
Safeguarding intellectual property to enhance corporate value

30 September 2020



Foreword

As the value of intellectual property continues to grow, organisations need to prioritise actions to protect their IP portfolios

Intellectual property is often referred to as 'the currency of the knowledge economy'. In terms of currency, the value of IP has appreciated consistently in recent years. Revenues earned from leasing IP have increased almost 700% between 2012 to 2018 with an expectancy to continue its rise in the decade ahead. Many of the world's most valuable businesses have sizeable IP portfolios and many of the market challengers or disruptors are trying to bring new ideas to the market that require legal protection.

COVID-19 has amplified some of these trends, with businesses racing to open up digital presence and still trying to adjust to the full consequences of remote working. One of the implications is that well tested processes that are fit for purpose in a face to face environment, are suddenly being used in a virtual setting, exposing organisations' IP to a plethora of new risks.

According to some studies, only about half of corporate leaders understand the value and importance of IP and are actively involved in strategic planning related to IP. This means that IP decisions are often delegated to lower level legal staff who understand IP but don't necessarily connect with broader strategic implications. One of the consequences is that many businesses fail to maximise the value of their IP portfolios.

IP risks pose a threat not only to intellectual capital itself but also to the overall financial success of the organisation. Interestingly, exposure to these risks can happen at various steps in the IP lifecycle, including the early stage of research and development (e.g. disclosing a critical piece of information about your invention to a 3rd party before submitting a patent application), the process of safeguarding your trade secrets (e.g. neglecting some aspects of cyber security), IP registration process (e.g. by registering a patent that is too narrow and allowing a competitor to innovate around it), and monetisation (e.g. third parties exploiting loopholes in licensing agreements).

Consequently, there will be a number of risk prevention / mitigation actions that organisations can take to keep their IP safe. This report provides a range of examples on how 'IP savvy' organisations safeguard their IP portfolios. Some of these risks can be managed through a range of internal measures or by using insurance through a captive solution. In some cases, there are opportunities to use the help of the external insurance market or alternative solutions provided by investors. As the sophistication of external IP insurance solutions grows, the future IP safeguarding possibilities are likely to increase.

Contents

-
- 04 Executive summary**
 - 10 The growing importance of intellectual property**
 - 17 Determining the value of your intellectual property**
 - 21 How to manage the value of intellectual property**
 - 28 How to mitigate the risk of things going wrong**
 - 37 Moving forwards**

Executive Summary



The growing importance of intellectual property

Intellectual property (IP) is a sub-set of intangible assets distinguished by the fact these are created by law. Typically, it is the product of original thought and creativity with recognition or financial benefit as a result of it. There are multiple types of IP, including copyrights, patents, trade marks, industrial designs, geographical indications, and trade secrets.

The importance of IP has been steadily rising across the world for the past few decades. The number of patent applications has almost tripled in the last 20 years while the number of trademark grants has increased five times. China has been a major hotspot of intellectual property growth – a trend that is also likely to continue in the next decade.

Where IP has historically been seen as a legal device, it is now seen as invaluable strategic tool that can help businesses gain competitive advantage and provide a strong foothold in a market. Protection of IP assets is, therefore, becoming more important than ever before.



Copyrights / Database rights

Creations of mind, e.g. literary works, films, music, databases, architecture, etc.



Patents

An exclusive right granted for an invention.



Trade marks

A word or a combination of words, letters, and numerals.



Industrial designs

The ornamental or aesthetic aspect of an article.



Geographical indications

Having qualities or a reputation due to geographical origin.

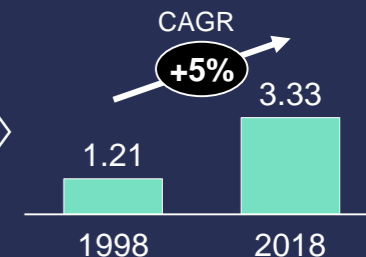


Trade secrets

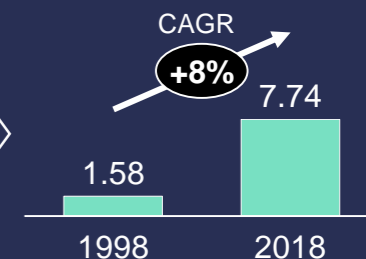
IP rights on confidential information which may be sold or licensed.

Compound annual growth rate of global IP

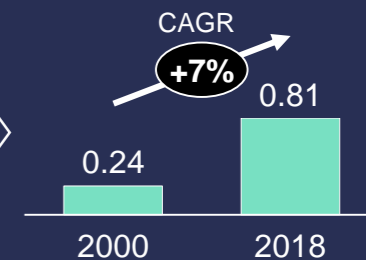
Global patent applications (millions)



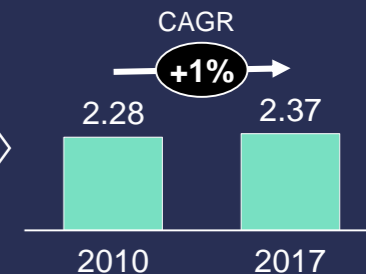
Global trade-mark grants (millions)



Global industrial design grants (millions)



OECD R&D spend (% of GDP)



Managing the value of intellectual property

There are two types of IP risk – internal and external; both can result in a significant damage to the competitive position of the business and a sizeable monetary loss.

The internal IP risks typically arise from insufficient intellectual property protection due to lack of awareness of similar inventions in existence or from making mistakes in the protection process. Meanwhile, the external IP risks typically arise from a 3rd party attempting to invalidate someone's IP or claiming infringement of their IP.

Both types of risk are very common and a large number of risk managers and risk owners across industries are unaware of the full exposure to these risks and how their actions (or inaction) could lead to new risks. For example, a 2015 survey by the UK Intellectual Property Office showed that 79% of businesses are not aware that telling people about an invention before applying for a patent could undermine a patent application.



Internal IP risks

Lack of exclusivity / loss of revenue

- **Lack of proper intellectual property rights protection** of core products resulting in increased counterfeiting
- **Missed deadlines** (renewal, payments, oppositions)
- **Insufficient freedom-to-operate analysis**
- **Early disclosure** of inventions by employees
- **Flaws in drafting or application limiting enforceability** of intellectual property rights



External IP risks

Infringement of 3rd party intellectual property rights / cost for defence or licensing

- **Becoming a defendant** in IP litigation
- **Forced licensing** under unfavourable conditions
- **Liability for IP risks and problems of contractual partners**, such as suppliers
- **Invalidation attempts of intellectual property rights** by competitors or non-practicing entities (NPEs) such as “patent trolls”
- **Own invalidation attempts** against 3rd party intellectual property rights

Example of Insufficient freedom-to-operate analysis



- A motor company wanted to launch a motorcycle with a new engine, **for which it had several patents.**
- The company **did not conduct a freedom-to-operate study considering that the more limited ‘positive patentability’ study was sufficient** to proceed with the launch.
- It was later **sued by a competitor** as one of its patents made a broad claim which was found to infringe an essential component of the competitor's engine. The court instructed the company to halt its launch and motorcycle manufacturing, resulting in significant losses.

Example of forced licensing



- A patent troll **acquired several patents essential to the 802.11 Wi-Fi standard**, and then claimed that every business (or individual) with a router containing a Wi-Fi chip was infringing its intellectual property.
- It followed this by sending thousands of letters targeting hotels and cafes that provide Wi-Fi for customers, **demanding them to pay a license fee of \$2,500 per location.**
- A major router manufacturer then stepped in to defend its customers and whilst it **ultimately settled with the patent troll** for only 3.2 cents a unit, this still meant a payment of \$2.7m plus \$13m in legal fees.

How to mitigate the risk of things going wrong

IP risks pose a threat not only to intellectual capital but also to the overall financial success of the organisation. It is more important than ever to have an effective risk mitigation strategy that covers the whole life lifecycle of IP. Effective IP management, from the creation and development stage, through to the protection and monetisation stage, will help ensure that all IP related internal risks are adequately covered. This will also mean that any unexpected external risks would cause less disruption.

Each step in the IP lifecycle will bring a new set of risks that will have to be mitigated. Depending on whether an organisation decides to register its IP or keep it as trade secrets, there will be different internal and external events that could cause financial damage. Consequently, there will be a number of risk prevention / mitigation actions that organisations can take to keep their IP safe.



Create and develop

There are multiple ways the most 'IP savvy' organisations protect themselves during this critical stage of IP lifecycle. The best practice includes being disciplined around signing NDAs with employees and business partners, clearly articulating ownership rights to the background and foreground IP, safeguarding access to information (including cyber and physical security), and carrying out a thorough search of existing ideas.



Keep it secret

Before IP has been legally protected and is still kept in the form of a trade secret, it is subject to a range of key risks that can cause major commercial implications. The most 'IP savvy' organisations will make sure they follow the guidance of the domestic legislation in each IP jurisdiction (the trade secret rules tend to differ), take good care of cyber and physical security of their IP portfolio, and provide regular training to their staff in handling confidential information.



Register

Some of the obvious protection activities will include selecting the right type of IP and deciding how broad or narrow the registration should be, as well as thinking through the geographical scope of the IP rights and smart orchestration of the registration process (e.g. patent delay strategies). Before registering your trade mark or patents in new markets, it is wise to conduct searches to determine whether by expanding into those markets you will infringe a 3rd party's IP.



Monetise

There are multiple ways organisations can try to protect themselves during monetisation, including forming their own 'rainy day' funds, creating patent thickets, and carefully monitoring licensing agreements, including conducting compliance audits. Having a clear market reputation as someone that protects its IP will also help deter potential infringers. Furthermore, performance monitoring of your IP portfolio will help you allocate your resources to protecting the assets that matter the most.

