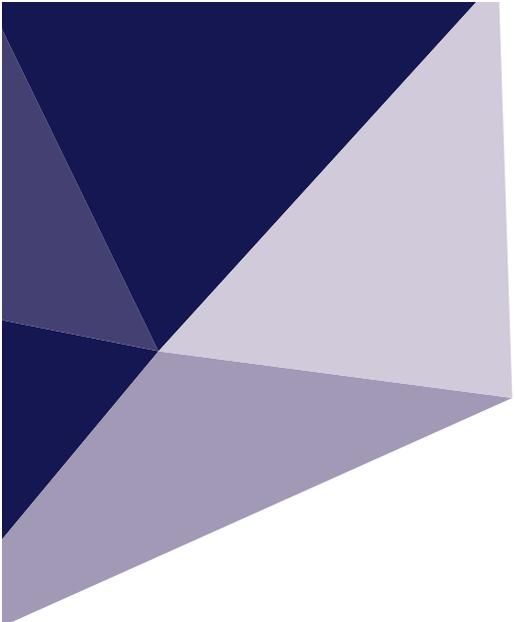


IP STRATEGY REPORT

Rebecca Burn-Callander
Edited by Professor Jeremy Phillips
April 2017



About the author and editor

Rebecca Burn-Callander is former enterprise editor at The Daily Telegraph and Sunday Telegraph. Rebecca writes about entrepreneurs, start-ups, SMEs and fast-growth businesses. Rebecca is one of Gorkana's top 100 UK journalists and named as one of the Smith & Williamson Power 100 for championing entrepreneurship.

Professor Jeremy Phillips is one of the world's most respected IP academics. Jeremy was founding director of the Journal of Intellectual Property Law and Practice and creator and of the best read intellectual property blog, IPKAT. Jeremy serves on the Advisory Board of Aistemos.

About Aistemos

AISTEMOS is an intellectual property data analytics company, based in London. By applying AI and machine learning to comprehensive IP data, we have developed Cipher - the world's most definitive source of business intelligence designed to help companies understand complex technology landscapes.

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Forward

The Aistemos IP Strategy Report set out to answer one question: what is the level of understanding of intellectual property (IP) within companies? It has ended up as a more substantive piece of research with a tangible recurrent theme, that IP is important to more sectors and more companies than ever before. There is also an actionable recommendation; ensure that the main board engages with IP, such that patents, trademarks and copyright issues do not remain locked in specialist silos, but are integrated into mainstream business strategy.

This is not a report written for Facebook, Uber and Airbnb. Nor does it focus on the importance of mobile to the digital economy, or the well-understood dependence on patents by big pharma. This is a report for all companies which have concerns about the disruptive power of innovation. The concerns impact all sectors from automotive (think fuel cells, autonomous driving) to financial services (the all-encompassing world of FinTech). If you include Industry 4.0/Internet of Things in the mix, that's just about everyone.

So please read on. Aistemos has been observing the evolution of IP as an asset class since its formation, and it is now clearer than ever what needs to be done.

First, companies must understand the importance of intellectual property. This is inevitably a cross-functional exercise. Secondly, the key value and risk issues must be communicated to the board, and appropriately integrated into business strategy. Thirdly, investors must actively interrogate all companies on their IP strategy. This combination of both “push” and “pull” forces will transform tomorrow's understanding of what drives enterprise value - and consequently what is important to the economy at sectoral, regional and global levels.

The catalyst for this efficiency gain is information - not just data, but accessible analytics that can support the generation of executives who have not previously needed to engage with IP issues. This realisation is our driving force. This is why we have developed Cipher, to decode the layers of complexity associated with unstructured data and to ensure that organisations have the information they need, when they need it.



Nigel Swycher, CEO
Aistemos
April 2017

Introduction

The world is currently in the midst of its fourth industrial revolution. Technology is changing the way we live and reworking the fabric of our global economy. The impact of this revolution is not just evident in the way we hail taxis, book accommodation, or order takeaways; it affects the way companies are built, and defines which will thrive and which will fall by the wayside.

This report reviews how companies are responding to what is both a threat and an opportunity. It is based on an extensive survey conducted between August and October 2016 as well as additional interviews and research. The key findings can be characterised as follows:

- **Awareness** - recognition that intellectual property (IP) is a material business issue for very many companies, and that today's issues are different in type and impact to those that may have been traditionally relevant (Chapter 1).
- **Appreciation** - IP issues can be viewed through the lens of both risk and value, and the former remains the norm for many. Structures and roles (such as the advent of the Chief Intellectual Property Officer) are having a significant impact on perception (Chapter 2).
- **Impact** - the rise in IP litigation and monetisation has enabled both the significant threats and opportunities to be brought to the attention of boards. Similarly, the movement of M&A into adjacencies (and not merely into the conventional expansion of core areas) has encouraged management to pay closer attention to unknowns; these unknowns include IP (Chapter 3).
- **Transparency** - the absence of transparency, and the lack of consensus about how to increase it, is a significant obstacle to understanding corporate value. Global trends in many other areas of corporate transparency are beginning to influence attitudes in the area of IP, but this is an area that needs much closer attention and more action (Chapter 4).
- **Communication** - those who have implemented structures or roles to support better ownership and communication of IP issues report substantive progress. This is helped by the increased availability of better information and analytics that can be shared across the many areas of the business that need to be involved (Chapter 5).
- **Competitive intelligence** - a significant obstacle to understanding IP has been the absence of competitive intelligence on IP, in a form that can be communicated to and digested by the many stakeholders who are not IP specialists. Cipher, the analytics solution from Aistemos, is recognised by a range of business leaders as helping to make a real difference (Chapter 6).
- **Investors** - the investor community is virtually blind to IP issues (outside traditional pharma/biotech). The position is beginning to change, but any significant improvement depends on a combination of "push" (from the companies) and "pull" (from external scrutiny) (Chapter 7).

What is now beyond argument is that IP is one of the most important drivers of both value and risk in today's technology economy. Companies, their advisers and investors must ensure that IP issues are part of mainstream governance, reporting and analysis.

1. The rise and rise of the intangible asset

Many different intangible assets contribute to a company's value. While patents are an important part of the picture, other intellectual property (IP) rights, such as trademarks, copyright, design, and trade secrets, all add substantial value to a business.

Aistemos recently surveyed a wide range of business leaders, ranging from the world's most innovative companies, including BAE Systems, Siemens and Bayer, to small, fast-growth start-ups, to gauge views on the importance of IP within companies (see appendix 1, about the participants).

Our research shows that, while competitive intelligence and risk management remain the primary concerns for the vast majority of business leaders, there is a very significant interest in IP licensing and litigation (chart below).

"As the UK moves to an increasingly knowledge-driven economy, the importance and role of IP in enterprise

creation, growth and development also grows apace," said Charlotte Chung, enterprise and innovation policy adviser for the Federation of Small Businesses (FSB). "One area that warrants special attention is the growth of intangible assets. Over the past few years, investment in intangibles has grown to outstrip more traditional tangible assets. For those businesses looking to better capitalise on their innovation, this increased attention creates great potential, particularly for growth."

Dan McCurdy, partner at Quatela Lynch McCurdy and former senior vice president at RPX Corporation, believes that "every CEO and board director needs to structure their companies so that IP is used to deliver ever-improving business results. Once this is done, executives will recognise the leverage available from these assets and the enormous value that they can deliver to shareholders through focused attention on IP, and will find themselves competing for the opportunity to lead this effort within the company."

How important are the following elements of an IP strategy?

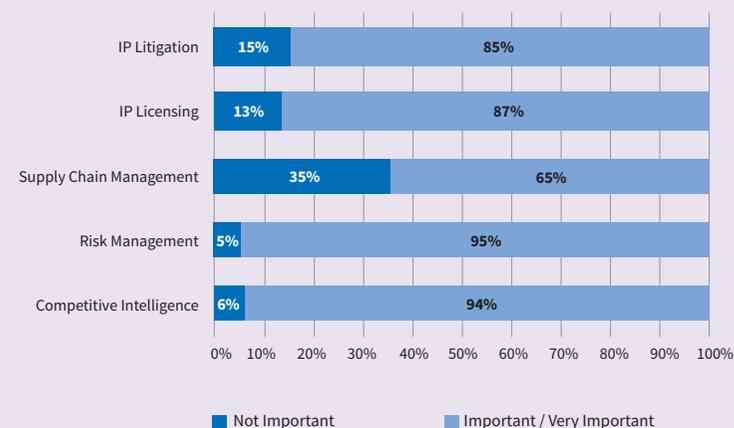


Chart 3: Elements of an IP strategy

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Every CEO and board director needs to structure their companies so that IP is used to deliver ever-improving business results.

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IP STRATEGIES FOR CHANGING TIMES

Many companies have traditionally viewed IP strategy as best left to the lawyers or the departments in charge of building IP portfolios, but this is changing.

Back in 2004, Bill Gates, founder of Microsoft, made a visionary statement that helped turn the tide: “Over the last 10 years, it has become imperative for CEOs to have not just a general understanding of the IP issues facing their business and their industry, but to have quite a refined expertise relating to those issues. It is no longer simply the legal department’s problem. CEOs must now be able to formulate strategies that capitalise on and maximise the value of their company’s IP assets to drive growth, innovation and cooperative relationships with other companies.”

Intangible assets - their creation, protection and exploitation - are now increasingly being incorporated into mainstream business strategy.

At Siemens, IP is recognized as an asset of critical importance. It owns over 55,000 patents¹ and employs more than 400 people to protect its IP all under the watchful eye of Siemens chief IP counsel, Beat Weibel: “Siemens invests a lot of money in research and development - around €4.5bn in 2015,” Weibel said recently. “We have to protect these innovations and ensure that competitors can’t simply copy the knowledge and results we’ve gained. To do that, we need to hold the IP rights. They are the key to Siemens’ treasure chest of innovations, which nobody should be able to steal.” According to Weibel, IP is no longer viewed in isolation. He states: “IP should be a part of business strategy to protect and sustain the competitive advantage we secure

through our technology. Siemens was built on patents and this heritage makes the value of IP easier for the board to understand.”

NEW WORLD ORDER

The rise of big data has given companies the ability to understand not only their own intangible assets, but those of rivals and partners too.

