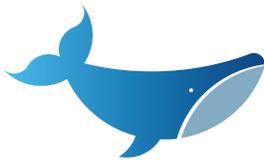




# 2021 Northeast Teams



**13 MARI**

**13 Mari Ltd**

<https://13mari.com>

New Jersey

Transportation

Making you twice as rich by reducing drag and fuel consumption of your maritime fleet. We make local, smart hull modifications that reduce the drag, so the vessel consumes less fuel. The modifications are done during the scheduled dry dock maintenance window. Our compensation is realized by the ship owner operator savings and as such the service is low risk. Speaking of risk, the modifications do not compromise the hull and are totally passive and reversible, but we doubt you'll ever want to do this.



**Acadian Composite  
Materials**

<https://www.acadiancomposites.com>

Maine

Green Building

We've engineered a better construction material: a composite panel made from recycled plastic that replaces studs, sheathing, & insulation with a single structural wall. A 2000 sf home built with our product recycles more than 600,000 bottles, reducing industry dependence on natural resources. A home built with our product also exceeds Passive House air change standards, has R-27 insulation, and reduces on site construction time by 90% - equating to thousands of dollars in savings for builders.



**ACUA Ocean**

<https://www.acua-ocean.com>

United Kingdom

Energy Efficiency

ACUA Ocean is a UK-based maritime clean-technology start-up. We have developed a zero-carbon emission uncrewed surface vessel (USV) as a solution delivery platform. With the rapid adoption of USV technology the UK government estimates this sector will be worth £111bn per year by 2030; part of the £3.2 trillion per year "Blue Economy".



### **Agrivolution LLC**

<https://shop.agrivolution.us>

Connecticut

Agriculture, Water, & Waste

Agrivolution is on a mission to solve the global water crisis that is impacting Californian farmers whom two-third of 328 million people in the U.S. depend on. Air-Extracted Water Generator (AWG) taps into the unlimited source of freshwater contained within the natural cycle of air with our innovative liquid-desiccant absorption technology powered by renewable energy for irrigation. No more drilling, No more desalination. No more contaminated water. Only clean water supply anywhere in the world.

### **Alonetics LLC**

Maine

Energy Distribution & Storage

Alonetics is a DER Enabling Platform for cost effective load flexibility and decarbonization. We simplify the complexity of access to strategic, flexible, residential loads (e.g., water heaters) so as to enable a more cost-effective future with high levels of wind and solar generation. We are an agnostic, IoT, IaaS organization focused on energy management applications. We seek to significantly expand the supply of cost-effective DR resources by lowering the cost of communication per device.



### **aqualumos**

### **Aqualumos**

<https://www.geyser-remediation.com>

Connecticut

Agriculture, Water, & Waste

We are developing a specialized industrial-scale reactor that uses light and a catalyst to break down PFAS, also known as “forever chemicals”. Available solutions merely filter out and concentrate PFAS and inevitably recontaminate the environment. We are developing a system that safely breaks down PFAS to non-toxic compounds, permanently solving the problem. We expect our solution to be scalable and energy-efficient, thus affording us a unique business model that aligns financial interests.



### **Ashipa Electric**

<https://www.ashipaelectric.co>

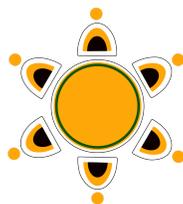


Alabama

Energy Efficiency

We design creative energy solutions and an AI enhanced management software to reduce energy cost especially in underserved communities.

### **Barrio Eléctrico**



### **Barrio Eléctrico**

<https://www.barrioelctrico.com>

Puerto Rico

Energy Distribution & Storage

After the 2017 hurricanes in Puerto Rico, almost 500,000 households waited 2-10 months to be reconnected to power. Today, less than 20,000 households have installed solar systems. We fix the failed electricity market with affordable residential solar-plus-storage leases, relying on community engagement to support the systems. This model creates distributed energy and data needed to construct the microgrids and local energy marketplaces that will define the future of electric service.



