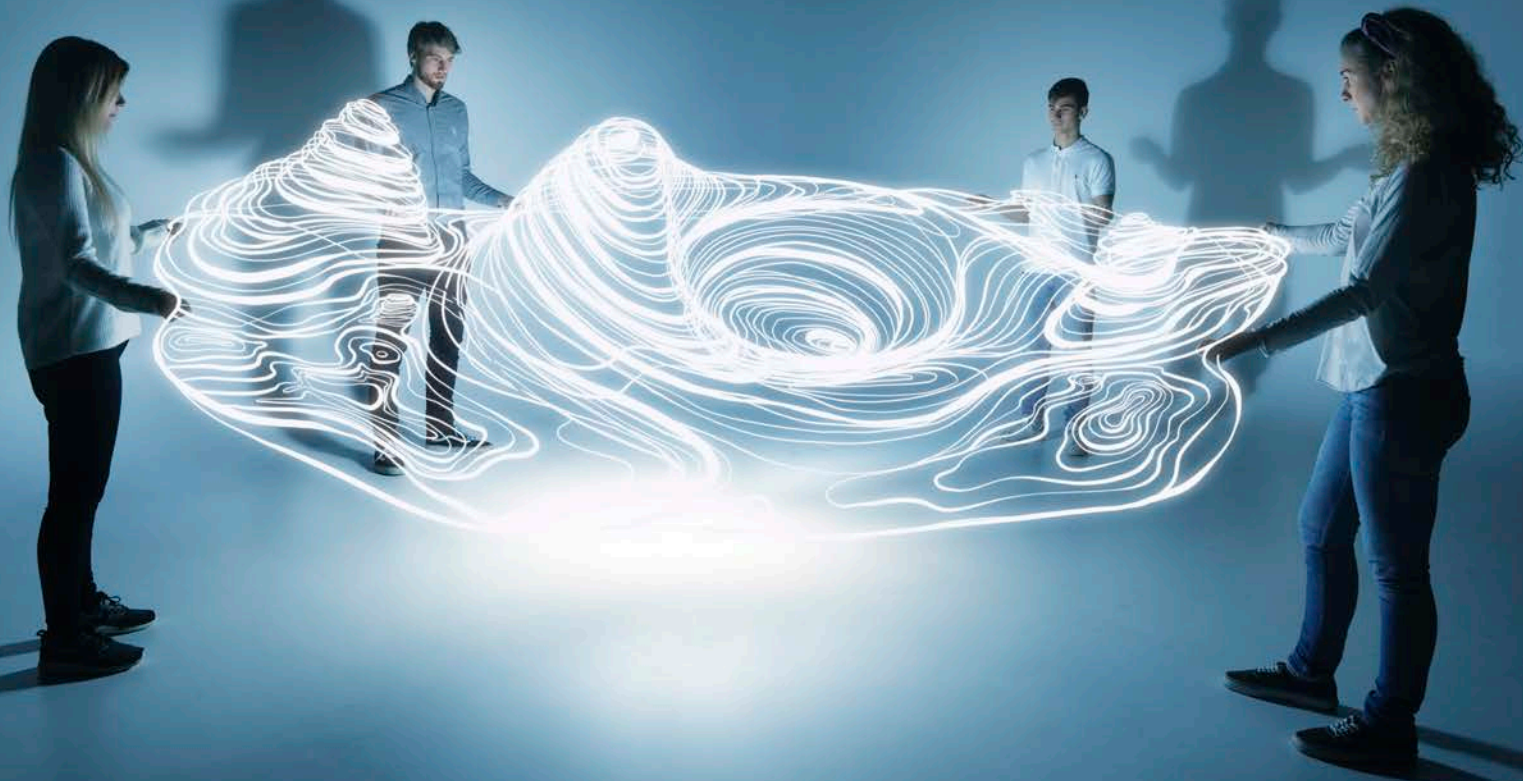




MINISTRY OF INDUSTRY, BUSINESS
AND FINANCIAL AFFAIRS

Intellectual Property Rights

Action plan for an innovative Denmark



Preface

Denmark is among the world's most innovative and technology-intensive nations, and this has been crucial for the progress that Denmark and many Danish companies have experienced over the past many years. However, the world is changing rapidly, and future developments are of great importance for the future opportunities for success of Danish companies and thus for the future of Danish jobs.

In particular, technologies such as artificial intelligence, robotics and the Internet of Things (IoT) are already creating major changes in companies as well as society as a whole. At the same time, consumers and politicians around the world are increasingly demanding sustainable products and solutions that contribute to the green transition. This is a development that, together with the COVID-19 crisis, creates fundamental changes and holds great potential for the companies that are ready to seize the opportunities and work innovatively.

Denmark's prosperity is largely created by the ability of companies to transform knowledge, research and innovation into value, growth and jobs. A strong and knowledge-based business community is one of the prerequisites for a well-functioning welfare state and an important driving force for future growth.

It places demands on Danish companies if they are to be competitive and able to create future growth as well as jobs: They must be innovative, inventive and open to opportunities, and they must be able to translate their innovation and research into value-creating, commercial successes that can be exported worldwide.

One of the basic prerequisites for companies to commercialise their ideas is that they can protect their innovation from copying through the use of strong intellectual property rights (IPR). The Ministry of Industry, Business and Financial Affairs will therefore ensure the best possible framework for the Danish business community to create value based on their investments in research and innovation.

The small and medium-sized enterprises (SMEs) represent the backbone of the Danish business community and make up 99 per cent of all Danish companies. Therefore, it is absolutely crucial that SMEs work innovatively and take advantage of the opportunities to emerge stronger from the COVID-19 crisis. Several studies show that SMEs that use IP rights perform better financially than other companies. At the same time, many Danish SMEs find it too expensive and cumbersome to protect their innovative solutions, and they thus do not get full value from their ideas. The framework conditions must therefore to an even greater extent encourage companies to invest in research and development by ensuring that IP rights are easily accessible for the benefit of both companies and society.

The purpose of the IPR system is to increase research and innovation in society and thus give companies and consumers access to new and better technology, goods and services. The IPR system is a catalyst for collaboration on research and innovation, as it gives companies an assurance that partners will not wrongfully run off with their technology. At the same time, the patent system obliges companies to make their knowledge open to the public, so that others can use it as a basis for their own research and development. It increases innovation and co-creation in society and creates fertile ground for increased exports, growth and jobs in Denmark. Thus, the IPR system plays a crucial societal role by strengthening innovation cooperation and promoting the development of new technology.

However, as a small and open economy, Denmark is also dependent on a strong, global IPR system, which is a work that Denmark is actively involved in, so that fair and equal, global conditions of competition are ensured.

On this basis, the Ministry of Industry, Business and Financial Affairs has prepared an IP action plan to increase Danish companies' knowledge of and use of IP rights and to create a better framework for companies' use of IP rights to create future growth and jobs.

*Minister for Industry, Business
and Financial Affairs Simon Kollerup*

Four focus areas will strengthen the framework for Danish companies' use of IP rights to create value, growth and jobs

1

Value creation via IP rights

Global competition and the capacity to innovate¹ are growing rapidly, and innovation is increasingly the key for companies to create value and earnings.

It places stricter demands on companies' development of new and better products, designs and services, and it places increased demands not least on SMEs' ability to actively use IP rights, to create value from their research, development and innovation.

Initiatives are therefore being launched which increase the companies' knowledge of the value-creating opportunities in IP rights, and which give them better access to use IP rights to create value for the company.

2

A fair, efficient and well-functioning IPR system

The IPR system plays a significant role in innovation and technology development in society. It gives companies an incentive to invest in research and development, and it ensures that the latest knowledge is published and disseminated in society.

It is therefore important that work is done both in Denmark and in the EU to ensure that there is a fair, efficient and well-functioning IPR system.

Initiatives are therefore launched to ensure that the interests of rights owners are continuously balanced in relation to fair market and competitive conditions. There must be access to effective enforcement of IP rights, so that both small and large companies can defend their rights, and consumers can be protected against e.g. counterfeit goods that are hazardous to health.

¹ https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf

3

International commitment

Denmark is a small, open economy, which is completely dependent on being able to export abroad. This is particularly relevant for the technology-intensive industries within the green transition, where IP rights play a crucial role.

A strong, global IPR system is therefore in Denmark's interest. This is especially true during times of crisis such as the COVID-19 pandemic, in which the IPR system is put under pressure.

Initiatives are therefore being launched to help maintain and promote a global IPR system with strong IP rights for the benefit of Danish companies and Danish exports.

4

Knowledge of IP rights

IP rights stimulate innovation in society and ensure companies a reasonable return on their investment in research and development.

Therefore, it is crucial that future entrepreneurs and relevant employees in the companies have a basic understanding of what IP rights are, as well as how rights have an impact on their particular business. However, the fact remains that many entrepreneurs and SMEs lack completely basic knowledge of IP rights.