Future insurance opportunities

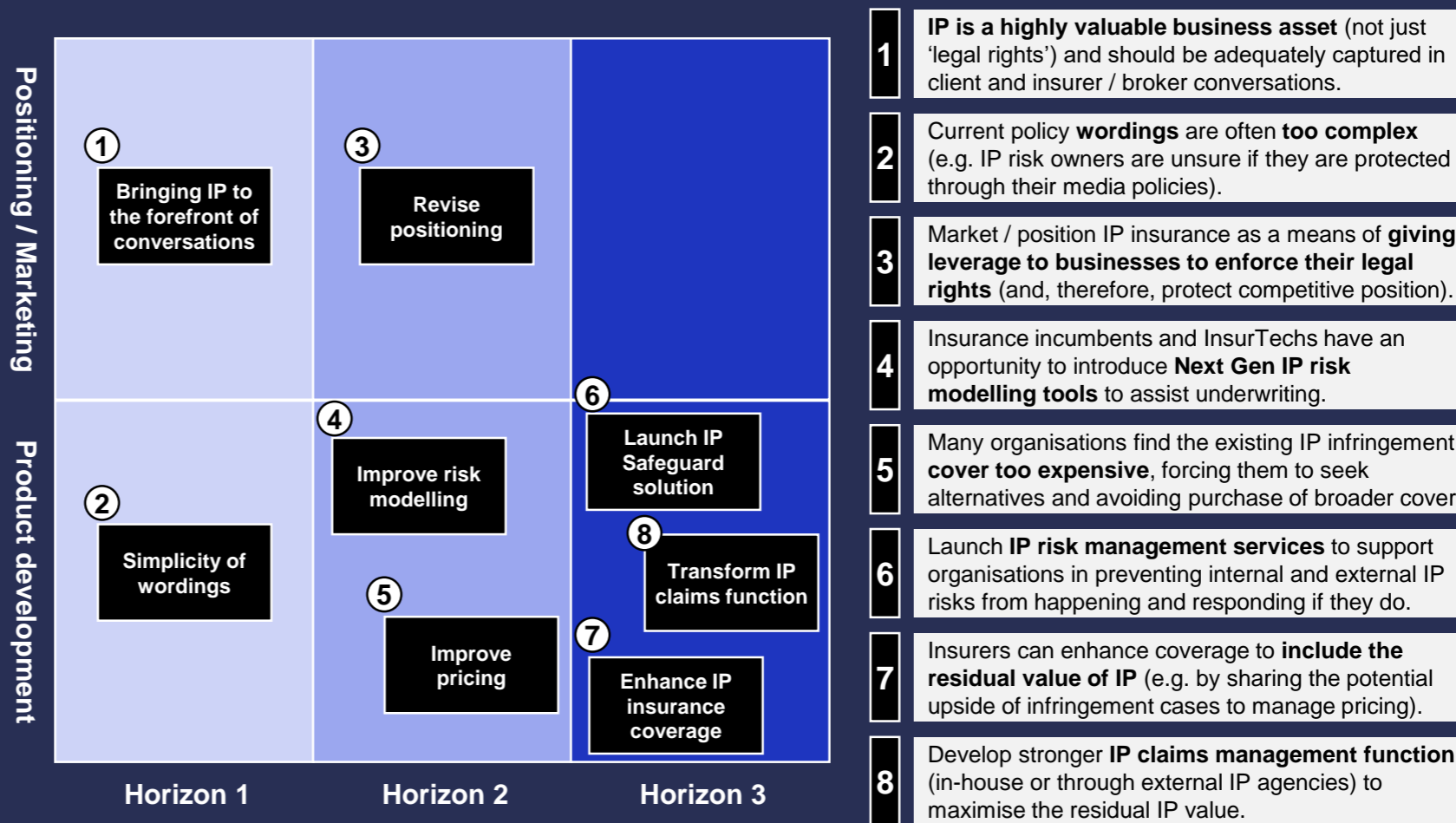
One way organisations can protect themselves is IP insurance. Insurance solutions can offer extra protection in case of an unexpected turn of events related to internal intellectual property management. There is a range of offensive and defensive insurance products that already exist, particularly when it comes to supporting businesses with legal costs.

Despite these products, there is significant scope for the insurance industry to do more to support organisations in protecting their IP portfolios. In the short term (horizon 1), insurers need to think about ways of simplifying policy wordings and bringing IP to the forefront of insurance conversations to improve awareness.

In horizon 2, insurers need to make a step change in IP risk modelling and pricing and start rethinking the positioning of IP insurance. The recognition that IP is a strategic business asset (and not just “legal rights”) and that insurance can provide a true leverage in the case of infringement could play a major role in increasing the use of IP insurance.

Finally, in horizon 3, there could be opportunities for insurers to expand product coverage and offer IP related risk prevention and response services.

There are multiple attractive opportunities for insurers to drive better awareness of the power of the existing IP insurance products, while working diligently to continue enhancing risk modelling and pricing, offering better risk coverage and broader preventative insurance solutions. This would provide tremendous value for risk owners beyond their traditional risk management strategies.



Moving forward – four actions risk owners could take

There are four actions risk owners can take to minimise the risk to their IP portfolios.

Depending on the size of your organisation, you will also want to think about how IP risk management fits into your broader insurance strategy. Some of these risks can be managed through a range of preventative measures or by using internal insurance through a captive solution. In some cases, there are opportunities to use the help of the external insurance market or alternative solutions provided by investors.

Your risk management function can (and should) play a major role in safeguarding your IP assets. It is important that your risk managers are represented at board level discussions about the value generation from your IP portfolio and other intangible assets.

The sophistication of the IP insurance coverage available is likely to increase in the coming years, so don't forget to raise this topic with your insurance broker and / or insurer.


1

Mitigate your risks during creation & development process of IP

- Make sure your idea does not already exist
- Do not disclose your idea to 3rd parties prematurely
- Make sure NDAs are in place with employees and third parties
- Make sure the future ownership is well articulated, especially if you are collaborating with 3rd parties


2

Keep your IP secret before its registered and in the public domain

- Think carefully if the best strategy is to register your IP or keep it as a trade secret; this will depend on the risk and your business potential
- Bolster IP's cyber and physical security
- Improve governance (e.g. make sure your employees and business partners are properly briefed and trained)
- Prevent reverse engineering


3

Make sure you maximise the value of your IP through registration

- Select the right type of protection (different types of IP protection will give you different rights)
- Be smart about registering broad or narrow patents (risk of invalidation vs risk of competitors innovating around)
- Actively manage your IP applications (e.g. does it make sense to delay the judgement?)
- Think carefully about geographical scope


4

Enforce your rights during exploitation / monetisation of your IP

- Plan IP strategy to maximise value of your IP portfolio
- Create a fund (or use insurance) to cover the potential cost of litigation
- Be smart about using patent thickets / clusters to enhance your protection
- Keep monitoring your licensing agreements to reduce any value leakage
- Build a reputation as 'enforcer' of your rights

1 The growing
importance of
intellectual
property



What is intellectual property?

Intellectual property is a type of intangible assets that can take multiple different forms, including copyrights, patents, trade marks, etc.

An **intangible asset** is an identifiable non-monetary asset without physical substance. The identifiable criterion is met when the intangible asset is separable (that is, when it can be sold, transferred or licensed), or where it arises from contractual or other legal rights (IAS 38).

Intellectual property (IP) is a sub-set of intangible assets distinguished by the fact these are created by law. Typically, it is the product of original thought and creativity with recognition or financial benefit as a result of it.

There are multiple **types of IP**, including copyrights, patents, trade marks, industrial designs, geographical indications, and trade secrets.

Copyrights / Database rights

- Literary works such as novels, poems, plays, reference works, newspaper articles.
- Computer programs, databases.
- Films, musical compositions, and choreography.
- Artistic works such as paintings, drawings, photographs, and sculpture.
- Architecture.
- Advertisements, maps, and technical drawings.

Patents

- An exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.

Trade marks

- A word or a combination of words, letters, and numerals.
- Trade marks may also consist of drawings, symbols, three-dimensional features such as the shape and packaging of goods, non-visible signs such as sounds or fragrances, or colour shades used as distinguishing features.

Industrial designs

- In a legal sense, an industrial design constitutes the ornamental or aesthetic aspect of an article.
- An industrial design may consist of three dimensional features, such as the shape of an article, or two dimensional features, such as patterns, lines or colour.

Geographical indications

- A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- Geographical indications are typically used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.

Trade secrets

- Trade secrets are IP rights on confidential information which may be sold or licensed.
- To qualify as a trade secret, the information must be commercially valuable because it is secret, be known only to a limited group of persons, and be subject to reasonable steps taken by the rightful holder.

The growing importance of patents

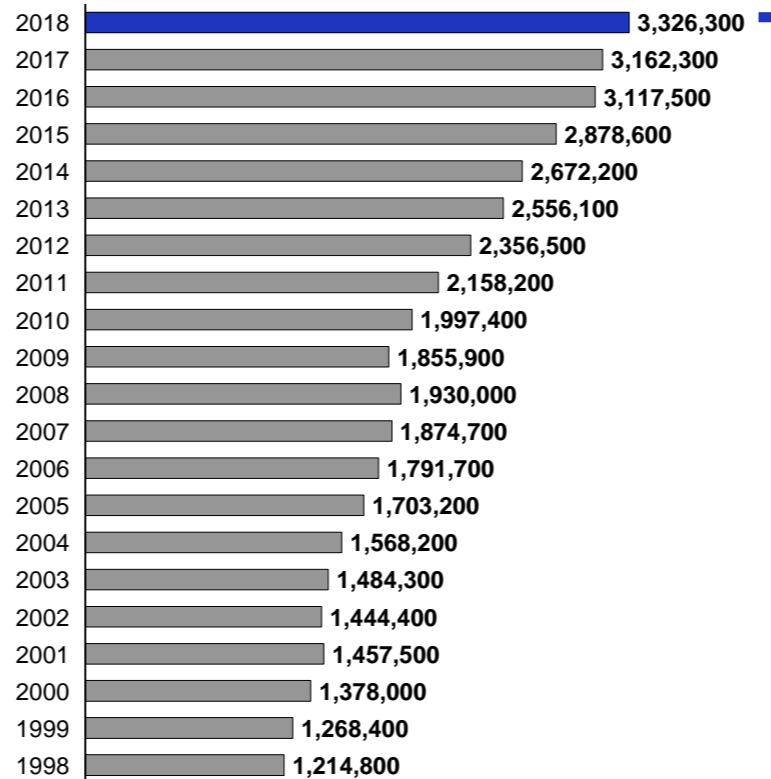
The global importance of patents has increased significantly over the last 30 years, showing particularly strong growth in Asia

The number of patent applications has shown significant growth over the last 20 years worldwide, increasing steadily almost every year, with a slight dip in 2009 due to the global financial crisis.

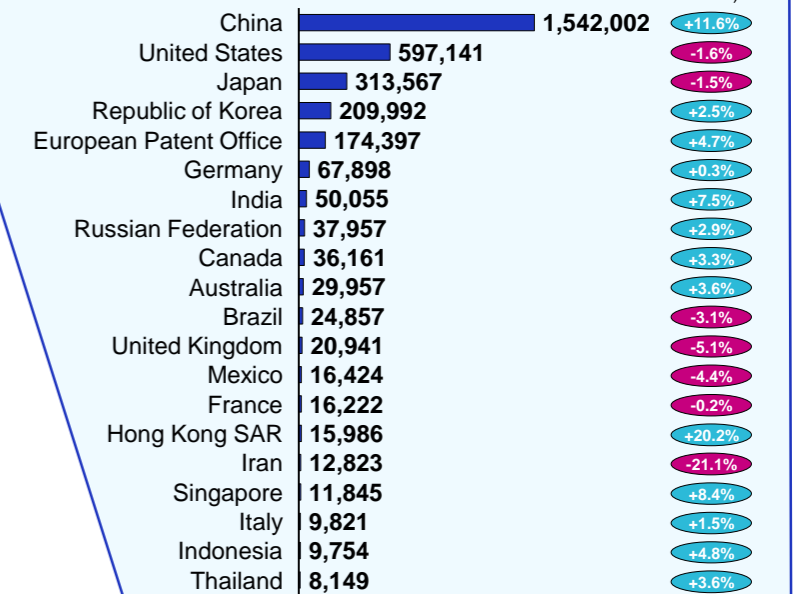
The patent activity has been particularly noteworthy in parts of Asia, with China registering almost three times more patents than its closest 'follower' the U.S. This trend is unlikely to change soon with China registering a 12% increase in 2018 while the U.S. patent registration plateaued.

In Europe, the patent applications have grown from c. 75,000 in 1998 to around 170,000 in 2018. However, this growth has not been the same in all European countries with the UK being one of the examples where the patent application rate has plateaued and has even slightly declined over the last 20 years. While patent applications have stalled, the UK has shown a significant growth in trade mark applications.