**Biovert Protein Co.,  
Ltd**

<https://www.biovert-protein.com>

Thailand

Agriculture, Water, & Waste

We treat the wastewater of farmers and food producers lacking filtration systems to clean the water. Using a portable ready made treatment unit to remove organic pollutants and purify the water for their reuse. The removed solids are then fed to thousands of insect worms, which are processed later into growth or health food for fish, dogs and cats. Combining wastewater cleaning with insect bio-conversion, we recover nutrients in organic waste into reusable resources and stop pollution. **Company Development Program (CDP) team**



*Your friend to ride*

**Bonzer**

<https://www.bonzer.rocks>

Massachusetts

Transportation

Bonzer is an eco-friendly multi modal transportation sharing service with a focus on last mile trips using cool mini electric pods and scooters. It is a complementary transportation solution that offers convenience and cheaper trips. Bonzer's sharing platform reduces vehicle use globally and helps reduce the carbon footprint by using 100% electric vehicles.



**CUPOD, LLC**

Pennsylvania

Chemicals & Advanced  
Materials

CUPOD is a novel invention that gives homes, businesses, and industries the ability to make pure chlorine dioxide gas in solution for disinfecting, sanitizing, and cleaning. CUPOD creates a position in the current market, where no other product exists, while raising the bar by producing a (GRAS) antimicrobial/sanitizing agent (CLO<sub>2</sub>) in a novel machine that is convenient, safe, and reusable while being Controllable, Ultra-Pure, and On Demand. For Everyone You. CUPOD.



**Curbhub**

<https://www.curbhub.io>

Massachusetts

Transportation

Curbhub offers transportation orchestration technology to enable collaborative multimodal last mile delivery. At its core, it is an advanced routing engine coupled with a dispatching platform that enables delivery service providers to use underutilized urban spaces as on-demand temporary distribution hubs. This technology improves transportation efficiency for delivery service providers while significantly reducing pollution, congestion, and safety problems caused by delivery vehicles.



## **DND Biotech**

<http://dndbiotech.it/en/>

Italy

Agriculture

A containerized mobile laboratory equipped with I. diagnostics molecular tools for the identification of microorganisms responsible for degradation of contaminants II. bioreactors for biomass production III. terrestrial drone to test detoxification capacity of selected microorganisms.



## **Ecotone Renewables**

<https://ecotonerenewables.com>

Pennsylvania

Agriculture, Water, & Waste

Ecotone Renewables is a research-focused small business with the mission of closing the food loop. Utilizing our Seahorse anaerobic digestion system, we succeed in this mission through our work in diverting food waste from landfills while uplifting local agriculture initiatives. With our prototype system we diverted 3 tons of food waste and developed an incredibly diverse network of agriculture non-profits, small businesses, and local residents which underpin our social license to operate (SLO).



## **eHempHouse**

<https://ehemp.house/about/>

New York

Agriculture, Water, & Waste

eHempHouse harnesses its proprietary technical innovations to a creative use of capital secured from the global carbon markets to deliver an exciting business opportunity that will contribute to building a sustainable future for all. Using our proprietary agri-tech innovation (The SmartBox - SB™: x2 patents being filed) we release capital from the carbon markets and use it to deliver sustainable benefits to local communities and meaningful action on climate change.



## **Enerpaper**

<https://www.enerpaper.com>

Italy

Green Building

ENERPAPER produces at low cost a superior thermal insulation material for residential building applications based on loose fill cellulose. Product is sold in paper rolls (in place of plastic bags of flakes as competitors), allowing lower costs in production (-30%), logistics (-80%), less chemicals (-50%) and faster installation times (2x). Production, product and installation equipment have been granted of an international patent with 9 claims and one further patent demand has been deposited.



**Equilibrium**

<https://www.equilibrium-bioedilizia.it>

Italy

Green Building

We improve people health and living comfort by providing patented solutions to the green building sector made with hemp and lime renewable biocomposites which simultaneously maximize energy efficiency, durability and carbon sequestration. We aim at bringing our technology to the global scale by substituting synthetic and mineral insulation products with biobased materials that have a regenerative environmental, social and economic impact.