Initiatives are therefore being initiated to increase the basic knowledge of IP rights in the education system, among key business promotion actors as well as among entrepreneurs and small companies.

Initiatives of the action plan

Value creation via IP rights

The Ministry of Industry, Business and Financial Affairs will:

- ▶ *Set aside DKK 3 million annually in the years 2021-2023 for a patent voucher scheme that will provide small and medium-sized companies with financial support to protect their research and innovation with patents. The purpose of the scheme is to strengthen technological development in SMEs. The voucher must provide SMEs with financial support to obtain patents, thereby increasing companies' access to protect their technology and innovation.*
- ▶ *Launch a new IP Marketplace to create a better basis for value creation through collaboration and exchange of IP rights. The platform will increase the interaction between universities, companies and entrepreneurial environments and create a better framework for the purchase, sale and licensing of IP rights, which can strengthen companies' opportunities for increased value creation through the active use of IP rights. The platform is developed in collaboration with DTU and with the involvement of private operators.*
- ▶ *Establish two IPR information centres to strengthen companies' access to knowledge about IP rights and the opportunities for commercialisation of their innovation. In collaboration with the Business Development Centres, the Danish Patent and Trademark Office is establishing two IPR information centres in Ikast and in Copenhagen. The centres must provide entrepreneurs, companies and researchers with guidance on IP rights and access to insight into patent data in dialogue with experts from the Danish Patent and Trademark Office. At the same time, the centres must be able to provide access to guidance on the commercialisation of innovation, including in the form of guidance on business potential and the possibilities for access to financial support and risk capital.*
- ▶ *Establish a mentoring programme to give small businesses access to constructive dialogue with companies with IPR experience. The mentor programme will act as a bridge-builder between IPR-experienced and inexperienced companies, where the mentor and mentee are part of a learning partnership. Based on IP rights, constructive dialogue and the exchange of experience concerning the work with IP rights and value creation of IP rights for the company will be carried out. The Danish Patent and Trademark Office will, in collaboration with the Business Development Centres, run the programme and spread knowledge of the scheme and facilitate the process where the mentor and mentee are matched.*

A fair, efficient and well-functioning IPR system

The Ministry of Industry, Business and Financial Affairs will:

- ▶ *Distribute a fast-track patent scheme targeted at companies in industries with rapid technology development such as tech or gaming industry. In industries characterised by rapid technological development, the rapid issuance of patents can be crucial. Especially for entrepreneurs and SMEs, a fast-track patent scheme can minimise the period of legal uncertainty and have a major impact on their ability to attract investors. However, among many companies there is a perception that the grant of patents takes too long and thus does not match their needs. The Patent Office will therefore propagate a Danish fast-track system that can provide firms the opportunity to obtain a patent for 6-10 months, which is more than half of the average patent granting times for Danish patents.*
- ▶ *Conduct a service check of the IPR insurance market to make it easier for small businesses to enforce their rights. For small businesses in particular, costs can be a barrier to enforcing their rights. Currently, there is a private market for IPR insurance, but the market is limited. A service check is therefore carried out, which must identify any barriers for the use of IPR insurance by small businesses.*
- ▶ *Strengthen efforts against piracy. Demand for counterfeit goods must be reduced, which will benefit both consumer safety and health, as well as law-abiding companies and society as a whole. In collaboration with EUIPO, campaigns targeted at Danish consumers will be carried out in 2021 and 2022. The campaigns provide consumers with knowledge about the harmful consequences of buying pirated goods.*
- ▶ *Supporting the objectives of the European Commission's IP Action Plan for a fair and accessible IPR system for the benefit of society as a whole. Efforts must be made to ensure that the objectives are implemented and implemented in such a way that consideration for the rights owners is balanced in relation to reasonable market, competition and consumer conditions. Specifically, the Ministry of Industry, Business and Financial Affairs will, among other things, work to ensure that new EU legislation in the field of IPR always takes into account the needs of SMEs and ensures fair licensing conditions for patents included in industry standards.*

International commitment

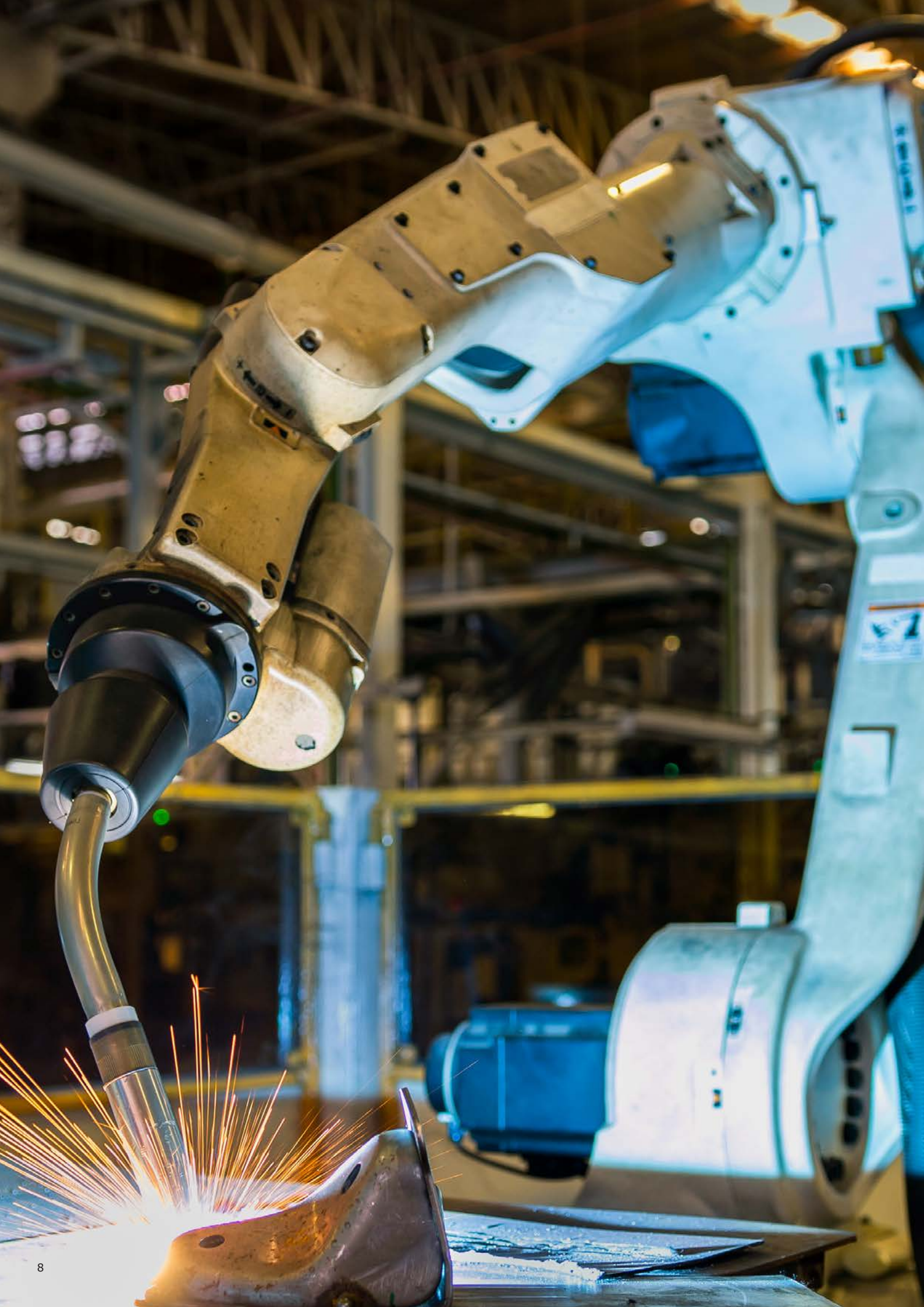
The Ministry of Industry, Business and Financial Affairs will:

- ▶ *Work for the rapid entry into force of the Unified Patent Court and the unitary patent.* It is crucial to the Danish business community that there is an effective patent system in Europe, where it is cheap, simple and quick to obtain and enforce one's rights. The Ministry of Industry, Business and Financial Affairs will therefore continue to work for the Patent Court and the unitary patent to enter into force as soon as possible.
- ▶ *Strengthen the dissemination and IPR protection of green technologies.* The importance of IPR protection and commercialisation of green technologies is reflected in the green strategic partnership with India. Work is underway on concluding a Patent Prosecution Highway (PPH) agreement with India covering green technologies. The IPR area must also be part of Denmark's strategic partnerships with Japan, Mexico and Indonesia.
- ▶ *Strengthen international enforcement and harmonisation of IP rights.* Projects will be implemented in India, Brazil, Argentina and Serbia in 2021-2022 to strengthen the countries' IPR systems and thereby improve the framework conditions for Danish companies in these countries. The possibilities for establishing new IPR authority collaborations in export markets with special relevance for Danish companies must be identified.
- ▶ *Promote a global system for IPR protection with a good framework for Danish companies' use of IP rights.* The Ministry of Industry, Business and Financial Affairs will strengthen international engagement and work in the EU as well as in the international IPR organisations, so that a strong, global IPR system is maintained. Specifically, efforts must be made to ensure that the EU's forthcoming design reform is designed with a strong Danish impact and ensures a good framework for SMEs.

