

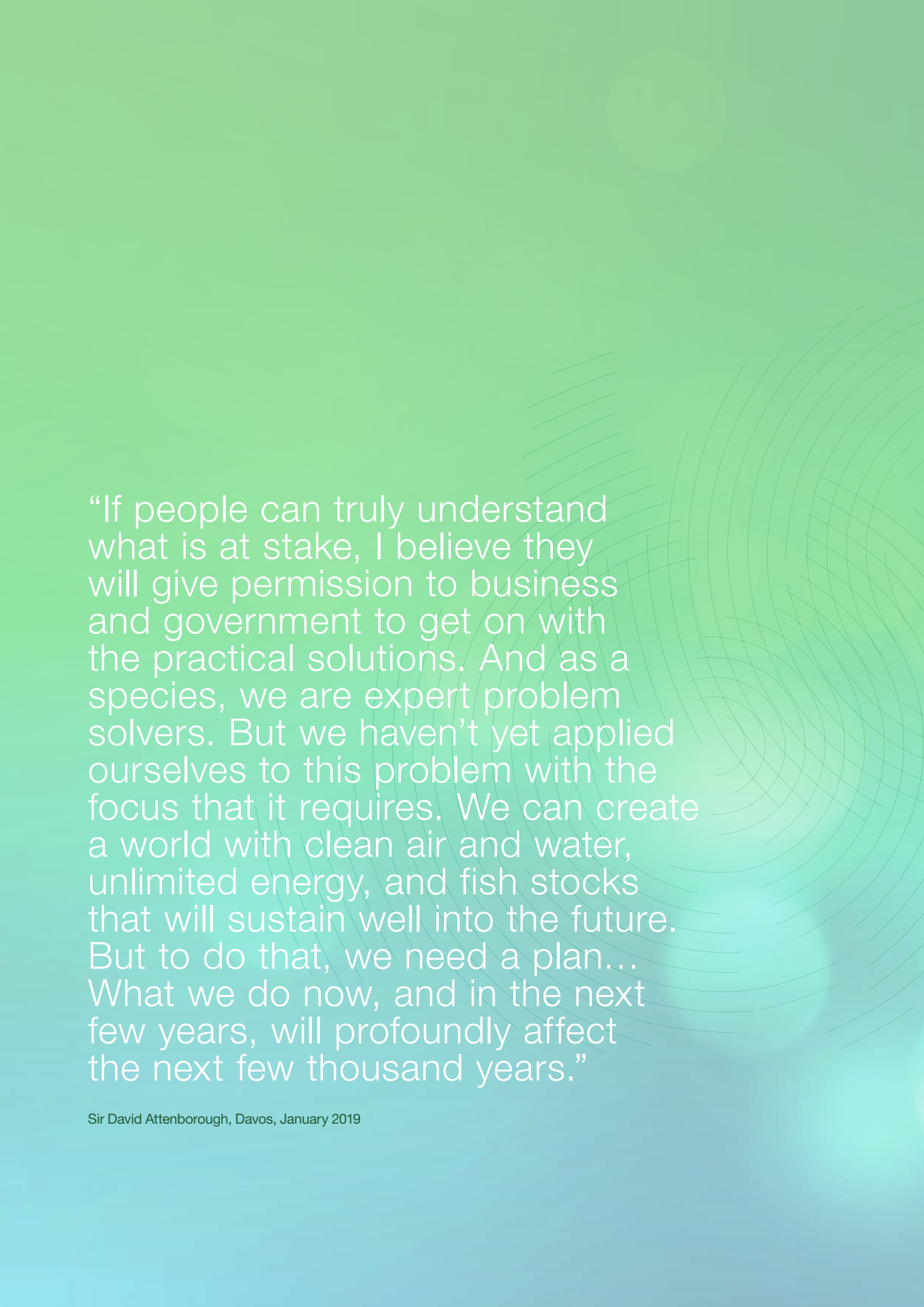


WIPO GREEN Strategic Plan 2019–2023

Accelerating the transition
to a greener global economy



WIPO | GREEN
The Marketplace
for Sustainable Technology



“If people can truly understand what is at stake, I believe they will give permission to business and government to get on with the practical solutions. And as a species, we are expert problem solvers. But we haven’t yet applied ourselves to this problem with the focus that it requires. We can create a world with clean air and water, unlimited energy, and fish stocks that will sustain well into the future. But to do that, we need a plan... What we do now, and in the next few years, will profoundly affect the next few thousand years.”

Sir David Attenborough, Davos, January 2019

Mission

An online platform for technology exchange that will contribute to the accelerated adaptation, adoption and deployment of green technology solutions by connecting technology providers with technology seekers.

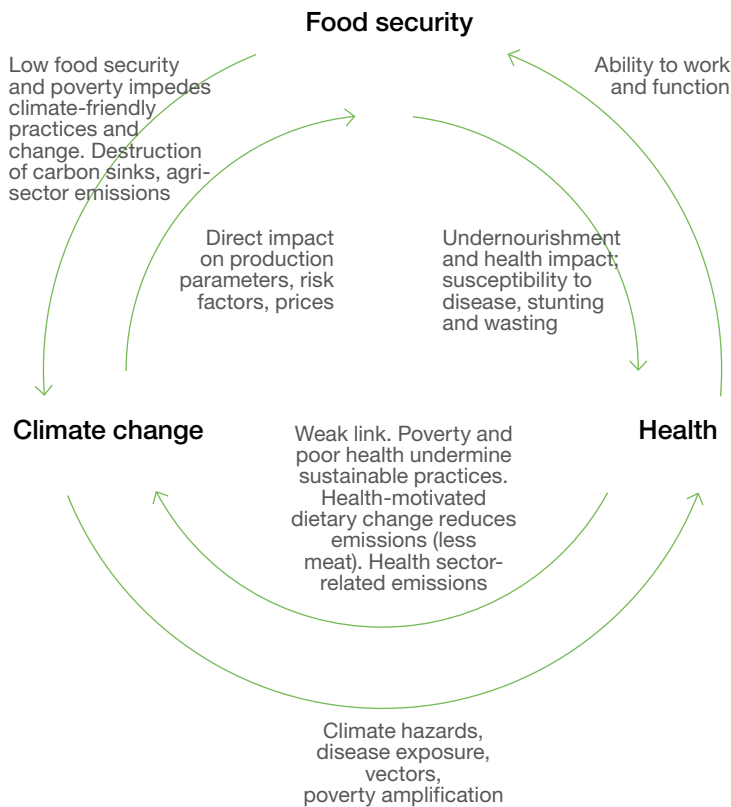
Value addition

- *Harnessing the power of intellectual property (IP) and innovation to address climate change;*
- *Database rich in information, with green technology search and matching functions;*
- *Tangible contributions to achieving the Sustainable Development Goals (SDGs);*
- *Robust partner network spanning multinational companies (MNCs), small and medium-sized enterprises (SMEs), governments, United Nations (UN) agencies, financial institutions and non-governmental organizations (NGOs);*
- *Global convening power;*
- *Unique potential to go to scale.*

I. Background and current context

The mission of the World Intellectual Property Organization (WIPO) is to lead the development of a balanced and effective international IP system that enables innovation and creativity for the benefit of all, and places the Organization at the nexus of global interests and global challenges. Program 18 in WIPO’s Program and Budget addresses three of the most pressing, interconnected global challenges of our time: global health, climate change, and food security.

