



**PIONEERS**  
**CLIMATE**

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**SUSTAINABLE  
INNOVATION FIELDS  
AND TOP CLIMATE TECH  
STARTUPS**

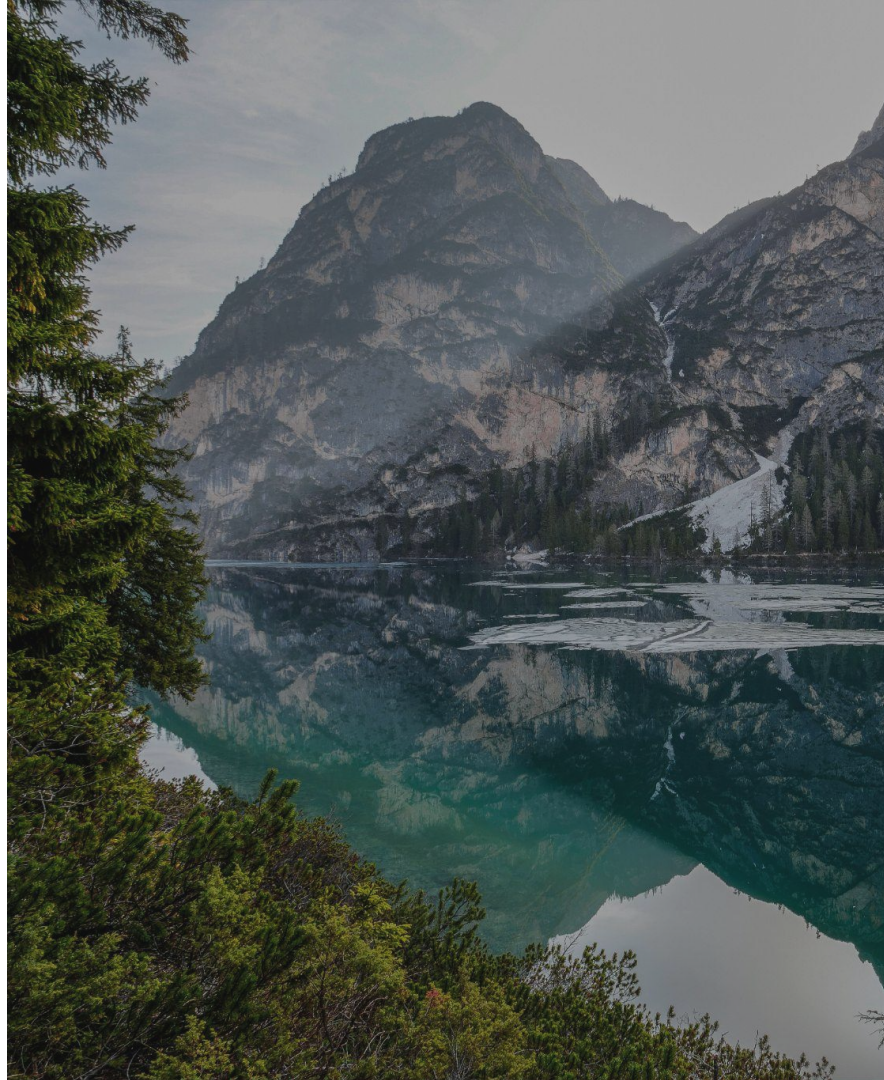
More insights @pioneers.io

# **PIONEERS. CLIMATE**

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Sustainable business is the path to a better future for our planet and society, while creating financial value for shareholders.

Pioneers.Climate supports companies in mastering the challenges of tomorrow through sustainable innovation.





## WHY CLIMATE INNOVATION?

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In order to remain competitive in the 21st century, companies must both be innovative and sustainable. They need climate innovation **win-win solutions** that benefit **people, planet and profit** and **close the climate innovation gap**.

## HOW DO WE DO IT?

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We guide companies through a **structured process** of strategy definition, organizational setup and execution of **sustainable innovation**. We **combine** latest **innovation methods** and practices **with** our **climate expertise**.



