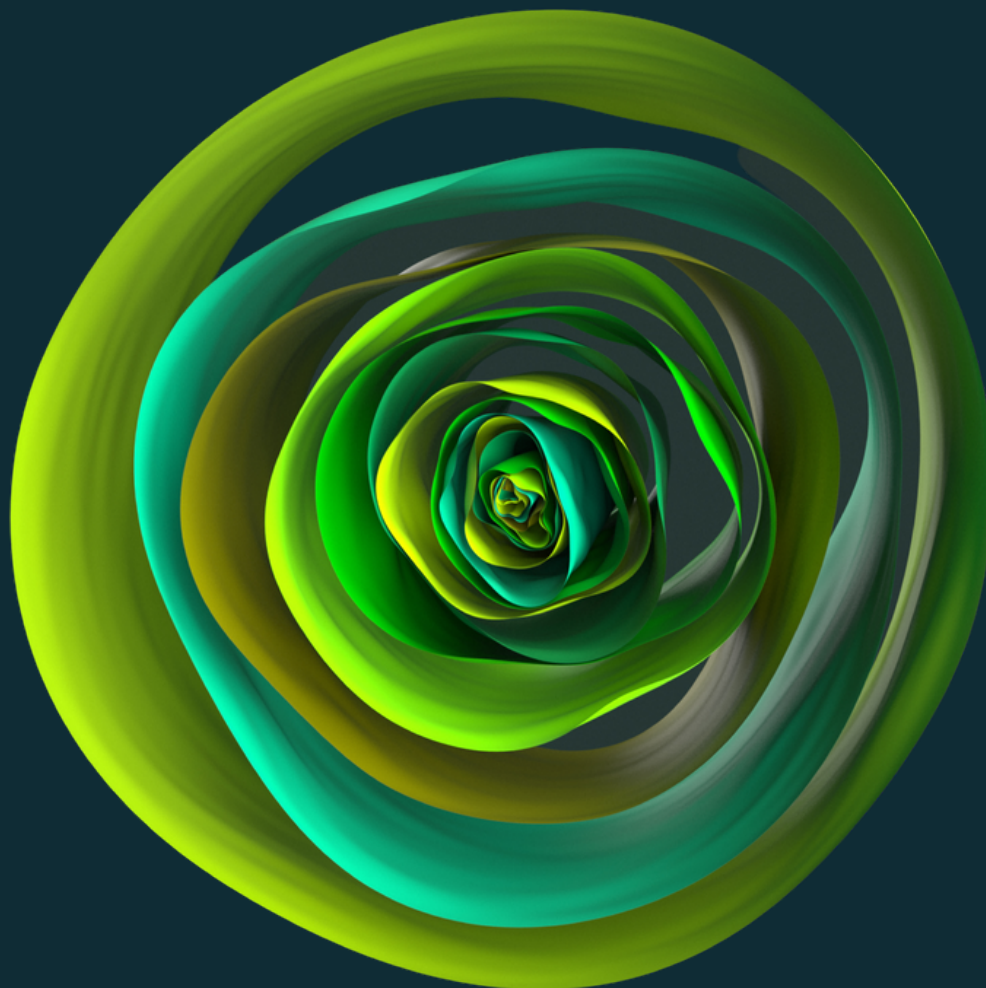


A PAPER BY DENNEMEYER CONSULTING

# SUSTAINABILITY

IN THE INTELLECTUAL PROPERTY LIFE CYCLE



## Sustainable growth through sustainable IP

Unleash the power of IP and innovation to  
realize business success



How to integrate  
sustainability aspects  
into IP and corporate  
strategy

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An aerial photograph of a terraced rice field, showing the intricate patterns of the terraces and the lush green color of the rice plants. A small, dark-roofed house is visible on a hillside in the upper right corner. The overall scene is a mix of natural and agricultural elements, with the terraces following the contours of the land.