WIPO global challenges causal links



WIPO GREEN was launched in 2013 to promote the diffusion of green technology by facilitating connections between technology seekers and providers. In its first five years, WIPO GREEN built its core elements. These include an active and

engaged network of partners, a database of experts, and an online marketplace for green technology featuring listings from a worldwide pool of contributors, ranging from small enterprises to Fortune 500 companies.

Since 2013, WIPO GREEN’s database, targeted matchmaking events, and projects have led to more than 600 connections between technology providers and seekers. The initiative’s 86 partners include intergovernmental organizations (IGOs), trade associations, MNCs, government institutions, financial institutions, SMEs and universities.

Currently, the WIPO GREEN online marketplace contains thousands of entries in the areas of building and construction, chemicals and advanced materials, energy, farming and forestry, green products, pollution and waste, transportation, and water. These listings have been consulted by users spanning 170 countries. The green technologies in WIPO GREEN’s marketplace cover both climate change adaptation and mitigation technologies. Climate smart agriculture (CSA) approaches and technologies demonstrate the overlap between climate change and food security, as do issues around food waste and sustainable production and consumption.

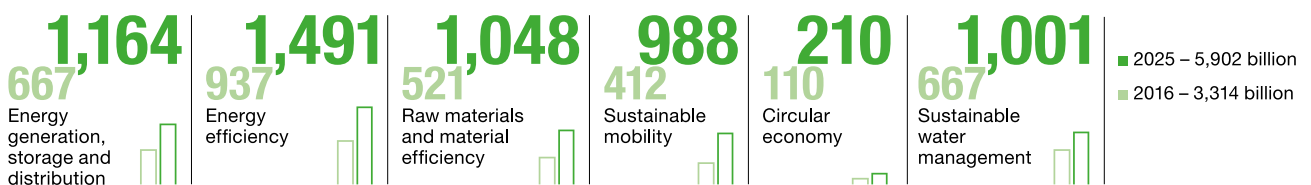
The green technology context is complex: it is not a single industrial branch or sector; multiple terms abound (“cleantech,” “green tech,” “environmentally friendly,” “sustainable solutions,” etc.); and there is no internationally agreed standard or categorization for green technologies. It is partly because of this complex context that, to date, no single initiative has emerged as the clear “green technology diffusion” flag bearer. However, WIPO GREEN is broadly acknowledged as having the potential to fill this role.

Demand for green technology is expected to grow by 6.9 percent annually to 5,902 billion euro in 2025, as demonstrated in the chart below.

When WIPO GREEN was launched in 2013, it was at the vanguard of green technology promotion and dissemination. Since then, it has become a powerful instrument in its mission to support and promote innovation in the growing green technology sector.

WIPO GREEN presents WIPO with the opportunity to accelerate the greening of the global economy by becoming a leading institution supporting green technology innovation and diffusion, further reinforcing the positive contributions of IP and innovation to address the world's most urgent shared challenges, and contributing to the SDGs.

Green technology growth outlook (in billion euro)



Source: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) (2018): *GreenTech Made in Germany 2018*.
www.bmu.de/fileadmin/Daten_BMU/Pool/Broschueren/greentech_2018_en_bf.pdf

II. Mission and value addition

To scale up, WIPO GREEN will focus on building critical mass, increasing value for users, and achieving greater impact. Over the next five years, WIPO GREEN will be guided by an updated mission that builds on the first five years and places the initiative in the broader context of today's most pressing climate change and sustainability-related issues.

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- *Global convening power;*
- *Unique potential to go to scale.*

III. Strategic goals and objectives

Goals

To accelerate the transition to a greener global economy, WIPO GREEN in the next five years will:

Goal 1:

Link green technology providers and those seeking solutions in a targeted manner, catalyzing and maximizing the potential for green technology transfer and diffusion.

Goal 2:

Accelerate access to green technology innovation opportunities for countries at all levels of development.

Goal 3:

Support member states to leverage IP and innovation in global efforts to address major policy issues related to climate change, food security, and the environment.

Strategic objectives

Advancement of WIPO GREEN's mission implies an increase in the total number of technologies and needs listed in the database, and, ultimately, the number of concrete connections facilitated by WIPO GREEN.

To achieve this, the following strategic objectives will underpin the 2019–2023 strategy:

Strategic objective 1:

Increase the capacity of the WIPO GREEN database to accurately, effectively and efficiently match technology needs with green technology offerings.

The green technology database is the technical cornerstone of WIPO GREEN's offering. The proposed approach is to increase both the quantity and quality of technology "matches," which in turn will lead to increased diffusion of green technology.

Upgrades to the WIPO GREEN database will be carried out in phases; early improvements can be made to the existing database in the first 18 months of the strategy, whereas the broader vision and "game changers" – including the integration of artificial intelligence (AI) – will take longer, will be carried out in partnership with leading technology companies, and will require additional resources.

As the WIPO GREEN database evolves, the aim is to incorporate natural language processing, information retrieval, and machine learning to generate optimal responses to complex queries. Because green solutions are strongly dependent on the context in which they are deployed (geographical, meteorological, etc.), a machine learning-based solution is conducive to meeting the challenges posed by sorting through large amounts of data to identify appropriate "matches" based on a broad and varying set of contexts.

As an innovation- and technology-oriented agency, WIPO is well suited to taking up these challenges. Working with WIPO's Advanced Technologies Application Center (ATAC), WIPO GREEN will leverage in-house expertise as well as build new partnerships with technology companies to achieve this strategic objective.

