innovation works
CASE STUDY

Pressed for Success: Rewiring the Vinyl Supply Chain



Despite vinyl's resurgence into a multi-billion-dollar market, the infrastructure behind it remains outdated. Fragile supply chains and legacy production cycles that stretch from six to twelve months create a systemic bottleneck for artists. With physical sales generating significantly higher margins than streaming, these delayed releases represent a direct threat to artist viability.

Founded in 2023, **Lead-In Record Co.** is re-engineering how records are made by integrating modern manufacturing, robotics hardware, and software. Lead-In's proprietary system produces vinyl on demand—reducing turnaround times to as little as 24 hours. By replacing brittle manual processes with a streamlined, automated approach, Lead-In enables a high-quality and accessible path to physical distribution. This shift allows artists to move at digital market speed while retaining a greater share of the value they create.

Lead-In co-founder and CEO **Maximillian Obasiolu** drives this vision through a rare blend of music industry experience and technical fluency. A former jazz trombonist, Obasiolu spent years immersed in the Chicago indie music scene promoting concerts and managing artists. While pursuing an electrical engineering degree at Washington State University, he continued booking talent. Obasiolu later earned dual master's degrees from Carnegie Mellon University (CMU), where he met co-founder and CTO **Kevin Chou** in a robotics course. Their complementary partnership combines Obasiolu's expertise in electrical engineering with Chou's strengths in mechanical design and fabrication. Together, they have developed a vertically integrated hardware and software platform to automate vinyl production at scale. The core thesis is simple: robotics, signal processing, and AI can transform record fabrication from an antiquated process into an on-demand bespoke capability for artists.

Challenge

For Lead-In Record Co., reinventing vinyl manufacturing meant tackling an industrial-scale problem, not just a technical one. Building a robotic system to make high-quality records on demand required tight coordination across mechanical, electrical, and software systems—all while navigating a fragmented, outdated supply chain.

At the prototype stage, sourcing and manufacturing quickly became major obstacles. Critical components required specialized materials, novel geometries, and tight tolerances that many shops couldn't support. The team faced repeated setbacks, including rejection from more than a dozen contract manufacturers. At the same time, the team was pushing into largely uncharted territory, rethinking manufacturing tools, durability, and sound quality, while also redesigning their system for manufacturability, consistency, and scale in an industry with no clear quality standards.

Project Details

Company:
Lead-In Record Co.

Year Founded:
2023

Founders:
Maximilian Obasiolu and **Kevin Chou**

Programs Participated In (Year):
AlphaLab (2024)
Robotics Factory Scale Program (2025)





AlphaLab was instrumental in bringing our product to life, truly accelerating time to market."

-Maximillian Obasiolu
Co-Founder and CEO, Lead-In Record Co.

Solution

Innovation Works' AlphaLab and Robotics Factory Scale programs served as a critical bridge between Lead-In's ambitious vision and the realities of hardware commercialization. Through AlphaLab, the team gained early-stage capital and, more importantly, hands-on access to manufacturing support. Working closely with in-house shop staff and electromechanical engineer **Andrew Katon**, Lead-In rapidly iterated on its original scrappy prototype, refining mechanical components, overhauling its electrical architecture, and advancing firmware and software systems. Design reviews became a core discipline, ensuring each iteration met not just functional requirements, but standards for manufacturability and scalability.

Equally important was AlphaLab's role in unlocking the supply chain. After being turned away by more than a dozen contract manufacturers, Lead-In was connected through the program's mentor network to a local supplier who successfully produced a critical component. That breakthrough opened the door to a broader network of partners, with the team touring facilities and vetting manufacturers across machining, printing, and finishing. What began as a major constraint evolved into a growing operational advantage, grounded in trusted relationships and a clearer path to production.

Lead-In's Robotics Factory Scale residency built on this momentum by shifting focus from prototyping to consistency and quality. The team identified and eliminated sources of variation across mechanical, electrical, and process layers, leading to targeted redesigns and more robust quality assurance. This included advanced multimodal analysis to evaluate records immediately after manufacturing, ensuring tighter control over sound performance. With no industry standards, Lead-In established its own engineering methods for repeatable, high-quality output. The result is a system that not only accelerates production but also delivers the consistency and fidelity required to compete at the forefront of modern vinyl manufacturing.

Lead-In Record Co. continues to leverage Pittsburgh's hardware ecosystem to accelerate technical and operational growth. Partnerships with CMU, InnovatePGH, and AlphaLab provide ongoing technical and institutional support, while a 2025 Equity|Impact Center IMPACT Fund award strengthened prototyping and operations. The company also gives back through collaborations with the SCALE Fellowship, manufacturing records for emerging black women artists. This convergence of talent, capital, and collaboration gives Lead-In a formidable edge in a specialized hardware market.

With Prototype 2.5 now in market-facing R&D and a waitlist of 300+ artists, Lead-In Record Co. is at a defining inflection point, focused on proving performance, consistency, and real-world demand. The immediate priority is to establish a repeatable pipeline with a small set of breakthrough artists, then scale with precision. As the system advances through integrated signal and audio analysis and high-precision mechanical control, the company is building toward an end-to-end, on-demand platform that removes the barriers of traditional vinyl production and enables independent artists to create, monetize, and scale more effectively.

Innovation Works and the Robotics Factory

Innovation Works is one of the most active early-stage investors in the country and the most active in Pennsylvania. Since its inception of the seed fund in 1999, Innovation Works has invested in over 800 companies that have gone on to raise $3.74 billion in follow-on funding. Innovation Works is part of the Ben Franklin Technology Partners network, which has catalyzed economic growth over the last 30 years by providing access to capital and networks that help foster innovation and technology-based economic development in Pennsylvania. The Robotics Factory is an array of robotics programs led by Innovation Works and the Pittsburgh Robotics Network. Learn more at **innovationworks.org** and **roboticsfactory.org**.