Knowledge of IP rights

The Ministry of Industry, Business and Financial Affairs will:

- ▶ *Increase awareness of IP rights among entrepreneurs and small businesses.* A strengthened effort will be initiated in the form of holding presentations, workshops, etc. aimed at educational institutions, business clusters, start-up environments, etc. In addition, the Danish Patent and Trademark Office will in 2021 and 2022 carry out an annual campaign and increase digital media efforts via activities on social media, in newsletters as well as other digital media.
- ▶ *Launch an IPR toolbox to make it easier for SMEs to use IP rights to create value for their businesses.* A virtual toolbox is being developed with concrete tools that can facilitate the use of IP rights and clarify the value of companies' use of IP rights.
- ▶ *Develop teaching materials to increase awareness of IP rights among students and future entrepreneurs.* A collaboration is initiated between the Danish Patent and Trademark Office and selected professional colleges on disseminating knowledge of IP rights, so that future entrepreneurs and employees in Danish companies gain increased knowledge of IP rights.
- ▶ *Cooperation with EUIPO on their efforts in the field of education, "Ideas Powered for Schools".* The effort is targeted at the primary school and must provide students with knowledge about IP rights and the harmful consequences of piracy. The purpose is to reduce students' demand for counterfeit goods and provide them with a basic knowledge of how IP rights can be used to strengthen their ideas and future business.



Background of the IPR system and its purpose

The purpose of the IPR system is to increase research and innovation in society and thus give companies and consumers access to new and better technology, goods and services. Through the IPR system, companies can obtain a commercial exclusive right, which increases their incentive to invest in research and development. At the same time, the companies' knowledge is made available to the public. E.g. all the technical details of the invention are published within 18 months of the filing of a patent. This gives others knowledge about the patented technology, and this creates a basis for further research, development or further development of technology.

In a world without IP rights, knowledge can be exploited by anyone as soon as it is publicly available. This means that companies cannot prevent others from copying their innovation and products. It will reduce the companies' incentive to invest in research and development, just as knowledge will to a much greater extent be tried to be kept secret. As a result, society will lose out on new knowledge and technological advances, just as companies and consumers will not have access to new products to the same degree.

The IPR system thus acts as a catalyst for innovation in the form of a social contract between companies and society. Companies are encouraged to invest in research and development and to publish their knowledge for the benefit of society as a whole. In return, companies get a time-limited exclusive right to exploit their idea commercially so that they can achieve a reasonable return on their investment. This Societal contract also implies that effective enforcement of the rules must be ensured. Companies that follow the rules must be assured that they can enforce their rights if they are violated. Just as consumers need to be assured that illegal copies are being cracked down on, which can often be of poor quality and pose safety and health risks to consumers.

IP rights

Patents

A patent grants a commercial exclusive right to a technical invention. The exclusive right is limited in time to a maximum of 20 years, where annual fees must be paid to maintain the right. In practice, most patents are rarely maintained for 20 years and often for less than 10 years. Patents stimulate innovation in society, as they give companies an incentive to invest in research and development, as the patent provides an opportunity to protect themselves against copying by competitors.

Utility models

A utility model is an exclusive right to the commercial exploitation of an idea that solves a technical problem and is often called "the small patent". The requirements for inventive steps are less than with a patent. That is, the invention need not differ to the same extent from similar inventions as is the case for patents. A utility model can be maintained for a maximum of 10 years.

Trademarks

Trademarks do not give exclusive rights to specific technology, but exclusive rights to the use of a name, logo or the like. Thus, other companies may not use the same name or logo for similar products.

Trademarks act as a signal to consumers from the manufacturer about e.g. the quality of a given service or product. This can allow the rights owner to increase pricing and increase the incentive for companies to ensure the quality of their service or product.

The trademark registration is valid for 10 years, and there is no upper limit on how many times it can be extended.

Design

Design protection is achieved on a product's design or appearance. The design protection gives the exclusive right to produce the given object with the protected design. Thus, design protection has basically the same positive effects on innovation as patents. The design registration is valid for 5 years, after which the protection must be renewed. A design right is valid for up to 25 years.

The significance of IP rights for the Danish economy

IPR-intensive industries account for a significant part of Denmark's value creation, exports, growth and jobs, and IP rights are an important prerequisite for the success of many Danish companies. A number of international analyses² have shown that IPR-intensive industries and companies have a greater positive effect on growth, exports, wages and job creation than other companies.

This includes the research-intensive companies in the pharmaceutical industry, robot technology and green transition, which protect their technology with patents. This applies to design companies, which protect the design of their jewellery, furniture and applied art,

and this also applies to companies within all types of industries that use trademarks to protect the good reputation of their companies and products against piracy and counterfeiting.

Strong IPR protection and an efficient IPR system increase innovative business competitiveness and enable them to recoup the often large investments they make in research, product development and the establishment of a global reputation.

There is thus evidence that IP rights play a central role in the economy as well as in the competitiveness and economy of companies³.

IP rights and Denmark's economy

Impact of IPR-intensive industries on the Danish economy in relation to other industries.

IPR-intensive industries make a significant impact on the economy⁴, which is due to the fact that the productivity level is significantly higher in the IPR-intensive industries than in other industries (see figure 1).

Example of an IPR-intensive industry's impact on the Danish economy

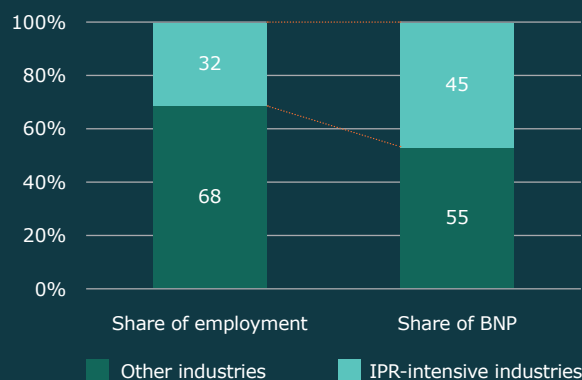


Figure 1 – Impact of IPR-intensive industries on the Danish economy in relation to other industries.

Source: https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IPContributionStudy/IPR-intensive_industries_and_economicin_EU/WEB_IPR_intensive_Report_2019.pdf

The positive economic impact is not least evident in research-intensive industries such as the life science industry⁵, where the patent

system plays a crucial role in the national and international success of Danish companies (see figures 2, 3 and 4).

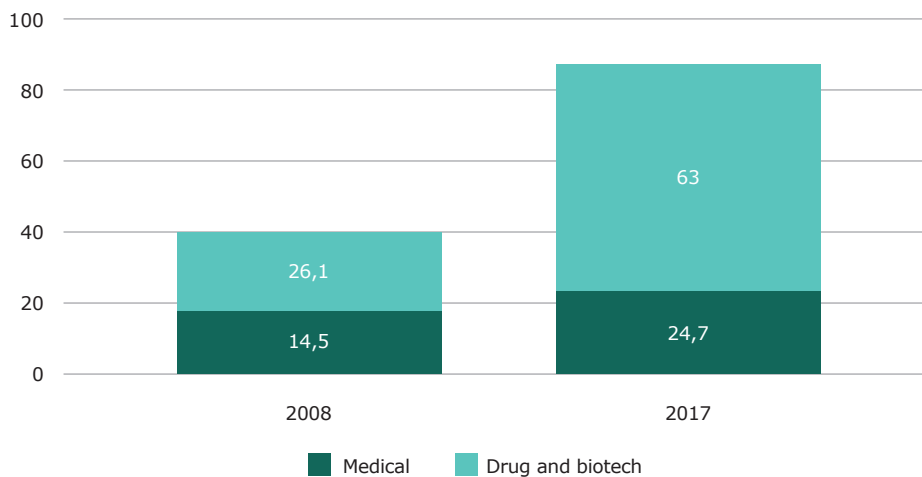
² See https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IPContributionStudy/IPR-intensive_industries_and_economicin_EU/WEB_IPR_intensive_Report_2019.pdf og https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2019_High-growth_firms_and_intellectual_property_rights/2019_High-growth_firms_and_intellectual_property_rights.pdf

³ See https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IPContributionStudy/IPR-intensive_industries_and_economicin_EU/WEB_IPR_intensive_Report_2019.pdf og <https://euipo.europa.eu/ohimportal/documents/11370/80606/Intellectual+property+rights+and+firm+performance+in+Europe>