Number of patent applications worldwide from 1990 to 2018



Ranking of the 20 countries with the most patent applications 2018



Patents across industries

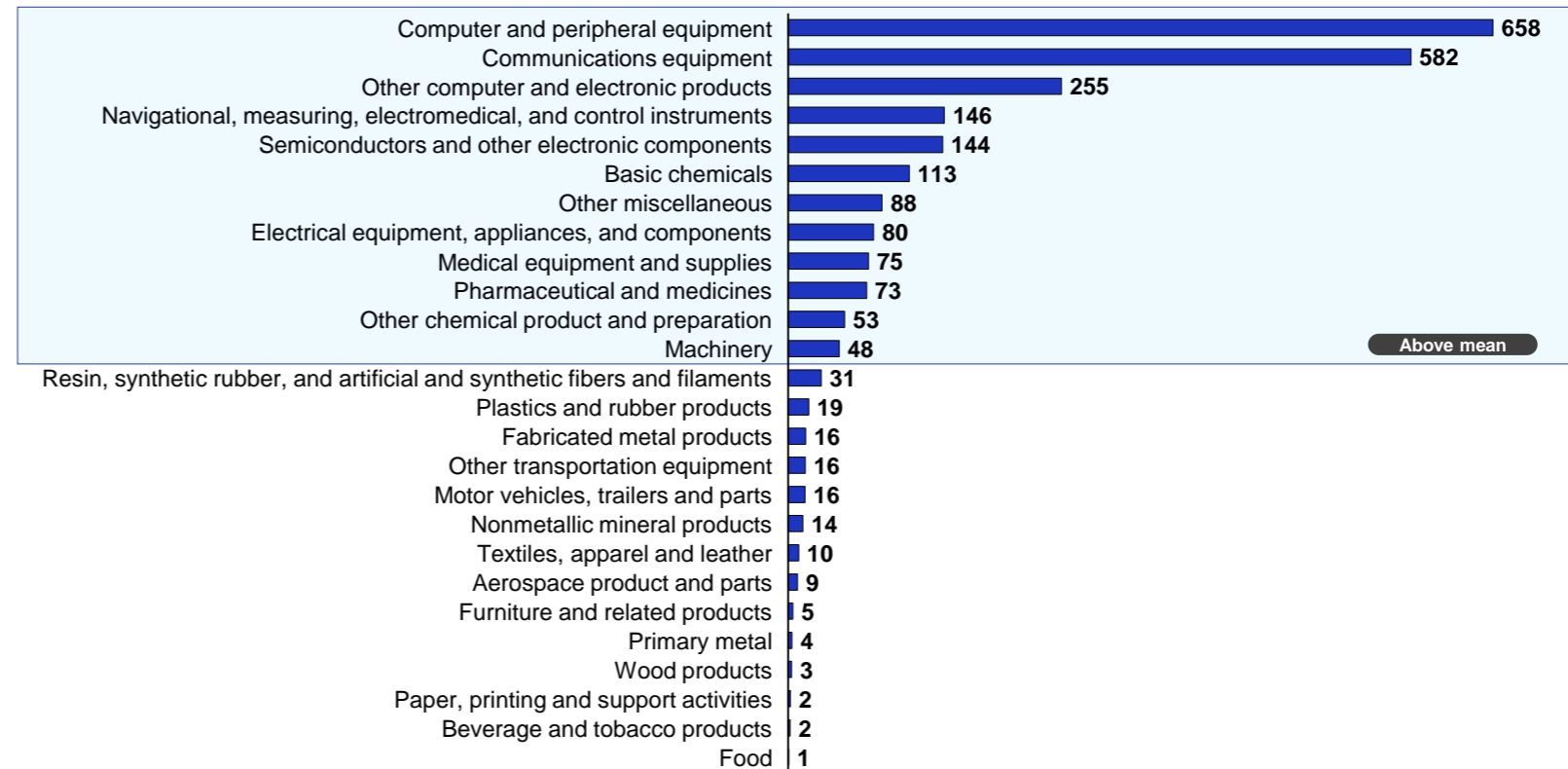
The use of patents has been particularly widespread in computer equipment and communications

In the U.S., manufacturing has historically been the most active sector for patent registration, particularly the high tech driven manufacturing sub-sectors, including computers, communications equipment, and electronics.

In Europe, only 3 out of 20 most patent-intensive industries are related to services. The other 17 are sub-categories of manufacturing, including communication equipment as the most patent intensive type of manufacturing.

In the UK, technology driven industries held the largest share of patent grants in 2017 (e.g. civil engineering held 11.5% of all grants). Meanwhile, some emerging industries like 'nano-technology' showed the greatest annual increase in patent registrations (17.1%).

Patent Intensity in the U.S. (patents / 1000 jobs in the given industry), 2009 - 2013



The growing importance of trade marks

The number of trade marks has followed a very similar growth pattern, again dominated by trade mark grants in China

The number of trade mark registrations has increased significantly worldwide over the last 20 years, showing a similar pattern to patents. The main driver of this increase has again been China, registering more trade marks than the rest of the world together and still showing phenomenal growth rates (almost 30% from 2017 to 2018).

A large number of trade mark intensive industries tend to be in manufacturing, with manufacturing sectors being significantly more prominent than the sectors related to services (12 of 20 most trade mark intensive industries are in manufacturing). However, this trend is less obvious compared to patents.

As indicated previously in the report, trademark registration has been very strong in the UK (both, from domestic as well as international businesses). This might be driven by multiple reasons, including increasing awareness of the potential benefits trade marks can provide to the strength of the brand, as well as the general ease of obtaining trade marks. This number is expected to increase further as the legislation changes post Brexit.



Source: Statista; EUIPO, IPR-intensive industries and economic performance in the European Union, 2019; KPMG analysis

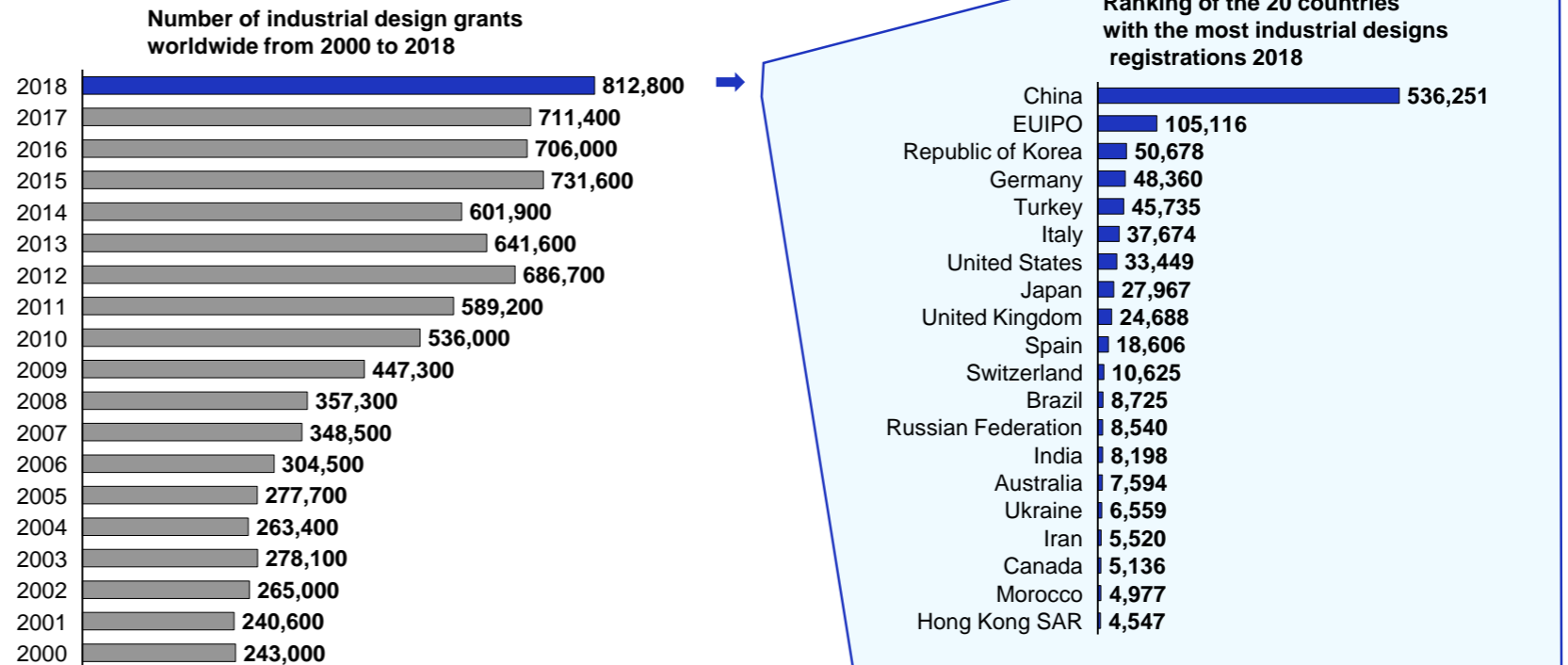
Industrial designs growing at a slower rate

The number of industrial designs has grown at a slower rate than patents and trade marks but still shows positive trends

The number of industrial design grants has increased from 243,000 in 2000 to 813,000 in 2018, more than tripling in less than 20 years. The growth has been slower in the last decade, however, with a less obvious rate of increase year by year.

China has dominated the industrial designs league table, with the European Union also showing significant numbers.

As is the case for patents and trade marks, most industrial design intensive industries are related to manufacturing. However, while patents and trade marks are also widely used in the digital industries, that is not the case with industrial designs, which potentially explains why the growth in the industrial designs granted has been slower in the last decade.



Expenditure in R&D (as % of GDP) indicates the potential value generation of trade secrets

Another type of intellectual property is trade secrets. While patents, some copyrights, trade marks and similar IP is intentionally publicised to make a claim on the ownership of these intangible assets, trade secrets are by their nature confidential and meant to provide competitive advantages without disclosing this information to the public.

The true value of trade secrets is, therefore, difficult if not impossible to quantify. However, we can make assumptions about the speed of creating new trade secrets as businesses engage in research and development activities. The share of R&D spend (as % of GDP) has increased in most major economies across the world in the last decade, indicating an increase in the generation of new intellectual capital, some of which is kept confidential and has been turned into trade secrets.

Most major OECD countries spend 2-3% of their GDP in R&D which indicate the significant potential size of the total trade secret assets. It should be noted that even though in the UK the R&D spend has been below the OECD average, the government has recently committed to support a substantial increase in R&D funding.

R&D spend as % of GDP	2010	2011	2012	2013	2014	2015	2016	2017
Korea	3.47	3.74	4.03	4.15	4.29	4.22	4.23	4.55
Israel	3.94	4.01	4.16	4.09	4.18	4.26	4.39	4.55
Sweden	3.21	3.25	3.28	3.30	3.14	3.26	3.27	3.40
Taiwan	2.81	2.91	2.96	3.02	3.01	3.06	3.17	3.30
Japan	3.14	3.25	3.21	3.32	3.40	3.28	3.16	3.21
Austria	2.73	2.67	2.92	2.96	3.08	3.05	3.13	3.16
Denmark	2.92	2.95	2.98	2.97	2.91	3.06	3.10	3.05
Germany	2.71	2.80	2.87	2.82	2.87	2.91	2.92	3.04
United States	2.74	2.77	2.68	2.71	2.72	2.72	2.76	2.79
OECD - Total	2.28	2.31	2.31	2.33	2.35	2.34	2.34	2.37
France	2.18	2.19	2.23	2.24	2.28	2.27	2.22	2.19
China	1.71	1.78	1.91	2.00	2.03	2.07	2.12	2.15
European Union (28 countries)	1.83	1.88	1.91	1.92	1.95	1.96	1.94	1.97
Singapore	1.96	2.09	1.94	1.94	2.10	2.19	2.09	1.95
United Kingdom	1.66	1.67	1.59	1.64	1.66	1.67	1.68	1.66
Canada	1.83	1.79	1.77	1.71	1.71	1.69	1.69	1.59
Italy	1.22	1.21	1.27	1.31	1.34	1.34	1.37	1.35
Spain	1.35	1.33	1.29	1.27	1.24	1.22	1.19	1.21
Russia	1.05	1.01	1.03	1.03	1.07	1.10	1.10	1.11
Turkey	0.80	0.80	0.83	0.82	0.86	0.88	0.95	0.96

Most major OECD countries spend 2-3% of their GDP on R&D which is a good proxy for the total value of trade secrets (although the true value is even higher as these figures do not include such items as customer lists, sales data, and other marketing information).