## WHAT DO WE DO?

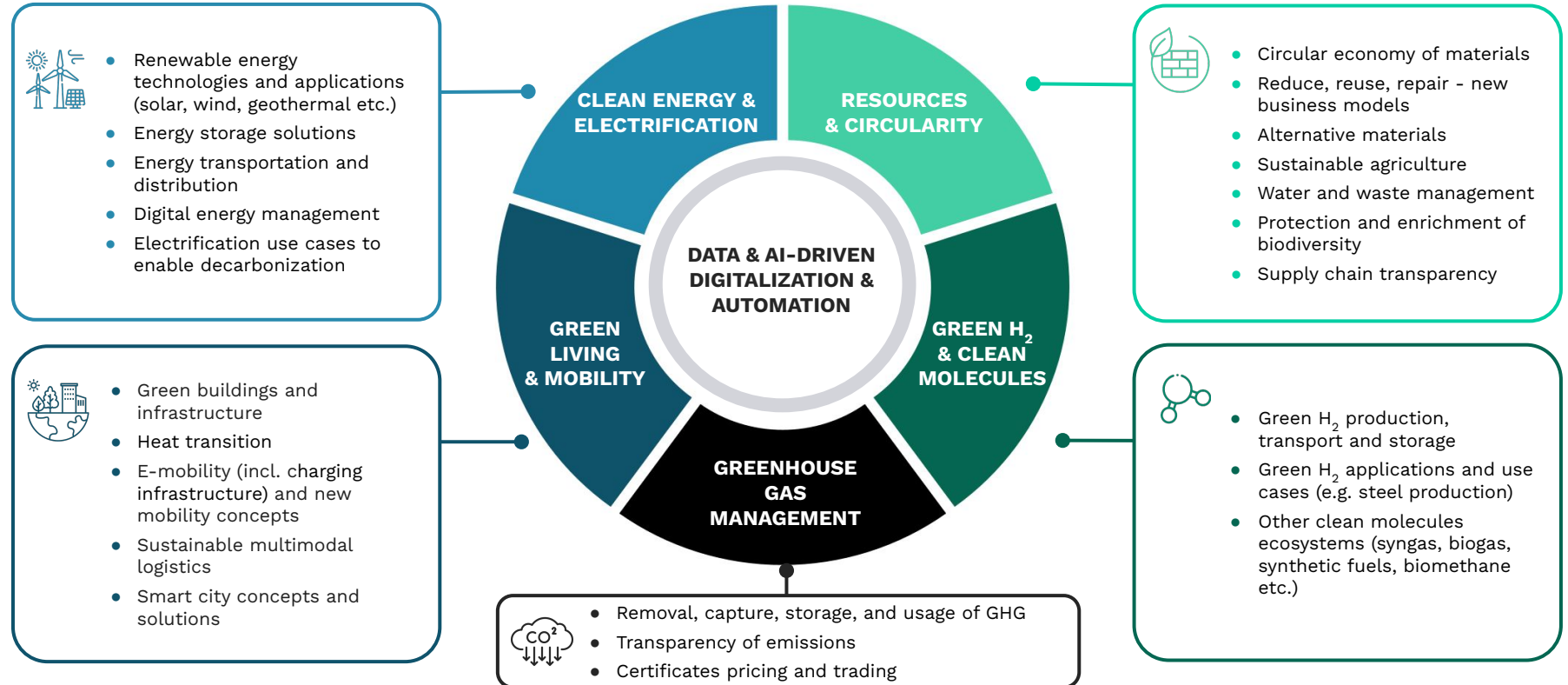
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We help companies to develop **sustainable innovation** through mapping **key climate innovation fields** and supporting in **rethinking** and **developing** their **products** and **business models** to **close their “climate innovation gap”**.



