



2022 Northeast Alumni



3D Architech

<http://www.3d-architech.com/>

Boston, Massachusetts

Chemicals & Advanced
Materials

We decarbonize metal manufacturing. Our interviews with +20 jewelers and manufacturers proved our technological competitive advantages: the next day on-demand production (vs 7-14 days of existing method), a thread of hair-scale fine-featured design (x10 finer than existing), and CO2 reduction (99.6% reduction). Our know-how (full densification, recycling, material and structure optimization) in this market allows us to penetrate other industrial metal manufacturing markets.



4.0 Analytics, Inc.

<https://www.4-0analytics.com>

Newark, New Jersey

Transportation

4.0 Analytics specializes in software and automotive technologies that optimize the health of vehicle engine and emission systems. Our application enables vehicle emissions testing to be conducted while driving, eliminating the need to go to a testing facility. It provides real-time, accurate vehicle "check engine light" diagnostics, and emissions test "pass/fail" status. The results are lower testing, maintenance, and repair costs; improved fuel efficiency; and reduced greenhouse gas emissions.



Ai Can Recycling Corp

<http://www.aicanrecycle.com/>

Summit, New Jersey

Waste

Ai.Can Recycling (AiCR) reimagines the traditional waste receptacle by using computer vision technology to accurately identify, move, and sort previously separated waste items into correct bins (e.g. glass, metal, compost, etc.). The AiCR receptacle prevents contamination and spoilage of recycling streams by ensuring that recyclable materials are correctly sorted and free from human error. AiCR is the first company that seamlessly connects conversion/recycling facilities to the hands of users.



AMATEC - new material, new construction methods

<https://amatec-corp.com>
Toronto, Ontario, Canada
Chemicals & Advanced
Materials

We have developed a new material called high-density gypsum (HDG). This new material is much stronger than concrete and can easily become its competitor. By being a zero-carbon and fully recyclable material, HDG, in certain aspects, is fundamentally different from concrete, ceramic and wood - so much so, in fact, that gypsum gives birth to the Sustainable Construction Industry. This material also allows us to fully automate the production of PreFab house sets for high-speed assembly..



Avocet Wind

(formerly OBVIA)

<http://www.obvia.biz>
Charlestown, Rhode Island
Energy Generation

Bringing jet engine technology to the propeller driven wind turbine industry has met with challenges related to the weight and mass of the ringed airfoil. Avocet's wind turbine rotor design provides the aerodynamic effect of a ringed-airfoil shroud, without the weight and mass of the shroud. The result is increased tip-speed ratio, lower cut-in speed and significantly reduced noise. We have laboratory and field tested prototypes and six patents in the US and Canada.



Bloom

https://docs.google.com/presentation/d/1EKfAikuGyafDES1_WWfMBFVtMlvhXQurYChKfJs-/edit?usp=sharing
Wellesley, Massachusetts
Agriculture

Algal Clean-Up and Conversion Initiative. With increasing global temperatures and rising levels of pollution, algal blooms have become a prevalent phenomena in today's ecosystem. This past summer, the Marmara Sea encountered a catastrophic algal bloom, pushing researchers to create the first mucilage-specific hydrothermal carbonization method which would convert surface algae into energy. This fairly recent technology provides a gleam of hope for communities around the world impacted by algal blooms.



CA Hybrid

<https://www.cahybrid.com/>
Toronto, Ontario, Canada
Information & Comms Tech
(ICT)

Soon, homes will be powered by multi-energy resources such as battery storage systems, electric vehicles to home, backup generators that are designed to be installed through additional interface devices to the home distribution system. There is no simple integrated solution if you like to have some of these together.

We developed a strategic product that creates an infrastructure to give residential customers the opportunity and freedom to easily be connected to any energy resources.