2 Determining the value of your intellectual property



The increasing value of intangible assets

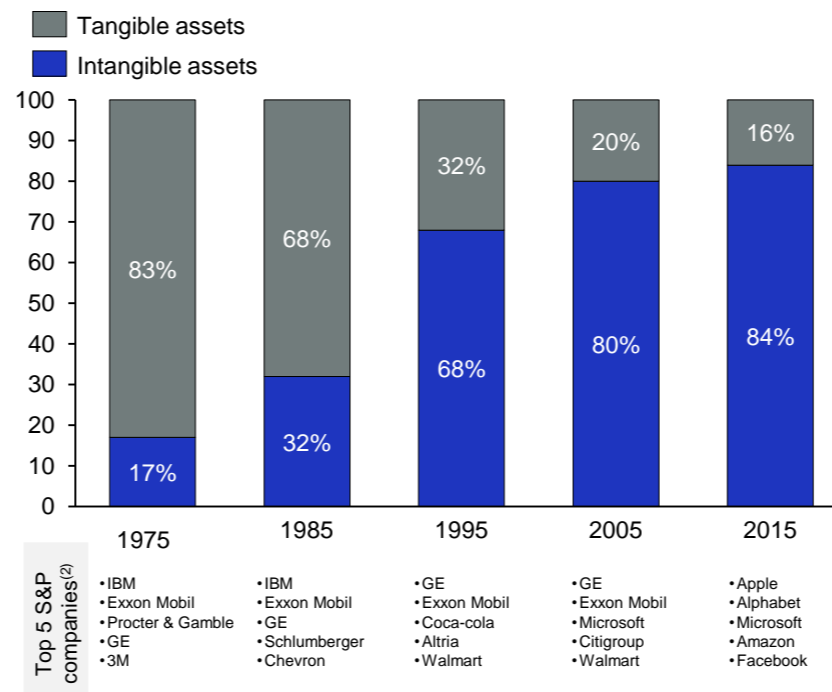
With the rise of IP prominence over the last 15 years, intangible assets have become more valuable than tangible assets

Intellectual property is often referred to as ‘the currency of the knowledge economy’. In terms of currency, the value of IP has appreciated consistently in recent years. Revenues earned from leasing IP have increased almost 700% between 2012 to 2018 with an expectancy to continually rise to 2024 and beyond. We have seen in more recent years that the return intangible assets can generate has much higher potential or multiplier value than that of tangible assets.

Whilst acknowledging the changing landscape of markets and sectors over time, the rise of major technology companies indicates the paradigm shift of value that is increasingly held in IP, often off the balance sheet. It is now regularly observed that companies that effectively manage IP often win in the long term⁽¹⁾.

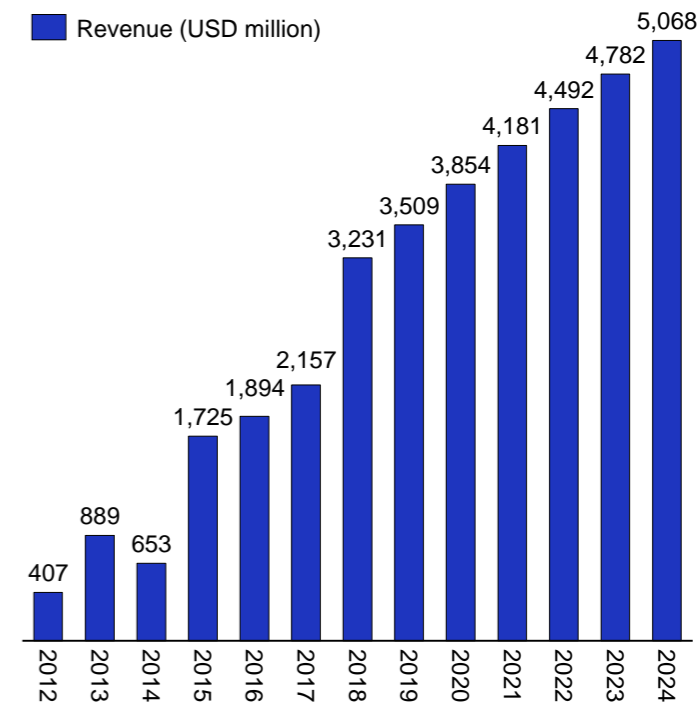
Where IP has historically been seen as a legal device, it is now seen as invaluable strategic tool that can help businesses gain competitive advantage and provide a strong foothold in a market. Protection of IP assets is, therefore, becoming more important than ever before.

Components of S&P market value between 1975 and 2015^(a)



Over the last three decades, **intellectual capital has become the dominant asset class in terms of the value drivers** for companies, as can be seen in the graph above when looking at the market cap of the S&P 500 over time, conducted by Ocean Tomo as part of an Intangible Asset Market Value (IAMV) Study in 2017 (please note that the methodology has not been reviewed or approved by KPMG or Lloyd's, this is indicative of intangible trends over time).

Industry revenue of “leasing of intellectual property” in the UK, \$m, 2012-2024 (forecast)^(a)



Industry revenues increased by almost 700% between 2012 and 2018 with a prediction of continued increase in the future. It is forecast that revenues of IP and similar products (except copyrighted works) in the UK will exceed \$5bn by 2024.

Finding the value of your IP

There are three common approaches to value an IP asset that can be used regardless of the purpose of the valuation; some challenges still remain, however

Three common approaches to valuation:



Cost approach
(backward looking)

This method takes into account the costs that were incurred by the business in the creation of the IP. It can also include potential cost of recreating an IP asset or developing a product that is similar in nature.



Income approach
(forward looking)

The income method values the asset by considering the economic income that could be generated in the future by the asset and presented as the net present value.



Market approach

This method indicates the market appetite for similar assets; however, relies on comparable transactions.

Common challenges:

IP generated during the day to day business

Such IP under most accounting GAAPs cannot be recognised on the balance sheet and is, therefore, “invisible” to the outside investor. In order to understand the true value, one would need to do a bottom up valuation of the business or try to split the overall business value into its components one of which is IP. Separating value between multiple (tangible and intangible) assets in a business can be complex as businesses often have more than one IP and other intangible assets.

IP which was brought on the balance sheet as part of acquisitions (either IP itself or businesses which have IP)

Such IP would be recognised under the most common GAAPs, e.g. IFRS and US GAAP. There is a great ambiguity in terms of the recognition criteria for this IP. For example, some organisations may prefer to have a greater allocation towards goodwill (and have a one-off large impairment risk), whilst others may prefer to have greater intangibles values (and amortise those on a regular basis). That means that the reliance on the valuations in the accounts (e.g. for insurance purposes) may be problematic. Furthermore, accounting standards require amortisation of finite life intangible assets but the determination of the remaining useful life of the IP can be subjective. This would also mean that depending on the useful life chosen, this may have an impact on the value of the asset (especially if valued under an income approach).

It should also be noted that although IFRS permits revaluations following initial recognition of the IP, the adoption of this accounting policy is only permitted if the future value is determined by reference to an active market, which is rare given that intellectual property is often unique. US GAAP, for example, prohibits the revaluation model, which means the value of any recorded IP asset only represents the value at a point in time and does not reflect an ongoing development or improvement of the asset.

If you don't measure it, you can't manage it. The first step in being able to use IP for competitive advantage is to understand the true value of it. Choosing the most suitable valuation method is essential in ensuring that the asset can be accurately valued and validated by investors to justify a potentially higher market cap and thus realise the 'true' value of a company relative to its resources.

There are many valuation methods that will depend on the nature of the asset and the amount of information that can be retrieved about the asset. Depending on the circumstances of the valuation and the information available, one approach may be favourable over the others. There are three common approaches to valuation – cost method, income method and market approach. Some factors to consider when valuing your IP may include the type of IP in question, the purpose of the valuation and the amount of information available under each method.

There is a range of challenges when it comes to IP valuation, however, which means that the reliance on the IP value described in the corporate accounts (e.g. for insurance purposes) can be problematic.

The importance of valuing your IP

Valuing IP may allow organisations to not only meet regulatory requirements and follow standard business practices but also allow to capture broader commercial benefits

In most cases, IP valuation is event-driven when it is necessary to agree a figure for a specific purpose, often a transaction or a dispute. However, there is a broader range of purposes that companies can exploit to leverage the value of IP for their own benefit to gain competitive advantage.

In recent years, the C-suite has realised the additional value that can be leveraged in IP, resulting in commercially-driven business cases for valuation where a specific outcome is in mind. This can range from supporting the share price to raising capital, commanding a premium, rethinking performance metrics for more accuracy and setting true market rates for licenses.

In some instances, it is difficult to separate the value of IP and the broader business value (particularly, other types of intangible assets like customer relationships and brand). However, the better your understanding is of the true value of your IP, the easier it will be to protect it.



Necessity

Required by regulation and practice

Examples:

- Business combination accounting (M&A activity)
- Determining IP value in insolvency proceedings
- IP litigation proceedings
- Transfer pricing e.g. for tax planning
- Pension asset transfer
- Compliance with market requirements e.g. IPO
- IP ownership dispute resolution
- Investor remuneration dispute



Opportunity

Meeting a commercial need for a business

Examples:

- Raising equity funding
- Negotiating licensing agreements
- Establishing franchising arrangements
- Structuring partnerships/ JVs
- Buying/ Selling assets
- Setting reserve for IP auction
- Portfolio assessment
- ROI calculation
- Strategic business insights



Emerging

New types of requirements

Examples:

- Raising debt funding for collateral
- New forms of IP insurance
- Development in financial reporting of intangible assets
- Asset utilisation checks
- Hidden pockets of value for creditor benefits in distress situations

3 How to manage the value of intellectual property



Violation of intellectual property rights

Violation of intellectual property rights typically manifests in four key forms

Intellectual property rights can be violated by competitors, counterfeiters, or even suppliers or employees. Threats can come from a myriad of different sources or directions which increases the need for tighter IP controls – both through applying for registered rights as well as practical controls (e.g. non-publication process before patent, invention disclosure to ensure that all IP is appropriately captured and, therefore, appropriately protected).

Most violation cases impact intellectual property that has been gone through official protection measures (e.g. trade mark registration), showing that the registration itself can act as a foundation on which to enforce your legal rights but can not guarantee full protection from infringement itself.

Things are different with trade secrets where the strength (or lack of) of protective measures will directly correlate with the probability of appropriation.



Reproducing, distributing, displaying or performing a work, or to make derivative works, without permission from the copyright holder (excluding fair use).