# 5 HIGH-POTENTIAL AREAS FOR SUSTAINABLE INNOVATION

We currently see five high-potential sustainable innovation fields to tackle



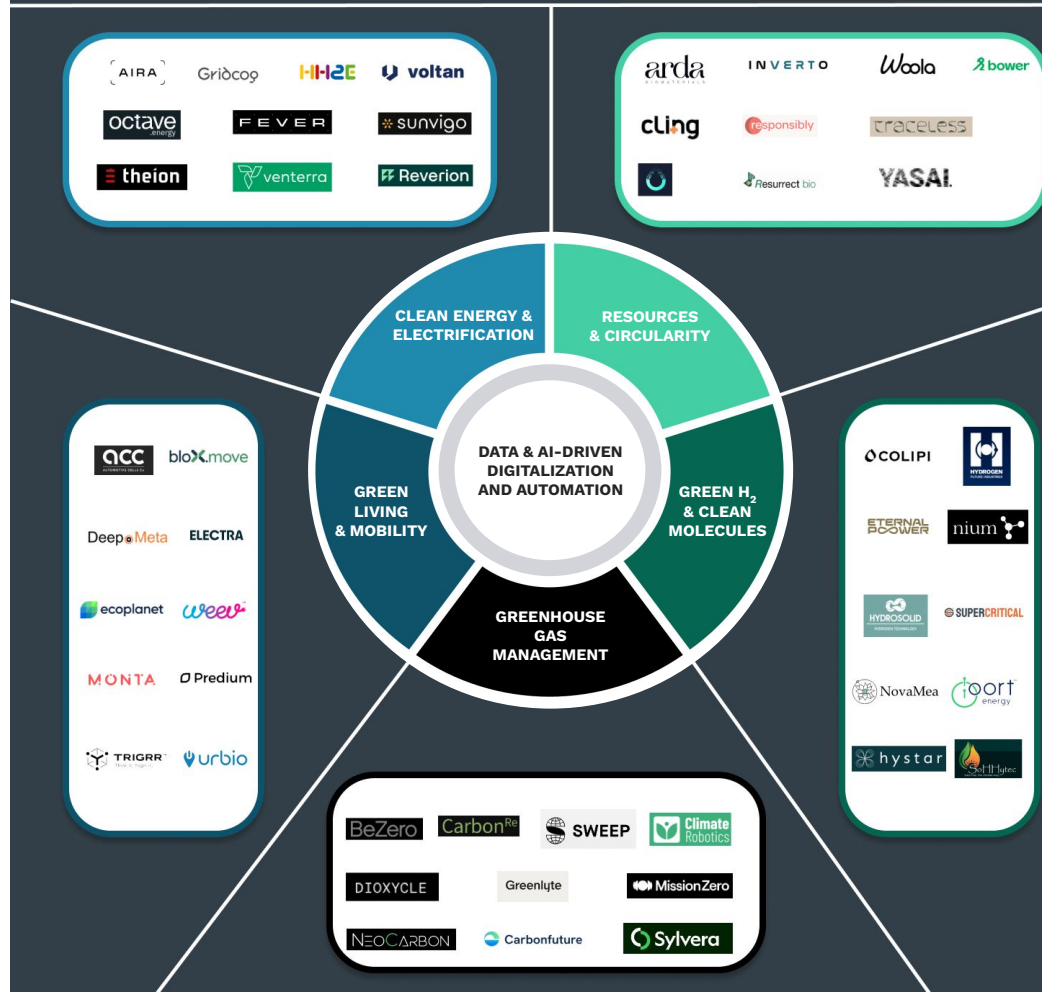
## CLIMATE TECH STARTUP MAP 2024

**10 top startups** in each of the **five** Pioneers.Climate **areas of sustainable innovation**

## SELECTION CRITERIA



<b>Founding year</b>	Within the last 5 years
<b>Location</b>	Headquarters in Europe
<b>Stage</b>	Funded
<b>Scoring</b>	Based on various metrics like company size, traction and growth scores

