IMPACT INDEX

live updated

120 COMPANIES

15 INDUSTRIES

ENTER HERE

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Introduction

In recent years, there has been a growing emphasis on the impact criteria.

Companies are now expected to not only generate financial returns but also to create positive outcomes for society and the planet.

Investing in the technologies of the future is a priori the right strategy, although there is a high margin of error associated with major technological changes.

The real problem for the third decade of the 21st century is to direct cash towards these new projects as quickly as possible.

The more a technology allows for a mode of operation that is low in energy and greenhouse gas emissions, the more it is destined to become universal on all continents, and the more its value can skyrocket without any immediate profitability being associated with it.

The great principle of periods of innovation is a general upheaval in the representation of financial values.

This is when finance has invented one of the best stimulants, one of the best drivers of investment: the impact indicator.

It is appropriate to return to basic information, to non-financial data that has become the number one issue in financial communication.

The impact indicator is the return to physical measurement, without going through its monetary or financial translations.

Investing in a complex technology whose primary interest would be, for example, the improvement of water quality, the reduction of pollution or any other tangible benefit of sustainable development, then this is what becomes the real expected profitability of the investment.

How much is earned or not, what rate of return, all that which used to be the major criterion of valuation is considered secondary, and even accessory.

The clearer and more scientifically measured the impact indicator is, the more it becomes possible to communicate on this profitability.

The more investors are looking for the real impact, the more the valuation will increase, like in an auction.

One of the fundamental factors is therefore patience, the long term, the ability to wait for the impact indicators to prove their relevance.

It appears more and more that the calculation of wealth creation will have to be profoundly modified, depending on the positive and negative impact indicators

Clearly, non-financial information, qualitative data, is becoming the determining element for investors.

In response to this trend, we have developed an index to assess companies' performance on Impact, Environmental, Social, and Governance criteria.

This index is designed to provide investors with a comprehensive view of a company's Impact ESG and to help guide their investment decisions.

H&B Impact Index (HBII), tracks the performance of companies that demonstrate strong Impact practices.

The HBII evaluates companies based on a range of criteria, including environmental management, labor practices, social issues, corporate governance, and owners engagement.

Companies are selected for inclusion in the indice based on their performance relative to their peers in their respective industries.

The selected companies are young businesses with immense potential for future growth and success.

WHY EVALUATING COMPANIES ON IMPACT CRITERIA

Hamann & Benson is a firm dedicated to advancing the cause of sustainable investments by promoting and endorsing companies that align with Impact and ESG criteria established by global taxonomies.

A Word From Our Founder

Boris Kalt

Impact Investment Strategist

Hamann Benson

I am delighted to announce the launch of our new indice that is focused on Impact criteria and ESG factors : Hamann & Benson Impact Indice (HBII)

As someone who is passionate about sustainable and responsible investing, I believe that this indice will be an important tool for investors who are looking to make a positive impact with their investments.

This indice aims to promote more sustainable and responsible business practices.

This indice has the potential to drive positive change in the business world.
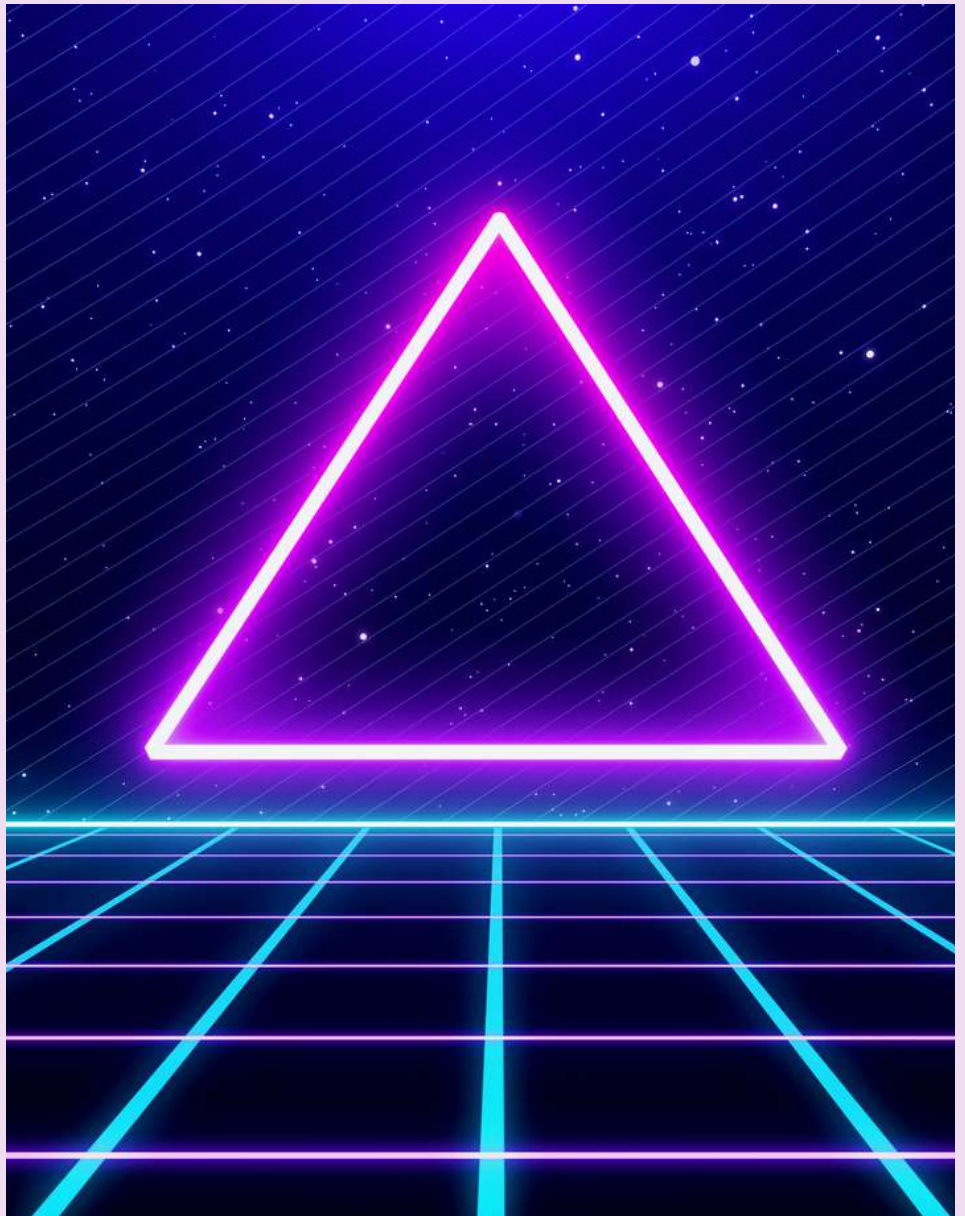
Our objective is to encourage investors to direct their resources towards companies that have a positive impact on the environment and society, thereby contributing to a sustainable future for future generations.

To achieve this goal, Hamann & Benson actively engages with businesses, corporations, and collective innovations, supporting and promoting those that meet the set criteria.

This strategy not only benefits the environment and society but also promotes sustainable business practices that are crucial for the long-term success and prosperity of companies.

Hamann & Benson's commitment to promoting sustainable investments is a testament to their dedication towards creating a more equitable and sustainable future for all.

The impact indicator is the return to physical measurement, without going through its monetary or financial translations.

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IMPACT CRITERIA TO EVUALATE COMPANIES
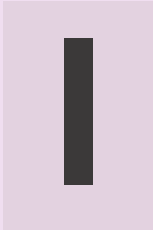
I n order to assess the performance of different companies, we had to establish a set of Impact criteria against which they can be evaluated.

Impact criteria are a set of metrics used to evaluate companies based on their social, environmental, and governance practices. In recent years, the importance of impact criteria has grown as investors and consumers have become more interested in supporting companies that prioritize sustainability and ethical practices. By considering impact criteria when evaluating companies, stakeholders can gain a more comprehensive understanding of a company's performance and its contributions to society and the environment.
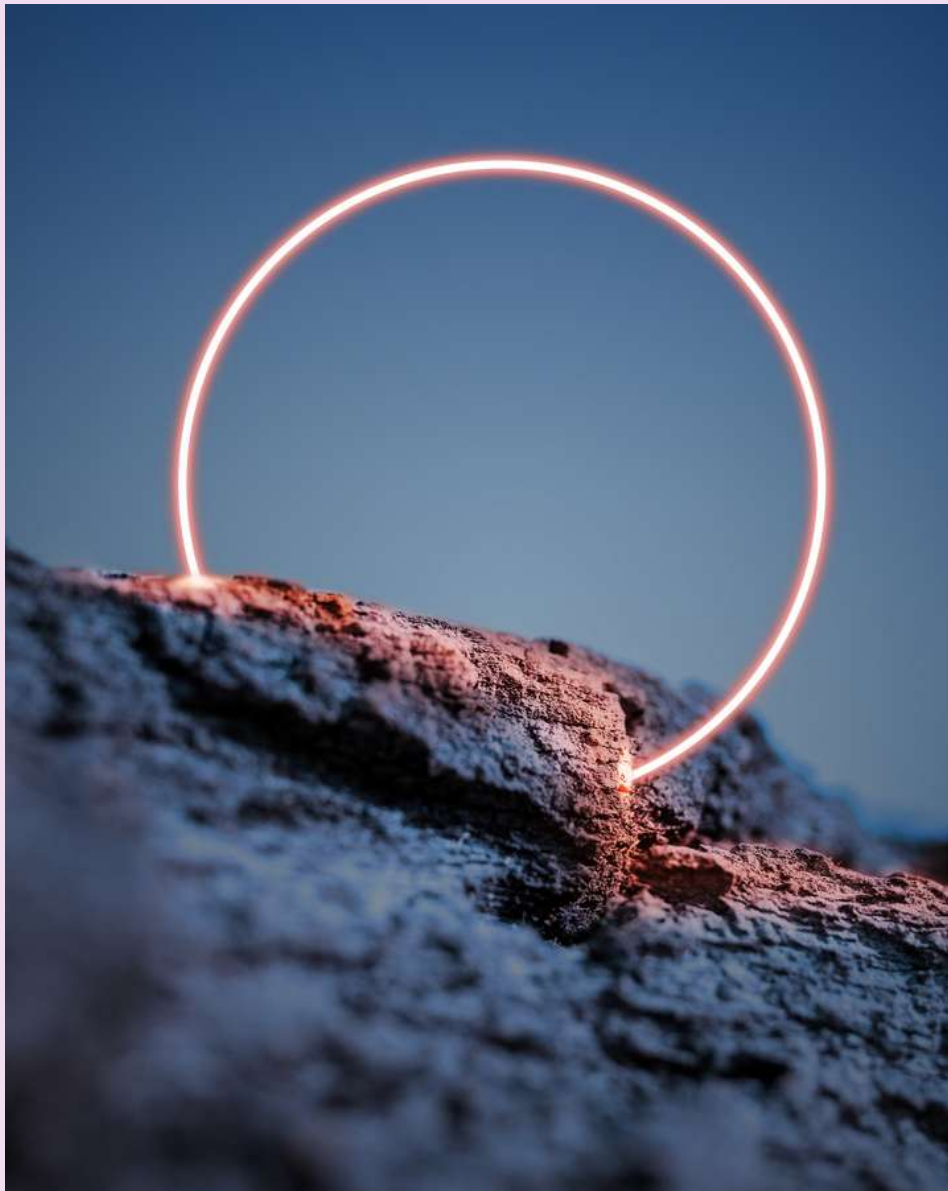
These criteria include factors such as Products Criteria, Environmental Criteria, Humanistic Criteria and Corporate responsibilities, among others.

Once these criteria have been established, each company can be assigned a score on each criterion.

This score is typically out of 100, with higher scores indicating better performance in that area.

Once all of the criteria have been evaluated and scores assigned, the overall score for each company can be calculated.

This is done by taking the average of all the criteria scores.

The resulting overall score provides a comprehensive measure of the company's performance across all of the Impact criteria.

It's important to note that the weighting of different criteria may vary depending on the specific goals and priorities of the evaluation process.

The goal of the evaluation process is to provide a clear and objective measure of each company's performance, allowing stakeholders to make informed decisions based on the results.

Product Criteria

Prospectivism

Prospectivism is an intellectual approach that consists of studying current developments and trends to anticipate possible futures.

It is a discipline that is part of foresight, a broader approach that aims to understand the issues of the present by placing them in a historical and future perspective, seeking to anticipate future developments, based on current developments and weak signals.

Data Collectors

Real-time data collection is a key component to improving a company's impact. By collecting data in real time, businesses can quickly identify customer trends and behaviors, as well as potential problems.

This allows companies to react quickly to changes in the marketplace and make informed decisions to improve their products or services in real time. By using this information, companies can also improve their customer service by providing faster and more efficient solutions.

Real-time data collection is a powerful tool to help companies make smarter decisions and improve their impact in the marketplace.

User Development Potential

A company's User Development Potential (UDP) is a measure of a company's ability to increase the number of customers and users in the future.

Cleaning Tech

By using technologies such as soil remediation, water disinfection, e-waste management, greenhouse gas emission reduction and air decontamination, companies can help eliminate the harmful effects of pollution on the environment and human health.

The use of these technologies can also provide economic benefits. Cleaning up polluted areas can help restore the land and make it usable again for agriculture, construction or other economic activities.

Energy savings

Energy use often represents a significant portion of a company's operating costs. Reducing energy consumption can result in significant long-term savings for a company. This can be achieved through various strategies such as optimizing existing equipment, using renewable energy sources, implementing environmentally responsible practices and educating employees on the importance of saving energy.

By reducing their energy consumption, companies can also contribute to the fight against climate change by reducing their greenhouse gas emissions, while improving their brand image.

Life simplification

These are the technologies that can save time by automating tasks, providing information quickly and facilitating communication.

This can improve productivity, free up time for more important activities, and improve quality of life by reducing the stress of managing complex and time-consuming tasks.
These technologies can save money by reducing the costs associated with managing certain tasks.

For example, the use of smart technologies for energy management can reduce electricity consumption and associated costs.

By evaluating companies based on production impact criteria, stakeholders can gain a better understanding of a company's commitment to sustainability and its efforts to minimize its impact on the environment and local communities.

Product Criteria Part.2
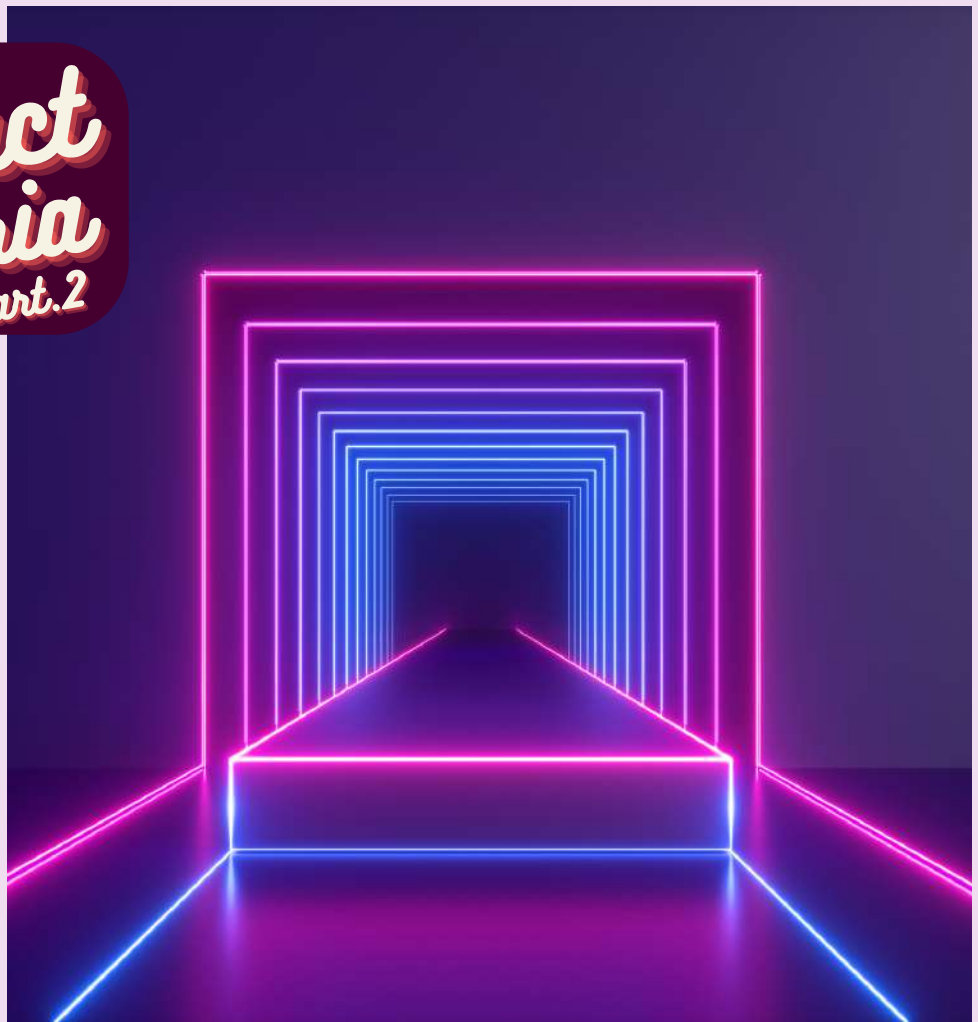
Disruptiveness

This involves challenging existing models and finding new and innovative solutions to meet customer and market needs.