**EvTek**

<https://www.evtek.co/>

New York

Agriculture, Water & Waste

Evtek is increasing recycling rates by allowing people, businesses and governments to have a direct connection to their recycling actions. The Evtek EcoSystem creates a new and unique recycling experience by giving our members 100% verification that their items were actually recycled. Members receive money, rewards and can donate the value of their items. Soon to be patent pending software and hardware technologies allow us to collect and process recyclables better than ever before.



**ExoCell**

<https://www.exocellpower.com>

New Jersey

Energy Distribution & Storage

ExoCell Power develops and manufactures a hydrogen fuel cell device, The Thin Flexible Fuel Cell (TFFC), that extends drones' flight time by 4X. The TFFC has a radically improved architecture, which is sheet-like, ultralight & air-breathing. Years of development eliminated cleanroom processing while increasing power. Commercial users need longer flight and drone manufacturers will implement new technology. We are ready for scale up and with the right resources can take drones to the next level.



**FINSULATE by  
Ocean Innov**

<https://www.finsulate.com/en/>

Maine

Chemicals & Advanced  
Materials

Classical anti fouling paints try to prevent the on-growth of marine organisms which reduce boat speed and increase fuel consumption. They dissolve slowly, release biocides and micro plastics, and require regular re-coating. Finsulate's environmentally friendly alternative mimics sea urchins' spines and creates a physical barrier to bio fouling. Made of recycled nylon and water-based adhesive, Finsulate does not release any pollutant in the water and can exceed its 5-year warranty.



## Forest Founders Rewards

<https://www.forestfoundersrewards.com>

New Jersey

Agriculture, Water, & Waste

The majority of consumers in the United States want to take action to support the environment with consumerism being the leading cause of climate destruction. The problem is, nobody knows what to do to reverse that trend. Forest Founders Rewards lets consumers plant trees on behalf of their favorite businesses just by shopping at those businesses. We use a combination web app and QR technology to let consumers plant trees when they perform a business-defined action at the shop of their choice.



## Gaia AI

<http://gaia-ai.eco>

Massachusetts

Agriculture, Water, & Waste

Gaia AI utilizes automation and artificial intelligence to plant forests at scale. By combining ecology-centric AI, region optimized seed pods, and automated planting solutions, we will deliver more resilient, carbon dense, and cost-effective forests. The cornerstone of our approach is to quickly collect large amounts of data to train AI that will generate strategic insights on forestry ecology.



## Grade for Good

<https://www.gradeforgood.com>

New York

Information & Communications Technologies

Grade's mission is to create a cloud-based platform of concise sustainability reports for individual articles of clothing seamlessly searchable by barcode or item number. Grade helps fashion brands effectively conserve marketing and reporting resources by communicating concise sustainability reports to fashion consumers to increase consumer education, trust, and brand loyalty while simultaneously providing data on consumer preferences to aid business development. **Company Development Program (CDP) team**



## Greenpower.ai

<https://www.greenpower.ai/>

New York

Energy Distribution & Storage

We focus on using deep learning algorithms for democratizing the solar marketplace, and for efficient dispatching of renewable energy resources. Our focus is on educating people to find best solar and financing options that suits their needs. Our founders are a PhD from MIT who is currently a professor of deep learning at University of Maryland, and a PhD from UC San Diego who is a power industry veteran.



**HYDRONIC SHELL**  
TECHNOLOGIES

## Hydronic Shell Technologies

<https://www.hydronicshell.com>

New York

Energy Efficiency

Our technology is a solution to the major global challenge of reducing CO2 emissions from existing buildings. Our facade panels form a super-insulated shell around an existing building and includes a high-performance HVAC system integrated within the shell, thereby achieving dramatic reductions in energy use as well as improved comfort and indoor air quality. Compelling economics will make Hydronic Shell a disruptive force within the trillion-dollar multifamily construction industry.



