensure that it can still use the IP rights and that it will take the necessary steps to ensure the validity of the IP rights (via especially the payment of renewal fees).

Transfer of ownership is rarely chosen as an option because, in this case, it is up to the creditor to manage the IP rights portfolio. The creditor might even become a party to a potential infringement action or have to follow an opposition or invalidity procedure. Often the creditor, mostly a financial institution, does not have the capacity and the capabilities to manage IP rights.

To overcome this barrier, companies have the option to transfer the rights to a licensed fiduciary⁶¹. Such a transfer can be made by a private deed, without the requirement of a third-party notification. Once a fiduciary contract has been established, the fiduciary holds the IP rights in its own name on behalf of the creditors.

In practice, the licensed fiduciary must keep the IP collateral separate from its own property or any other property it may hold on behalf of other beneficiaries. There is no obligation of disclosure, but the formalities and rules on enforceability against third parties must be respected. For that reason, the transfer of registered IP rights should be recorded with the relevant IP office (there is no such requirement for unregistered IP rights). In case of litigation, the licensed fiduciary is the party to be addressed, as well as in the case of granting new license to third parties. In case of non-payment, the licensed fiduciary will directly discuss with the creditor which measures to take. Once the debt is reimbursed the licensed fiduciary will hand back the rights to the debtor.

SECURITISATION

To lower the risk of non-payment, creditors may ask to pool IP portfolio assets in a special purpose vehicle (SPV). The SPV will then issue debt backed securities against the transferred IP portfolio assets and the generated income of the portfolio. This type of finance structuring is called securitisation⁶² and is especially interesting if IP rights generate a continued cash flow, as in the case of royalties and licensing fees.

Luxembourg has its own Securitisation Law⁶³ and it adopted the EU Securitisation Regulation and the Capital Requirement Regulation by the beginning of 2019. The Luxembourg Securitisation Act has on purpose a broad definition of securitisation, which allows for securitisation of all kind of asset classes, including intangible assets, such as IP rights.

Regulated by the Luxembourgish law on trusts and regulating fiduciary contracts of 27th July 2003

⁶² United Nations commission on international trade law, UNCITRAL, Legislative Guide on Secured Transactions, United Nations, 2010

⁶³ The Luxembourg Securitisation Act of 22nd March 2004

Other entities than SPVs may execute securitisation actions, but they do not benefit from the provisions for safety and flexibility of the Securitisation Law⁶⁴. SPVs will prefer to obtain the ownership of the IP rights to be in full control of these intangible assets, although the law keeps the position open for SPVs to leave the securitised assets with the owner and to transfer the risk related to the assets to the SPV.

A main element of the securitisation of IP rights in SPVs is the structuring of the debt⁶⁵. Typically, the credit risk is split into different tranches with various risk profiles. In this way a range of investors with different risk and reward appetites can be attracted. Typically, 80% is allocated to senior tranches, with a lower risk and 20% to so-called subordinated, mezzanine or junior tranches. The SPV can benefit from any kind of receivables of the IP rights, which include royalties or other licensing fees, but also claims for damages resulting from infringements by third parties of the rights subject to securitisation.

In comparison to bank financing, the main advantages of securitisation of IP rights are the costs and the access to a wider range of capital providers and investors. Another advantage of securitisation is that the original company continues to receive payments after the debt has been paid back.

The disadvantage of securitisation is that it takes time to set up the SPV and to package and layer the respective tranches. Also, the costs might be a bottleneck, consisting of fees of lawyers, banks and the costs of transfer of IP rights.

OTHER USEFUL ELEMENTS TO CONSIDER

ACCOUNTING PRACTICES

Economic consideration of IP rights implies, in the first place, the recording of intangible assets in the balance sheet.

Luxembourg accounting standard is the LUX GAAP (Luxembourg General Accepted Accounting Principles), a standard based on the historical cost method and the prudence concept. LUX GAAP prescribe that IP has to be listed under intangible fixed assets, insofar the company has the intention to use the IP on a long-term basis.

Initially, intangibles will be recognised at their acquisition price or costs, and development costs may be included. Intangible fixed assets must be written off over their useful lifetime. Any income from the exploitation of intangibles should be reported under "other operating income", unless it is part of the main business of the company which is then reported under "net turnover".