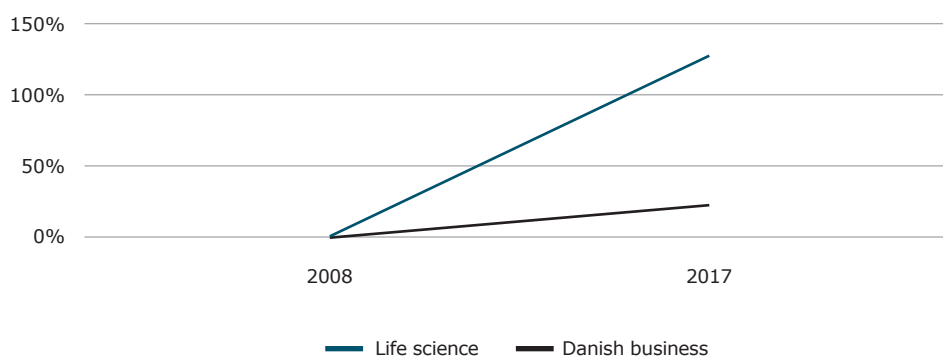
⁴ https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IPContributionStudy/IPR-intensive_industries_and_economicin_EU/WEB_IPR_intensive_Report_2019.pdf

⁵ Cho et al. (2015), *Differential effects of Intellectual property Rights on innovation and economic performance: A cross-industry investigation*, *Science and Public Policy* og <https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/5/445/1527517171/copenhagen-economics-2018-study-on-the-economic-impact-of-spccs-pharmaceutical-incentives-and-rewards-in-europe.pdf>

Value added in Danish life science in DKK billion



Percentage development in value added



Figures 2 and 3 – Value added in Danish life science.

Source: <https://em.dk/media/14135/det-oekonomiske-fodaftryk-af-life-science.pdf>

The life science industry's share of total commodity exports, 2019

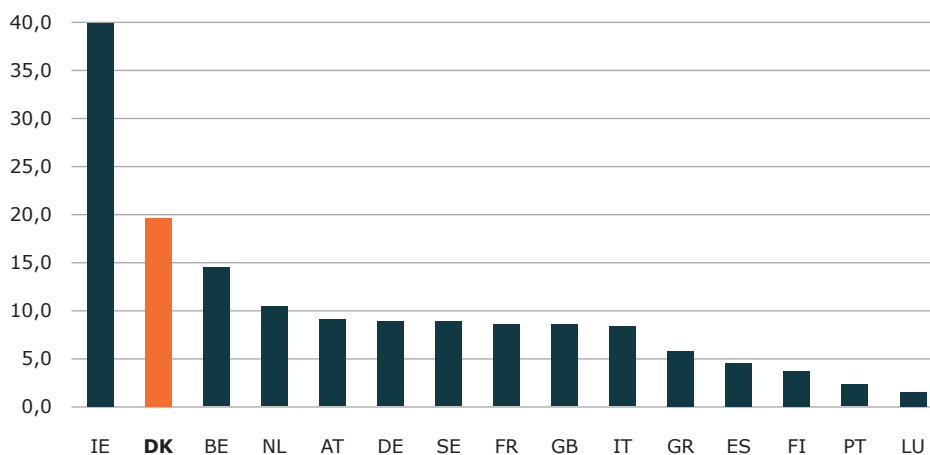


Figure 4 – The life science industry's share of total commodity exports 2019.

Source: <https://em.dk/media/14135/det-oekonomiske-fodaftryk-af-life-science.pdf>

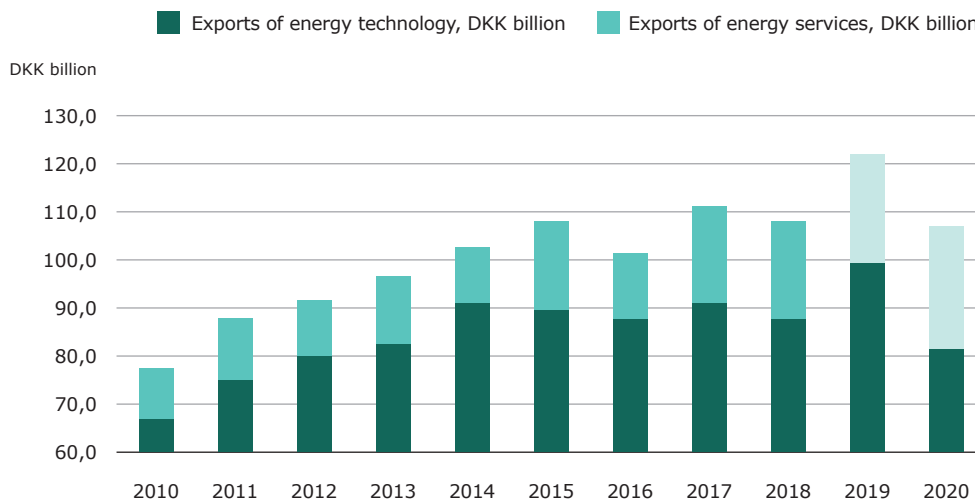


Denmark's green position of strength

The potential and value of green technology is great. Denmark's exports of green technologies have increased by 60 per cent since 2010 and in 2019 reached a value of DKK 122 billion⁶ (see figure 5). At the same time, a report from the EU trademark authority, EUIPO⁷, estimates

that the production of technologies for mitigating climate change will reach a size of EUR 5,385 billion by 2025, and Denmark's export potential will thus grow significantly in the coming years.

Danish export of energy technology and service, 2010-2020



Note: The export is in current prices and is exclusive of drilling platforms. The export of energy service is at company level in 2019, and 2020 is projected on the basis of the development in the industries' total exports and share of service exports. Calculations made by DI, the Danish Energy Agency, Danish Energy, Danish District Heating Association and Wind Denmark

Source: Export of energy technology and service 2020, Danish Energy Agency <https://ens.dk/sites/ens.dk/files/Statistik/eksport-af-energiteknologi-og-service-2020.pdf>

Figure 5 – Danish exports of energy technology and services, 2010-2020

The development of new green technology by Danish companies is crucial for the global fight against climate change and the fulfilment of the government's and the EU's green objectives, including the government's objective of reducing greenhouse gas emissions by 70 per cent in 2030, but also for the competitiveness and export potential of companies. Here, IP rights play an important role so that Danish companies that are at the forefront of technological development can protect their research and innovation from competitors.

In the report "Denmark's green strength position"⁸, the Danish Patent and Trademark

Office examined Danish companies' green patent applications to the European Patent Office (EPO) over the past 10 years. The report shows that Danish companies are leaders in patenting green technology when compared with companies from countries such as USA, China, Germany and Sweden. However, the report also shows that the position of strength is based on a few companies. In Denmark, the 10 largest applicants account for 73 per cent of all the green patent applications, and the two largest account for as much as 43 per cent. SMEs, which make up to 99 per cent of all Danish companies, play, on the other hand, a limited role.

⁶ However, a decrease is seen in 2020, which is partly due to Covid-19, but also that 2019 was a particularly high export year for wind technology, cf. Danish exports of technology and services 2020.

⁷ https://euiipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IPContributionStudy/IPR-intensive_industries_and_economicin_EU/WEB_IPR_intensive_Report_2019.pdf

⁸ https://www.dkpto.dk/media/6641/nypatentogvaremaerkestyrelsen_gron-rapport-2020_a4.pdf

Good starting point but also challenges

Denmark is among the most innovative countries in the world⁹, and the IPR activity of Danish companies is high. As shown in figure 6,

Denmark's IPR activity per million inhabitants is on a par with Sweden, Germany, the Netherlands and USA.