Source: Tracxn ranking for sustainable innovation fields













# CLEAN ENERGY & ELECTRIFICATION

## 10 Top Startups

SUSTAINABLE INNOVATION FIELDS	STARTUP	DESCRIPTION	FOUNDING YEAR	LOCATION	WEBSITE	STAGE	LOGO
RES - solar, wind & H2	HH2E	HH2E is a fast-growing, innovative green energy company that has developed the next-gen plant, the HH2E-Werk is capable of converting just a few hours of surplus solar and wind power per day into a steady supply of heat and hydrogen.	2021	Germany	<a href="https://hh2e.de/">https://hh2e.de/</a>	Series A	
RES - solar	sunvigo	Provider of solar panel installation services for residential and commercial	2020	Germany	<a href="https://sunvigo.de/ueber-uns">https://sunvigo.de/ueber-uns</a>	Series C	
RES - wind	Venterra Group	We engineer, build and support the operations of wind energy developments around the world	2021	UK	<a href="https://www.venterra-group.com/">https://www.venterra-group.com/</a>	Series C	
RES - bio	Reverion	Developer of bio-energy projects	2022	Germany	<a href="https://reverion.com/">https://reverion.com/</a>	Seed	
RES - geothermal	Volta Local Energy	Provider of investment and maintenance the geothermal system	2020	Finland	<a href="https://voltaenergy.com/">https://voltaenergy.com/</a>	Seed	
Energy storage	Octave	Our battery energy storage systems are sustainable, modular and maintenance-friendly by design, with unique hardware features that enable smooth installation and seamless operation.	2020	Belgium	<a href="https://octave.energy/en/">https://octave.energy/en/</a>	Seed	
Energy storage	theion	theion's Sulfur Crystal Battery We develop sustainable battery cells for mobility and energy storage applications.	2020	Germany	<a href="https://theion.de/">https://theion.de/</a>	Seed	
Smart grid	Gridcog	Software to plan, track, and optimize the transition to a decentralized and decarbonized energy future. It focus on optimizing the planning and operations of distributed energy systems.	2020	UK	<a href="https://www.gridcog.com/">https://www.gridcog.com/</a>	Seed	
Smart grid	Fever energy	Online platform offering marketplace for energy credit. It provides automate and optimizes your participation in the balance markets. It helps able to monetize your energy resources. Its platform offers the team to participate in balance markets.	2022	Sweden	<a href="https://www.feverenergy/about">https://www.feverenergy/about</a>	Seed	
Energy efficiency	Aira	Provider of heat pumps solution. It offers air-source heat pumps for residential heating. It delivers innovative and affordable clean energy-tech solutions to accelerate the electrification of residential heating.	2022	Sweden	<a href="https://www.airahome.com/de-de">https://www.airahome.com/de-de</a>	Series B	











# GREEN LIVING & MOBILITY

## 10 Top Startups

SUSTAINABLE INNOVATION FIELDS	STARTUP	DESCRIPTION	FOUNDING YEAR	LOCATION	WEBSITE	STAGE	LOGO
Facility energy management	ecoplanet	Online platform offering energy management solutions. They help businesses in lowering their energy usage and investing in renewable energy by assisting them to detect unusual consumption early as well as providing them access to flexible electricity tariffs.	2022	Germany	<a href="https://www.ecoplanet.tech/product">https://www.ecoplanet.tech/product</a>	Seed	
Smart building	Trigrr	Provider smart building management solutions. It enables control and automation of smart products like HVAC, access control systems, sensors using its hardware-agnostic software. It also offers an integrable mobile application for remote management.	2021	Belgium	<a href="https://trigrr.io/en/our-solution">https://trigrr.io/en/our-solution</a>	Founding raised	
Smart city	urbio	Provider of AI and IoT-based building energy management and grid planning solutions. It provides software that centralises and merges data sources, including machine learning, to provide updated energy data from open and commercial sources.	2020	Switzerland	<a href="https://www.urbio.io/">https://www.urbio.io/</a>	Seed	
Green building	Predium	SaaS-driven platform for real estate owners for managing ESG performance. The company's software allows users to overview their ESG performance, energy consumption, CO2 emissions, and climate risks.	2021	Germany	<a href="https://www.premium.de/">https://www.premium.de/</a>	Series A	 
Electric vehicles charging	weev	Online platform offering charging network solutions. It offers electric vehicle solutions, including setting up the infrastructure required for EV charging stations. It also provides public charging points for electric vehicles.	2022	UK	<a href="https://weev.ie/">https://weev.ie/</a>	Series C	
EV charging station management	Monta	SaaS-based platform for charging station management. Its platform allows users to customise their electric vehicle charging points according to charging needs. It provides solutions for workplace charging, fleet charging, commercial charging, residential charging, and others.	2020	Denmark	<a href="https://monta.com/">https://monta.com/</a>	Series B	
Smart factory	Deep.Meta	Provider of AI based software solutions for circular metal production, managing yield loss, and CO2 emissions. It offers software that collects data related to machinery to create a digital version of defects.	2020	UK	<a href="https://deepmeta.io/">https://deepmeta.io/</a>	Seed	
Mobility as a service	bloXmove	Provider of SaaS & blockchain-driven smart mobility solutions. For consumers, it offers a comprehensive mobility platform that enables users to find & book tickets for public transit, get micro-mobility services, and more. For business mobility managers, they can manage their business operations by integrating the service on the platform. It offers features like digital contracting, transaction management, and more.	2021	Ireland	<a href="https://bloxmove.com/">https://bloxmove.com/</a>	Seed	
Fast charging EV batteries	acc	Manufacturer of lithium-ion battery cells and modules for electric four-wheelers. It offers involved in the research and development of batteries. They provide batteries with features that include recyclability, low carbon emission, and more.	2020	France	<a href="https://www.acc-emotion.com/">https://www.acc-emotion.com/</a>	Series D	
Fast charging solution	Electra	Provider of fast charging solutions for electric vehicles, removing barriers to the adoption of electric cars. They provide easy-to-use and reliable Superchargers to remove barriers to the adoption of electric cars.	2021	France	<a href="https://www.go-electra.com/en/">https://www.go-electra.com/en/</a>	Series B	

