



Intellectual
Property
Office

Innovation and Growth Report

2021/22



IPO | Making life better through IP

Intellectual Property Office is an operating name of the Patent Office



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Adam Williams

Adam Williams, Interim
CEO of the Intellectual
Property Office

Adam Williams, Interim CEO of the Intellectual Property Office

Building and maintaining a strong and modern economy relies on many elements but innovation must always be at its centre. The flow of new ideas coupled with the opportunity to invest and turn them into successful new ventures is essential for growth.

The government's Innovation Strategy makes it clear that innovation should be at the centre of everything it does so we can ensure the UK remains competitive on the world stage.

Harnessing that innovative drive and investing in the technologies of tomorrow will underpin future growth and help secure the government's aim to make the UK a global science superpower.

But coming up with the next big thing or a creative idea is not enough if it is done in isolation. For the UK to be truly competitive in a global and interdependent marketplace, we must be able to protect and maximise these ideas, for the good of our economy and our wider society.

The intellectual property (IP) system enables creators, inventors, and investors to turn their ideas into reality. And the UK consistently has one of the very best IP systems in the world.

This Innovation and Growth Report captures the full scope of the role the Intellectual Property Office (IPO) plays in supporting the UK's innovation ecosystem and, ultimately, its economic growth.

Our story over the last year has been one of continued increases in the volume of our work and the progress on our transformation journey to improve the way we deliver our services to our customers.

We have a clear commitment to these improvements, putting our customers – inventors, creators, businesses – at the very core of our work.

But the IPO has also been innovating for innovators beyond our rights granting services. We want to improve the whole IP environment, making it fit for purpose for both current demands and also the needs of the future.

Some of this has included looking at the impact of emerging and future technologies on IP, beginning to look at changes needed for Standard Essential Patents and starting a review of the Designs framework.

“ The intellectual property (IP) system enables creators, inventors, and investors to turn their ideas into reality. And the UK consistently has one of the very best IP systems in the world. ”

And while we look at the future of the IP ecosystem, we also need to ensure these creations and innovations are sufficiently protected and enforced. One landmark over the last year was the publication of our new strategy to reduce infringement of IP rights and protecting all parts of the economy.

The IPO, working across government and with our partners stakeholders, is focused on delivering the very best support for those that help drive our economy forward.

I hope this report gives confidence that the IPO delivers, through its robust and effective IP system, benefits to millions of UK citizens.

Adam Williams

Interim CEO of the Intellectual Property Office

Overview

Innovation at the heart of Government's Plan for Growth

Innovation and creativity underpin modern lifestyles, businesses and wider society. In today's constantly changing environment we not only take for granted technologies and services that could not be conceived of just a few years ago but have also come to expect and depend on the constant generation of new ideas and products. Innovation turns great ideas into value, prosperity, productivity and wellbeing. It is the mechanism by which we create new opportunities and adapt to challenges.

Innovation is vital for economic growth and productivity, creating more and better-paid jobs¹. Evidence shows that UK firms that innovate, grow at around twice the rate of those that don't. That is why innovation is at the heart of Government's Plan for Growth and so much else we want to achieve, from fighting coronavirus (Covid-19) to achieving net zero and building Global Britain. Boosting innovation in the private sector is an essential part of the UK's future prosperity. We are calling on businesses to invest in innovation, getting British firms to the front of the pack.

The UK starts from a position of strength ranked 4th in the World Intellectual Property Office's Global Innovation Index 2021² and 2nd in the Global Intellectual Property Centre (GIPC) International IP Index 2021³.

The UK continues to build on its Research and Development roadmap⁴ which outlined the UK's journey towards becoming a science superpower. In March 2021, the government published Build Back Better: our plan for growth⁵ which outlined the UK's approach to tackling long-term challenges, delivering growth, and creating high-quality jobs across the UK. The UK Innovation Strategy sets out key actions to unleashing innovation across the country and making the UK a global hub for innovation by 2035. Beneath this overarching objective our action is organised under four pillars: Unleashing Business; People; Institutions & Places and Missions & Technologies.

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- 1 There is a positive relationship between product innovation and revenue productivity and firms that increase innovative sales see increased productivity. Hall, Bronwyn H. (2011). Innovation and productivity. No. w17178. National bureau of economic research; Hodges D. (2010). Investigating the links between innovation and productivity: an analysis of UK firms, BIS, 2010; Criscuolo C. (2009). Innovation and Productivity: Estimating the core model across 18 Countries" in OECD, Innovation in Firms – A Microeconomic Perspective, Paris: OECD (2009).
 - 2 WIPO Global Innovation Index 2021. Access here. [Global Innovation Index 2021: Which are the most innovative countries? \(wipo.int\)](#)
 - 3 GIPC International IP Index. 2022. Access here. [U.S. Chamber 2021 International IP Index | The Global Innovation Policy Center \(theglobalipcenter.com\)](#)
 - 4 UK Research and Development Roadmap, 2020. <https://www.gov.uk/government/publications/uk-research-and-development-roadmap>
 - 5 Build Back Better: our plan for growth, 2021. <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth>

The role of the Intellectual Property Office

The intellectual property regime gives researchers, inventors and creators the confidence to develop something new. IP can reduce the risk by allowing innovators to protect their creations through the interconnected system of rights: trade marks, patents, copyright or designs. Protected by IP rights, inventors, researchers and creators can pour their time, money and knowledge into developing new and better things with the confidence that if successful, they can benefit from the result and make a return on their investment. By creating a temporary monopoly in which innovators are sufficiently rewarded, IP creates an incentive for R&D, leading to innovation.

Of course, innovation happens when knowledge is shared as well as when it is protected. IP rights are in the public domain, promoting the diffusion of ideas and the sharing of knowledge. IP plays an important role in creating an ecosystem that encourages and enables all UK businesses to innovate.