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# Expectations

Many large and small businesses welcome the focus on sustainability

Businesses worldwide are increasingly expected to prioritize environmentally and socially responsible practices and act “sustainably” as an organization. Scrutiny may come from investors, customers, staff or business partners, and such pressure often means it is not enough to act sustainably. To cultivate the right perception, it is necessary to demonstrate sustainable operations through reporting, decision-making and marketing. In the EU, for instance, the proposed **Corporate Sustainability Reporting Directive (CSRD)** would expand reporting requirements for all large companies and those listed on regulated markets. This directive would introduce more detailed disclosure obligations while mandating audits of published information and the digital tagging of data.

There are also voluntary initiatives: Last year, a group of more than 70 companies agreed on the **Stakeholder Capitalism Metrics**, a set of universal disclosures on environmental, social and governance (ESG) issues. In cooperation with the World Economic Forum, these international companies pledged to incorporate the agreed metrics into their published materials (including annual and sustainability reports). Among the **70 initial signatories** were BP, Dell, Heineken, HSBC, IBM, Mitsubishi, Petronas, SAP, Unilever and Wipro. It is worth noting that the companies involved represent a broad range of sectors, from energy generation and heavy industries to financial services, consumer products and entertainment.

Many large and small businesses welcome the focus on sustainability, even finding that this new emphasis aligns with programs they were already committed to. However, it can also prompt difficult or uncomfortable decisions

regarding pricing, investment, supply chains or even the organization's strategic direction. Intellectual Property (IP) is vital to the success and furtherance of innovation and creativity, and so it follows that sustainability should also be integrated holistically into IP strategy and management. This means considering ecological and community priorities at all stages of the IP life cycle: R&D for identifying and creating new inventions, procurement of exclusive rights, portfolio management and valuation and, finally, commercialization.

While that may sound challenging, there are many touchpoints where sustainability can be integrated into a sound IP strategy. Moreover, as this paper will show, IP can be a powerful way to demonstrate to stakeholders what a business is achieving in terms of environmental protection and how it is delivering on expectations.

## Companies can not afford to ignore ESG goals any longer

IP can be a powerful way to demonstrate what a business is delivering on expectations.

# What is sustainability?

Sustainability incorporates environmental as well as human, financial and social aspects

Many organizations now concentrate on ESG matters, which can include everything from cutting carbon emissions to embracing equal opportunities and promoting boardroom accountability. Probably the most helpful and comprehensive definition is provided by the [United Nations' 17 Sustainable Development Goals \(SDGs\)](#).

The SDGs are at the center of the 2030 Agenda for Sustainable Development, adopted by all UN member states in 2015. The targets of the Agenda span from ending poverty and reducing inequality to improving health care and education. There is also a focus on economic growth while tackling climate change and preserving our oceans and forests.

Sustainability, therefore, incorporates both environmental aspects (such as reducing excess packaging, switching to cleaner fuels and recycling) and broader awareness that includes responsible use of resources, efficient operations and providing long-term value to society. This second facet involves approaching business conscientiousness from various perspectives: human, financial and social.

Regarding the first component, we increasingly see companies promoting green products and services: automakers switching to electric vehicles, energy companies investing in

renewable sources and retailers providing reusable bags and other containers. Much of this shift relies on new technologies or improvements to existing processes to make them more efficient and less wasteful. This is where IP comes into play, incentivizing these innovations and getting them to the market. For example, IP practitioners can drive this change by carrying out portfolio assessments that identify ecological benefits in existing technologies, harvesting suitable inventions and mapping their IP assets against green metrics.

The second element is more complex, but again IP has a significant role. Consistent value can be generated by licensing IP rights for technology transfers. This can include delivering innovation to new geographical markets or customer segments. Creative licensing can also ensure that discoveries are fully exploited by accommodating new applications for existing inventions, whether it is a repurposed drug, a manufacturing technology integrated into a consumer product or a software program adapted to a new function.

Investment in innovation and IP protection can provide far-reaching advantages to staff, customers and investors, creating a financially solvent and socially supportive business that is adapted for success and contributes positively to society.