# GREENHOUSE GAS MANAGEMENT











## 10 Top Startups

SUSTAINABLE INNOVATION FIELDS	STARTUP	DESCRIPTION	FOUNDING YEAR	LOCATION	WEBSITE	STAGE	LOGO
Direct air capture	Mission Zero	Provider of direct air carbon capture technology. It helps in recovering CO <sub>2</sub> emissions with access to water and electricity.	2020	UK	<a href="https://www.missionzero.tech/">https://www.missionzero.tech/</a>	Series A	
Direct air capture	NeoCarbon	Provider of solutions for direct carbon capture. It provides a cooling tower to capture carbon and allows users to buy carbon credits.	2021	Germany	<a href="https://www.neocarbon.tech/">https://www.neocarbon.tech/</a>	Seed	
Carbon reduction	Dioxcycle	Provider of solutions to convert carbon into chemicals. It provides carbon electrolyzers that turn industrial emissions into valuable commodities. It uses the low-temperature conversion of carbon dioxide to produce sugars and metabolic fuels.	2021	France	<a href="https://dioxycle.com/">https://dioxycle.com/</a>	Series A	
Carbon management	SWEEP	SaaS-based platform to reduce carbon emissions in business and value chain. Its platform helps to organize and measure the carbon footprint of a company. It also provides dashboards to track and visualize the carbon footprint of the company tasks.	2020	France	<a href="https://www.sweep.net/">https://www.sweep.net/</a>	Series B	
Carbon management	Climate Robotics	Provider of an AI and robotics based solution to manage climate change. Enables users to automate and mechanize the emission and sequestering of carbon dioxide.	2020	Netherlands	<a href="https://www.w.climaterobotics.com/">https://www.w.climaterobotics.com/</a>	Series A	
Decarbonization	Carbon Re	AI-powered platform providing cutting-edge decarbonization solutions for industrial processes in cement, steel, and glass production sectors. They are developing an AI-powered platform to enable the decarbonization of these energy-intensive industries.	2020	UK	<a href="https://carbonre.com/">https://carbonre.com/</a>	Seed	
Carbon offset	Sylvera	Provider of solutions to offset the carbon footprint. Users can understand the real-time carbon performance of offset projects through the platform. It also allows users to explore satellite imagery to see real-time data.	2020	UK	<a href="https://www.sylvera.com/">https://www.sylvera.com/</a>	Series B	
Carbon offset	BeZero Carbon	Provider of carbon credits rating and risk analytics solutions. It provides solutions for investing in carbon projects to tackle climate change. It offers independent, risk-based, project level carbon ratings for investment. The carbon ratings and risk tools equip organisations with the knowledge, tools and confidence to make better climate decisions. It aims to scale investment in environmental markets.	2020	UK	<a href="https://bezerocarbon.com/">https://bezerocarbon.com/</a>	Series B	
Carbon removal	Carbonfuture	Offering solutions to remove the CO <sub>2</sub> from the atmosphere. It helps people and organisations to mitigate the climate crisis by removing CO <sub>2</sub> from the atmosphere. It provides a blockchain-enabled carbon sink transaction platform, providing verifiable end-to-end carbon removal accounting and flexible trading.	2020	Germany	<a href="https://www.w.carbonfuture.earth/">https://www.w.carbonfuture.earth/</a>	Series A	
Carbon capture	Greenlyte	Provider of carbon capture solutions. It captures atmospheric CO <sub>2</sub> and produces hydrogen in the process. The used absorbent is regenerated in the electrolysis and then reused for absorption.	2022	Germany	<a href="https://www.greenlyte.tech/">https://www.greenlyte.tech/</a>	Series A	



