HIGH TECH XL

DEEP TECH
VENTURE BUILDER

VENTURE OPPORTUNITY

MAKE “FOREVER CHEMICALS” FINITE

Let’s build a future where PFAS are not impacting the environment and our health

THE CHALLENGE: A World Where PFAS No Longer Accumulate

PFAS are synthetic chemicals prized for decades for their resistance to heat, water, oil, and chemical breakdown. That same resistance is now the world's problem: PFAS do not degrade naturally, and they have accumulated steadily in soil, water, the food chain, and the human body. Long-term exposure has been linked to immune system, liver, and developmental effects, and for a large share of the population, combined exposure through food and drinking water already exceeds health-based guidance values. Every year we don't act, the burden compounds for the next generation.

Compounding this environmental burden, tightening global legislation, such as the EU's sweeping REACH restrictions and stricter drinking water directives, is shifting from mere monitoring to active liability. Industries and utilities face mounting legal pressure and escalating disposal liabilities, making the status quo untenable.

The frustrating part is that this is not a detection problem. Monitoring and analytical methods for finding PFAS in water are mature and reliable. *The gap is on the treatment side: today's leading technologies, granular activated carbon, ion exchange, high-pressure membranes, only concentrate or separate PFAS out of water. They do not destroy it.* That leaves a hazardous, highly concentrated waste stream that someone still must deal with. Currently most of the PFAS gets filtered however then ends up in landfills or gets incinerated and as a result ends up in the environment again. This venture will close the destruction gap, turning endless pollution into permanent remediation to restore our water, protect future generations, and secure a truly clean planet.

THE SOLUTION: The Core Innovation

A modular, non-thermal plasma platform, combined with purpose-built bubble, foam, and interfacial reactor designs. Non-thermal plasma generates energetic electrons, reactive radicals, hydrated electrons, UV radiation, and strong local electric fields, all without heating the entire volume of water to extreme temperatures. That combination is what makes true destruction of PFAS possible, rather than simply moving the problem downstream.

Why do we believe in this technology:
It integrates advanced plasma physics, fluid dynamics, gas-liquid mass transfer, power electronics, process control, and rigorous analytical validation into a single working system; a hard combination of disciplines to replicate.

It’s built for broad-spectrum performance across thousands of distinct PFAS variants, including short-chain PFAS and TFA, rather than being tuned narrowly to well-known compounds like PFOA or PFOS.

Patent & IP status: technology developed by HighTechXL in combination with partners; patent filing pending, with Freedom-to-Operate (FTO) analyses already completed.

THE OPPORTUNITY: Product-Market Fit Hypothesis

Industrial emitters and water treatment plants represent the primary near-term targets for this technology. Additional opportunities exist across sectors managing complex, dilute PFAS flows, including groundwater remediation and wastewater treatment, where a destruction step is required to complement existing concentration technologies.

Value Proposition: The venture provides the destruction step required after proven concentration technologies. Rather than simply relocating the PFAS, it destroys the compounds at the source, transforming an escalating liability, driven by tightening regulation, into a permanent solved problem.

Revenue Model: The venture generates revenue by supplying its plasma destruction technology to industrial and municipal operator as a capital equipment sale. This positions the technology as a modular add-on that integrates directly with customers' existing concentration infrastructure, minimizing adoption friction to ongoing regulatory-driven demand.

An interesting opportunity is to use the PFAS removal and destruction technology for decentralised soil remediation. There are a great number of e.g. industrial sites, military and fire brigade sites which need (cost) effective treatment options.

WHO WE ARE LOOKING FOR

CEO / CBO: commercialization experience in environmental services (selling industrial treatment systems e.g. related to waste treatment or industrial water technology; relationships with engineering primes and NL/EU counterparts (waterschappen, Rijkswaterstaat) who gatekeep customer access; working knowledge of the different EU and NL Regulation, since this market's sales cycle is regulation-driven; track record raising deep-tech capital and accessing non-dilutive funding (eg. SERDP/ESTCP, EU Horizon/LIFE).

CTO / Plasma Systems Architect: expertise in non-thermal plasma physics and mechanical engineering, pulsed power, reactor engineering, and scale-up from bench to field-deployable systems; experience with independent third-party analytical validation, since credibility here depends on externally verified destruction data; familiarity with environmental permitting and destruction-efficiency standards.

WHAT WE BRING: Build it with HighTechXL

Structure program: During the program, you will validate the problem you want to solve, consolidate your team, find the right business model, develop the proof of technology and reach investor readiness. All this in collaboration of HTXL team.

Venture Journey: Interactive guidance through the milestones to help you prepare in each phase of the program and its gate moments.

Free office space: Once the program starts you will be able to use HTXL's office space and meeting rooms to work with your team and have private meetings.

1-1 Sessions: During the program, your venture will benefit from 1:1 covering business, team, financial, legal, technology, subsidies, supply chain and more that will keep you on the right track and support the development of your venture

Network Access: You will get access to the deep-tech startup ecosystem. Including HTXL partners and beyond.

Visibility: Because being on the radar of the right people is important, HTXL creates exclusive opportunities for ventures to capture the spotlight and connect to new talents for your team, investors and major players who can help you to grow.

Workshops: You will be invited to participate in a variety of workshops addressing topics such as team dynamics, market validation, supply chain, venture branding, media training, subsidies and more.

PreSeedXL Fund: You will have the opportunity to receive pre-seed investment from our HighTechXL Fund during the program once the venture has successfully passed the relevant gate moments.

Pre-seed and Seed Fundraising Support: We will introduce you to investors within our ecosystem and support you with fundraising and term sheet negotiations.

Equity Split / Cap Table Structure: Founders and HighTechXL build the venture together as co-founders, sharing both the opportunity and the risk. Individual founders retain a significant ownership stake in the company, while HighTechXL is equally committed to the venture and invested in its success. The specific cap table and equity allocation are discussed and agreed privately on a 1:1 basis, depending on the venture and deal structure.

READY TO TURN THIS OPPORTUNITY INTO YOUR NEXT ADVENTURE?

If you see yourself as the founder of this venture, we'd love to hear from you.

Email Ximena at ximena@hightechxl.com and mention this venture opportunity to start the conversation for our fall cohort 2026.

HIGH TECH XL

GET INVOLVED

WE DON'T WAIT FOR THE FUTURE, WE BUILD IT.

New venture opportunities are on the horizon. Explore where they lead and find the co-founders who'll walk the path with you.

HIGHTECHXL.COM

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