

Earth Day: Top 15 sustainable startups as rated by Early Metrics

To mark Earth Day, Early Metrics has released a selection of startups that are not only innovating for a more sustainable future but also have a strong growth potential. These 15 startups underwent Early Metrics' rigorous rating process in 2020, where the quality of their team, project and market positioning was assessed. All of them were ranked among the top 30% of over 3,500 rated startups, with a score of over 70 out of 100.

WePower offers an energy marketplace to purchase green energy directly from suppliers. This solution is based on blockchain technology, which enables smart contracts, seamless authentication and full transparency.

Early Metrics says: The founders have been working in the energy sector for over a decade. In addition

to the founders' strong market expertise, the startup's traction and international ambitions are promising. Indeed, they've already opened offices abroad and signed with clients in Australia and Spain.

OrganoClick develops functional materials based on environmentally friendly fibre chemistry. The startup changes the properties of cellulosic fibre (present in wood, paper, non-woven textiles, etc.) to provide the material with enhanced features. Features include water repellence, flame resistance, and other mechanical and antimicrobial properties. The goal is to replace plastics, biocides, heavy metals, and PFA polymers.

Early Metrics says: The startup has a long list of patents protecting its technology. It has also won several accolades, including the Worldwide Fund for Nature Climate Solver award. Thanks to its advanced technology and maturity on the market, the startup benefits from a good edge on newcomers.

EcoTree develops a platform for individuals and companies to invest in forests, that the startup operates or owns in France, by adopting trees or growing forests. When a tree has reached its cutting age, the owner receives exploitation income (2% per year). The goal is to help preserve and protect forests through sustainable forestry.

Early Metrics says: The startup provides a simple tool for individuals to become more involved in sustainable forestry. Its online presence is quite strong on social media with 17K followers on Instagram and 21K on Facebook. As of 2020, over 45k individuals had used the platform to support the planting or maintenance of 1 million trees in total.

Paboco develops recyclable paper bottles for large cosmetics and beverage manufacturers (including Coca-Cola). The startup's bottles are made of paper sourced through responsible forestry, allowing these manufacturers to reduce their plastic use and their carbon footprint. While the first generation of the startup's product still contains some plastic, the company's vision is to develop a fully bio-based paper bottle.

Early Metrics says: The CTO and CCO both have prior experience in the packaging industry, providing the management team with key skills and knowledge of market needs. Furthermore, the startup has protected its product with several patents. One challenge the startup may face is that the cosmetics and beverage packaging markets are growing at a relatively slow pace. Indeed, B2B adoption of sustainable packaging isn't necessarily as strong as one might assume, given the rise in interest in plastic-alternatives among consumers.

Switchr develops a platform allowing users to invest in solar energy and become energy producers. The company buys solar farms around the world and runs them with the help of local partners. Investors get 6% annual returns of “saved CO2” through non-voting B shares in the plants, which will be bought back by Switchr after an agreed period.

Early Metrics says: The founders have decades of combined experience in solar energy. Their experience in the sector has also provided them with strong business networks to leverage. The startup has also already started expanding its user base internationally which is an encouraging sign for its future growth.

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Breeze Technologies develops a cloud-based air quality analytics platform and deploys a network of environmental sensors for data collection, indoors and outdoors. Using data from the sensors and external sources (weather, traffic), Breeze Technologies provides concrete recommendations on how to reduce air pollution to their clients in city operations, facilities management and industrial manufacturing.

Early Metrics says: The German startup and its

founders have received several awards and recognitions: named one of the EU's most promising startups by the European Parliament, the founders were listed as Forbes' 30 under 30 social entrepreneurs, and won the Public Governance Institute's myGovernment Hero Award in 2019. While the founders have limited prior experience in sales and marketing, their results so far have been promising.

Biotrem has developed edible wheat bran tableware. The product is obtained by feeding the raw material into a mechanical press developed by the company. The startup currently offers plates and bowls of various sizes, as well as cutlery. Biotrem is also developing other solutions such as cups and containers. The startup's products can be used for both hot or cold meals and can withstand the heat of microwaves or ovens.

Early Metrics says: The startup's media presence is promising, boasting press coverage from outlets like Telegraph, CNBC, ITV, Metro as well as 15K followers on Facebook. However, lower demand for disposable tableware during the COVID-19 pandemic might impact the startup's traction in the short-term.

Sinay develops a big data platform to help players in the maritime industry optimise their operations and limit their environmental impact. By leveraging sensors and numerous algorithms, the startup's solution helps prevent air, water and noise pollution. The startup does so by providing its clients with real-time insights and alerts based on data autonomously collected from their ships.