This can help a company adapt to rapid market changes and seize opportunities before competitors do.

Disruptive innovation can also create new industries or disrupt existing ones by introducing new business models, removing barriers to entry, or creating new markets.

Ease of access and use

Easy-to-use / Easy-to-access products can help reduce customer frustration, which can improve customer satisfaction and strengthen brand loyalty.

Repairability

The objective is to extend the life of products by allowing them to be repaired rather than replaced.

Done Eco-friendly or recycled materials, local focus

By focusing on local materials, a company can help reduce the carbon footprint by reducing the distance products travel.

This can help reduce greenhouse gas emissions and support local economies by encouraging local production as well as reducing energy consumption.

The use of eco-friendly or recycled materials can help a company reduce waste.

Sustainability

The long term use of a product is beneficial for the company, the consumer and our society as a whole.

This is a guarantee of quality for the company which will bring many consumers.

The consumer will know that by buying this product he will be able to keep it for a long period of time and thus amortize its cost in time.

In the end, this will result in reducing energy costs and potential waste by producing fewer products.

Production impact criteria are a set of metrics used to evaluate the environmental and social impact of a company's production processes. These criteria take into account the entire production process, from raw materials sourcing to manufacturing and distribution, and are designed to identify areas where a company can reduce its environmental footprint and improve its social responsibility.

Environnemental Criteria

Humanistic Criteria

Greenhouse gas emissions

Businesses can be a significant source of GHG emissions, particularly in sectors such as industry, transportation and agriculture.

Waste Management

Waste management within a company refers to all practices put in place for the collection, sorting, treatment, recycling and disposal of waste generated by the company.

Responsible use of natural resources

The use of natural resources refers to the use of all raw materials provided by nature, such as water, air, soil, minerals, fossil fuels, forests, agricultural land and oceans. Natural resources are essential for human survival, but their use can have significant environmental and social impacts.
Responsible use involves using resources sustainably, ensuring that they are not depleted or polluted, and that their use does not harm natural ecosystems or the quality of life of local people.

Biodiversity protection

Biodiversity protection refers to efforts to preserve the variety and complexity of life forms on Earth, and the ecosystems in which they exist.

Biodiversity protection can take many forms, including the creation of nature reserves, the implementation of conservation laws and policies, the restoration of natural habitats, the sustainable management of natural resources, the reduction of pollution and environmental degradation, and public awareness and education on biodiversity issues.

Diversity and Inclusion

Diversity and inclusion within a company refers to the accommodation of individual differences among employees and the creation of an inclusive work environment that values the diversity of perspectives, ideas, cultures and experiences of all people.

Human Rights

Human rights are fundamental rights inherent to all human beings, regardless of nationality, gender, ethnicity, religion or social status.

Gender equality

Gender equality is a fundamental principle that states that all individuals, regardless of their gender, sexual orientation, gender identity or gender expression, have the same rights and opportunities in all areas of life, including education, employment, health and political participation.

Corporate governance

Corporate governance refers to the processes, policies and systems of direction and control that govern the way a company is managed and run.
It is about how decisions are made, responsibilities are assigned and performance is measured and evaluated.

Ethical Business Practices

Ethical business practices are actions taken by a company that uphold moral standards and ethical values in all business activities. They are based on integrity, transparency, accountability and sustainability to achieve fair, ethical and sustainable business results.

Occupational Health and Safety

Occupational health and safety refers to measures taken to protect the health, safety and well-being of employees within an organization.

This includes the establishment of policies and procedures to identify, assess and minimize risks to the health and safety of workers.

Fair Employee Compensation

Fair employee compensation is the salary or monetary compensation that an employer provides to employees in exchange for their work, and that is perceived to be fair and reasonable.

Corporate Responsabilities

Transparency of information

Transparency of information is an indicator of how well a company communicates its activities and results.

Business ethics

Companies that take an ethical approach to business seek to avoid inappropriate behavior such as fraud, corruption, discrimination, exploitation of workers or environmental destruction.

Business Plan

Market Analysis

Organisation & Management

Services

Market size and growth

The target market for the Hamann & Benson Impact Index (HBII) is large and growing. This market includes both institutional and individual investors, as well as companies seeking to improve their environmental, social and governance (ESG) performance. According to a recent study by the Global Sustainable Investment Alliance, global assets invested according to sustainable strategies exceeded $35 trillion in 2020, an increase of 15% on 2018. In Europe, growth has been even faster, with an increase of 27% over the same period.

Target customers

Target customers: HBII's target customers include institutional investors such as pension funds, investment funds, insurance companies and banks, who are increasingly concerned about the ESG impact of their investments. In addition, companies looking to improve their ESG performance and demonstrate their commitment to sustainability to their stakeholders may also be interested in HBII.

Competitors

Although there are other ESG indices on the market, such as the MSCI ESG Index and the FTSE4Good Index, the HBII stands out for its use of real-time data to assess company performance. This approach enables a more accurate and up-to-date assessment of companies' ESG impact, which can give the HBII a competitive edge.

Organizational structure

The HBII project will be organized into several dedicated teams to ensure effective and efficient implementation of all aspects of the index.

Technology development team

This team will be responsible for setting up and maintaining the real-time data collection systems, developing the evaluation algorithms, and creating the user interface.

Research and analysis team

This team will be responsible for collecting and analyzing data on the companies to be evaluated. They will work closely with the technology development team to ensure the accuracy and relevance of the data used in the evaluation.

Company Relationship Management Team

This team will manage relationships with the companies being evaluated, providing information about the index and helping to resolve any issues or concerns that may arise.

Investor & Institutional relations team

This team will be responsible for communicating with investors interested in the index, providing information on index methodology and valuation results.

How HBII works

HBII is based on real-time data collection, enabling an up-to-date and accurate assessment of each company's impact performance. The index uses advanced technologies such as the Internet of Things and artificial intelligence to measure a range of criteria such as energy consumption, greenhouse gas emissions, waste management and more.

Benefits of HBII

The HBII index offers several advantages. It provides a reliable and transparent means of assessing the environmental, social and governance impact of companies. This gives investors and consumers valuable information with which to make informed decisions.

Benefits for investors and companies

For investors, the HBII offers a method of evaluating companies that goes beyond simple financial analysis. It enables investors to identify companies that are not only profitable, but also have a positive impact on society and the environment.

For companies, HBII provides an objective assessment of their sustainability and social responsibility practices. The results can be used to identify areas for improvement and develop strategies to enhance their impact performance. In addition, a positive assessment can enhance their reputation and attractiveness to investors and consumers.

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Business Plan p.2

Marketing

Funding

Connecting Companies

Direct marketing

We will directly target institutional investors, ESG fund managers, impact investors and corporations through presentations, meetings and webinars. The aim is to explain the benefits of HBII, how it works, and how it can add value to their businesses.

Digital marketing

We will use our website, social media, and email marketing to reach a wider audience. We will produce high-quality content to attract and educate our visitors about the importance of sustainability and corporate social responsibility, and how HBII can help measure and improve these aspects.

Public relations

We will work with public relations agencies to promote the HBII in the media. This will include press releases, articles, interviews, and possibly launch events.

Strategic partnerships

We will seek to establish partnerships with organizations that share our vision of a more sustainable and responsible economy. This could include NGOs, professional organizations, universities, research bodies, and other relevant players. These partnerships could help us reach a wider audience and increase our credibility.

Venture capitalists

given the growth potential of our index and its alignment with current trends in sustainable investing, we believe our project could be attractive to venture capitalists, particularly those focused on financial technology and sustainability.

Seed capital investors

as our project is still at an early stage, seed capital investors may be interested in financing initial development.

Grants and public funding programs

given the growing importance of sustainability in public policy, there may be grants or public funding programs available to support our project.

Dashboard and user interface

To visualize data and scores, you'll need a user interface, often in the form of an online dashboard. This could include real-time graphs, comparisons with other companies, and recommendations for improving the score.

Technical support

You'll also need to set up technical support to help companies connect to your index and resolve any issues that may arise.

Training and education

Finally, you may need to offer training or workshops to help companies understand how to use the index, how to interpret their scores, and how to use the information to improve their performance.

IoT sensors

These devices are the key to collecting real-time data on different aspects of the company's activity. For example, an energy consumption sensor could be installed on the company's power grid to measure how much electricity it uses. Similarly, air quality sensors could be used to monitor greenhouse gas emissions.

Communication network

To transmit sensor data to your HBII platform, you'll need a communication network. This could be an existing Wi-Fi network, a cellular network, or a dedicated IoT network like LoRaWAN or Sigfox.

IoT gateway

This piece of hardware acts as an intermediary between the sensors and the communications network. It collects data from the sensors and transmits it to the server via the communications network.

Server and data storage: You'll need a server to receive and process data from the sensors via the gateway. Data can be stored locally or in the cloud, depending on your preferences and security requirements.

Data analysis software

To derive meaningful information from the data collected, you'll need software capable of analyzing the data. This software could use machine learning algorithms to evaluate the company's performance and calculate its HBII score.

Financing

Estimated implementation costs

Initial costs include software development (real-time data collection, evaluation algorithms, user interface, real-time update system), team recruitment (data analysts, developers, ESG experts, marketing and sales, administration), purchase of equipment and software, legal and administrative fees, and marketing and PR costs for the launch. We estimate these costs at around €2 million for the first year.

The estimated cost of 2 million euros for the first year is a rough estimate based on the various operational costs associated with starting up and running the HBII project. Here is a breakdown of how this amount might be broken down:

System development

System development includes software design and development, implementation of evaluation algorithms, development of a user interface, and deployment of a real-time update system. Considering the cost of hiring high-level engineers and software developers, this cost could be estimated at around 800,000 euros.

Management team

A competent management team is essential to lead the project. This could include a managing director, a technical director, a financial director and a sales and marketing director. Taking into account market salaries for these positions, these costs could be estimated at around 500,000 euros.

Administrative and legal costs

These cover a variety of costs, including setting up the company, obtaining licenses, insurance, office rent, utilities and other overheads. These costs could amount to around €200,000.

Marketing and public relations

To promote the launch of HBII, we would need to invest in marketing and public relations, which could include online advertising, media relations, launch events and so on. These costs could be estimated at around 250,000 euros.

Working capital

To cover unforeseen expenses and keep the business running for the first few months before significant revenues are generated, it would be wise to have some working capital reserve. This could be estimated at around 250,000 euros.

Income and expense forecasts

We anticipate income from the sale of subscriptions to our HBII index to investors and companies. Assuming gradual growth in the number of customers, we estimate revenues of 500,000 euros in year two, rising to 2 million euros in year three. Annual expenses should stabilize at around 1 million euros after the first year, covering salaries, software maintenance and enhancement, marketing and other operational costs.

Subscriptions for investors

Investors who wish to have access to our real-time index to guide their investment decisions will be charged for a subscription. This could be on a monthly, quarterly or annual basis. Subscriptions could be priced on a sliding scale, with higher rates for those who want more in-depth or personalized access to our data.

Corporate subscriptions

Similarly, companies wishing to use our index to monitor and improve their ESG performance can also subscribe. In addition to access to the index, they could receive additional services such as customized reports, benchmarking and consultation on sustainability best practices.

Sale of specialized reports and analyses

In addition to subscriptions, we may also generate revenues by selling specialized reports and analyses based on our data. This could include sector analysis, market research, trend analysis, etc.

Costs for Companies

Costs will vary according to the specific characteristics of the company, the number of sensors required, the type of sensors, the communication network used, etc.

IoT sensors

Sensors can vary greatly in cost, from 50 euros for basic sensors to several hundred euros for more specialized sensors. Let's say you need 10 sensors to cover all the necessary aspects of the business, you could be looking at a cost of around 1,000 euros.

Communication network

Network costs will depend on the technology used. If the company uses its own Wi-Fi network, the cost could be negligible. If using a cellular network or a dedicated IoT network such as LoRaWAN or Sigfox, costs could range from 10 to 50 euros per month, or around 120 to 600 euros per year.

IoT gateway

An industrial-grade IoT gateway typically costs between 200 and 1,000 euros.

Server and data storage

If you're using cloud services for data storage and processing, you can expect to pay between 20 and 200 euros per month, or around 240 to 2400 euros per year.

Data analysis software

The cost of this software varies considerably. Some data analysis tools are free, but the most advanced can cost several thousand euros a year.

Dashboard and user interface

Developing a customized user interface can cost from a few thousand to tens of thousands of euros, depending on the complexity of the interface.

Adding up all these costs, a low estimate could be around 5,000 euros for the first year, while a high estimate could be 20,000 euros or more.

After the first year of installation and commissioning, annual costs will generally decrease, as many of the initial expenses (such as sensor purchase, gateway installation, software development) are not repeated. However, some operational costs will continue each year.

Sensor maintenance and replacement

IoT sensors may require regular maintenance or occasional replacement. Consider budgeting around 10% of the initial cost of sensors each year for maintenance and replacement, or around 100 euros using previous estimates.

Network costs

If you're using a cellular or dedicated IoT network, these costs will continue each year. As mentioned above, this could cost between 120 and 600 euros per year.

Server and data storage costs

These costs will continue each year. Using previous estimates, this could cost between 240 and 2400 euros per year.

Software licenses

If you're using paid-for data analysis software, these costs will continue each year. The cost can vary considerably, but could range from a few hundred to several thousand euros per year.

User interface maintenance

Summarizing these costs, a low estimate could be in the range of 500 to 1,000 euros per year, while a high estimate could be as much as 4,000 to 5,000 euros or more, depending on the software used and the costs of maintaining and upgrading the system. Again, it's important to note that these figures are general estimates, and that actual costs may vary depending on many factors.

Installation and commissioning costs (first year):
IoT sensors: 120 companies x 1000 euros = 120,000 euros
IoT gateway: 120 companies x 100 euros = 12,000 euros
Network costs: 120 companies x (120 to 600) euros = 14,400 to 72,000 euros

Data analysis software development and user interface: Although this cost is the same regardless of the number of companies, we'll divide it by the number of companies to get an idea of the cost per company. Therefore, 250,000 euros / 120 companies = approx. 2,083 euros per company.

Server and data storage costs: 120 companies x (240 to 2400) euros = 28,800 to 288,000 euros
Annual operating costs (second year and beyond):

Sensor maintenance and replacement: 120 companies x 100 euros = 12,000 euros
Network costs: 120 companies x (120 to 600) euros = 14,400 to 72,000 euros
Server and data storage costs: 120 companies x (240 to 2400) euros = 28,800 to 288,000 euros

User interface maintenance: Again, this is likely to vary according to specific needs, but we could estimate this cost at around 10% of the initial development cost, or around 25,000 euros per year.

For the first year, total estimated costs could therefore range from around 427,283 to 747,083 euros.

For subsequent years, annual operating costs could range from 80,200 to 405,000 euros.

EVALUATING COMPANIES' IMPACT IN REAL TIME

Hamann & Benson will soon launch the dynamic and connected version of its HBII (Hamann & Benson Impact Index) to assess the environmental, social and governance impact of companies.

Boris Kalt

Impact Investment Strategist

Hamann Benson

"We're excited to be launching the HBII in the coming months. It's a game-changer in the world of impact assessment and sustainability, as it provides a dynamic and connected evaluation of companies' impact performance in real time.

With the use of advanced technologies like the Internet of Things and artificial intelligence, we're able to collect data and analyze it in ways that were never possible before. This will allow investors and consumers to make more informed decisions, and companies to improve their sustainability practices. »

The HBII will use real-time data to provide an up-to-date and accurate assessment of each company's impact performance.

This assessment will be similar to a stock index, but will focus on companies' commitment to sustainability and social responsibility.

The HBII index will collect real-time data using advanced technologies such as the Internet of Things and artificial intelligence.

Sensors will measure in real time all the criteria present in the HBII index, including energy consumption, greenhouse gas emissions, waste management, and so on for each stakeholder of each company present in the index.

The data will then be analyzed by artificial intelligence algorithms to assess the impact level of each company.

The impact score assigned to each company will be updated in real time, making it possible to track the evolution of each company's impact performance.

This will allow investors and consumers to make more informed decisions based on each company's impact performance.

Companies will also be able to use this information to improve their environmental, social and governance practices.

Hamann & Benson's HBII will reinforce the importance of sustainability and social responsibility for companies, as their rating will be directly linked to their practices and commitment to reducing their impact on the environment and society.

Hamann & Benson's Index will reinforce the importance of sustainability and social responsibility for companies, as their rating will be directly linked to their practices and commitment to reducing their impact on the environment and society.

This transparent and real-time assessment will also allow companies to be more responsible and sustainable, which can have positive impacts on the environment, society and long-term financial performance.