In Luxembourg, publicly traded companies are obliged to report in conformity with the International Financial Reporting Standards (IFRS). Under the IFRS, there are two standards related to IP rights⁶⁶:

- > IAS 38, related to the accounting treatment of intangibles, including IP rights; and
- > IAS 18 that is about the accounting treatment of income from ordinary business activities, including royalties generated by IP rights.

⁶⁴ Frequently Asked Questions Securitisation, Commission de Surveillance du Secteur Financier, https://www.cssf.lu/en/ Document/fag-securitisation

⁶⁵ Securitisation in Luxembourg, A comprehensive guide, 2020, PwC Luxembourg, https://www.pwc.lu/en/securitisation/docs/pwc-securitisation-in-luxembourg.pdf

⁶⁶ Olivier Laidebeur, Pierre Kihn, Bernard David & Thierry Bovier, Intellectual Property in Luxembourg, Promoculture, 2nd edition 2019

Under IFRS, intangibles must be recognised if their future economic benefits will benefit the company and if the costs of the assets can be reliably measured. IAS 38 describes at which cost base an intangible must be initially recognised. If an intangible is generated internally there are very strict rules under which it can be recognised. The intangible should be the result of development and not from research. Research can only be incurred as an expense. If the intangible results from development, it can only be recognised if the company fulfils certain conditions (see Box 1).

Box 1: Criteria for recognition of an intangible asset in IAS 38

- 1. The technical feasibility needed to complete the intangible for its commissioning or sale;
- 2. Its intention to complete the intangible and to commission or sell it;
- 3. Its capacity to use or sell the intangible;
- 4. The way in which the intangible will generate probable future economic benefit. The company must demonstrate, inter alia, that there is a market for the output arising from the intangible or for the intangible itself, or its utility is to be used internally;
- 5. The availability of appropriate technical, financial, and other resources to complete the development and commission or sell the intangible.
- 6. Its capacity to reliably assess the expenditure attributable to the intangible during development.

Under IFRS, licenses of IP rights granted by a lessor are also recognised. Also recognised under IFRS is the IP that is part of an acquired business. If other companies in Luxembourg than publicly traded companies prefer so, they can opt to apply IFRS standards to their accounts.

Trademarks cannot be recognised on the balance sheet, except for the costs incurred for their use.

In summary, SMEs wishing to register their intangible assets on their balance sheet, must prepare themselves by keeping an accounting and administrative journal relating to their development activities and related costs, where they will identify the intangible assets, assess the technical feasibility of licensing or selling these intangible assets, carry out a market assessment for these assets and plan their use or sale. In practice, the majority of SMEs in Luxembourg are not aware of these requirements.

IP INSURANCES

IP Insurances cover the costs of defending IP rights resulting from IP infringement or misappropriation claims by third parties. They can also protect for the defence costs and damages resulting from contractual obligations to indemnify business partners, such as vendors and manufacturers and customers in case of third-party claims alleging infringement. And they can also insure against the costs for defending against third-party attempts to cancel or invalidate registered IP. The most used IP Insurance is a defensive IP Insurance against external attacks.

In Luxembourg IP Insurances are rarely applied.

It seems that there is very little demand for IP Insurances and there is no local party offering IP Insurance in Luxembourg. In the rare case of IP Insurance consideration, the requesting party report prohibitively high costs of the IP Insurance offered by foreign insurance companies.

MARKETS FOR IP RIGHTS

Backing up finance with IP rights benefits from active markets where these assets can be traded. Such markets enable the financial institutions to independently verify the value of IP rights and to sell them in case of default of a debtor.

The development of IP marketplaces is an international issue and not specific to Luxembourg. There have been many attempts to set up IP marketplaces of which the most well-known IP market in Europe was IP-Marketplace set up by the Danish Patent and Trademark Office. In 2016, IP-Marketplace listed 766 patents, 206 trademarks, and 39 designs on the exchange. About half of them were from European countries excluding Denmark. The Danish Patent and Trademark Office concluded that, to be effective, such IP marketplace should be part of an international network of IP rights exchanges. The platform has now closed, based on a market analysis finding that a standalone platform focusing on IP only was not seen as viable. §8

An expert group on IPR valorisation initiated by the European Commission has stated, based on an extensive analysis of the state of play of different options for patent valorisation, that a clear value added of supporting the creation of an IPR exchange platform at the European level was not necessary, as "it would not represent a superior alternative to commercial platforms". In addition, due to existing risks, options for putting into place IP markets should be submitted to thorough prior investigation before considering any further development.⁶⁹.

