

SOLAR**IMPULSE**  
FOUNDATION



# Solar Impulse Foundation Activity Report 2022

# Solar Impulse Foundation Activity Report 2022 —

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## 2022 Activities

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## A year of Achievements & Promises by Bertrand Piccard

Dear readers,  
2022 has been a year of significant change for the Solar Impulse Foundation as we went further in our mission to accelerate the transition to a carbon-neutral and sustainable economy.

The success of the ecological transition depends less on the continuous innovation of new technological solutions, and more on creating an enabling environment that will pull the existing ones to market and flourish. So while there are a plethora of solutions that both protect the environment and are economically viable, the conditions are less than ideal for them to succeed. That is why we don't see uptake at the pace and scale required

to meet our decarbonisation goals by the end of the decade and beyond.

We have to go one step further than just showing that the solutions exist and are economically profitable. We must also demonstrate how we can create the right enabling environment for them to succeed. That is what defined 2022 for the Solar Impulse Foundation, as we set out on a new trajectory, and making greater efforts to support the adoption of Efficient Solutions.

A major focus for this effort was cities. Responsible for three-quarters of all CO<sub>2</sub> emissions but also 80 % of global GDP, they are well placed to harness the opportunities of the ecological transition. Based on our experience of working with public authorities, we published a Solutions Guide for Cities to solve 50 "Pain points" that cities face to adopt new solutions, and provided 180 examples of where they have been overcome across the world. This work was part of the official program of the Egyptian Presidency hosting the COP 27 Climate Conference in Sharm El Sheikh at the end of the year, where cities and innovation were a central pillar of their efforts.

2022 also marked the first initiative

to impact legislation. I have long spoken that we must pull solutions to market by creating a need for this. Modern laws, regulations, and standards are central to making this happen. The objective of Prêt à Voter was to identify the specific obstacles blocking more rapid adoption of cleantech in France. We worked closely with innovators, technical and legal experts to develop 50 legislative and regulatory recommendations that were provided directly to the incoming French National Assembly that they could make use of straight away, advancing the ecological transition and directly supporting French businesses. This work will serve us for years to come as we continue to push for a legal and regulatory environment that favours the adoption of these solutions.

With these new avenues of exploration for the Solar Impulse Foundation, we also found that we needed to change our organizational structure to optimize how we engage on these new fronts. That work began in 2022 and will be implemented over the course of 2023. It will help us forge this new path that we are on, making us more effective than ever before.

I can't wait to see what the new year will bring.



“We will go nowhere if we try to protect the environment by threatening human comfort, mobility and economic development.”

Bertrand Piccard

# How it began

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## Bertrand Piccard's Vision

Bertrand Piccard was among the first to consider ecology through the prism of the economy, encouraging the implementation of efficient technological solutions to protect the environment and improve quality of life. In the early 2000s, Bertrand's dedication emerged from a solid conviction: climate change can only be tackled through the lens of profitability and popular endorsement. He shared his vision through a Manifesto in which he defined the symbolic and political scope of the Solar Impulse project. His global circumnavigation in a solar airplane, 43,000 km without using any fuel, carried this message and demonstrated the immense potential of renewable energies and clean technologies.



### RECONCILING ECOLOGY AND THE ECONOMY TO ACHIEVE QUALITATIVE GROWTH

1. Highlight the solutions instead of the problems
2. Stop threatening human mobility, comfort and economic development in order to protect nature
3. Speak of profitable investments instead of expensive costs:
4. Offer both rich and poor countries a share in the returns on investment
5. Refrain from setting goals without demonstrating how to reach them
6. Combine regulations with private initiative
7. Act in the interest of today's generation and not only for future generations

## First round-the-world Flight



## The creation of The Foundation

The Solar Impulse Foundation was created to add an educational angle to the flight-around-the-world project and to raise public awareness about the importance of clean technologies and renewable energies.

2004—

—2004-2016

More than a revolutionary aircraft capable of flying through day and night without fuel, Solar Impulse highlighted the enormous potential of renewable energy production and energy efficiency. A powerful demonstration of how clean technologies can give our planet a more sustainable future.



“A giant step forward that sends a strong message to the entire world.”

Ban Ki-moon, UN Secretary General

# Looking Back

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“Thousands of solutions exist that can preserve nature while boosting economic growth, but they are often hidden in start-ups or research labs. They remain unknown to decision makers and are not implemented at industry level.”

Bertrand Piccard

## The 1,000 Solutions Challenge

At COP22 in Marrakech, Bertrand Piccard set the challenge for the Solar Impulse Foundation to identify at least 1,000 Solutions capable of protecting the environment in a financially profitable way in order to accelerate the transition to a carbon-neutral economy. Five years later, in April 2021, the challenge was completed and the Foundation hasn't stopped labeling since.

“Initiatives like selecting 1000 Efficient Solutions are exactly what we need to further enable investors, governments, cities and citizens to harvest the rich variety of clean technologies, that already exist or are under development, and accomplish the goals of the Paris Climate Change Agreement and all the Sustainable Development Goals to catalyse a healthy and prosperous future for all.”

Patricia Espinosa,  
Executive Secretary, UNFCCC

2016



“Europe is committed to a clean energy transition. But this can only happen if we break down silos, if all those who share this commitment work together and focus on tangible and efficient solutions. That is why I support the World Alliance.”

Maroš Šefčovič,  
former Vice-President,  
European Commission

## WORLD ALLIANCE for EFFICIENT SOLUTIONS

by  
SOLARIMPULSE  
FOUNDATION

2017

The World Alliance for Efficient Solutions was created at the initiative of Bertrand Piccard and the Solar Impulse Foundation to federate the main actors in the fields of sustainability and clean technologies. This global network gathers Innovators, investors and decision-makers around a pool of solutions ready to be promoted and implemented to achieve environmental targets.

## Solar Impulse Efficient Solution Label

Thanks to a rigorous assessment performed by external, independent Experts, the “Solar Impulse Efficient Solution” Label is the only evaluation available today that guarantees the economic profitability of products and processes that protect the environment. Considered a recognition for Innovators and a credible trademark of quality for governments and companies, it enables decision-makers to find efficient solutions to meet their environmental commitments.



**A label focused on both the environment and profitability in the fields of water, energy, mobility, infrastructure, industry and agriculture.**

## Label Credibility

Ernst & Young supports the Solar Impulse Foundation in defining and reviewing targets, operational modalities, and the selection criteria. EY assessed the appropriateness of the standards of the Label regarding its relevance, its exhaustiveness, its reliability, its objectivity and its clarity.



## Label Recognition

This powerful tool to facilitate the emergence of efficient solutions has received global support from institutions such as the UNFCCC, the European Commission, the International Renewable Energy Agency (IRENA), the International Energy Agency (IEA) and many others.



The Solar Impulse Efficient Solution Label, introduced in 2018, is a dynamic and continually evolving process designed to accurately mirror shifts in the Cleantech sector. While the fundamental principles persist—awarding the Label to products, services, or processes that combine credible environmental and economic performance, while outperforming the mainstream options in its market—the label undergoes annual updates to its standards. These revisions are driven by internal assessments, engagements with pertinent stakeholders, including experts and innovators, and collaborations with members of our World Alliance network who implement Cleantech & innovation selection processes, such as those within the EU Horizon 2020 framework. The audit, conducted in collaboration with EY, plays a crucial role in fine-tuning the eligibility criteria, ensuring both quality and the overall credibility of the evaluation process. This iterative approach allows us to stay at the forefront of advancements in the Cleantech space while maintaining the integrity of our evaluation framework.



## Engaging at International Fora

A continuous advocacy effort has been led the Foundation to build strong relationships with key political stakeholders and to position Bertrand Piccard as a key thinker on topics related to ecological transition. Appointed Champion of the Earth and UN Goodwill Ambassador for the Environment, Bertrand Piccard has become an influential voice heard within the most distinguished institutions across the globe over the years.



## Special Advisor to European Commission Vice-President Maroš Šefčovič

After several years of engaging with the European Commission at the highest levels, Bertrand Piccard was selected to advise Vice-President Šefčovič on emerging mega-trends affecting the EU, with a focus on decarbonisation and circular economy. As a Special Advisor, he also contributes to brainstorming on strategic foresight priorities, in particular those related to the green transition and challenges of sustainability. Vice President Šefčovič has a broad mandate within his role in the current administration, including leading on interinstitutional relations, better policymaking and strategic foresight.



2019-2020



## Present at the G7 Summit in Biarritz

Selected by the French government to speak at the 45th G7 meeting in Biarritz, Bertrand called on heads of state to adopt courageous policies to counter the climate crisis. Bertrand Piccard's intervention reflected his work with the One Planet Lab, and focused on the advancement of clean mobility and decarbonizing the transport sector.

June 2020

## Reaching 1,000 Solutions

On April 13th, 2021, after more than five years of outreach, reviews, coordination, and precious collaboration with independent Experts, we crossed the line of 1,000 labeled Solutions from across the world. The critical mass brought together with this pool of over 1000+ solutions provides a unique resource to give political and economic decision-makers the tools to adopt much more ambitious energy and environmental policies.

April 2021 —

SolarImpulse  
Foundation  
#beyond  
**1000**  
solutions

“*These 1000 Efficient Solutions turn the challenge of our century into a historic opportunity. They provide concrete responses to immediate issues and allow us to work towards a sustainable future together.*”

Florent Menegaux, CEO of Michelin

May 2021 —

## The Funds announcement

The Foundation announced the launch of two investment funds that plan to invest a combined EUR 350m in some of the 1000+ clean solutions identified and labeled by the Foundation. The initiative was a next strategic step, following the 1000 solutions announcement, to prove that the protection of the environment is profitable

 **Rothschild & Co**

 **Air Liquide**

 **BNP PARIBAS**

- Supporting the creation of two investment funds, a growth & buyout strategy with Rothschild & Co and Air Liquide, and a VC strategy with BNP Paribas strategy with BNP Paribas



## The Solutions Explorer

The Foundation launched the Solutions Explorer – a dynamic, free-access database showcasing at that time more than 1,300 clean and profitable Solutions from all over the world. It was presented at COP26 during three live web series.



It introduces five new user-friendly search-filters to quickly identify what the user is looking for:

- > Sectors
- > Clients
- > Applications
- > Environmental benefits
- > Technologies

October 2021 —



## COP 26

COP26 was the first opportunity to engage with decision-makers since we had reached our target of 1,000 labelled Solutions. We succeeded in meeting with a great many of them over the course of the two weeks, including Prime Minister Narendra Modi of India. We heard of the challenges they face to combat climate change, and the support that these solutions could bring, recognising that their existence – clean and profitable solutions – served as an argument in favor of taking ambitious action.

November 2021 —

## The first 'Solutions Guide'

Scotland's situation presenting an interesting case study of a country, with an evolving economy dedicated to a just ecological transition, pushed us to select the Scottish climate change plan as a source from which to write a first Guide. This Solutions Guide was a first step in accompanying public authorities and businesses on their path to net-zero by highlighting specific innovations which could be incorporated into their climate strategies.



“My vision of the ecological transition is a peaceful and unifying one, yet we are still talking of carrying out a revolution.”

Bertrand Piccard

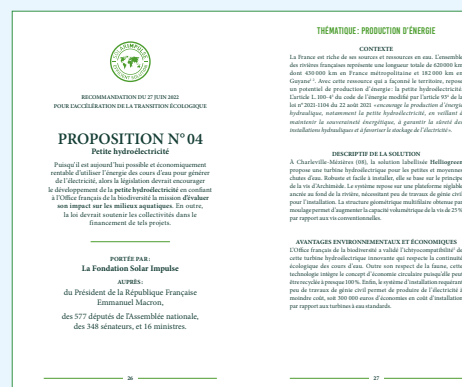
# Milestones

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2022

## The 'PRÊT À VOTER' initiative

The Solar Impulse Foundation believes that creating an economy that is both logical and ecological requires recognizing the value of clean and efficient technologies. Neglecting this can hinder the ecological transition. To address this, in 2022, the Foundation launched the "Ready to Vote" initiative, aimed at modernizing France's legal and regulatory framework. It provided 50 vote-ready recommendations based on innovative solutions to align laws with technological advancements. These recommendations span nine key themes, from energy to circular economy. The initiative involved sharing these proposals with incoming members of the French National Assembly, aiming to influence future legislative agendas. This marked the Foundation's first foray into the legislative arena, with plans to continue such efforts in 2023, ultimately striving to expedite positive change for our planet.



## The 'SOLUTIONS FOR CITIES' initiative

Since May 2022, the Solar Impulse Foundation has been actively promoting climate solutions for cities and helping decision makers seize economic opportunities in the ecological transition. With over 1,400 efficient solutions already identified, the focus is now on their application in urban contexts, recognizing cities' pivotal role in mitigating climate change. These solutions span areas like energy, construction, mobility, and infrastructure, assessed based on environmental benefits, economic viability, technical feasibility, and scalability.

Officially released at COP27, the Solutions Guide is a comprehensive resource that presents a compilation of clean and profitable labeled solutions implementation case studies. It is designed to help and inspire urban centers to quickly build and implement effective decarbonization programs, proposing solutions that enable decision makers to harness the economic opportunities presented by the ecological transition while simultaneously reducing their environmental footprint. The guide, along with an online platform, addresses 50 common challenges faced by cities in adopting clean and efficient solutions and targets mayors, city planners, public administrations, companies, and citizens, showcasing that sustainable solutions exist and can help cities achieve environmental goals profitably.