Companies such as Aistemos with its analytics solution Cipher have built platforms that bring transparency to an area that has been traditionally opaque. Nigel Swycher, CEO at Aistemos, explains the opportunity this way: “Information about intangible assets is no different or less important than financial data or other economic indicators. The bridge that needs to be built is between the world of IP and the decision makers. This is becoming much easier now that there is sufficient data to analyse and the computing capacity to master it. I see our role as ensuring that the right information flows to the right places at the right time.”

These changes coincide with a new age of transparency across many areas of business. Whether it’s remuneration packages for the management team or diversity goals, companies are becoming increasingly open with their data. IP is sure to follow suit.

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Some companies are in the vanguard of this new movement towards IP transparency. This isn’t just because they see it as a trend worth following, but rather because it helps to maximise the value of that IP. Take the recent launch of the Avanci platform. This new platform was created to give companies working on Internet of Things (IoT) technologies access to standard-essential patents owned by industry-leading technology innovators - including Ericsson, Qualcomm, InterDigital, KPN and ZTE- through a single licence. It is an open and more transparent approach to licensing patents in a bid to facilitate innovation.

Companies increasingly have to collaborate with other businesses in this way - even with their rivals - to solve huge technological challenges. But partnerships such as these remain rare: many IP-rich companies, while keen to see transparency from rivals, fear that giving too much away about their own IP could dull their competitive edge.

Industry experts also point to a marked difference in the way IP is viewed in the UK and Europe, compared to the US and China. “China is on the verge of becoming a major technology and IP generator, creating a tidal wave of patents likely to wash over the US and Europe’s shores in the next two decades, enabling China to dominate significant technology areas” says Ian Harvey, former IP adviser to the UK Government. “By contrast, particularly in Europe at some deep political levels, the value of IP is often challenged, putting in jeopardy Europe’s competitive base in its global markets.”

According to Harvey, China, Japan and Korea are innovation powerhouses that have woken up the power of IP to shape markets. Since 2004 there has been more patent litigation in China than in any other country,

including the USA. The recent decisions by China and Korea regulators to impose near \$1bn antitrust fines on Qualcomm relating to its IP licensing practices are signals that attitudes are changing in economies that have historically been less active in IP policy and abuse.²

MOVING INTO DANGEROUS TERRITORY

Over the next decade, the value of IP is set to rise even further but many business leaders remain in the dark about its true impact. This is not helped by the fact that intangible assets are often absent from financial reports and accounts. Patents, for example, even when they are mentioned in financial disclosures, tend to be lumped together as a number, which frankly communicates nothing.

According to the FSB’s Chung, this can pose problems down the line. “While most businesses have an awareness of IP, the value of it as an asset to the business and the importance of protecting their IP is, overall, quite poorly understood,” she said. “This is particularly true for small firms which typically run on limited capacities and resources - investing time and money to get to grips with their IP can be a burden for many of them.”

Chung added that businesses that do not see themselves as being rich in IP may be ignoring valuable assets to their detriment: “There are real challenges in being able to clearly identify and measure the IP that exists in their business; many businesses will not even be aware that they have created or own IP worth protecting.” She is not alone in warning that there is a significant issue with the way that IP is understood and communicated by businesses in the context of this knowledge-driven world economy. When companies acquire IP, they will often include its value on the balance sheet but, where it is generated in-house, it is not.

According to Hywel Ball, a managing partner at EY, this creates a worrying disconnect. “Given that more than half enterprise value is represented by intangible assets, for some companies up to 80pc, I worry that this value is not being represented by financial statements,” he said. “This means that when you look at the stock market, the real value of those companies isn’t visible. As each year goes forward and IP represents a greater proportion of company value, this will get worse.”

The majority of business leaders, however, feel strongly that stating the value of IP as a balance sheet item was riddled with its own problems and might create the opposite of transparency and clarity. Without a standardised way of communicating value, which was universally used, this could be a way to obfuscate a company's true worth, or generate huge swings in its value.

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2. How IP became the strategist's darling

A decade ago, the majority of boards routinely dismissed IP as a cost centre. When it came to business strategy, it wasn't even on their radar. Today, things are changing - albeit slowly. Patents and trademarks, among other intangible assets, cost significant sums to acquire, yet their economic benefit is frequently ill-defined. Rather than view IP as a valuable asset, boards see it as a necessary evil, best left to legal departments or, at a push, to the R&D or marketing team.

This is a gap that needs to be addressed. Boards understand the need to protect competitive advantage yet often fail to understand that this very advantage depends on the existence and strength of the company's IP.

If boards do not make IP management and performance a priority, how can they know they are making the most of

their innovations? That risk and value are being properly managed?

There are well known exceptions to the rule: pharma, biotech, high tech and media (audio and visual) companies that rely heavily on IP for their livelihoods, have typically been proactive in their management of intangibles such as patents, copyright and trademarks.

The wider business ecosystem is now playing catch-up. Aistemos' survey suggests that there are real signs of progress. 41% of respondents consider that IP is now part of business strategy, and over a quarter regard IP to be a value driver. There are however many who still regard IP to be either a cost or arisk. One respondent captured this sentiment by adding that IP was "a necessary evil".

How do you think your board of directors regard IP issues?

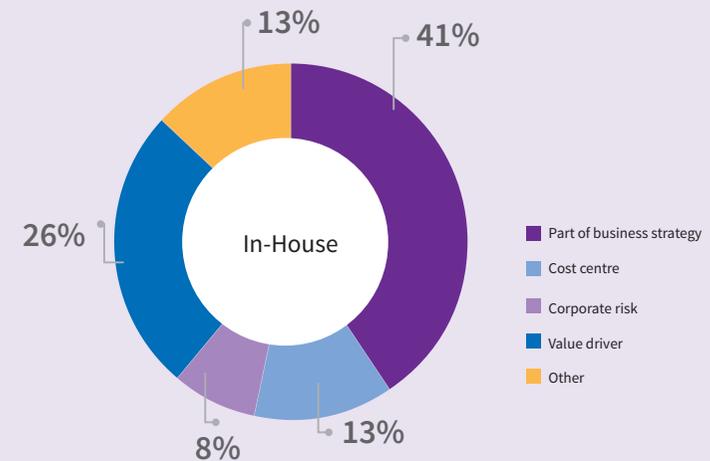


Chart 1: View from the board

WHY HAVE BOARDS NEGLECTED IP?

IP has yet to find its true place in the boardroom - but where does the blame lie? According to Anders Arvidsson, founder and CEO of the IP consulting firm Parallel North IP: "There are a lot of boards not familiar with IP. They don't know what to do with patents, or understand the risks. It is perhaps not their job; you can always blame the board of directors but it is also the responsibility of the rest of the managers to educate the board."

The onus, therefore, lies on the chief executive to communicate the importance of IP to the board of directors, and to ensure that stakeholders are aware of its relevance. IP has long been a complex area, full of arcane rules. Many business leaders, when asked to detail the extent of the IP owned and managed by their company, have struggled to give a comprehensive overview.

Jennifer Wuamett, deputy general counsel for IP and litigation at NXP Semiconductors, added her voice to the report: "I think most business leaders know instinctively that there are many important reasons to invest in IP protection, but monetary return on the investment in terms of revenue generation often tends to be a focal point as other benefits are more difficult to measure and quantify."

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THE DRIVERS OF CHANGE

There have been several developments in recent years that have spurred boards to take more notice of IP.

The most prominent is the surge in IP-related litigation that has received mainstream press coverage. This has created the perception that all companies face business interruption, thereby earning its place on main board agendas.

While US reforms have thwarted the growth of patent litigation (and specifically from Non-Practising Entities, the so-called patent trolls), the fact that more companies face more IP risk remains true. Litigation is not the only growth area; licensing is also increasingly seen as a smart way of releasing value from IP. And, as businesses across the globe begin to generate serious revenues from IP monetisation, IP rises inexorably up the corporate agenda.

The world is in the midst of a new industrial revolution: an age of technology. Increased innovation means more IP. And IP can no longer be seen as a standalone asset: it touches every aspect of corporate value. As more sectors become impacted by technology, the challenge will be for the value of IP to be understood by management and the board.

Dr Bobby Mukherjee, chief counsel for group IP at multinational defence, security and aerospace firm BAE Systems, told Aistemos researchers: "There has been a significant change over the last 10 years. With over 50pc of corporate value being intangibles, it is now increasingly understood as a main board issue."

Not long ago, friction between boards and investors over patent monetisation would have been unthinkable. Now, insiders claim, it is happening more frequently. Recent years have also seen a rise in activist hedge funds attempting to invalidate patents so as to devalue stock to support specific stock trading strategies.

Legislative changes are also affecting the wider IP landscape. Talk of a "post-Alice" environment (referring to a recent US Supreme Court decision) has resulted in much tighter standards over the kinds of software and business method patents that courts will enforce. Seismic shifts such as this are receiving widespread industry attention - and the ramifications of these shifts create substantive issues which transcend technical legal issues of patentability.

Globalisation continues apace as companies increasingly operate across borders. According to Janhavi Dadarkar, training course leader for "Role of the Director and the Board" at the Institute of Directors (IoD), this has prompted business leaders to look more seriously at their IP:

"Companies looking to move into new countries acknowledge they need to manage their IP better. When crossing borders, even boards recognise that IP must be a big part of business strategy. They talk more about management and commercialisation but also remain focused on mitigating the risk of IP value loss."

The data revolution is now making it much easier for business leaders to understand what IP is held - not just by their own organisations but by peers and rivals. Having access to trusted sources of IP data will make it easier to incorporate IP into business strategy.

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Data and analysis relating to IP needs to be just as accessible as financial data, and not require a PhD or a law degree to understand it.
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As Aistemos' Swycher puts it: "Data and analysis relating to IP needs to be just as accessible as financial data, and not require a PhD or a law degree to understand it. That's why we developed Cipher - if you put the right information into the hands of senior management at the right time, they will make better decisions. It's that simple".

The movement towards transparency will bolster this trend. Initiatives such as the Open Register of Patent Ownership (oropo.net) can help. If IP data is to be trusted it needs to be accurate. "We should expect very significant improvements in the quality, accessibility and effective use of IP data in the next few years, with much clearer linkages to value, otherwise the world's growth engine will stall" says Tony Clayton, board member of OROPO and former chief economist at the UK IPO.