**Clean Valley
Bio-filtration
Technologies CIC**

<http://www.cleanvalleycic.com>

Dartmouth, Nova Scotia,
Canada
Agriculture

By 2050, there will be 10 billion people on this planet needing a sustainable source of protein. The onshore aquaculture industry is poised to meet this demand. However, they have an optimization problem when it comes to water quality treatment. Treatment systems are incredibly expensive, utilize non-disposable plastic beads, and are too specific in their treatment. It does not need to be this way. At Clean Valley we've developed a biofilter so fishfarmers can treat the waste but keep the flavor.



EVbuddy

<http://www.evbumdy.net>

Edison, New Jersey
Transportation

The Company is developing a smart charging system to transfer electric charge from one electric vehicle to another electric vehicle that is out of charge. Currently there are only a few other options to deliver charge to electric vehicles. These options are very restrictive, limited, costly, charging is slow and they are high maintenance. Our smart charging system will eliminate separate, expensive and bulky batteries or generators used to deliver charge (power) to an electric vehicle.

florrent
florrent

[https://www.hempaxenergy.co](https://www.hempaxenergy.com/)

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Amherst, Massachusetts
Energy Distribution & Storage

florrent is a minority-owned and led ClimateTech company creating high energy density ultracapacitors for the just energy transition. Our ultracapacitors are built from abundant, affordable, and regenerative hemp, grown domestically by Black and Indigenous farmers, and produced in Western Massachusetts.



**G Force Waste
Sorters, Inc.**

<https://gforcewastesorters.com>

Boston, Massachusetts

A market disruptor to the waste industry, G Force Waste Sorters is an innovative, immediate solution for current critical waste crises. Multinational consumer goods companies are tasked with, and challenged by, recovering post-consumer waste for its supply chain, in order to manufacture new goods. G Force Waste Sorters recovers high value post-consumer recyclables from trash at major sports and entertainment venues, diverting up to 80% of a venue's trash from landfill.

NECEC, 444 Somerville Avenue, Somerville, MA 02143



GRAIN

<http://www.graineecosystem.com/>

Boston, Massachusetts
Information & Comma Tech
(ICT)

We accelerate the journey to a carbon neutral world. The Grain Ecosystem empowers carbon removal project developers to move faster through the certification to sale process and spend more time focused on saving the world from greenhouse gases. We provide project developers, investors, and certifiers a cooperative platform to simplify the carbon offset project lifecycle. Our unique solution eliminates the risk of double counting, ensures carbon offset quality, and creates pricing transparency.



HiT Nano Inc

<https://www.hitnanoinc.com/>

Bordentown, New Jersey
Chemicals & Advanced
Materials

HiT Nano Inc, is a small business grown from research undertaken at Princeton University, New Jersey. HiT Nano's objective is to deliver industry-leading, cost-effective and high-performance materials to address critical energy storage and conversion challenges, e.g., Li-ion battery electrodes, catalysts, and thermal energy storage materials. Our central focus is to develop novel and scalable synthesis technologies specifically needed for the manufacture of functional materials and chemicals.



iCheck Energy

<http://icheckenergy.com>

Fair Lawn, New Jersey
Information & Comms Tech
(ICT)

We are working on a seamless hardware-software integration for energy users of all sizes to not only make actionable carbon mitigation decisions but be able to save money and participate in grid stability and demand response programs as easy as calling an uber ride.



Influent (formerly Clean Power Connection)

<http://www.cleanpowerconnection.com>

Brookline, Massachusetts
Information & Comms Tech
(ICT)

Influent operates an online platform which allows individuals and organizations to learn about the benefits of clean energy, compare offers from developers, and find the best ways to enroll in projects while saving on their monthly bills. Going forward, our company intends to also build a peer-to-peer energy trading platform where individuals and companies can transact directly with each other on our network and unlock the value of their distributed energy resources.



Kasava LLC

<https://www.kasava-engineering.com/>

Hamburg, Germany
Transportation

Kasava Engineering has developed the most efficient and powerful transmission solution for key and underserved areas of the transportation industry. This innovation reduces the cost of transportation for shipping via sea, rail or trucks, while reducing CO2 emissions. It will also enable electric and hybrid trucks to go 20% further per charge. It is simple to produce, reliable, durable and reduces maintenance cost compared to existing solutions.