Early Metrics says: The startup is addressing a fairly niche market, which could be both positive and negative. Sinay could become a leader in this space thanks to the limited competition. However, it could also face challenges regarding its growth, due to the limited number of potential clients.

ladys develops autonomous robots that collect floating waste (macro-waste and hydrocarbons) in marine environments. Within a zone that is predefined by the user, the robot moves autonomously thanks to its LiDAR sensors and collects waste in a net. This device enables marine ports and industrial companies to clean up polluted bodies of water autonomously, thus reducing human efforts.

Early Metrics says: While there are other similar solutions on the market, ladys' detachable net system, which can be emptied without removing the robot from the water, is fairly innovative.

Furthermore, competitors are mainly other startups, leaving ladys room to establish itself as a leader on

the market. The project has enjoyed good press coverage in France, from outlets like BFM, Canal+ and France Television. Still, sales cycles can be quite long with public institutions responsible for maritime ports, which could affect the startup's growth pace.

ULEMCo offers a transformation service for diesel-powered city trucks based on the incorporation of a hydrogen reservoir and the adaptation of their engine to this new fuel. This process allows trucking and fleet management companies to reduce their carbon emissions by up to 60% and to reduce, in the longer term, the costs related to the rising prices of traditional fuel.

Early Metrics says: ULEMCo just recently raised £500K to build up its ability to support clients in Scotland. A great news as with complex projects like this, funding R&D and scaling production to boost sales are key challenges. Moreover, the startup has benefitted from its co-founder and MD Amanda Lyne's extensive experience and network in the hydrogen market.

Brite Solar develops photovoltaic glass with 70% transparency, and electrochromic glass that automatically tints itself based on the level of light. The company targets the construction industry and greenhouse farming. Its

solar glass allows plants to photosynthesise and farmers to generate electricity in order to reduce operational costs.

Early Metrics says: The project is highly scalable and has received many grants from EU initiatives. While the startup faces significant direct competition, the properties of its self-tinting glass mean it can target numerous sectors, which is a competitive advantage worth noting.

Daphne Technology has developed a solution to remove harmful gases from gas engine rejections. Its product SulPure eliminates 99.3% of nitrogen oxide and 85% of sulphur oxide from marine engine exhaust gas in three stages: a pre-filtration unit, a patented nanotechnology purification unit, and a by-product collection unit. The solid by-products can be sold as fertiliser. The startup's second product uses the same technology to remove methane from natural gas engines.

Early Metrics says: The startup has received financial support from Saudi Aramco Energy Ventures and from the EU's Horizon 2020 research and innovation programme. It has also been able to protect its technology with several patents. It's worth noting the project is cash-intensive, which means funding will continue to be a challenge. As such, Daphne Technology is currently raising CHF

15M to conduct pilot testing with shipowners and ramp-up sales.

Blok-Z develops energy management software and blockchain technology to bring provenance and activity monitoring to the renewable energy market. The white-label platform enables energy-retailer clients to verify the origin, ownership and consumption of green energy in real-time, thereby increasing acquisition and retention of eco-conscious end users, both corporates and individuals.

Early Metrics says: The startup's founding team demonstrated to have strong market expertise and mastery of the key technical skills required to develop their project. Furthermore, the startup has been selected to take part in several accelerator programmes (Draper University VC, ConsenSys Tachyon, Berkeley Blockchain Xcelerator).

Terradona develops Cliiink, a solution to encourage and reward waste sorting. Cliiink leverages sensors that local authorities put on waste bins. They are paired with a web platform that helps clients track how full each bin is. End users identify themselves when throwing something away by using a mobile app. For each item they put in the bin, they earn points that can be exchanged for rewards from local partners (shops, etc).

Early Metrics says: The startup's technology is fully

scalable and patent protected. However, there are several companies developing similar solutions, making the startup's competitive landscape fairly crowded.

Fabrig develops software for users to control energy and building performance data for all their assets. The software collects data from any source, from new sensors to existing systems. Clients are able to easily monitor their entire portfolio in one place, through various analytics, maps, meters and reports. These insights help operators reduce costs and carbon emissions by identifying inefficiencies related to energy, water, waste, air quality, etc.

Early Metrics says: The startup's business model is highly scalable and adoption for smart building technologies has been growing rapidly. However, building monitoring solutions are fairly widespread on the market, so the startup will have to watch out for startup and corporate competitors.

Early Metrics specialises in startup ratings and emerging technology research. As an independent agency, it has developed a scientific methodology to identify emerging tech players and assess their growth potential. It therefore provides the right tools for decision-makers from funds and corporates to discover, qualify and engage with startups. To date, Early Metrics has rated over 3500 startups in Europe and worldwide.