THE FUTURE OF IP IN THE BOARDROOM

"Boards tend to focus on two areas: conformance and performance," said the IoD's Dadarkar. "There needs to be a balance of the two: not just conforming, in terms of corporate governance, but looking at future performance

too. Boards should not just be looking to mitigate IP breaches; those processes should already be in place. Boards are just getting involved in the 'performance' side of IP." According to Dadarkar, boards must evolve further if they are to leverage their innovation. "Risk and opportunity go hand in hand," she said. "If your IP is one of your biggest assets - and for many companies it is their lifeblood, of more value than the product itself - then it has to be part of ongoing future strategy."

To understand how boards might view IP in future, we can look at the behaviour of IP-rich companies today. Philips is the largest patent applicant at the EPO. It filed its first patent - to extend the burning time of a light bulb - in 1905, and the corporation now owns 76,000 patents, 47,000 trademarks and 91,000 design rights.³

"IP strategy is developed and implemented by my organisation across each of the Philips business groups," says Brian Hinman, chief IP officer (CIPO) at Philips. "The IP strategy is an integral component of the overall strategic plan on record for each of these businesses, and we always ensure an effective, integrated intellectual asset management (IAM) approach in implementing these IP strategies. This IAM is a holistic approach whereby my organisation carefully analyses the needs of each business group and secures the optimum blend of each type of IP in order to maximise IP protection for the business. IP & Standards employs a centralised organisational structure led by me to ensure speed of decision making and IP strategy execution."

One of the changes that has helped is the appointment of a new breed of CIPOs that report directly to the board. Some observers say that this does not go far enough and that CIPO status should guarantee a place on the board. Whatever the preferred structure, this new role is defined by the ability to integrate IP into a business context - and this requires clear communication supported by verifiable data.

Many of these routes lead to the same destination. Aistemos CEO Swycher thinks it is the objective that matters most: "Anything that goes to the heart of corporate value should be managed by the board. This means that tangible and intangible assets should receive equal scrutiny and attention."

3. The currency of ideas: IP can make or break a business

Innovation, and the research and development that delivers it, are crucial to a company's survival. Whether this involves developing new products or services, enhancing existing product lines or making operations leaner and more efficient, R&D is the fuel in the tank: it propels ventures forward.

In the previous chapter, we discussed the need for boards to engage with IP, and to understand its role as a value-driver. But ensuring that the rest of the organisation is aware of the issues around protecting new ideas is equally challenging. Those developing new IP teams focused on mergers and acquisitions, and staff who work collaboratively on innovation projects, may not appreciate what's at stake.

Without vigilance, protection for new ideas can evaporate or drag the organisation into a protracted dispute with competitors. Furthermore, R&D is hugely expensive. This means that business leaders are increasingly looking

for certainty that revenue can be derived from these activities, and that the IP offers the necessary protection. Yet Aistemos' research suggests that many organisations simply do not have the right data at the right time to support key business decisions. Alarming, the survey suggested that R&D decisions are often made with insufficient understanding of IP issues (chart below).

One of the main IP risks is the ability to sell a product without infringing the IP rights owned by a third party (so called "Freedom to Operate"). The converse is just as important. Why invest in R&D if there is no IP protection and others can copy with impunity? This is why it is essential to access valid and up-to-date information about who owns which IP, and to integrate this information into the decision-making process. However, in a world of 80m patents, this is not easy. Sifting through incomplete databases or innovating on a wing and a prayer are no longer viable options.

According to BAE Systems' Dr. Mukherjee it is not enough to simply educate management about the true impact of IP on business strategy - this must be communicated to the whole organisation. "There is always more work to do at grass roots level," he said. "The key is to integrate IP into routines and processes, such as inductions and exit interviews. Education is an important part of the process."

PROFITING FROM INNOVATION

There are other ways companies exploit their IP: licensing and litigation. In recent times these activities have become quite closely related. What routinely starts as an offer to license (the "carrot") can turn quickly into litigation (the "stick"). Either way, the opportunities are core to business strategy. In some situations, the licensing revenue is very significant; in other cases the IP is the way competitors are kept out of the market. This makes the case for IP to move up the chain of priorities within an organisation.

Speaking to World IP Review recently, Manny Schecter, chief patent counsel at IBM, said of its litigation strategy: "Billions and billions of dollars has been spent on research and development to maintain that innovation edge. We do bring litigation against others that take our IP and refuse to compensate us."⁴

But litigation is a high-risk game with more losers than winners. The majority of IP cases rarely go to trial but, when they do, the outcome is expensive and uncertain and often fails to deliver an outcome perfect for either party. Little wonder, then, that management would rather settle out of court. While patent litigation has been on the rise in recent times, licensing trends perhaps provide a more accurate gauge of organisations' willingness to commercialise their IP. There are many indicators that activities of this sort are also on the rise. According to the International Monetary Fund (IMF), charges for the use of IP increased from \$285.5bn in 2012 to \$328.5bn in 2014.⁵

Can more be done to encourage innovators to license out their IP? "While litigation is as transparent as it needs to be, licensing isn't, and it's a problem," said David Kappos, partner at the law firm Cravath, Swaine & Moore, and former director of the United States Patent and Trademark Office (USPTO). "As innovation has increased, the whole marketplace for IP licensing has had to transact in the dark without comparables. This is no way to value

IP. A government solution is needed, perhaps using blockchain technology to create transparency."

In the wake of macroeconomic shocks, such as the UK's decision to leave the EU and talk of a protectionist stance in the US by its new president Donald Trump, licensing could become a crucial way to keep the currency of ideas flowing across borders.

MERGERS AND ACQUISITIONS

In yesterday's business environment, mergers and acquisitions were used to move into new territories, generate cost savings, eradicate a rival or simply grow at pace. Now, a large driver of M&A is enabling "adjacencies", allowing companies to move into new technology areas. Yet IP due diligence has failed to keep pace with the needs of the dealmakers.

Nigel Swycher, who was an IP partner in law firm Slaughter and May before founding Aistemos, explains the issue this way: "The challenge is to understand complex technology landscapes, involving thousands of patents, within tight deadlines and finite budget. Conventional due diligence tends to deal with counting patents and renewals. With the advent of analytics, you are now able to understand both the assets and overall environment".

The consequences of not assessing the intangible assets with the same degree of scrutiny as the financials can be disastrous. There are plenty of war stories of buyers assuming that they had all the IP they needed, only to be caught out late in the day or, worse still, after the deal is done. "Today's reality is that IP issues are now often at the heart of the deal. The issues need to be surfaced early if they are to be addressed effectively" adds Swycher.

“Analysing a company’s patent portfolio is so fraught with difficulty as you can’t really trust the public data.”

Are the following business decisions made with sufficient understanding of IP?

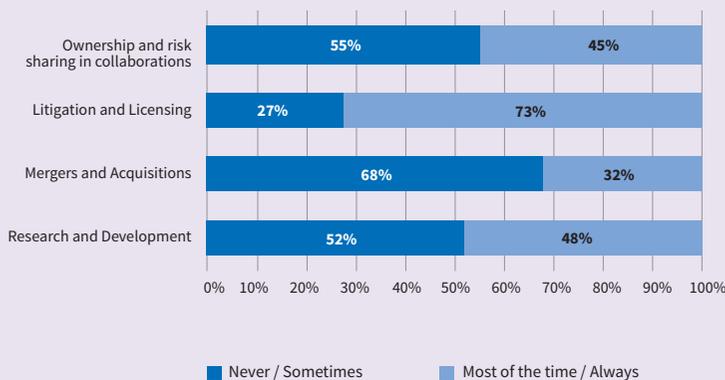


Chart 4: Elements of IP Strategy

OWNERSHIP AND RISK SHARING

One of the greatest challenges faced by innovative companies today is understanding who owns what. “Analysing a company’s patent portfolio is so fraught with difficulty as you can’t really trust the public data,” said ORoPO’s Clayton. “If there was better quality information about who owns what IP, this would provide a welcome boost to licensing and a corresponding reduction in litigation. The 2015 ORoPO Report estimated this benefit at \$300bn”.⁶

When business leaders were asked whether they have adequate access to the competitive intelligence they need about what IP is owned by others, over half responded indicating that they did not. This is a shocking indictment of the current levels of transparency in the world of IP.

As the age of technology proliferates across multiple geographies and many owners, collaboration is going to become increasingly commonplace. Innovators must work together if they want to solve tomorrow’s challenges. The Internet of Things may be the tipping point for more alliances. “In a world where all devices are connected, there will be more dependence on licensing” commented Swycher.

According to EY’s Ball: “We have to find a new form of collaboration to reach a better answer for business. We need to accelerate the way that companies talk about long-term value. It’s essential because the public is losing trust in business, and collaboration is a way that we can regain that trust.”

McCurdy, warns that the IP must evolve if it is to become an enabler of change, rather than a barrier. “Much of the recent focus has been on patent battles, not using patents and other IP to maximise financial performance,” he noted. “Yet, as we know from examples such as ARM, Qualcomm, and Dolby, tremendous value can be extracted from IP. The issue is that most IP staff are engaged in harvesting and protecting IP on the one hand, and defending against attacks from adversarial IP owners on the other.”

Open innovation may sound like a pipedream, but innovators across the world accept that collaboration will be critical to their future success. In a world of

open-source, cloud computing, and big data, R&D is no longer something that has to take place isolated from the IP trends that may influence success or failure. This means that corporations need to understand their IP as never before. This will reduce risk and open up a world of opportunity.

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4. Corporate secrets in an age of innovation

Even though more patents are being granted each year, more than ever before, with a corresponding boom in the growth of publicly accessible descriptions of technologies, we live in a world of innovation that is steeped in corporate secrecy. Even though patents and other IP rights may result in public disclosures, being a way to tell the world about your innovation, the opacity of the existing system and an ongoing corporate unwillingness to adopt IP transparency means that we actually know very little about who owns what, and how those inventions are being managed, defended and monetised. By this, we mean disclosures about the IP owned, and how it is licensed or protected through litigation and even how it is described to outside stakeholders such as investors, be that on the balance sheet - which is very rare - or even internally.

WHY THE SECRECY?

Based on the Aistemos survey, business leaders and IP experts were split straight down the middle over whether increased transparency would be beneficial to their organisations (chart below).

This division could be attributable to a number of factors. The most obvious is that business leaders conflate transparency with disclosure of corporate secrets. On the other hand, it could be just a disconnect: if management do not fully understand their IP, they are not in a position to disclose.

Either way the current position is alarming. External scrutiny of a company’s public disclosures, such as public filings or accounts, tells you virtually nothing about the importance of intellectual property to the company’s current standing or future prospects.