The envisaged development of the database is illustrated in the diagram opposite. The development will be implemented in the period 2019–2020.

WIPO GREEN database developments

Increase volume

- Patentscope IPC Green Inventory import
- Translation
- Partner database import
- EPO YO2 import

Conventional search

- Multi-keyword search
- Advanced field-based search
- Ranked listing
- Improved filter options

Free text search

- Artificial intelligence (AI)/natural language processing
- Keyword extraction
- Open linked data context
- Keyword search
- Ranked listing

Patent2Solution

- AI/natural language
- Processing keyword extraction from patent description
- Global brands database search
- Internet search

AI = artificial intelligence; EPO = European Patent Office; YO2 = EPO classification scheme for climate-change mitigation and smart grid technologies; IPC = International Patent Classification

Current situation

The WIPO GREEN technology database contains data uploaded by individual users and imported from partner databases. Users can do a keyword search to return an unranked list of results, or filter using broad, predefined categories.

Planned developments

The database will incorporate relevant green technologies from WIPO's Patentscope database. With more than 70 million patents, it is one of the world's largest publicly accessible patent databases. WIPO GREEN will leverage this vast resource in support of the SDGs that relate to climate change, food security, and the environment.

As the number of technologies in the WIPO GREEN database grows, it will be necessary to have more advanced search, filtering, and ranking functions. This includes 1) improving the keyword search function and ranking of results according to keyword hits and other criteria, and 2) developing an advanced, multi-field search function.

A new search option using AI will be developed to enhance the free text search function, making it possible for users to type in a description of a problem and return a ranked list of solutions. A cloud-based AI service will extract keywords from this text and use it for a database query.

Patent2Solution is a function that will provide users with relevant information about applicable or commercially available solutions related to a particular patent. This will inform users about where the technology can be bought, licensed, or contracted. Similar to the AI-assisted free text keyword extraction for database queries, the same mechanism extracts keywords from patent descriptions and uses these words to search for commercially available solutions on the Internet.

Strategic objective 2:
Build a critical mass of partners, market actors, users, and technology uploads through targeted outreach and engagement.

To build critical mass around WIPO GREEN, a four-pronged outreach and engagement strategy will be employed.

1. Targeted outreach to technology providers

To increase the critical mass of green technologies listed on the database, WIPO GREEN will engage market actors who are most active in the various categories of green technology reflected in the database. The initial focus will be on MNCs in Europe, North America, China, and Japan; outreach to other regions will follow. Members of the WIPO GREEN team, as well as WIPO senior leadership with responsibilities related to WIPO GREEN, will participate in the outreach activities. In addition, WIPO External Offices will be requested to support this targeted outreach and engagement.

2. Recruitment and engagement of new users through participation in green technology fairs, exhibitions and events

To increase both needs and technologies listed on the WIPO GREEN database, providers and seekers will be actively recruited. By participating in national, regional and global technology fairs, exhibitions and events, WIPO GREEN will attract MNCs as well as SMEs, which are a leading source of green technology innovation.

To drive database uploads, WIPO GREEN will predominantly focus on events with a high presence of technology providers. It will favor business events rather than events of an academic nature.

3. Targeted outreach in specific thematic areas

WIPO GREEN will also increase the number of technology listings in specific thematic areas. One way to do this is to establish acceleration projects, building on one of WIPO GREEN's greatest strengths: the ability to bring green technology stakeholders together. The overall objective of an acceleration project is to drive new technology uploads (both needs and solutions) to the WIPO GREEN database, and to create tangible links between technology providers and solution seekers.

Acceleration projects provide an opportunity for in-person exchange between providers and seekers within a specific thematic area and geographical focus. They also facilitate access to potential funders, legal counsel, IP-related advice, and local and international commercial networks.

Acceleration projects engage current partners and potential future users; they are tailored to a specific theme determined in cooperation with stakeholders; and they can have a regional, national or local focus. Such projects can be broad – covering several topics – but in general, a more targeted approach means a higher likelihood that the acceleration project will have tangible outcomes in the form of green technology transfer agreements, also referred to as “deals.”

4. Leveraging and increasing partnerships, including dedicated actions with other WIPO programs

WIPO GREEN has established a robust partner network, including among the members of its Advisory Board. Working with partners facilitates the planning and implementation of activities, while increasing WIPO GREEN's sustainability and visibility; it also broadens WIPO GREEN's sphere of influence and facilitates communications. Identifying and motivating key partners to engage more fully with WIPO GREEN will be a cornerstone of this element of the program.

The initial focus will be on UN sister organizations with similar objectives, including the Climate Technology Center and Network (CTCN), the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Environment Program (UNEP), and the United Nations Industrial Development Organization (UNIDO), as well as development banks. Partnerships with members of the WIPO GREEN Advisory Board – a rich and diverse source of support – will also be more strategically leveraged in the period 2019–2023, as will national IP offices.

Partnership opportunities within WIPO also abound; internal support and more robust involvement across the Organization are vital in order to take WIPO GREEN to the next level.

WIPO GREEN partner arenas



**Strategic objective 3:
Strengthen WIPO GREEN's
communications and
marketing functions.**

WIPO GREEN engages a diverse set of stakeholders from across various sectors with limited communications and marketing resources. The focus of the communications and marketing strategy is to demonstrate the positive impact of WIPO GREEN and generate increased awareness of the value of its activities, particularly among key stakeholder groups. Amplifying WIPO GREEN's brand will help to expand its user base, acquire strategic partners, and increase overall engagement levels.

To reach its stakeholders, WIPO GREEN will segment its audiences, use tailored messages to reach each target group, and focus on activities that leverage partner and internal communications channels and capabilities. The primary channels that will be used to deliver messages to target audiences include the WIPO GREEN webpages, the WIPO website, publications, WIPO social media platforms, partner channels, sector events and exhibitions, targeted email communications, and one-on-one meetings (in-person, telephone).

The tailored messages to reach each stakeholder group are found in the table below.