This effort, driven by a bottom-up approach involving cleantech entrepreneurs, engaged over 180 cleantech companies within the Solar Impulse ecosystem, 10+ experts, and 9 external organizations between December 2021 and October 2022. Furthermore, the guide includes systemic enablers, recognizing the need for additional measures alongside technology adoption. These encompass integrating green public procurement criteria, fostering collaboration between city administrations and businesses, unlocking public finance, and embracing innovative financing mechanisms to facilitate long-term shifts essential for the ecological transition's success.

“If most of our problems are concentrated in cities, so are the solutions. If we manage to decarbonize cities, reduce their energy consumption, and minimise their waste, we are already making huge strides in the fight against climate change. The ecological transition is possible now – let's start with the biggest challenge, let's start with our cities.”

Bertrand Piccard



**The '1000+ Solutions for Cities' exhibition** was held in the context of Grenoble, European Green Capital 2022, in one of the most sustainable building in the world, IntenCity, the headquarter of Schneider Electric. An opportunity to understand the challenges related to cities and experience a selection of 26 labeled solutions firsthand.

# 2022 Activities

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## Modernizing the reglementation

An economy that is at once logical and ecological must properly value the benefits brought by using clean and efficient technologies. Failing to do so will prevent the ecological transition from ever properly taking off. Reducing the demands on natural resources, making far better use of the materials already employed, developing circular economies that do away with the concept of waste — these “needs” must be recognized by the laws that govern our lands. The success of the green transition depends less on the development of new technologies, but rather on the creation of favourable conditions to increase their adoption. That is why the Solar Impulse Foundation launched itself into the legislative arena in 2022.



## Prêt à Voter France

Prêt à Voter – translated as Ready to vote and a play on words of Prêt à Porter – was one of our landmark initiatives for 2022. It took clean technologies as a starting point in guiding the modernisation of France's legal and regulatory framework and sought to provide policy makers with 50 vote-ready recommendations that would align outdated norms and standards with the state of the art whilst continuing to grow the economy.

The Foundation selected 50 solutions from its portfolio of 1,450 labeled solutions, most of which are French and rooted in the regions, and has translated them into 50 legislative recommendations intended for deputies and senators in order to bring them more in line with the evolution of technologies. They are the result of the collaboration between innovators, experts and lawyers. The Ready to Vote initiative targets priorities to be implemented among the following 9 themes: energy production, energy storage, construction & housing, infrastructure & planning,

mobility & logistics, agriculture & food, water & biodiversity, circular economy and industry.

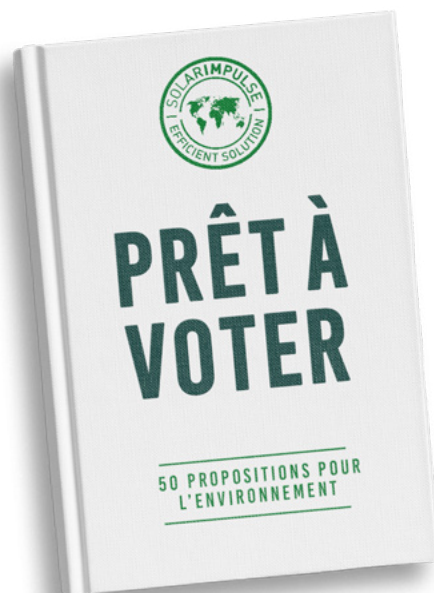
During a campaign over the summer of 2022, these were shared with 577 incoming members of the French National Assembly, 348 senators, and around twenty members of the government. Throughout the rest of the year, we continued to raise awareness elected representatives about the content of these proposals, so that they could be included in forthcoming legislation.

This work was also a first foray into the legislative arena for the Solar Impulse Foundation, having for many years spoken of the need for a suitable regulatory environment for the uptake of clean and efficient solutions. It is by no means the only time we will do this type of work, and steps are already underway to continue producing such content and follow it up in 2023. The objective here has been to save time for the planet by saving time for politicians!





- **Objective:** Beyond Solutions, it is the regulatory framework that drives environmental protection. Modernize current regulations to make them more in line with the evolution of technologies.
- **Approach:** Bring innovation to policy makers and help them create the framework necessary to implement the concrete solutions society needs to protect the environment, reduce waste and thereby improve the quality of life of citizens.

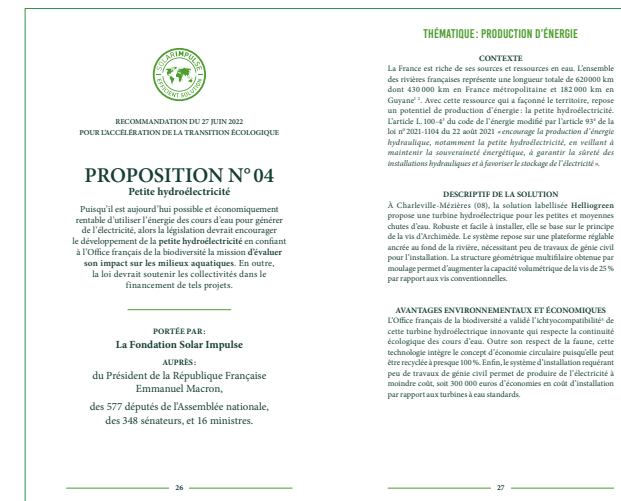


- **Medium – 50 recommendations for the environment:** Provide policy makers with 50 turnkey legislative recommendations to accelerate the updating of legislation and respond to current issues without delay. These 50 impactful proposals are designed to bring to market innovations and systems that are more environmentally friendly and efficient. They are the result of the cross-fertilization of different expertises between innovators, experts and lawyers.

Based on the 1,450 Solutions selected and labelled by the Solar Impulse Foundation, the 50 proposals are structured around 9 themes: Energy production, Energy storage, Construction & housing, Infrastructure & planning, Mobility & logistics, Agriculture & food, Water & biodiversity, Circular economy and Industry.

Each proposal presents a recommendation, the issues at stake, the explanation of the solution with its positive impacts in terms of environment and profitability, the

regulatory framework and aspects to be changed, an example of a case-study application or an example of a country that has implemented such a regulation.



## The communication campaign

### 1 – Slogan: ‘When the climate changes, the laws must change’

- A campaign for a federative and realistic ecology with subjects that transcend party allegiances.
- A campaign that engages politicians in concrete actions and gives them the tools to move forward quickly.
- A campaign that integrates the climate emergency, which is part of the public awareness but goes beyond the alert, the denunciation.
- A campaign that relies on the commitment of economic players in our society who have mobilized their resources to move the lines: we could benefit from the creativity of the famous Publicis Agency, the support of the advertising agencies JC Decaux, MediaTransport and Clear Channel, digital relay from Google and promotion in Paris with Hype Taxis.

### 2 – Campaign periods to support the political action

- **End of June:** when the MPs took office; A mailing including a letter, Bertrand's book, and a QR code to access the first 10 recommendations in digital format, with the other 40 to be published on our website in the form of a multi-episode serial
- **End of September:** at the beginning of the parliamentary year; Physical distribution of the Prêt à Voter books with the 50 recommendations of laws to the President of the Republic to the 577 deputies of the National Assembly, to the 348 elected officials of the Senate and to 20 ministerial cabinets

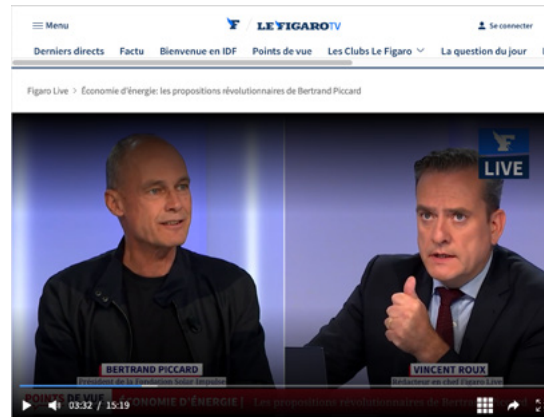
We led an integrated campaign across a variety of media including social & traditional ones, creating material to familiarise our audience with a new axis of our activity.



## Media coverage

### 37 Bertrand Piccard's interviews/articles in leading media

The press was very interested in this approach of providing turnkey legislative proposals to political decision-makers to facilitate the emergence of solutions for the ecological transition. The interviews followed one another on the main French radio and television channels – France Info, Radio France, Europe 1, BFM TV, TV5 Monde, CB News – supplemented by columns or articles published in quality newspapers in France – among *le Figaro*, *les Echos*, *L'Opinion*, *Paris Match* – but also in Switzerland – *Le Temps* – in the Netherlands – *Financial Daily* – or in Spain – *EFE Verde*, etc..



[Le Figaro 27/6/2022](#)

### Économie d'énergie: les propositions révolutionnaires de Bertrand Piccard



[L'Opinion 28/6/2022](#)

### Bertrand Piccard : « Pour l'environnement, les lois actuelles sont anachroniques : il faut les moderniser ! »

[Monde 21/10/2022](#)

### Ecologie : « Bertrand Piccard ne propose pas de changer la société, mais d'en améliorer son efficacité »



L'explorateur suisse Bertrand Piccard, à la tête de la Fondation Solar Impulse, aux Loges-en-Josas (Yvelines), le 26 novembre 2019. ERIC PIERMONT / AFP

[Le Temps 18/10/22](#)

### Bertrand Piccard et l'environnement : 1400 solutions réalistes et du « Prêt à voter » !



[TV5 Monde 27/6/2022](#)

**Environnement : les 50 initiatives qui pourraient changer la France, selon la fondation Solar Impulse**

[BFM TV 27/6/2022](#)

**L'appel de Bertrand Piccard aux députés !**

[RTL 25/08/22](#)

**Changement climatique:  
Bertrand Piccard appelle sur RTL à  
« faire sauter les freins législatifs »**

[CNews 17/11/22](#)

**Eric de Riedmatten reçoit  
chaque week-end un invité dans  
#LHebdoDeLEco pour approfondir un  
sujet économique.**



## Social Networks & Website

As the recommendations were technical and required a certain awareness of the legislative framework, we provided a simplified social media format explaining the problem, the solution and our recommendation. This provided a regular appointment with our audience, getting our message across while pushing it to our political and media audience. Media interventions were planned not only to explain our work on the Prêt à Voter but also to pressure political entities into meeting us and hear our plans. As seen in the next part, it worked.

Following the partnership with Google, we were able to benefit from a very good visibility for the PAV communication campaign. That campaign led to an excellent results with more than 778,000 pages of book read.

The results of the campaign were excellent, with a total number of 1,441,701 video views across all platforms. In addition, we recorded high engagement from our target audience, with 38,279 likes, comments and shares

on all our social posts. The QR code included in our communication allowed us to make the link between the physical and the digital campaign. The QR code was scanned by almost 5,000 people, providing a conversion path for users interested in the 50 proposals. Proof of the good targeting, the average reading time of our pages is relatively high with an average of 4 min 10 s per user.

- > **13,059,063 Impressions**
- > **1,441,701 Video views**
- > **38,279 Engagements**
- > **75,000 Visits to the PàV pages from the RS**
- > **20,500 Reading of the 50 proposals**
- > **778,000 Pages of the PàV book seen**
- > **4 min 10 sec Average reading time**
- > **4,457 QR Code Scans**

**#PRÊTÀVOTER**



## Meetings with politicians

### Beyond the Ready to Vote book, the initiative is a call to legislative action.

Bertrand Piccard and the Foundation's team went to meet with elected officials to present the approach, which is intended to be constructive and non-partisan, in order to assist elected officials in their efforts to change current legislation. To bring together the worlds of innovation and law to facilitate the emergence of today's solutions and thus accelerate the ecological transition.

### End of June 2022

- Working meetings with the energy and ecology advisors of President Emmanuel Macron and Prime Minister Elisabeth Borne. The latter have sent the cabinet of the Minister of Energy Transition to identify actions that could be integrated into the text under construction on the acceleration of the production of renewable energy.

### July 2022

- Hearing at the National Assembly with Jean-Marc Zulesi, President of the Commission for Sustainable Development and Land Use Planning

### September 2022

- Intervention with the MoDem deputies during their parliamentary reopening day in Guidel





## October–November 2022

- Audience at the National Assembly with Guillaume Kasbarian, President of the Economic Affairs Commission
- Intervention with 15 Les Républicains deputies of the Commission for Sustainable Development and Land Use Planning at the National Assembly
- Several meetings with the cabinet of Valérie Pécresse, President of the Ile-de-France region, who are interested in the work of Prêt-à-voter in order to identify recommendations relevant to the region's issues.
- Audience at the Council of State.



## During the COP

- Bilateral meeting with Agnès Pannier-Runacher, Minister of Energy Transition, to present the Ready-to-Vote
- Intervention in the framework of a summit of the Inter-Parliamentary Union (IPU) with 200 national parliamentarians from all over the world
- Audience with the delegation of European deputies on the subject of cities, led by Bas Eickhout, during which the parliamentarians mentioned having read and analyzed the Ready to Vote and explicitly requested a European version of the work from Bertrand Piccard and his team present there.