Investment in IP makes a significant contribution to innovation and productivity for the UK economy:

- Intangible assets, of which IP is a part, play an important role in the UK economy. Investment in intangible assets grew by 3.6% to £168.7 billion between 2018 and 2019 (ONS) exceeding total tangible investment, which in 2019 increased by 3.8% to £160.2 billion⁶
- Knowledge assets are a subset of intangible assets. In 2016, firms in the UK market sector invested an estimated £134.3bn in knowledge assets, of which £63.8bn was protected by IP rights. This equates to 6.8% and 3.2% of total GDP, respectively according to ONS data.
- The IPO estimates that industries with an above average use in any IP right accounted for 26.9% (£298.5 billion) of UK non-financial value-added output, 15.5% (£4.5 billion) of total UK employment and 52.1% (£159.7 billion) of goods exported.⁷

⁶ Investment in intangible assets in the UK: 2021, ONS [Investment in intangible assets in the UK by industry](https://www.ons.gov.uk/economy/government-and-business/investment-in-intangible-assets-in-the-uk-by-industry) - Office for National Statistics (ons.gov.uk)

⁷ Use of Intellectual Property rights across UK industries, IPO, 2022, <https://www.gov.uk/government/publications/use-of-intellectual-property-rights-across-uk-industries/use-of-intellectual-property-rights-across-uk-industries>

The work of the Intellectual Property Office

We want to be the best IP office in the world, helping the UK to become the most innovative and creative country in the world. Our strategy is simple, we will do this by;

- Delivering Excellent IP Services;
- Creating a World-Leading IP Environment, and by
- Making the IPO a Brilliant Place to Work.

These three areas of priority are characterised as ‘pillars’ in our strategy.

Delivering IP services for our customers is our priority. To be excellent we know that we must deliver timely, reliable, and quality services, and deliver services that are easy to use, operate and change to meet future needs. We must provide creators and innovators with the tools that allow them to use IP to its full potential and inspire further innovation and creativity. The UK has a world class IP system; however, this is only part of the picture. We want the whole IP environment, from the legal and policy framework to the level of IP knowledge and the ability to protect rights to be world leading and to provide incentives to be creative and innovative. Our strategic approach to achieve this is through developing our legislative and policy framework; increasing IP’s impact through awareness and education; and reducing IP crime and infringement.

To underpin this and to deliver the best possible service, we need well-motivated and happy people with the right skills, tools, competencies and working environment. Therefore, our third strategic pillar is to make the IPO a brilliant place to work, where everyone provides the best services for our customers. We operate as ‘One IPO’ and our culture is inclusive, one where everyone feels supported, included, and valued in all they do.

This report outlines many of the things that we are doing to support innovation and growth in delivering our customer-facing objectives – Delivering Excellent IP Services; and Creating a World-leading IP Environment.

Delivering Excellent IP Services

Delivering excellent IP services for our customers is central to the IPO. The rights granting service we provide for patents, trade marks and designs provides certainty for innovators. By administering IP rights in a timely and reliable way, we provide the confidence that their investment is protected, encouraging the development of innovators, creating jobs and economic growth.

Our customers

We are putting customers at the heart of the IPO; we already deliver excellent customer service; this year we met a challenging benchmark of over 85% (88% in Q4) for customer satisfaction. We have achieved this despite experiencing unprecedented demand across 2021/22.

We recognise there is more that we can do, and we are committed to being customer-focussed, providing creators and innovators with the tools to inspire innovation and creativity. This year we continued to deliver our Customer Strategy – including a focus on the customer relationships that are key to understanding business, inventor, and creator needs. We reviewed our approach to managing our relationships with customers and benchmarked against other IP offices and Government departments to support the development of our new customer relationship framework which will be implemented in 2022/23.

Understanding our customers is crucial to delivering excellent IP services. We updated our quarterly customer satisfaction survey to help us understand the needs of our changing customer base post-Brexit, and commissioned research to understand if timeliness targets for patents services are fit for purpose. We also undertook a review of our website to improve our online guidance and content - ensuring our customers find it easier to access and understand.

To support businesses to recover from the impact of the Covid-19 pandemic, we launched our new financial support scheme for innovative, high-growth potential Small and Medium-Sized Enterprises (SMEs). The aim of this scheme was to foster growth and help the UK economy build back better. We received 317 applications for funding support, exceeding our target of 285, with an estimated value of the scheme of £1.39 million.

We also reached a record number of 568 businesses through our IP Audits scheme, which provides part-funding towards a specialised service carried out by an IP professional to support businesses to identify, manage and protect their IP assets so they can maximise their value.

These funding schemes were delivered through our partners: Innovate UK Edge, Scottish Enterprise, Highlands and Islands Enterprise and the Welsh Government so they can be targeted across UK regions to businesses with ambitions to innovate and grow.

Delivering our core services

In 2020/21 we received a record level of trade mark applications. Overall, we received our highest ever input of 187,000 applications, and an increase of 16.1% on the previous year. Of these, 152,000 were received via the national IPO route, 8% higher than the previous year. Although our input has increased significantly this year, we have reduced the temporary backlog to return to our normal customer service standards which has improved customer satisfaction for our trade mark services. We examined 216,000 domestic and international trade mark applications – an increase of 59% on 2020/21. At the beginning of the year, it took around three months to examine a trade mark, this has now returned to our previous standard of five to 15 days.

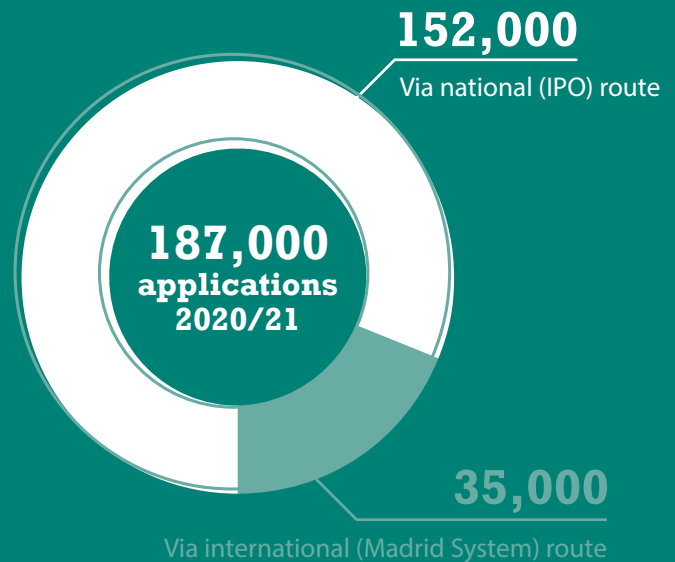
Designs also saw a record year with 71,200 applications, an increase of 71.8% compared to the previous year. This increased growth was predominantly from applications from the international route. As a result of our record levels of input, our time to examine a design application increased to around eight weeks during the first part of the year. However, as a result of examining 77,000 designs applications, which was 133% more than 2020/21, since the start of 2022 we have returned to our normal customer service standards of five -15 days to examine an application. This has been reflected in improved levels of customer satisfaction for our designs service.