Target group	Message(s)
Green technology providers	As a global marketplace, WIPO GREEN is <i>the</i> platform to publicize technologies. We help innovators from all around the world connect to the global innovation ecosystem by linking together networks. We implement projects, organize in-person events and otherwise facilitate access to potential investors and partners.
Green technology seekers	As a global marketplace, WIPO GREEN is <i>the</i> platform to list green technology needs in order to find the best technology solution available. WIPO GREEN puts you with qualified partners who can source innovative solutions that respond to your needs.
Service providers and seekers	Service providers use the WIPO GREEN experts database to advertise their services free of charge and connect with innovators who are looking for specialists with the knowledge and skills needed to move their green business venture forward.
Investors	WIPO GREEN offers access to green technologies and innovative entrepreneurs from around the world. WIPO GREEN partners with other networks and incubators to ensure that the platform contains the most relevant, high-quality investment opportunities. We organize events and otherwise facilitate access to promising investments.
Advocates and donors	WIPO GREEN has proven that it is agile and can expand with very limited resources. It is a unique global green technology network, and there is potential to deliver much more with minimal additional funding. We use money efficiently, connect networks, and leverage the collective strength of our partners to attain our common objectives.
Policymakers	WIPO GREEN helps demystify and facilitate access to IP, helping innovators access the resources needed to commercialize and disseminate their green technology inventions. WIPO GREEN leverages the power of WIPO, as a UN agency focused on IP, to support and complement the work of the many entities focused on environment-related SDGs.
WIPO internal allies	WIPO GREEN is successful, expanding, and has great potential that will be tapped in the period 2019–2023. It can help WIPO become the leading institution supporting green technology innovation and diffusion, which in turn further reinforces the positive contributions of IP and innovation in addressing the world’s most urgent global challenges.
Potential partners	WIPO GREEN is a reference for the deployment of clean technologies and a pioneer in the field, with a strong network and various practical tools (database, acceleration projects, etc.). WIPO GREEN leverages the power of WIPO as the UN agency focused on IP and innovation to create a diverse network for promoting capacity building and the transfer and uptake of green technologies. WIPO GREEN supports and complements the work of other organizations focused on environment-related SDGs.
MNCs	WIPO GREEN promotes innovative partnerships for tackling climate change at a variety of global policy fora. WIPO GREEN can support the achievement of partners’ corporate social responsibility (CSR) objectives and provide a valuable resource through which MNCs can source innovative solutions for their challenges.
Other networks and databases	In an environment of limited resources, value is added to both sides by connecting networks. The WIPO GREEN database offers thousands of green technologies in a wide range of fields and the WIPO GREEN network includes over 6,000 members.

IV. Governance

WIPO GREEN is governed by the rules laid out in the Charter, which is available for download on the WIPO GREEN webpages. WIPO administers WIPO GREEN. The Advisory Board, comprising the WIPO GREEN partners and WIPO, guides the activities of WIPO GREEN. The Advisory Board is a consultative and counselling body and does not exercise any influence over WIPO's overarching programs or budget.

While the current model that was established in 2013 facilitated growth in the early days of the WIPO GREEN initiative, now is an opportune time to refine the role of partners, restructure the Board, and reconsider its size.

The following new elements will be introduced and mainstreamed in the first year of the strategy's implementation:

- refined membership categories and corresponding value proposition for each membership category;
- creation of a smaller Advisory Board with representation of different stakeholder categories and defined terms of membership;
- adaptation of the Charter to reflect the above as well as other strategic updates resulting from the mid-term strategy development process, as appropriate.

V. Implementation

At a glance, the following overarching workflow will guide the strategy's implementation:

WIPO GREEN five-year strategy implementation workflow	2019		2020		2021		2022		2023	
	1	2	1	2	1	2	1	2	1	2
Database – fixes, restructure, quality assurance										
Database – redesign, expansion										
Database – AI-assisted query function										
Database – upgrade										
Outreach to MNCs – Europe, US										
Outreach to MNCs – India, China, Russia, Korea, Japan										
Outreach to MNCs – additional countries										
Participation in business-to-business (B2B) events										
Participation in policy-related events										
Acceleration projects										
Advisory Board reform										
Webpages enhancement										
Publicize impact stories and other content										
Promotional video (database)										
Social media outreach										

Annex 1:
Strategy and roadmap for strengthening the WIPO GREEN database

The WIPO GREEN database

The WIPO GREEN database is a fundamental, defining element of WIPO GREEN, providing the technical backbone to promote the adoption of green technology solutions to solve issues related to climate change, food security, and the environment.

To optimize the database, this area of work will focus on increasing both the quality and quantity of entries. Currently, the quality of information provided in uploads varies widely, bringing with it the inherent risk of conveying an unintended negative impression of the overall quality of information in the database.

The database acts as a meeting point between technology providers and solution seekers, and as such will be most useful if it contains applicable, commercial solutions to problems. Partial or very narrow technical descriptions, such as are often found in patent descriptions, may be less useful in this context, but patent entries are nevertheless necessary in order for the database to be comprehensive.

Ideally, a user looking for solutions should be able to freely formulate the need and receive back a ranked list of relevant potential solutions. If a potential solution is not readily applicable, there should be an option to search for commercial or similar offerings of the technology. As such, the WIPO GREEN database will aim to provide applicable, off-the-shelf, available, commercial solutions based on innovative green technologies.

Partnerships for the WIPO GREEN database

The development of the WIPO GREEN database is based on collaboration with partners. For development and maintenance of the database, in-house partners like the Information and Communication Technology Department (ICTD), the Advanced Technology Applications Center (ATAC), and Patentscope are crucial. The integration of AI-assisted functions could be implemented with the support of ATAC and in partnership with IT companies. Partners may want to use the partnership and its outputs for CSR purposes.

Annex 2: Outreach and engagement strategy

Achieving WIPO GREEN's mission requires the involvement of actors all along the innovation value chain. WIPO GREEN operates as an innovative multi-stakeholder partnership between governments, international development partners, the private sector, and academia. Each partner brings unique expertise and networks that are essential to the success of WIPO GREEN.

Involving partners and other key entities helps increase the sustainability of WIPO GREEN's activities – and maximize its impact in the green technology sector. Partners can help broaden WIPO GREEN's sphere of influence, increase its visibility, and reach new audiences through communications. Partners and other stakeholders are an essential element of the WIPO GREEN network, as they contribute to the database, acceleration projects, and to the general development and success of WIPO GREEN.

Mapping the actors

WIPO GREEN and its stakeholders operate in political, technical, and commercial/financial spheres. WIPO's unique configuration as a United Nations specialized agency with ties to the SDGs means that it benefits from greater access to substantial technological resources, including through the patent system. As a business- and solution-oriented entity, WIPO GREEN is well suited to be an actor in all three arenas.