## HYFOIL Marine

<https://hyfoilmarine.com>

New York

Transportation

HYFOIL Marine's hydrofoil-supported catamaran RIBs are capable of delivering speed, comfort, efficiency, maneuverability and load carrying that surpass well beyond those of deep-V boats. Requiring smaller engines and available in long-range all-electric configurations, these vessels enjoy greatly reduced Co2 emissions and their low-wake operation leads to less shoreline erosion. The fluid nature of the design leads to amazing performance that provides transit that is safer and more worry-free.



InfiSense

## InfiSense

<https://www.infisense.com>

Vermont

Information & Communications  
Technologies

InfiSense provides real world data feeds to the analysts, engineers and experts that are solving today's most complex challenges, from building decarbonization to indoor ag production. Just like financial analysts pay premiums to monitor high-quality real-time and historical business information delivered through curated data feeds - think Bloomberg - our customers pay us to have a constant stream of data from long range, wide area network (LoRaWAN) sensors that they install in the real world.



## Innovia GEO Corp.

<https://www.innoviageo.com>

Canada

Green Building

Innovia GEO is focused on decarbonizing how we heat and cool our buildings and homes by developing innovative renewable heating and cooling solutions. Our flagship GEOthermal Piles significantly cut the cost of implementing clean and efficient geothermal HVAC systems by integrating geothermal functionality into steel foundation piles, thereby enabling their dual use as both a foundation structure and a geothermal ground heat exchanger.



## **Irradiance**

Delaware

Energy Distribution & Storage

Global population will exceed 9B by 2100. Solar will replace Crude oil. But only 10% of the sun's energy reaches the earth, the rest is scattered by the atmosphere. Some regions don't harness solar because of geographical limitations. Irradiance will deploy >10 discrete space solar power systems and beam it globally to >10 ground stations including regions without sun. Co-located storage facilities allow high dispatchability for on-demand supply. The system raises efficiency of sun-capture to >80%.



## **Julius**

<https://juliusedu.com/>

Massachusetts

Green Building

Julius powers the green infrastructure sector with solutions to attract, upskill, and drive mobility for millions of diverse learners & employees. Renewable jobs will reach 30 million globally by 2030, while decarbonization disrupts millions of fossil fuel jobs. We seek to help workers affected by the energy transition find new roles; help green infrastructure companies better support, upskill and retain critical employees for the future; and drive economic mobility for millions of workers.

## **Long Island Clean Water Technology, Inc.**

New York

Agriculture, Water, & Waste

Long Island Clean Water Technology is developing an aqueous nitrogen sensor that can measure both ammonium and nitrates in real time, in wastewater for over six months without maintenance. The self calibrating and self cleaning system has been sponsored and extensively tested by the US EPA, which estimates the need for over 2.4 million new nitrogen treating septic systems. The Sensor won a \$50,000 challenge against 18 incumbent products for its accuracy, precision, and reliability.



## **Measured Air Performance**

<https://www.measuredap.com>

New Hampshire

Energy Efficiency

High dilution lab exhaust fans run 24x7 to dilute potential contaminants in the lab exhaust air. However, lab exhaust air is clean 80%+ of the time. SmartStack® monitors the cleanliness of lab exhaust air and indexes the associated lab exhaust fans accordingly, driving significant savings. SmartStack® is one of the required technologies for all new high dilution lab exhaust fans in California per their Title 24 Energy Code. We recently patented another lab exhaust monitoring product.



## **Meltek**

<https://meltek.io/>

New York

Energy Distribution & Storage

Founded in May 2020 by Frank, and his father, Mark, a 37-year utility veteran, Meltek is a Rochester, NY-based clean technology startup building AI-enabled software for microgrids. Meltek's cloud-based control software collects data from utility systems (e.g., dynamic pricing, demand response), weather forecasts, and behind-the-meter assets (e.g., inverters, energy storage), to optimally control the load to minimize monthly energy costs. Meltek is finalizing the MVP and launching Summer 2021.