A barrier for further development of IP marketplaces is the lack of guarantees for IP rights⁷⁰. In 2016, a working group of the Joint Research Centre of the European Commission concluded that public guarantees on IP rights to investors would boost innovation and large-scale science development. The costs for governments of providing guarantees would be limited in comparison to other governmental interventions, like subsidies, which are to be provided to all parties eligible to the intervention. Indeed, in case of an IP guarantee there would be only a need for public fund disbursement in case of failure.

It is possible to mention here the "market place for idea" developed by the BOIP called "i-D Space⁷¹".

This market place is based on "i-DEPOT". An i-DEPOT is a proof, provided by the BOIP, of the existence of documents on the date of their receipt. The documents are kept by the Office for a period of five or ten years, depending on the period chosen by the applicant (the retention period may be extended by further five-year periods). This will take place on a strictly confidential basis, unless the applicant submitting the documents explicitly waives confidentiality.

Thanks to "i-D Space", applicants can chose to publish their "i-DEPOT". The latter can be consulted on this open-acess marketplace by any third party. This open-space can be used to find business partners.

VALUATION OF IP RIGHTS

Before a financial transaction takes place, a creditor will ask for the value of the IP rights. As IP rights are exclusive rights and are not a commodity, the monetary value of each and every IP right has to be determined on its own merits. The value of IP rights can be derived from direct income like licensing fees or royalties, from exploitation by integrating the IP within a product or service, or by a market value when used to create barriers for competitors to enter a market or for substitutes of products to be introduced.

⁶⁷ Karlsson Dinnetz, M., IP Exchange and Finance, A workshop report, 2016, http://publications.jrc.ec.europa.eu/repository/bitstream/JRC103597/ip%20exchange%20and%20finance_online.pdf

⁶⁸ https://www.dkpto.org/system-status-

Options for an EU instrument for patent valorization, Final report prepared by an expert group on IPR valorization, rapporteur Yann Ménière, published by the European Commission, 2012

⁷⁰ Ibid.

⁷¹ https://www.boip.int/en/entrepreneurs/ideas/i-d-space-marketplace-for-ideas

There exists a vast literature on the valuation of IP rights⁷² which recognises three valuation methods:

- a) Income method
- b) Market method
- c) Cost method

The preferred valuation method to be applied depends on a lot of variables, such as the nature of the IP, the options to commercialise the IP rights, the actual ownership, the way they were generated, their transferability, the applicable laws and regulations and if they are recognisable in annual accounts.

Each of these methods turn out to be more labour intensive than the valuation of tangible assets, which is one of the reasons why financial institutions prefer to finance tangible assets.

In Luxembourg, the fees charged by IP lawyers or other IP professionals for performing an IP valuation, even if they are aligned with international practices, are often prohibitively expensive for SMEs. There have been attempts to set up public services for the valuation of IP rights that were unsuccessful due to the lack of trust of SMEs in sharing detailed information with public authorities and the lack of agreement on valuation methods to be applied.

For a good overview of valuing IP rights, see i.e. the website of the Word Intellectual Property Organisation: Valuing IP Assets (wipo.int), the Handbook on valuation of Intellectual Property Assets, International Chamber of Commerce, 2019, https://iccwbo.org/publication/icc-handbook-valuation-intellectual-property-assets/ or the RICS professional standards and guidance, global Valuation of intellectual property rights, 2nd edition, March 2020, https://www.rics.org/globalassets/rics-website/media/upholding-professional-standards/sector-standards/valuation/valuation-of-intellectual-property-rights-2nd-edition.pdf

Main findings – Challenges in accessing IP-backed finance

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IP rights can play an important role in access to finance for international companies in Luxembourg, for instance during mergers and acquisitions⁷³.

So far, IP rights have had a limited role in direct access to finance for SMEs in Luxembourg, and they are rather considered as a bonus or minimal security in negotiations for finance by third parties. If IP rights were used in a product or service and this product or service generates revenues, they could be an important lever for access to finance.