In patents, we delivered 96.9% of requests for an accelerated two-month turnaround for search, publication, and examination against a target of 90% and eliminated our backlog of overdue examination requests. This included granting 10,798 patents, the highest number granted in over 30 years.

Trade marks

We received our highest ever input of

187,000
applications



Designs

Designs also saw a record year with

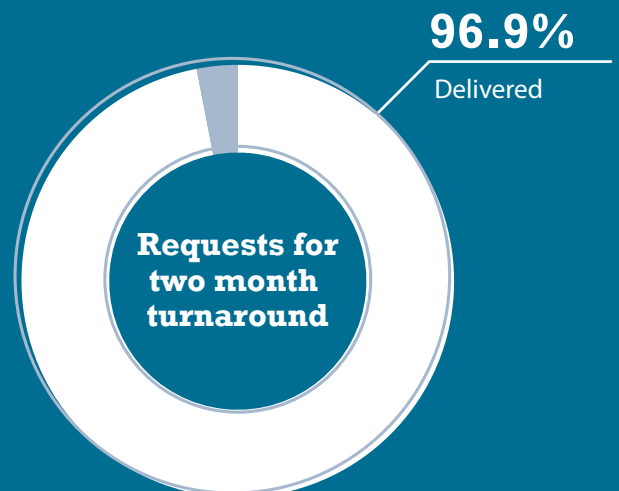
71,200
applications



Patents

We received

19,000
applications



One IPO Transformation Programme

Our ambition is to be the best IP office in the world, but outdated systems are holding us back. Our One IPO Transformation Programme will deliver outstanding customer-focused services, fit for the 21st century. The programme will provide a single, integrated system for all registered IP rights. It will allow creatives, innovators, and businesses to apply for, manage and research all their IP rights in one place. We will unleash the power of our data by building new tools to help businesses search and analyse IP data, making it easier to find and share the UK's brightest ideas. In doing all of this, we will ensure that IP is playing its role in driving economic growth and enabling and accelerating UK innovation.

One IPO Transformation is a strategic priority for IPO, and we have made significant progress over the last year. In the 2020/21 Innovation and Growth report, we reported that the initial 'Mobilisation' or 'getting ready' phase of the programme had been completed. Now we are a year into the delivery phase of the programme, and work has started on our four transformed services:

- Manage IP – all new IPO customer accounts
- Secure IP – a new fully digital application service
- Research IP – new search and analysis tools for IP
- Challenge IP – all new digital service for hearings and tribunals

The programme is continuing to build up pace as we look forward to inviting customers onto the new 'One IPO' patents service in 2023. Over the last year we have:

- Opened the new digital renewals service, that slashes renewal time for IP rights from five days to five minutes, for all customers. The service is the first example of a 'One IPO' service', providing a single, integrated renewal service across all registered IP rights.
- Conducted research and testing with over 100 customers to understand what they need from our new digital services and test and refine our thinking. We've spoken to a wide range of customers, from attorneys through to small business owners, to understand the full range of needs for our new services.
- Developed prototypes for the Manage IP project that is developing new IPO customer accounts. These will allow customers to manage all of their IP and account information in one place. The project has finished its 'design' or 'Alpha' phase, having passed an assessment from the Government Digital Service. We are now starting to build the customer accounts on our new IT systems.

- Completed the 'design' phase of the Secure IP project, which is developing a new, fully digital IP application service. We have built prototypes of the new application service for both customers and colleagues. The service will improve the quality of the applications we receive through new verification and validation features. It will also allow us to process customer information far more quickly and efficiently.
- Completed our initial research to understand what customers need from our Research IP service, which will allow customers to search and analyse UK IP rights.
- Started our initial research for the Challenge IP project, which will introduce a new digital hearings and tribunals service.
- Started developing the Customer Onboarding Strategy, which outlines how we will roll the new patents service out to customers.

Creating a World-Leading IP Environment

IP's impact on innovation and growth depends on more than our rights granting system. The legislative and policy framework needs to support innovation, people need to know what IP rights can do for their business and how to access them, and IP rights need to be enforced or they are worthless. Over the past year we have worked hard to improve the overall IP environment and ensure that it supports the Government's ambition of making the UK the most innovative country in the world.

Encouraging innovation through policy development

Our aim is to produce the optimal IP framework for the UK, one that promotes innovation and creativity both now and, in the future, one that will integrate us with trading partners in a wide variety of jurisdictions as Britain re-asserts its presence as a global trading nation.

The UK has a sophisticated, effective, and widely respected IP regime, which is reflected in and supported by our IP trade policy.

We have successfully signed ambitious trade agreements with Australia and New Zealand in the past twelve months. The IP chapters contain provisions that will support our vibrant economies through adequate, effective, and balanced protection and enforcement of IP rights that encourage innovation and creativity. Amongst other benefits, through these agreements New Zealand has committed to extend the term of copyright and rights in performances and will compensate visual artists for the resale of their works by adopting an artist's resale right and operating it on a reciprocal basis with the UK; whilst Australia have agreed to make all reasonable efforts to accede to the Hague Agreement on Industrial Designs.