The following table illustrates key stakeholders, their interests and potential areas for collaboration:

Stakeholder	Their motivation	Our motivation	Activities	Current partners	New targets
MNCs	Associate with UN, network, business and product promotion	Private sector engagement, new technologies, network	Partners, matchmaking, database import, co-organized events	Fujitsu, General Electric, Haier, Siemens	Additional MNCs from Europe and North America
SMEs	Promotion, network, technology identification	New technologies, problem identification	Partners (support organizations), matchmaking, data sharing	Australian CleanTech Cluster	European Enterprise Network
Business associations	Associate with UN, network, IP advisory, events for business promotions	Private sector engagement, network, local knowledge, and services	Partners, matchmaking, local contact, co-organized events	The World Business Council for Sustainable Development, International Chamber of Commerce	Local chambers of commerce, sector-specific associations
Think tanks/ research institutions/ universities	Associate with UN, IP and technology knowledge	Network and technical knowledge, quality assurance, identifying solutions	Partners, co-organized events, co-publication, peer review, data sharing	Association of University Technology Managers, Technologie-Allianz	World Resources Institute, World Economic Forum, Technion, Massachusetts Institute of Technology, Swiss Technology Transfer Association

Stakeholder	Their motivation	Our motivation	Activities	Current partners	New targets
Foundations, financial institutions, investors	Associate with UN, network, IP and technology knowledge	Network, funding, co-organized events	Partners, co-organized events, co-publication	The Asian Development Bank, Korea Technology Finance Corporation	Green Climate Fund, the Asian Infrastructure Investment Bank, African Development Bank, Inter-American Development Bank, KfW, Bill & Melinda Gates Foundation, Rockefeller Foundation
NGOs (advocacy groups)	Associate with UN, legitimation, network	Problem identification, local network	Partners, co-organized events, co-publication	Kopernik	The International Union for the Conservation of Nature, CARE, World Wildlife Fund, SNV Netherlands Development Organisation, Helvetas
Governments, regional organizations, municipalities, cities	Technology identification, matchmaking	Political support, problem identification, providing solutions	Partners, matchmaking	Intellectual property offices of Brazil, Canada, France, and Morocco	The Association of Southeast Asian Nations, French Environment and Energy Management Agency, other IP offices interested in the program
IGOs	Gain access to technology and IP issues	Networks, local anchoring, technical and political experience	Partners, coordination, co-organized events, co-publications	UNEP, UNIDO, CTCN, World Bank	The United Nations Development Programme, Convention on Biological Diversity, International Fund for Agricultural Development, Food and Agriculture Organization, World Food Programme

Internally, the following WIPO divisions have been identified as having important potential for WIPO GREEN:

- **Database development:** *Information and Communication Technology Department, Global databases including PATENTSCOPE and IPC Green Inventory, ATAC;*
- **Outreach and engagement:** *Regional Bureaus, SMEs and Entrepreneurship Support Division, Access to Information and Knowledge Division, External Relations Division, External and Coordination Offices, NGO and Industry Relations, Special Representative of the DG on SDGs and Development Agenda Coordination, Economics and Statistics Division;*
- **Communications and marketing:** *Communications Division*

Methods of engagement

Area 1: Targeted outreach to MNCs

In order to drive more technology uploads to the database, WIPO GREEN will actively approach the MNCs that are most active in the various categories of green technology contained in the database. The initial focus will be on Europe, North America, China, and Japan; outreach to other regions will follow. Members of the WIPO GREEN team, as well as WIPO senior leadership with responsibilities related to WIPO GREEN, will participate in the visits. In addition, WIPO External Offices will be requested to support this targeted outreach.

Partnerships with MNCs will be pivotal to the execution of various strategic activities: database development, building critical mass of database uploads, enhancing WIPO GREEN's visibility, and co-sponsoring acceleration projects.

Currently, their incentive for joining WIPO GREEN and collaborating on joint initiatives is linked to their CSR mandate and respective SDG-related objectives. Yet, as WIPO GREEN continues to grow and increase its influence globally, it could potentially also help companies gain access to new markets.

Area 2: Recruitment of new users, providers and seekers through participation in green technology fairs, exhibitions and events

To increase the number of needs and technologies listed on the WIPO GREEN database, both providers and seekers must be actively recruited.

In addition to the main acceleration project that WIPO GREEN will plan and lead each year, WIPO GREEN will participate in selected sector events and fora that would draw in technology providers/seekers. As such, it will favor business events rather than events of an academic nature. It will also aim to respond to selected member state requests, provided that sufficient resources are available and requests are aligned with objectives outlined in the Strategic Plan.

WIPO GREEN will contribute to the global policy dialogue by participating in one major climate change or SDG-related event per year. Regional and thematic priorities will be considered in the selection of events.

Recruiting small and medium-sized technology providers

Currently, the clean technology space is primarily dominated by SMEs. WIPO GREEN will continue reaching SMEs directly or through multipliers, i.e., structures with an interest in promoting/connecting these entities: export promotion bodies, trade fairs (e.g., Reed Exhibitions), and SME financiers (e.g., KOTEC).

Recruiting technology seekers

Various organizations and other entities are looking to deploy green technology. WIPO GREEN will pay particular attention to SMEs, community-based organizations, NGOs and cooperatives for the following reasons:

- *SMEs are often disconnected from international markets, creating a potential for platforms like WIPO GREEN to bridge the gap;*
- *Since they tend to have small-scale needs, it is feasible for a platform like WIPO GREEN to identify corresponding providers/investors.*

Area 3: Driving uploads to the database through acceleration projects

Acceleration projects have the overall objective of driving new technology needs and solutions to the WIPO GREEN database. They also aim to create tangible links between technology providers and solution seekers.

An acceleration project provides an arena for exchange between providers and seekers within a specific thematic area and geographical focus, and facilitates access to potential funders, legal counsel, IP-related advice, and local and international commercial networks.

Acceleration projects are tailored to a specific theme determined in cooperation with partners and stakeholders. The focus may be broad and cover several topics, but in general, WIPO GREEN will opt for a more targeted approach, as this is more likely to lead to tangible outcomes in the form of deals.

The focus of acceleration projects may be determined through partner requests, related to the technologies and needs uploaded to the WIPO GREEN database, through WIPO GREEN research, or decided in consultation with other organizations. The scope of the event can be local, national, or regional.

In-person contact with stakeholders in a specific region or country will be a cornerstone. Acceleration projects will help to address challenges that are shared across borders, promoting international cooperation and attracting MNCs that may find a regional market more attractive than a national one. This has the capacity to mobilize additional sponsors, including Advisory Board members, IGOs and regional development banks.