Considering the above, there are challenges to be met in order to enable SMEs to actively use their IP in accessing finance in Luxembourg:

1. Commercial banks in Luxembourg are reluctant towards providing access to financing to SMEs. Thanks to a growing local market for corporate finance, there is currently no strong incentive for Luxembourg commercial banks to consider IP in providing finance to SMEs. Commercial banks regard financing enterprises based on their IP alone as a high-risk investment. The transactions are also more expensive, due to the relatively higher cost of valuing IP, when compared to tangible assets. As they currently do not see a need to get active in financing enterprises based on their IP, they do not attract specialised expertise in the area, which in turn results in a lack of active involvement in IP valuation by banks.

To enable IP rights to play a more important role, there are structural issues to overcome, as the banks do not have capacities to assess the value of IP rights and are not able to trade in them in case of credit default.

2. Most SMEs are not prepared for considering IP-backed finance.

Most SMEs are not aware of the value of their IP or of existing possibilities regarding IP-backed finance in general. They are also not aware of the fact that they can have their IP rights recognised in their balance sheet, but only if they are keeping a separate bookkeeping on the cost incurred to obtain that IP rights and the income generated by these IP rights. That is required by the international accounting standards and the Luxembourg general accepted accounting standards.

The consequence is that SMEs have to prepare themselves to include IP rights in their annual accounts, which most of them are not aware of.

3. The costs of the valuation of IP rights are often prohibitively expensive for SMEs in Luxembourg.

Even though significant expertise on the valuation of IP rights is available on the Luxembourgish market, service providers are primarily geared to large international clients. However, even if the fees charged by IP Lawyers in Luxembourg are aligned with international practices, they are often prohibitively expensive for SMEs in Luxembourg. There have been attempts to set up public

⁷³ S. Gerling, V. Wellens, Taking Security over Intellectual Property Rights in Luxembourg, 2022, to be published

services for the valuation of IP rights in Luxembourg. Unfortunately, these attempts did not succeed because SMEs were reluctant in sharing detailed financial information with public authorities and because of the lack of agreement on valuation methods to be applied.

4. There is a lack of IP marketplaces for IP rights trading.

Backing up finance with intangible assets benefits from active markets in which these assets can be traded. The existence of these markets enables the financial institutions to independently verify the value of intangible assets and also sell them in case of default of a debtor.

Although an initiative exists at the Benelux level, this project is not as successful as expected. To be successful marketplaces need to reach a critical mass and provide for sufficient liquidity.

5. A financing strategy that covers all IP rights needs must take into account the different nature of IP rights.

There is no one-size-fits-all solution to improve the financing of IP rights in Luxembourg, as the nature of different IP rights is quite different. A strategy to improve IP-backed finance should take these particularities into account and could lead to targeted approaches for each different IP right (patent, trademark, design, author's rights and related rights).

Policy recommendations

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The main policy recommendations derived from this report for the government of Luxembourg are:

1. Creating a dialogue between the parties concerned by IP-backed finance in order to analyse their needs

The findings at this stage underline a rather limited use of IP in order to access finance. This shows the importance of developing a dialogue between the parties which may be involved in the process of using IP to access finance. Deeper knowledge related to the needs of the different stakeholders is fundamental in order to take sensible actions in this field. The needs of the different types of enterprises, of the financing entities, of valuation and accounting experts, and of the various business sectors, *inter alia* would need to be analysed.

2. Evaluating the current tools and the legal framework related to IP-backed finance

More detailed evaluation of the tools and practices mentioned in this report (e.g. public IP financing tools; IP insurances; formalities), as well as of the legal framework related to securities⁷⁴ (e.g. pledges), is recommended in order to assess their adequacy with the use of IP for accessing finance. The actors and experts of these various fields should be involved in this evaluation.

3. Launching targeted awareness raising campaigns and creating a category dedicated to IP assets in the financial reporting

Raising IP awareness is an important lever to enhance the involvement in IP-backed finance. The efforts invested in awareness raising activities, such as the Luxembourg Intellectual Property Day, dedicated workshops, social media campaigns, advertising, etc., should continue and be reinforced as much as possible in order to reach the parties involved in IP-backed finance.

This report shows that SMEs need to be prepared to include their IP assets in their annual accounts. Targeted awareness raising campaigns can be used to make companies aware of the importance of this practice.