The HBII Index aims to fill this gap by providing a dynamic assessment of the environmental, social and governance impact of companies.

As companies strive to improve their scores, the index could have significant implications for their relationships with banks and governments.

Banks may offer more favorable lending terms to companies with positive impacts, while governments may offer tax breaks and other incentives.

In this way, the HBII is creating a more sustainable business environment in which companies are rewarded for their efforts to minimize their impact on the environment and society.

"We're proud to be at the forefront of this movement towards more sustainable business practices, and we hope that the HBII will help drive positive change in the world." Boris Kalt

As the world becomes more aware of the impact of companies on the environment and society, investors are increasingly looking to assess the sustainability of their investments.

"We believe that the HBII will help reinforce the importance of sustainability and social responsibility for companies, and we're optimistic that it will create a more sustainable business environment where companies are rewarded for their efforts to minimize their impact on the environment and society. »

Boris Kalt

120 COMPANIES 15 INDUSTRIES TO IMPACT THE WORLD

This indice was built by evaluating more than 10,000 companies from around the world, with a focus on Europe and particularly France.

This large sample size provides a broad and diverse range of companies to evaluate, allowing for a more comprehensive and accurate assessment of their performance.

To be included in the index, each company had to meet a set of predefined criteria.

These criteria likely included factors such as Products criteria, Environnemental Criteria, Humanistic Criteria and Corporate responsibilities, among others.

Companies that did not meet these criteria would be excluded from the index.

In addition to meeting the criteria, each company was also evaluated on their ability to transform and positively impact our world.

This likely includes factors such as innovation, impact on society and contribution to sustainable development.

By evaluating companies on these broader criteria, the indice can identify potential leaders in their respective sectors who have the potential to make a positive impact on the world in the future.

Building an index requires a significant amount of research, analysis, and evaluation.

These evaluations have been made by Artificial Intelligence, Algorithms and humans.

By including thousands of companies from around the world, the index can provide a comprehensive view of the corporate landscape and identify potential leaders who are working to create a better future for all.

Disclaimer : The following 120 companies in the 15 industries represented are for information purposes only and may not be included in the final real-time connected index.

EXAMPLE

IMPACT
82

In each presentation card, there is a short introduction that allows to understand what each company produces and how it is innovative, and why it will positively impact the planet.

"Impact" stands for Hamann & Benson's overall impact rating for the company

"Pro" stands for Product Criteria

"Env" stands for Environnemental Criteria

"Hum" stands for Humanistic Criteria

"Corp" stands for Corporate Responsabilities

As explained above, each score is given out of 100

PRO
87

ENV
83

HUM
82

CORP
82

QR code toward the company's website

QR code toward a company's introduction video

Textile Industry

The textile industry is one of the oldest and most important industries in the world. It is responsible for the production of clothing, upholstery, carpets, bags and many other products that we use in our daily lives. This industry is a crucial economic sector for many countries, employing millions of people worldwide.

However, the textile industry is also very energy intensive. It uses a significant amount of energy throughout its production process, from the cultivation of raw materials such as cotton or linen, through the transformation of these raw materials into yarn and fabric, to the manufacture of finished products.

8 %

The global textile market in World CO2 emissions - World Bank - 2020

$573.22 BILLION

The global textile market in 2022
The Business Research Company

2 %

The global textile market in the World GDP - World Bank - 2020

The energy consumption of the textile industry is mainly due to production processes such as washing, drying, chemical treatment and dyeing. These processes require large amounts of water and energy, mainly in the form of electricity and fossil fuels.

Unfortunately, the energy consumption of the textile industry has adverse effects on the environment, including contributing to climate change, air and water pollution, and the depletion of natural resources. This is why it is important that the industry make a transition to more sustainable and eco-responsible practices, especially in terms of energy use.

H&B IMPACT INDEX

fairbrics

Fairbrics **converts waste CO2 into polyester fabric** using molecular chemistry, which reduces the reliance on expensive fossil fuels and produces polyester with the least environmental impact possible.

By capturing CO2 from industrial sources and reacting it with a catalyst and solvent to generate chemicals that are used for polyester synthesis, Fairbrics produces polyester pellets that can be spun into yarn and finally into fabric.

The company's technology also has the potential to produce carbon negative 100% sustainable PET in the near future.

The company's ongoing research aims to maximize their output while minimizing environmental and social impact, while also producing the best fiber quality.

PRO 87

ENV 83

HUM 82

CORP 82

www

RENAISSANCE
textile
plateforme française de recyclage textile

Renaissance Textile is a company that is dedicated to creating sustainable fashion. They have developed a revolutionary machine that can transform old clothes into small textile squares and then into fibers.

This machine is at the forefront of the company's mission to reduce waste and promote circularity in the fashion industry.

The machine works by taking old clothes and breaking them down into small textile squares. These squares are then further processed to create fibers that can be used to create new clothing.

This process is incredibly efficient, with 85% of the original material being reused to create new clothing.

The fibers that come out of the machine are high-quality and can be transformed into a variety of fabrics. Renaissance Textile takes great care to ensure that the fabrics they produce are durable, comfortable, and fashionable.

PRO
89

ENV
83

HUM
82

CORP
82

19

VERA

Vera has developed a **virtual wardrobe application that recommends three outfits per day based on weather conditions**.

Vera uses artificial intelligence to provide personalized outfit recommendations based on users' wardrobe items.

The company aims to monetize through a second-hand market for clothing, allowing users to sell items they have not worn in 18 months to other users nearby to reduce their carbon footprint.

Vera is also looking into potential partnerships with brands or retailers, although nothing has been confirmed yet.

IMPACT 84

PRO 88

ENV 84

HUM 83

CORP 83

DATA Companies

Data has become an integral part of our lives and businesses.

The amount of data being generated daily is increasing exponentially, and the ability to capture, store, and analyze this data has become critical to making informed decisions.

Data is driving innovation in many industries, from healthcare to finance, and companies that can effectively harness the power of data are more likely to succeed.

Advances in technology such as artificial intelligence and machine learning are making it possible to derive insights from data that were previously impossible to obtain.

As such, data is poised to play an increasingly important role in shaping our world and driving progress in the years to come.

163 billions

The Global Big Data Market Size accounted for 2021 in USD - Acumen

473 billions

projected to occupy a market size in USD by 2030- Acumen

12,7%

projected to grow at a CAGR of 12.7% from 2022 to 2030 - Acumen

H&B IMPACT INDEX

BRAD
Soil Technology

Brad is an agricultural sensor that **provides soil health status for farmers.**

The sensor, known as a "beacon," is installed in the heart of a plot of land and collects data to measure the impact of human activities on the soil.

The sensor measures temperature, humidity, pressure, luminosity, and UV to provide farmers with real-time data on their crops.

The data can be accessed through the Brad mobile application or can be transmitted in raw form to clients.

Brad's target market is farmers, large groups, and cooperatives with agronomic units that are already working on living soil.

The company aims to develop its offer with predictive devices in the future.

PRO
87

ENV
83

HUM
82

CORP
82

22

IMPACT 82

Deepki has launched its **ESG index, aimed at helping real estate players understand the performance of their assets** and meet the challenges of the European Taxonomy.

This is the first European benchmark measuring the ESG performance of real estate.

Available online for free, it will provide a top 15% and a top 30% in terms of primary energy consumption performance for each asset class, by country.

By automatically collecting real data from more than 400,000 assets in over 40 countries, Deepki can share information on the energy performance of the sector, by asset type and location.

Published and updated annually, this benchmark represents a true reflection of the European market and its systemic changes.

PRO 87

ENV 83

HUM 82

CORP 82

GENESIS

Genesis has developed **a tool to rate soil quality and improve the health of cultivated soils.**

The Genesis score is calculated from 35 indicators of the agronomic characteristics of the land, grouped into three indices: biodiversity, carbon, and pollution.

This unique method provides a universal impact measurement of the cultivated soils analyzed.

The plots are rated on a standardized scale from -100 to +100 in relation to a reference system that takes into account the climatic context of the sampled area.

The notation is a mix of soil samples with metadata, resulting from the collaboration of experts from all horizons: ecologists, data specialists, soil health specialists.

The service provided by Genesis includes Biodiversity Score, Climate Score, Water Score, and Fertility Score.

PRO
89

ENV
83

HUM
82

CORP
82

GLIMPACT

Glimpact **evaluates the ecological performance of products by analyzing their life cycle** with respect to 16 categories of environmental impacts, weighted based on their economic, social, and planetary impact.

In addition to its solution for industrial clients, the Company has launched the version of the Glimpact application.

It allows individuals to scan the barcode of a product to obtain its environmental footprint and facilitate their purchasing decisions.

Consumers can also find out which phase of the product's manufacturing is the most polluting and what its main impacts are.

These impacts are translated into simple actions, such as equivalent distance traveled by car, showers taken, or washing machine cycles.

PRO 87

ENV 82

HUM 83

CORP 82

Hiphen specializes in **providing highly precise information on the quality of crops to stakeholders in the agricultural sector**.

The company's approach involves processing images captured by satellites, drones, and sensors such as Airphen multispectral cameras, using artificial intelligence to derive insights that help farmers and seed companies manage their crops more effectively.

Hiphen's online data platform, Cloverfield, provides a user-friendly tool for uploading, downloading, analyzing, and visualizing data across all crops, fields, and trial sites.

PRO
87

ENV
83

HUM
82

CORP
82

IMPACT

83

PRO 86

ENV 83

HUM 82

CORP 82

Murmuration uses **satellite data to create a map showing the maximum number of tourists a destination can accommodate** without deteriorating the environment.

The project aims to fight against tourist overcrowding and will run for a year.

The company offers various indicators such as the Tourism Infrastructure Indicator, Tourism Flow Indicator and Road Infrastructure Indicator.

The indicators allow users to visualize the distribution of tourism infrastructures, track human flows related to tourism, and visualize the presence and distribution of road infrastructures on a territory.

Naonair is a mobile application that allows you to **know the air quality in real time**, launched by the Nantes association Air Pays de la Loire.

It can be downloaded on a smartphone and is available throughout the Nantes metropolitan area (France, Europe).

The application calculates the healthiest route to avoid polluted areas, taking into account the pollution levels of ozone and fine particles, which can have health consequences such as lung cancer.

The application required two years of study and data collection before being offered to pedestrians and cyclists.

PRO
87

ENV
82

HUM
82

CORP
82

Senseen develops measurement **tools to support the development of agroecology.**

The company's first product, launched in February 2021, is a miniaturized infrared spectrometer that uses artificial intelligence to measure plant stress and evaluate crop health.

Senseen has also developed a scanner that measures the potential Redox of plants using light.

The portable spectrometer vibrates atoms to obtain a photocopy of the matter that is then analyzed by the company's AI, which combines a miniature spectrometer, artificial intelligence, and deep learning to measure stress parameters and assess crop health on the field.

PRO 87

ENV 83

HUM 82

CORP 82

29

WEENAT

Weenat is a company that specializes in **providing weather and agronomy sensors for farmers.**

With over 12,000 farmers and 8,000 sensors installed in France and Europe, Weenat claims to process 1 billion data points per day.

The company is already the agro-meteorological partner of the top 40 French agricultural cooperatives and trading companies and is present in seven countries, with plans for further international expansion.

PRO 85

ENV 82

HUM 82

CORP 82

youmeal
DATA IN THE KITCHEN

YouMeal wants to **inform consumers about what they are eating, in collective catering facilities** (company canteens, nursing homes, vacation clubs, etc.), in **supermarkets** (which are increasingly selling prepared meals) **or on online platforms for home delivery** of meals or any other place.

To inform consumers not only about the nutritional composition of food and recipes, but also about the environmental footprint of what is offered to them at the table.

To feed its machine learning algorithm, YouMeal uses a dozen databases, both nutritional (like Nubel in Belgium) and environmental (like Agri-footprint).

To expand its consumer footprint, the start-up is also testing a personalized mobile application.

IMPACT
82

PRO
85

ENV
81

HUM
81

CORP
82

Energy Companies

Energy is at the heart of our economy because it is essential to the production, transformation and distribution of goods and services.

Energy is needed to power the machines and equipment used in production processes, to provide transportation services, and to heat and light buildings.

Energy is a limited and expensive resource, making it a critical issue for businesses and national economies.

Greenhouse gas emissions from energy production and consumption contribute to climate change and have significant economic and social consequences.

1510 billions

The Global Renewable Energy Market projected value by 2028
GLOBE NEWSWIRE

41%

Share of Energy in global CO2 Emissions
AIE 2020

910 billions

The Global Renewable Energy Market in 2021 - GLOBE NEWSWIRE

H&B IMPACT INDEX

AIRTHIUM

Airthium is a company that has developed a **machine capable of storing electricity and converting it back into usable energy.**

This is achieved through a process of storing electricity as heat and then converting it back into motion, which can then generate electricity.

To achieve this, Airthium proposes using liquid ammonia, which can be stored for long periods of time and easily converted back into electricity when needed.

PRO
87

ENV
82

HUM
81

CORP
82

www

33

BeFC
Bioenzymatic Fuel Cells

BeFC's goal is to create a revolutionary **battery using paper and enzymes**.

The paper battery utilizes enzymes, natural elements, to convert glucose and oxygen into electricity.

BeFC promises to be able to modify the battery's format to meet specific customer needs.

The battery is fixed on a digital platform that bridges the gap between hardware and software, utilizing sensors and wireless communication for data reading.

This platform is flexible and reusable.

PRO
87

ENV
83

HUM
81

CORP
81

énergiestro

35

Energiestro invented a **concrete flywheel system that, when operating at high speed, stores energy in kinetic form.**

Their innovation consists of compressing the concrete with composites such as fiberglass, before rotating the cylinder.

This operation allows to put the concrete in a very resistant state to make it turn at very high speeds, and to store energy.

These flywheels can be used to smooth intermittent renewable energy and store energy for distribution outside peak hours.
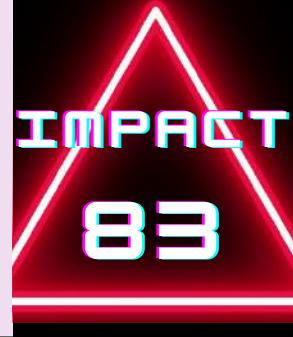
PRO
87

ENV
82

HUM
81

CORP
83

ENERGY VAULT
Enabling a Renewable World

Energy Vault has developed a "gravity" storage system based on concrete blocks.

The system involves hoisting concrete blocks to the top of a structure to store gravity potential energy, then letting them fall to the ground to generate electricity.

Energy Vault recently unveiled a more advanced version of its concept, where the blocks travel in a metal cage inside a huge rectangular building.

The company claims that each module would be capable of storing 10 MWh of electricity, though its size, power, efficiency and the amount of concrete required are unknown.

PRO
87

ENV
83

HUM
81

CORP
82

Polar Night Energy have developed a **heat storage system that allows for the up-scaling of solar or wind energy to up to 100% of heating and electricity demand**

The core of their solution is the use of hot sand as a storage medium, which leads to safe operation and a natural balance in the storage cycle

Sand is a cheap and abundant material that can be heated up to 1000°C and even higher

Their storage systems vary in size from tens to thousands of cubic meters and can be located underground

Their heat storage system produces minimal emissions and the heat taken from their storage is as clean as the electricity that was fed into it

Each storage system is individually tailored to the customer's needs and can be designed as part of a full energy system

IMPACT 83

PRO 87

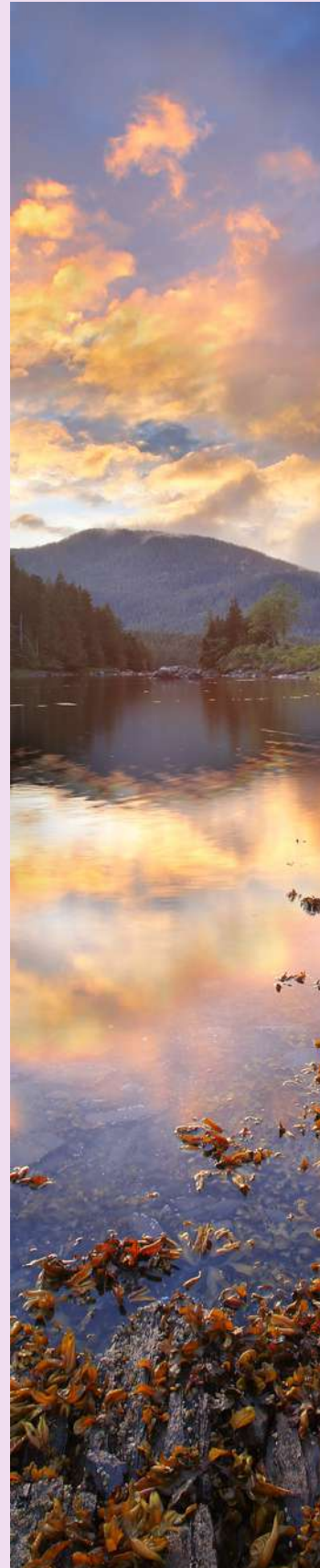**ENV 83**

HUM 81

CORP 83

TURBULENT

38

Turbulent Hydro developed a vortex tidal turbine that can be installed in any river or watercourse

An autonomously operating lock controls the flow of water into the device, which has several filters to protect the turbine from blockages

The shape of the basin transforms the incoming water into a low pressure vortex, making it respectful of aquatic fauna

The central unit includes a generator and gearbox, making it usable 24 hours a day without interruption

Each device can generate between 120,000 and 560,000 kWh per year, enough to power between 50 and 500 homes

PRO
87

ENV
83

HUM
81

CORP
83

This market encompasses a broad range of products and services, including tourism, entertainment, sports, and other leisure activities. In recent years, the leisure market has undergone significant transformations due to various social, economic, and technological factors.