Generally, acceleration projects will be:

- *Planned and implemented in partnership with core WIPO GREEN partners, member states, local stakeholders, and potential funders;*
- *Solution oriented;*
- *Inclusive of a variety of different stakeholder types.*

Building on WIPO GREEN's successful matchmaking series, acceleration projects provide the following value-added benefits:

- *Ensure the sustainability of WIPO GREEN's services by leveraging financial and in-kind contributions (the goal being to generate around two-thirds of the budget for an acceleration project from external sources);*
- *Build on previous projects and mobilize local actors in the provision of follow-up support;*
- *Support local governments and member states in their capacity-building activities by exploiting synergies with other WIPO programs, thus reinforcing their collective impact and WIPO's global reputation;*
- *Produce thematic knowledge around specific green technology-related domains (and more broadly climate change, food security, etc.) and specific regions (geographic areas, local context, etc.). This information will be documented and will provide content for WIPO GREEN publications and seminars, facilitating knowledge sharing.*

A WIPO GREEN acceleration project will follow a specific planning process:

1. *Identification of geographic scope, theme, and topic(s). This will typically be carried out in close cooperation with one or several partners, be based on WIPO GREEN research, and be aligned with WIPO GREEN thematic priorities.*
2. *Identification of topic stakeholders, seekers and potential solution providers. If this has not already been the starting point for the event, a local consultant or organization may be engaged to assist in this. Preliminary solutions to topics will be identified through the WIPO GREEN database and network and initial contact established.*
3. *Detailed planning of a meeting event. This includes venue, timing, participants, budget, financial and in-kind contribution from stakeholders, communication strategy, and expected outcomes.*
4. *Execution of the event. A local professional event organizer may be engaged to assist.*
5. *Uploading of all needs and technologies identified onto the WIPO GREEN database.*
6. *Follow-up with stakeholders, reporting, and other support activities.*

Area 4: Leveraging and increasing partnerships, including dedicated actions with other WIPO programs

Initially, WIPO GREEN will aim to strengthen relationships with internal allies and a select number of existing partners. WIPO GREEN will continue to engage external partners through the Advisory Board, a powerful source of support that will be more strategically leveraged in the period 2019–2023 by clarifying expectations and roles.

WIPO GREEN will exploit WIPO internal synergies and ensure more robust involvement across the Organization. The first step will be to carry out an in-depth analysis of WIPO programs and identify the most relevant internal partners. This exercise is vital and is linked closely to the achievement of all strategic objectives, i.e., database development, acceleration projects, and increased communications and marketing. Taking the needs of the respective programs into consideration, specific objectives for each internal partner will be defined.

Geographically, and across the technology sectors, expansion will primarily be linked to the acceleration projects, as they provide a good incentive for new stakeholders to come on board. In 2019, WIPO GREEN aims to organize an acceleration project in Latin America. Expanding geographic coverage and thematic areas will be important considerations in the planning of acceleration projects.

Annex 3: **Communications and marketing**

WIPO GREEN engages a diverse set of stakeholders from across various sectors with limited communications and marketing support. The current budget and human resource allocation (0.4 FTE, temporary appointment) for this work stream considerably impacts the frequency and scope of communications, precluding essential activities that would enable WIPO GREEN to attract and retain strategic partners and a larger volume of users. Consequently, improving external understanding and perceptions of WIPO GREEN in order to reach potential users on a mass scale remains a challenge.

To support WIPO GREEN's overarching goals and ensure its long-term sustainability, the communications and marketing strategy has as its objective to demonstrate the positive impact of WIPO GREEN and generate increased awareness of the value of its activities, particularly among key stakeholder groups. The amplification of its brand will facilitate the expansion of the platform's user base, the acquisition of valuable partners, and increase overall engagement levels. Communications and marketing activities will thus aim to develop or strengthen relationships with the following groups:

- *Providers of green technologies and services (e.g., innovators/SMEs);*
- *Seekers of green technologies and services;*
- *Investors;*
- *Donors and advocates;*
- *Policymakers;*
- *WIPO internal allies;*
- *Potential partners (e.g., development banks, NGOs, IGOs);*
- *MNCs;*
- *Other networks and databases (e.g., current partners).*

To reach its stakeholders, WIPO GREEN will segment its audiences, develop tailored messages for each target group, and focus on activities that leverage partner and internal communications channels and capabilities, to overcome resource constraints. Three types of communications will be produced:

- *General communications to raise awareness about database offerings, services, events/programs and successful collaborations;*
- *Technical communications to support innovators and SMEs;*
- *Internal communications within the WIPO GREEN network and in WIPO to increase information sharing and understanding of WIPO GREEN.*

Activities, channels, and messages

In support of WIPO GREEN's mission, a selected number of communications and marketing activities that can help demonstrate the positive impact of WIPO GREEN and increase awareness of the value of its activities will be prioritized, in order to progress towards critical mass.

- *Enhance the WIPO GREEN webpages to improve user experience and provide additional benefits to the WIPO GREEN network, including the introduction of a dedicated "Network News" section and page focused on acceleration projects;*
- *Publicize achievements via digital channels and publications, including a series of "Impact Stories" which capture successful collaborations within the network;*

- *Develop and disseminate regular, interesting content that is member-driven, to the extent possible;*
- *Produce and disseminate a promotional video demonstrating the key functions of the revamped database;*
- *Develop materials (e.g., leaflet, slides) for internal communications purposes;*
- *Organize webinars leveraging the expertise and knowledge of WIPO GREEN and its network to facilitate access to technical information;*
- *Increase social media presence to reach new users and boost engagement with the WIPO GREEN brand via WIPO social media channels, to the extent possible;*
- *Provide ready-to-use social media materials (e.g., messages, photos) to partners to facilitate promotion via Twitter, LinkedIn, and Facebook.*

WIPO GREEN's retention strategy is based on maintaining regular two-way communication with users, providing value-added services, including resources and timely notifications about relevant activities and opportunities, as well as introductions to potential partners. For example, database users can currently set up email alerts to receive updates about new technologies. In the future, the introduction of new database functions will encourage users to visit the platform regularly and facilitate user-to-user interaction. The planned database enhancements that will enable a more seamless user experience will also facilitate user retention. Analytics will be routinely monitored, and user behavior tracked on both the platform and WIPO GREEN webpages to gauge user experience, detect issues and respond accordingly.

The primary channels used to deliver our messages to target audiences include the WIPO GREEN webpages, the WIPO website, publications, WIPO social media platforms, partner channels, sector events and exhibitions, targeted email communications and one-on-one meetings (in-person, telephone).