## December 2022

- Hearing at the National Assembly with Mrs. Givernet (deputy) and Mr. Piednoir (senator), in charge of a study on energy sobriety for the two chambers of the French Parliament
- Hearing at the Economic, Social & Environmental Regional Council of Auvergne Rhône-Alpes



## An approach to be duplicated

The Ready-to-vote campaign stands out as a formidable tool for supporting the environmental advocacy of the Solar Impulse Foundation. Indeed, it offers public decision-makers a credible and non-partisan demonstration of the regulatory and legislative changes to be made, enabling them to achieve their climate objectives, but also to envisage more ambitious ones.

Also, during bilateral meetings between the Solar Impulse Foundation and its political interlocutors, the Ready-to-Vote approach has generated a lot of interest, notably because of its realistic and pragmatic approach as well as its potential for replicability. Indeed, the structure of the proposals included can be adapted to different scales and for different models of governance, while maintaining a certain appeal due to the tangible nature of the proposed changes. Thus, it is quite natural that the Solar Impulse Foundation has armed itself with this new tool to demonstrate to decision-makers the extent of what is possible in terms of legislation favorable

to the deployment of clean technologies. In some cases, the Ready-to-Vote tool has become much more than a tool of inspiration, but a real gateway to new avenues of collaboration between the Solar Impulse Foundation and local, national and even supranational actors who are ready to act pragmatically for the climate.



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## Promoting sustainable urban solutions

Cities are the primary generators of economic activity and are well placed to harness the opportunities of the ecological transition. Whilst over 55% of the global population live in cities, they are responsible for three-quarters of all CO<sub>2</sub> emissions. Notably though, they generate 80% of global GDP, meaning they have an outsize importance and decision-making power when it comes to the mitigation of climate change. Having already identified over 1400 efficient Solutions that are both environmentally and economically beneficial, the next step is to apply the most appropriate ones to a city context, recognizing the outsize importance and decision-making power that they have on the mitigation of climate change.

## The solutions for cities initiative

The Foundation believes that the players that are most eager to boost climate solutions adoption are the ones that made a business out of it. Solar Impulse has built a unique ecosystem of such entrepreneurs over the past five years. This initiative leverages their knowledge of their clients' adoption barriers and highlights their success stories to inspire climate action.

By assessing these challenges holistically, and then identifying the technologies that can help those obstacles to be overcome, the Solar Impulse Foundation has sought to remove any doubt that cities can't fully participate in the ecological transition and benefit from the opportunities that it offers.

The initiative focuses on solutions related to energy, construction, mobility and infrastructure among other areas. These solutions are evaluated based on criteria such as their environmental and economic benefits, technical feasibility and potential for widespread adoption.



## The Solutions Guide for Cities

Proposing solutions, with reference to market trends, blockages to uptake, and implementation case studies, this report seeks to address each challenge that cities face to become more sustainable, helping decision makers to harness the economic opportunities of the ecological transition whilst reducing their environmental footprint.

Since identifying Solutions is only part of the puzzle, an additional section, powered by organizations such as ICLEI, Metabolic, WBCSD, WWF, and Climate-KIC, focuses on systemic enablers that allow cities' practitioners to go from their urban vision to concrete sustainable solutions implementation.

Given the current lack of significant representation of solutions targeting low-income cities in the Solar Impulse portfolio, it was decided that this Guide would focus on addressing the decarbonization challenges of medium and high-income cities more specifically.

## Helping the stakeholders involved in cities' decarbonization actions to take actions:

- Prioritizing sectors for sustainable efforts
- Identifying the Solutions they could use in each industry sector
- Being inspired through real-life cleantech implementation case studies
- Exploring best practices to lift adoption barriers



A bottom-up approach to leverage cleantech innovators experience of the market

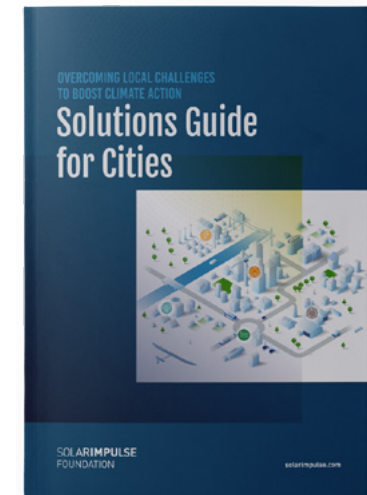
- 180+ cleantech companies contribution
- 10+ experts
- 9 external organizations
- real life case studies across 130+ cities & 28 countries



1,400+ Labelled  
Solutions – products,  
processes, services



188 Solutions came  
forward with a real-life  
case study in a city



5 sectors, 14 levers  
of action, & 48 challenges  
solved by the Solutions







## Thematic Sections – Levers of Action – Challenges

The five Thematic Sections of the Guide were first identified with inputs from subject-matter experts. They encompass industry sectors of interest for urban public authorities: Energy & Power Grid, Construction & Buildings, Mobility & Logistics, Waste Management, Water & Urban Infrastructure.

Their inputs were then supported via a literature review, to ensure that such sectors were indeed impactful – either directly or indirectly – on the quality of life, the natural environment, and GHG emissions in cities.

The Thematic Sections start with an overview of selected solutions' adopters categories – the “Stakeholders” – that can be found in the chapter's case studies. Each Thematic Section further outlines a series of Levers of Action identified. The 14 Levers of Action are split into 48 Challenges that present the more detailed adopters' pain points that the Solutions seek to address.

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	> <b>Challenge 3.3.1</b> Incentivizing the use of bikes for in-city mobility	123
	> <b>Challenge 3.3.2</b>	126

## Observations – Obstacles – Opportunities

For each Challenge, the common Obstacles identified by some of the Solar impulse labeled innovators related to the client users of their solution were summarized. In the Opportunities section, approaches and features of the example solutions are highlighted as potential ways to tackle those challenges (eg. system's modularity, plug-and play, versatility etc.).

> **The Solutions Guide for Cities looks at 50 pain points faced by cities in their efforts to adopt clean and efficient solutions**



**ENERGY &  
POWER GRID**



**CONSTRUCTION  
& BUILDINGS**



**MOBILITY &  
LOGISTICS**



**WASTE  
MANAGEMENT**



**WATER & URBAN  
INFRASTRUCTURE**

## From Urban Vision to Solutions Adoption

Whilst the Solar Impulse Foundation is focused on the technological solutions to the ecological transition, we also recognize that there are a whole host of other measures that must also be aligned for the ecological transition to succeed. We have collaborated with a host of organizations that have worked with cities for many years and who bring specific expertise to this domain to highlight some of the actions and processes that can be undertaken to create this enabling environment.

### These include but are not limited to;

- integrating green public procurement criteria to ensure purchasing by the city is aligned to their objectives. In Europe, spending by cities accounts for about 14 % of GDP.
- City administrations working closely with the business community to make sure

they are working in complementary ways. After all, a typical city has direct control over only 15-30 % of the total emissions generated by its activities.

- Ensuring that public finance is unlocked and mobilised for these objectives, and also that new and innovative financing mechanisms are embraced so as to allow for investment in many of the long-term shifts that need to occur.

## > Collaborating with Systemic Enablers to Create a favorable cleantech adoption environment in cities using key practices

### Limitations

As it follows a bottom-up approach, and because part of the information collected were sourced from the innovators' point of view (Solutions Submission Form),

the content of this report is closely linked and constrained by the existing labeled solutions in our portfolio. While we believe that the 1,400+ database of the Solar Impulse Efficient Solutions portfolio provided the means to cover a broad range of topics and opinions, we acknowledge that experiences and views from commercial companies representatives are not always reflecting what has been validated in the scientific literature.

We also acknowledge that this work cannot always report a 100 % exhaustive and unbiased view on the question of cities' decarbonization obstacles and opportunities. It rather provides a sample of potential pathways to explore with tangible insights coming from the actors involved in the commercialization of climate solutions.





## Launch at the COP 27

A significant moment in the political calendar for the Solar Impulse Foundation is the annual climate change Conference of the Parties, or COP, conducted by the UNFCCC. This year for COP 27, the negotiations were held in Sharm El Sheikh where the Egyptian Presidency of the COP placed significant emphasis on ensuring that less economically developed countries and emerging economies would not be left behind in efforts to modify our current climate trajectory. As such, there was much focus on the finance to be provided by those economies deemed most responsible for climate change. The meeting would eventually end with an agreement as to the establishment of a “loss and damage” fund to help those countries that will be most affected by climate change to deal with the burden. Whilst a figure was not put on how much will be made available for the fund, it was an important step and took until late in the second week of negotiations to be agreed upon.



## Presenting our work to a whole host of decision-makers

For the Solar Impulse Foundation, a major part of our effort was focused on the release of the solutions guide for cities, which became an official part of the programming for this COP, including a highlight when we were able to host a **high-level side event attended by Her Excellency Yasmine Fouad, Minister of Environment for the Arabic Republic of Egypt.**



We were active throughout the whole two weeks with over **two dozen involvements in events that we had either organized or contributed to.** These touched on a host of different thematics, and recognized the broad nature of our implication at the COP, with our message regarding the existence of efficient solutions once more inspiring decision makers and showing them that they can go further.



During the two weeks we also had a **small exhibition of Efficient Solutions for the built environment** hosted on the buildings pavilion. This served as a permanent (for the duration of the COP) exhibit of the solutions we represented but also of the Solutions Guide for Cities itself. It allowed visitors to interact with our solutions explorer and provided something a little different from what people may usually see at the COP.

In addition, we were able to **find opportunities for innovators to speak on panels and side events** throughout the duration of the COP, working with our partners to ensure that tech startups – a sorely under-represented community at these meetings, were also able to gain a voice. We intend to grow this effort in the next edition of the COP.



“Very few companies of our size have the chance to present our work at pavilions or sit on panels, much less to be highlighted on Solution Day. Our experience at COP27 was entirely different because Solar Impulse elevated our profile and opened up opportunities we couldn't have had otherwise. We are all so grateful to Bertrand and your team for giving us this opportunity to present our solution for the climate and waste emergencies on the global stage.”

Rachel Barr and the UBQ Family



- **20+ – Speaking engagements (panels & keynotes):**

The Climate & Clean Air Coalition ministerial (50 ministers), UNFCCC & thematic side-events (food, energy, finance, buildings, oceans...), panels with partners (Holcim, ENGIE, Solvay, Schneider Electric, BNPP), Ecotech Quebec and the European Commission.

- **50+ High-level bilaterals & exchanges (presidents, ministers, mayors, CEOs & IOs),**

including Emmanuel Macron, John Kerry, Ignazio Cassis, Ministers from France, Egypt, Chile, UAE, Spain, Finland and Pakistan, as well as Al Gore, Ursula Von der Leyen, Inger Andersen and Frans Timmermans.

- **4 – SIF-led opportunities:**

Buildings Pavillion pitches for labelled solutions, Buildings Pavillion side-event with Holcim & Ikea, Solutions Guide for Cities webinar, Presidency official event “1000+ Clean & profitable solutions” (C4S)

## The sheer breadth of subjects we engaged with:




Bertrand Piccard was a keynote speaker or a member of the panel in the following sessions;

- **Solutions to decarbonize the built environment** with Jesper Brodin, the CEO of Ingka Group, and Magali Anderson, Chief Sustainability and Innovation Officer for Holcim.
- **Financing the Renewable Energy revolution that has arrived** – addressing the challenges for the newer RE technologies: in collaboration with the European Investment Bank.
- Panel discussion on **Progressing ocean innovation to advance climate action** at the Ocean Innovators Platform, organized by His Serene Highness Prince Albert of Monaco.
- Bertrand Piccard addressing the **Sustainable Innovation Forum**.

- **Innovation driving food systems transformation:** Our current food systems are outstripping our planetary boundaries and depleting the Earth's resources. Small changes will not suffice and it is imperative that we radically rethink how food is produced and consumed.

- **Solutions Guide for Cities: Launch Webinar:** this event will look at what else can be done by cities to reduce their environmental footprint, speaking with mayors from leading cities as well as those organizations whose work is critical to helping cities meet their environmental objectives.

- **Solutions Guide for Cities: Launch Webinar: a post-live success (2500 viewers atm)**
- **More than 50 Guides distributed in all bilateral meetings**

**Online session**  
November 14th 2022 | 4pm GMT+2

**Prosperity and protection of the environment**


## How can cities unlock the opportunities of the ecological transition?



**Dr. Bertrand Piccard**  
President & Founder  
Solar Impulse Foundation



**Magali Anderson**  
Chief Sustainability  
& Innovation Officer  
Holcim



**Carlos Moedas**  
Mayor  
City of Lisbon



**Thomas Osdoba**  
Program Director  
NetZeroCities

**Host Moderator**



**Alexandra Barraquand**  
Strategic Products Lead,  
Solar Impulse Foundation



- **Bertrand Piccard addressed the Ministerial meeting of the Climate and Clean Air Coalition**, attended by over 50 Ministers and including Secretary John Kerry of the United States. As the issue of Methane emissions has gained prominence in recent years, this has become an integral domain in which to engage. This ministerial serves as a stock-take of progress on this effort.



- **Biodiversity – Active Restoration of Ecosystems during Global Change.** The Climate Crisis and Biodiversity Crisis are interlinked and that Nature has a key role in mitigation of and adaptation to climate change.