The UK is also setting its sights on the next generation of trade deals to secure closer economic ties with the major economies of today and tomorrow. We have already begun negotiations with India, Canada and Mexico, and will shortly begin negotiations with the Gulf Cooperation Council, Switzerland, and Israel. The UK has also set an ambitious timeline for UK accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and we hope to have concluded negotiations by the end of 2022. As we develop our trading relationships with these countries, getting the right outcome for UK inventors, creators, and consumers will be a key focus.

Research at the IPO

- Since 2010 the Economics, Research and Evidence (ERE) team at the Intellectual Property Office (IPO) has published over 100 research reports involving leading experts from the UK and around the world. This strong team of economists, researchers and analysts are working to build data on the role of IP in the UK economy;
- link IP data to business data to better understand incentives and impacts;
- tackle the gaps in empirical evidence, in support of the industrial strategy and better understanding the role of innovation in the economy;
- supporting IPO policy teams, providing economic analysis on key issues;
- develop an economic, evidence-based approach to inform enforcement policy; and
- support IP operations through analysis of patent pendency, and demand forecasting.

Current research projects commissioned by the IPO to help create a sustainable, innovative and world leading IP environment.

Online copyright infringement tracker	→	Longitudinal survey of 5000 representative people 12+ to better understand consumer behaviours around digital content.
Counterfeit goods tracker	→	Longitudinal survey of 5000 representative people 16+ to better understand consumer behaviours around physical goods.
Economics Streaming	→	Further research into issues relating to music streaming.
Trade Secrets	→	How does the SME community use trade secrets?
The Future of IP	→	This will include building the evidence base on IP licensing and future tech; and consideration of the opportunities and challenges of the Metaverse to the IP framework.
IP and Innovation	→	Contribution to the Enterprise Research Centre (ERC) to undertake research on innovation.
The cost of IP crime	→	Development of a methodology (or methodologies) to measure the Economic Impact of IP Crime in the UK - online and offline.
OECD Update of the economic impact of trade in counterfeit goods	→	Last updated in 2019 - financial contribution to the Organisation for Economic Co-operation and Development (OECD).
Evaluation framework for the Counter-Infringement strategy	→	Delivery of an independent evaluation framework for the Counter Infringement Strategy.

Understanding the impact of Artificial Intelligence (AI) on the IP framework

Artificial intelligence (AI) is a transformative technology, which is already revolutionising many areas of our lives. The [Taskforce on Innovation, Growth and Regulatory Reform \(TIGRR\) report](#) urged UK leadership on AI. Unleashing the power of AI is a top priority in the plan to be the most pro-technology government ever. The [National AI Strategy](#) sets out how the government aims to secure the UK's position amongst the global AI superpowers.

To support innovation and growth in AI, we have taken forward the actions identified in the government response to the call for views published on 23 March 2021. These included:

- a. Seeking evidence and views on a range of options on how AI should be dealt with in the patent and copyright systems. The consultation ran from 29 October 2021 to 7 January 2022 and the [Government Response](#) was published on 28 June 2022;
- b. Conducting studies into the role of IP in incentivising investment in AI and on the use of AI for IP enforcement;
- c. International cooperation and partnership working within the UK;
- d. Using sophisticated AI systems to improve our services;
- e. Reviewing patent practice to establish any difference in outcome for AI patent applications filed at the IPO and the European Patent Office (EPO) and working up IPO guidelines on patent exclusion practice for AI inventions to enhance understanding of UK patent exclusion practice and AI inventions; and
- f. Delivery of a programme of university-led seminars from May to November 2021. We partnered with the Alan Turing Institute (through the Office for AI), University College London, Cardiff University and the University of Exeter which are active in the Artificial Intelligence and Machine Learning space. Each of the seminars focussed on different aspects of AI and IP such as whether AI-generated inventions or creations should be protected by patents and copyright respectively, whether patents and copyright adequately protect AI software and if copyright is a barrier to machine learning.

IPO Futures Group

The purpose of the IPO's Futures Group is to increase understanding of the future opportunities and challenges for IP posed by technological developments. To help in developing this understanding, the Futures Group has:

- completed a programme of horizon scanning workshops internally and with stakeholders;
- identified priority themes for further exploration:
 1. The metaverse and related technology – This includes all extended reality technology (augmented, extended, mixed and virtual reality)
 2. The future licensing environment for IP in the context of technological developments – e.g. blockchain, NFTs, emerging business models
 3. How society views IP and the future social value of IP – The way that the IP system can best continue to provide benefits to society as a whole and IPO's evolving role in this.
- established a Foresight Network to embed horizon scanning and futures thinking within the IPO and take work forward under the priority themes.

Green Technologies Patent Landscapes – Case Study

In 2019 the UK was the first major economy to embrace a legal obligation to achieve net zero carbon emissions by 2050. To help achieve this, the UK published a Ten Point Plan for a Green Industrial Revolution in 2020. This was followed by a net zero strategy to keep us on track for UK carbon budgets and net zero by 2050. Timed to coincide with COP 26 in Glasgow in November 2021, the Economics Research and Evidence team at the IPO published some analysis into various technology areas which linked to the Government's Ten-Point Plan for a Green Industrial Revolution.

The technologies covered in this series of mini reports included:

- [offshore wind](#);
- [low-carbon hydrogen](#);
- [nuclear power](#);
- [environmentally friendly transportation](#) (zero emission vehicles, green public transport, jet zero and green ships);
- [heat pumps](#) (greener buildings);
- [carbon capture, usage and storage](#);
- [flood and coastal defence](#) (protecting our natural environment).