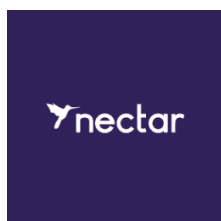


MOBY

<https://yonironn.webflow.io/moby>

New York, New York
Waste

Microplastics are minuscule particles that have been identified in every ecosystem. As they enter food supplies, an AVERAGE HUMAN INGESTS THE PLASTIC WEIGHT OF ONE CREDIT CARD EVERY WEEK! 35% of all MPs come from household washing of synthetic clothes. MOBY is a closed-loop filter that fits any washer. MOBY captures the microfibers and uses the particles to create new filters. MOBY's circular innovation tackles human toxicity, ecotoxicity, biodiversity loss, climate change, and climate justice.



Nectar (formerly Clay Energy)

<https://www.clay.energy/>

Toronto, Ontario, Canada
Transportation

Most multi-unit buildings can only handle 10% of EV charging needs. With 100% of car sales targeted to be electric by 2035, that's a massive problem for landlords and tenants. Clay energy plans to close that gap. We build on-demand EV charging for multi-unit buildings that scales with tenant EV adoption. Using batteries as an intermediary between the building's electrical system and EVs, allows us to increase charging capacity without electrical upgrades.



NTP Technologies

<http://www.ntptechnologies.com>

Mystic, Connecticut
Agriculture

Synthetic nitrogen fertilizer production and its use negatively impacts our air, water, and soil. Future Farmers that grow 24/7 365 days a year, such as vertical hydroponic and indoor greenhouse farmers, want an eco-friendly fertilizer that is easy to apply, affordable, and increases their crop yield. NTP Technologies uses non thermal plasma to produce organic, salt-free liquid nitrates onsite and on demand for use in agriculture. Our inputs are air and renewable energy, so we do not produce any GHG. Because we are eliminating the costs of the supply chain, a farmer's nutrient costs can be reduced.



OGA Street Tech

<http://potholepillow.com>

Boston, Massachusetts

Green Building

IP-wielding OGA Street Tech sells sustainable materials, to decrease the world's dependence on poisonous temporary asphalt and concrete. Focused on government road construction, we are cleaning up a multi-billion dollar niche, and proving demand for non-harmful reusable methods! We provide one product currently, but more are confirmed/in development and by using our proprietary material advantage we are changing how our planet wastes and spends on road repair forever



Planète GreenLeaves

<https://greenleaves.app/>

Montreal, Quebec, Canada

Information & Comms Tech
(ICT)

As urban planners across the world work on designing greener communities, it can be quite difficult for them to accurately measure the long-term impact of their design on the communities of tomorrow.

Wrestling with messy data and inefficient workflows is challenging. Planète GreenLeaves is a web-based platform that streamlines the development process and reduces the reliance on external experts by providing pre-existing GIS data and an integrated urban development tool.



Positive Energy

www.positivenergy.ca

Verdun, Quebec, Canada

Energy Distribution & Storage

Early stage startup, in the green energy sector within the circular economy ecosystem. In focus. with the eventual hazardous to the environment of accumulating more than 1.2 million tons of batteries that the world needs to find an environmental solution for. By utilizing the existing batteries for another ten years of utilisation is a great solution for the environment and to avoid the depletion of rare earth materials, as we see it currently in our existing market.



Prime Lightworks Inc.

<https://www.primelightworks.com>

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Brunswick, Maine

Transportation

Prime Lightworks is developing propulsion systems for space satellites and launch vehicles that are fully renewable with zero CO2 emissions. Our vision is to enable sustainable space travel by developing reusable green hydrogen (H2) propulsion for a circular clean aerospace economy. We are expanding our aerospace propulsion technology portfolio to include H2 rocket engine development, with the goal of making fully reusable satellite rocket launch vehicles with zero CO2 emissions.



re:Charge-e

<http://www.recharge-e.com>

Albany, New York
Transportation

To encourage the use of micromobility as a way to combat climate change, re:Charge has developed a universal charging solution for the electric micromobility industry. Using advanced wireless power transfer technology and intelligent power management software, our innovative design adapts to a range of vehicles and battery types ensuring a variety of shared micromobility operators and private vehicle owners can reap the operational and financial benefits of the re:Charge-e solution.