- **Climate innovation and building resilience through technology transfer** with – Ms. Ann Mettler – Vice President Europe, Breakthrough Energy Ventures, Prof. El Askary – Deputy President of the Egyptian Space Agency and Professor of Earth Sciences, Alexandria University (EG) and Chapman University (US), and – Mr. Mathias Rauch – Director of Research Strategy and Policy, Fraunhofer Institute
- **Energy Transition: Key Insights from Global Covenant of Mayor signatories: GCoM signatories have been invited by the European Commission's Directorate-General for Climate Action (DG CLIMA) to showcase their work.**



- **1000+ Clean and Efficient Solutions for COP 27:** Our landmark event for this COP, The purpose being to provide evidence to the attending ministers that by adopting ambitious environmental targets and putting in place the right enabling conditions, the technologies will be pulled to market and kickstart the clean industrial revolution at the pace and scale that we need to reach the 1.5° C target.

**Speakers included:** Sharon Dijksma – Mayor of Utrecht, Kobie Brand – Regional Director, ICLEI Africa Secretariat, Gwenaëlle Avicé-Huet – Chief Strategy and Sustainability Officer, Schneider Electric. A special intervention from Her Excellency Yasmine Fouad, Minister of Environment for the Arabic Republic of Egypt.

## Smart city expo world congress 2022

The 2022 Smart City Expo World Congress served as a pivotal platform for the launch of our “Solutions Guide for Cities.” Indeed, while Bertrand Piccard and the Solar Impulse Foundation Public Affairs team were at COP to ensure maximum political and mediatic coverage for the launch of the report, the rest of the team focused its launch activities on this targeted event. The goal here was to acquaint local governments: mayors, city officials, and agents with our hands-on content.

Indeed, The Expo turned into a forum for discussions and partnerships, reflecting a shared vision for the future of urban living. The event facilitated meaningful interactions with city leaders on a global scale and their enthusiastic engagement underscored a collective commitment to advancing sustainable development via Efficient Solutions and a positive mindset.

- 2 Sessions at the Smart City Business Forum with Solutions & high-level panelists



- 6 interventions on different panels & booth
- +70 City representatives
- +65 Solution providers
- +25 Collaborators (ecosystem, investors, others)

## What we heard at the Expo

- “Let’s steal each other ideas – speed is what we need to reach our goals by 2030 and 2050”.
- “It doesn't make sense to re-invent the wheel and create our own local solutions”.
- “This work (the guide) is inspirational, we need to be bold & to act fast”.





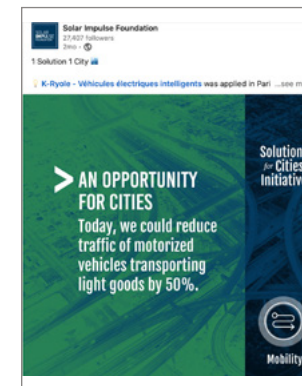
## Media and social media campaign

The Solutions Guide for Cities communication campaign was the central element of Solar Impulse's comms activities from September onwards. Still going strong in 2023 through the Solutions for Cities Initiative, it includes a vast array of tools & products. Cities were a new and unknown target for the Foundation, hence everything had to be designed knowing that content and tactics testing would be required. We developed a variety of formats, from articles with world-leading associations and the #Solutions4Cities Podcast to **videos and carousels** to put the content of the Guide forward.

The Guide was central to our on-the-field- live publications such as **Hot Takes, Instagram Stories and Webinar** promotion content. Overall, the campaign allowed us to reach new audiences on social media, establish ourselves as important players in the sustainability city sector and creating long-lasting contacts for future collaborations, notably through

our newly created Podcast. The impact of the campaign will only be clearer in the future projects of Solar Impulse, but it set the foundations for a whole new kind of communications tactics that we aim to expand to other campaigns in 2023, as their successes provided valuable lessons-learned.

➤ **3 vidéos Solutions for Cities:**  
**25,965 views**  
**71,231 impressions**  
**1,439 engagements**



## 11 – Chronicles published by 8 platforms (3 of these daily)

[La Tribune-daily FR](#)

[EFE Verde-daily ES + LATAM](#)

[Le Temps-daily CH-fr](#)

[Le Soir BE](#)

[Die Welt Woche CH-de](#)

[Green Biz US-en](#)

[Business Green UK-en and Clarion](#)

[Energy -en](#)

## +20 – Interviews given by Bertrand at COP 27 (ON-SITE, ZOOM AND PHONE)

[BFM TV](#)

[Jornal de Negocios](#)

[Bloomberg](#)

[UNEP and UN Channels](#)

[10 Million Solutions](#)

[SwissInfo](#)

[Leman Bleu](#)

[Futura Sciences](#)

[Associated Press](#)

[Energy Monitor](#)

[Clarion Energy](#)

[RTS](#)

[Trends Tendence](#)

[LTE Magazine \(Morocco\)](#)

[EU Official Media channel](#)

## Website

### • Solution City Page Views

**(digital version): 9,825**

Unique Users (digital version): 2283

### • Solution City Page Views

**(pdf version): 188,300**

Unique Users (PDF version 5.500)



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## Enhancing investment in efficiency-driven solution

At SIF, our mission is to accelerate the adoption of clean technologies. But adoption will not come about without investment in the startups that bring these solutions to scale. As we entered more turbulent times on the investment markets, we've found that more support was needed to help innovators to find capital. As a result, the year 2022 became a stepchange for the investor team: The first closings of the investment funds were realized and the first investments took place. The collection of financial and fundraising data was scaled up and new tools were developed to operationalise and enhance matchmaking between the innovator and investor community.

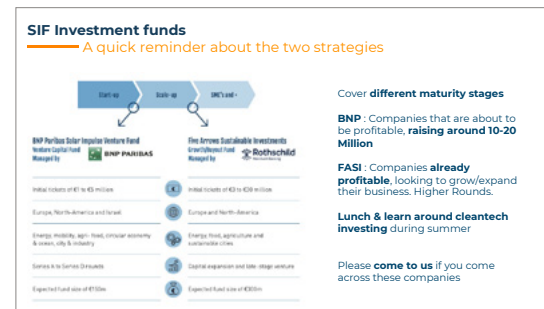
## Enhancing investment in efficiency-driven solution

### Closing of the Solar Impulse Funds

Both the BNP Paribas Solar Impulse Venture Fund and Five Arrows Sustainable Investments (In partnership with Rothschild&Co) have performed several closings in the 2022. Whilst fundraising had not been fully completed by year's end, both funds had raised over two thirds of their intended size.

Close collaborations between the investment teams of the respective funds and the Solar Impulse investment team were set up, with regular deal flow meetings to present **78 solutions** for review. Over **16 solutions** had serious follow up with either of the funds in the form of a call or more. In these partnerships, SIF either presented labeled solutions for potential investments, or accompanied deals proposed by the funds through the labeling process, aspiring to a positive outcome as a validation of the solution's impact.

The closing of the funds also meant the first investments saw the light of day in 2022: UK-based biodiversity monitoring company Nature Metrics was the first investment by a Solar Impulse Fund in May, followed by **French food** waste reduction company **Phenix** in October, resulting in tangible financial support for these companies to grow their impact and accelerate their implementation.



**BNP Solar Impulse Venture Fund invests in NatureMetrics**  
The first investment from the funds

**NEWS & ARTICLES**

DNA-based biodiversity monitoring company NatureMetrics announces \$15M in new funding to bring nature data to the boardroom  
Published 20th May 2022

**Reduce the cost and democratize biodiversity monitoring** with DNA-based analysis

**Co-investor** alongside 2150, Ananda Impact Ventures, SWEN Capital Partners' Blue Ocean fund

**Great team effort from SIF** with the labelling process of the Solution

### Scaling the Financial Information Form (FIF) and launching the Investor Profile

In 2021 we launched the FIF to collect fundraising and financial data on our solution providers, with the objective to acquire a visibility on the financial needs of the portfolio solutions. In 2022 we scaled the implementation of this form and collected and validated over 130 of them. This enabled us to have a clear view of investment opportunities across the network, and to share these with the wider investment community through our monthly newsletter which highlighted 81 investment opportunities. In combination with ad hoc introduction requests from our networks as well as the e-pitches, the SIF team made 79 introductions between innovators and the wider investor community (excluding those made with the SIF Funds). In order to further facilitate the matchmaking, we also developed an investor profile in which investor members can register their investment scope, paving the way for a more elaborate matchmaking programme between innovators and investors in 2023.

## The SIF Investment E-pitch Programme

The solar Impulse E-pitch programme was continued into its third year and yielded the following results:



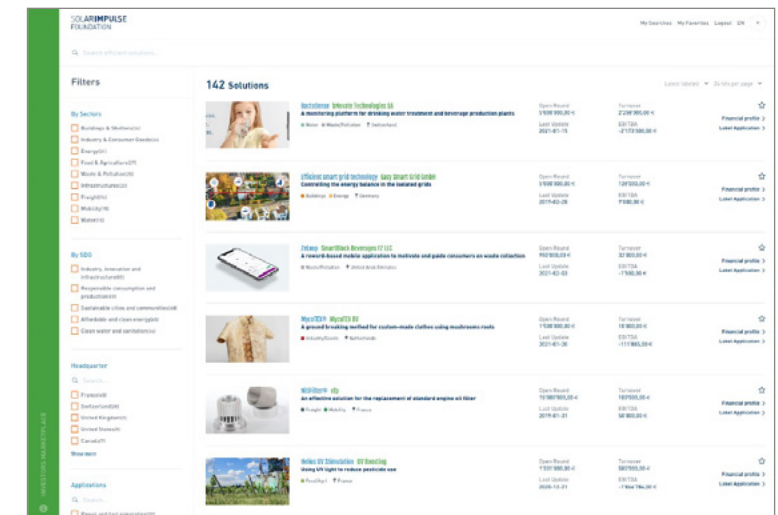
- 8 E-pitches
- 39 pitching solutions
- 370 investors present



- 33 introductions  
(45 % of solutions pitching received at least one introduction)
- 3 physical matchmaking events

## The next milestone: Launching an investor matchmaking platform

In 2022, the first iteration of a matchmaking platform was created as a test for the investment teams of the Solar Impulse Funds. This platform can be seen as a Solutions Explorer for Investors, with the addition of financial filters based on the FIF. The team developed an initial proposal to launch a fully fledged investor matchmaking platform in 2023, considering fundamental questions of product development and potential monetisation of the project.





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## Inspiring adopters

Inspiring Adopters lies at the core of our commitment to drive the widespread adoption of cleantech solutions. Recognizing that the successful integration of innovative technologies depends on motivated adopters, we have developed a strategy to engage clients and facilitate the implementation of cleantech solutions.

Central to our approach is the empowerment of clients in the design phase. Actively involving clients in shaping their call for solutions — their innovation requests — ensures a tailored alignment of cleantech solutions with their specific operational requirements. This proactive involvement fosters a sense of ownership and deepens the appreciation of the tangible benefits cleantech can bring.

The Solar Impulse Foundation serve as a conduit to we serve as a conduit to facilitate meaningful connections between clients and innovators in the cleantech space. By providing a platform for direct engagement (online pitch session or face-to-face networking), we aim to enhance understanding and lay the groundwork for collaborative partnerships. This direct interaction is pivotal in bridging the gap between adopters and the innovators behind Efficient Solutions.

Beyond conceptualization, successful adoption hinges on concrete agreements. Be it with procurement teams of private entities such as ADEO or public entities like the Region Grand Est, we work diligently to facilitate the realisation of implementation agreements. This collaborative approach fosters the concrete integration of cleantech solutions.

The objective is to transform every matchmaking endeavor into a success story. These instances not only showcase the effectiveness of cleantech adoption but also serve as inspirational

benchmarks, encouraging others to follow suit and contributing to the cultivation of a culture of innovation and sustainability.

## Examples of activities

### Adeo

Following the success of the first edition in 2021, we reorganized a Positive Home Challenge with our partner ADEO in 2022. There are more than 300 new applications to the challenges and more than 50 pitches to the different business units of ADEO in one day. More than 100 representatives of ADEO business units from all over the world joined the session.

The goal is to support candidates by either accelerating their development or their commercialization through the 900+ Adeo stores and their websites.

The result of this is already several new products in test in ADEO stores and more to come. It's also a way for ADEO to send a message to its suppliers about its commitment to having more responsible products for its customers.