The main findings of each of these reports are summarised in the following table:

Title	Key findings
Offshore wind power	<ul style="list-style-type: none"> • Wind power has a 300% increase in worldwide patenting activity in the last 10 years. • Of the top 10 patenting countries, our research shows that the UK is the most specialised country for offshore wind power patenting. This correlates with reported figures showing that the UK is the global leader in offshore wind, with more capacity installed than any other country.
Low-carbon hydrogen	<ul style="list-style-type: none"> • Low-carbon hydrogen patenting activity worldwide has more than doubled over the last decade. • Companies in the automotive industry own a notable share of patents in this field. This suggests that hydrogen-powered vehicles may be an important end-user application of this technology.
Advanced nuclear power	<ul style="list-style-type: none"> • Of the top 10 patenting countries, our research shows that France and the UK are the two most specialised countries for nuclear power patenting. • British companies such as Rolls-Royce and Tokamak Energy are playing a part in the UK patent landscape.
Greener vehicles	<ul style="list-style-type: none"> • Worldwide patenting activity in greener vehicles has increased over 300% in the past 10 years. • The growth rate of patents relating to the Jet Zero concept (net zero aviation) is accelerating. • The patenting activity of large UK companies such as Rolls-Royce and Airbus means that the UK industry is relatively specialised in Jet Zero patenting.
Greener buildings and heat pumps	<ul style="list-style-type: none"> • The patenting of heat pumps has increased more than 200% in the last five years. • A large proportion of greener building patents relate to electronics, and smart home technologies (e.g. smart home heating technologies).
Carbon capture, usage and storage	<ul style="list-style-type: none"> • Carbon capture and storage (CCS) patenting activity worldwide has more than doubled over the last decade. • Carbon capture, usage and storage (CCUS) is an emerging technology and although worldwide patenting activity is increasing, the market is relatively small and specialist.
Flood and coastal defences	<ul style="list-style-type: none"> • Flood and coastal defence patents have seen increases of over 250% in the last 10 years. • Unsurprisingly, most patents relating to flood and coastal defences fall within the construction sector, emphasising that physical structures are a key aspect of these technologies.

The below table highlights which countries are most specialised in which areas, compared across the top 10 patenting countries worldwide.

Relative Specialisation Index ranking	Offshore wind	Low-carbon hydrogen	Nuclear power	Greener vehicles	Greener buildings	Carbon capture, usage and storage	Flood and coastal defences
1	UK	Australia	France	Germany	UK	Australia	South Korea
2	France	Canada	UK	France	France	Canada	Australia
3	South Korea	USA	Canada	UK	Australia	India	Canada
4	India	France	South Korea	USA	Canada	UK	Japan
5	Australia	Germany	Japan	Canada	Germany	South Korea	China
6	China	Japan	USA	India	India	USA	France
7	Germany	UK	China	South Korea	USA	France	UK
8	USA	South Korea	Australia	China	South Korea	China	India
9	Canada	India	India	Australia	China	Japan	USA
10	Japan	China	Germany	Japan	Japan	Germany	Germany

Rankings calculated using the Relative Specialisation Index, and limited to comparing the top 10 patenting countries worldwide

In general, the key take-away points from across this mini-series were:

- The number of patents being filed worldwide in these green technology areas has significantly increased over the past 20 years.
- There is particularly strong growth in the worldwide patenting of wind power, hydrogen power and ‘green’ vehicle technologies, which have seen their annual levels of patenting more than double in the past five years alone.
- For the majority of these green technology areas, China and the US have the largest absolute levels of patenting activity.
- When comparing the top 10 patenting countries worldwide, the UK has a Revealed Technological Advantage and a degree of specialism in the patenting of wind power, nuclear power, greener buildings, greener vehicles and CCUS (carbon capture, usage and storage).
- The UK is particularly specialised in offshore wind power and greener buildings and is ranked 1st of the top 10 patenting countries worldwide in these technology areas.
- This analysis ties in with further ongoing work being carried out by the IPO’s green technologies working group, and is only the beginning, with further analysis on green technologies planned in this financial year.
- Future work in this area includes analysis other IP rights such as trade marks, investigating the use of the IPO’s Green Channel, and some broader analysis of green technology patent trends.

The IPO's International Activity

The IPO's objective is to ensure the UK's relationship with the international IP environment maximises the benefits of innovation and creativity for the UK economy and society. In support of this objective, we have continued to take forward a busy programme of international engagement work supported by our network of attachés based in key UK export markets around the world.

We have also launched the [International IP Service](#), providing UK businesses planning to trade overseas with easy to access information on managing IP internationally. The service offers both guidance on using an [international process](#) to file in several countries at once, as well as country specific guides. The service also extends to an international module in the IPO's IP Masterclass and providing in person guidance and support at business events across the country. Activity under the service will continue to expand in 2022/23.

Brazil

We have established an influential stakeholder group of government representatives from countries including the US, France and Japan. The group will focus on collaborative work with Brazil relating to innovation and growth matters and has recently spearheaded (in conjunction with our Science and Innovation Network colleagues) the inaugural International Congress on AI.

We have also concluded the FCDO-funded Prosperity Fund project "A Brazil Intellectual Property Office for the 21st Century", a collaborative project with the Brazilian IP Office (INPI) which will have a significant and long-lasting impact on the Brazilian IP framework. The project has delivered improvements to the quality and waiting times of rights granting services for both domestic and overseas applicants (trade mark processing times reduced from 49 to 17 months; patent processing times reduced from 10 years to five years and INPI moved from 26 to sixth position in the 2022 World Trade Mark Review rankings). This will create a much more fertile, accessible trading environment for UK exporters and will attract innovative business to the region.

United States

We are working closely with existing HMG resources in the US to provide support for innovative UK exporters and ensuring that they are equipped with the necessary knowledge to exploit this huge market. We have also forged strong links with the technology, pharmaceutical and creative sectors to understand the issues and barriers that UK creators and rights holders face in protecting their IP in the US. Working with the US administration to address these issues and barriers has allowed the UK to make its views heard in the US on key issues.

We are now looking to partner with the US to take forward work in countries where we have similar issues, creating a better export environment which will benefit innovative companies in priority markets across the globe.



India

As the UK and India grow closer on trade, negotiations for a free trade agreement have commenced, with the India attaché involved in supporting the complex IP chapter work. The work of the attaché was also highlighted in an All-Party Parliamentary Group report commending her efforts to harmonise the UK and India's creative industries into a united voice on India's copyright legislation. The report further commended the global attaché network as an invaluable support to UK business, especially in innovative industries.