Relastics Company

<http://www.relastics.co>

Providence, Rhode Island
Green Building

Relastics Company upcycles household plastic waste into industrial standard green building materials without incurring incremental environmental impact.



Seah4 Pty LTD

<http://www.seah4.co.za>

Cape Town, South Africa
Energy Generation

SeaH4 has the objective to produce vessel bunker LNG from farmed macro algae, later biodiesel for road transport, supplying a sustainable replacement for fossil fuels that can compete in terms of cost and profit margins with its fossil equivalents, without subsidies. The process is based on three well established subprocesses, each streamlined and optimised for circularity in the overall process. 40k tons of CO2 e per year can be achieved in a scalable and multipliable process,.

SENSIBLE
PHOTONICS

Sensible Photonics

<http://www.sensiblephotonics.com>

Pittsburgh, Pennsylvania
Information & Comms Tech
(ICT)

Sensible Photonics is delivering a more reliable, resilient, and safe energy infrastructure through low-cost fiber optic sensing that enables real-time predictive analytics to anticipate failures in distribution and energy storage assets before they occur. To keep pace with the growing demand for electricity and heightened threat from climate change, the grid needs to be smarter and more self-aware. At the same time, supply for distribution transformers is constrained, causing utilities to seek solutions for extending the life of these assets. Sensible Photonics fiber optic sensors provide real-time temperature readings for electrical assets and can enable the proactive prediction of required maintenance and imminent failures due to thermal runaway, resulting in improved reliability, financial savings, enhanced lifespan of equipment, operational efficiency, and safety.



Smart Cocoon

<https://mysmartcocoon.com>

Concord, Ontario, Canada

Green Building

At SmartCocoon, we are passionate about creating climate comfort for in-door environments while reducing the energy footprint through our world class technology



Solais Ventures LLC

<http://www.solaisventures.com>

Belle Mead, New Jersey

Waste

Solais is developing a technology called Pyrogest which is essentially an integration of Anaerobic Digestion and Pyrolysis. Together, the technology processes wasted biomasses like pre and post consumer food waste, crop and forest residue and manures that cause enormous GHG emissions while maximizing Renewable energy recovery and creating a broader spectrum of products like Organic Biofertilizers and Biochar. We are researching isolating Hydrogen from gas fractions for Fuel cell storage.



SP Elements

<http://spmills.com>

Erode, Tamil Nadu, India

Water

I provide solutions to improve efficiency and lower operating costs for zero liquid discharge (ZLD) systems. I also provide solutions to the unaddressed problem of solid residue from ZLD. Our solutions better the financial viability of ZLD operations making them business driven practice instead of a regulatory driven one.



Verde Technologies Incorporated

<https://www.linkedin.com/company/verde-technologies-incorporated/>

Burlington, Vermont

Energy Generation

Verde Technologies is a thin-film solar company that specializes in roll-to-roll manufacturing using perovskites. Their flexible panels will be used mainly for commercial rooftops as they are 87% lighter than traditional panels and have an adhesive backing. These benefits eliminate many concerns, some being the snow, wind, and rain load on roofs, and the intense labor of installing heavy ballast mounting systems.



Vermillion Power Technologies Inc.

<https://vpwrtech.com/>

Calgary, Alberta, Canada

Energy Generation

Imagine a world where everyone can use renewable energy. This is extremely important to us at VPT, and we have developed a renewable energy system that is simple, affordable and expandable. Our technology is patent pending & proven. We have a 75% cost advantage, and the design is flexible & future proof. VPT is partnering with a US utility to pilot our product with their customers, So you can have your emergency back up system & start converting your home to solar for less than \$1000, yourself



2022 Cleantech Open Northeast