# Creating a sustainable IP portfolio

Innovative businesses that wish to prioritize social and environmental factors should start with the invention harvesting and assessment processes. The focus at this point should be on inventions addressing one or more SDGs or similar targets. This approach has the potential to deliver on both aspects of sustainable practice. Firstly, external influences (e.g., governments or investors) tend to emphasize products and processes that will benefit the environment. By implementing these, companies foster their own economic and social viability and deliver on the second aspect as a result. That is to say, by reducing energy expenses or wasted resources, additional value is provided to investors, direct stakeholders, and even society in general.

This methodology contributes to an IP portfolio aligned with overall corporate (sustainability) strategy and external demands. Practical examples include manufacturing companies developing machinery that uses less power or transport companies that develop more efficient systems. Pursuing the aim of sustainable asset creation involves cultivating a corresponding culture for inventors, researchers and IP specialists, among others. Parts of such a culture could be special incentives for eco-friendly innovations and invention disclosures

or, overarchingly, a flat hierarchy and forgiving company setting to foster new ideas and solutions. IP managers have a great deal to contribute in this respect alongside experts from other corporate functions.

When it comes to patenting green inventions, particular care should also be taken to identify sustainable claims or applications. Doing this can aid the compilation of internal or external documentation of SDG efforts or potentially help obtain funding. Several tools are available to help with this task, especially for environmental technologies.

For example, to tackle the problem that environmentally sound technologies are scattered widely across the International Patent Classification (IPC), the [IPC Green Inventory](#) was developed to gather this information together. The Inventory provides data on IPC codes to facilitate searches as well as direct links to relevant international patent applications through PATENTSCOPE. Its hierarchical approach covers alternative energy production, transportation, energy conservation, waste management, agriculture / forestry, administrative, regulatory or design aspects and nuclear power generation. The European Patent Office has also developed the [Y02 / Y04S](#)

**patent classification scheme** dedicated to climate change mitigation or adaptation technologies and published **many pertinent studies**, including "Patents for tomorrow's plastics" (2021), "Patents and the energy transition" (2021) and "Innovation in batteries and electricity storage" (2020). These are a valuable resource for researching industry trends, innovation gaps and competitor activity.

Some national or regional patent offices also offer inducements for green tech. For example, the United Kingdom Intellectual Property Office's **Green Channel** (launched in May 2009) affords accelerated patent application processing if the invention has an environmental benefit based on the applicant's "reasonable assertion." As of May 2022, **2,997 Green Channel applications** had been published.

Aside from categorizing a company's IP portfolio according to environmental concerns, specific research for these classifications can also serve to identify potential technologies to license or acquire, especially if relevant capabilities cannot be developed in-house and need to be obtained from outside. Green classifications make it possible to track trends and identify opportunities and risks across the IP landscape.

## Maintaining a sustainable IP portfolio

Sustainability metrics can help future-proof an IP portfolio

Patent specialists can use the aforementioned new classifications and related tools to spot opportunities in their own portfolios and use collected information to identify value drivers or inhibitors. R&D activities can then be increased

in fields pertaining to sustainability drivers, while technologies that no longer contribute to the general strategy or are not future-proofed may be dropped or sold. Indeed, regularly reviewing and assessing whether there are parts of a portfolio that can be discarded is a critical aspect of financial planning. Outside advice is invaluable here, too, as it provides an independent perspective on where value lies, unencumbered by personal involvement or history. Whether conducted with or without external consultation, existing processes can be challenged and refined based on detailed review and analysis according to new sustainability goals and requirements. All of this can, of course, also be carried out in comparison with competitors' activities or industry benchmarks.

Decisions about which patents to maintain should acknowledge the current and expected regulatory environments. For instance, are there any technologies outlawed or restricted by government policy, such as diesel and petrol engines or plastic containers? Are you engaged in activities or research areas that could be targeted by campaigners, leading to reputational damage or the loss of markets? Are there assets that can be better deployed in other areas, such as fossil fuels switching from the automotive to the marine sector?

**Sustainability should be integrated into a good IP strategy**

**In almost every part of the IP life cycle, sustainability aspects can generate added value.**

# A sustainable IP department

Incorporating attainable goals into all operative levels

Making good use of automation, lean processes and appropriately-sized portfolios are all part of becoming a sustainable IP department, as is promoting a work environment that is healthy, unbiased and ethical.