One of the primary factors driving the growth of the leisure market is the increasing demand for experiences over material possessions.

Another significant driver of the leisure market is technology. The proliferation of smartphones, social media, and other digital platforms has enabled consumers to access and share information about leisure activities more easily.

1900 billions

The global recreation market in 2023 in USD The Business Reseach Company

917 million

international tourism arrivals in 2022 Statista Research Department

2.9 trillion

the total expenditure by leisure travelers worldwidein USD Statista Research Department

H&B IMPACT INDEX

BALL'N CONNECT

Ball'N Connect allows you to **find players on a playground and to find** information about the characteristics of the courts.
How it works : you create your profile in a few seconds.

Activate the geolocation to find the courts nearby, the events in the schedule and the number of remaining places or to discover where your friends play on the interactive map.

PRO 87

ENV 81

HUM 84
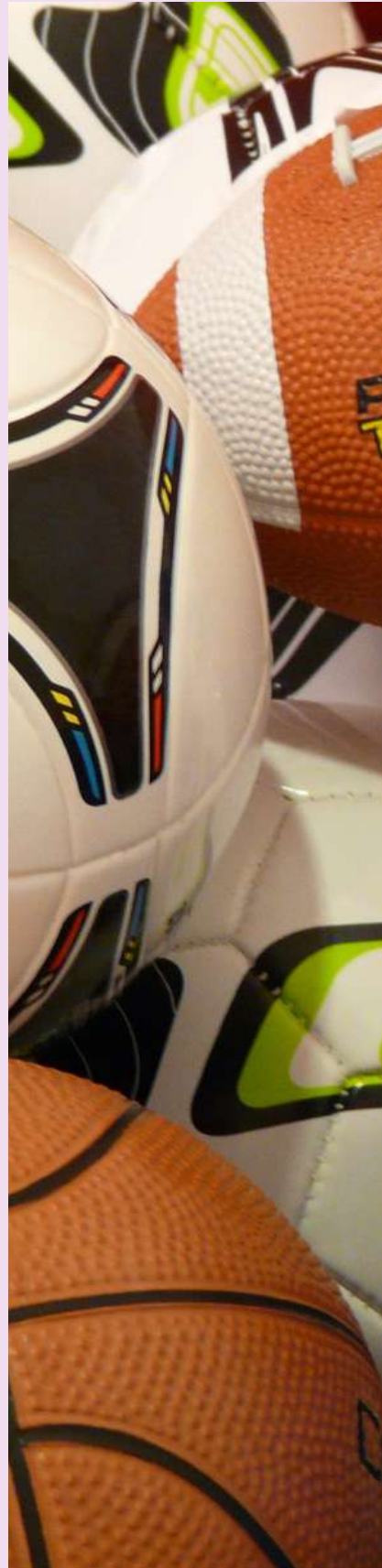
CORP 83

BoxUp

IMPACT
85

BoxUp provides free sports equipment such as tennis rackets, basketballs, chess boards, and figurines at its stations.

The company does not require any deposit or credit card information to access its equipment.

Users simply need to download the BoxUp app from the App Store or Google Play, register, phone number, and scanned ID.
BoxUp's lockers have polycarbonate windows that are 400 times stronger than glass, and a high-security Bluetooth lock.

Furthermore, the stations are entirely self-sufficient thanks to their solar panels, making them completely independent for power supply.

PRO
91

ENV
83

HUM
82

CORP
83

Footbar has launched a sensor called **Meteor** that **allows football players (professional or amateur) to have complete statistics after each game.**

the sensor allows to collect all possible data during a match.

The sensor, named Meteor, is easy to use and is installed between the knee and the calf.

The data collected is sent to an application (Footbar) that allows the user to consult it.

The sensor analyzes various aspects of the player's performance, including speed, dribbles, defense, physique, and shot speed.
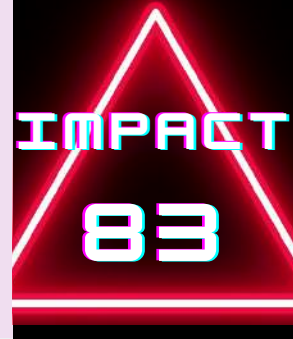
IMPACT
83

PRO
87

ENV
82

HUM
82

CORP
82

geovelo

Geovelo has developed a free **application that optimizes bike routes by avoiding main roads and prioritizing bike paths.**

Users can find all available cycling facilities for their trip, including bike parking and bike-sharing stations.

The company will provide municipalities with data on the average speed of cyclists on each street and identify the most used routes.

This data analysis will help optimize the proposed routes and improve their maintenance.

Additionally, the collected data has a touristic vocation.

Cities plan to use it to propose secure routes for discovering them.
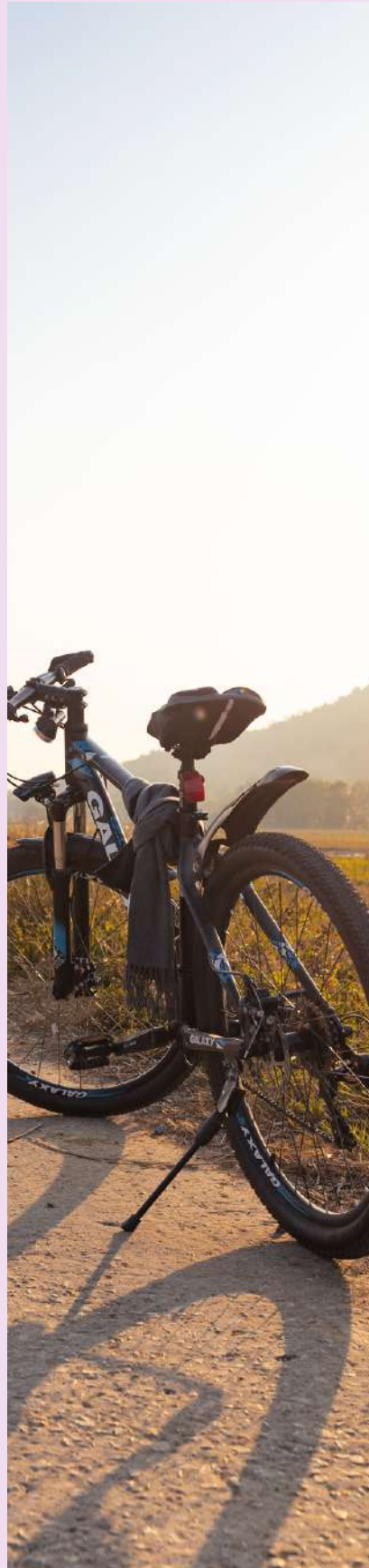
IMPACT
83

PRO 87

ENV 83

HUM 82

CORP 82

GreenGo

Greengo seeks to offer its clients accommodation options that are environmentally friendly and located in areas with minimal environmental impact.

To achieve this, the company requires its hosts to adhere to a three-pillar charter.

The first is to promote sustainable development through eco-responsible principles, the second is to ensure a fair commission, and the third is to provide a warm and local welcome.

Greengo has nearly quadrupled its accommodation options in the past year, and its client satisfaction rate is currently 9.6 out of 10.

PRO
87

ENV
83

HUM
82

CORP
82

Henoo

Henoo is a free application that **allows users to access all the heritage of France in their pocket**.

The application allows users to share "Noo", points of interest that are associated with facts, historical anecdotes, and legends.

Anyone can enter information related to a monument, village, place, or statue on a facade.

Participants are asked to source their anecdotes or indicate if they do not have a source.

The application is moderated by both the community and an algorithm that detects and reports anecdotes that need proofreading.
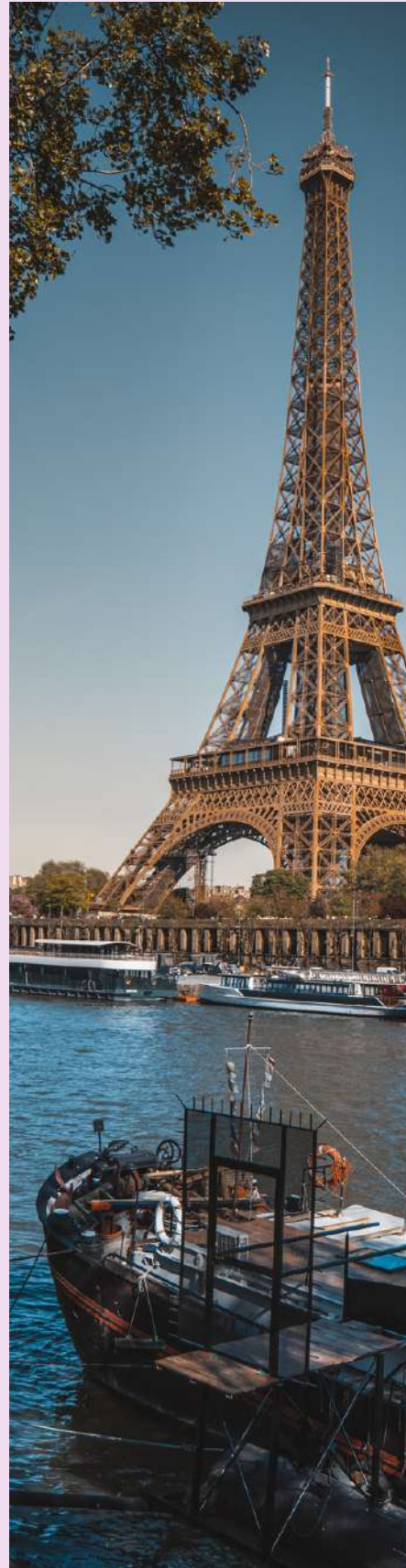
PRO 87

ENV 82

HUM 82

CORP 82

Rewind offers **audio-guided tours through its smartphone app.**

Visitors can download the Rewind app, select the tour of their choice, and follow the guide's voice in their own language as they move around.

Rewind has partnered with professional guides to write the tour content and actors to tell the stories.

The audio-guided tours are sold directly on the Rewind website and mobile application, at tourist offices, company committees, and online travel agencies.

The tours can be taken alone or with others and can be taken at your own pace.

PRO 87

ENV 82

HUM 82

CORP 82

Lights in our public spaces are essential for safety, orientation and visibility of citizens.

However, the need for 24/7 public lighting has a significant impact on energy consumption.

In a world where reducing greenhouse gas emissions is paramount, it is crucial to find street lighting solutions that consume less energy, while meeting the needs of the community.

Energy-efficient lighting technologies can help significantly reduce energy consumption and associated costs while maintaining sufficient lighting quality for public spaces.

40%

Share of Street lighting of the electricity bills at a municipal level - The Copenhagen Centre on Energy Efficiency
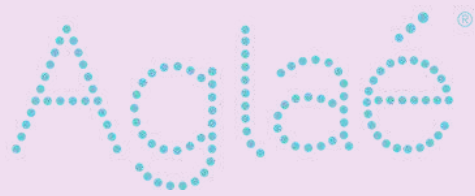
15%

Share of Street lighting in the global power consumption - The Copenhagen Centre on Energy Efficiency

5%

Share of Street lighting in greenhouse emissions - The Copenhagen Centre on Energy Efficiency

H&B IMPACT INDEX

Aglaé

Aglaé had the vision of **producing light using plants**.

The company has developed a serum that is "biosourced and biodegradable," which when absorbed by plant roots, makes them fluorescent for approximately three months.

While the formula is kept secret, the company assures that it is not harmful to plants.

PRO
89

ENV
84

HUM
83

CORP
83

glowee
c'est la mer qui nous éclaire

Glowee aims to **use bioluminescent properties to light cities and urban structures without electricity or light pollution.**

The company uses bioluminescent genes from aquatic entities such as squids, jellyfish, and algae.

The bacteria produce a bluish light powerful enough to rival conventional urban lighting when immersed in a saltwater aquarium.

The aquarium needs to be fed regularly and supplied with a flow of air for the bacteria to convert chemical energy into light energy.

PRO 89

ENV 84

HUM 83

CORP 82

49

Sunna
DESIGN

Sunna Design provides **solar-powered lighting solutions to remote and off-grid areas.**

With over 100,000 installations in 60 countries, including Africa, the Middle East, and Latin America, Sunna Design is revolutionizing access to light in the most remote areas of the world.

It currently produces around 10,000 solar-powered and connected streetlights per year, with a capacity of up to 100,000 units.

IMPACT 84

PRO 88

ENV 82

HUM 84

CORP 82

Woodlight is a research and development startup that **aims to create bioluminescent plants**.

By transferring the natural biological phenomenon of bioluminescence to plants, Woodlight hopes to produce plants that emit their own light without requiring any external electrical or lighting source.

These plants are expected to be non-fertile and dependent on a specific growth environment to avoid any unintended spread.

The technology will be applicable to a wide range of plant varieties and will have potential applications in areas such as lighting for cycling paths, parks, and roads, serving as markers and not as a replacement for streetlights.

Woodlight's primary goal is to create a sustainable lighting solution that reduces energy consumption and pollution.

PRO
89

ENV
84

HUM
83

CORP
82

AgTech Compaies

Agriculture is a mainstay of the global economy, providing food, raw materials and jobs to millions of people around the world.

However, intensive and unsustainable agriculture can have negative consequences on the environment, such as soil degradation, water pollution, loss of biodiversity and the release of greenhouse gases.

This is why it is imperative to develop sustainable agricultural practices that meet the needs of the population while preserving natural resources.

In this perspective, the agricultural industry is called upon to play a key role in the implementation of more sustainable food systems, where the production, processing and distribution of food are carried out in a responsible and environmentally friendly manner.

13,398 billion

The global agriculture market in 2023 in USD The Buisness Research Company

23%

Share of Agriculture CO2 global emissions - GIEC 2020

12 gtCO2

In year the consumption of Agriculture
GIEC 2020

H&B IMPACT INDEX

AGREENCULTURE

IMPACT

83

Agreenculture is developing a **secure teleoperation service for remotely controlling and operating agricultural robots and tractors in fields**.

The goal is to offer farmers the ability to monitor and control an autonomous tractor from their smartphones or to delegate this task to a team of teleoperators at a distance of up to 600 km.

The company claims that 3G is sufficient for this service and that they cover most agricultural land through a multi-operator solution.

PRO 87

ENV 82

HUM 82

CORP 82

www

IMPACT 84

AGROPAD

AgroPad is an innovative company based in Cameroon that is changing the way farmers irrigate their crops.

By using a simple cell phone application, **farmers can remotely irrigate their farms through an automaton that is activated by SMS**.

This technology is a game-changer for farmers who previously had to manually irrigate their fields, which was both time-consuming and labor-intensive.

One of the unique features of AgroPad's system is its reliance on photovoltaic solar energy.

This makes the device environmentally friendly and ensures that it can be used in areas with limited access to electricity.

PRO 88

ENV 83

HUM 83

CORP 83

air protein™

Air Protein is an American start-up whose goal is **to turn carbon dioxide into steak.**

Air Protein claims that coupling CO2 with microbial cultures can produce synthetic meat with a high protein content.

The secret lies in the hydrogen-trophic bacteria, grown in fermentation tanks and fed with CO2, but also with oxygen, water, minerals and nitrogen.

The result is a flour that will become synthetic meat in various forms after using processes already in use in the food industry.

With equivalent production, this process would take up 1.5 million times less space than the usual breeding farms.

IMPACT 84

PRO 88

ENV 84

HUM 82

CORP 82

AQUA4D

Aqua4D has developed an innovative technology capable of i**mproving the performance of agricultural irrigation systems thanks, in particular, to a better distribution of minerals in the water.**

The company's technology, which changes the physical structure of water molecules to efficiently dissolve minerals, helps farmers to grow crops in areas where high levels of soil salinity can be an issue.

Aqua4D technology does not require consumables or wastewater disposal.

It uses the same amount of energy as a standard 10W light bulb, making it an eco-friendly solution.

Aqua4D technology also increases the soil's water retention capacity, which leads to the optimal balance of water and air in the soil pores.

As a result, farmers can reduce the volume of water applied by up to 10% without affecting plant growth, making the solution cost-effective and sustainable.

PRO
87

ENV
83

HUM
82

CORP
82

56

FARMCube

Farmcube is a **robotized soilless vertical crop farm** that optimizes planting yields and reduces transportation.