The campaigns could be carried out by the main actors in Luxembourg: the Intellectual Property Office of the Ministry of the Economy and the IPIL with the support of the relevant accounting, financial and banking actors.

Besides, the creation of a specific category in financial reports would provide companies with a reference document containing all relevant information regarding the financial value and the financial management of their IP assets. This document could be used to facilitate exchanges with banks and other private investors.

4. Carry out an assessment regarding the feasibility and appropriateness of a state guarantee scheme for IP-backed finance, especially with respect to SMEs

⁷⁴ In the sense of *droit des sûretés* in French

To create an incentive for banks and financial institutions to provide IP-backed finance, it is necessary to lower the risk of investing in IP. This could be for example achieved by a state guarantee scheme, which could be set-up as a stand-alone instrument or in cooperation with other institutional players such as the European Investment Bank (EIB).

The potential of setting-up such a tool could be explored through a consultation of all the relevant actors to identify the possible needs and establish the feasibility and desirability of such a tool, which may also depend on other factors such as the existence of robust and affordable IP valuation tools or access to highly liquid IP-marketplaces.

5. Creating and strengthening knowledge and competences related to IP-backed finance

Given the findings of this report and in order to allow IP-backed finance to develop, knowledge in IP-management tools should be significantly enhanced and put at the disposal of the parties involved (e.g. companies, public and private stakeholder involved in financing companies, consultants involved in IP and in financing). This knowledge could be developed by setting up academic and vocational training programmes in IP, linked to this issue. As part of this training, IP management, IP management tools, IP and accounting, the valuation of IP rights, as well as the specificities of each IP rights, could be taught to enhance the expertise related to IP-backed finance. The training could also include IP litigation and involve the legal protection of IP rights in courts. It might, for example, be developed in cooperation with the University of Luxembourg, the professional chambers, the Court of Justice of the European Union and the new Unified Patent Court. A dedicated expertise in IP-management, securities, accounting, banking and finance, could ultimately result in opportunities to exchange and develop knowledge and best practices between the different stakeholders for the benefit of the various actors.

6. Proceed to a careful evaluation of IP markets before supporting their establishment

With regard to the experiences related to IP marketplaces, implementation of the above-mentioned policy recommendations could increase the potential demand for this type of intervention. Careful evaluation of the needs and experiences of the parties involved in IP-backed finance as well as structure and the effect IP market places might have, and the benefit and suitability of such market places, and of alternative solutions need to be taken into consideration.

It may be advisable that any interventions to create an IP market be implemented as part of a European or an international network of IP rights exchanges so as to ensure sufficient scale and liquidity.

Conclusion

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There is an untapped potential to use IP for access to finance for innovative SMEs in Luxembourg. It is not only important to unleash this potential for future economic growth, but it is also important to use IP rights as a booster for the digital, green and energy transition in Luxembourg.

Although a fully developed legal and regulatory framework in the field of intellectual property is provided and despite the presence of strong banking and finance sectors in Luxembourg, there is currently unfulfilled synergy potential between these two fields, making access to finance based on intellectual property rights complicated for SMEs.

The main barriers and areas for improvement that were identified are the following:

- 1. The commercial banks in Luxembourg have a conservative attitude towards financing SMEs and a lack of expertise on IP rights.
- 2. The majority of SMEs is not prepared for including IP rights in their annual accounts, as they are not aware of the potential benefit to do so for their financing needs.
- 3. The costs of the valuation of IP rights are often prohibitively high for SMEs in Luxembourg.
- 4. There is a lack of IP marketplaces.
- 5. A financing strategy that covers all IP rights needs must consider the different nature of various IP rights and needs a targeted approaches for each different IP right (patent, trademark, design, author's rights and related rights).

Considering the great contributions of SMEs to growth and innovation, the Luxembourg Government ould provide support to overcome these challenges by:

- 1. Creating a dialogue between the parties concerned by IP-backed finance in order to analyse their needs.
- 2. Evaluating the current tools and the legal framework related to IP-backed finance in order to assess their adequacy with the use of IP for accessing finance.
- 3. Creating competence for IP-backed finance by setting up an academic training in IP linked to this issue.
- 4. Careful evaluation of IP markets before supporting their establishment.
- 5. Launching targeted awareness raising campaigns can improve the preparedness for IP-backed finance of the involved parties in Luxembourg.