



# DESTINATION STARTUP

## Pure Blue Tech, Inc.

**One-Sentence Summary of What You Do:** Pure Blue Tech is developing the world's most productive, efficient and low-fouling membrane elements for desalination, wastewater treatment and industrial processing.

**Affiliated Institution:** University of Colorado Boulder

**Have you formed a company yet?** Yes

**Funding/Financing:** Grant Funding, Direct/Indirect University Support, Angel Funding (including Self or Friends/Family)

**Please describe your company and the problem you are trying to solve:** Pure Blue Tech develops innovative water treatment solutions that save energy, water, and money. Membranes separate viruses, fats, and particles in liquids throughout industries including electronics, food & beverage, and desalination. The costly problem with membranes is fouling—clogging and degradation. Fouling wastes energy, downtime, production, chemicals, labor, and membranes. PureMembrane reduces fouling 50-80% with its patented nano-imprinted membranes and clean-in-place ultrasound. It can efficiently separate whey in dairy, organics in wastewater, and salts in seawater. PureMembrane increases throughput, saves energy, and reduces maintenance costs. PureMembrane enables less infrastructure to efficiently treat more water for less. Our flat-sheet membranes have been tested and validated, and scaled from vertical imprinting to continuous roll-to-roll embossing. We are in the process of developing commercial-scale manufacturing for scaled membrane element field demonstrations to occur in 2021. More than 10 multinationals and corporations have expressed interest in our technology and products, with \$1M US Army contract signed (\$800k earned to date) and another \$1.5M of commercial interest. Both the nanoimprint and ultrasound technology have an issued patent (2 total).

**What is/was your go-to-market strategy?**

Sequence: Our market commercialization sequence is as follows, unless excellent channel partners and/or specific revenue/project opportunities arise in alignment with our goals. 1. Military 2. Dairy processing and other food processing 3. Industrial process water 4. Wastewater 5. Desalination – ultimately the largest market, though the longest to develop given the relatively longer sales cycles in B2G vs. B2B sales.



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Strategy: Our commercialization strategy is to contract manufacture (existing working collaboration) and: A) Directly sell to customers, e.g. Darigold, a 450-farm dairy cooperative (verbal intent to purchase \$1mm of units in first two commercial years. Then, B) Sell through key specific channels-to-market, beginning with OEMs and distributors we already know including:

- WaterTectonics, an industrial wastewater treatment systems design-build-operate company (\$500k LOI secured).
- Alfa Laval, the world-leading dairy membrane processing systems provider.
- Pall, a large multinational leading municipal wastewater treatment systems.
- WaterSurplus, a world-leading equipment repurposing and leasing company.
- And other market-focused OEMs and systems integrators.

## How will/do you generate revenue?

Model: We will sell patented PureMembrane elements direct to end users and through key channels including OEMs and consulting engineering firms. Standard elements sell for \$800 (average) in industrial applications like food and beverage, and sell for \$500 (average) in municipal applications.

## Traction:

1. U.S. Army – \$1mm in contracts to date; \$750k revenue received to date for development, testing, and manufacturing milestones completed from/through these contracts. The final deliverable is 24 nanoimprinted reverse osmosis membrane elements, dimensions: 2521.
2. WaterTectonics – signed LOI to purchase 1,000 units @ per unit “cost + \$250” (~\$600) = total est. \$600k
3. Utility Management Group Ltd. – signed LOI for 22 units @ per unit “cost + \$250” (~\$600) = total est. \$13,200
4. Darigold – Verbal intent to purchase \$1mm of units in the first two years. Furthermore, they provided us 250 pounds of dry whey for our dairy ultrasound system tests. They look forward to piloting our solutions necessary to trigger the first purchase order.
5. Pall – Interested in selling (or licensing or acquiring) both of our products/technologies for their large network of customers. Pall is a multinational, multi-billion-dollar water systems leader especially in the municipal wastewater market. They look forward to testing our units.
6. Alfa Laval – Interested in licensing or acquiring both of our technologies to their international network of dairy customers and other industrial liquid processing facility customers.

**How will this showcase benefit your company or technology?** This showcase will benefit our company by the introduction of new VC and angel investors, plus potentially strategic corporate partners. We are opening a seed investment round. \$2 million provides us runway to build commercial product, demonstrate, and initiate sales. We welcome new team members experienced in membrane development, sales, or management. Corporate partners could include membrane users or channels to market.



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## Who are the members of your team and why is this the right team to get the job done?

- Ryan Vogel – Founder & CEO. Founded bluetech business accelerator growing 10+ startups, and built network of mentors, channels, and acquirers. Former VP of Business Development, Assets America (commercial financing). Project Sponsor: UW Global Integrated Systems Engineering. BS Finance & Entrepreneurship, UW. Featured in High Country News' "10 Leaders under 30 Changing the West." Geekwire nominated Young Entrepreneur of the Year.
- Dave Paulson – CTO (interim). 45 year membrane and water treatment-focused technical & company growth veteran. While helping develop Osmonics early membrane technology, then building its R&D department, he saw the fledgling RO, NF and UF technologies through their technical and commercial infancy to their accepted status today. As Corporate R&D Director he led design and development of 20+ water treatment product lines internally and through acquisitions, and led Osmonics' applications and market development, its IP strategy, product commercialization, and technology marketing strategy. GE acquired Osmonics in 2003. He authored 40+ papers on membranes, applications, and technology trends.
- Randy Truby – VP Global Business. 45 year veteran in membrane marketing, development, application, and manufacture. Formerly served as VP of Aqua Media Ltd., CEO of Fluid Systems Corporation, VP of Hydranautics/Nitto, CEO of Toray Membrane USA, and CEO of NeoTech Aqua Solutions. Involved in many major desalination systems around the world. Former President, VP, and Chairman of International Desalination Association (IDA), American Membrane Technology Association (AMTA), and Affordable Desalination Collaboration (ADC), respectively. Authored 55 presentations on membrane desalination technology and market development.