Annex 4: **Resources and sustainability**

WIPO GREEN is one of WIPO's most prominent partnerships supporting the SDGs; its ultimate aim is to promote a more sustainable world. The strong interaction between IP, innovation and technology dissemination will support the future development and recognition of WIPO.

The WIPO GREEN team's flexibility as a small unit fits well with its objectives and nature of work. Nevertheless, WIPO GREEN would benefit from increased internal support and resources, particularly as related to IT projects, if the 2019–2023 WIPO GREEN strategy is to be fully and meaningfully realized.

The budget

WIPO GREEN's current funding is based on three pillars:

1. *WIPO Program and Budget (Program 18).*
2. *Donor funding: national governments and, to a limited extent, the private sector.*
3. *In-kind contributions by WIPO GREEN partners.*

Achievements thus far are in line with similar initiatives when measured using comparable metrics (number of technologies with similar maturity, etc.). Considering that the budget and human resources dedicated to this program are very limited in comparison to the diversity of topics and elements covered, if no increase in the WIPO GREEN budget over the coming two biennia is foreseen, expectations should be brought into line.

Financial sustainability

WIPO GREEN acknowledges the efforts of WIPO, its donors, and partners in providing funding. In order to tap into additional resources as it continues to grow, WIPO GREEN will:

- *Identify potential new donors, including foundations and the private sector;*
- *Seek to maximize partner contributions.*

WIPO GREEN will increasingly leverage external and other internal WIPO resources for its activities, to the extent possible, to ease the financial and human resources burden placed directly on the small WIPO GREEN team. The acceleration projects will be co-financed. In addition, it is also foreseen to identify strategic partners willing to co-invest in database development.

Scaling activities will depend on the availability of resources. The proposed evolution of the database could allow for leveraging of financial and in-kind resources by MNCs, foundations, and private banks. To be credible towards multinational corporations, industrial partners, private banks or foundations, WIPO GREEN must have the financial resources to match funding offered by partners for specific projects.

Programmatic sustainability

The green technology sector is growing, and large-scale deployment is urgently needed in all regions; this favors WIPO GREEN's programmatic sustainability. WIPO GREEN is poised to implement the 2019–2023 strategy to its fullest extent, with continued close guidance from WIPO's senior management, active buy-in from WIPO GREEN's partners, and increasing support and interest from WIPO member states.

To preserve its relevance, WIPO GREEN must remain at the cutting edge. Its focus areas are by nature highly dynamic and changing, which is further accentuated by the increasing urgency of climate-change mitigation and adaptation. WIPO GREEN's ability to be responsive to needs and opportunities in the green technology space will be crucial to its continued success. Leaving room for a certain degree of opportunism (in the positive meaning of ability and willingness to pursue new, promising developments) will therefore be crucial if WIPO GREEN is to remain at the forefront of green technology innovation and diffusion.

Annex 5: **Monitoring and measuring impact**

WIPO GREEN's tangible contributions can be measured through a number of proxies, e.g., number of deals, database uploads, connections. These mainly quantitative indicators are covered in WIPO's formal monitoring framework; the more complex monitoring challenge is impact. For this, a more qualitative approach based on feedback from core partners and stakeholders is required.

To monitor the implementation of this strategy, the following actions will be taken:

- 1. Convene semi-annual internal stocktaking of activities and progress. This will provide an opportunity to reflect on whether we need to adjust our strategy to reach our goals. The stocktaking exercise will take the form of an informal internal meeting and a brief summary of decisions.*
- 2. Consult with core partners to understand their perception of WIPO GREEN and the value we represent for them. The annual Advisory Board meeting will be highly instrumental in this regard.*
- 3. Monitor interactions between technology providers and seekers to understand how many are progressing to the deal stage (a key performance indicator (KPI) for WIPO GREEN).*
- 4. Follow up on use and usability of WIPO GREEN products (e.g., webpage, briefs, reports, tools made available) through various indicators (click-through rates, downloads, citations, etc.).*
- 5. Follow up on impacts of WIPO GREEN events through participant surveys.*

A mid-term, external review will be conducted in 2021 to take stock of progress and to allow for any necessary course corrections.

Annex 6: **External Evaluation Executive Summary – Initial Evaluation of WIPO GREEN by CimArk**

As part of the medium-term strategic planning process, the *Initial Evaluation Report* (the second of four deliverables) assessed the first five years of WIPO GREEN. The evaluation aimed to assess WIPO GREEN's current status, its perception by its stakeholders, and the overall context of green technologies. This document is an Executive Summary of the *Initial Evaluation Report*.

WIPO GREEN aims to promote the diffusion of green technologies by facilitating connections between service providers and institutions that are seeking to develop and implement green technology, particularly within developing countries.¹

To show how this offering is perceived, and to identify potential constraints and improvements, a so-called “360-degree analysis” was performed to inform the initial evaluation of WIPO GREEN. The 360-degree analysis helped to assess WIPO GREEN's environment as well as its interfaces with current and potential future stakeholders. It encompassed diverse activities, including an online survey, in-person interviews, value proposition design workshops, a review of WIPO documents and databases and an assessment of the WIPO GREEN webpages.

The survey results show that globally the perception of WIPO GREEN is positive, even if some beneficiaries had difficulty articulating the concrete benefits received. This is not surprising, and is even typical for activities with a high degree of intangibility where direct impact of a specific action is difficult to measure, thus making valuation difficult.

1. Findings

This section provides an overview of the findings from the analysis of the current situation. They form the basis for the options and recommendations in the third deliverable.

1.1 Context

Green technology is not a stand-alone industrial sector; rather, it combines numerous industries and applications. Often based on time- and resource-intensive infrastructure, green technology can require an extended period of time for proper implementation. Thus, actions in this area require a long-term commitment and mastery in a multitude of different value chains, including technical areas such as waste, water, and energy, as well as overarching capabilities in financing, project development, and technology transfer – a balance that is challenging and costly to achieve.