The Farmcube is a 10 m3 cube that can house between 200 tomato plants and 2,000 basil plants.

Inside the cube, all parameters such as temperature, humidity, CO2, and viruses are measurable, allowing for pesticide-free growth and constant production.

The cube can be installed in various locations, including offices, gardens, and garages.

The cube uses ultra-biopony, a technique where roots grow in the air and are watered by a cloud of 50 microns by ultrasound.

PRO
89

ENV
84

HUM
82

CORP
82

57

Futura Gaïa

Futura Gaïa has been working since in the development of a new mode of production for the agricultural world.

A vertical precision agriculture, called **rotating geopony**, in living soil, without pesticides or fungicides, using soil in a controlled climatic environment, and operated in brownfield buildings.

The plants (lettuce, strawberries, herbs, flowers, etc.) will grow in trays placed on a wheel and filled with soil.

They benefit from a watering line from the top of the wheel, with a computer calculating the amount of nutrients and water strictly necessary for each plant.

The model is meant to be complementary to open field agriculture, an alternative which, according to the founders of Futura Gaïa, would allow to reserve land for productions that require open field cultivation.

58

GreenOnyx

IMPACT 85

GreenOnyx is a technology-driven company that has created an entirely **autonomous platform based on artificial intelligence (AI) for the production of highly nutritious crops**.

Their system does not require human intervention, land, or favorable weather conditions, and applies advanced agricultural methods to simulate the natural environment for crop production in high-tech modular farms.

The company's co-founder and CEO, Dr. Tsipi Shoham, discovered a tiny aquatic plant called Wolffia arrhiza, also known as water lentil, in the wild regions of Thailand.

This plant has high nutritional value and grows in complex environmental conditions.

PRO 90

ENV 83

HUM 83

CORP 83

59

Jungle

Jungle is a company that is currently developing a v**ertical farm as an alternative to traditional farming methods.**

Their vertical farm does not use pesticides since insects do not reach the plants.

The water is recycled and the production is sold within 100 kilometers to limit the environmental impact of transportation.

The entire area is used for the planting and harvesting process.

The farm uses LED lights to replace sunlight, and they control the climate to create seasons, allowing for year-round production of a variety of crops.

Each crop has its own program, and the temperature and humidity are controlled using an automated system.

PRO 89

ENV 84

HUM 82

CORP 82

www

IMPACT
83

Meatable develops a technology that produces **artificial meat from a few cells of an animal and mimics the natural process of fat and muscle growth**.

It currently focuses on making artificial pork and beef, but its technology is adaptable to all species, including sheep and fish.

It is expected to enable small-scale production of artificial meat in just a few weeks and produce a product that has the same taste and texture as a traditional piece of meat.
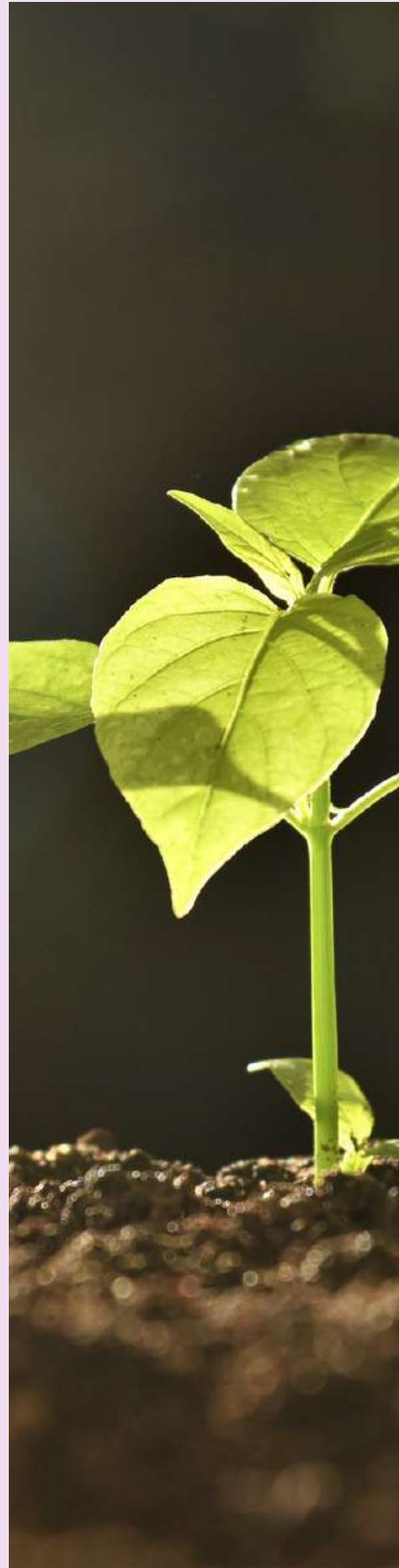
PRO 88

ENV 83

HUM 82

CORP 82

61

Neopouss cultivates micro pousses of around twenty different varieties (basil, carrots, nasturtiums, etc.) **in an underground location in the city center**.

These high-nutrient foods are currently sold to local restaurants, but the company hopes to soon commercialize a dehydrated version for use in health, sports, and even for astronauts.

The micro pousses are ultra-concentrated in terms of nutritional benefits, such as minerals and vitamins, making them superfoods.

The company uses a closed-circuit, vertical growing system, and only the water from the network is used, resulting in significant water savings.

The system is also energy-efficient, with each rack containing 500 pots of micro pousses consuming the equivalent of one freezer in electricity.

PRO
88

ENV
83

HUM
82

CORP
82

www

62

Perfect Day offers an innovative scientific solution for **producing dairy products without cows.**

The start-up has developed yeast that can produce milk by incorporating the genetic blueprint for making milk from a cow.

These yeasts are fed with plant sugars and after fermentation, they produce a cow's milk protein that can be used to make any dairy product.

This makes milk production more efficient, reducing greenhouse gas emissions by up to 97%.

Perfect Day does not sell its own products, but provides its solution to manufacturers.

PRO
88

ENV
82

HUM
82

CORP
82

63

remilk.

Remilk produces **milk proteins without cows via a fermentation process that are "chemically identical" to those found in milk and milk products produced by cows**.

Remilk recreates the milk proteins by taking the genes that code for them and inserting them into a single-celled microbe, which has been genetically manipulated to express the protein

The product is then dried and turned into a powder.

This food production model will be up to 100 times more land efficient than the existing dairy system, 25 times more raw material efficient, 20 times more time efficient and 10 times more water efficient.

IMPACT
83

PRO 88

ENV 82

HUM 82

CORP 82

www

SOLAR FOODS

Solar Foods is a Finnish start-up that has developed a method to **produce protein powder from CO2, water, electricity and nutrients.**

The technology produces edible protein in just a few days and uses significantly less water and farmland than conventional animal husbandry.

The company has named the product "Solein" and compares it to dried algae or soybeans.

PRO 89

ENV 83

HUM 82

CORP 82

Telaqua offers a **remote irrigation control solution**.

To do this, it offers a control complement assisted by one or more connected pressure gauges installed on the boom, pivot or reel.

These continuously measure data through connected sensors and read both the pressure and the water flow.

According to Telaqua, these readings ensure that the valves and pumps open and close properly and respect the programming made by the farmer.

They save the farmer the trouble of systematically checking the system.

The pressure gauge identifies any leaks or other anomalies in the system.

In the end, it saves time, yield, efficiency and peace of mind.

The Telaqua pressure gauge works wirelessly and on a low speed LoRaWan network.

PRO
88

ENV
83

HUM
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CORP
82

www

66

Upcycling Companies

70 tons

Of waste generated each second - World Bank

Upcycling is increasingly seen as an essential practice for achieving a sustainable economy.

In an environment where natural resources are rapidly depleting and waste is accumulating, upcycling offers an effective alternative for reducing our environmental footprint.

By transforming unused materials or waste into new useful products, upcycling extends the life of existing resources, reducing waste and preserving the environment.

2,000 billion

Waste generated each year in tons
World Bank

822 000

Olympic-sized swimming pools
Generated of municipal solid waste each year
World Bank

earth wake

Earthwake uses pyrolysis to **convert plastic waste into fuel**.

The company has developed a low-tech, self-sufficient, and mobile machine called the Chrysalis.

Earthwake turns plastic into fuel.

Plastic waste is melted by pyrolysis up to 450°C and distilled into gasoline, diesel and gas.

PRO 88

ENV 81

HUM 83

CORP 82

www

Green Phoenix collects **food scraps to create energy instead of incinerating them**.

The team collects biowaste by meeting people at the big markets of the city and collecting their compost by bike.

They offer a subscription service for people to deposit their compost and limit their environmental impact.

They also offer their services to professionals in the restaurant industry, with the collection of their biowaste by bicycle

The team hopes to use all the waste for methanization by the end of the year, creating biogas and a digestate for local agricultural crops.

IMPACT 83

PRO 89

ENV 83

HUM 83

CORP 83

Hector le Collector collects organic waste, such as food scraps, peels, and coffee grounds, **and transforms it into energy through biogas and electricity**.

What sets Hector apart is that they collect this waste from businesses, restaurants, and events directly at their locations.

They also provide a unique service by allowing employees to sort their waste at home and bring it to work for collection.

Hector even provides a bamboo bucket kit to transport the waste safely.

In their first year, Hector collected about 50 tons of organic waste, and in 2022 they have already collected 150 tons.

Additionally, a new regulation in 2023 will require restaurants with a certain volume to sort their organic waste, which should accelerate the creation of new collection points.

PRO
89

ENV
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HUM
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CORP
82

MECAWARE

Mecaware uses **a chemical process to extract strategic metals and rare earths from garbages** (lithium, cobalt, nickel, manganese, lanthanum, etc.) with a high level of yield and purity.

The company's goal is to create a new rare metal supply chain for the high-consumption electric mobility sector by recycling battery cathodes.

Mecaware's technology is 30-50% cheaper than current recycling techniques and 20-30% cheaper than the cost of these metals.

The company plans to use the technology to address the growing problem of waste from electric cars, bicycles, scooters and other wireless devices.

The process does not release any effluent and requires little energy, making it economically efficient and scalable.

The technology is simple to implement, produces a metal that is compatible with industrial processes and is "green" and eco-efficient.

PRO
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ENV
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HUM
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CORP
82

71

NEOLITHE

Neolithe transforms the waste into granulates, a by-product widely used in construction.

Neolithe's founders have developed a unique process where the waste, excluding rubble, is ground and agglomerated with a binder they have created.

PRO
88

ENV
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HUM
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CORP
82

Pyrum Innovations has developed **an innovative industrial process to transform old tires back into their original raw materials** through thermochemical treatment.

By subjecting rubber pellets to a temperature of 500 to 800 degrees Celsius in the absence of oxygen, the rubber decomposes into **coke, oil, and gas,** which can be recycled or further processed.

The Pyrum process produces more energy than it consumes, converting gas into electricity and achieving a favorable carbon footprint.

PRO
88

ENV
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HUM
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CORP
82

73

UPCYCLE

UpCycle's flagship product is the **Demeterra**, a **composting machine that can process food waste, including fruit and vegetable scraps, eggshells, and meat leftovers, into high-quality compost in just two weeks**.

The process is odorless and uses a patented mixing technology that ensures optimal aeration and temperature control.

IMPACT 84

PRO 89

ENV 83

HUM 82

CORP 82

WEEECycling

WeeeCycling is a recycling company that **sets up circular economy loops for the recycling of strategic metals**.

It buys electrical and electronic scrap as well as manufactured products from eco-organizations or dismantlers, and dismantles and grinds them through an innovative process.

WeeeCycling then recovers these precious and rare metals in the form of anodes, salts or solubles, and sells them to the electronics, pharmaceutical, luxury goods, aeronautics and space industries, surface treatment, etc.

IMPACT 84

PRO 89

ENV 83

HUM 83

CORP 82

Health Companies

In recent decades, health technologies have played an increasingly important role in the global economy.

These technologies include a wide range of medical devices, software, drugs and services that aim to improve the health and well-being of individuals.

Through technological innovation, new healthcare solutions are being developed to meet the growing needs of populations, improve the efficiency and quality of healthcare and reduce the costs associated with disease management.

In this ever-changing environment, health technology companies are able to capture new business opportunities by responding to market needs and developing innovative solutions.

60 billion

Revenue in the global Health Care segment projected in 2023 - Statista

1.5 billion

the number of users expected by 2027 Statista

The importance of health technology in the economy is increasingly recognized, with substantial investments in research and development, production and commercialization of new products and services.

As a result, health technologies have become a key driver of economic growth, while having a positive impact on the health and well-being of society as a whole.

H&B IMPACT INDEX

Circular

Be more.

Circular is a smart ring equipped with biosensors that connect to an app for data analysis.

The ring measures blood oxygenation and detects possible health problems such as sleep apnea.

Data is anonymized and stored on AWS.

The ring will be sold directly to consumers, but there may be potential for use in clinics, insurance companies, and nursing homes to monitor patients.

The ring is equipped with micro-sensors that can measure over 140 metrics including heart rate, blood oxygenation, respiratory rate, and body temperature.

The data is transmitted via Bluetooth to a dedicated app available on iOS and Android.

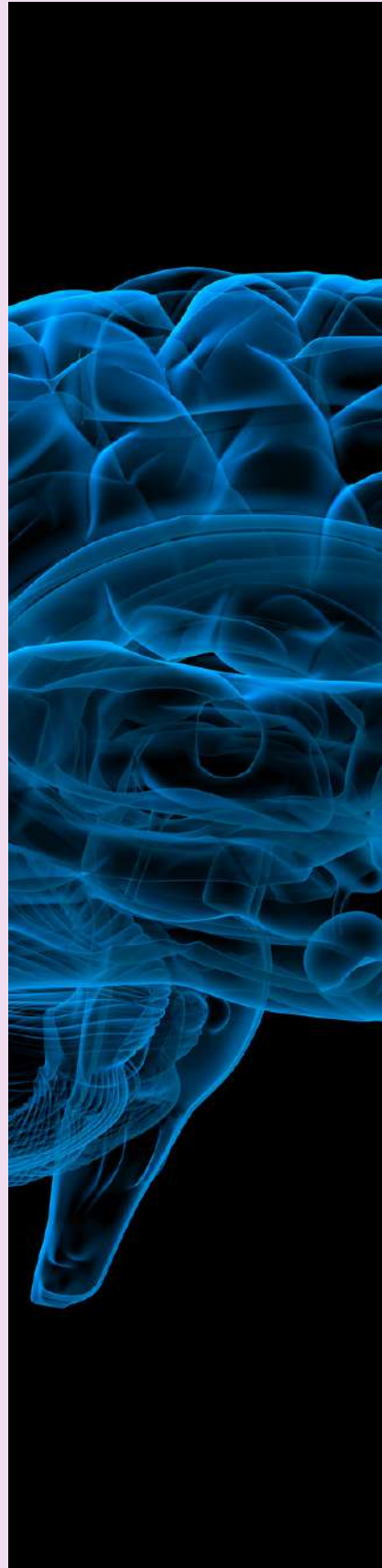PRO 87

ENV 82

HUM 82

CORP 82

www

77

iMediSync

iMediSync, a South Korean company, has developed a **helmet** called **iSyncWave** that is **capable of scanning brain waves to detect the risk of cognitive disorders**.

The helmet uses an electroencephalogram and artificial intelligence algorithms to make a diagnosis within ten minutes.

The company believes that the iSyncWave could significantly reduce the financial resources and time required for such diagnoses.

In addition, the helmet could be used for certain therapies against neurodegenerative diseases.

PRO 87

ENV 82

HUM 82

CORP 82

Hamann & Benson Impact Index 2023

kahun

Kahun, hopes with its AI-based software, intended to facilitate the task of doctors, no longer confront them with huge amounts of text, to help them in their diagnosis.

After doctors submit their patients' symptoms to Kahun's website, the software crawls the wealth of information available in the medical texts and creates a "knowledge graph" that can map 5 million relationships between symptoms and diseases, outcomes, labs, complications and risk factors.

Kahun also developed an AI engine that uses the created knowledge graph to "mimic" a doctor's thinking.

It helps them diagnose, directs them to a recommended course of action, and "supports them with medical sources" by linking the information provided to the original medical sources consulted.

the software offers a plan for next steps, including the best questions to ask, tests to perform, or additional lab and imaging work needed to refine the diagnosis.

PRO
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ENV
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HUM
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CORP
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TOTO

Toto Wellness Toilet is able to directly analyze your feces to screen for diseases and provide wellness recommendations.

It is equipped with sensors that can detect serious conditions, such as colorectal cancer, urinary tract infections or kidney problems.

This data can then be sent to a lab and/or doctor for medical diagnosis.

PRO
87

ENV
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HUM
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CORP
82

Xrapid Group has developed a patented **portable laboratory** called **XRblood Pro**, which **allows for complete blood tests to be performed at home**.

The device is equipped with an artificial intelligence (AI) system that enables it to count red and white blood cells, platelets, and more, and provides complete analysis of the blood formula with machine learning.