INNOVATION IN THE AGE OF TECHNOLOGY

Over the past decade, technology has reshaped every conceivable industry. But technology start-ups are different from the businesses that were established even 10 years ago. Their competitive advantage relies on their speed to market and their ability to crack complex problems faster than rivals, rather than simply on how much money they have behind them, or their ability to do one thing well ad infinitum.

Should companies be more transparent about their IP strategy?

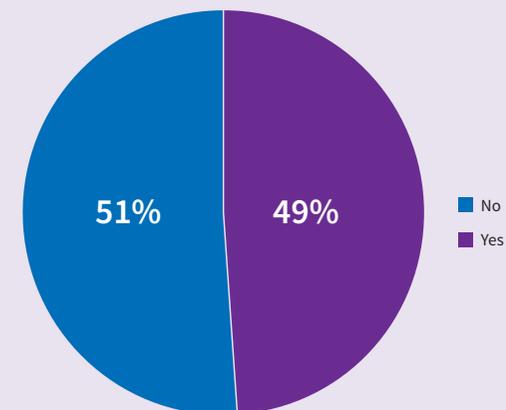


Chart 5: IP Transparency

As Klaus Schwab, founder and executive chairman of the World Economic Forum, wrote back in 2015, "In the new world, it is not the big fish which eats the small fish, it's the fast fish which eats the slow fish. In the past we had revolutions - perhaps they would be better described as evolutions - that came at a relatively slow pace, like long waves in the ocean," he added. "The impact of the first Industrial Revolution, which began in Britain in the 1780s, did not fully begin to be felt until the 1830s and 1840s. Today technological change happens like a tsunami. You see small signs at the shore, and suddenly the wave sweeps in."⁷

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According to Bo Heiden, deputy director of the internationally renowned Centre for Intellectual Property at Chalmers University of Technology, Gothenburg, business leaders' reluctance to shout about their innovations can be explained by the dominance of technology-first firms in this latest industrial age. "Most technology companies start from the position of secrecy concerning their innovation activities in general, and invention in particular, given the importance of protecting legal novelty as well as planning the timing of announcing new market offerings," he explained. "This may be a rational strategy for most firms given the competitiveness in tech industries."

THE BENEFITS OF GREATER DISCLOSURE

Innovation is hailed by business leaders, academics, and governments alike as a crucial asset, one to be celebrated and encouraged rather than hidden, neglected or crippled through inaction. Yet, by refusing to commit to increased IP transparency, companies are hiding their light under the proverbial bushel.

Patents, for example, not only protect innovation but enable companies to generate extra revenue from their investment in R&D, either through licensing or litigation.

In a recent report, experts from MINES ParisTech, one of the most prominent and prestigious engineering schools in France, explain that: "Patents in particular are not only legal fences against competitors: they make it possible to license out technology, to build up partnerships or negotiate access to potentially blocking positions of competitors. They can also be sold on a stand-alone basis, and therefore provide security for investors."⁸

Jennifer Wuamett, NXP, notes that by having more data on the patent landscape relating to a specific technology can provide insight into the strength of a company's IP position and help identify potential partnering and M&A opportunities.

But Heiden points out that there is actually a cognitive dissonance in the world of IP over whether shouting about innovation, even when it helps build a brand or make money, is worth the risk. "For patents, the quid pro quo of disclosure in return for exclusivity is in the public interest but not necessarily in the private interests of the firm, depending on their business strategy," he explained. "Some firms looking to assert their patents may benefit from the element of surprise, for example."

This view was echoed by Dr Jörg Thomaier, Head of IP at Bayer Group, who told Aistemos researchers, "I don't believe there should be greater transparency when it comes to data about licensing. Early licences, for example, are strategic. Why would you open up that information to your competitors and tell them where you are heading?"

A NEW DIRECTION OF TRAVEL

Transparency is now rising up the corporate agenda. Be it corporate remuneration, the gender pay gap, women on boards, sustainability or corporate social responsibility, companies are increasingly being either required, or at least strongly encouraged, to show their hand. IP could well be one of the next facets of corporate life to be illuminated by the transparency spotlight. Many studies have shown that companies demonstrating improved transparency tend to outperform their peers in a wide range of areas, from staff retention to investor engagement - all the way through to increased revenue and profit.

Many of the high-level executives interviewed said that any move that helped to bring IP into the public domain,

and generally demystify the area, would be positive. Even Bayer's Thomaier, who expressed concerns about excessive IP transparency, accepts this point: "Greater transparency on the patents covering a product would avoid situations where companies inadvertently infringe our patents." His main caveat: "For this to work, the whole industry will need to embrace the idea, and not all companies are open to greater transparency."

THE BARRIERS TO CHANGE

Transparency, in any facet of corporate life, is neither cheap nor easy. It may involve establishing a dedicated team to manage disclosures, can meet resistance from the wider organisation - especially if it adds further duties to already heavy workloads - and could take months, even years, to show any real benefit.

Ian Cass is managing director of the Forum of Private Business (FPB), one of the leading voices of private enterprise in the UK. He stresses that education will be key in creating a wholesale transparency movement. "If we truly are moving to a knowledge economy where the intangibles are the key areas of value, then we are moving to new territory," he said. "Some companies will have thought about this but the majority will not; this highlights the need for educated discussion and sharing of information. Without this, companies will take the safe option, which is keep your cards close to your chest and be overly cautious and secretive."

More businesses must take the plunge into transparency if we are to observe and measure the benefits. At the very least, a further move towards transparency could help meet the pressing need to tackle the public's ongoing mistrust of big business. Corporate scandals have eroded consumers' faith in large organizations: according to the 2014 Edelman Trust Barometer, 42pc of people around the world do not trust corporations.⁹ Concerted efforts to adopt more transparent business practices across the board could help rebuild this trust.

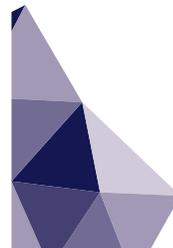
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STAYING AHEAD OF LAWMAKERS AND REGULATORS

Another reason why many business leaders are keeping a watchful eye on the evolution of IP transparency is to avoid falling foul of the law. Recently, we have seen the Securities and Exchange Commission (SEC) proposing changes to disclosure requirements about IP.¹⁰ But progress is slow, and many companies have become adept at revealing less and less about their IP, while staying on the right side of the rules.

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Shareholders are becoming
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Ian McClure, a leading IP strategy adviser, wrote recently that while public companies in the US may appear to be required by law to disclose any and all information that may affect their value - which includes data about intangible assets such as IP - most skirt the issue. "It is not manifest that companies perceive any ethical or other obligation to provide more information about these assets or risks than blanket and boilerplate statements in their disclosures," he said. They may not get away



with this strategy for much longer. "Shareholders are becoming activists around IP at an increased rate and additional transparency can make those activities less adversarial." ¹¹

The USPTO, a powerful voice in the global IP community, also remains in favour of greater transparency so there may be value in embracing a culture of openness before it becomes mandatory. This topic is not one where there is a clear direction of travel. Swycher thinks that things will change: "There is an increasing amount of publicly available data about IP and its strategic role within a business. As companies see that there is much to be gained, and little to lose from increased transparency, I predict more openness - and this openness will increase the value, and decrease the risk associated with IP rights".

5. Grasping intangibles - IP can slip through your fingers

While IP is definitely increasing in both profile and importance, it still remains an esoteric issue for many. It is understandably difficult for many corporations to grasp something that is by its very nature "intangible", with apparently only superficial connection to fundamental business operations. Thus the question remains: what active steps can business leaders take to ensure that IP is taken seriously?

Almost 80% of respondents to the Aistemos survey said that the most effective way to enhance the management of IP was to improve communication between IP and commercial teams. Other popular answer included the appointment of a high-level executive tasked exclusively with IP management: the relatively new role of CIPO (Chief Intellectual Property Officer). There was significant support for improved IP governance and reporting and inclusion of IP issues on the corporate risk register (chart below).

THE CHALLENGE OF MAKING IP A MAINSTREAM BUSINESS ISSUE

Many business leaders continue to underestimate the value of IP. Its impact on a company's success goes way beyond licensing and litigation. For many it encompasses innovation, brands and people, and it lies at the heart of its ecosystem and supply chain. IP can also help organisations secure new business deals and seal lucrative partnerships. Yet, as the Aistemos survey demonstrates, communication remains a significant challenge, as the language of IP and the language of business can be very different. The former is rife with jargon and complexity, while the latter requires data and certainty. The challenge for both sides is to find a common language.

IP analytics and tools like Aistemos' CIPHER provide necessary help with business intelligence, but this is not sufficient. Without effectively communicating the value of IP and its related risks to the board, the integration of IP

What measures should companies take to improve the management of IP issues?

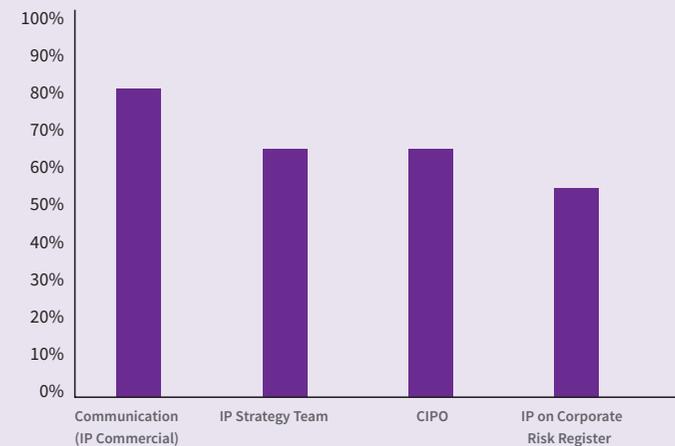


Chart 6: Access to IP Information

strategy into mainstream business strategy will continue to be beyond the reach of many. Former USPTO director Kappos recommends that a combination of all four measures - better communication, a CIPO, an IP strategy team, and inclusion on the risk register - would embed IP into corporate culture and raise the prominence of IP. "IP is too important to leave to the lawyers," he said. "It's a business asset and should be treated that way. Establishing a business role within a company that regards IP as property and treated with the same rigour would be a step forward."

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IP is too important to leave to the lawyers. It's a business asset and should be treated that way.
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UNDERSTANDING THE ROLE OF THE CIPO

Many IP-centric companies, including Apple, HP, Philips, Ericsson and Siemens, have created a CIPO role and appear to be reaping the benefits. The role is cross-departmental, to reflect the fact that IP touches every facet of business. It can help facilitate and enrich the role of other high-level executives, such as the general counsel, chief legal officer or chief technology officer, who deal with IP from time to time but who will usually have a broad spectrum of responsibilities and may be unable to make IP a priority.