At the heart of this approach should be a long-term focus on incorporating sustainability into all aspects of IP management to support efficient working and build value. These efforts are best undertaken in cooperation with other parts of the business, with wider strategic decisions being taken following interdepartmental discussions.

Allied to this organizational mindset is sustainable knowledge management. This ensures that IP know-how is retained in the event of business disruption, staff departures or corporate restructuring / realignment. This way, key priorities and plans can proceed with minimal interruption, increasing company efficiency (because time does not have to be wasted on duplicated tasks) and driving business stability (because strategic goals dictate corporate direction).

It is also vital to consider external factors that may play a role in deciding where to file or renew IP rights or establish new businesses. For instance, do you take account of a country's environmental or social governance record? In other cases, decisions to patent or invest in a particular territory can encourage the move toward sustainability by, for example, promoting genuine products rather than harmful and poorly-made counterfeits. In

addition, should the time spent traveling and the ecological damage caused be a factor in attending hearings, meetings, conferences, etc.? ESG issues should also be attended to when working with licensees / licensors or joint venture partners. Even if you have watertight policies, a business partner's potential failings can rebound on you – impacting your own ESG rating, public perception and your ability to conduct other deals. Sustainability should be a clear and well-considered element of due diligence alongside the other established criteria and should be part of every deal and negotiation.

Finally, do not neglect outside suppliers, including IP attorneys, investigators and other service providers: Should they be required to meet minimum ESG expectations? Do you have specific requirements regarding sustainability set out in writing, and are these reviewed regularly? And do these apply only to direct suppliers or to those further along the chain? Even if it is not the case already, an ESG assessment will likely be a common factor in the appointment and retention of service suppliers, as anti-bribery or money-laundering checks are today. Precisely what this will involve will vary from business to business. Some elements that are likely to be important are diversity and inclusion policy and gender / race / LGBTI metrics; plans to reduce emissions; charitable initiatives; travel policies; working environment and responsible consumption targets. It may be possible to have one-size-fits-all policies, but in many cases, it will be more practical to tailor them by region or industry.



# Sustainability as IP-value driver

It is interesting to note that sustainability as a value driver has often been neglected until now, especially in the practice of IP valuation. The monetary valuation of IP is both a science and an art in itself, and numerous factors influence the value of a patent, technology or trademark.

Therefore, it makes sense for environmental and societal impact to be one of them. But how do you achieve this within the boundaries of complex IP valuation frameworks?

The 17 SDGs (and their 169 total targets) provide a good starting point. Applying this scheme, the IP portfolio to be valued can be mapped against the most relevant SDGs (and their sub-goals) to assess how it contributes overall. The higher the degree of contribution, the greater the value-adding factor.

Such added value can be significant for high-impact environmental technology startups, and the many established companies that want to demonstrate internally or externally the extra capital their IP generates by being sustainable.

Social and environmental accountability has become crucial to businesses now that investors and fund managers attach great significance to it. Indeed, there is a growing number of investors who will only consider sustainable

investments. That means corporate responsibility has to be considered in fundraisings, initial public offerings, mergers and acquisitions and other forms of collaboration.

It also means that it is not enough to look at the environmental aspect when conducting due diligence, including on IP portfolios — embracing a holistic understanding of sustainability delivers investors greater long-term value and security.

Therefore, a rigorous and transparent focus on ethics can drive corporate value, creating a premium both in monetary and reputational terms. This, in turn, creates better business opportunities (partnering, mergers and recruitment) than could be expected by organizations that are not viewed as favorably.