The XRblood Pro has been recognized as the first complete self-test blood formula that functions like a laboratory analyst, eliminating the need for trips to the doctor's office and long wait times for results.

PRO 88

ENV 82

HUM 84

CORP 82

81

Housing Companies

The housing industry is a critical economic sector that encompasses a wide range of activities related to the construction, renovation and management of homes and buildings.

This industry is vital to the global economy, providing jobs, stimulating economic growth, and improving the well-being of communities.

The housing industry is an ever-evolving sector that meets the growing need of the population for safe, quality and affordable housing.

The demand for housing continues to increase, which has led to significant growth in the construction of new housing, renovation of existing housing, and real estate property management.

63%

Share of energy used by households in the EU in 2020 for heating their homes - Eurostat

27,4%

Share of final energy consumption in 2020, households, or the residential sector - Eurostat

In addition, the housing industry has become a key area for technological innovation, with companies looking to develop new sustainable building materials, advanced home automation systems and energy efficient solutions.

In sum, the housing industry is an important pillar of the global economy, contributing to wealth creation, improved living conditions and sustainable development.

Snugr

4Inch has developed a **smart heating solution called Snugr.**

Snugr allows for **room-by-room temperature programming,** allowing for energy savings.

The system replaces traditional radiator valves with connected valves that receive orders from a central system.

The valves do not require batteries or wires.

The system can be programmed in advance to turn on heating at specific times and places.

PRO
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ENV
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HUM
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CORP
82

Atlantic is a company that specializes in providing high-end heating solutions.

The company had **acquired Ween** which has **developed** an artificial intelligence (AI) technology **that can predict human presence in a location**. Ween's technology has a worldwide patent that covers 19 innovations.

When applied to homes, the technology analyzes the thermal profile of a house based on its characteristics and local weather conditions.
It then connects to the occupants' smartphones to react to their movements and provide precise instructions to the thermostat.

For example, when the residents leave the home, the thermostat lowers the temperature proportionally to their distance.

When they return, it raises the temperature to the programmed comfort level, taking into account the estimated return time based on traffic.

PRO
88

ENV
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HUM
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CORP
82

Beem Energy has developed a modular solar energy kit that can be fixed to a wall or floor and connected to a socket.

The kit's micro-inverter **transforms direct current into alternating current for use directly in the home**.

The aim is to eliminate standby energy consumption and make solar energy more accessible.

A 300 watt Beem kit can produce the equivalent annual energy consumption of a fridge, internet box, stereo system and five LED lightbulbs.

Users can track production and consumption in real-time with a dedicated platform.

PRO
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ENV
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HUM
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CORP
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COOL ROOF
FRANCE

Cool Roof France is a company that provides innovative and sustainable roofing solutions to prevent overheating caused by solar radiation.

Its flagship product is a white reflective coating for roofs that can reduce the average temperature of buildings by 6°C, leading to a 20-50% reduction in electricity consumption for air conditioning.

The company aims to improve the thermal comfort of users while reducing the impact on the environment by decreasing the need for air conditioning, which emits greenhouse gases.

PRO
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ENV
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HUM
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CORP
82

equium
ACOUSTIC HEATING

Equium has developed a new **technology for heating and cooling called the "acoustic heat pump".**

This technology uses the natural phenomenon of acoustic waves generated by temperature gradients to convert heat into sound waves, and then back into heat.

The result is a highly efficient, environmentally-friendly and silent heating and cooling system that does not require any polluting substances to function.

According to the company, the acoustic heat pump is three times more efficient than a regular radiator and can reduce CO_2 emissions to almost zero when used with decarbonized electricity.

The technology has a low carbon footprint and requires minimal maintenance, with a lifespan of up to 30 years.

PRO
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ENV
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CORP
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www

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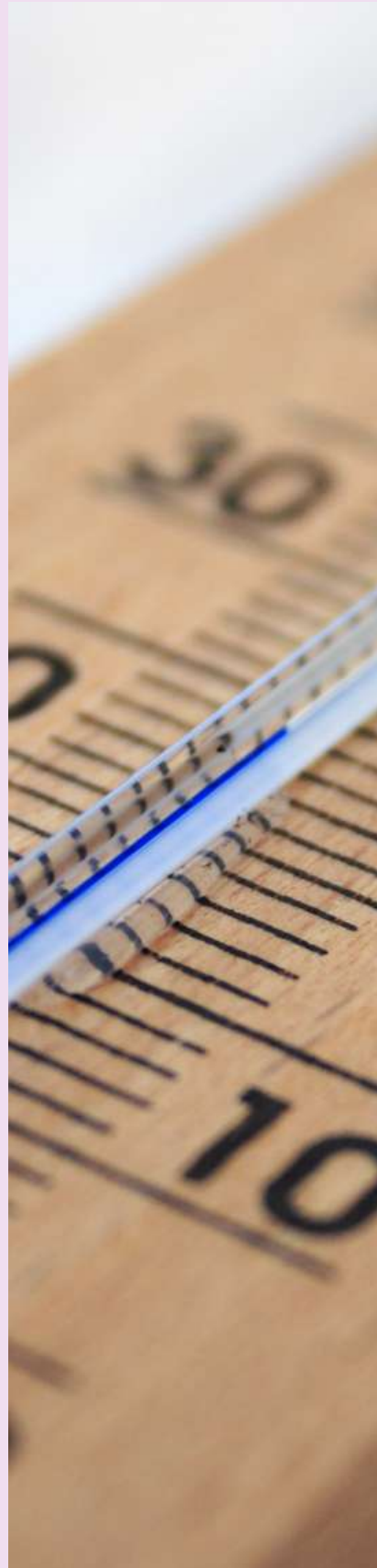
FHE develops a **thermal battery that stores excess energy from solar panels and allows for desynchronization of production and consumption**.

The technology, called **Inelio**, can reach up to 100% self-consumption with proper monitoring of consumption.

IMPACT

83

PRO 88

ENV 83

HUM 82

CORP 82

The **Geocorail** by **Secure** is an **artificial rock created by combining electrochemical reactions of seawater and sediment collection**.

The device allows the formation of a rocky conglomerate around a grid specially designed to receive the aggregates.

The aggregation process uses electric currents (very weak) circulating in the sea water and in the soil and sediment or debris carried by the waves.

The electrolysis process in seawater naturally leads to the formation of a calcimagnesian deposit of a thickness higher than 10 centimeters, resulting from the sediments of all types carried by the seawater.

As long as the electric current is maintained in the material, the rock concretion process continues.

Any possible deterioration of the material (cracking, breakage…) is annihilated and reversed by the self-healing capacity of the Geocorail.

PRO
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ENV
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HUM
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CORP
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89

Helio
Concept

Energy Concept's **Heliodome** is a **concept of ecological solar house created** which **consists in making the sun rays penetrate the house in winter to heat the interior and to maintain it shaded and fresh in summer** thanks to the position of the sun.

Since the construction of the first Heliodome 10 years ago in Cosswiller, about ten projects have been built in France, Switzerland and Germany.

The Heliodome can take different forms to answer all the uses.

The energy savings are considerable, with an electrical consumption up to 42% lower than a conventional house.

PRO
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ENV
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HUM
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CORP
82

HF
HELIOFRANCE

Héliofrance specializes in the manufacturing of thermal solar panels for hot water production.

The panels are designed with recyclable materials such as copper, aluminum, and glass, making them more environmentally friendly.

The panels use the sun's heat to heat running water, unlike photovoltaic solar panels which produce electricity.

The panels are not just limited for residential use but also for commercial and industrial use.

PRO
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ENV
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HUM
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CORP
82

www

HEXAFRESH

Hexafresh is an **energy-saving cooling and heating device**

It is a "refreshing individual fan" that uses proprietary technology to refresh air without emitting CO2

The device is able to offer the same freshness as an air conditioner, reduce humidity and filter the air without the need for a compressor

It takes 80% less electricity to run Hexafresh compared to a conventional air conditioner

Hexafresh uses the Peltier effect, a thermoelectric phenomenon, to cool a restricted area of about 1.3 to 1.5 cubic meters, such as a small office

The device can also be used as an auxiliary heater if necessary
Hexafresh is designed to be portable and can be moved anywhere in the house

PRO 89

ENV 83

HUM 82

CORP 82

92

IQ spot

IMPACT 85

IQspot provides a solution for **tracking energy waste in buildings.**

The company uses sensors and algorithms to collect and analyze data on energy consumption and delivery in real-time.

The sensors used by IQspot collect a variety of data, including water, gas, and electricity consumption, as well as temperature, humidity, and CO2 levels.

The company's algorithms analyze the data to detect any unusual spikes in consumption and provide alerts to building managers via a mobile application or email.

By identifying energy waste and enabling quick action, IQspot's solution has been shown to reduce energy consumption by an average of 16% without requiring any physical renovation work.

IQspot's solution also provides users with a user-friendly interface that displays energy consumption data and performance indicators, which can be easily integrated into energy and environmental reports.

PRO 90

ENV 84

HUM 83

CORP 82

93

Power of moss

PowerOfMoss' main product is an **insulating foam made from moss, which improves thermal and sound insulation in buildings**.

Laboratory studies conducted by PowerOfMoss show an insulation gain of 10% for a bitumen roof and 18% for a steel roof.

The company also produces foam-irrigated totems for indoor installation that improve air quality.

The moss foam attracts and removes particles present in the air, which are biodegraded and transformed into phytomass.

PowerOfMoss claims that 1 m² of moss treats between 13 and 22 grams of fine dust, the equivalent of eight beech trees.

PRO 88

ENV 83

HUM 82

CORP 82

Roofscapes aims to **transform the sloping roofs of dense cities by covering them with green roofs.**

Green roofs could improve air quality, increase water retention during heavy rain, and reduce the temperature of the roof surface.

This technique allows for the preservation of Parisian roofs, two-thirds of which are sloping and typically difficult to access, while also making them more environmentally friendly.

Roofscapes was inspired by "altanas" in Venice, wooden terraces that were created in the 12th century when population density restricted the possibilities of having a garden.

PRO
88

ENV
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HUM
82

CORP
82

WANIT

Wanit offers a **fully integrated system** for self-consumption of photovoltaic energy to reduce electricity or gas bills.

The system is designed to prioritize the production of a few PV panels for daily hot water needs and manage energy storage through an intelligent dual tank water heater and specific batteries.

Up to 85% of hot water and 98% of electrical production can be recovered.

The system is profitable without subsidies, with a return on investment of less than 5 years for electric boilers and 7-8 years for gas boilers.

IMPACT 84

PRO 88

ENV 83

HUM 82

CORP 82

yord

Yord is a company that uses **artificial intelligence to reduce heating consumption.**

They have developed an optimizer that can be connected directly to any heating system.

Once connected, the optimizer and its wireless sensors perform a thermal calibration of the building, compiling information on the building's orientation, size of windows, thickness of walls, insulation quality, sunlight exposure, and other factors to optimize the heating system autonomously.

Yord's solution starts delivering savings from day one and continues to increase over time.

The installation is simple and does not require any modifications to the existing heating system.

Yord's algorithms continuously optimize and better understand the building and user habits to maximize energy savings.

PRO
90

ENV
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HUM
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CORP
82

Hydrogen is a key component of the future economy because of its ability to provide a clean, renewable energy source.

As the most abundant natural gas in the universe, hydrogen can be produced from a variety of sources, such as water, biomass and solar energy.

This production can be achieved without greenhouse gas emissions, making it an ideal solution for the transition to sustainable and environmentally friendly energy sources.

Hydrogen can also be easily stored and transported, allowing it to be used in a variety of applications, including power generation, transportation and manufacturing.

Hydrogen can be used to store energy produced by intermittent renewable energies, such as solar and wind power, thus ensuring a stable and reliable energy supply.

35%

Increase of Public funding for hydrogen R&D observed its largest annual increase in 2021 - IEA

9%

Growth of low-emission hydrogen production in commissioning projects - IEA

In this context, hydrogen is becoming a key element of the energy transition to a greener and more sustainable economy.

The importance of hydrogen in the economy of the future is therefore indisputable, offering considerable opportunities for companies and governments seeking to reduce greenhouse gas emissions, improve energy security and stimulate economic growth.

H&B IMPACT INDEX

AQUA AEREM™

Aqua Aerem is an Australian start-up company that aims to produce green hydrogen using an innovative solution.

Aqua Aerem's solution to these problems is to **extract water from the air and use it to produce hydrogen.**

The company is developing the "Desert Bloom Hydrogen" project in the Australian outback, which aims to produce water from air and generate hydrogen using renewable energy.

The initial objective is to develop an installation with a capacity of 10 GW.

The equipment must not be connected to the electricity grid and should produce no waste.

The start-up claims that it will be able to produce green hydrogen at a price lower than $2 per kilogram by 2027 and export around 410,000 tons of H2 per year when its site is fully operational.

PRO 89

ENV 83

HUM 82

CORP 82

www

99

H2Gremm has developed a **compact hydrogen production station that operates with minimal water and electricity usage**.

The station is a three-story box that compresses, stores, and redistributes energy in the form of either electricity or hydrogen, producing between 1 and 10 kg of hydrogen per day.

The station converts water and electricity into hydrogen using an electrolysis process, which can be used to power vehicles or provide electricity and heating for a family of four.

The station operates in a closed system, storing solar energy during the summer to be used during the winter.

PRO
90

ENV
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HUM
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CORP
82

HOPIUM

Hopium aims to launch and assemble a 100% hydrogen-powered automobile in France.

A first running prototype was unveiled in June 2021, and a luxury hydrogen sedan should be available on the market in 2025 or 2026.

The vehicle will fall into the mid-luxury category with an estimated price of around €120,000.

The vehicle promises unusual performance: 1,000km of range, 3 minutes of recharging, 500hp, top speed of 230km/h.

Hopium went public on December 23, 2020, on the Access compartment of Euronext Paris.

PRO 88

ENV 83

HUM 82

CORP 82

L A V ·O·

Lavo is an Australian startup that **has developed a hydrogen-based battery aimed at residential use**.

The Lavo battery stores hydrogen in a solid state under high pressure and uses a fuel cell to produce electricity.

The battery has a capacity of 40 kWh, which is 2-3 times more than other domestic batteries.

It can provide enough electricity to power a family's needs for 2-3 days.

The battery also includes a lithium-ion battery and a water purifier.

Lavo claims that the battery has a lifespan of around 30 years and does not require any polluting metals in its production.

PRO
90

ENV
84

HUM
82

CORP
82

Taxirail®

Exid Concept & Développement, a French company, has designed an autonomous train that runs on hydrogen.

Taxirail is **designed for regional lines and has a maximum capacity of 40 people, with the ability to combine up to three modules for peak hours**.

The train uses artificial intelligence to optimize schedules and runs on demand during off-peak hours.

Taxirail uses a hydrogen hybrid system, which is autonomous over a day's activity and generates no pollutant emissions.

The train is a "serial hybrid," with a battery-powered electric vehicle and a hydrogen-powered fuel cell range extender.

The modules will have the highest level of rail autonomy, allowing for up to 500 km.

PRO 89

ENV 83

HUM 82

CORP 82

Retail Companies

Consumption is an engine of economic growth because it creates jobs, stimulates production and influences business decisions about the production of goods and services.

Indeed, if consumers buy more goods and services, this encourages companies to produce more to meet demand. Consumption is therefore a key factor in economic activity and its evolution is closely linked to that of GDP.

Thus, to ensure stable and sustainable economic growth, it is crucial to understand the importance of consumption in our economy and to encourage responsible and sustainable consumption.

27.34 tri

Global Retail Sales in USD, 2022 - Statista

19.86tr

Global Physical retail store sales in USD - 2022 - Statista

5.75 tr

Global eCommerce Retail sales, 2022 in USD Statista

H&B IMPACT INDEX

Cabashop allows **customers to share their grocery deliveries from local stores** such as butchers, bakers, and fruit and vegetable shops.

After registering, users have two options: either they offer to do the shopping for others and in exchange, Cabashop offers them discounts on their own food purchases, or they prefer to be delivered by another member of the community and the service will be charged 3 € per delivery.

IMPACT
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PRO
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ENV
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HUM
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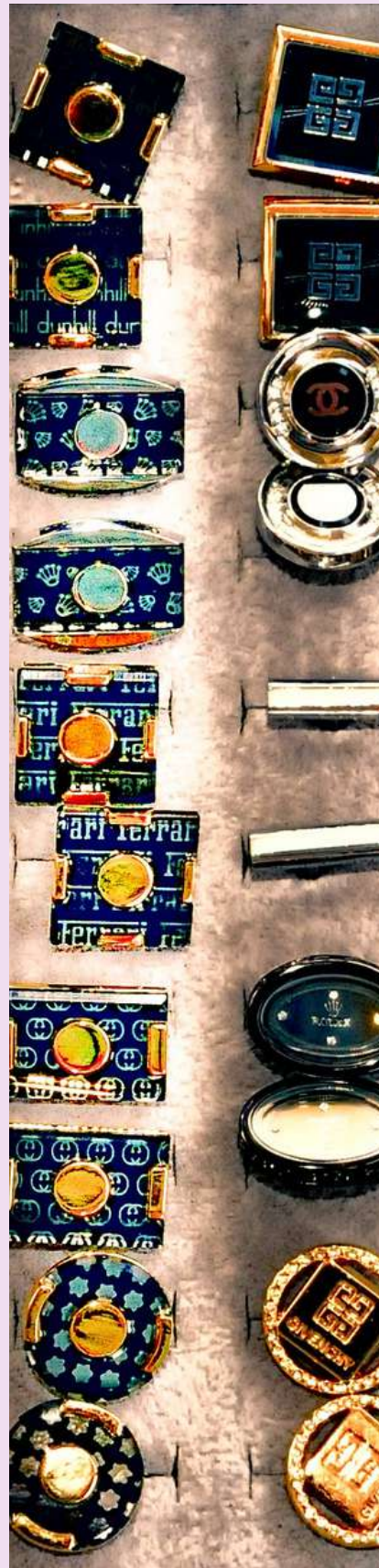CORP
83

JACHETEPAS
Je loue malin...