The other side of the coin is that these individuals may resent the CIPO encroaching on what they perceive to be their domain. And, while larger companies may find it useful to have this focus, it's not the first appointment made by most SMEs.

Crucially, the CIPO goes a step beyond appointing a simple "head of IP". The CIPO becomes a focal point within the corporate structure, on the same footing as the chief operating officer, chief marketing officer and the chief financial officer. This shows the entire organisation that IP is as vital to its survival as its revenue, customers, and brands. The CIPO will be able to take a holistic overview of IP, rather than a focus on just patents or

trademarks, and automatically involve IP in corporate decision-making and strategy.

According to Philips' Brian Hinman, an effective, global IP strategy, when well executed, can lead to real cultural change within a company. "One issue is that few companies have the proper IP organisational structure, IP strategy or cultural mindset to be properly involved with IP issues," he told Aistemos' researchers, adding:

"The CEO and the entire C-suite have to understand why IP is important, how it enables innovation, and the value that it brings to the shareholders. IP leaders need to understand and articulate this vision with these executives. At Philips, the CIPO has a lot of autonomy, and makes all IP related decisions, in close alignment with the executive committee of the company. There is full transparency to the board of directors about how the IP strategy translates into value for Philips."

Nestlé's Valerio Nannini, head of strategies and performance, sees the challenge in the same way: "IP needs to be valued by organisations. What is necessary is to move from a reactive to a proactive approach. Businesses must have IP embedded into all areas of the organisation. It needs the legal structures in place to defend its IP, and to build a fortress around what it does. But IP also needs to be represented at the very highest levels."

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IP needs to be valued by organisations. What is necessary is to move from a reactive to a proactive approach.
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DOES IP BELONG ON THE RISK REGISTER?

Based on the IP Strategy Survey, business leaders are divided on whether IP should be included on the corporate risk register. Increased visibility would be a significant benefit; risk registers are at the heart of corporate governance. Executives can manage IP risk if they are aware of threats and problems that can arise from its mismanagement, especially when they

disrupt business as usual. But there can be negative consequences of such a limited view: IP generates value, as well as posing risk. Labelling IP as "risk" can inject unnecessary fear and delay into IP-related plans. This would be a retrograde step, as research by Massachusetts Institute of Technology into start-ups found that young companies that focused on IP were 35 times more likely to be successful.¹²

INCORPORATING IP INTO OTHER ROLES

One of the findings from the Aistemos survey suggests creating a dedicated IP team. The principal barrier to building a group of this sort tends to be cost. Neither buying in new skills nor training existing staff in IP are cheap solutions. In order to be effective, the IP team needs to have sufficient budget and resources behind it.

Building an IP team or appointing a CIPO represents significant progress for many firms. But experience shows us that it can be unhelpful to create silos within businesses. By analogy, when diversity first rose to the fore as a corporate issue, many businesses appointed small teams tasked solely with improving the balance of genders, races and sexual orientations. Though this resulted in some progress, it was only when every department, from HR to commercial, R&D to marketing, took it upon themselves to focus on diversity that real equality became an achievable goal.

"A firm that's made up of 80pc intangible assets wouldn't have a market value at all if these assets weren't being managed at least implicitly," said Heiden. "As with the quality movement that grew from a quality department to quality as a job for everyone, firms that are becoming more knowledge-intensive will need to not only have an IP department but a more ubiquitous understanding of IP across the organisation."

This challenge harks back to the recurrent theme of communication: it is essential that IP experts improve their methods of communication if their views are to be invited, welcomed, understood and integrated into wider corporate thinking.

Deloitte research found that while technology companies are adept at cross-department IP management, it is time for other sectors to play catch-up: "The twin currents of

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The impact of technology and innovation across business of all types, from pet food to autonomous vehicles, means that there is no business large or small that can afford not to consider the implications of IP across the entirety of the business.
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patent-law change and accelerating technological transformation and disruption have made it essential for business leaders to master the dimensions of IP management through a contemporary lens. While the experience and perhaps the edge in this case may lie with companies that have been steeped in technology for years, it is increasingly clear that these tides are affecting sectors that will find IP to be a completely new challenge."¹³

Swycher thinks that there is a common thread between survey responses in this area: "The impact of technology and innovation across business of all types, from pet food to autonomous vehicles, means that there is no business large or small that can afford not to consider the implications of IP across the entirety of the business. Anything less is just asking for trouble."

The consensus is clear: IP is for everyone, not just for specialists.

6. Navigating the intangible landscape - access to data

The big data revolution has made its mark on many industries from agriculture to e-commerce. Information about almost anything is available at the touch of a smartphone screen, and data providers such as Thomson Reuters and Bloomberg have built vast businesses distributing instant financial facts and figures. Yet the IP sector has remained to this point resistant to change.

This failure is attributable to one chief culprit: systemic data blindness across the IP industry. Information about different kinds of IP - even patents and trademarks, which are ostensibly in the public eye - is often difficult to access, or worse, can be inaccurate or incomplete.

THE PERILS OF DATA BLINDNESS

Business leaders would never be content to accept inaccurate or incomplete information about core financials such as revenue and profit, or settle for half a competitor analysis. But this is the position they find themselves in when it comes to IP. In a recent report, EY claimed that big data analytics was one of the most disruptive forces to impact deal-making.¹⁴ EY's forecast made no mention of IP as a sector facing change. Yet change it must.

Sir Francis Bacon once wrote "Ipsa scientia potestas est" ("knowledge is power"), and this has never been more true than it is today. IP data is increasingly becoming

a crucial component of corporate decision-making. Information about patents, trademarks, licensing revenue and other considerations can make or break deals and decide whether a new product is to be developed or a new service to be introduced. If up-to-date and correct IP data is not available, these strategic decisions are much harder to make. For example, even in USPTO data, the name 'International Business Machines' has over 800 permutations, which makes the patent database almost impossible to search effectively.

"Outside the major patent offices, there can be cases where filings are in a poor state, lost, or have other problems," says Justin Watts, IP partner at global law firm Freshfields. "It's hard to get one's hands on the data, so you have to work with that uncertainty. That means lots of warranty clauses in deals and an assumption that there will be a good degree of post-closing work so that IP rights go in the right places." This situation is far from ideal, he adds. "But we have to do deals in the context of the current system."

THE STATE OF PLAY

Aistemos' survey demonstrated a struggle to get hold of the right IP information within one's own organisation, let alone access data regarding IP rights in a client or competitor corporation (chart below).



There is a stark contrast between what is available to companies and what is accessible to their advisers. So while there is high quality information around in relation to registered IP, there is a relative sparsity of litigation, licensing and valuation data. This suggests that both the legal and accountancy profession need to find new ways of aligning themselves to the levels of corporate awareness of IP.

The research suggests that the advisory community knows that their clients have data, and they want to use that data to give better quality counsel, but they are being stymied by the current system. If this is the state of play with those with a degree of specialist knowledge, it suggests that data deprivation must be widespread in the mainstream.

DROWNING IN DATA

Last year, the Economist Intelligence Unit found that 60% of executives were already using big data to generate more revenue within their organisations, while 83% claimed that it was making their existing range of products or services more profitable.¹⁵ As companies produce increasing volumes of data, the insights derived from this information have the potential to be even more disruptive.

In the world of IP, data is becoming readily available, not only because of tools such as Cipher but also because of changes to how data is digitized and distributed. The EPO, for example, has opened up access to more than 90m patents through its free tool, Espacenet. Google has its own service providing indexed and searchable data through Google Patents. But it's almost impossible for a human to analyse this data efficiently - and that's where machines and AI enter the scene.

"There are large amounts of patent and IP related data available," says Michael Durst, chief executive and founder of Itonics, an analytics and software firm supporting R&D. "This means more data that has to be researched and analysed and evaluated. It's coming from all over the world now, especially China and the US. But the big data revolution has not really arrived; it's still in the making." Yet many of the systems devised to help companies access and manage IP data have not kept pace with the clients they serve. "A lot of the existing software looks like

it's from the eighties," Durst says. "Companies are still turning to external resources, such as specialist law firms, to fill the gaps. Companies like Aistemos are showing that it's possible to cherry-pick the relevant data and analyse huge pools of data, but it is early days."

As the available data pool swells and machine learning becomes more sophisticated, it will become increasingly possible to crunch information in a way that is useful and effective. "There's no doubt that the direction of travel is consistently towards more complete datasets and better access to data," says Freshfields' Watts. "But there's still a long way to go."

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AN INCOMPLETE PICTURE IS BETTER THAN NO PICTURE AT ALL

Customers shopping with the e-commerce giant Amazon have become accustomed to the use of big data to prompt suggestions regarding new purchases. Sometimes the algorithm gets it right; other times the products listed miss the mark. Consumers and businesses alike accept that big data cannot always give a precise answer - but that it may provide a helpful nudge in the right direction. This is true of IP data as well.

"You know you're looking at an incomplete picture, but tools like Cipher give you enough information to ask the right questions," says Watts. "Cipher's reports were very useful in a recent transaction. I was able to rapidly get to grips with a company's IP structure and identify two dozen key questions about how the company operated its IP and the vulnerabilities that needed to be addressed. That ability to ask sensible questions was very important indeed. The alternative is to do nothing, which is worse. It is possible, given unlimited time and an unlimited

budget, to dig out most of the IP information that is pertinent to deals,” he adds, but that is rarely an option. “We work on very short timescales in M&A and clients are very cost-sensitive.”

“Results aren’t always clear when reviewing available data,” admits Durst. “You must ask yourself if this really provides a clear view, or are we just looking at a specific segment. Can we compare this data to other datasets? But it’s better to look at incomplete data than look at nothing at all. Even a data set that is only 80pc complete gives you a solid idea of what’s going on in the market.” Corporations in established industries often know what their large rivals are working on but struggle to keep up with innovations at smaller firms or start-ups, which may be moving in new and unforeseen directions. Similarly, companies tend to understand their own sectors but have more issues when entering new technology areas.

Both Watts and Durst see tools such as Cipher as being a tool for innovation rather than a weapon for litigation. “Innovation isn’t about just having an idea and creating a product, it’s about finding where the opportunity lies,” Durst explains. “If you can see patents were filed in the last three years in the markets you’re playing in, or are looking to move into, you can decide what to focus on.”