## **Moduly**

<https://www.moduly.io>

Canada

Energy Efficiency

Moduly helps residential and commercial electricity users optimize their energy efficiency by allowing them to shift consumption peak hours, reduce their energy consumption and GHG emissions, while saving them through our modular intelligent energy platform. Using artificial intelligence, Moduly predicts, recommends and personalizes the user experience according to their consumption habits. Moduly is a plug and play, modular and scalable solution that reduces the cost & complexity of installation.



## **Nanolyx Incorporated**

<https://nanolyx.com>

Massachusetts

Chemicals & Advanced  
Materials

Nanolyx is a green nanomaterials company dedicated to employing sustainable methods to create the next generation of tools to combat antimicrobial resistance in our hospitals and shared spaces. Our products can be used as a disinfectant spray applied on surfaces, or as an additive to the production process of those surfaces, giving them inherent antimicrobial properties. In the lab, we've demonstrated a higher log reduction than name brands, and are dedicated to keeping surfaces cleaner, longer.



## **Nordee Enterprise**

<https://www.nordeellc.com>

Massachusetts

Energy Distribution & Storage

Organizations are looking to meet their sustainability priorities by deploying clean and renewable systems that affordably reduce their carbon footprint. Traditional approaches focus on power system project cost, time, and quality. Nordee Enterprise realizes that grassroots inclusion and community equity increasingly need to be at the center of any solution. Nordee Enterprise LLC., engineers solutions that incorporate local stakeholders through the design, deployment, and operations phases.

# OSMOSES

## Osmoses

<https://www.osmoses.tech>

Massachusetts

Chemicals & Advanced  
Materials

Industrial purification and separation processes account for 15% of the world energy consumption and 16% of the CO2 emissions. This is because we still use energy-intensive, century-old technologies. At Osmoses, we developed a clean solution to change this: molecular filters that can purify hydrogen, natural- and bio-gas, and can perform carbon capture at scale. We are committed to transform chemical separations and contribute to tackle climate change while generating value for our customers.



## Pharos Seafood

<https://pharosseafood.com>

Rhode Island

Agriculture, Water, & Waste

Our platform expands the sales channels for Rhode Island oyster farms while improving their marketability. Farmers do not have the resources to plan, harvest, market, discover customers for, and distribute an entire operation. While they remain focused on planning, harvesting, and distributing the operation, we market and discover new customers on their behalf. Our platform will allow farmers to focus on expanding and capturing unmet demand as we sell their product.



PRINCETON  
NUENERGY

## Princeton NuEnergy

<https://www.pnecycle.com>

New Jersey

Chemicals & Advanced  
Materials

Princeton NuEnergy (PNE) is developing a novel lithium-ion battery recycling process to directly recover and regenerate used battery materials. Compared to current industrial battery recycling processes, PNE's process is simpler, more cost effective, and more environmentally friendly. With our process, critical battery materials such as the cathode and anode can be recycled, restored, and reused in new batteries, without the need to break the materials down into the raw elements.



river cleaning

## River Cleaning

<https://rivercleaning.com>

Italy

Agriculture, Water, & Waste

To mitigate the threat of ocean pollution and prevent the dispersion of waste in marine areas, River Cleaning has developed a smart, modular barrier which is deployed in watercourses and is able to block litter as well as oil pollutants. Intervening where the problem can still be addressed more easily allows the company to provide economic benefits to a variety of actors, while ensuring maximum efficacy and efficiency in protecting the environment and public health.



## rStream Recycling

<https://www.linkedin.com/company/rstream-recycling/>

Massachusetts

Agriculture, Water, & Waste

rStream Recycling leverages artificial intelligence to enable low-cost waste sorting on-site to keep plastic out of landfills. By generating revenue through leasing machines to venues and processing recyclables, rStream creates value for its investors. Based on a prior art search, rStream maintains freedom to operate and is exploring patenting options with licensing potential. By making recycling easier and cheaper, we build a robust bridge from consumer to recycler for sustainable outcomes.