# A holistic approach

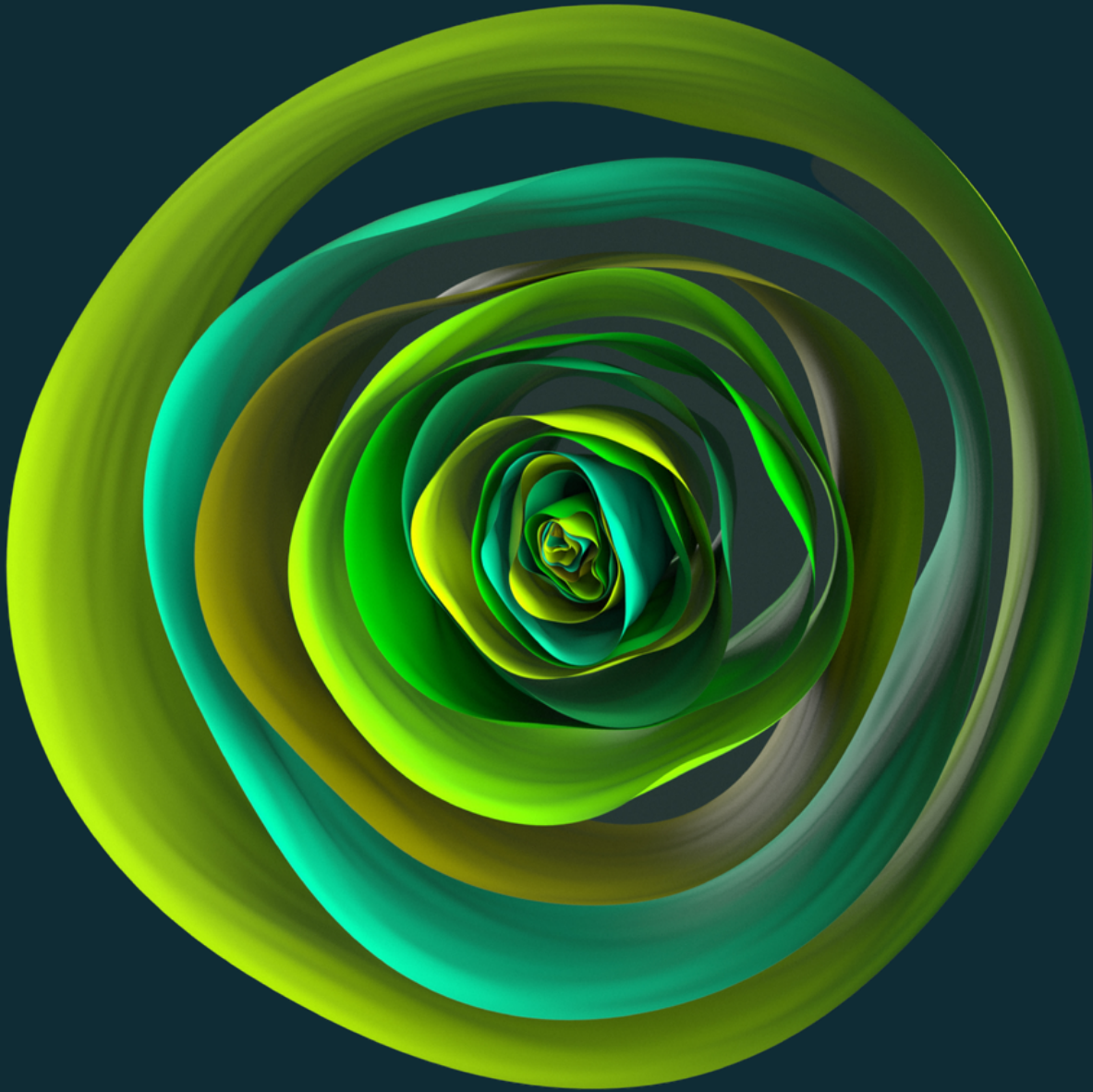
Areas where IP can contribute to a company's overall sustainability goals

The best approach to sustainability in IP is a holistic one, making it a key consideration in all stages of the IP life cycle. As this paper has shown, there are many areas where IP can contribute to a company's overall sustainability goals. Addressing all of these will only become more important as investors' and regulators' focus on ESG intensifies.

By integrating sustainability aspects into IP and corporate strategy, significant improvements can be made to everything from invention generation to IP protection strategy, portfolio management, IP valuation and commercialization. Ultimately, the aim is to contribute more significantly to social and ecological goals, ensuring that the IP portfolio and department deliver greater value to the business and the wider world.

**It is not enough to look at the environmental aspect**

Embracing a holistic understanding of sustainability delivers startups, established companies and investors alike greater long-term value and security.



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