WORKING TOWARDS A MORE INFORMED FUTURE

In recent years, new online databases have been launched, attempting to provide accessible resources for those outside the IP bubble. Cipher does exactly that: aggregate, analyse and, importantly, visualise IP data to support strategic decision-making.

IP experts all seem convinced that within the next decade, big data and the move towards further transparency in the IP sector will make it much easier for companies to find opportunities, innovate, and protect their know-how.

Swycher predicts the future in this way: “In a world where innovation is the life and soul of major companies, it is essential that there are reliable ways to measure and compare performance. There is no shortage of data, and advances in artificial intelligence and machine learning now make analysis available to everyone. In five years, we will be faintly amused that it took so long to bring transparency and understanding to the world of IP.”

Trust will be more and more crucial as time goes on. It will not be enough to access the right IP information, but rather it must come from a trusted provider who can break down and analyse these vast swathes of facts and figures and present them in a format that is digestible by everyone at all levels, and not just by the IP experts.

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7. Investor understanding - mind the gap?

Followers of hit BBC television show Dragon’s Den have witnessed many entrepreneurs failing to secure funding because of inadequate IP protection. The investors demand to know if the pitching business owns a particular patent or trademark, only to declare themselves “out” if the answer is “no”. However, the Aistemos research suggests that the Dragons are unusually savvy about IP: most investors will buy a stake in a company with little or no knowledge about the value of its intangible assets.

The survey asked whether investors understand IP when acquiring shares in a company, and the results were alarming.

The vast majority of respondents investing in both public and private sector companies (over 80%), claim that investors generally do not understand the value of intangibles (chart below). A significant proportion (14%) said that investors in public companies never assess intangible assets (see appendix 1, question 10).

CAVEAT EMPTOR

IP value should be a driving force behind investment decisions in both private and public companies. If investors buy shares without the relevant information, they are transacting in the dark.

“The assets of a company are often like an iceberg,” explained Scott Bell, head of UK investment banking at Deutsche Bank. “You can see the physical assets above the surface, and they are on the balance sheet; below the surface where most of the value resides in the form of intangible assets you can see very little. The trademarks and patents that a company creates are not on any balance sheet, nor are they often even referred to in the notes to the accounts or more generally by management. Think brand Coca-Cola or Intel patents and realise how bizarre that is.”

The iceberg analogy should warn the financial world of the scale of the problem; without understanding IP, the investor is like the Titanic, sailing into danger without

Do investors understand the intangible assets (including IPRs) of a company when acquiring shares?

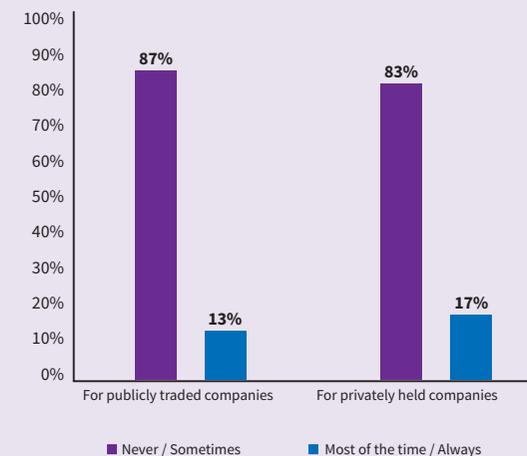


Chart 9: Investors

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forewarning. In the absence of a firm grasp of a company's IP, investors could be unaware that certain products and services cannot be sold in other territories or that there is the potential for additional licensing revenue. The teams within companies see the problem in the same way: “Investors and fund managers are really bad about understanding IP,” said Bayer's Thomaier. “They count numbers and ask about litigation and expiry date. What's not understood is what really happens. I doubt they investigate IP sufficiently enough.”

But how can investors assess the value of intangibles when companies themselves are often also badly informed? While auditing financials is mandatory, many companies do not routinely conduct an IP audit. Swycher thinks this is part of the problem: “At a time when companies are buckling under ever-increasing rules and regulations, people instinctively avoid doing things they don't have to. With increasing awareness of the importance of IP, things are beginning to change.”

A DEARTH OF INFORMATION

There are only a handful of industries where investors are savvy about IP. The pharmaceutical sector is understood to be the most advanced; IP is the foundation on which new drugs and treatments are built. But as the number of IP-intensive industries increase in not only technology, media and telecoms but also automotive, financial services and energy, the number of investors with a keen interest in the value of intangible assets is increasing.

“So much of the value of a pharma company can be in a single molecule underpinning a blockbuster product, such as Lipitor,” said Bell. “Beyond that, when it comes to patents, I can honestly say that they are only on the radar screen of investors when the target is involved in litigation. But to be fair, if the company gives little or no disclosure on their patent portfolio, and the investors do not have the tools to understand from the outside, how could they?”

The information that is available is often incomplete or out of date. Many of the traditional resources are also very difficult for the layperson to read or understand. Time-poor investors, who are used to reading financial reports, would greatly benefit from access to IP data that is instant, clear and easily understood.

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Investors and fund managers are really bad about understanding IP... they count numbers and ask about litigation and expiry date. What's not understood is what really happens. I doubt they investigate IP sufficiently enough.

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Robert Trezona, head of cleantech at IP Group, the innovation investor, said, “There are a number of providers of patent analysis databases, and patents themselves can be readily searched using free online tools. However, conventional tools deliver qualitative results and group patents based on existing database fields such as inventor and keywords. They do not quantify the value or risk of a patent and struggle to make natural language associations between similar patents that happen to use different keywords.” The challenge, therefore, is to make useful data accessible.

Swycher couldn't agree more. “After 25 years of advising companies on the importance of IP to M&A and commercial transactions more generally, my frustration was not having the data in a form that could be shared across teams. Cipher, our analytics solution, was developed specifically to address that problem.”

WHERE DOES RESPONSIBILITY LIE?

The question puzzling many industry insiders is this: does the buck stop with the investor or with the business? Do investors assume that all the necessary information about company value will be included in a prospectus, or will it be reported by analysts? Where does the onus lie?

“Directors of innovative companies have a fiduciary duty to ensure they understand the company IP, but investors in IP-rich technology companies should ideally understand IP too,” argues Trezona. Steven Lewis, managing director of Randolph Square IP, which helps companies to value their intangibles, was a contributor to the recent Aistemos report. He told the researchers that some of the fault must lie with the professionals who are paid to look beyond the financials: namely, the analysts. Unlike retail investors, analysts are likely to have access to the information that can help them assess IP value. “This is one of our real areas of focus,” he said. “We are working with analysts who should really have a view of the IP portfolios owned by companies. But, while the typical analyst will realise the IP is there, it's not an element that is focused on in their reports.”

However, some experts suggest that investors may not be as poorly educated about IP as they appear to be. While terms such as “patents” and “registered rights” might be alien to them, others such as “brand value” and “market share” are more familiar. According to Paul Morton, who was recently appointed tax director at the Government's Office of Tax Simplification, some investors understand IP value very well but don't refer to it explicitly. “Software, people, capability, customer, value creation: this is the language often used. It's possible that the label 'IP' may never appear.”

HOPE FOR INVESTORS

It seems clear that greater IP transparency and understanding will only come about if pressure mounts on both investors and companies. The combined forces of push and pull, i.e., the push from inside innovative companies and the pull from the investor community, could drive real change.

Many people who have been watching developments in IP dream of a day when intangibles sit alongside financial information on the Bloomberg terminal, and that day may not be far off. According to Bell, “Investing without access

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Investing without access to IP signals, which represent three quarters of the value of a company, will seem archaic ten years from now.

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This is partly due to the ‘survival of the fittest’ adage. As Trezona noted, “Institutional investors in technology companies who lack this understanding will not last long.” But it is also due to the technological evolution that is affecting every industry and sector.

IP asset management is evolving quickly, and we are certainly no longer in the dark ages. There are many companies now aggregating and analysing the existing and ever-increasing amounts of IP data. As investors become more aware of the power wielded by such tools and platforms, more will choose to invest time and resources into investigating the true value of IP to their portfolio companies.

Conclusion

IP was once seen as a specialist topic, accessible only to those working within the specialist and insular domain, but attitudes are changing. Executives from every industry and across every corporate function now recognise the myriad of ways that IP affects their departments, bringing both opportunities and challenges.

Patents and trademarks are no longer viewed in isolation, but are considered as part of the overall mix of assets that contribute to a company's ongoing success. This is because of a "carrot and stick" evolution within the overall economy. On the one hand, IP litigation is on the rise; on the other, licensing remains a beneficial way to generate high-margin revenue or to bolster status in a specific ecosystem.

This report has shown that there is no one-size-fits-all approach to IP. Each organisation must tackle the issue in its own way. This may involve creating a team dedicated to innovation, appointing a CIPO, adding IP to the risk register, or better communication to ensure all stakeholders factor IP into their long-term strategies. It is also clear that some industries are more IP-savvy than others. The technology and pharmaceutical industries continue to lead the way but the rest of the business world is or will soon follow suit.

There are some IP issues on which opinions differ: how much influence should be locked into the specific legal or IP functions. The report suggests that more team based and business-led approaches are beginning to find favour. But all contributors to this report are united behind one particular banner: the need for better, more reliable IP data.

There are several players in the marketplace, including Aistemos, helping to make this goal a reality. There is no question that greater IP transparency is essential, but the pace of change relies heavily on whether the world's innovators choose to be active participants or passive subjects in this transformation.