## STAC Technology

<https://stactechnology.com>

Denmark

Green Building

STAC Technology is a leader in the development of advanced water-vapor driven turbo-compressors targeted towards large-scale District Heating & Cooling (DHC) networks. Our patented Vapor Compression Refrigeration System employs 100% water to simultaneously produce pumpable ice slurry and hot water. This technology presents a near-zero-emission, plug-and-play solution to DHC networks that will drive material efficiency gains, reduce power consumption and enable greater reach & retrofit potential.



## SustainLoop

<https://www.sustainloop.com>

Massachusetts

Information & Communications  
Technologies

Today's big problem is climate change, and one addressable problem linked to climate change is that buying energy and sustainability solutions is painful. At the same time, they are also extremely costly to sell. The process is too old school, very consultative. In order to solve this issue, we're simplifying the process by building a climate focused digital marketplace fueled by AI and machine learning. Changing how energy solutions are bought and sold forever to curb climate change.



## TechnoCarbon

<http://tctf.eu/en/>

France

Chemicals & Advanced  
Materials

Technocarbon delivers materials which can replace steel and concrete in infrastructure and industry. Ultimately, our goal is to automate manufacturing in order to enable industrial users to make their own carbon-neutral, high performance materials, increasing their margin and their customer benefits: 1. use less material, 2. slash maintenance costs and environmental footprint, 3. improve product lifetime. Our vision is a world with carbon-neutral high performance material manufacturing.



TORO WATT is a HVAC startup that brings low OpEx, climate-friendly, Healthy, Fresh Air - Air Conditioning solutions for residential, commercial and mission-critical applications. A patented leapfrog technology allows us to reduce energy and refrigerant use and thereby lower carbon emissions. We help our customers reduce their carbon footprint.



Average use of plastic packaging is only a few days, yet upon disposal it persists centuries beyond its usable lifespan. Transfoam is engineering a cradle2cradle biomanufacturing platform to turn plastic waste into polyhydroxybutyrate (PHB). PHB is a bio-based plastic that offers the same durability, barrier properties and shelf life as petroplastics, except it biodegrades fully upon disposal. PHB's rapid, nontoxic degradation is unmatched by any material offered in single-use consumer products.



Municipalities spend millions of dollars a year collecting and disposing of organic waste. We have invented the first dustbin for organic waste capable of reducing the volume by a factor of twenty by converting the organic material into nitrogen compounds. All of this is possible thanks to our patented technology which uses the Black Soldier Flies' full life cycle within a closed container, to eat and digest the organic waste.



We are producing sustainable carbon nanomaterials that are needed for better energy storage solutions. There is currently rapid growth of battery manufacturing in the World. By 2030 there will be 50 times more batteries needed than today. Carbon nanomaterials are used as conductive additives to make those batteries. Our technology allows us to produce carbon nanomaterials from combustion exhaust CO<sub>2</sub>. Our products have lower price and 400x less environmental impact than our competitors.



**Voltpost, Inc.**

<https://www.voltpost.com>

New York

Transportation

Across the US, transportation accounts for 31% of annual greenhouse gases, with cars being the largest source of emissions. The top barrier stopping city residents from purchasing electric vehicles is a lack of public charging stations. Voltpost retrofits lamp posts into Level 2 charging stations managed by a mobile application. This enables quick installation to reduce the cost, timing, and footprint. Voltpost will increase electric vehicle adoption so cities achieve decarbonization targets.



**Xizan Energy**

<https://www.xizanenergy.com>

Spain

Energy Distribution & Storage

MY SOLAR PLANT is a light, portable, performant, foldable and easy-to-use modular solar generation system for private use. It's been designed to empower end-users with a highly performant personal solar generator easy to transport and assemble in a matter of minutes with no tools (real Plug&Play). These characteristics make the system suitable for both temporary and permanent uses. The system includes an AC backup source to ensure uninterrupted supply (diesel generators or electrical grid).

**ZERO**

Massachusetts

Energy Efficiency

We are simplifying the pre-construction process for deep energy retrofits and making it dead simple to have healthier, smarter and zero emissions homes.



**2021 Cleantech Open Northeast**