Jachetepas allows users **to rent temporary objects without having to buy them**.

Users can either upload an object to be rented or search for a needed item.

The ultimate goal for the founders is to expand the app's reach and have more users to make it a local platform accessible to everyone.

PRO 88

ENV 84

HUM 85

CORP 83

www

kloovis

Kloovis offers **the sale of end-of-stock and second-hand products**, targeting individuals looking for good deals in the DIY sector.

According to the company, 90% of their platform users will be individuals.

On Kloovis, individuals can sell their used tools (without paying any fees) as well as industrial and corporate companies to clear their stock.

Kloovis takes a commission for each transaction, but it is paid by the buyer (5% on each sale).

However, it should be noted that Kloovis does not verify the condition of the tools for sale, even though the platform asks sellers to classify them by indicating a status: new, used, or in good condition.

PRO
88

ENV
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HUM
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CORP
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www

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IMPACT
85

"La petite Marelle" has innovated by creating a **digital platform for toy exchange and rental**.

The idea is to be able to offer renewal and novelty to children from 0 to 6 years old to accompany their awakening curve while avoiding cluttering up the living spaces too much.

The toys come either from partner manufacturers or from individuals.

All toys are checked, washed and disinfected before being used again.

PRO 89

ENV 84

HUM 85

CORP 83

Ludessimo
Jeux d'occasion beaux et *écolo*

Ludessimo **repairs board games and sells them at affordable prices on its website**.

The company has repaired around around 20 000 games, are stored in the founder's house, a rented storage space, and a garage.

Games were purchased from associations or received in donations from individuals.

PRO
89

ENV
84

HUM
85

CORP
83

www

MARCOO
le marché connecté

PRO
87

ENV
83

HUM
85

CORP
83

Marcoo is a **mobile application that maps more than 10,000 markets in France**, promoting a connection between consumers and market merchants.

The app provides innovative and free services, including information on promotions, news, and presence or absence of merchants, as well as community reviews.

Consumers can easily find a market near them or their holiday destination, discover new merchants, and contact them via a messaging service.

Additionally, merchants can reference their business for free, share their news and deals, and alert customers with one click if they are absent.

They can also track their profile's traffic, the number of subscribers, and received reviews.

Pickme

Pickme **has formed partnerships with transporters**, who, at the request of the recipient, **deliver packages directly to "keepers"**, people who have agreed to receive them for a third party, **in return for payment**.

The company takes a 15 to 20% commission from the carrier, which in turn reduces the cost of redelivery.

The start-up also plans to offer its service directly to e-commerce sites by the end of the year.

All you have to do is register via the start-up's mobile application, fill in your identity card, proof of address, a photo and your availability.

On the other hand, the recipient only has to go to the "keeper" to get his box.

IMPACT 84

PRO 88

ENV 82

HUM 83

CORP 83

TAPA

TAPA is a **platform that connects people who have items they don't use frequently** with those who need them.

TAPA's objective is to create a win-win situation where owners can earn money by renting out their items, and renters can save money by renting only what they need when they need it.

The platform is free for owners, and they receive the full rental fee when they rent out their items.

TAPA operates on two key principles: security and community.

The platform ensures the security of the rental process, and the company aims to create a community of users who trust and support each other.

PRO
88

ENV
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HUM
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CORP
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Social Network Companies

Social networks have grown dramatically over the past decade and have become a key part of the daily lives of millions of people around the world.

They are online platforms that allow users to create profiles, connect with others, share content and interact with online communities.

Social networks have a huge impact on today's society, as they have transformed the way people communicate, share information and interact with each other.

They also play an important role in the dissemination of information and culture, as well as in the creation of social movements and public opinions. Companies and brands have also realized the importance of social networks in their marketing strategy, as they allow them to reach a wider audience and better understand the needs and preferences of consumers.

49 billion

Valuation of The global social networking app market in USD in 2022 - Statista

2 H 30 mins

Average internet user spent daily on social media in 2022 - EarthWeb

50%

Time spent on mobile reserved for social media apps - Earth Web

Despite their positive impact, social networks can also have negative consequences, such as spreading false information and cyberbullying.

Understanding the importance of social networks in our society is key to understanding their potential and impact on our daily lives.

H&B IMPACT INDEX

henry
Simple comme bonjour

IMPACT 84

PRO 87

ENV 83

HUM 85

CORP 83

Henry is a user-friendly **mobile application designed specifically for seniors**, and it can be easily installed on any tablet or smartphone.

One of the key features of the app is its voice recognition feature, which allows users to read or send messages to their loved ones without the need for typing or navigating through complicated menus.

The app can be integrated with popular messaging platforms such as Facebook Messenger, WhatsApp, email, or SMS through a chatbot, making it easy for family members to stay connected.

To help seniors get started, the app's voice assistant offers a step-by-step tutorial that guides them through the process of using the app and sending their first message.

The app has been developed with simplicity and ease of use in mind, ensuring that even those with limited technical knowledge can use it without any difficulty.

114

Frimake is an **application** that allows **people** to meet **in small** groups around real activities or in video.

Each user is free to propose the activity of his choice, whether it is a sports trip, a barbecue or to meet around a game of cards according the company.

The application also offers the possibility to the organizer to choose with whom he wants to share his activity: evening exclusively between women, walk between parents, selection of an age group,....

The platform is aimed at everyone, from "16 to 79 years old"

IMPACT
85

PRO
88

ENV
83

HUM
86

CORP
83

LEIZUP

Leizup is a French startup that has developed a mobile app designed to **help people make new friends through shared activities and hobbies**.

Members can suggest and organize cultural, sports, or charitable events, which other members can then sign up for.

The goal is to create a community of like-minded people who enjoy spending time together and discovering new things.

PRO
88

ENV
83

HUM
86

CORP
83

www

Scientific innovations and new technologies have dramatically changed our society over the past decades.

New scientific discoveries and technologies are being developed every day, transforming the way we live, work and interact with the world around us.

Advances in biotechnology, artificial intelligence, energy and information are all having a significant impact on society.

Scientific innovations have solved many global problems such as disease, poverty, hunger and environmental sustainability.

New technologies have also created new jobs and improved business efficiency and productivity.

Understanding the importance of scientific innovations and new technologies in our society is essential to adapt to these changes and maximize their positive impact while minimizing potential risks.

72%

CIO Answer AI is on top their whish list - Medium

46%

CIO Answer IoT (Internet of tools) is on top their whish list - Medium

35%

CIO Answers RPA (robotic process automation) is on top their whish list - Medium

H&B IMPACT INDEX

iCivil®

Icivil is an innovative system developed by Burkinabe engineer Adama Sawadogo and French engineer Francis Bourrières that **enables remote birth registration.**

The system has been in development for six years and uses a unique bracelet with a bubble code and QR code that is given to newborns by the attending midwife.

The midwife then inputs the baby's information into a dedicated app on their phone, which is transmitted to iCivil's central server, where the birth certificate is automatically generated.

The birth certificate can be retrieved from any civil registry center in the country at any time by presenting the bracelet.

Icivil has the potential to eliminate the need for birth registration to be done in the child's place of birth and also removes the legal time limit for registering a birth.

IMPACT
84

PRO
87

ENV
82

HUM
86

CORP
83

kinetix

Kinetix is a technology company that, with a mobile phone or other device, captures a person's movements and generates an animated 3D avatar using Kinetix's deep learning algorithm.

The technology, which took 18 months of research and development, can be integrated seamlessly into existing metaverses such as Roblox, Sandbox, Minecraft, and others.

Kinetix aims to become the leading platform for accessible animated content creation for professionals and non-professionals alike.

PRO
88

ENV
82

HUM
83

CORP
83

www

mentalista

Mentalista has developed a patented technology that allows **people to control an object using their thoughts**.

Mentalista uses electroencephalography (EEG) technology to capture electrical impulses in the brain through electrodes placed on the head.

The company has developed a new language that helps to analyze mental images in the visual cortex.

To do this, they have developed a web interface that includes real-time data processing, APIs, access to demos, and an SDK for application development.

Mentalista has also developed the ability to measure the brain activity of multiple individuals simultaneously, known as hyperscanning, and to better understand their environment using equipment such as cameras, GPS, microphones, and eye-tracking.
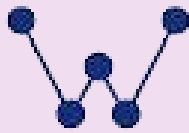
IMPACT 85

PRO 89

ENV 82

HUM 85

CORP 83

120

WALLETMOR

Walletmor, a British firm, has launched the **first implant of its kind that is based on NFC technology, similar to contactless payment cards.**

The implant is accepted by almost all current payment terminals and has a lifespan of 8 years after which it must be replaced or removed.

The company assures that the implant is completely bio-compatible and is "impossible to hack or copy".

The implant must be linked to an iCard account separate from the user's usual account and must be loaded with credit.

Walletmor assures that it has not implemented any technology other than NFC, and it is not possible to spy, track, monitor or obtain any information on the implant.

The implant consists of a microscopic chip, miniature antenna, and a bio-compatible plastic capsule that has been cleared for surgical implantation by the FDA.

PRO
87

ENV
82

HUM
82

CORP
82

Water is a vital resource for life on earth, essential for the survival of living beings and for the development of agriculture, industry and cities. However, water has become a limited resource, with increasing demand and increasingly scarce freshwater resources in many parts of the world. Therefore, it is crucial to understand the importance of water and not to waste it.

Water waste is a global problem, with significant losses in agriculture, industry and homes. Leaky pipes and irrigation systems, as well as inefficient farming practices and lack of regulation, all contribute to water loss. Wasting water has negative effects on the environment, human health and the economy.

Water is vital to the environment, and its waste can lead to problems such as reduced river flows, lowered groundwater levels, land desertification and loss of biodiversity.

140 Liters

are used (37 gallons) of water for an average shower - ecofriendlyhabits

13 liters

are used 13 litres (3 ½ gallons) of water every time toilet is flushed - ecofriendlyhabits

27%

Share of household's water used for showering and bathing - ecofriendlyhabits

It is therefore essential to raise awareness of the importance of water and the need to preserve it. Governments and organizations must work together to put policies and regulations in place to protect water resources, as well as to encourage sustainable and water-efficient practices.

H&B IMPACT INDEX
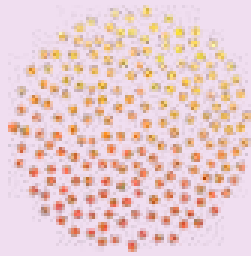
FONTO DE VIVO®
HUMANA SOLVO

ORISA developed by **Fonto de Vivo**, is a **high-performance water purifier that filters biological contamination and suspended matter from surface water.**

ORISA filters most surface water, including rainwater, moving water, river water, groundwater, and non-chlorinated water from networks. It cannot filter sea water or water contaminated by heavy metals or chemicals.

ORISA water filter can be used remotely with user kits for suction or automated filtration.

ORISA can produce 2 liters of water in one minute, or 120 liters per hour.

The device has a lifespan of at least five years with no spare parts or maintenance required.

PRO 88

ENV 84

HUM 84

CORP 83

123

GREEN CITY ORGANISATION

PRO 88

ENV 84

HUM 84

CORP 83

Green City Organization has developed **D-Rain, a solution for collecting waste from wastewater collectors before it flows into the sea**.

The company has patented a collar that allows a net to be attached to the outlet.

However, the big innovation lies in the installation of sensors and monitoring.

The company has added digital technology to their solution, where their sensors release the water flow when the net is full.

The solution sends back data on water quality, temperature, salinity, acidity, turbidity, etc.

Green City plans to raise funds at the end of the year to scale up their solution.

HYDRALOOP

USE WATER TWICE

Hydraloop's innovative system connects directly to the plumbing of a house, where it **filters and disinfects the water, before returning it back into the system**.

This unique approach ensures that every drop of water is recycled and reused, making it an excellent eco-friendly solution for households.

The system can be connected to a variety of water sources, including washing machines, showers, and toilets, making it an incredibly versatile option for water recycling.

Hydraloop's technology can recycle up to 85% of the water used in a household, which translates to significant water savings for families.

According to the company, a family of four can save up to 75,000 liters of water per year by using Hydraloop's system, which is a considerable amount in terms of water conservation.

PRO 88

ENV 84

HUM 84

CORP 83

HYDRAO

HYDRAO offers a **smart shower head that helps users save water and energy.**

HYDRAO's low-energy design delivers 6.6 liters of water per minute, compared to 12 liters for a standard showerhead.

The shower head changes color depending on the amount of water flowing, with green for up to 10 liters, blue for up to 20 liters, purple for up to 30 liters, and red for up to 40 liters.

Beyond 40 liters, the shower head starts to flash, warning the user to turn off the tap.

The app also allows users to view their shower history, water and energy savings, and set their water and heating costs.

The shower head can memorize up to 200 showers and transmit them to the app for tracking.

IMPACT 85

PRO 88

ENV 84

HUM 84

CORP 83

ILYA

Ilya has developed an **eco-friendly shower system which allows users to save up to 90% on water usage**.

The shower system uses only 5 to 10 liters of water per shower, as opposed to 60 to 80 liters used in a typical shower.

The Ilya system recovers the water before it is drained, filters it, sterilizes it, and reheats it to room temperature before reintroducing it into the shower system.

Essentially, the same amount of water is used repeatedly in a closed loop, making it an environmentally sustainable solution for personal hygiene.

The company plans to offer its innovative shower system to hotels and other hospitality establishments as well as residential properties.

IMPACT 84

PRO 88

ENV 84

HUM 84

CORP 83

KUMULUS

Kumulus is a Tunisian company that has developed **a machine capable of transforming ambient air into potable water**, potentially addressing the issue of access to clean water in some countries.

The machine, which is called Kumulus, is designed to replicate the morning dew and can produce between 20 and 30 liters of water per day.

It operates by filtering the air of pollutants and condensing the moisture contained in the air.

The Kumulus is powered by solar energy and requires no electrical connection or nearby water source.

The company has installed its first machine in a primary school in the rural town of El Bayadha, where access to clean water is restricted.

PRO 89

ENV 85

HUM 84

CORP 83

leakmited

Leakmited utilizes artificial intelligence to identify and isolate the 20% to 30% of the network responsible for 80% of the leaks, reducing the areas that require investigation.

The company then deploys a single sensor to monitor the targeted area based on the AI's recommendations.

The company has developed a learning process for the technology, which has been tested and implemented in France by major water management companies like Veolia, Suez, and SAUR in cities such as Redon, Rouen, and Besançon.

The solution has also proven successful in other countries such as Italy, Portugal, and England.

PRO
89

ENV
84

HUM
83

CORP
83

www

Marine Tech has developed **a self-contained water distillation system** that operates without emitting CO2 and replicates a natural phenomenon: solar distillation.

The system is contained within a sphere that is heated by sunlight, and impure water is poured onto a tray inside the sphere.

The impurities are trapped on the tray while the pure water flows down the walls and collects in the bottom of the sphere, where it can be retrieved as potable water.

The sphere is designed to produce 10 liters of water per day, enough for five people. Each module weighs between 80 and 100 kilograms and can be assembled or disassembled by two people in two hours.
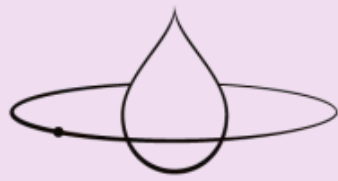
PRO
88

ENV
84

HUM
83

CORP
83

www

ORBITAL SYSTEMS

Orbital Systems recycles **waste water in real-time, cleaning and purifying it using microcapsules before reinjecting it into the shower head**

The system only requires 5 liters of water to start, significantly reducing overall water consumption

The technology employed is similar to that used by NASA on the International Space Station, where water is not wasted

The water that comes out of the shower head is cleaner than tap water

The company's technology results in a 90% reduction in water usage and 80% reduction in energy consumption

The water is only heated once, and then continues to circulate through the system.