Number of global IPR applications per million inhabitants (2019)

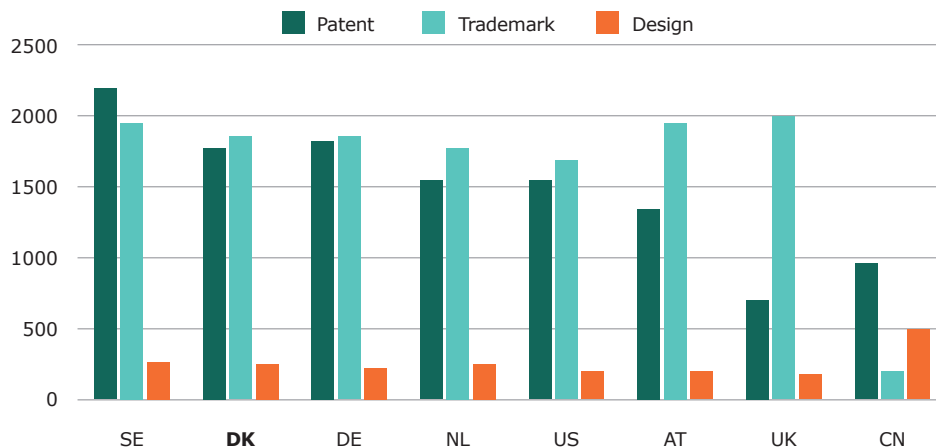
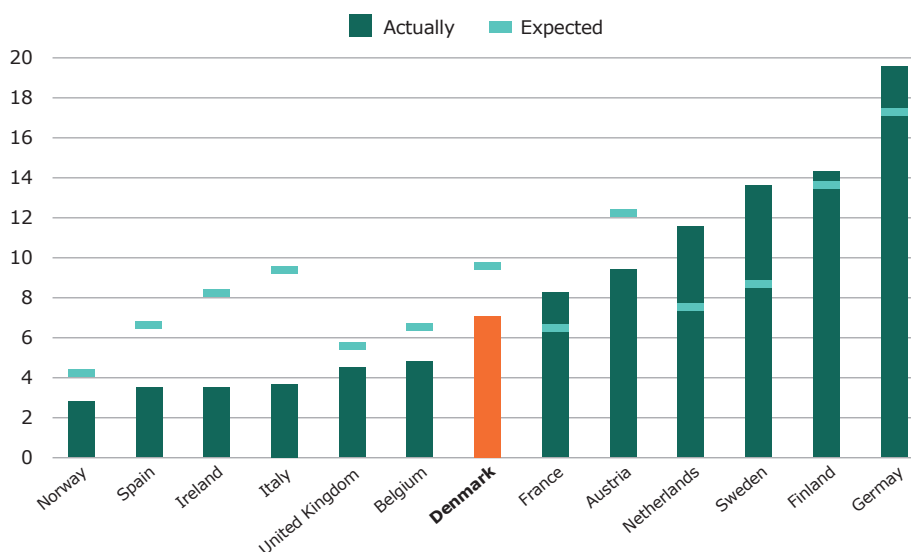


Figure 6 Global IPR applications by category. Source: Figures from the WIPO database and PVS.

However, there also seem to be some challenges for the IPR activity of Danish companies. Despite Denmark's high number of patent applications, a study by Deloitte and Kraka (2019) shows that the number of patent applications is actually lower than would be expected, given the composition of the the Danish industry structure¹⁰.

As shown in figure 7, Denmark has an industry structure that suggests that Denmark should have more patents than is actually the case. The opposite is true in countries such as the Netherlands, Sweden and Germany, where more patents are granted than expected. This indicates that there is potential for innovation in Denmark to be increased, and that Danish companies can to a greater extent make use of IP rights.

Number of patent families per billion euro GVT* adjusted for industries in 2015



Note: The expected number of patent families¹¹ is calculated by taking into account the industry composition of the individual countries in relation to how many patents are on average taken in the individual sub-sectors. The calculations are made for 2015, and are only made for sub-sectors of the industry, as approx. 97 per cent of all patent families are taken in the industry. * GVA is GDP less net taxes.

Figure 7 - Source: https://sgnation.dk/application/files/2216/0146/9644/Small_Great_Nation_innovation.pdf

⁹ See for example Global Innovation Index 2020: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf

¹⁰ Wilken, T. & Egelund-Müller, A., Quantity and quality of Danish ideas elucidated using patent data, Kraka and Deloitte

¹¹ A patent family is a group of one or more patents taken out in different countries to protect the same invention.

At the same time, the Academy of Technical Sciences has prepared a report (ATV & Teknologisk Institut, 2020), which sheds light on Denmark’s patent activity within 11 Danish positions of strength and compares it with patent activity in the world’s 30 leading tech regions¹². The study shows that Denmark is lagging behind the world’s leading tech regions when it comes to patent activity on a number of the major technologies of the future, such as artificial intelligence and robotics. Although innovation and IPR activity is high in Denmark, there is much to suggest that there is potential to increase the competitiveness of Danish companies by having even greater focus on IP rights.

It is also an important point of attention that there is a tremendous growth in the number of applications for IP rights, especially among Chinese companies. Chinese applicants thus accounted for 62 per cent of all the world’s patent families in 2016¹³. A very large number of these patents apply only in China, but the trend is increasingly affecting applications to the United States and Europe. The number of Chinese applications to the European Patent Office (EPO) has thus more than tripled from approx. 3,700 in 2012 to approx. 12,250 in 2019. In comparison, the number of Danish applications to the EPO has increased from approx. 1,600 to 2,400

(approx. 50 per cent) in the same period. The increasing global focus from Chinese companies is also illustrated by the fact that in 2019 China was the country in the world that filed the most patent applications to the International IPR Office, World Intellectual Property Office (WIPO)¹⁴.

Small businesses in particular face barriers for the use of IP rights

Several national and international studies show that especially entrepreneurs and SMEs have a huge untapped potential that can be exploited by increasingly using IP rights. SMEs account for a significant part of Denmark’s economy and make up 99 per cent of Danish companies¹⁵. A recent study from EUIPO (2021) shows that 68 per cent of the large Danish companies use IP rights, which is the second highest figure in the EU, surpassed only by Finland (see figure 8).

In comparison, it is only 10 per cent of Danish SMEs that have IP rights (see figure 9). The proportion of Danish SMEs with IP rights is above the EU average, but is lower than in e.g. Germany, Spain, Austria and France, all of which are countries where large companies also make extensive use of IPR¹⁶. This indicates that there is an untapped potential for the use of IP rights, especially among Danish SMEs.

Proportion of large companies with IP rights

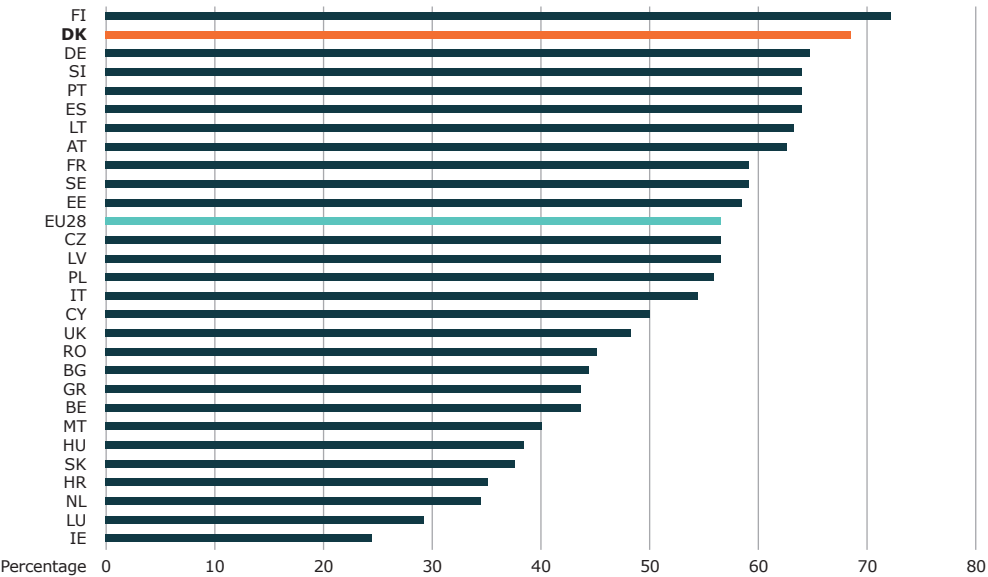


Figure 8: Proportion of large companies with IP rights. Source EUIPO (2021) and PVS.

¹² https://atv.dk/sites/atv.dk/files/media/document/ATV%20analyse%20verdens%20forende%20tech%20regioner_opslag_web.pdf
¹³ https://www.wipo.int/edocs/pubdocs/en/wipo_pub_941_2020.pdf
¹⁴ https://www.wipo.int/pressroom/en/articles/2020/article_0005.html
¹⁵ Statistics Denmark, general figure 2019
¹⁶ EUIPO/PVS data og https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/IPContributionStudy/IPR_firm_performance_in_EU/2021_IP_Rights_and_firm_performance_in_the_EU_en.pdf