Examples

A major film studio sued its direct competitor for copyright infringement, claiming that it had stolen dozens of distinct ideas from its epic space-opera media franchise.



Using or selling a patented invention without permission from the patent holder.



A biopharmaceutical company proved that the use of specific active ingredient in its competitor's hepatitis C drugs, infringes its U.S. patent, resulting in a \$2.54bn pay-out.



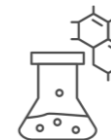
Using a trade mark that is identical or confusingly similar to a trade mark owned by another party, in relation to products or services which are identical or similar to the products or services of the other party.



A leading shoe manufacturer filed a lawsuit against a clothing retailer alleging that the retailer's products, which contain a specific well known design element, constitute "counterfeit products."



Discovering trade secrets through lawful methods of reverse engineering or employee poaching or through unlawful methods, including industrial espionage.



Two individuals (a businessman and a scientist) stole a major American chemical company's secret method of making product whitener titanium dioxide and sold it to a Chinese competitor.

The potential loss caused by IP infringement

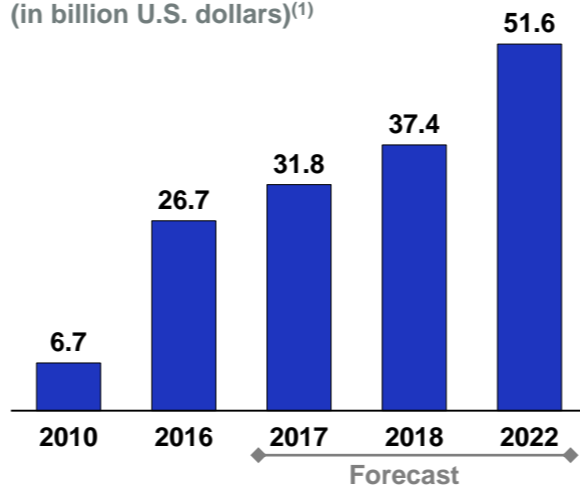
The cost of piracy is still increasing across industries, even after introduction of streaming services; the losses caused by IP infringement can sometimes exceed billions of U.S. dollars

The losses caused by IP infringement can be measured in tens of billions of U.S. dollars. The global TV and movie revenue lost through piracy alone account for more than \$40bn and could exceed \$50bn in the next few years. This was vividly demonstrated by the popular Game of Thrones series which experienced some of the highest piracy rates ever. Game of Thrones season 7 was pirated more than one billion times, with the premiere being streamed or downloaded illegally by 187m viewers while only 16m viewers watched it legally.

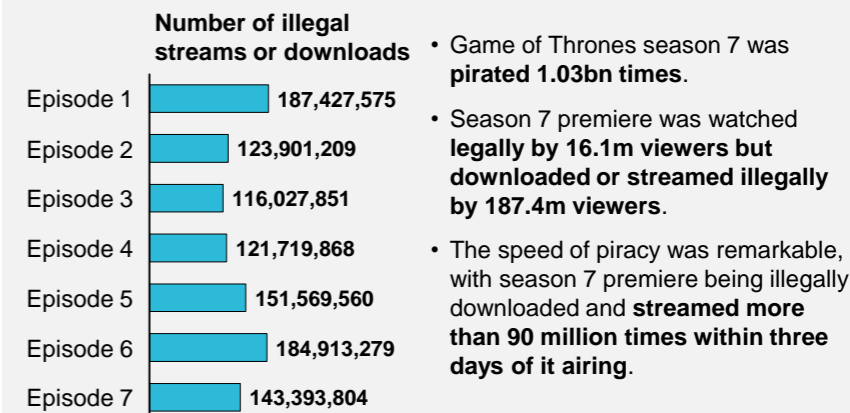
This is a common problem in the film, music, and gaming industry. It is estimated that around 189 billion visits were made to pirate sites in 2018, with half of the activity related to the film industry, mostly through unlicensed web streaming sites.

The increasing IP infringement costs are not limited to online piracy. As businesses become increasingly reliant on various types of IP, the potential financial consequences of IP infringement continue to rise.

Global online TV and movie revenue lost through piracy from 2010 to 2022 (in billion U.S. dollars)⁽¹⁾



Case example – Game of Thrones, Season 7⁽²⁾



- Over 189 billion visits were made to pirate sites in 2018. TV-related piracy took up 49.4% of all activity related to piracy, with only 17.9% for access to film.
- Music was the third most pirated medium in 2018, with a 15.9% share. Only publishing and software were lower (11.5% and 6.2% respectively).
- Almost 60% of all piracy visits are to unlicensed web streaming sites, whereas public torrent networks now only equate to 13% of piracy visit activity.

The rising cost and complexity of IP litigation

The total cost of IP litigation continues to rise, claims are getting bigger and more complex

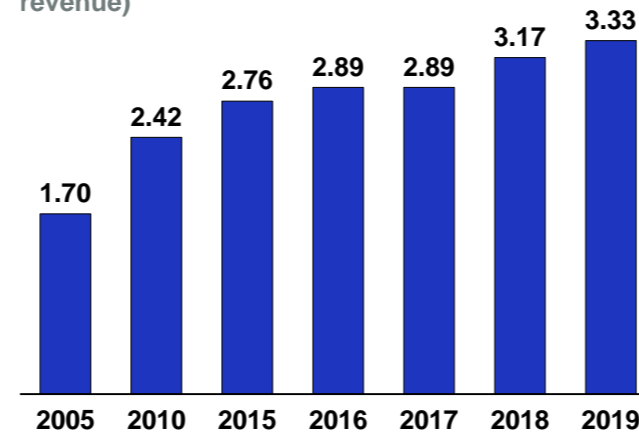
While the financial impact of IP infringement continues to rise, IP litigation claims are also getting bigger and more complex. According to some estimates, the total spend on IP litigation has increased by 15% from 2016 and 2019.

Meanwhile, the IP claims are also getting larger (the median damages award for patent infringement increased from \$6.1m in 2016 to \$10.2m in 2017).

With the globalisation of markets and supply chains, patent disputes have been increasingly likely to play out in multiple jurisdictions around the world, adding to the overall complexity and cost. It is still to be seen if some of the early de-globalisation trends could sustain in the post COVID-19 environment.

Future hotspots of IP litigation could increasingly be geographies outside the U.S., including China and Germany. It is predicted that some of the industries with particularly high number of litigations could be genetics and biosimilars.

Corporate counsel spending on IP litigation (\$ billions) by large companies (\$750m+ in revenue)



Future hotspots for IP litigation



China



Germany



Genetics



Biosimilars

Geographies

Industries

- The **total spend on IP litigation has increased** by 15% from 2016 and 2019.
- IP legal decision-makers report managing an **average of 11 IP litigation defence matters** at the beginning of 2019. This is down from the 15 matters reported in the 2015 annual survey – a 27% drop.
- **IP claims are getting bigger**, potentially because claims are being made later in a product or use life cycle, allowing claimants to assert higher damages because the infringement covers longer time frames and larger revenue streams. The median damages award for patent infringement in 2017 was \$10.2 million, an increase from \$6.1 million in 2016.
- **Patent-infringement litigation is also becoming more complex**, covering ever-evolving innovations and technologies. At the same time, plaintiffs are more aggressive, forcing companies to defend against claims involving numerous sources of alleged infringement.

How to think about the IP risk

Internal and external IP risks can both result in a significant damage to the competitive position of an organisation

There are two types of IP risk – internal and external; both can result in a significant damage to the competitive position of the business and a sizeable monetary loss.

The internal IP risks typically arise from insufficient intellectual property protection due to lack of awareness of similar inventions in existence or from making mistakes in the protection process. Meanwhile, the external IP risks typically arise from a 3rd party attempting to invalidate someone's IP or claiming infringement of their IP.

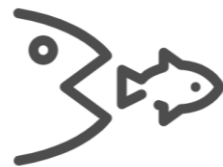
Both types of risk are very common and a large number of risk managers and risk owners across industries are unaware of the full exposure to these risks.



Internal IP risks

Lack of exclusivity /
loss of revenue

- **Lack of proper intellectual property rights protection** of core products resulting in increased counterfeiting
- **Missed deadlines** (renewal, payments, oppositions)
- **Insufficient freedom-to-operate analysis**
- **Early disclosure** of inventions by employees
- **Flaws in drafting or application limiting enforceability** of intellectual property rights



External IP risks

Infringement of 3rd
party intellectual
property rights /
cost for defence or
licensing

- **Becoming a defendant** in IP litigation
- **Forced licensing** under unfavourable conditions
- **Liability for IP risks and problems of contractual partners**, such as suppliers
- **Invalidation attempts of intellectual property rights** by competitors or non-practicing entities (NPEs) such as “patent trolls”
- **Own invalidation attempts** against 3rd party intellectual property rights

Internal IP risks

Internal IP risks typically arise from insufficient intellectual property protection due to lack of awareness of similar inventions in existence or from making mistakes in the protection process

Example internal IP risks

Early disclosure of inventions⁽¹⁾

- A leading cancer care company sought to protect its cancer treatment by **applying for a patent**.
- A year before it had **entered into a confidential agreement with another company to distribute the products** once they are on sale. The agreements required that the company keep confidential any proprietary information received.
- Later, a **competitor started producing a similar treatment and the company sued it for patent infringement**. The court rejected the claim, arguing that the confidential disclosure as part of the distribution agreement **constitutes "being on sale"** before the patent application was made.



Lack of proper IPR protection⁽²⁾

- A small musical instrument business invented an accessory that helps students hold the violin bow correctly. They **patented this invention in the U.S., Canada, Mexico, Europe and Australia**.
- Years later, the company wanted to **start distributing the product in China but discovered that two factories in China were already manufacturing** and selling counterfeits.
- The company found that a counterfeiter had **translated all 32 claims of its patent into Mandarin and registered in China**, meaning that the company would now violate IP of the counterfeiter if it tried to sell its products in China.



Insufficient freedom-to-operate analysis⁽³⁾

- A motor company wanted to launch a motorcycle with a new engine, **for which it had several patents**.
- The company **did not conduct a freedom-to-operate study considering that the more limited 'positive patentability' study was sufficient** to proceed with the launch.
- It was later **sued by a competitor** as one of its patents made a broad claim which was found to infringe an essential component of the competitor's engine. The court **instructed the company to halt its launch and motorcycle manufacturing**, resulting in significant losses.



Application limiting enforceability⁽⁴⁾

- A lumber yard **patented a new product, describing it as a "board for use in constructing a flooring surface** for exterior use (such as a deck)". It noticed that a competitor had started producing a similar product and sued it.
- The competitor explained that there was no infringement as a "board" means "piece of elongated construction material made from **wood cut from a log**" while its product was produced from a composite plastic / wood particle. The patent application did not specify that the "board" can be produced from a broader set of materials.
- The court **dismissed the infringement case**.



Internal IP risks often arise due to seemingly minor nuances in the IP registration process. One business might not think about protecting its IP in China as it only sells in Europe but then decides to start manufacturing in China, just to have the products seized by the local customs as it turns out a local Chinese company has registered the same patent locally. Another business might not think through the patent application claims wording carefully enough, leaving the patent open for a challenge. Yet another business might rely on its patent without realising the importance of carrying out a freedom-to-operate analysis before applying for a patent, just to be sued for patent infringement by a competitor a few months later.