## Other opportunities offered to solutions

### December 2022

- **Microsoft Environmental Startup Accelerator**, support for Solutions to be awarded the Label
- **NREL Growth Forum**, online – 10% discount to apply

### November 2022

- **COP27**, Sharm El-Sheikh – Blue Zone pass + pitch opportunity for 4 Labeled Solutions
- **Smart City Expo**, Barcelona – Pitch opportunity for 2 Labeled Solutions
- **InnoClimat 2022**, Pitch opportunity for 2 Labeled Solutions
- **London EV Show**, London – Free booths for 3 Labeled Solutions
- **World Impact Summit**, Bordeaux – discounted booth for 16 Labeled Solutions
- **Decarbonize Thailand Symposium by New Energy Nexus**, Bangkok – 2 free booths + discounted visitor passes

### October 2022

- **London Climate Technology Show**, Londres – Free booths for 6 Labeled Solutions
- **Cleantech Forum Asia** – 10% discount visitor pass

### September 2022

- **UrbanTech Forward**, Poland – 20% discount visitor pass
- **Innopolis Expos**, Paris – discounted booth for 11 Labeled Solutions

### August 2022

- **Salon Produrable x BPIFrance** – discounted booth for Labeled Solutions + promo code for visitor passes

### June 2022

- **Urban Future Conference Session**, Helsingborg – 10% discount visitor pass

### May 2022

- **ChangeNOW 2022**, Paris – 8 free booths for Labeled Solutions + promo code for visitor passes
- **UrbanTech Forward**, 20% discount visitor pass

### April 2022

- **CUMA x Région Grand Est**, Bannwihr (Haut-Rhin) – 3 free booths for Labeled Solutions
- **MIX.E**, Lyon – 9 free booths for Labeled Solutions
- **Événement Luxembourg**, 18 Labeled Solutions invited to pitch

### March 2022

- **Cleantech Group**, Cleantech Forum Europe, Edinburgh – 300\$ discount visitor pass
- **Innovate4Water**, pitch opportunity
- **Bioket Exhibition x Region Grand Est**, Free booth for 10 Labeled Solutions
- **Monaco Ocean Week** – 7 Labeled Solutions invited to speak on a panel
- **IdF Tech Meetings on Smart Mobility**, 14 Labeled Solutions introduced to companies
- **Panel in prague organised by the swiss embassy**, 1 Labeled Solution on the panel
- **Fédération Française du Bâtiment**, 9 Labeled Solutions introduced to the members representing the BTT companies of the Grand Est Region in the framework of our collaboration with the Region

### Prize nominations

- Earth Short prize
- Cleantech Group, 50 to watch list
- Cleantech Group, APAC 25 list
- Green Business Award
- UNDP Tanzania Growth Stage Impact Ventures (GSIV) for SDGs
- WIPO Global Awards

### Shortlist Press Article

- 10.2022 – 1 jour 1 actu, “Les Enfants pour l’Océan”, **Groupe press Bayard**, Editions Milan
- 04. 2022 – Interview with **Media Le Soir** – 4 Labeled Solutions
- 01.2022 – 7 Labeled Solutions featured in **Real Leaders Magazine** special Climate Edition (digital & print)
- 01.2022 – Shortlist Solutions for **La Libre Belgique**
- 01.2022 – 2 Labeled Solutions shortlisted to be featured in an **LVMH newsletter**

### Blog post & Newsletter features

- Investor newsletter features: 10 newsletters with 81 Labeled Solutions highlighted that led to **16 introductions** investors x Labeled Solutions
- Labeled Solutions Update blog post: **11 blog posts** featuring env. 70 Solutions Stories



### E-Academy

- 12.2022 – How to partner with big businesses: 3 tips to radically improve your chances of success
- 11.2022 – Cleantech business opportunities in the MENA region
- 10.2022 – The Financial Information Form: Our tool to promote your funding rounds
- 09.2022 – Why and how to establish your cleantech company in Region Grand Est? x Partner RGE
- 05.2022 – Non-dilutive finance for young cleantech companies
- 04.2022 – How to implement your cleantech company in Ile-de-France x IDF partner





- 03.2022 – The guide to winning over investors: How to do a good pitch x BPIFrance
- 02.2022 – Label Update Program: Increasing Label credibility

Total attendees: Sophie to add #

### Other webinars

- Webinar with the Swiss Federal Office of Energy

### Get Togethers

- 11.2022 – Get Together in Sharm El-Sheikh (COP27)
- 11.2022 – Get Together in Barcelona (Smart City Expo)
- 06.2022 – Get Together in Singapore, 5 Labeled Solutions
- 05.2022 – Get Together at ChangeNow, Paris, 35 Labeled Solutions invited and experts
- 05.2022 – Get Together x Green Business Switzerland & Lindeln AG, 18 Labeled Solutions invited





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## Fostering Internal Expertise and improving the Labeling process

The achievements of 2022 were focused on expanding the Solutions portfolio beyond the 1000+ mark and ensuring that our unique database, the Solutions Explorer, is leveraged by seekers looking for Solutions. The team, which concentrates all key expertise, was also significantly involved in providing support through several projects, such as the estimation of the impact for our “prêt à voter” campaign, as well as selecting relevant Solutions to be showcased in the Solutions Guide for Cities. A significant emphasis was also placed on revamping our internal processes to estimate the impact of Solutions for the Efficiency Solution Label, notably with the introduction of the update to our Solution Environmental Impact tool, which now integrates more indicators than just CO<sub>2</sub>.

## Efficient Solutions Label, Internal process improvements

The Solar Impulse Foundation prioritises the Efficient Solution Label as a core activity, aiming to curate a portfolio of clean and profitable solutions for potential adopters. The Label's process undergoes continuous refinement to ensure the inclusion of high-quality solutions while maintaining a fast and efficient application process.

Notably, in 2022, a series of improvements were implemented to enhance various aspects of the process. These include the introduction of a comprehensive digital transformation across our operations, an improved methodology for assessing the environmental impact of solutions, a more streamlined approach to conducting compliance and reputational checks, and the initiation of a new program that encourages labelled Solutions to update their information and label three years from the date of initial labelling. These measures collectively contribute to maintaining the efficacy and relevance of the Efficient Solution Label in promoting sustainable and impactful solutions.



“C’est une vraie fierté et c’est important pour nous car Solar Impulse, c’est (...) un processus extrêmement robuste, avec un comité d’experts internationaux neutre de très haut niveau qui audite en profondeur les solutions: Life Cycle Analyses, business model, etc... tout y est passé.”

Raphaël JATTEAU, Cocoparks, June 2022



“We are very happy to have passed the demanding but smooth process of certification. Highlights of our application to the Solar Impulse Foundation. An access methodology on Comparative Life Cycle Analyses to deploy new methodology. A transparent and efficient approach thanks to the development of an own platform. A focus on circular economy projects, with high environmental added value!”

Grégoire GUIRAUDEN, Reverse, October 2022

## Digital transformation

With the aim of enacting the digital transformation of the foundation and developing a data-oriented culture a number of projects were carried out around these four pillars: (1) Business Process Automation; to improve the overall efficiency of our workflows. (2) Analytics & Business Intelligence; to gain strategic insights from internal & external data sources. (3) Knowledge Management & Governance; to centralise resources, ensure compliance and build capacity.

### THE PROCESS IN NUMBERS

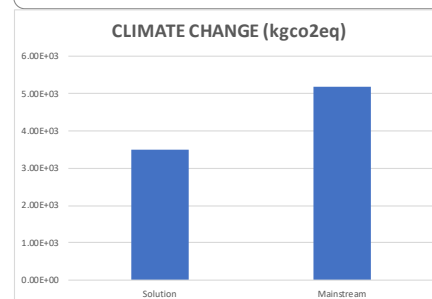
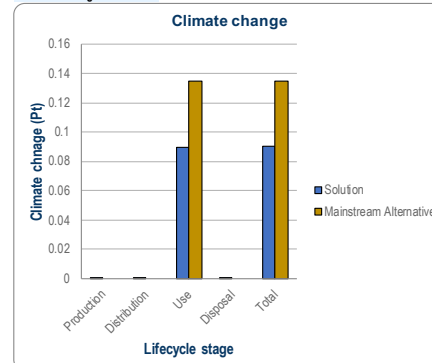
- 500+ new solutions were initiated, and 311 were submitted
- 176 solutions received the Label in 2022
- 40% of solutions submitted in 2022 were rejected
- The process is 1.72 times faster in 2022 compared to 2019



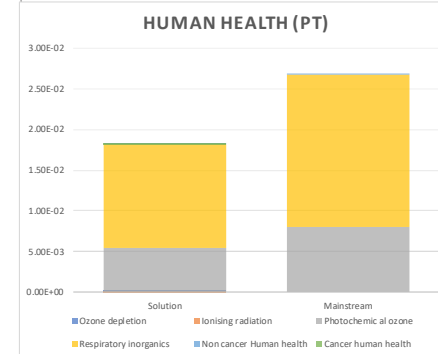
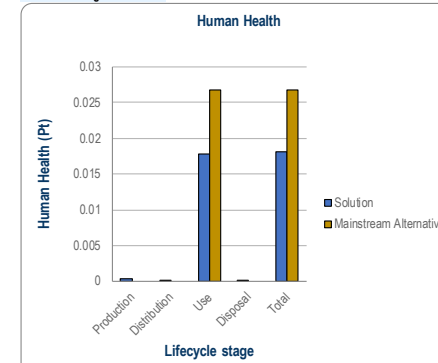
“The Excel charts look amazing, before we started the Solar Impulse Foundation Label application we were not even aware of how much positive impact our solution creates.”

Aleksandar Kavgi, Typhoon HIL, October 2022

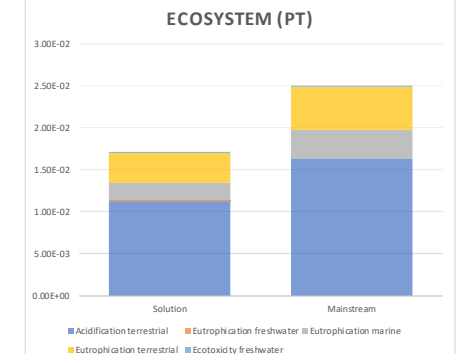
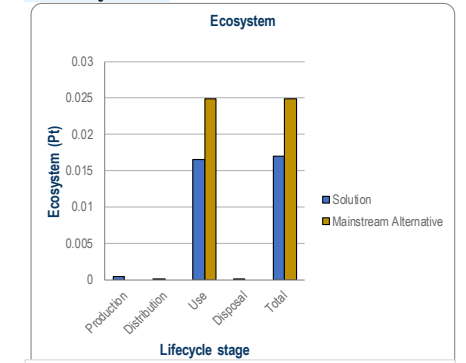
Climate change			
Summary (Pt) per FU	Solution	Mainstream Alternative	
Production	0.000804461	0	
Distribution	7.87481E-06	0	
Use	0.089845023	0.134767534	
Disposal	2.42236E-05	0	
<b>Total</b>	<b>0.090681582</b>	<b>0.134767534</b>	
Relative Savings		32.71%	



Human Health			
Summary (Pt) per FU	Solution	Mainstream Alternative	
Production	0.000354727	0	
Distribution	1.65909E-06	0	
Use	0.017830718	0.026746077	
Disposal	5.12123E-06	0	
<b>Total</b>	<b>0.018192225</b>	<b>0.026746077</b>	
Relative Savings		31.98%	



Ecosystem			
Summary (Pt) per FU	Solution	Mainstream Alternative	
Production	0.000406678	0	
Distribution	1.81365E-06	0	
Use	0.016631868	0.024947803	
Disposal	5.62004E-06	0	
<b>Total</b>	<b>0.01704598</b>	<b>0.024947803</b>	
Relative Savings		31.67%	



## Improved methodology for assessing the environmental impact of Solutions

In 2022, our team tested and implemented an upgraded version of the Solution Environmental Impact Tool. This enhancement was the result of extensive collaboration with third-party environmental consulting firms, international experts, and stakeholders. The key feature of this new version is the integration of a comprehensive database, enabling the tool to generate results for various environmental impact indicators beyond greenhouse gas (GHG) emissions. One notable change in the new Solution Environmental Impact Tool version is the introduction of a questionnaire designed specifically for innovators. This questionnaire streamlines the application process by providing essential information required for the team to populate the tool and estimate the solution's basic impact. The primary objective of the questionnaire is to alleviate the workload on innovators during the application process, eliminating the need for them to perform environmental footprint calculations on their own.

## A more streamlined approach to conducting compliance and reputational checks

Furthermore, to guarantee that every company proposing a solution for the Solar Impulse Foundation's Label adheres to its Ethical Charter and complies with all relevant laws and regulations, a reputational check is conducted. While this check was originally carried out by a third party in previous years, we have revamped and integrated the process into our operations in 2022. Presently, we possess internal tools that enable us to assess compliance risks effectively. This tool facilitates the verification of the transparency of information provided by innovators and promptly detects potential cases of bribery, money laundering, terrorism, and corruption that will be as a result rejected.

## A new program that encourages Solutions to update their information

In 2022, as part of SIF's continued commitment to upholding the value, credibility, and impact of its Label, the Label Update Program (with retroactive effect) has been introduced. The Label Update Program (LUP) aims at introducing a process for already-Labelled Solutions to reaffirm their association with SIF as well as receiving an official confirmation that their solution still meets SIF standards. Four months before the three year renewal date, Labelled Solutions will be invited to follow the same application procedure as Solutions applying for the first time, with the possibility of partially using parts of their former application to speed up the new submission process. After successfully passing this process, they will then receive an updated Label they can display alongside their previously-obtained Label. If a Member chooses to not accept SIF's invitation to go through the LUP, they will continue to hold the original Label they received, as well as any acquired in the past. However, they will not actively receive the majority of benefits provided



by SIF to Labelled Solutions. The LUP is key in maintaining the credibility of the Label to investors, partners, and affiliated government entities. As SIF continues to grow and evolve, we are committed to ensuring our Labeled Solutions continue to have a strong, positive impact in the world. Along with the LUP, SIF operates yearly checks in order to ensure that the Labelled Solutions are active and up to date. In the case where a Solution fails to prove that it is still operational and is in line with the information provided with SIF during the application process, SIF retains the right to withdraw the Solar Impulse Efficient Solution Label granted to that Solution, as well as, its World Alliance Member status.

## > Carbios is proud to announce that its Solar Impulse Label has been renewed!

In 2019, Carbios biorecycling technology was among the first labeled innovations to join the 1 000 sustainable and competitive solutions sought by the Solar Impulse Foundation. This breakthrough technology removes the need to use fossil resources to create virgin plastic. Based on the use of highly specific enzymes, this technology breaks down PET plastic waste into its original building blocks, which can be used to produce high-quality PET plastic.