Proportion of SMEs with IP rights

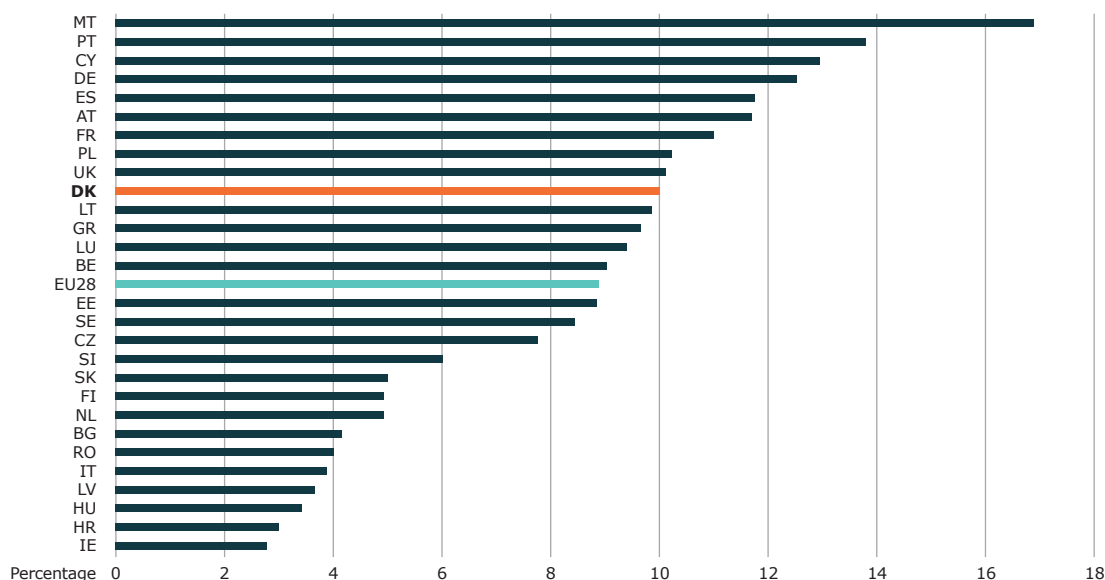


Figure 9: Proportion of SMEs with IP rights. Source EUIPO (2021)

It is important that more Danish SMEs are focussing on IP rights so that the high level of Danish competitiveness and innovation can be maintained, and so that SMEs can take advantage of their opportunities and emerge stronger from the COVID-19 crisis. The Ministry of Industry, Business and Financial Affairs wants the barriers that deter SMEs from making use of IP rights to be reduced. Several studies¹⁷ show that in particular the following barriers prevent SMEs from making use of IP rights:

- Lack of knowledge about the IPR system
- Lack of knowledge about how IP rights can be value-creating
- High costs associated with obtaining and defending IP rights
- The IPR system is complicated and difficult to access

This is particularly problematic, as studies also show that SMEs in particular seem to benefit greatly from the use of IP rights¹⁸. International studies¹⁹ thus show that SMEs with IP rights have a greater chance of becoming both growth companies and high-growth companies than companies that do not have IP rights. In addition, SMEs use of IP rights creates great societal value, as they trade and out-license rights more often than large companies²⁰. Thus, the IP rights are dispersed in society, and the inventions benefit society to a greater extent. There is thus a great and untapped potential in getting Danish entrepreneurs and SMEs to use IP rights more actively.

¹⁷ See The Danish Patent and Trademark Office (2020) and https://euiipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IP_sme_scoreboard_study_2019/IP_sme_scoreboard_study_2019_en.pdf
¹⁸⁺¹⁹ https://euiipo.europa.eu/ohimportal/documents/11370/80606/Intellectual+property+rights+and+firm+performance+in+Europe+and+https://euiipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2019_High-growth_firms_and_intellectual_property_rights/2019_High-growth_firms_and_intellectual_property_rights.pdf
²⁰ Nikzad, R. (2015), *Small and medium-sized enterprises, intellectual property, and public policy*, *Science and public policy* 42, pp.176-187. Se også Rassenfosse, G. (2011), *How SMEs exploit their intellectual property assets: evidence from survey data*

Four focus areas will strengthen the framework for Danish companies' use of IP rights to create earnings, growth and jobs

There is significant growth potential in Denmark's IPR-intensive industries.

However, if the growth potential is to be exploited, it requires that the framework conditions for the use of IP rights, both nationally and internationally, are continuously improved, and that more small businesses and entrepreneurs realise how IP rights can be used to create value in their particular companies.

The Ministry of Industry, Business and Financial Affairs has therefore identified four focus areas that will strengthen the framework for Danish companies to use IP rights to create earnings and growth and secure future jobs:

- 1 Value creation via IP rights**
- 2 A fair, efficient and well-functioning IPR system**
- 3 Internationally commitmentt**
- 4 Knowledge of IP rights**

The focus areas each contain a number of initiatives to strengthen the conditions for Danish companies' use of IP rights.



1

Value creation via IP rights

Global competition and the capacity to innovate²¹ are growing rapidly, and innovation is increasingly the key for companies to create value and earnings. It places stricter demands on companies' development of new and better products, designs and services, and it places increased demands not least on SMEs' ability to actively use IP rights to create value from their research, development and innovation. It is therefore a challenge that many SMEs do not have the knowledge and resources to be able to use IP rights strategically and in a manner that creates value.

International and Danish studies show that companies with IP rights perform better financially than companies that do not make use of IP rights. This is particularly true for SMEs²². An analysis carried out by the Academy of Technical Sciences (ATV) and the Danish Patent and Trademark Office (PVS) shows that patent-active Danish start-ups generally have higher value added, productivity, turnover and exports per business than startups in the rest of the industry, cf. figure 10.

It is therefore paradoxical and problematic that the vast majority of Danish SMEs do not use IP rights.

²¹ https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf

²² <https://euipo.europa.eu/ohimportal/documents/11370/80606/Intellectual+property+rights+and+firm+performance+in+Europe+og> https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2019_High-growth_firms_and_intellectual_property_rights/2019_High-growth_firms_and_intellectual_property_rights.pdf



Significance of patents for startups

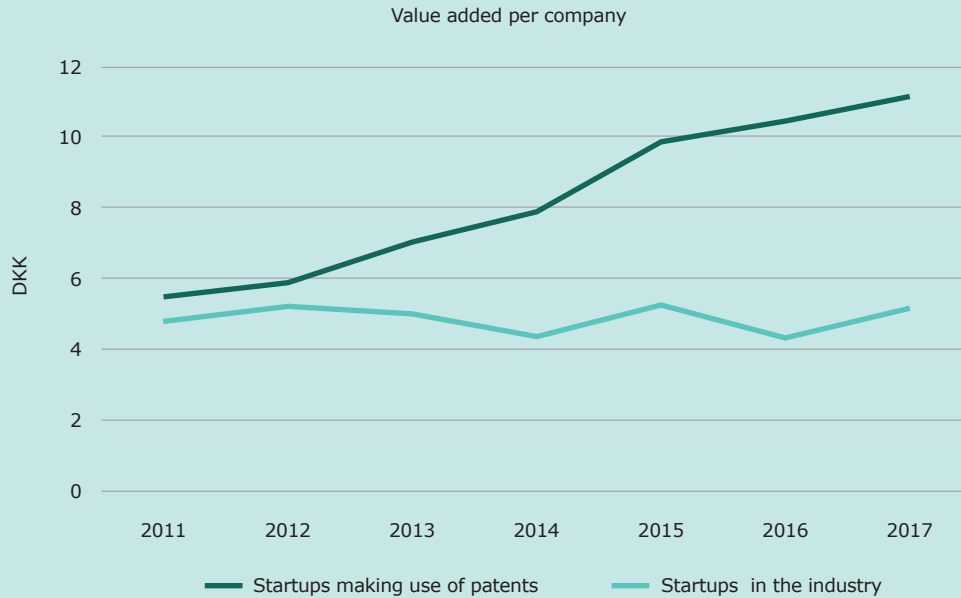


Figure 10: Value added per company. Source: ATV and PVS

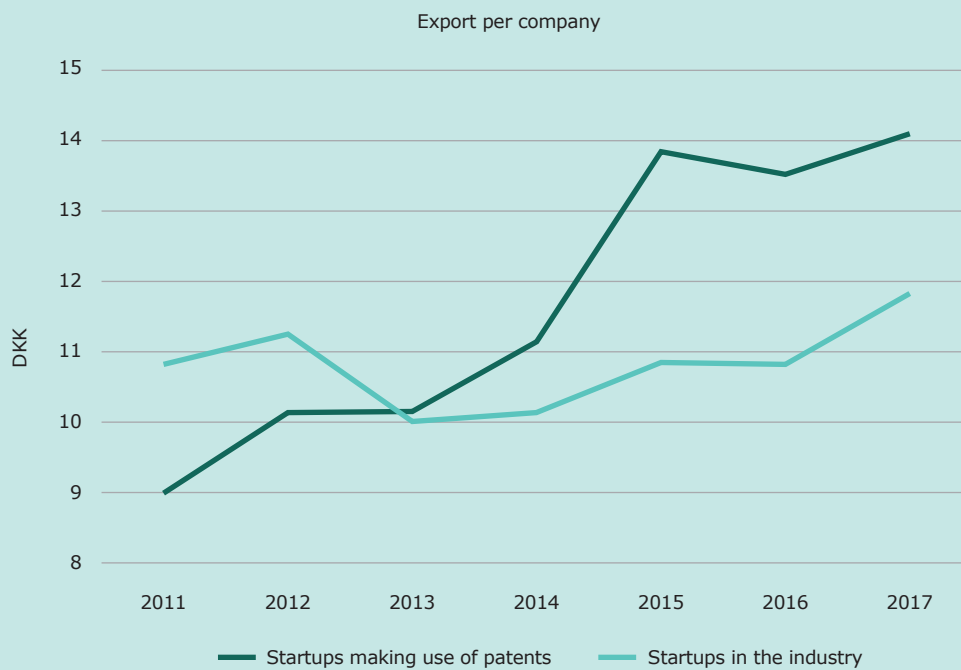


Figure 11: The development in exports per company. Source: ATV and PVS

If Denmark is to continue to be among the world's most innovative countries and make even greater use of the opportunities inherent in technological development, it is necessary

that in particular SMEs become more aware of exploiting the potential of IP rights to create value and earnings based on their innovation.