This list of examples can be very broad but the common factor behind most infringement cases was a lack of awareness or simple mistakes. A 2015 survey by the UK Intellectual Property Office showed that 79% of businesses are not aware that telling people about an invention before applying for a patent could undermine a patent application⁵. Similar knowledge gaps can be seen in the context of other aspects of IP management.

External IP risks

External IP risks typically arise from a 3rd party attempting to invalidate someone's IP or claiming infringement of their IP

External IP risks are primarily related to different types of invalidation attempts, activities of patent trolls, or risks with contractual partners. According to various studies, the majority of patents (that have been granted via the rigorous patent registration process) are actually invalid (according to some estimates, 70-80%). This means that any challenge to these patents would potentially go to court and could result in partial or full invalidation. This is often as a result of the mistakes made in the drafting the patent claims as mentioned in the internal IP risks section.

Many attempts to invalidate patents are brought by the so-called patent trolls (a form of non-practicing entities (NPEs)) that try to aggressively enforce patent rights against potential infringers without ever intending to produce products or deliver services protected by those patents. Major leading businesses have settled such claims from NPEs which have cost hundreds of millions of dollars, but it should be noted that a disproportionate number of patent trolls target smaller companies – according to some estimates, more than 50 percent of businesses targeted by patent trolls make less than \$10 million in revenue per year⁶.

Example external IP risks

Becoming a defendant⁽¹⁾



- A major book publisher **alleged that Dan Brown, author of the bestselling 'Da Vinci Code' had infringed the copyright** of its book 'Holy Blood, Holy Grail', claiming that Dan Brown had **told the story and stated historical facts in 'the same manner'** as expressed in its book.
- The claimants' case **was dismissed** noting that "...there is no copyright infringement either by textual copying or non textual copying of a substantial part of 'Holy Blood, Holy Grail'...".
- The case, however, illustrated how the most **unusual claims can force a business to engage in a legal case.**

Forced licensing⁽³⁾



- A patent troll **acquired several patents essential to the 802.11 Wi-Fi standard**, and then claimed that every business (or individual) with a router containing a Wi-Fi chip was infringing its intellectual property.
- It followed this by sending thousands of letters targeting hotels and cafes that provide Wi-Fi for customers, **asking them to pay a license fee of \$2,500 per location.**
- A major router manufacturer then stepped in to defend its customers and whilst it **ultimately settled with the patent troll** for only 3.2 cents a unit, this still meant a payment of \$2.7m plus \$13m in legal fees.

Invalidation attempts by competitors⁽²⁾



- A technology company **was sued for infringing a patent of a device for displaying computer text on a television monitor.**
- The technology company **launched a defence** by arguing that more than a year before filing its patent application the company that filed the suit had submitted a proposal for sale of the invention (making the patent invalid).
- The court agreed that the patent should be invalidated and **ruled that there is no infringement.**
- According to various studies, the **majority of patents are actually invalid** (according to some estimates, 70-80%⁽⁵⁾).

Problems with contractual partners⁽⁴⁾



- In 2010, an Asian telecom equipment business entered into a **supply agreement with an EU telecom company to supply wireless phones.** In 2012, the EU company granted the partner's engineers access to a robotic testing system to **test partner's phones prior to its release.**
- Earlier that year, the Asian partner had begun developing its own phone-testing robot, and **asked the EU business to sell or license the robot system;** but it declined.
- The Asian partner then tried to steal the trade secrets to develop its own robot by **entering the laboratory without authorization and taking photos.**

4 How to mitigate
the risk of
things going
wrong



Steps for consideration in the IP lifecycle

Several steps are required to manage and protect IP effectively throughout its lifecycle from creation and development to monetisation

IP risks pose a threat not only to intellectual capital but also to the overall financial success of the organisation. It is more important than ever to have an effective risk mitigation strategy that covers the whole life lifecycle of IP. Effective IP management, from the creation and development stage, through to the protection and monetisation stage, will help ensure that all IP related internal risks are adequately covered. This will also mean that any unexpected external risks would cause less disruption.

As indicated previously in this report, each step in the IP lifecycle will bring a new set of risks that will have to be mitigated. Depending on whether an organisation decides to register its IP or keep it as trade secrets, there will be different internal and external events that could cause financial damage.

Consequently, there will be a number of risk prevention / mitigation actions that organisations can take to keep their IP safe. These will include some well known measures like signing non-disclosure agreements (NDAs) with employees and business partners, as well as some less known strategies like registering patent thickets that reduce the chance of competitors innovating around your IP portfolio.

01

Create and develop

The creation process of the IP, including research and development, articulation of the idea, prototyping, etc.



02

Keep it secret

The process of keeping your IP safe after it is fully developed (e.g. protecting your trade secrets).



03

Register

The process of registering organisation's IP rights, including registering patents, industrial designs, trade marks, etc.



04

Monetise

Using the created IP to generate royalty flows or achieve exclusivity in the market to increase sales.



Mitigating risks during creation and development

Successful development of IP could help organisations generate financial benefits for decades; however, if the risks are ignored, organisations can find themselves in a situation where all this potential future value disappears even before the new invention is ready for the market

Most major OECD countries spend 2-3% of their GDP in R&D, with the total value increasing year by year. However, as many companies race to bring their products to the market, many of them neglect the importance of proper IP protection during the IP development process. This then means that they risk their inventions being copied by competitors or find themselves in a situation where they can't proceed with IP registration as they have disclosed too much information early in the process.

There are multiple ways the most 'IP savvy' organisations protect themselves during this critical stage of IP lifecycle. The best practice includes being disciplined around signing NDAs with employees and business partners, clearly articulating ownership rights to the background and foreground IP, safeguarding access to information (including cyber and physical security), and carrying out thorough search of existing ideas (including registered patents) to make sure that the organisation is not infringing someone else's IP. In many cases, timely support by legal advisors can improve protection and save future costs.

Checklist

- Does the idea already exist?
- Is the domain name available?
- Are information protection measures in place?
- What are the relevant IP rights for protection?
- Have all relevant stakeholders signed an NDA?

What could go wrong?



- Leakage of information
- Ability for competitors to use your innovation if not properly protected
- Inappropriate ownership e.g. multiple IP rights required
- Infringement of existing IP

Best Practice of protecting IP



NDA's

Before exchanging valuable information with employees and 3rd parties, the NDA is a useful mechanism to protect confidential information such as financial data, new ideas and trade secrets. This allows more open and constructive discussions or negotiations to occur. There are multiple types of NDAs e.g. one way, mutual or multi-party to name a few. Further consideration must be given to managing ownership rights of any IP generated by staff members or contractors.



Limit access to information

Much of today's IP is stored electronically, giving rise to a risk of information breach, including cyber-attacks or system hacks. Tight security protocols should be implemented for all systems, including high quality firewalls. The security resources available should allocate effort towards value i.e. protect the information that holds most value and competitive advantage. Continuous reviews should be in place to ensure that only those who need to know it, can actually access the information.



Make sure the idea doesn't exist

Developing an idea costs money and time. Before putting significant effort, organisations should, therefore, be confident that the asset has not already been created. Not only can this be a waste of resource but potentially infringing someone else's rights can result in legal proceedings. Patents, trade marks and copyrights can be accessed as a matter of public record but similar inventions can be described in many different ways, so the best practice is to use an experienced IP attorney who can provide additional security.

Mitigating risks while keeping IP secret

Trade secrets vs IP protection is a strategic choice that requires organisations to provide an honest assessment of the likelihood of success; choosing to keep information secret will require crucial actions to ensure the invention is safeguarded against the threats that IP rights would otherwise provide

Before IP has been legally protected, it is subject to a range of key risks that can cause major commercial implications. Before proceeding with formal protection, the most IP focused organisations think through their broader commercial strategies. For example, if you decide that a 20 years protection period granted by a patent is not long enough, perhaps keeping your IP as a trade secret might be a better strategy. This can be illustrated by the famous example of the Coca Cola recipe – still to this day, for more than 100 years no company contractor has access to the whole formula.

Understanding the difference in government regimes globally towards IP is also important as the level of protection available varies considerably. Thinking about the right decision as part of a wider, diversified portfolio can help decide which IP protection is the right choice.

Checklist

- Will the invention still be useful in 20 years?
- Can the invention be kept secret within the company?
- Can the idea be easily reverse engineered?
- Is the invention likely to be discovered soon?
- Do the relevant jurisdictions protect IP well?

What could go wrong?



- Secrets are leaked from within the organisation
- Competitors reengineer the innovation
- The innovation is soon discovered and patented by a competitor
- Varying approaches by governments globally *e.g. Trade secrets Act/ Directive*

Best Practice of protecting IP



Adhere to domestic legislation

Trade secret law is one of the most important areas of IP but by far the least consistent internationally. Understanding the relevant laws and extent to which the organisation is protected across the jurisdictions in which the invention will be sold is essential. For example, IP infringement in China has been a significant problem historically. Laws and regulations and other policies have not been enforced well leading to a reputation for having a poor IP regime, giving rise to multiple threats.



Split up the information shared

In addition to enforcing NDA's, additional measures can be taken to restrict information held by employees, 3rd parties and suppliers. Organisations should limit access to information through need-to-know policy. Additionally, creating a register to monitor ownership and control who knows what can reduce the risk of knowing too much. Lastly, physical and electronic security of information will ensure it is stored securely, reducing the risk of unauthorised access.



Enhance governance

Enforcing an IPP (Information Protection Plan) and 'need-to-know' policies will tighten the buckle on information leakage. Additionally, organisations should not expect that people automatically know how to treat information. Regular training in line with current policy will ensure employees are treating information in the right way. In the event of loss or unlawfully disclosure of information, an action plan should be in place as part of a wider governance framework.



Prevent reverse engineering

If a secret is embodied in the product, others may be able to inspect it, dissect it and reverse entitling themselves to the innovation. Creating strategic advantages such as strong distribution channels, market awareness, product design can all prevent the success of a competitor. Technology can be protected through obfuscating code or information within the design to complicate things for those looking to reverse engineer.

Mitigating risks during IP registration process

Corporate leaders who make sure that their IP strategy is aligned with broader corporate vision and who think through the most optimal ways of exploiting their IP, will be more likely to find the most suitable safeguarding mechanisms that could support long term offensive and defensive strategic moves

According to some studies, only about half of corporate leaders understand the value and importance of IP and are actively involved in strategic planning related to IP¹. This means that IP decisions are often delegated to lower level legal staff who understand IP but don't necessarily understand broader strategic implications.

The most 'IP savvy' organisations will align their IP strategy with broader corporate strategy. That means that they will think carefully about the best way to exploit their IP (e.g. by exercising market power, by selling their IP, licensing it, collaborating with others, or even donating it for public good). The best safeguarding strategies will then depend on this decision. Some of the obvious protection activities will include selecting the right type of IP and deciding how broad or narrow the registration should be, as well as thinking through the geographical scope of the IP rights and smart orchestration of the registration process (e.g. patent delay strategies). Before you register your trade mark or patents in new markets, it is wise to conduct searches to determine whether by expanding into those markets you will infringe a 3rd party's IP.

Checklist

- Do you know which types of IP would provide the best protection to your invention?
- Have you successfully registered the IP rights before going to market?
- Do you have a thorough understanding of what is better to be kept as a trade secret?

What could go wrong?