Middle East

The IPO expanded its network to the Gulf Cooperation Council (GCC) with the successful recruitment of an IP attaché in October 2021. The IPO engagement in the region has developed at pace, building strategic partnerships with UK businesses and key local IP stakeholders. A work plan has been agreed with the Saudi Authority for IP (SAIP) to set out mutually beneficial objectives under the bilateral IP MoU, with a focus on enforcement, brand protection and improved remuneration for copyrighted works all of which would significantly enhance the prospects of UK businesses in the country. IP is an important element of the UK-GCC free trade agreement and ongoing mapping of the individual GCC member states' respective IP regimes will help inform negotiations.

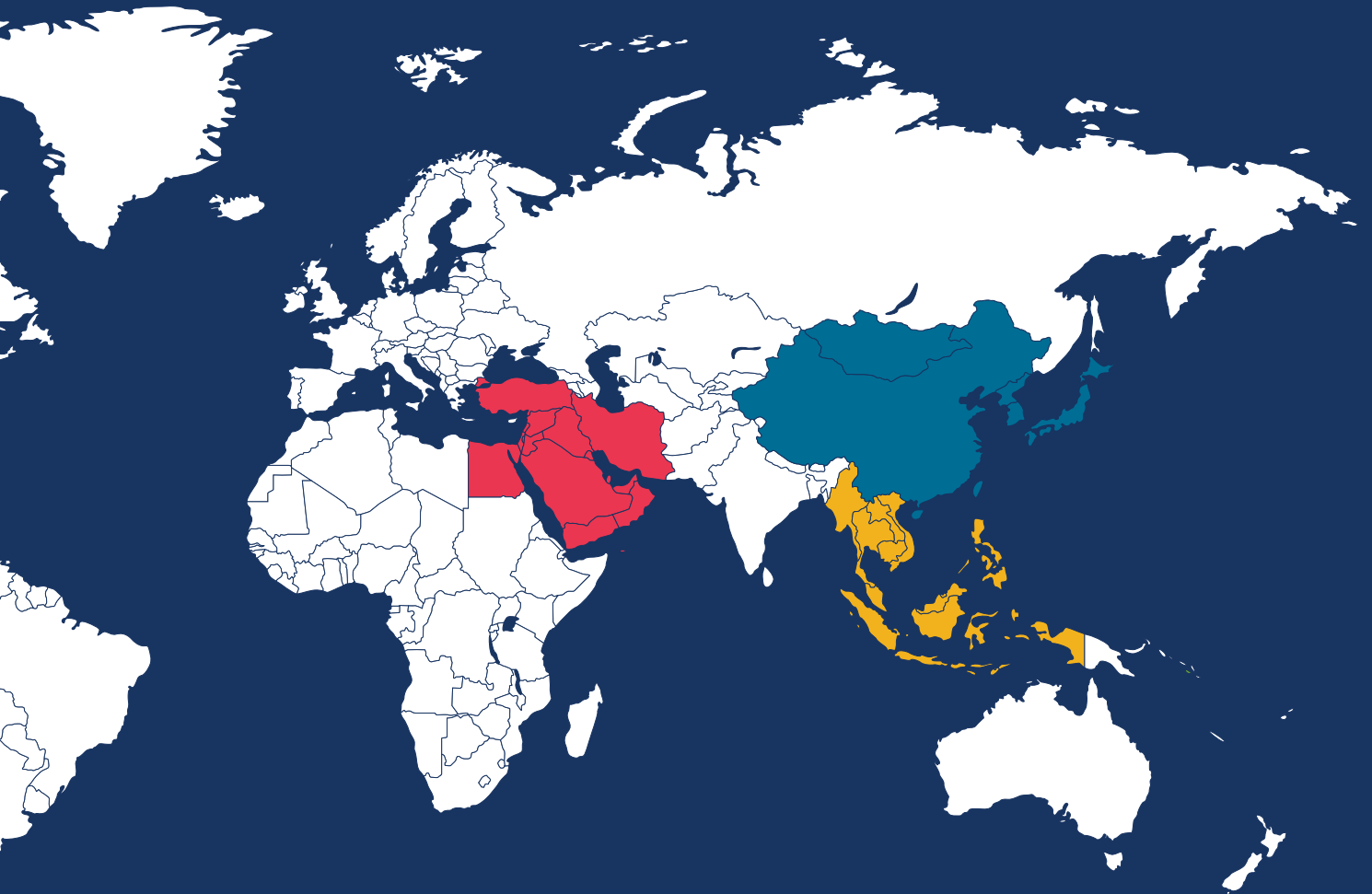
Southeast Asia

We successfully concluded several projects across SE Asia that will make it easier for UK businesses to protect their innovation and creative work in the region. These projects included supporting Indonesia and Vietnam with revising their IP laws to improve the IP environment and increasing enforcement coordination to give UK businesses more confidence that their IP rights will be enforced. We continued to build our online resources for UK businesses with advice on e-commerce and green tech, and held the third UK-ASEAN innovation seminar with the region's IP offices to promote UK best practice on how to implement IP policies that promote innovation and economic growth.



East Asia

2021 marked the 25th anniversary of formal co-operation between the UK and China on IP rights. Through meetings by both the IPO CEO and Director for Copyright and Enforcement, we pursued improvements to China's patent and copyright framework which would make it easier for UK businesses to protect and enforce their innovations and creative works. We also held a judicial exchange, a trade mark technical exchange, and a patent examiner exchange, to showcase UK best practice. Through our business support work we directly helped businesses on IP issues worth £1 million, despite significant impacts on outreach from Covid-19 in China. More broadly, the IPO CEO met with the head of the Japan Patent Office; and we held working level discussions with South Korea on the implications of AI and future technology for IP.





World Intellectual Property Organisation (WIPO)

As the UN specialised agency responsible for the international registration of IP rights and the primary multilateral forum for setting the global IP framework, WIPO continues to be of great importance to UK innovators. Recognising this, during the pandemic we were at the forefront of engaging with WIPO to ensure continuity of its services. To allow sharing of best practice in the global IP environment, we also requested that WIPO led on global IP coordination by creating a tracker setting out actions that domestic offices were taking during the pandemic. Alongside heightened visibility following a year of WIPO Group B (industrialised countries) leadership, UK influence in WIPO could be seen at the General Assemblies (GAs) via the External Audit function for WIPO being carried out by our National Audit Office; and the GAs being overseen by a British national on the WIPO senior management team.