Specific findings related to the broader context in which WIPO GREEN operates are as follows:

- *There is no internationally recognized categorization standard for green technologies;*
- *The international geopolitical climate regarding green technologies is on a positive, upward trend;*

¹ *Evaluation of Program 18: IP and Global Challenges –*
Reference: EVAL 2017-03, April 19, 2018

- *Supporting the dissemination of green technology efficiently requires an understanding of the overall ecosystem, including related financing schemes and respective timescales;*
- *Green technology, sometimes referred to as “cleantech”, requires “patient money” from investors and funding sources;*
- *The health sector (pharma/biotech/medtech) has a recognized reference process in terms of valorization and product deployment; green technologies do not;*
- *Green technologies often require specialized skill sets for installation, proper running and repair. These skill sets may be in short supply in certain areas;*
- *WIPO GREEN describes itself as a marketplace. A marketplace is a tool where transactions can take place. The volume of products offered and transactions realized depends on the specificity of the content offered (maturity and finality of the products);*
- *Value chain expertise is necessary for green technology dissemination.*

1.2 Stakeholder perceptions of WIPO GREEN

This section summarizes common themes that emerged from stakeholder perceptions with regard to the principles underpinning WIPO GREEN, as well as its current and potential future role.

- *The dissemination of green technology contributes to fostering innovation (97 percent of respondents agree);*
- *IP is considered to have an important relationship with green technology dissemination (85 percent of respondents);*
- *There is a strong link between WIPO GREEN and the SDGs (80 percent of respondents);*
- *WIPO GREEN could play an important role in the future by supporting SDG implementation while achieving its main objective, i.e., improving green technology dissemination;*
- *More than 75 percent of participants see WIPO GREEN as having a major role in supporting green technology innovation in the next five years.*

1.3 Potential for future collaboration

Findings in this section focus on how respondents see the potential for future collaboration with WIPO GREEN.

- *Seventy-five percent of participants felt involved in green technologies within their current responsibilities;*
- *Two-thirds of the stakeholders see interlinkages between their institution and WIPO GREEN;*
- *Seventy-five percent of the 23 member states who responded see strong interlinkages with WIPO GREEN;*
- *More than 90 percent of all respondents see possibilities to be more involved with the dissemination of green technologies in the future.*

1.4 Impact

Impact as perceived by stakeholders is captured by the findings below. Overall, achievements are in line with similar initiatives when measured using comparable metrics. WIPO GREEN was a pioneer at the time it was launched in 2013. It currently has the opportunity to become the reference for green technology development, dissemination and deployment.

Specific findings related to WIPO GREEN's impact are as follows:

- *One-third of the surveyed stakeholders have received concrete support from WIPO GREEN;*
- *More than 75 percent of the stakeholders surveyed are aware of WIPO GREEN activities, with “networking” named most often as a concrete example (15 percent of respondents);*
- *The partner network is mentioned as being WIPO GREEN's main asset;*
- *WIPO GREEN is evolving in a field where support offered is an intangible benefit;*
- *Participant responses are mixed as to whether there should be different offerings for developing and developed countries.*

1.5 Value proposition and branding

Active in a field where results are mostly intangible, WIPO GREEN has to overcome this critical challenge by reinforcing its communications and marketing activities. Proactivity is necessary in order to exploit existing outcomes and communicate achievements to targeted customer segments.

Specific findings related to the WIPO GREEN value proposition and branding are as follows:

- *The description of WIPO GREEN is vague and can lead to confusion;*
- *The value proposition of WIPO GREEN could be clarified and segmented by stakeholder group;*
- *There is a gap in terms of technology maturity between needs and technologies available. The definition of “technology” in the WIPO GREEN sense is crucial for setting priorities and corresponding adequate actions.*

1.6 Partners and Advisory Board

This section includes findings related to the current structure of the WIPO GREEN Advisory Board as described in the Charter. While the current model originally facilitated growth, the role of partners now needs to be refined and the Advisory Board restructured in light of the size of its membership.

- *Although the WIPO GREEN Charter specifies that partners “should support WIPO GREEN and/or provide advice that facilitates transactions directly or indirectly” future contributions need to be more specific and explicit in the value added;*
- *The responsibilities of the Advisory Board need to be more clearly defined;*
- *It is not clear what WIPO GREEN does for its partners (those who signed the Charter), and what these partners do to support WIPO GREEN;*
- *Some terms such as “Partners” or “Network” are used interchangeably and with different meanings. This could lead to potential confusion and poor understanding of WIPO GREEN activities.*

2. Synthesis

As a conclusion to this intermediate report, WIPO GREEN's assets and challenges as perceived by its stakeholders are summarized in four tables. Each table addresses one main strategic angle, namely: structural, institutional, operational, and contextual.

Structural (WIPO GREEN)

Assets	Challenges
<ul style="list-style-type: none"> • Robust partner network • Database rich in information • Successful matchmaking events • Attractive webpages • Dedication of the WIPO GREEN team • Demonstrates value of public-private partnership (PPP) in green tech space 	<ul style="list-style-type: none"> • Lack of resources (human and financial) • Poor quality control of data/technology listings • Large membership of Advisory Board • Unclear mandate for Advisory Board members

Institutional (WIPO/UN)

Assets	Challenges
<ul style="list-style-type: none"> • Green technology dissemination reinforces innovation • Fully meets yearly targets (database and partners) • Instrument to promote tangible solutions to address several SDGs • Neutrality/credibility • Good reputation • Legitimacy to work with governments • Exposure to international networks/privileged access to other UN agencies and IGOs • Facilitated access to international events 	<ul style="list-style-type: none"> • Low direct involvement of member states/ few promoters at national level • Lack of commitment from other relevant units within WIPO • Unexploited internal potential (events, courses, capacity building, presentations, etc.)

Operational

Assets	Challenges
<ul style="list-style-type: none"> • Matchmaking projects/events • Access to information from a variety of sources/experts • showroom for promoting green technologies • IP visibly seen to be helping to address environmental challenges • Awareness raising • Access to innovators 	<ul style="list-style-type: none"> • Measuring impact for intangible outcomes is difficult • Partially adapted indicators ((KPIs do not capture the real value added) • Limited number of success stories • Need for intensified promotion, communications and marketing • Absence of a long-term strategic plan and clear priorities • Misalignment of technology providers and technology seekers • Real value added for customer not clear enough

Contextual

Opportunities	Barriers
<ul style="list-style-type: none"> • Growth of green technologies in the market • Relevance of green technologies in international discussions (environmental treaties and international cooperation) • Green technologies and their role in helping to achieve the SDGs • Positive perception of the link between IP and addressing environmental challenges • Global relevance of green technology will continue to grow 	<ul style="list-style-type: none"> • Target audience is broad • Lack of absorption capacity • Green technologies are not easy to understand and diffusion of green technologies is perceived as risky • Difficulty in reaching seekers • Mismatch between technology seekers and providers (in terms of stage of development and in the way they describe their needs/offers)



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