Aistemos, April 2017

End Notes

Chapter 1: The rise and rise of the intangible asset

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Chapter 2: How IP became the strategist's darling

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Chapter 5: Grasping intangibles – IP can slip through your fingers

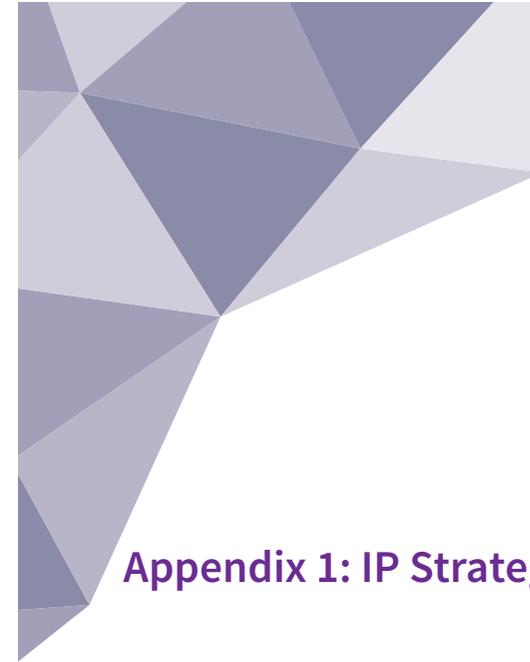
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Chapter 6: Navigating the intangible landscape – access to data

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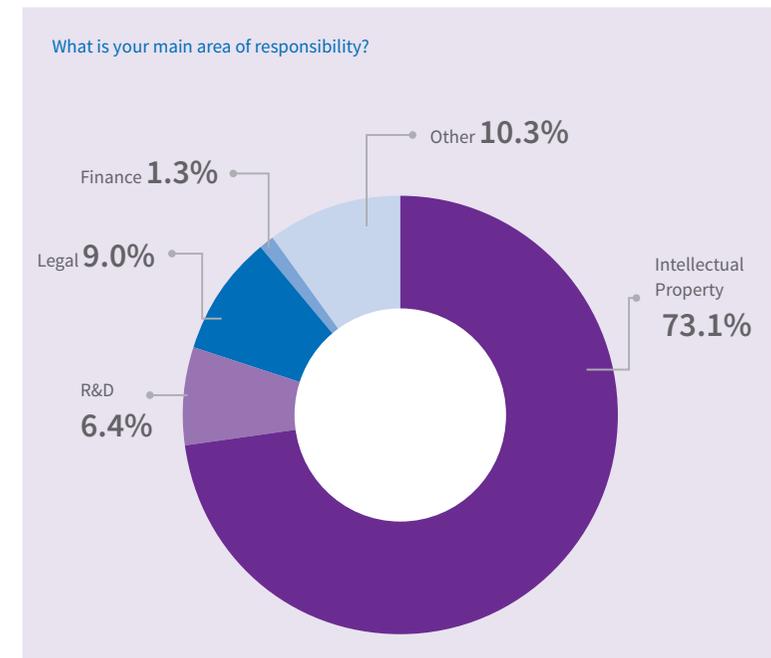
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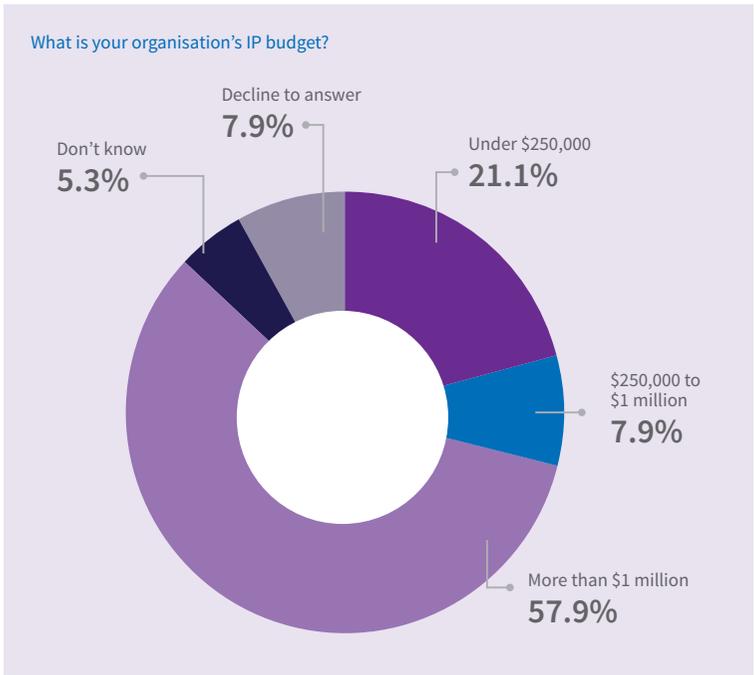
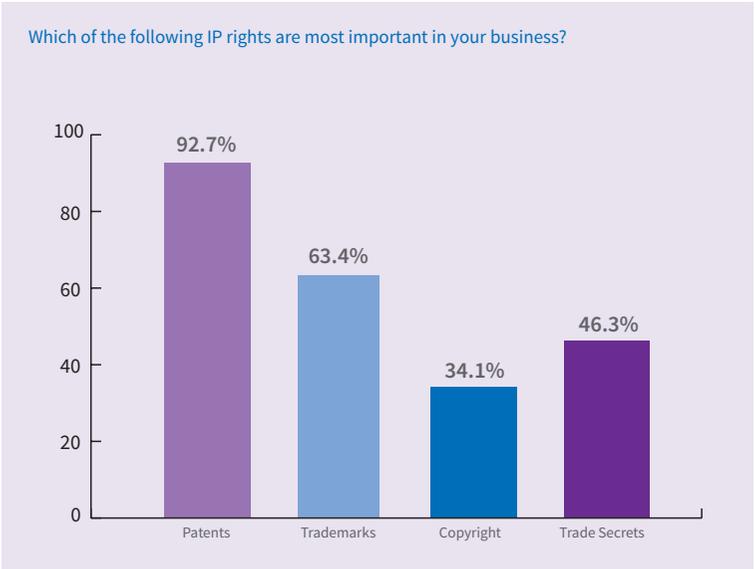
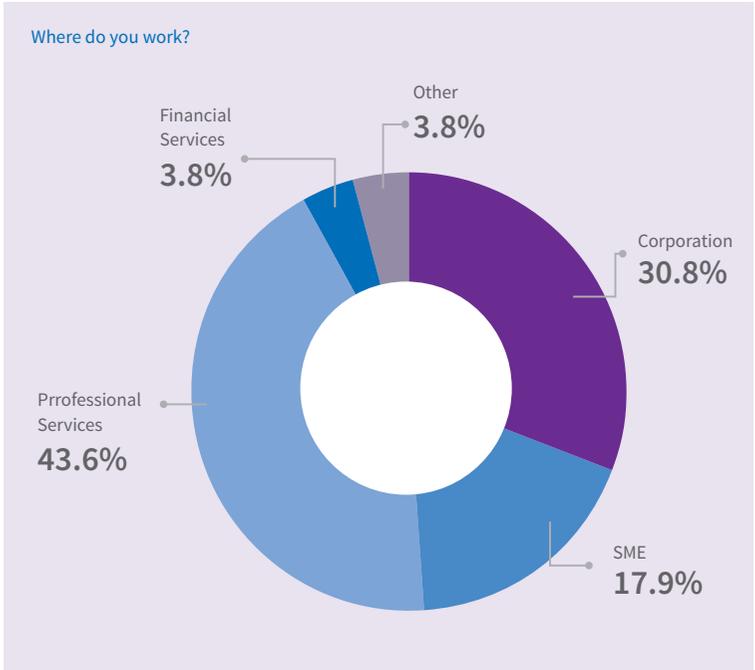


Appendix 1: IP Strategy Survey Results

ABOUT THE PARTICIPANTS

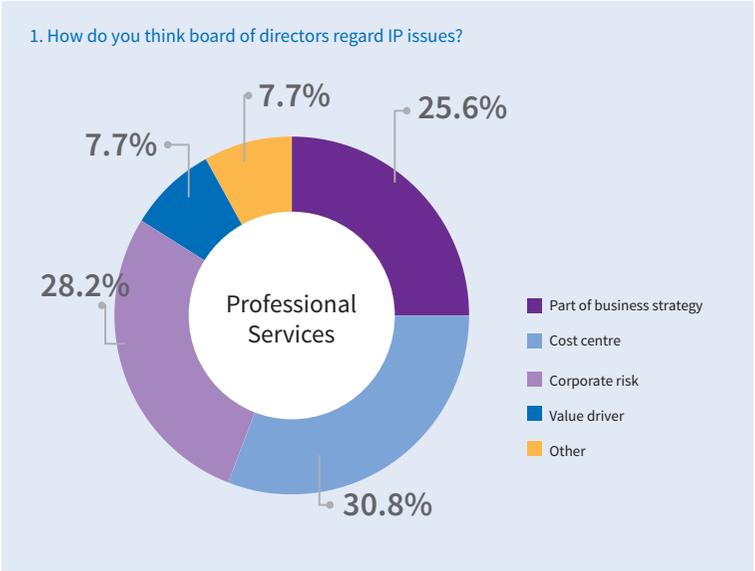
We surveyed over 70 professionals who work within major corporations, SMEs, professional services and financial services. Their main area of responsibility lay in Intellectual Property, R&D, Legal and Finance.

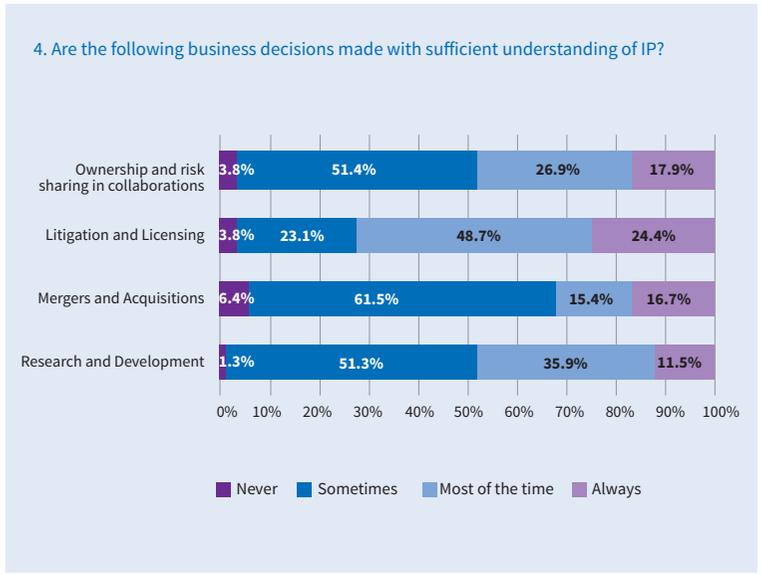
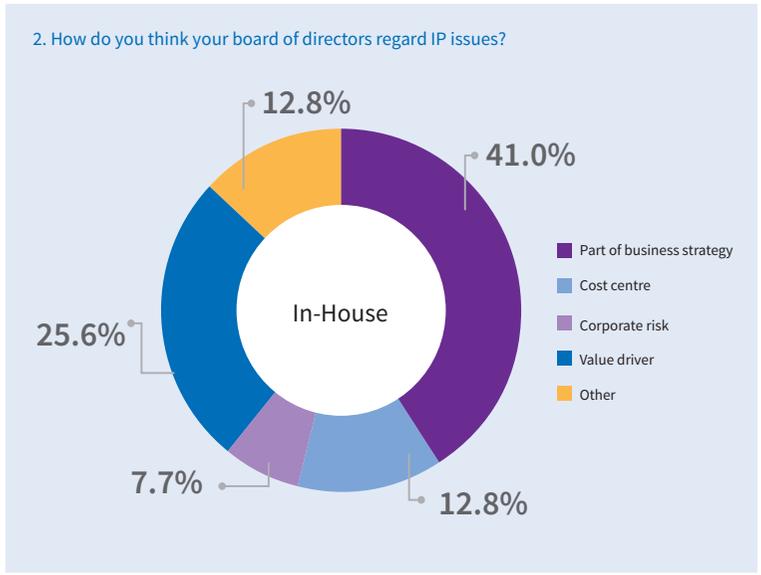