- Invalidation of patents
- Failure to register the most appropriate type of IP
- Competitors innovating around the idea
- Failure to pick the best IP exploitation strategy

Best Practice of protecting IP



Select the right type of IP

Even though all IP types are different, many companies confuse them and as a result don't get the maximum protection they otherwise would. Different types of IP protection will give organisations different rights, including patents protecting your innovation, industrial designs protecting your product's appearance and trade marks protecting marketing of your product. Quite often the most IP aware organisations use a range of IP collectively to strengthen the protection of the same product.



Go broad or narrow

Patent applications can expose businesses to unexpected issues later down the line. Protect the innovation too narrowly and you will increase the chance of a patent being granted but it will also allow others to innovate around the description of your innovation. Submit a too broad application, and your patent might be rejected by the patent office or invalidated by a competitor. A typical rule of thumb for most organisations will be to go as broad as possible and (if requested by the patent office), narrow it down. Although there might be alternative strategies of registering multiple overlapping narrow patents.



Delay the grant of patents

One may ask why it would be advantageous to slow down the procedure? Keeping an application pending can provide commercial benefits. These would include creating uncertainty for competitors and the scope of the innovation, more flexibility to amend the claims at a later date (as it evolves). However, there are costs attached to this strategy so this should be weighed against the benefits. Maintaining a close and aligned relationship with an IP attorney is helpful in controlling the speed of the process.



Decide geographical scope

One of the main IP risks is the lack of proper worldwide protection. As international rights are costly and time consuming to acquire, many organisations focus on their main target markets. This can cause some issues, however, as an application submitted in one country can be translated by a competitor in another language and submitted in another country (e.g. there have been multiple such cases in China). The best in class organisations will plan this with a long time horizon in mind.

Mitigating risks during monetisation of IP

The monetisation of IP can have multiple forms, including seeking market exclusivity or engaging in licensing agreements to earn royalties

How an organisation exploits the IP portfolio is heavily dependent on the sector. Pharma is often defined purely by the patent portfolio, trying to get market exclusivity for as long as possible. Many other industries frequently see cases of businesses engaging in license agreements to earn royalty flows. As an example, some technology companies generate close to \$1b p.a. in licensing revenues.

There are multiple ways organisations can try to protect themselves, including forming their own 'rainy day' funds, creating patent thickets, and carefully monitoring licensing agreements, including conducting compliance audits. Having a clear market reputation as someone who protects its IP will also help deter potential infringers. Furthermore, performance monitoring of your IP portfolio (e.g. through licensing compliance audits) will help you allocate your resources to protecting the assets that really matter and bring commercial success of your organisation.

Checklist

- Do you know which revenue streams will be utilised?
- Have you had the pricing reviewed by an expert?
- Have you conducted a royalty audit?
- Have you outlined your IP strategy?
- Are external licenses needed to develop your innovation further?

What could go wrong?



- Unpredictable and potential loss of future cash flows
- Incorrect pricing can undervalue the asset ROI
- Failure to identify IP as a value generator
- Loopholes exploited by competitors
- Licensees not complying with complex royalty provisions leading to underpayments



Best Practice of protecting IP

Create a fund to cover the potential cost of litigation

An internal 'rainy day' fund can ensure that the organisation will be protected in case of an unpredictable case of infringement. This is particularly relevant for small and medium sized businesses that could risk going out of business in case of sudden cash flow difficulties. Some 'IP savvy' organisations sometimes use external funds (or insurance) to support their internal capital.



Patent thickets / clusters

A key challenge, particularly in the case of patent ownership, is the risk of competitors innovating around any single patent. Some IP focused organisations are protecting themselves by trying to create a cluster of overlapping IP rights, requiring the potential competitors to reach licensing deals for multiple patents from multiple different organisations before they can enter the market. This strategy, however, has negative connotations as it is sometimes viewed as limiting innovation.



Monitor licensing agreements

There are multiple obvious monetisation models of IP, including generating sales from exclusivity in the new market or licensing IP to other parties for their use or exploitation in their markets. The licensing model often involves complex agreements between the licensee and licensor, including limitations of grant of license, basis of royalties, etc. The more precise the terms, the less opportunity for any third parties to exploit loop holes. Regular license compliance audits is the best practice many businesses follow.



Build market reputation

Having a market reputation of always enforcing / protecting (or not) your rights to specific IP is likely to change behaviours of your competitors, including counterfeiters and patent trolls. Lack of willingness to actively protect your IP or pursue potential infringers will signal to the market that your organisation is potentially vulnerable. The most 'IP savvy' organisations will make sure that they are ready for a strong offensive and defensive response to adverse IP related events.

Insurance solutions: Risk transfer can help

Insurance solutions can offer extra protection in case of an unexpected turn of events related to internal intellectual property management

Example scenarios: how risk transfer can help⁽¹⁾:

	Patent dispute	Contractual indemnity	David vs Goliath
Case example	An innovative investment broker has developed a platform which they provide to clients but has not registered any patents as development of the software has been ongoing. It has recently received a notice that it is being sued by a competitor for infringing 5 patents . The estimated cost of defending the case is £4m and potential damages are estimated to be around £9m.	A multi-million pound toy manufacturer, sells products via a retailer and also provides a contractual indemnity to this retailer , stating that if the retailer is sued by a 3 rd party in respect of IP infringement caused by the goods, it will defend the retailer against all defence costs and damages . The retailer receives notice that they are being sued in relation to patent infringement . The retailer makes £6m profit, the manufacturer makes £1m profit.	A very promising technology startup is in the process of securing the second round of funding when it is sued by a major industry player for infringing one of its patents . The startup appoints a representative for its defence and receives the quotation for defence costs through the trial for in excess of £2m.
Scenario without insurance	The company loses the case. The cost of defence and damages awarded by the court run to c. £13m, causing considerable financial difficulties and forcing them to issue a profit warning .	The manufacturer agrees to defend the retailer and itself. The costs of defending both are estimated at £2.5m and damages of £4m based on the profits generated by the retailer.	Unable to afford the cost of defence, the startup has no option but to negotiate a settlement from a weakened position or continue to fight the case and risk bankruptcy.
Scenario with insurance <small>(Individual policy terms and conditions would apply)</small>	The company loses the case. The cost of defence and damages awarded by the court run to c. £13m, but it is reimbursed by the insurer .	The costs of defending both are estimated at £2.5m and damages of £4m based on the profits generated by the retailer. Both are reimbursed by the insurer .	The startup notifies its insurer and agrees to the appointment of an experienced representative to fight the legal case . The appointed representative is reimbursed by the insurer.

Source: (1) Tokio Marine Kiln scenarios

One way organisations can protect themselves is IP insurance. Insurance solutions can offer extra protection in case of an unexpected turn of events related to internal intellectual property management. There are two typical types of insurance solutions that can help with IP risks:

- 1) Defensive products** that would protect the insured against someone making a claim against its patent or a claim about the insured infringing someone else's patent (e.g. infringement liability product or indemnified party infringement liability);
- 2) Offensive products** that would help businesses when pursuing a case against a 3rd party that has knowingly or innocently infringed your IP (e.g. enforcement (abatement) product);

Some insurers also offer 'after the event' products that help manage the costs of supporting an IP infringement position at court.

Access (or lack of) to risk transfer solutions can result in a significantly different financial outcome in case of an IP infringement case.

Future opportunities for the insurance industry

There are multiple attractive opportunities for insurers to drive better awareness of the power of IP insurance, while working diligently to continue enhancing risk modelling and pricing, offering better risk coverage and broader preventative insurance solutions

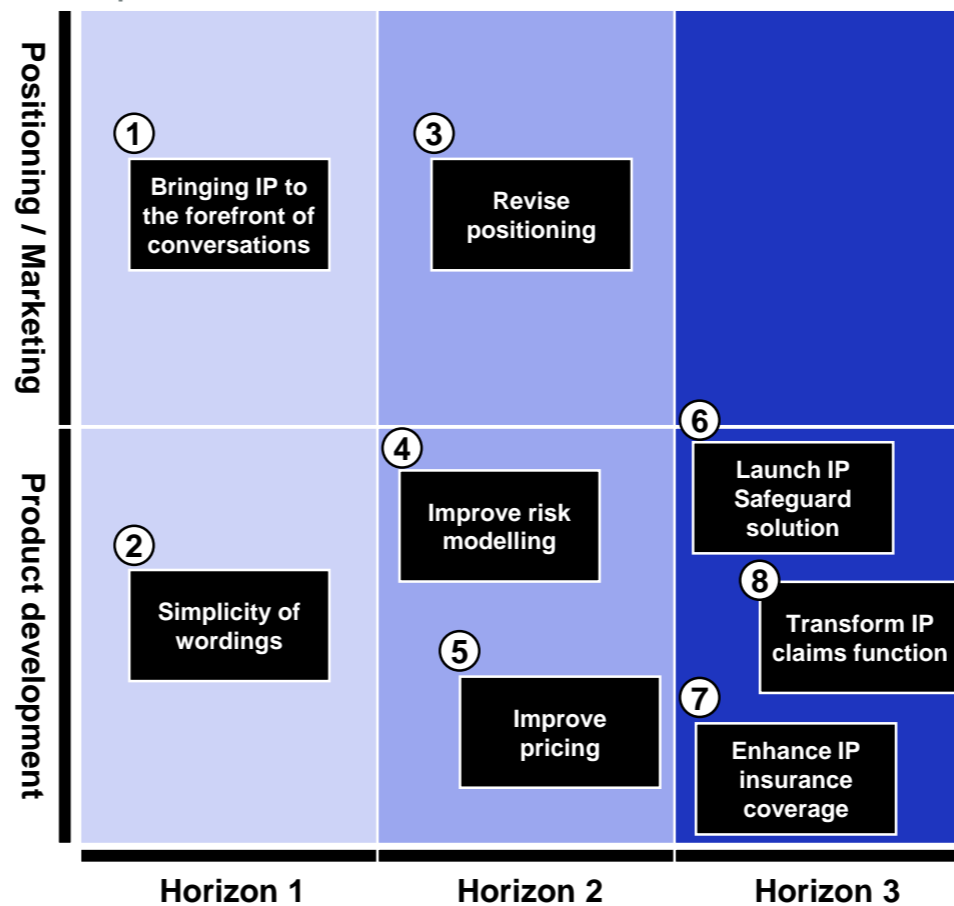
And yet, there is significant scope for the insurance industry to do more to support organisations in protecting their IP portfolios.

In short term (horizon 1), insurers need to think about ways of simplifying policy wordings of the existing offensive and defensive products and bringing IP to the forefront of insurance conversations between the risk owner and an insurance broker / insurer to improve awareness of the existing solutions.

In horizon 2, insurers need to make a step change in IP risk modelling. This would result in more accurate pricing and could lead to different 'risk taking' behaviours. Furthermore, insurers need to rethink the positioning of IP insurance. The recognition that IP is a valuable business asset (and not just "legal rights") and that insurance can provide a true leverage in the case of infringement (e.g. by allowing a 'capital poor' business to sustain a legal defence) could play a major role in increasing the use of IP insurance.

Finally, in horizon 3, there could be opportunities for insurers to expand product coverage and offer IP related risk prevention and response services.