# RESOURCES & CIRCULARITY

## 10 Top Startups

SUSTAINABLE INNOVATION FIELDS	STARTUP	DESCRIPTION	FOUNDING YEAR	LOCATION	WEBSITE	STAGE	LOGO
Sustainable supply chain	Responsibly	Artificial intelligence-based supplier data platform for the supply chain industry. It provides a supplier data platform for building a one-stop shop for supplier data to make it easier for users to source. It also provides a holistic overview of suppliers and also provides transparency across data providers for decision-making.	2021	Denmark	<a href="https://responsibly.tech/">https://responsibly.tech/</a>	Seed	
Sustainable packaging	Woola	Sheep wool based compostable packaging solution. It provides waste wool to replace plastic bubble wrap and paper envelope made from recyclable ProVantage Kraftliner paper.	2020	Estonia	<a href="https://www.woola.io/de">https://www.woola.io/de</a>	Seed	
Alternative textiles	arda	Developer of biomaterials. It provides users with a platform for developing new biomaterials with advanced properties for fashion, home goods, and automotive solutions. It also provides users with grain brewing and product life cycle management.	2022	UK	<a href="https://www.arda.bio/">https://www.arda.bio/</a>	Seed	
Bioplastics	Traceless	Manufacturer of bioplastics from agricultural waste. Its product portfolio includes biodegradable and traceless films, plastics, and coatings. Its features include natural polymer materials, home-compostable, and environment-friendliness.	2020	Germany	<a href="https://www.traceless.eu/">https://www.traceless.eu/</a>	Series A	
Water management	Hulo	Online platform for water leak detection. The algorithms provide water utilities with valuable insights about the water network, helping them detect and localize water leakages efficiently.	2021	Netherlands	<a href="https://hulo.ai/">https://hulo.ai/</a>	Seed	
Waste management	Bower	Provider of reward-based recycling solutions. Its platform allows users to scan and sort packages at home. Users can find the nearest recycling station on the mobile app. Its mobile app is available for iOS and Android devices.	2020	Sweden	<a href="https://getbower.com/">https://getbower.com/</a>	Seed	
Circular business models	Cling	Marketplace for used batteries. Battery manufacturers, owners of used batteries, and recyclers can sign up on the platform for trading used batteries.	2020	Sweden	<a href="https://www.clingsystems.com/">https://www.clingsystems.com/</a>	Seed	
Biodiversity & reforestation	Inverto	Provider of a drone-based mangrove planting and seed ball release solution. It offers an automation solution with the use of hardware and software to facilitate reforestation and restoration activities. It also provides an automated insect release solution, mangrove site selection, and monitoring.	2022	Switzerland	<a href="https://www.inverto.tech/">https://www.inverto.tech/</a>	Seed	
Vertical farming	YASAI	Developers and operators of smart vertical farming systems for sustainable crop production. It enables users to grow a variety of different herbs and leafy greens. It uses automated vertical farms based on circular system to grow produce leafy vegetables.	2020	Switzerland	<a href="https://www.yasai.eart.h/">https://www.yasai.eart.h/</a>	Seed	
Sustainable agriculture	Resurrect Bio	Provider of AI-based crop protection solutions. It experiments on r-genes by combining computational biology, AI, and synthetic biology methods to develop its product. It claims to improve the immune system of crop species to protect them from disease.	2021	UK	<a href="https://resurrect.bio/">https://resurrect.bio/</a>	Seed	

