Why should you join this project?

Clean Technology opportunities are center stage in today’s entrepreneurial and venture capital activity. Your GEM Project efforts this quarter will make significant contributions to the market development and business strategy of an award-winning clean tech startup based in Northern California.

By teaming with Micromidas you will learn about emerging clean technologies and business models, and gain invaluable experience at a time of great excitement and growth in this industry. Clean technology is the future and represents an incredible opportunity for those interested in pursuing new entrepreneurial ventures and careers.

About Us

The Company
Micromidas, Inc. is a twenty month old clean technology startup founded by chemical engineers and microbiologists from the University of California at Davis. The founders’ vision is to revolutionize the emerging market for a range of biochemical products, including biodegradable, compostable bioplastics, while significantly reducing biomass disposal challenges for municipal wastewater treatment plants.

The company has already won state and national acclaim in a variety of entrepreneurial competitions, including the University of California “Big Bang” technology competition, the Environmental Protection Agency’s “People, Prosperity and the Planet Sustainable Design” Competition, and, most recently, the National Clean Tech Open Competition held in San Francisco in November.

Micromidas is currently in the process of closing its Series A round of venture financing.

What We Offer Customers
At Micromidas pioneering new clean technology solutions represents the foundation and future of our business. Innovating biochemical solutions while solving huge environmental sludge disposal problems are the central focus of what we offer our customers.

Micromidas clean technology closes the biomass cycle by enabling the production of a myriad of products from highly diverse, biological feedstocks. The company’s innovative biorefinery processes convert carbon found in organic wastewater into a range of biochemical products, including degradable, compostable bioplastics that can be used in place of harmful petrochemical based alternatives.

Micromidas biorefinery processes generate high yields of biochemical products and bioplastic outputs, while substantially reducing the amount of solid waste material requiring expensive treatment and disposal by municipal wastewater treatment facilities.
**Key Micromidas Business Opportunities**

Biosolids disposal represents a very significant expense category for municipal wastewater treatment plants (WWTPs). Approximately 40% of a WWTP’s overall annual budget goes towards management and disposal of unwanted biosolids, also referred to as sludge. Disposal methods such as transport to landfills, incineration, and land surface application are expensive, environmentally difficult, and fraught with community and governmental policy issues. Working closely with municipal WWTPs to reduce this huge expense is a highly compelling business opportunity for Micromidas.

Wastes generated from traditional petroleum-based plastics are also huge financial and ecological problems. Less than 10% of the world’s post-consumer plastics are recycled. Well over 80% of this material is sent to landfills, requiring millennia to fully degrade and become non-toxic. The scale of this problem is enormous. Solutions that address this problem will be very popular and very profitable.

Micromidas also sees a tremendous opportunity in assisting manufacturers with a wide range of biochemical solutions and biodegradable, compostable bioplastics. One of the markets the company is targeting is the enormous disposable plastics market, estimated to be approximately 77 million metric tons annually or $40 billion per year. For plastic manufacturers interested in bio-plastics alternatives, Micromidas is producing earth-friendly polyhydroxyalkanoates (PHA) plastics. Unlike other bioplastics which rely on sugar or cellulose feedstocks, Micromidas uses advanced microbial bio-refinery processes to extract carbon from wastewater streams, eliminating the impact on existing food supplies and natural resources.

The Micromidas PHA market entry will be a key element in the nascent, fast-growing bioplastics industry worldwide. This market is currently valued at more than $1 billion, and growing at an annual rate in excess of 18% - similar to semi-conductor markets of the 1960s and 1970s, or the Information Technology markets of the 1980s and 1990s. Micromidas anticipates being able to address .05% of this market with its first bio-refinery plant, and over time, more than 20% as successive Micromidas bio-refinery plants come online.

Other huge markets exist for biochemical alternatives that provide polymer precursors used in the formulation and production of a wide range of industrial and chemical products. These biochemical foundation products are purchased by chemical companies and manufacturers around the world, and represent a significant and growing business opportunity due to the the increasing price and supply volatility of fossil fuel based feedstocks like petroleum.

**Project Details**

Like many early stage clean technology startup companies, Micromidas is primarily focused on scientific research, product development, process engineering, near term customer acquisition, and pilot deployments at customer locations.

The GEM Team can assist Micromidas by building on significant market research conducted in the Winter Quarter by earlier GEM team participants. This research focused on several key Asian markets and helped Micromidas identify, understand, and prioritize significant business opportunities, and frame important international “go-to-market” strategies.
Taking this work to the next level is Part 1 of the Spring Quarter assignment. The specific focus will be on Micromidas biorefinery technology business opportunities with municipal wastewater treatment authorities in Singapore and Hong Kong.

Part 2 of the Spring Quarter GEM Project assignment will be to help the company conduct significant research in to business opportunities that exist for a range of biochemical products made possible through Micromidas biorefinery processes. This market research will focus on specific biochemicals and include assessing market size, revenue opportunities, competitive threats, potential customers, geographic priority for market development, cost advantages/comparisons with traditional petroleum based alternatives, etc.

What You Get

First of all, you already have a tremendous advantage: the great work done last quarter by GEM Program alumni which will serve as a research baseline, and a great foundation for getting up to speed quickly on Micromidas global business opportunities and challenges.

Secondly, you will work with and learn from entrepreneurs and seasoned advisors building a new generation of biorefinery businesses around the world. The experience working with Micromidas will provide a window in to the fast-growing clean tech industry, and the numerous new business opportunities unfolding for young entrepreneurs from all educational and vocational backgrounds. The networking relationships, knowledge, and experience you develop will be invaluable. This is the perfect opportunity to learn about one of the fastest growing markets in the world.

Your presentation deliverables will be to provide, in hardcopy and PowerPoint form, a final report to the Micromidas executive team and advisors, detailing your research highlights and specific recommendations for future strategy and market actions.

Additional Information

We would prefer to work with a four to five member team whose combined experience might include some or all of the following: online marketing research capabilities, general business analysis, competitive assessment, and pricing skills. Some familiarity with Singapore and Hong Kong markets is a plus, but not a requirement.

How To Reach Us

We welcome your questions about our proposed project. We can be reached at:

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