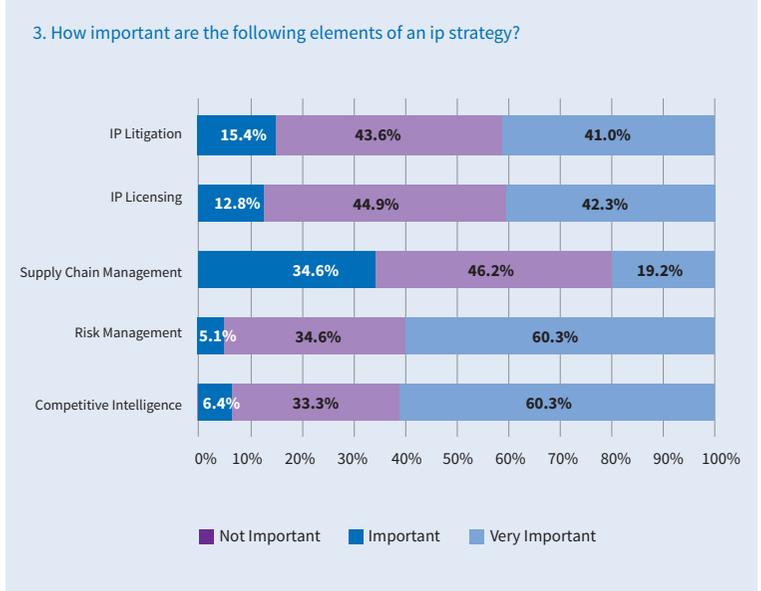
The participants were asked a series of questions regarding to IP Strategy. Their responses, organised by theme, are set out below.

VIEW FROM THE BOARD

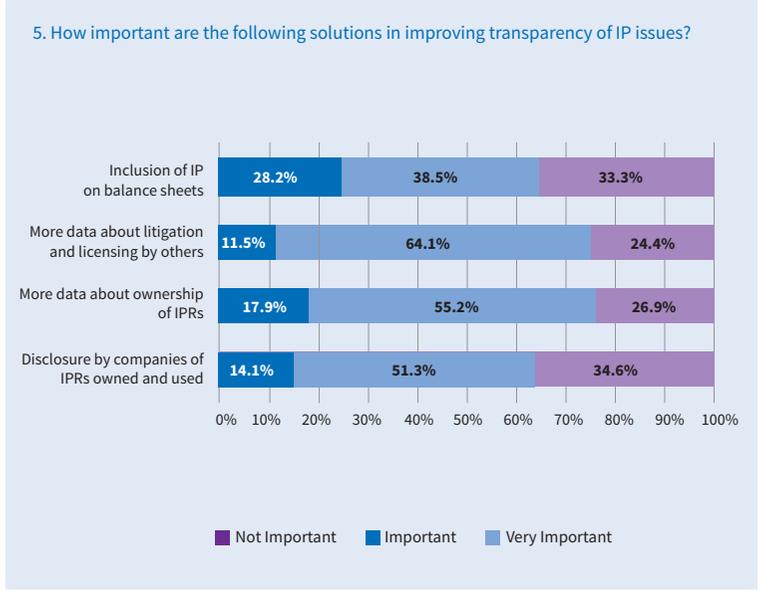




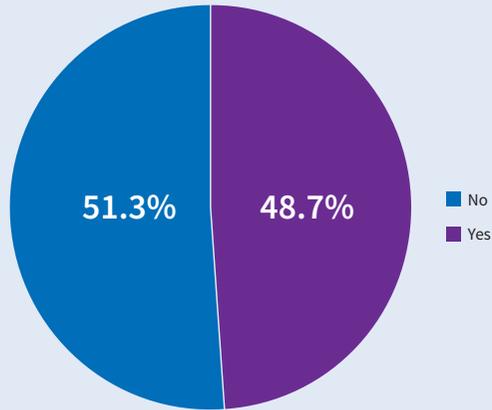
ELEMENTS OF AN IP STRATEGY



IP TRANSPARENCY

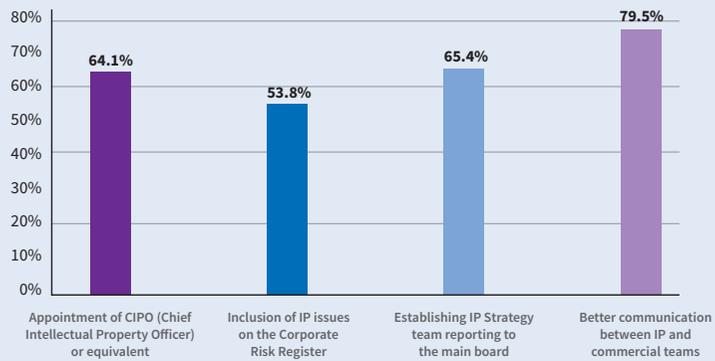


6. Should companies be more transparent about their IP strategy?



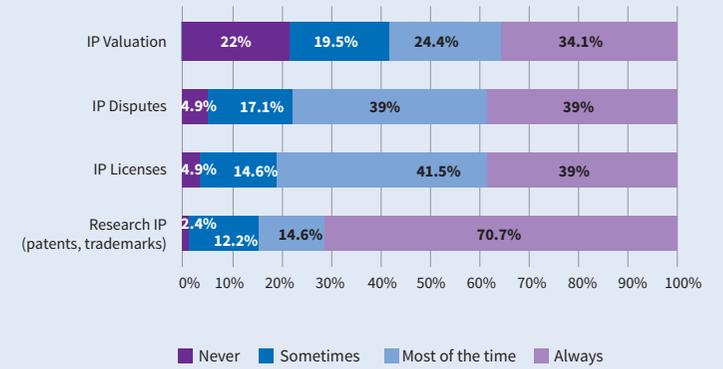
MANAGEMENT OF IP

7. What measures should companies take to improve the management of IP issues?

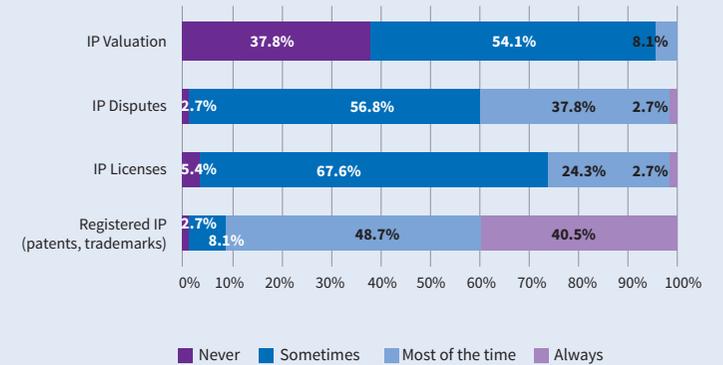


ACCESS TO IP INFORMATION

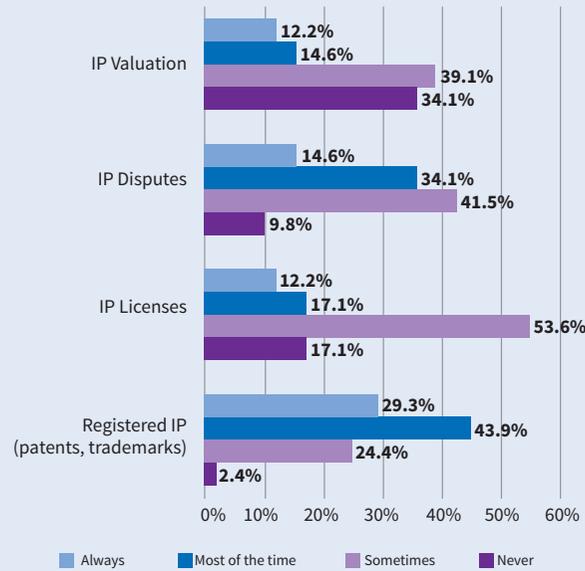
8.1 (In-house): Do you have access to the information you need relating to your organisation's IP?



8.2 (Professional Services): Do you have access to the information you need relating to your client?

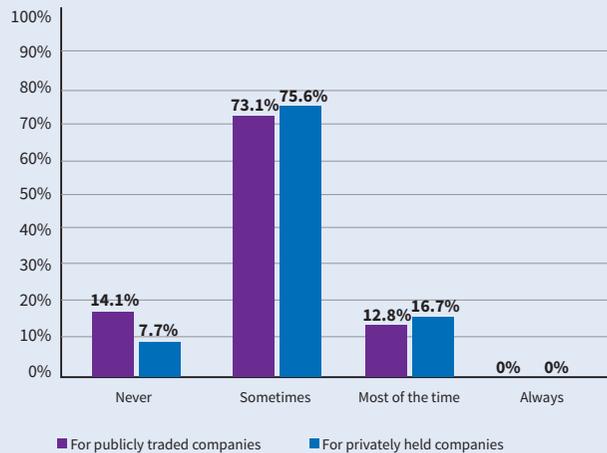


9. Do you have access to the competitive intelligence you need relating to third party IP?



INVESTORS

10. Do investors understand the intangible assets (including IPRs) of a company when acquiring shares?



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- Chung, Charlotte | enterprise and innovation policy adviser, Federation of Small Businesses
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- Dadarkar, Janhavi | course leader, Institute of Directors
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- Weibel, Beat | chief IP counsel, Siemens

DOES EVERYTHING HAVE TO BE SEEN TO BE BELIEVED?

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