[Click for more information](#)







## Impact Estimation for ad-hoc Advocacy projects

The team played a crucial role in the Prêt à Voter campaign by providing technical support for the selection of Solutions and drafting each law proposition. To ensure accuracy, key figures associated with the Solutions underwent a thorough verification process in collaboration with the innovators. Furthermore, an assessment of the potential impact of the campaign's solutions was conducted, aiming to estimate the greenhouse gas reduction on a large scale if implemented nationwide with a 100% penetration rate in France. This involved calculating the individual impact of each solution and aggregating the impacts of all 50 solutions, employing a “bottom-up” approach to ascertain the total emissions reduction.

A parallel process akin to the Prêt à Voter calculations was undertaken for the Solution Guide for Cities. However, given the broader scope of the study, encompassing 250 solutions globally, a distinct methodology, termed the “top-down” approach, was employed. In this instance, the focus was on identifying the environmental challenges confronted by cities. The solutions addressing these challenges were categorized, enabling the determination of an average emissions reduction for each specific challenge.

## Participation in mutli-stakeholders implementation projects in Building and Energy sectors

The team's expertise has been integral to collaborative projects with industrial stakeholders in the building and infrastructure sector, focusing on pre-selection and presentation of solutions for potential large pilot implementation projects. Additionally, the team has played a vital role in supporting the calculation of key impact metrics to determine the potential impact of implementing solutions from the Solar Impulse portfolio. These collaborative

efforts allowed us to be part of the conversation around key implementation topics such as carbon tax implications, utilization of carbon credits, limitations on CO<sub>2</sub> emissions, communication strategies, effects on bidding processes, lifespan considerations for projects and materials, and the influence on decision-making during implementation for multiple stakeholders. This exercise has proven to be an engaging and insightful implementation process, positioning the foundation at the core of its mission.

A comparable undertaking was conducted within the energy provider domain, specifically concentrating on the development of an optimal and efficient solar farm. The team initiated a series of visits to actual solar farm projects, acquiring firsthand insights into the practical aspects and challenges associated with implementing Solutions in this sector. This hands-on experience significantly enhances our capacity to offer well-informed recommendations, positioning the foundation at the forefront of promoting clean and profitable Solutions.

## Maintaining our Expert Community, the force behind the Efficient Solution Label

In 2022, the Expert community of the Foundation has demonstrated dedication and motivation not only by assessing Solutions that are seeking the Solar Impulse Efficient Solution Label but also by actively contributing to the major initiatives that have been launched throughout the year. 2022 has also been the year of the launch of the Ambassador program: 17 Experts from different industries and countries have been selected to promote the vision and mission of the Foundation by participating in strategic internal discussions, taking part to live events as speakers, and sharing SIF activities and messages on social media.

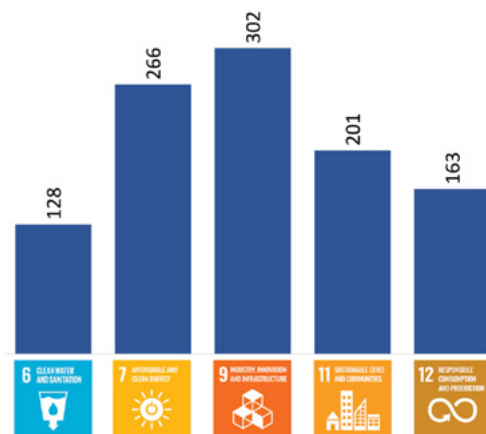
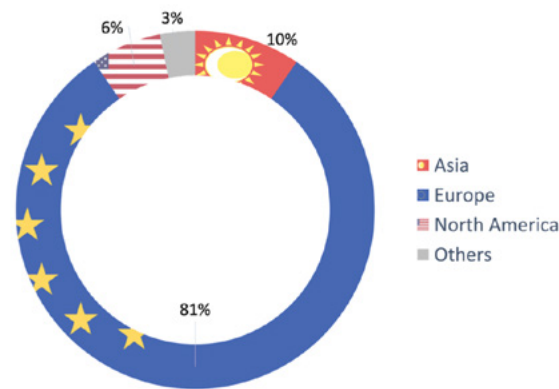
In order to spread knowledge around sustainability-related topics of interest, Experts have been involved in the organisation of exclusive webinars and in the writing of technical articles that have been published on the SIF website: biodiversity preservation, alternative proteins production, circular economy and

energy storage technologies are just a few thematics tackled by the Experts in 2022. To place a spotlight on the Experts who have gone above and beyond in their role to help label sustainable and profitable Solutions, the Foundation has conferred the “Expert of the month” and “Expert of the year” awards to the most engaged members of the Expert Community.



## The Expert Community in Numbers

- > 373 Active Experts
- > Distribution per SDG  
(each expert can cover multiple SDGs)



Distribution per continent:

## Experts contribution to major Solar Impulse Foundation's Advocacy activities

Since the very beginning of the drafting of the Solutions Guide for Cities, experts have been involved in the process of identifying the major challenges that cities are facing in their decarbonization plans. For the French initiative Prêt à Voter, more than 20 Experts have reviewed fifty law recommendations to ensure the consistency and soundness of the Foundation work. With their hands-on experience and knowledge, the Experts remain the Foundation's hallmark of credibility.



“Finding out whether a solution is good for the environment, especially in the B2B sector, is still a very complex undertaking. The Solar Impulse Foundation is one great example of taking responsibility to move in this direction.”

Rainer Notter



“There is no single global solution to sustainability. Often individual solutions at smaller scales may work together to make a noticeable impact on a large scale. It is incredibly encouraging to see the sheer number of innovative solutions that SIF is bringing together in one place. I am optimistic that this will accelerate us towards our sustainability goal.”

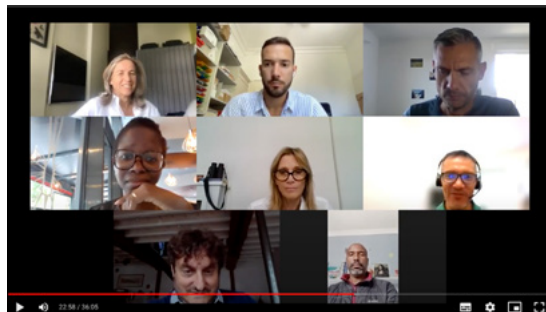
Namrata Salunke



## Spreading the message, the Experts' Ambassador Program

In 2022, our Ambassadors attended events in Europe, Middle-East and remotely. They were also extremely influential on social media, reposting our official content and creating some of their own. On LinkedIn, they highlighted their participation at events and shared their opinions on new developments within their respective field of expertise. Their

posts were viewed by over 30,000 people worldwide, increasing private/public/political awareness of our work and will to develop our world sustainably. Ambassadors also played a role in expanding our network. They connected us with startups, companies and other cleantech networks. Thanks to them, we have joint forces with several important actors and created strategic alliances for environmental protection.



### > 11 Experts' participation to Events

- ChangeNOW 2022, Paris
- Les Assises Européennes de la Transition énergétique, Geneva
- Salon Produrable, Paris
- London Climate Technology Show
- Innoclimat 2022, Montreaux
- Smart City Expo World Congress, Barcelona

### > 3 Experts' Technical Articles

- Biodiversity, Dr. Claudia Hitaj
- Alternative proteins, Rouyu Wu
- Circular Economy, Dr. Bénédicte Deryckere

### > 6 'Lunch & Learn' Sessions

## Forgetting about protecting biodiversity?



Written by Expert: Claudia Hitaj 4 min read

*Claudia Hitaj is a Solar Impulse Foundation independent Expert in environmental economics with a focus on the energy and agriculture sectors. On the occasion of the International Day for Biological Diversity (22nd May), Claudia talks about the importance of preserving and enhancing biodiversity, also through the use of sustainable agriculture.*

The 1992 Earth Summit in Rio de Janeiro brought us the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). While much of the public and media attention has focused on climate change, the goals of the two conventions are linked: We need to combat climate change in order to protect biodiversity, and biodiversity and healthy ecosystems in turn support climate change adaptation and mitigation.

**Biodiversity protection and climate change mitigation and adaptation go hand-in-hand**

It is important to apply biodiversity criteria and safeguards to climate change

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## Optimizing the digital experience

This year, our digital strategy focuses on enhancing member satisfaction and engagement by prioritizing user-centric design, personalization, high-quality content, and data-driven insights. We aim to continually improve our digital platforms like the Solutions Explorer, actively seek member feedback, and explore emerging technologies, all while maintaining a commitment to data privacy and security. Our goal is to provide a seamless, personalized, and valuable digital experience that fosters member loyalty and engagement.

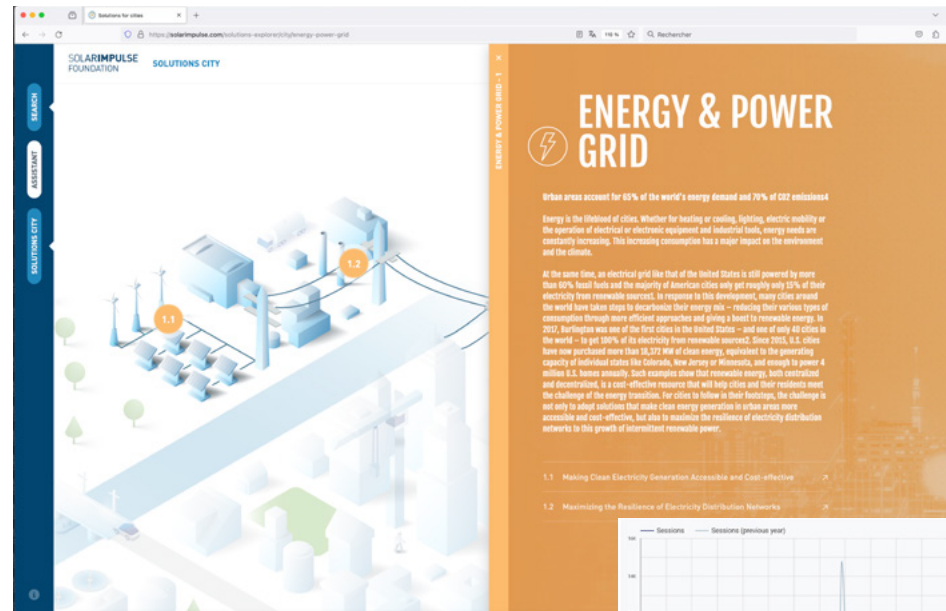


## Optimizing the digital experience

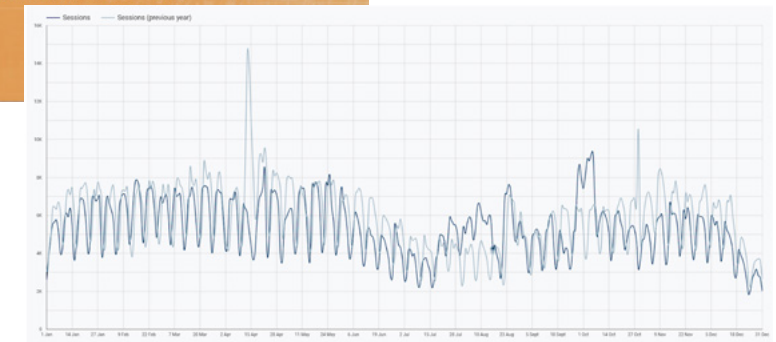
We initiated a transformative project to digitize our City guide, with the aim of simplifying and improving the efficiency of information access for our members and visitors. Through this digitalization effort, we strived to create a user-friendly platform that offered swift and intuitive access to efficient solutions and implementation stories

This year, the website has seen a slight decrease in traffic, with about 9 % fewer sessions compared to the previous year. Several factors can explain this decrease, but one of the main ones is the decrease of the paid traffic coming from the search engines. Indeed, it has dropped by 26 % compared to the previous year.

This decrease can be attributed to a more precise targeting strategy for our PAV and City Initiative campaigns, which resulted in a large increase in budget and a decrease in the number of clicks on our campaigns. While this strategy allowed us to reach a more qualified audience, it also resulted in a decrease in our overall traffic.



However, another important factor in this decrease in traffic is related to the evolution of our overall communication strategy. Indeed, we decided to move from a strategy of acquiring new solutions to a strategy of highlighting already implemented solutions. This new approach has allowed us to better promote our existing solutions and make them more visible to our target audience. However, it has also resulted in a decrease in the number of members and solutions recruited, which has had an impact on our web traffic.



In conclusion, while the decline in our web traffic may seem concerning, it is largely related to strategic choices we have made to better target our audience and better market our existing solutions. We will continue to closely monitor our traffic and adjust our strategy accordingly to ensure the best possible experience for our users.

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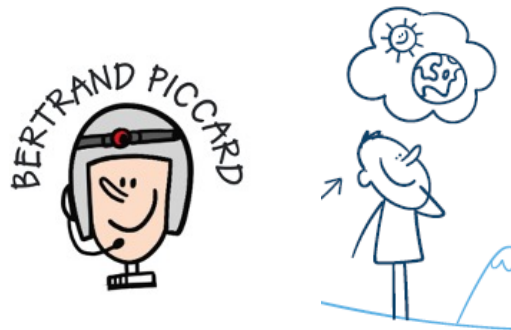
## Instilling pioneering spirit to young generations

At a time when the public and young people are increasingly concerned about the future of the planet, the Solar Impulse Foundation's mission is also to inspire the children about environmental challenges, encouraging them to take action for a sustainable future.