G7

We showcased IPO leadership in the multilateral space, convening the first ever dedicated meeting of G7 IP leaders. A keynote speech by the WIPO DG, made clear the links between IP, innovation and the need for economic growth post-pandemic. IPO CEO led discussions on IP intersections with public health and future technologies, and best practice on IP enforcement. Following the event, a Joint Statement was published in which G7 members committed to work collaboratively going forward on the topics discussed, and at WIPO.

Europe

Relationships with key European partners have continued to be productive, with ongoing engagement with our counterparts in multiple EU and non-EU countries. These engagements have set the foundations for the IPO to enhance our cooperation across leading countries in support of IPO interests, including sharing our innovation and growth agenda. We have affirmed our close relationship with Switzerland in signing a Declaration of Intent in February 2022. The agreement formalises our association and sets out a range of commitments from both Offices to collaborate on areas of mutual interest, including innovation.

The IPO Board also approved the recruitment of a European IP attaché to be based in Brussels. The attaché, once in post in late 2022, will be an important part of the IPO's approach to Europe, helping to ensure the continued growth of these relationships and support UK businesses operating in this key market.

Increasing IP's impact through awareness and education

Supporting businesses

Despite the ongoing Covid-19 restrictions, we engaged directly with over 45,000 businesses and business advisors last year. We returned to face-to-face events during 2021 whilst also continuing to run our established webinar programme for businesses and our virtual IP Masterclass. Feedback on our activities identified that, on average, 77% of businesses we engage with are now making informed decisions about their IP and 94% of business advisors have increased confidence in providing key IP messages.

During the year, we continued to provide support to the national network of Business & IP Centres (BIPCs) in partnership with the British Library. The BIPCs provide local access to combined IP and business guidance and support for entrepreneurs and businesses. We worked with the network to develop the IP knowledge and skills of BIPC advisors through our IP Masterclass and our digital tools and resources. We also continued to support the Growth Hub (GH) network, so IP guidance and support can be integrated into their business support services.

This year we also developed a framework detailing how IP links to the stages of a business' lifecycle, so they have the right information, guidance and support at the right time and stage of their journey. The Business Lifecycle Framework supports businesses to identify, manage and protect their IP to maximise the value of their IP assets. The framework breaks the business lifecycle down into stages using questions to help businesses identify what they need to know and how to find guidance and support. It helps businesses make informed decisions about strategic use of their IP assets so they can be confident when investing time, energy and money in innovation.

IP in Finance

We developed our IP in Finance strategy to build on our work to help innovative, IP-intensive businesses use their IP as an asset to gain access to the right type of funding at the right time so they can grow. Our strategy supports wider government strategies, including the UK Innovation Strategy, and involves working with partner organisations to enhance our understanding of the IP knowledge and skills that investors, lenders and businesses need to unlock finance for IP-intensive businesses.

We have deepened our knowledge of other countries' approaches to IP-backed financing to help us understand what works. We want to improve the transparency of IP in financial statements, as this is one of the first places that funding providers will look for financial information about a business. To further this aim of deeper appreciation of intellectual assets, during the last year we made representation to several international finance bodies. We responded to the consultation of the International Accounting Standards Board (IASB) on their agenda for the next five years. We also commented on the Management Commentary Exposure Draft issued by International Financial Reporting Standards Council (IFRS) and responded to the call for views from the UK Financial Reporting Council to inform their periodic review of the UK reporting standard.

IPO Places Strategy

During the last year, we have developed our new IPO Places Strategy to support the ambition to level up all areas of the UK. The strategy sets out how we will move to a places-focused approach across all our activities over the next three years and will support the aims of the recently published Levelling Up White paper.

As part of our Places Strategy, we have continued to develop our regional policy posts, with three advisors based in the West Midlands, Greater Manchester and West of England. Our advisors work with our regional partners, including Local Enterprise Partnerships, Growth Hubs and Combined Authorities.

We have expanded the remit of the posts to support knowledge exchange and provide guidance on international markets. We have developed new strategies to reflect our expanded work, along with a revised framework to set out clear objectives for the roles.

Our advisors have continued to build capability and capacity within their regions and worked successfully with local policy makers to influence the inclusion of IP in regional support. This includes funding and support programmes for SMEs with ambitions to innovate and grow and targeted IP training to empower local advisors. These activities have encouraged behavioural change in decision makers, local advisors and innovators through raising the importance of IP as an asset within the innovation journey.

During next year, we will continue to embed our Places Strategy across the whole of the IPO. As part of this, we will also agree the next steps for our regional policy advisor network to ensure we are supporting all areas of the UK.

Working with government

We want colleagues in Government to understand the role of IP in innovation. To achieve this, we have implemented a Cross-Government IP Capability Strategy to ensure civil and crown servants recognise and reflect IP and IP rights in their policy making, identify and effectively manage IP, and make informed decisions involving IP.

We have reviewed our government IP learning resources and they are being developed to meet the needs of civil service professionals to improve IP capability across government. A tiered IP training offer is being developed that will increase awareness and understanding of the IP system so our government colleagues understand the value of IP and are able to use and manage it effectively to support innovation and growth.

We delivered pilot sessions for our IP Masterclass for Government to 270 colleagues across government from 20 government departments. From these, we identified additional content to include IP in innovation, commercialisation, valuation, contracts, and licensing. We will continue to develop our training package during the next financial year.

We have also worked with BEIS to develop guidance for knowledge asset management in government. We delivered bespoke IP training sessions to professionals across government to support effective management of government knowledge assets.

Supporting researchers

We have expanded our flagship IP for Research education programme to a wider research audience so that more researchers can identify and strategically manage their IP to maximise its social and economic impact. This supports the objectives outlined in the UK Research and Development Roadmap, UK Innovation Strategy and Build Back Better plan for growth. We want researchers to understand the role of IP as a valuable asset in realising research impact through collaboration, commercialisation, and career development. Feedback indicates that 90% of respondents would recommend the programme.