Small businesses cannot see the value and relevance of IP rights

A significant barrier to small businesses' use of IP rights is that they cannot see how IP rights can be relevant and value-creating for them. A recent study from the Danish Patent and Trademark Office shows that as many as 85 per cent of the companies²³ believe that it is important to have knowledge of IP rights, while only 26 per cent believes that IP rights are relevant to their particular business. At the same time, the majority of small Danish companies with IP rights state that the rights create value in the company (PVS & Moos Bjerre 2020²⁴). It is not necessarily all companies that benefit from IP rights, but studies suggest that the value of IP rights will only be visible to companies when they have rights.

Another significant barrier to SMEs' use of IP rights is found in the costs associated with obtaining the rights. SMEs often have limited resources, and applications for IP rights (especially patents) will often require the use of patent advisers, as well as application fees. This is a challenge for many SMEs.

It is necessary that the barriers for entrepreneurs and SMEs' use of IP rights are broken down so that Denmark can maintain its competitiveness in the long term.

The Ministry of Industry, Business and Financial Affairs will therefore launch initiatives that increase corporate awareness of the value creating opportunities in IP rights and which give them better access to actively use IP rights to create value for the company.

The Ministry of Industry, Business and Financial Affairs will

- ▶ *Set aside DKK 3 million annually in the years 2021-2023 for a patent voucher scheme that will provide small and medium-sized companies with financial support to protect their research and innovation with patents.* The purpose of the scheme is to strengthen technological development in SMEs. The voucher shall provide SMEs with financial support to obtain patents, thereby increasing companies' access to protect their technology and innovation.

- ▶ *Launch a new IP Marketplace to create a better basis for value creation through collaboration and exchange of IP rights.* The platform will increase the interaction between universities, companies and entrepreneurial environments and create a better framework for the purchase, sale and licensing of IP rights, which can strengthen companies' opportunities for increased value creation through active use of IP rights. The platform is developed in collaboration with the Technical University of Denmark and with the involvement of private operators.

- ▶ *Establish two IPR information centres to strengthen companies' access to knowledge about IP rights and the opportunities for commercialisation of their innovation.* In collaboration with the Business Development Centres, the Danish Patent and Trademark Office establishes two IPR information centres in Ikast and in Copenhagen. The centres must provide entrepreneurs, companies and researchers with guidance on IP rights and access to insight into patent data in dialogue with experts from the Danish Patent and Trademark Office. At the same time, the centres must be able to provide access to guidance on the commercialisation of innovation, including in the form of guidance on business potential and the possibilities for access to financial support and risk capital.

- ▶ *Establish a mentoring programme to give small businesses access to constructive dialogue with companies with IPR experience.* The mentor programme will act as a bridge-builder between IPR-experienced and inexperienced companies, where the mentor and mentee are part of a learning partnership. Based on IP rights, constructive dialogue and the exchange of experience is carried out around the work with IP rights and IP rights value creation for the company. The Danish Patent and Trademark Office will, in collaboration with the Business Development Centres, run the programme and disseminate knowledge of the scheme and facilitate the process where the mentor and mentee are matched.

²³ The companies in the survey are from selected industries, where IP rights are considered to have some relevance. I.e. that industries where virtually no companies have IP rights and industries where a very high proportion of companies have IP rights are not included in the study.

²⁴ https://www.dkpto.dk/Media/B/9/PVS_Sammenfatning_Analyse_af_danske_ivaerks%C3%A6ttere_Dec2020_web.pdf



2

A fair, efficient and well-functioning IPR system

The IPR system plays a significant role in innovation and technology development in society. It gives companies an incentive to invest in research and development, and it ensures that the latest knowledge is published and disseminated in society. It is therefore important that continuous work is done to ensure that there is a fair, efficient and well-functioning IPR system in both Denmark and the EU. A system that creates value for both companies and communities, which is accessible to all companies, large and small, and which stops pirates and others who do not comply with the rules of the game.

Denmark has a well-functioning model of society, where the private and public sectors support each other in a fair and efficient way.

For example, the public sector ensures a high level of education, just as Denmark is among the countries that invest the most in public research in per cent of GDP²⁵.

The large public investments create good conditions for private companies, which benefit from an efficient system, a high level of education and high-quality research. At the same time, the IPR system gives companies an incentive to make large investments in research and innovation, which creates growth, jobs and good products and services for the benefit of citizens and society. It is a model that has brought Denmark forward as one of the world's most innovative countries (see figure 12).

Global Innovation Index 2020 rankings

Country/Economy	Score (0-100)	Rank	Income	Rank	Region	Rank	Median
Switzerland	66.08	1	HI	1	EUR	1	████████████████████
Sweden	62.47	2	HI	2	EUR	2	████████████████████
United States of America	60.56	3	HI	3	NAC	1	████████████████████
United Kingdom	59.78	4	HI	4	EUR	3	████████████████████
Netherlands	58.76	5	HI	5	EUR	4	████████████████████
Denmark	57.53	6	HI	6	EUR	5	████████████████████
Finland	57.02	7	HI	7	EUR	6	████████████████████
Singapore	56.61	8	HI	8	SEAO	1	████████████████████
Germany	56.55	9	HI	9	EUR	7	████████████████████
Republic of Korea	56.11	10	HI	10	SEAO	2	████████████████████

Figure 12 - Top 10 overview of the world's most innovative countries
Source: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf

If Denmark is to remain among the world's most innovative countries, there is a need for the framework for business to continue to be developed so that companies and technological development are supported in the best possible way. The IPR system must therefore be fair, efficient and well-functioning, so that companies have a good framework for innovating. This applies both to companies that have IP rights and to companies without IP rights.

For IPR-active companies, the system must be efficient, easily accessible and reasonably priced. Partly to save companies unnecessary costs and administrative hassle, partly to make it easier for smaller companies to extract and enforce IP rights.

In the interests of businesses and consumers without IP rights it must be ensured that the interests of the right holders are continuously balanced in relation to fair market and conditions of competition, like the published patent data as far as possible should be easily accessible to the community.

Similarly, there must be access to effective enforcement of IP rights so small and large companies can defend their rights, and consumers can be protected against counterfeit goods that are hazardous to health.

²⁵ https://read.oecd-ilibrary.org/economics/oecd-economic-surveys-denmark-2019_eco_surveys-dnk-2019-en#page106

The Ministry of Industry, Business and Financial Affairs will

- ▶ *Distribute a fast-track patent scheme targeted at companies in industries with rapid technology development such as tech or gaming industry.* In industries characterised by rapid technological development, the fast grant of patents can be crucial. Especially for entrepreneurs and SMEs, a fast-track patent scheme can minimise the period of legal uncertainty and have a major impact on their ability to attract investors. Among many companies, however, there is a perception that the granting of patents takes too long and thus does not match their needs. The Danish Patent and Trademark Office will therefore distribute a Danish fast-track scheme that can give companies the possibility of having their patent granted in 6-10 months, which is half the current average patent granting period for Danish patents.
- ▶ *Strengthen efforts against piracy.* The demand for counterfeit goods must be reduced, which will benefit both the safety and health of consumers as well as the law-abiding companies and society as a whole. In collaboration with EUIPO, campaigns targeted at Danish consumers will be carried out in 2021 and 2022. The campaigns provide consumers with knowledge about the damaging consequences of buying pirated goods.
- ▶ *Support the objectives of the European Commission's IP Action Plan for a fair and accessible IPR system for the benefit of society as a whole.* Efforts must be made to ensure that the objectives are implemented and implemented in such a way that consideration for the rights owners is balanced in relation to reasonable market, competition and consumer conditions. Specifically, the Ministry of Industry, Business and Financial Affairs will, among other things, work to ensure that new EU legislation in the field of IPR always takes the needs of SMEs into account and ensures fair licensing conditions for patents included in industry standards.
- ▶ *Conduct a service check of the IPR insurance market to make it easier for small businesses to enforce their rights.* For small businesses in particular, costs can be a barrier to enforcing their rights. There is currently a private market for IPR insurance, but the market is limited. A service check is therefore carried out, which shall identify any barriers for the use of IPR insurance by small businesses.