The Solar Impulse airplane has sent a powerful message of hope by demonstrating that impossible things can be achieved. This achievement was more than just a technical feat; it was a conquest of human limits. It has shown that each individual, with determination, respect and audacity can embrace the unknown to foster creativity and contribute to shaping a better future. We try to spread this mindset to inspire young people to develop an interest in the world and try to understand it.

## A mindset to inspire young people

Bertrand's conviction in humanity's ability to solve the most complex problems urges us, in turn, to redefine what is possible. It shows us that each individual, with determination, respect, and audacity, can embrace the unknown to foster creativity and contribute to shaping a better future. Bertrand invites us to embrace our own pioneering spirit, a philosophy of adventure that encourages us to break free from our routines and consider alternative ways of thinking and acting. This mindset can extend to society as a whole, inspiring us to develop our curiosity and ingenuity to reduce our impact on the planet.



“*Exploration is a state of mind in the face of life: abandoning our certainties, enriching ourselves with what the unknown can teach us to achieve the impossible.*”

Bertrand Piccard



## Inspiration, the legacy of the solar-powered flight around the world

Over the past years, The Solar Impulse Foundation has created an extensive selection of educational materials that are accessible to schools and families alike. This educational content comprises a variety of resources, such as cartoon videos, TED lessons, and children's brochures, designed to engage young people to become the 'explorers' of tomorrow's world.

# If it is possible in the air, it is possible on earth!

**An infinite number of solutions exist to change the world**





## Conferences in schools

As part of her involvement in the Communication Department, Michèle Piccard is developing the educational mission of the Foundation. She is giving conferences in schools to share the story of the Solar Impulse project, and raise awareness about climate change. These conferences provide a unique opportunity for students to learn about the importance of renewable energy and sustainability, and to see firsthand how innovation and determination can help us tackle some of the biggest challenges facing our planet.




By working with schools in this way, Michèle Piccard encourages the young generation to reflect on the impact of their actions on the planet and inspires them to explore new ways of living that promote sustainability and responsibility.

**SOLARIMPULSE FOUNDATION**


### Energy

Today we can...

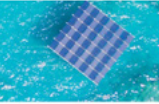
...produce it in a clean and renewable way.



**Waveroller**  
Create energy with the waves movement.



**Solarsea**  
Float solar panels on the sea or on large bodies of water.



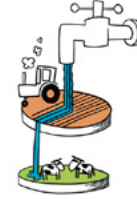
**SOLARIMPULSE FOUNDATION**

### Water


Today we can...

...manage the excessive use of the planet's freshwater reserves

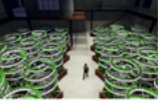
...clean up the freshwater sector by controlling the use of fertilizers, pesticides and other chemicals.



**Gjosa**  
Take inspiration from the water propulsion system of natural geysers to reduce the water used during a shower by 75%!



**Nutree**  
Use plants and microbes naturally present in the soil to locally purify and filter wastewater.




**SOLARIMPULSE FOUNDATION**

### Consumption and production


Today we can...

...make sure everything is biodegradable or transformable into gas


...moving from a linear consumer society to a circular economy where we recycle and recycle waste.



**Biopak**  
Use disposable plant-based cutlery that naturally degrades and turns into fertilizer.



**Inex Circular**  
Connect, via an application, companies so that the waste of one serves as raw material for the other.



**SOLARIMPULSE FOUNDATION**

### Cities and mobility

Today we can...

...raise public awareness, through education and training, to respect nature and invent a more balanced society.



**LED**  
Replace incandescent bulbs with LEDs to consume much less electricity in homes, schools, hospitals, public streetlights, etc.



**Winnow**  
Monitor food waste from restaurants on a «smart» bin to adapt its supply and throw less away.





# Collaborations

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## Partners supporting us

The Solar Impulse Foundation and its Partners share a strong long-term vision: a joint commitment in enabling and promoting clean and profitable technologies that have the potential to tackle climate change. Thanks to this continued support, the Solar Impulse Foundation can fulfill its mission, fund the World Alliance for Efficient Solutions and offer all services to its Members entirely free of charge. The Solar Impulse Partners family includes 14 corporate organizations.



## The Regions & Cities

International negotiations have for many years operated at the national level of politics, but it is well recognized that cities and sub-national entities have a major role in decarbonizing our society. The Solar Impulse Foundation engages with these entities to propose solutions based on their identified needs and help quantify what impact these solutions could have on their territory. By serving as an honest broker, without financial interest in the success of these solutions, the Solar Impulse Foundation acts as an intermediary placed at the center of Innovators' issues and political will.

The Région Grand Est has partnered with the Solar Impulse Foundation since December 2019. The Région île de France has partnered with the Solar Impulse Foundation since January 2021.

### Regions supporting us



### Regions & Cities collaborating with us



## Institutions endorsing us

The Foundation collaborates with numerous international institutions with the aim to demonstrate the business case for environmental protection and to support efforts to move governments, business and civil society toward economic growth that is qualitative rather than quantitative. This form of collaboration takes many forms: advocacy and communications efforts, mutual participation to high-level events, contributions to programs and working groups. Solar Impulse labeled Solutions also benefit from these collaborations via introductions, business opportunities and awareness raising.



## Services & Support

The Solar Impulse Foundation is pleased to have the support of several companies providing valuable services to the Foundation's activities. The expertise, competencies and generous contribution of these companies have assisted the Foundation across several areas, including building up the Foundation's technical knowledge and operational efficiency.

### Pielleitalia, Official Team Clothing Supplier

As the Official Team Clothing Supplier, Pielleitalia is providing the entire the Solar Impulse Foundation team with branded clothing. This partnership is a new chapter in the Solar Impulse Foundation's collaboration with Pielleitalia, as the company was also the Team Clothing Supplier for more than a decade during the Solar Impulse round-the-world journey. Pielleitalia continued involvement is yet another example of the company's commitment to protecting the environment and the Solar Impulse Foundation is proud to be associated with a company providing sustainable innovative textile solutions.

### EY, Label Auditor Partner

As the Label Auditor Partner, EY's role is to ensure that the Solar Impulse Foundation follows and adheres to the labeling process of Solutions which have been put into place. EY supports the Solar Impulse Foundation in defining and reviewing targets, operational modalities and the selection criteria. EY assesses the appropriateness of the standards of the Label regarding its relevance, its exhaustiveness, its reliability, its objectivity and its clarity. EY periodically carries out audits and checks to verify the correct implementation of the procedures defined in the Standards.

### LIST

The Luxembourg Institute of Science and Technology (LIST) has provided the Solar Impulse Foundation with ad-hoc support on improving the assessment methodology for the Efficient Solutions Label. In particular, they have contributed in shaping the way the evaluation of environmental impact of Solutions is currently estimated. Lastly, LIST has continuously provided committed and motivated volunteers that

continue to evaluate candidate Solutions as a part of our Expert Programme.

### My Climate Foundation, Cooperation on voluntary climate protection

The Solar Impulse Foundation takes into account the environmental impact of the actions it carries out and, already since the entire Solar Impulse adventure and until today, offsets the carbon emissions it generates with the My Climate Foundation [www.myclimate.org](http://www.myclimate.org). Therefore, Solar Impulse Foundation reports annually the business trips made as well as prints and exhibition printing costs. Based on the list, myclimate calculates the emissions and then assigns a monetary value to the offset amount which will in turn be donated in the name of the Solar Impulse Foundation to one of myclimate climate protection projects. In exchange, Solar Impulse Foundation communicates their climate protection partnership with myclimate publicly.



# Organization

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## The Organization

The Solar Impulse Foundation is recognized by the Swiss Confederation as being of public interest, and is subject to the supervision of the Swiss Federal Government's Department of Home Affairs, the department responsible for foundations. It is financed by annual donations from partner companies, as well as by foundations and sponsors. Bertrand Piccard and those within the organization aim to position the Foundation at the spearhead of the drive towards clean technologies, and to provide concrete and profitable solutions to today's environmental problems.

## The Foundation Board

The Foundation Board oversees the good governance, responsibility and orientation of the Foundation, in line with the mission it has set for itself.

### **Dr Bertrand Piccard,**

Initiator and Chairman of Solar Impulse and Bertrand Piccard SA

### **Prof Stefan Catsicas,**

Member, Founder and Partner of Skyviews, former Vice-President of EPFL and former Executive Board Member of Nestlé

### **Me Patrick de Preux,**

Member, Notary, former State Deputy

### **Michèle Piccard,**

Member, Managing Director, Head of Corporate Communication, Solar Impulse Foundation

### **Philippe Rathle,**

Secretary, CFO, Solar Impulse Foundation

## The Strategic Committee

As part of the Foundation's governance structure, a Strategic Committee has been put into place, composed of representatives from the Foundation's partner companies as well as outside Experts renowned for their experience and knowledge in the field of renewable energy and clean technology. The Strategic Committee meets to discuss the Foundation's strategy, opportunities, challenges, best practices and joint activities, providing valuable input and guidance.

### **Alexandre Mars,**

CEO & Founder, Epic Foundation

### **Michael Liebreich,**

Chairman & CEO, Liebreich Associates

### **Anne Lapierre,**

Global Head of Energy, Norton Rose Fulbright

### **Eric Scotto,**

President, Akuo Energy

### **Diego Pavia,**

CEO, EIT InnoEnergy

### **Kingsmill Bond,**

CFA & Energy strategist, Carbon Tracker

### **Denis Leclerc,**

President & CEO, Ecotech Quebec

### **André Borschberg,**

Co-founder & Executive Chairman, H55

### **François Vuille,**

Director of Energy Department/Etat de Vaud; Former Executive Director, EPFL Energy Center

## The Patrons Committee

Eminent personalities, brought together through shared values and a commitment to a cleaner world, are supporting us in our goals.

H.S.H. Albert de Monaco

Al Gore

Richard Branson

James Cameron

Hubert Reeves

Sylvia Earle

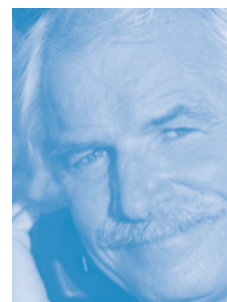
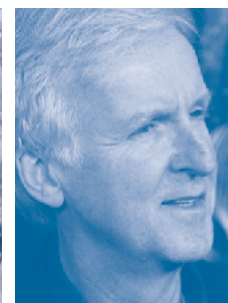
Yann Arthus-Bertrand

Don Walsh

Robert Swan

Paulo Coelho

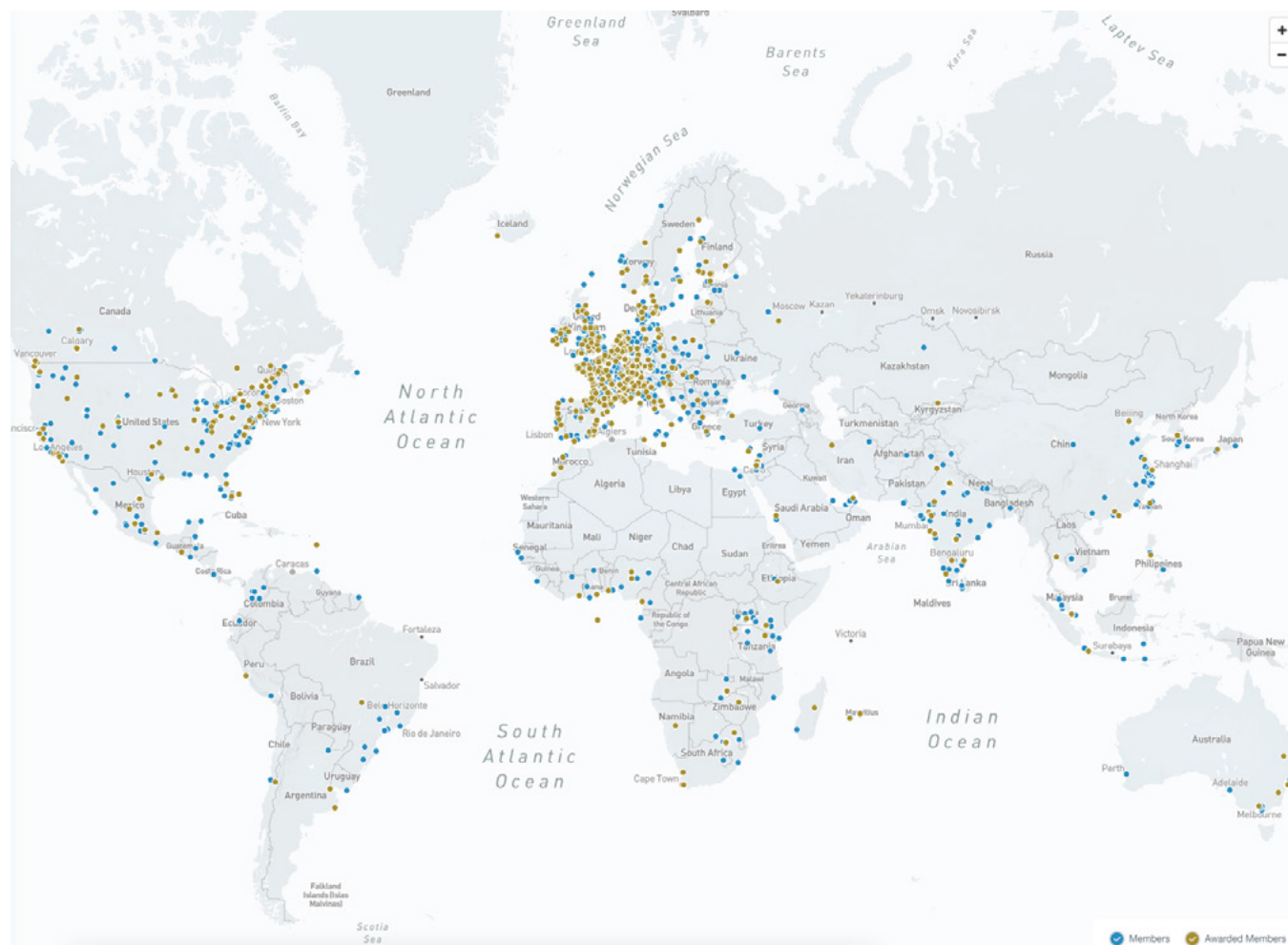
Dr. Sultan Al Jaber



## The World Alliance for Efficient Solutions

The WAES is a global network initiated by the Solar Impulse Foundation federating the main actors in the field of clean technologies and efficiency. As an independent global consortium, the Alliance advocates for agile governance in the ecological transition, free from traditional constraints. It connects stakeholders, amplifies positive impacts, and addresses barriers to implementation head-on, resolutely dedicated to pioneering a world in which efficiency is the driving force behind ecological balance and economic health. A global network with over 4,600 members in 121 countries. It has awarded the Efficient Solution Label to more than 1,500 solutions, supported by 300+ Adopters, 182 Promoters, and 197 Investor members. A team of 350+ independent experts assesses these solutions, making WAES a formidable catalyst for change.