PRO 88

ENV 85

HUM 83

CORP 83

131
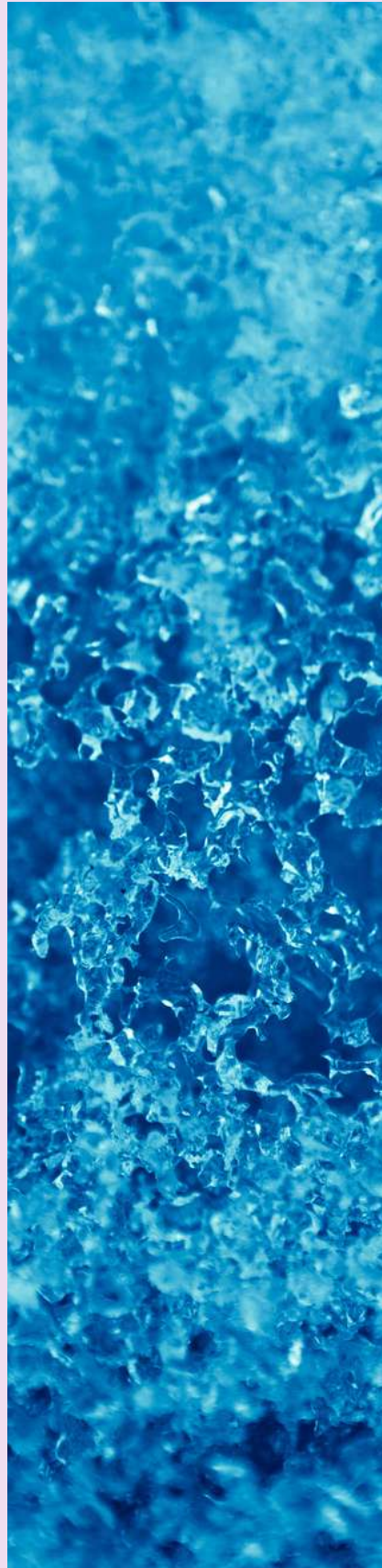
osmosun®
By Mascara

Mascara's **Osmosun** solution u**ses solar energy to desalinate seawater and treat all types of saltwater, including that from drilling**.

Osmosun has been exclusively powered by solar energy since its launch and has generated about 2 million cubic meters of freshwater, which has provided for 70,000 people and prevented the emission of 3,000 tonnes of CO2.

The company aims to target eight private and public markets, including the hotel industry, municipalities, agriculture, mining, and remote communities.

The solution has been installed in several countries, including Indonesia, Australia, Kenya, and Mauritius.

PRO 88

ENV 86

HUM 83

CORP 83

www

![QUANTIA logo]

Quantia offers an innovative **device** called **Gecko,** which is **a smart water heater that recovers the heat from wastewater after a shower to heat clean water in the home**.

Gecko allows energy savings of up to 90% on the energy bill dedicated to domestic hot water.

The system is based on a thermal exchange between greywater and cold water, allowing the recovery of 84% of the heat from wastewater.

Gecko is easy to install and can be fixed to the wall in the form of a towel rack, mirror, or even concealed.

Gecko is based on a patented principle of thermal exchange, replacing the traditional water heater and providing users with comfort, safety, and hygiene. It is easy to install and maintain and is produced based on the circular economy model.

The carbon footprint of Gecko is 5 times lower than that of a traditional water heater.

PRO 89

ENV 86

HUM 83

CORP 83

clearbot

Razer has teamed up with Clearbot, a brand known for developing **innovative cleaning robots that help protect the oceans from marine waste**.

Clearbot's robots are equipped with advanced artificial intelligence technology, which enables them to detect plastic waste up to two meters deep in the ocean and collect up to 250 kg of it.

The Clearbot robots are designed to run on solar energy, meaning that they operate independently and do not require any additional power sources.

The use of renewable energy makes these robots not only environmentally friendly but also cost-effective in the long term.

PRO
87

ENV
84

HUM
83

CORP
83

sea val
WATER

Sea Val Water is a company that specializes in **transforming seawater into clean drinking water.**
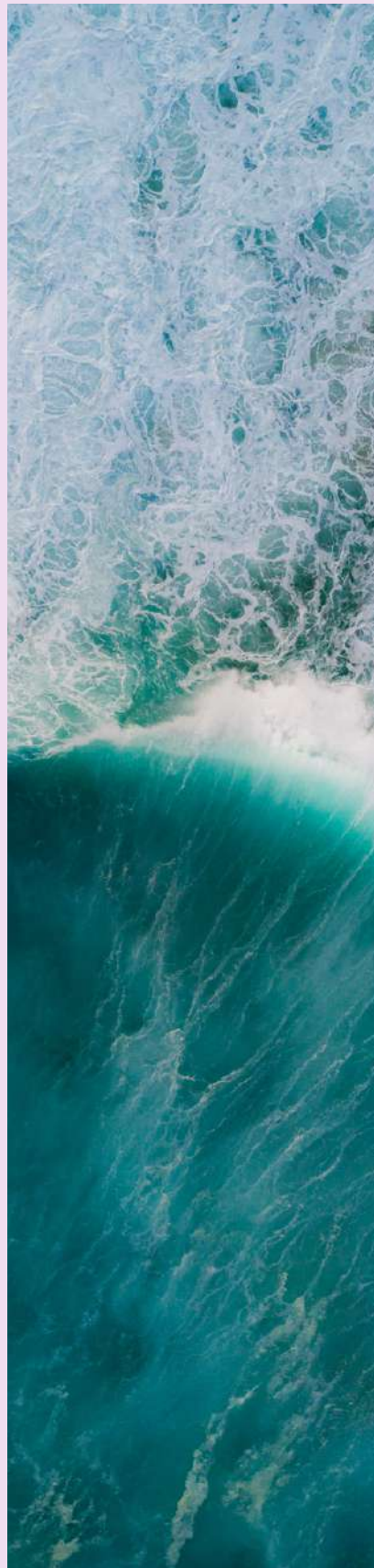
Their unique technology allows them to filter and remineralize seawater, turning it into a high-quality drinking water product that is both healthy and delicious.

Sea Val Water's Mai Water drink is now available in several stores, with flavor options such as lemon, strawberry, and alkaline.

With their innovative technology, Sea Val Water is able to convert up to 82% of the seawater they draw from the ocean into clean drinking water.

The company has set its sights on even greater heights, with a goal of producing 1,000m³ of clean drinking water per day.

This will enable them to expand their reach and develop a strong presence in the bottled water market.

PRO 87

ENV 83

HUM 82

CORP 82

www

135

Telaqua offers a **remote irrigation control solution**.

To do this, it offers a control complement assisted by one or more connected pressure gauges installed on the boom, pivot or reel.

These continuously measure data through connected sensors and read both the pressure and the water flow.

According to Telaqua, these readings ensure that the valves and pumps open and close properly and respect the programming made by the farmer.

They save the farmer the trouble of systematically checking the system.

The pressure gauge identifies any leaks or other anomalies in the system.

In the end, it saves time, yield, efficiency and peace of mind.

The Telaqua pressure gauge works wirelessly and on a low speed LoRaWan network.

IMPACT
83

PRO
87

ENV
84

HUM
82

CORP
82

VERTUOSO

Vertuoso aims to **eliminate the problem of rainwater**, in which all the urban waste is found and discharged, without filter, into the sea, **thanks to filtering receptacles installed at strategic points.**

Vertuoso designs metallic receptacles to be placed on the spillways, that is to say, where the water courses aggregate before being discharged into the sea.

The receptacle, with a volume of 16 square meters, has meshes between 5 and 12 millimeters depending on the waste to be collected.

It is generally collected every month, or after a heavy rain for example.

PRO 87

ENV 84

HUM 82

CORP 82

Work Companies

With the advent of technology and the digital age, the way we work has changed dramatically.

Remote work, is one of the new forms of work that have emerged in recent years.

This practice allows workers to work from home or any other location using online communication tools.

Remote work has many benefits, including flexibility, saving time and money in terms of travel, as well as the ability to better balance work and personal life.

Remote work offers environmental benefits by reducing travel-related greenhouse gas emissions.

However, remote work also presents challenges, such as the difficulty of maintaining effective communication with colleagues and clients, as well as the difficulty of separating work and home life.

87%

Share of workers / respondents stating that remote work options improved their overall work-life balance in 2022 - Forbes

80%

Share of people (which can) which are working hybrid or remote, June 2022 - Gallup Survey

H&B IMPACT INDEX

Kirae

Kirae is a **mobile app** that **offers mini-games** based on cognitive sciences to help users acquire and validate soft skills.

The app aims to help users reveal their potential and improve their skills through daily training and the development of certain skills.

When a user reaches a certain level, they will unlock a digital badge that attests to their possession of a soft skill.

The badges are based on Open Badges technology and contain metadata, allowing recruiters to see who issued the badge, when it was issued, and what the user did to obtain the skill level concerned.

Kirae's unique approach to soft skill development through gaming mechanics may offer a new way for users to enhance their employability and career prospects.
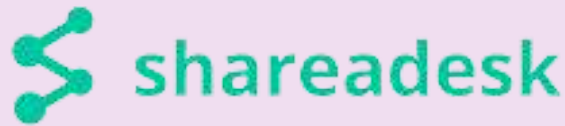
IMPACT 84

PRO 87

ENV 82

HUM 86

CORP 83

shareadesk

IMPACT 85

PRO 89

ENV 84

HUM 86

CORP 83

Shareadesk is a **platform designed to connect teleworkers who want to share a unique experience by sharing their workspace.**

The platform allows users to offer a workspace at home or look for one, similar to the principle of the Airbnb platform.

The app enables users to collaborate, network, share best practices and even earn extra money by renting out their workspace.

One of the unique aspects of Shareadesk is that it offers services that only private individuals can provide, such as access to a terrace, garden, or pool.

Additionally, the app allows users to find coworkers with similar interests or work styles, creating a more personalized and collaborative teleworking experience.

140

WorkAdventure

WorkAdventure, a subsidiary of The Coding Machine, offers a **virtual platform that allows employees to meet each other in a virtual world**.

The platform is based on a 2D graphics with a retro design and offers several interactive functions.

Employees can customize their own office, choose the color of the walls, and even design their own avatar.

The platform is open source, allowing for the addition of various features such as internet links, documents, and video conferencing systems.

PRO
89

ENV
83

HUM
86

CORP
84

Transportation plays an essential role in the daily lives of individuals and the functioning of modern societies. It enables the movement of people, goods, and services from one place to another, thereby contributing to economic growth and social development.

Transportation also enables people to access employment, education, health care, and recreation.

Means of transportation have evolved over the centuries from horse-drawn carts to autonomous electric cars.

Modes of transportation include road, rail, air, water, and mass transit. Each mode of transportation has its advantages and disadvantages, but they are all essential to meeting the travel needs of individuals and businesses.

2

Transportation is the second largest contributor of greenhouse gases behind energy and electricity production With 13.41 gigatons of CO2 emitted in 2016 worldwide, transportation - IEA

75%

75% Share of transport-related emissions are due to trucks, buses and cars - IEA

THowever, transportation also has an impact on the environment, including contributing to air, land and water pollution.

That's why it's important to promote sustainable modes of transportation, such as public transit, biking, or walking, that reduce greenhouse gas emissions and environmental impacts.

H&B IMPACT INDEX

BeTRITON

BOAT-CAMP-TRIKE

The **Betriton** is a **bike**, a **camper** and a **boat all in one**.

The amphibious machine, which is almost 4 meters long and 1.5 meters wide, is equipped with two electric motors, one for driving and the other for sailing.

It only takes a few minutes to switch from one to the other: the wheels are replaced by floats and the cabin is transformed into a cockpit.

As for performance, its creators claim that it can reach 25 km/h on land (with a range of 50 km), and 5 km/h on sea (with a range of 20 km).

Solar panels installed on the roof can partially recharge the batteries.

The Z-Triton's structure consists of a steel and fiberglass frame, with polyester made from recycled plastic bottles and several 3D printed parts.

The vehicle includes an adjustable seat, speed derailleur, hydraulic disc brakes, and even USB charging ports, a Bluetooth radio and a folding table.

143

PRO 88

ENV 84

HUM 83

CORP 83

Clip is a **revolutionary accessory that can electrify a mechanical bike in just 10 seconds.**

This device can be easily clipped and unclipped onto the wheel of the vast majority of bikes on the market, without the need for any complicated installations.

To use Clip, you just need to position it properly on the bike fork and attach the mini remote control to the handlebar.

Then, by pressing the button on the remote, the front wheel of the bike will start spinning on its own.

The device works through a RPM sensor that detects when the wheel starts to turn from pedaling, and the electric motor kicks in to amplify its speed.

PRO 88

ENV 84

HUM 83

CORP 83

ecopals

Ecopals has developed **an additive for road surfaces based on non-recyclable plastic waste.**

The additive is designed to replace bitumen, which is mostly made from petroleum and can emit toxic fumes.

By using non-recyclable plastic waste, the start-up is able to both valorize waste that would otherwise go to landfill and reduce the use of petroleum.

The company claims that its product can reduce the carbon footprint by 0.7 kg of CO2 per square meter compared to traditional bitumen.

Additionally, the plastic acts as a binder between the aggregates, which prolongs the road's lifespan.

PRO 88

ENV 84

HUM 83

CORP 82

www

145

![Geneco logo]

Geneco is a British company that has developed **a 100% green bio-bus, also known as the "poo-bus".**

The vehicle runs on biomethane produced from the fermentation of food waste, sewage, and human excrement, and can travel up to 300 kilometers on the waste of just five people.

The "poo-bus" emits 30% less greenhouse gas than traditional buses and has no odor, making it an eco-friendly and pleasant alternative for public transport.

Geneco's innovative solution demonstrates the city of Bristol's commitment to reducing the impact of climate change, as well as the company's efforts to find sustainable and renewable energy sources.

IMPACT 85

PRO 89

ENV 84

HUM 83

CORP 83

MIDIPILE MOBILITY

Midipile Mobility is a **vehicle inspired by both the electric bicycle and the small city car**: large 24-inch wheels like on a bicycle, pedals, two seats and photovoltaic panels to recharge its batteries in the parking lot.

Powered by solar energy (and a solid pedal stroke), the Midipile Mobility will weigh no more than 100 kilos.

This should allow it to reach 45 kilometers / hour in less than 3 seconds and thus to have "the same travel time as a car in town" with an autonomy of at least 170 km.

The materials chosen to manufacture it, thermoplastic or flax fiber.

PRO 88

ENV 84

HUM 83

CORP 82

OliKrom
SMART COLORS

Olikrom has developed a photoluminescent paint technology that illuminates road markings at night without the need for electricity.

The paint captures and stores ambient light during the day, then emits it at night for up to 10 hours.

This technology provides cyclists with visibility up to 80 meters at the beginning of the night and 30 meters at the end of the night, surpassing the visibility range of typical bike lights.

PRO 88

ENV 84

HUM 83

CORP 82

148

Ono is a cargo bike company that aims to **revolutionize urban logistics by providing an efficient vehicle for last-mile delivery.**

The company was founded in 2016 in Berlin, and was originally known as Tretbox.

The cargo bike is designed to carry a two cubic meter container, capable of storing dozens of parcels and letters, while taking advantage of the benefits of a bicycle such as free parking, use of bicycle paths, low maintenance and insurance costs.

The bike is powered by an electric motor and the batteries are removable, so a spare can be taken on trips to avoid breakdowns.

IMPACT 84

PRO 88

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CORP 82

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IMPACT 84

Pi-Pop is an electric bike developed by STEE, Pi-Pop **does not use any battery to operate, making it energy efficient and not dependent on rare earths**.

The bike is produced using recycled bicycles and incorporates new technology.

The Pi-Pop is designed for the urban environment and is a sustainable alternative for last-mile delivery.

It does not require charging, making it highly convenient for the users.

PRO 88

ENV 84

HUM 83

CORP 82

150

PODBIKE

IMPACT 85

Podbike developped, The **Frikar, an "electric velomobile", which is a hybrid vehicle with four wheels that can use bicycle paths while offering the comfort and safety of a car**.

The vehicle is designed for northern climates and has a complete protection system that protects the driver from bad weather, as well as a heating option and a space for a child seat.

The Frikar is equipped with an electric pedal assist system, which powers the two motors placed on the rear wheels.

The vehicle can reach a speed of 25 km/h and can go up to 60 km/h downhill, with an autonomy of 50-80km thanks to a rechargeable battery.

In driverless mode, the vehicle can travel at 6 km per hour.

The e-bike is equipped with headlights, taillights, turn signals, integrated reflectors and a rear view mirror.

PRO 89

ENV 85

HUM 83

CORP 83

URBANLOOP

The **Urbanloop** is an **electric and autonomous urban transportation system** that uses capsules on rails as a more ecological and cheaper alternative to current modes of transportation.

The single-seat capsules can carry two people, as well as a person in a wheelchair or on a bicycle.

The Urbanloop offers a transportation network of interconnected loops, with each loop accessible by numerous stations.

Each person is picked up by an individual capsule that travels to their destination without interfering with other transportation networks.

The average speed of a capsule is about 60 km/h, including loading and unloading time, and are designed for a fast and efficient urban transportation.

PRO
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ENV
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HUM
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CORP
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www

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