3

International commitment

Denmark is a small, open economy which is completely dependent on being able to export. This is especially true in the technology-intensive industries within the green transition, where IP rights play a crucial role. A strong, global IPR system is therefore in Denmark's interest. In times of crisis – such as during the COVID-19 pandemic – the IPR system has been under pressure. It is therefore important that Denmark engages with the international communities and organisations and supports the international conventions and rules of the game.

Foreign trade has been of great importance for the development of society and has made a significant contribution to economic growth. For example, exports accounted for about 50 per cent of Denmark's GDP and is estimated to have contributed to more than 800,000 jobs²⁶ in 2019. At the same time, the importance of exports for the Danish economy (see figure 13) are rapidly growing.

Exports of goods in DKK billion

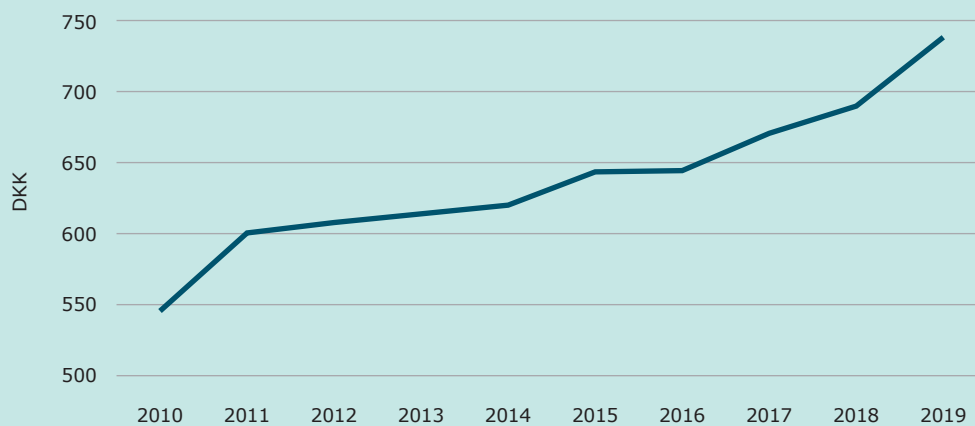


Figure 13 - In constant prices
Source: Statistics Denmark²⁷

IP rights are an important prerequisite for the majority of Denmark's exports

IIPR-intensive industries account for 81 per cent of total EU trade in goods and services²⁸, and export-active Danish SMEs are far more IPR-active than other SMEs (PVS/Advice 2019).

²⁶ https://fm.dk/media/18353/oeconomisk-redegoerelse-december-2020_web.pdf

²⁷ <https://www.statistikbanken.dk/statbank5a/SelectVarVal/Define.asp?MainTable=SITC2R4Y&PLanguage=0&PXSID=0&wsid=cftree>

²⁸ https://euiipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/IPContributionStudy/IPR-intensive_industries_and_economicin_EU/WEB_IPR_intensive_Report_2019.pdf



It is therefore also of great importance to Danish companies that the IPR systems in the EU, globally and not least in the export markets, are well-functioning, uniform and efficient. Well-functioning IPR systems and strong enforcement give companies greater predictability and security that they can protect their technology, products and services in their export markets.

Denmark is actively involved in the continuous development of the IPR systems at both bilateral and multilateral level, including in the UN Agency for IP Rights and in the European IPR organisations. It is of crucial importance to the Danish business community that there is an effective patent system in Europe, where it is cheap, simple and quick to obtain and enforce rights. Denmark was therefore among the first countries to ratify the Agreement on the European Patent Court.

In addition, Denmark has entered into a large number of bilateral government collaborations with countries outside the EU, including most recently in emerging markets such as India, Brazil and Argentina.

The main purpose of these collaborations is to increase the capacity of the partner countries' IPR systems, which streamlines case processing and strengthens the protection and enforcement of the IP rights in these countries for the benefit of both Danish and local companies. These collaborations have a strong focus on green technology and transition to improve the framework conditions for Danish companies. Most recently, as part of the government's green strategic partnership with India, a co-operation plan with India has been launched to strengthen IPR protection and the commercialisation of green technologies. The purpose is to strengthen innovation, job creation and growth in green industries.

In order to maintain and promote an efficient, well-functioning IPR system with strong IP rights for the benefit of Danish companies and Danish exports, it is essential to strengthen Denmark's international commitment. Therefore, the effort is increased in relation to the international work in the IPR area.

The Ministry of Industry, Business and Financial Affairs will

- ▶ *Work for the rapid entry into force of the European Patent Court and the unitary patent.* It is of crucial importance to the Danish business community that there is an effective patent system in Europe, where it is cheap, simple and quick to obtain and enforce its rights. The Ministry of Industry, Business and Financial Affairs will therefore continue to work for the Patent Court and the unitary patent to enter into force as soon as possible.
- ▶ *Strengthen the dissemination and IPR protection of green technologies.* The importance of IPR protection and commercialisation of green technologies is reflected in the green strategic partnership with India. Work is underway on concluding a Patent Prosecution Highway (PPH) agreement with India covering green technologies. The IPR area must also be part of Denmark's strategic partnerships with Japan, Mexico and Indonesia.
- ▶ *Strengthen international enforcement and harmonisation of IP rights.* Projects will be implemented in India, Brazil, Argentina and Serbia in 2021-2022 to strengthen the countries' IPR systems and thereby improve the framework conditions for Danish companies in these countries. The possibilities for establishing new IPR authority collaborations in export markets with special relevance for Danish companies must be identified.
- ▶ *Promote a global system for IPR protection with a good framework for Danish companies' use of IP rights.* The Ministry of Industry, Business and Financial Affairs will strengthen international engagement and the work in the EU as well as in the international IPR organisations to maintain a strong, global IPR system. Specifically, there must be worked to ensure that the EU's forthcoming design reform is designed with a strong Danish impact and ensures a good framework for SMEs.



4

Knowledge of IP rights

IP rights stimulate innovation in society and ensure companies a reasonable return on their investment in research and development. Therefore, it is crucial that companies generally have an understanding of what IP rights are and how rights affect their particular business. The fact is, however, that many SMEs lack very basic knowledge of IP rights.

Denmark is among the countries in the world where it is easiest to start and run a business²⁹. The framework conditions for companies are good, and there is a strong business promotion system, which contributes to strengthening Danish companies' innovation and supports Danish strengths. Despite this, there is still a widespread lack of knowledge among small companies about what IP rights are and their significance for the companies.

A study by the Danish Patent and Trademark Office (PVS & Moos-Bjerre, 2020³⁰) shows that 66 per cent of the small companies in Denmark within five selected industries have little or no knowledge of IP rights.

It is a fundamental problem that many SMEs lack knowledge of IP rights. On the one hand, it prevents companies from using IP rights themselves, and on the other hand, they inadvertently risk violating the rights of other companies. Small businesses and entrepreneurs need to have access to basic knowledge of IP rights at an early stage, so that they are better able to take a position on IP rights on an informed basis.

Initiatives are therefore being initiated to increase the basic knowledge of IP rights in the education system, among key business promotion actors as well as among entrepreneurs and small companies.

The Ministry of Industry, Business and Financial Affairs will

- ▶ *Increase awareness of IP rights among entrepreneurs and small businesses.* A strengthened effort will be initiated in the form of presentations, workshops, etc. aimed at educational institutions, business clusters, startup environments, etc. In addition, the Danish Patent and Trademark Office will in 2021 and 2022 carry out an annual campaign and increase digital media efforts through activities on social media, in newsletters as well as other digital media.
- ▶ *Launch an IPR toolbox to make it easier for SMEs to use IP rights to create value in their companies.* A virtual toolbox is being developed with concrete tools that can facilitate the use of IP rights and clarify the value of companies' use of IP rights.
- ▶ *Develop teaching materials to increase awareness of IP rights among students and future entrepreneurs.* A collaboration is initiated between the Danish Patent and Trademark Office and selected professional colleges on disseminating knowledge of IP rights, so that future entrepreneurs and employees in Danish companies gain increased knowledge of IP rights.
- ▶ *Collaboration with EUIPO on their efforts in the field of education, "Ideas Powered for Schools".* The effort is targeted at the primary school and must provide students with knowledge about IP rights and the harmful consequences of piracy. The purpose is to reduce students' demand for counterfeit goods and give them a basic knowledge of how IP rights can be used to strengthen their ideas and future business.

²⁹ <https://www.doingbusiness.org/en/rankings>

³⁰ https://www.dkpto.dk/Media/B/9/PVS_Sammenfatning_Analyse_af_danske_ivaerks%C3%A6ttere_Dec2020_web.pdf



**MINISTRY OF INDUSTRY, BUSINESS
AND FINANCIAL AFFAIRS**

Ministry of Industry, Business and Financial Affairs

Slotsholmsgade 10-12 1216 Copenhagen K Tel. +45 33 92 33 50