Insurance opportunities to maximise the value for the owners of IP portfolios⁽¹⁾:



Eight opportunities

- 1 **IP is a highly valuable business asset** (not just 'legal rights') and should be adequately captured in client and insurer / broker conversations.
- 2 Current policy **wordings** are often **too complex** (e.g. IP risk owners are unsure if they are protected through their media policies).
- 3 Market / position IP insurance as a means of **giving leverage to businesses to enforce their legal rights** (and, therefore, protect competitive position).
- 4 Insurance incumbents and InsurTechs have an opportunity to introduce **Next Gen IP risk modelling tools** to assist underwriting.
- 5 Many organisations find the existing IP infringement **cover too expensive**, forcing them to seek alternatives and avoiding purchase of broader cover.
- 6 Launch **IP risk management services** to support organisations in preventing internal and external IP risks from happening and responding if they do.
- 7 Insurers can enhance coverage to **include the residual value of IP** (e.g. by sharing the potential upside of infringement cases to manage pricing).
- 8 Develop stronger **IP claims management function** (in-house or through external IP agencies) to maximise the residual IP value.

Source: (1) KPMG analysis

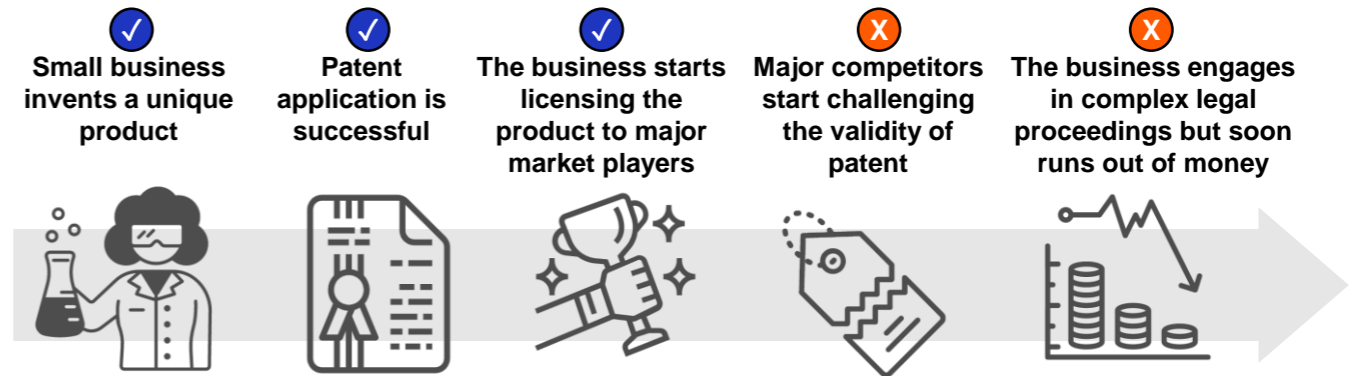
Transforming the IP insurance – broader coverage and value-add services

Many organisations, particularly those without significant capital, find it difficult to enforce their legal IP rights and could benefit from additional leverage provided by the insurance industry or alternative investors

One of the most frequently observed risks, particularly for small and medium sized businesses, is the inability to enforce the legal rights they have. This usually happens due to insufficient amount of capital which means that larger competitors can start a legal challenge and refuse to seek a settlement, knowing that the smaller competitor will not be able to sustain an adequate defence. The future insurance market could transform its relevance by providing the required financial support that would allow businesses increase their ability to engage in legal defence and would force 'attackers' to seek settlements. Some businesses are already seeking similar leverage outside the insurance market by approaching various alternative investors.

Furthermore, covering the actual value of IP (instead of just legal costs) would suddenly enhance the value of IP as a collateral and further increase the relevance of IP insurance. This would have to go 'hand in hand' with IP safeguard solutions and better risk modelling which would give insurers the required confidence of the risks they would be taking. Considering the potential sizeable downside risk (particularly, in the case of insuring the IP value of major corporations), there might be opportunities for a range of alternative capital driven solutions.

The world without IP insurance



Transformed IP insurance offering (illustrative)

- IP safeguard solution**
- Helping businesses **test if their ideas are unique** and don't infringe existing IP.
 - Providing a toolset to **keep IP secure** during the R&D process and after.
 - **IP valuation** advice.
 - Shaping the **optimal IP portfolio management** strategy.
 - Regular IP **portfolio audits** and continuous IP mining.
 - **IP response toolset** in case of infringement (or legal challenge).

- Enhanced IP insurance coverage**
- Providing financial support as a leverage for businesses to **discourage larger competitors** of trying to force them into a weaker legal position due to lack of funding.
 - **Compensating legal costs** (and damages) due to infringement.
 - Providing compensation for the **actual IP value lost** due to losing exclusivity in the market or reducing royalty income.

5 The way forward



Moving forward – four actions risk owners could take

1	2	3	4
<p>Mitigate your risks during creation & development process of IP</p> <ul style="list-style-type: none"> • Make sure your idea does not already exist • Do not disclose your idea to 3rd parties prematurely • Make sure NDAs are in place with employees and third parties • Make sure the future ownership is well articulated, especially if you are collaborating with 3rd parties 	<p>Keep your IP secret before its registered and in the public domain</p> <ul style="list-style-type: none"> • Think carefully if the best strategy is to register your IP or keep it as a trade secret; this will depend on the risk and your business potential • Bolster IP's cyber and physical security • Improve governance (e.g. make sure your employees and business partners are properly briefed and trained) • Prevent reverse engineering 	<p>Make sure you maximise the value of your IP through registration</p> <ul style="list-style-type: none"> • Select the right type of protection (different types of IP protection will give you different rights) • Be smart about registering broad or narrow patents (risk of invalidation vs risk of competitors innovating around) • Actively manage your IP applications (e.g. does it make sense to delay the judgement?) • Think carefully about geographical scope 	<p>Enforce your rights during exploitation / monetisation of your IP</p> <ul style="list-style-type: none"> • Plan IP strategy to maximise value of your IP portfolio • Create a fund (or use insurance) to cover the potential cost of litigation • Be smart about using patent thickets / clusters to enhance your protection • Keep monitoring your licensing agreements to reduce any value leakage • Build a reputation as 'enforcer' of your rights

There are four actions risk owners can take to minimise the risk to their IP portfolios.

Depending on the size of your organisation, you will also want to think how IP risk management fits into your broader insurance strategy. Some of these risks can be managed through a range of preventative measures or by using internal insurance through a captive solution. In some cases, there are opportunities to use the help of the external insurance market or alternative solutions provided by investors.

Risk managers can play a major role in helping your organisation to manage IP risks. You must make sure that IP risks are adequately covered in your risk register, that the likelihood, potential impact, and interconnectedness with other risks is properly assessed, and that your risk management function is represented at board level discussions about the value generation from your IP portfolio and other intangible assets.

The sophistication of the IP insurance coverage available is likely to increase in the coming years, so don't forget to raise this topic with your insurance broker and/or insurer.

Rethinking your IP strategy

As you are thinking through the broader IP safeguarding mechanisms, there are several ways KPMG can help you enhance the understanding (and value) of your IP portfolio almost immediately.

These include:

- Designing an IP monetisation strategy
- Performing IP safeguard stress-testing
- Performing IP due diligence
- Performing royalty audits
- Performing IP valuation

KPMG IP team includes a unique mix of strategists, IP lawyers, corporate finance specialists, accountants, and tax experts who will be privileged to support you on your journey to enhance the corporate value of your intellectual property portfolios.

IP monetisation strategy

Strategic planning on how to create, protect and exploit your IP, fuelling growth, expansion into new markets, taking on new distributors, licensees and partners to develop and commercialise new businesses and products.

Thinking through the best strategies of acquiring market exclusivity, managing their royalty flows etc.

IP due diligence

Assessment of the relative strength of a patent portfolio to demonstrate patent validity as part of due diligence for investors, shareholders and potential purchasers.

IP valuation

Providing independent IP valuation to support decision making as part of investment / reorganisation / divestment appraisal or joint venture / collaboration opportunities for management, investors, shareholders, and potential purchasers.



IP safeguard stress-testing

Assessment on how your organisation can manage your IP risks by looking at the design and operation effectiveness of your organisational structure, cross-functional working as well as IP processes and controls to develop, protect, manage and commercialise your IP.

Royalty audits

Conducting royalty audits (e.g. in music and technology) to recover lost royalty revenue by inaccurate and incomplete self-reporting by licensees.

Contacts

Lloyd's contacts

Dr. Trevor Maynard

Head of Innovation

Operations

Lloyd's of London

T: +44 (0) 20 7327 6141

E: Trevor.Maynard@Lloyds.com

KPMG contacts

Paul Merrey

Partner

KPMG in the UK

Global Strategy Group

T: +44 (0) 20 7694 5276

E: Paul.Merrey@kpmg.co.uk

Arturs Kokins

Associate Director

KPMG in the UK

Global Strategy Group

T: +44 (0) 20 7311 3398

E: Arturs.Kokins@kpmg.co.uk

Acknowledgements

The following people were consulted or commented on earlier drafts of the report; we would like to thank them all for their contributions:

Lloyd's

- Ivan Spence, Research Associate, Innovation team
- David Franco, Market Intelligence & Development, Senior Manager
- Mateo Acosta Rubio, Performance Management, Underwriting Associate

KPMG subject matter experts

- Viral Desai, Associate Partner, KPMG Corporate Finance Valuations
- Lara Quelch, Senior Manager, KPMG Law
- Daniel Donovan, Assistant Manager, Strategy

Members of Lloyd's of London Product Innovation Facility

- Thomas Hoad, Tokio Marine Kiln, Innovation Manager
- Neil Kempston, Beazley, Incubation Underwriter
- Dana Cullen, Channel2015, Innovation Associate
- Ed Mitchell, MS Amlin, Lead Underwriter
- Scott Bailey, Markel, Managing Director, Cyber

Other key inputs

- Prof Robert Burrell, University of Oxford
- Prof Dev Gangjee, University of Oxford
- Dr Henning Grosse Ruse - Khan, University of Cambridge
- Paul Cozens and Ben Wyatt, Mathys & Squire LLP
- Patrick Wheeler, Collyer Bristow LLP

About Lloyd's

Lloyd's is the world's specialist insurance and reinsurance market. Under our globally trusted name, we act as the market's custodian. Backed by diverse global capital and excellent financial ratings, Lloyd's works with a global network to grow the insured world –building resilience of local communities and strengthening global economic growth.

With expertise earned over centuries, Lloyd's is the foundation of the insurance industry and the future of it. Led by expert underwriters and brokers who cover more than 200 territories, the Lloyd's market develops the essential, complex and critical insurance needed to underwrite human progress.

About KPMG

KPMG in the UK is one of the largest member firms of KPMG's global network of firms providing audit, tax and advisory services. In the UK we have 631 partners and 15,864 outstanding people working together to deliver value to our clients across our 22 offices. Our vision is to be the clear choice in professional services in the UK. For our clients, for our people and for the communities in which we work.

KPMG's core business is to help your organisation work smarter, evaluate risks and regulation and find efficiencies. We do this by providing deep insight into market issues, transparency in everything we do, and using innovative technology to tackle complex problems. We are focused on the issues that keep our clients awake at night and responding to them as One Firm. To do that, we strive to create a high performance culture, guided by our values, where our diverse talent feels included and excels.

Legal disclaimer

This report has been co-produced by Lloyd's and KPMG. The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

Lloyd's and KPMG accept no responsibility or liability for any loss or damage of any nature occasioned to any person as a result of acting or refraining from acting as a result of, or in reliance on, any statement, fact, figure or expression of opinion or belief contained in this report. This report does not constitute advice of any kind. The report was paid for by Lloyd's.

© 2020 KPMG LLP, a UK limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved.

The KPMG name and logo are registered trade marks or trade marks of KPMG International.



LLOYD'S



KPMG