Feedback from this programme has informed the further development of our policy for the research sector. We have refined the toolkit, training materials and supporting resources to enable institutions to deliver their own IP for Research events, ensure that the programme is fit for purpose and enable scale up. Next year, we aim to expand the reach and impact of the programme, with a focus on advanced modules, scaling and sustainability.

IP Education

We want to equip the next generation of innovators, entrepreneurs, and creatives with the knowledge to identify, protect, use, and respect IP to support the UK's ambition to be the most innovative and creative country in the world. Learning about IP will help prepare young people for employment, develop responsible digital citizens, support levelling up across the UK, and inspire the next generation of innovators and entrepreneurs.

We have developed and published an Intellectual Property Education Framework that sets out the IP knowledge needed by young people from primary to higher education. The Framework has been designed to support teachers and educators to introduce IP concepts into lessons.

We will continue to support the delivery of the IP Education Framework through the provision of free online resources for teachers and educators.

Encouraging innovation through IP enforcement

IP rights have limited value in themselves if they cannot be appropriately enforced. The IPO works across a range of areas to support the effective enforcement of IP rights and we believe this provides part of the necessary foundation which allows innovation to flourish.

Counter-Infringement Strategy

A key moment came in February of this year when our new Counter-Infringement Strategy was published. As the culmination of several years' work gathering evidence, building proposals and engaging with experts in the field, the strategy marks a step change for the ambition of the IPO in this area. The new strategy focusses on getting the right structures and processes in place to allow us to work more effectively on IP infringement at home and internationally, making UK IP rights, and those owned by UK businesses overseas the best protected in the world.

We know that infringement of intellectual property rights creates economic and social harm: it disincentivises creativity and innovation, unfairly denies revenue to individuals and businesses, and it poses a danger to the public through unsafe products and services. Serious and organised IP crime is intrinsically linked to other types of serious crime. We can't address everything at once, which is why the foundation of our new Counter-Infringement strategy relies on developing a better strategic understanding of the threat, to allow intelligence-led, harm-focussed prioritisation of our activities aligned with wider government objectives on crime, the economy and public safety.

Intelligence and analysis

To support the focus on intelligence development over the past year, the IPO's intelligence resource has undergone significant transformation. The team has expanded to include additional intelligence analysts, financial investigators and intelligence officers. The team are now conducting a review of their processes, procedures and access to intelligence systems, tools and databases. Over the next year, our intelligence analysts will develop a consolidated strategic threat and harm intelligence assessment of IP crime that will ensure that we effectively support our partners across Law Enforcement, Industry and Government to tackle serious IP crime and infringement.

Law enforcement coordination

In addition to the expanded intelligence team, we have recruited specialist liaison posts within trading standards regional teams, additional support posts for UK Border Force and several additional posts internally to the team to support delivery of the strategy, support for the revised IP Crime Group, delivery of a new cross-government policy group and to bolster our resources working on trade. While this expansion has been underway, the team has also maintained a busy output of business-as-usual activities including policy development, outreach, capacity building and providing operational support for our partners in tackling IP crime.

Operational support

Operation Monty was a National Markets Group operation targeting the sale of counterfeit goods on Instagram, with the aim of removing online sellers. The IPO provided intelligence and research support to the multi-agency operation, and over 400 on-line traders were reported to Instagram for removal and take-down.

We have completed the first phase of our project looking at the use of self-storage businesses to facilitate IP crime. Work on self-regulation in partnership with the Self-Storage Association has been encouraging and we continue to work closely with National Trading Standards to support enforcement action.

In September of last year the IPO also supported a multi-agency investigation led by the North West Police Intellectual Property Crime Unit into the use of self-storage facilities by OCGs in the Manchester area. Approximately 55 storage units were searched, and over 200 tonnes of counterfeit goods were recovered, with an estimated value of over £500 million. A significant amount of cash, and the manufacturing equipment required to make counterfeit perfume, including white spirit and screen-wash, were also seized. The intelligence picture that allowed this successful multi-agency activity to take place was initially developed by IPO's intelligence team, and highlights the importance of maintaining a detailed, specialist understanding of the threat posed by international serious and organised IP crime gangs.

International engagement and coordination

Over the last year the team has established UK multi-agency steering groups engaging with a range of overseas law enforcement projects including European initiatives with particular relevance to UK interests. As a result, representatives from the IPO funded Police Intellectual Property Crime Unit (PIPCU), Police Service Northern Ireland (PSNI), National Trading Standards, Office Product Safety and Standards, National Food Crime Unit, Border Force, Her Majesty's Revenue and Customs, Medicines and Healthcare Products Regulatory Agency and the IPO themselves have direct involvement with these important international projects. As Covid-19 restrictions have eased, PIPCU, PSNI and IPO have attended in person. Work on third party threats to the IP system under project Ultro has also continued looking at false invoices, misuse of the IPO logo and suspect trade mark registrations.

Enforcement policy, trade behaviour change

On the policy side, work on our ambition to make infringing activity socially unacceptable continues. As part of a wide range of research to support enforcement policy development, this year we have commissioned behavioural change research which will inform our plan to run a pilot awareness campaign in summer 2022. The pilot campaign will focus on the beauty and hygiene sectors, but it is anticipated that the insights gained will support future activity across a wide range of sectors.

The team has also continued its training and capacity building work, with a key element of this being a project with the Chartered Trading Standards Institute to develop a comprehensive training package for trading standards officers. We hope that this work will soon lead to the reintroduction of an intellectual property module to the formal qualifications on offer for trading standards officers, embedding expertise in IP at the very heart of this key enforcement agency.

In addition, the team has contributed extensively to the negotiation of new trade agreements over the year and continued to work on legacy issues arising from EU exit, including the high profile topic of exhaustion of IP rights. This latter piece of work has been the subject of several national media campaigns and has required extensive work with officials and Ministers across a range of departments to consider ways forward.

2021/22

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