# GREEN H2 & CLEAN MOLECULES

## 10 Top Startups

SUSTAINABLE INNOVATION FIELDS	STARTUP	DESCRIPTION	FOUNDING YEAR	LOCATION	WEBSITE	STAGE	LOGO
Hydrogen production onsite	SoHHytec	Provider of solutions for onsite hydrogen generation and storage. It also provides solutions for onsite electricity and heat production. It provides a system called Arb that takes sunlight and water and generates hydrogen, electricity, and heat.	2020	Switzerland	<a href="https://www.sohhytec.com/">https://www.sohhytec.com/</a>	Seed	
Hydrogen production	Hystar	Provider of hydrogen generation solutions using electrolyzers. The company leverages a proton exchange membrane (PEM) technology that enables green hydrogen to be produced at higher efficiencies.	2020	Norway	<a href="https://hystar.com/">https://hystar.com/</a>	Series B	
Electrolyser	supercritical	Provider of high-pressure electrolyzer for the production of hydrogen and oxygen from water. The system uses heat and pressure to produce hydrogen without the use of hydrogen gas compressors to improve efficiency and reduce cost.	2020	UK	<a href="https://www.supercritical.solutions/solutions">https://www.supercritical.solutions/solutions</a>	Seed	
Hydrogen production	Oort Energy	Provider of solutions for green hydrogen generation. It provides solutions to make the electrolysis process economical and sustainable.	2021	UK	<a href="https://oortenergy.com/">https://oortenergy.com/</a>	Seed	
Hydrogen storage	HydroSolid	Provider of solutions for hydrogen storage. It uses space nanotechnology to store hydrogen in less volume for safe hydrogen applications.	2021	Austria	<a href="https://www.hydrosolid.com/en">https://www.hydrosolid.com/en</a>	Funding Raised	
Efuels	COLIPI	COLIPI is a biotech company focused on decarbonizing the industry by transforming CO2 into sustainable oils through gas-fermentation. They develop unique and CO2-neutral bioprocesses for the production of various oils based on renewable raw materials, offering a sustainable alternative to traditional oils.	2022	Germany	<a href="https://colipi.com/">https://colipi.com/</a>	Seed	
Hydrogen infrastructure	Eternal power	Provider of green hydrogen production solution. It focuses on reducing global emissions by offering green hydrogen and its derivatives. It covers the entire value chain and have a significant solar PV pipeline for green hydrogen production.	2021	Germany	<a href="https://eternal-power.de/">https://eternal-power.de/</a>	Funding raised	
Hydrogen production	Hydrogen future industries	Production of green hydrogen. It produces hydrogen by using highly efficient wind turbine combined with a high performance electrolyser.	2021	UK	<a href="https://hydrogenfutureindustries.com/">https://hydrogenfutureindustries.com/</a>	seed	
Clean ammonia	nium	Provider of green ammonia production solutions. It offers nanotechnology solutions to produce cooler green ammonia.	2022	UK	<a href="https://wearnium.com/">https://wearnium.com/</a>	Seed	
Hydrogen production	Nova Mea	Technology solution for hydrogen production. It focus on anion exchange membranes (AEMs) and catalysts to enable AEM water electrolyzers, which helps in green hydrogen production.	2023	Switzerland	<a href="https://www.novamea.swiss/">https://www.novamea.swiss/</a>	Seed	

# PIONEERS

Inspire. Empower. Create.

**BE BOLD.  
BE A PIONEER.**

[Pioneers.Climate Website](#)

## CONTACT US.

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