> 121 countries represented





## Multipliers

<b>France</b>	CSTB ( Centre Scientifique et Technique du Bâtiment)	<b>Europe</b>	EIT Urban mobility	Dynamics-Innovation	Kenya Climate Innovation Center	UNDP
50 partners	Hello Tomorrow	Aclima (Spain) (ICN)	EU Startup Prize	EGEC (European Geothermal Energy Council)	Plogging Kenya	UNESCO – Green Citizens
ADEME Interna- tional Club	Mix.e	CLEAN (Denmark) (ICN)	Euroheat & Power	EMIRI Association (Energy Materials Industrial Research Initiative)	PLANETech	UNIDO – PFAN
Aqua-Valley (Grand Est region)	Pôle Universitaire Léonard de Vinci	Clean Tech Delta (Netherlands) (ICN)	Euromediterrannee	EIT Manufacturing	DiTraCon	Waterpreneurs
Association française des en- treprises privées	The Good Goods	Cleantech Bulgaria (Bulgaria) (ICN)	European Heat Pump Associa- tion aisbl	<b>Americas</b>	<b>Asia-Pacific</b>	WIPO Green
Bioeconomy For Change (ex- IAR) (Grand Est region)	Université de Haute Alsace	Cleantech Scandinavia	FCH Europa	Caribbean Climate-Smart Accelerator	Global Business Inroads (India)	Ye! ITC
Cleantech Open France	Viva Technology	European Commission – Hori- zon Results Platform	Ignite Sweden	CanadaCleantech Alliance	Liveability Challenge from Eco-Business (Singapore)	CLIX (Climate Innovation Exchange)
Club Open Inno- vation Paris	World Impact Summit	EIB Institute	Impalahub	Ecotech Québec (ICN)	New Energy Nexus (China)	Global Covenant of Mayors for Climate & Energy
Entreprise du futur	AFEP	EU Start up Prize for Mobility	JRC – Joint Research Center	Foresight (ICN)	Solar Decathlon (China)	Microsoft accelerator
Euroméditerran- née	ALLICE	Flux50 (Belgium) (ICN)	Luxembourg Institute of Science and Technology	GARDN: Green Aviation Research and Development Network	APOS Media	ProVeg International
Fédération Française du bâtiment	Build and connect	Fuel Cells and Hydrogen Joint Undertaking	Riverse	GreenTown Labs	<b>International</b>	South Summit
FIBOIS (Région Grand Est)	CEEBIOS	Greentech Alliance (Germany)	Solar Power Europe	Kite insights's Climate Innova- tion Network & LEO	ATAG: Air transportation and Aviation Group	World Business Council for Sustainable Development ( WBCSD)
Fibres-Energivie (Grand Est region)	Devoteam	Green Tech Cluster (Austria) (ICN)	URBAN FUTURE	Las Brusquitas Greentech Cluster (ICN)	BP – LaunchPad accelerator	World Economic Forum
French Cleantech	Enerfip	Greentech South (United King- dom) (ICN)	WindEurope	NECEC (ICN)	C40	Startup Basecamp
Hydreos (Grand Est region)	ENERGIES 2050	H2Ub	accent Incubator	NREL Industry Growth Forum	Cleantech Group	The SeaCleaners
Materialia (Grand Est region)	Hystra	InnoEnergy – Business Booster	Boundary Holding	OCTIA	Ellen MacArthur Foundation	CESAL
PEXE – The French Cleantech Network	Paris and co	Michelin Scotland Innovation Parc Accelerator (Scotland)	Cleantech Slovakia	RTCC	FAMAE	CLIMATE FOUNDATION
SoREZO (Grand Est region)	<b>Switzerland</b>	NordicEdge (Norway) (ICN)	DENEFF – Deutsche Unterneh- mensinitiative Energieeffizienz	Urban Future Lab H2 Refuel	GCCA Association	Industrial Technology Research Institute
Station F	Agropole	Scottish Enterprises (Scotland)	Energy Cities	McMaster University	Greenbackers	makesense
Tenerrdis (ICN)	Cleantech Alps (ICN)	Sustainable Business Hub (Sweden) (ICN)	EUREC	Research Triangle Cleantech Cluster	Google Startup Advisor: SDG	Mersen
Vehicule du Futur (Grand Est region)	Engageability	The Conference Board – Innova- tion Council	EuroACE ASBL	<b>Middle-East &amp; Africa</b>	Holcim Accelerator	Orange Bird Agency
Action et Transition	EPFL Showcase 2030 (E4S)	BABLE	Finergreen	Zayed Sustainability Prize – Masdar (United Arab Emirates)	International Cleantech Net- work (ICN)	Questel
CaCharge	SwissCleantech	Bioenergy Europe	ICLEI	GreenCape (South Africa) (ICN)	Movin'ON Booster	Rxglobal
Caisse des depots	SwissPropTech	Clean tech Scandinavia	IMS Luxembourg	WEAC (Zambia)	Plastic Free World	The Good Food Institute
Cap Digital	4eyes GmbH	EBB European Biodiesel Board	Metabolic	Fondation Antenna	Plastic Odyssey	Toilet board Coalition
Change NOW	Amena AG	EIC Scaling Club	Ocean Energy Europe		Sustainable Ocean Alliance	World Ocean Council
Choose Paris Region	myblueplanet		Plan A		Tech4Islands Awards / La French Tech Polynésie	
Cluster Eau Lémanique Evian	Race For Water Foundation		Royal Scottish Geographical Society		Ubuntoo	
	Satw – Swiss Academy of Engi- neering Sciences					

# Team

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## The Team – A spirit and actors for tomorrow

The spirit of the Solar Impulse Foundation is the cement that brings the team together. Professionals from all walks of life, they know that the future can be written differently, while respecting the quality of life. Driven by their desire to change the world, they are all committed to supporting and accompanying the Foundation's approach. Sharing the same faith in clean technologies, they support and feed Bertrand Piccard's discourse on qualitative growth and invest themselves with passion in the research of new “efficient solutions”. Their enthusiasm and commitment make them actors of tomorrow's world.

## A pool of multidisciplinary skills

With its 51 employees, including 8 external freelancers, the Foundation has become a real small business that requires attention to internal dynamics and work methods that allow for collaboration, initiative, development of each person's skills and performance.

The objectives set in each department were met and even largely exceeded within an agile organization, organized by areas of expertise where exchanges between teams facilitate the completion of projects with efficiency and satisfaction.





## Professionals from different backgrounds:

Engineers  
International relations  
Public affairs  
Communication professionals  
Specialists in finance  
Administrative management

## Departments:

Office of the Chairman: 3  
Public affairs: 6  
Outreach: 7  
Operations: 9  
Partners & corporates: 4  
Investors relations: 3  
Communication: 7  
Digital: 5  
Finance & Administration: 3  
Regional development: 3

## Nationalities:

Switzerland: 23  
France: 17  
The Netherlands: 2  
Belgique: 2  
Portugal: 1  
Czech Republic: 1  
Greece: 1  
Brazil: 1  
Argentina: 1  
Italie: 1  
Mexique: 1



>44 Employees

>7 External collaborators

>24 Men employees and 3 externs

>20 Women employees and 4 externs

>36 years 2 months Average age

>2 years 11 months Average seniority



## After-work esprit de corps

The esprit-de-corps of the Solar Impulse Foundation is the cement that holds the team together. The team members are always enthusiastic and happy to maintain their esprit de corps in after-work sharing moments.



# Finance

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## Financial Situation

Declared as being in the public interest in 2007, the Solar Impulse Foundation benefits from a tax exemption, both at cantonal and federal level. About 85% of its funding is provided by companies and patrons who are both donors to the Foundation and active participants in its campaigns, in particular in the challenge of identifying 1000 efficient Solutions. The remaining 15% are supplemented by partnerships concluded with national and regional institutions in order to help them to develop a coherent environmental and economic policy, and to highlight Solutions available in their own territory. Apart from this funding, the Foundation generates no income from its activities.

## Analytical Accounts of the Foundation for 2022

		2022	2021	
<b>Partner donations</b>		<b>4 266 461</b>	5 231 614	CHF
<b>Institutional partnerships</b>		<b>656 110</b>	915 126	CHF
<b>Funding</b>		<b>4 922 572</b>	6 146 740	CHF
<b>Wages</b>	<b>67%</b>	<b>3 793 954</b>	3 387 750	CHF
<b>Fees</b>	<b>15%</b>	<b>856 679</b>	831 934	CHF
<b>Expenses</b>	<b>17%</b>	<b>981 981</b>	804 110	CHF
<b>Result</b>		<b>-710 043</b>	1 122 947	CHF

The Foundation benefits from tax exempt status at the federal and state level. Its financial statements are examined every year by statutory auditors (Fidexaudit Revision SA) in Lausanne.

**Partner Donations:**

Down by more than 20 % compared to 2021. This is mainly due to the fall in the value of the euro against the Swiss franc. A new partnership contract with the company Bekaert has been concluded for 2023.

**Institutional financing:**

Down by almost 40 % compared to 2021. This is also mainly due to the fall in the euro against the Swiss franc and the termination of the contract with Scotland. The new management contracts with the BNP Paribas and Rothschild bank investment funds will take effect in 2023.

**Salaries and fees**

Up nearly 10 % from 2021. This is primarily due to an increase in the number of employees to boost the adoption of efficient solutions.

**Operating Expenses:**

Up nearly 20 % from 2021. This is primarily due to increased communication costs.

The Foundation's financial statements are reviewed annually by the statutory auditors (Fidexaudit Revision SA) in Lausanne. Their report on the approval of the accounts is available



# Moving Forward

**In the ever-evolving journey of the Solar Impulse Foundation, our remarkable growth from a humble team of six in January 2017 to nearly 50 dedicated individuals in 2022 has led us to a pivotal moment of internal reflection and transformation.**

Embracing our achievements while recognizing the limitations of our current management style, we have embarked on a forward-looking restructuring journey. The introduction of a four-member directorial board (the Comex) and the shift towards a skills-oriented paradigm promises to optimize talents, enhance processes, and foster cross-functional learning. Our commitment to specialization and synergy is reflected in the creation of four distinct poles, ensuring efficiency and collaboration thrive throughout our organization.

The achievements in 2022 were significant, our team played a crucial role in highlighting the need for a suitable regulatory environment for the uptake of clean and efficient solutions. These efforts in guiding the modernization of France's legal and regulatory framework garnered attention, and we are confident that in 2023, more countries will express interest in collaborating on similar initiatives.

In parallel, the journey around sustainable investments demonstrated substantial progress, both the BNP Paribas Solar Impulse Venture Fund and Five Arrows Sustainable Investments (in partnership with Rothschild & Co) have performed several closings in 2022 with a successful first investment completed in 2022. For the upcoming year significant work will focus on empowering the portfolio of solutions to the eye of potential new investors with the creation of a Cleantech marketplace.

Moving forward, our emphasis will be on expanding and leveraging our World Alliance for Efficient Solutions

(WAES), which continued to flourish in 2022. With over 4,600 members in 121 countries, WAES played a pivotal role in catalyzing change and advocating for agile governance in the ecological transition. Today, WAES counts numerous innovators, and it is set to attract a large number of potential investors and adopters. This growth responds to our ambition of ensuring that the solutions identified in the context of the 1000 solutions challenge are not only recognized with the Efficient Solution Label but also implemented globally.

As we eagerly anticipate the implementation of these changes in January 2023, we look forward to a brighter, more efficient future marked by collaborative success and a steadfast commitment to our core mission. The Solar Impulse Foundation remains dedicated to leading the way in pioneering clean technologies and providing concrete solutions to environmental challenges on a global scale. Together, we stand at the forefront of a sustainable future, ready to embrace the challenges and opportunities that lie ahead.

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