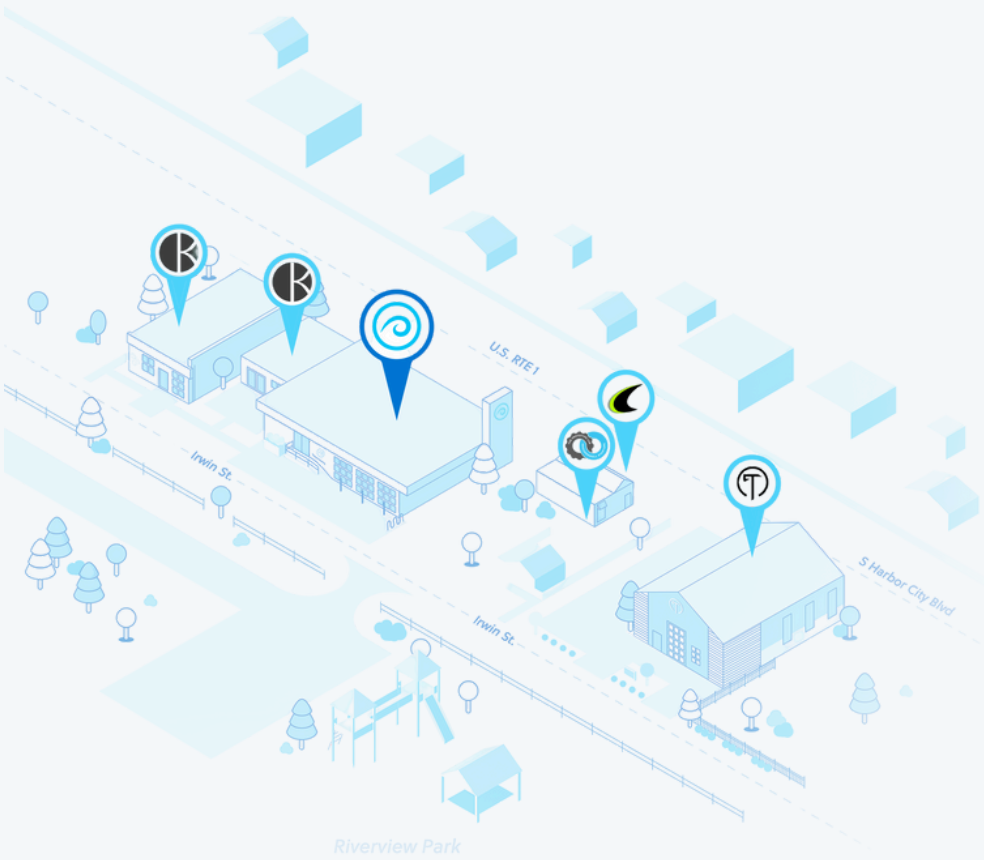
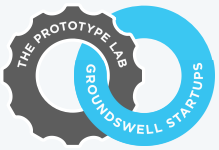
Impact Report

Groundswell Startups Prototype Lab



2023-2025



Since its launch in 2023, the Prototype Lab at Groundswell Startups has served as a critical infrastructure investment in support of Space Coast entrepreneurs, engineers, and inventors. Created through a $500,000 American Rescue Plan Act (ARPA) award from the Brevard County Commission, the lab enables early-stage companies to rapidly design, prototype, test, and iterate on hardware solutions without the typical delays and expenses associated with outsourcing or overseas production.

Since its launch, the lab has also become a vital resource for local businesses, educators, and independent professionals. It offers access to cutting-edge tools and support previously unavailable in the community.

Located in a dedicated 2,500 sq. ft. facility adjacent to Groundswell's main campus, the lab is equipped with state-of-the-art 3D printing technologies and, as of 2025, advanced electronic prototyping tools. The Prototype Lab has played a catalytic role in accelerating timelines, reducing development costs, and transforming early concepts into validated products ready for market.

This report highlights the lab's capabilities, startup success stories, collaborative partnerships, and measurable impacts since opening.

Technical Capabilities

Groundswell's Prototype Lab is designed to meet a broad spectrum of early-stage product development needs. Its in-house technologies cover fused filament fabrication (FFF), selective laser sintering (SLS), stereolithography (SLA), and printed electronics (DIW). These tools empower startups to produce functional prototypes, test-fit components, and even manufacture small production runs.

FUSED FILAMENT FABRICATION (FFF):

Bambu Lab - X1 Carbon

This high-speed desktop printer enables rapid iteration with tight tolerances (down to 7 microns). It is ideal for mechanical components, product housings, functional parts, and test rigs.

Photo credit: Bambu Lab

SELECTIVE LASER SINTERING (SLS):

Formlabs Fuse 1+ and Fuse Blast

SLS printing allows startups to create strong, detailed nylon parts without supports, which is ideal for durable components used in robotics, aerospace, and wearable devices. With 110-micron resolution, the Fuse system supports complex mechanical assemblies and high-load functional testing.

Photo credit: Formlabs Inc.

STEREOLITHOGRAPHY (SLA):

Formlabs Form 3L

The SLA workflow supports extremely high-resolution printing (25 microns) for specialized use cases such as medical devices, biocompatible prototypes, temperature-sensitive applications, and design validation.

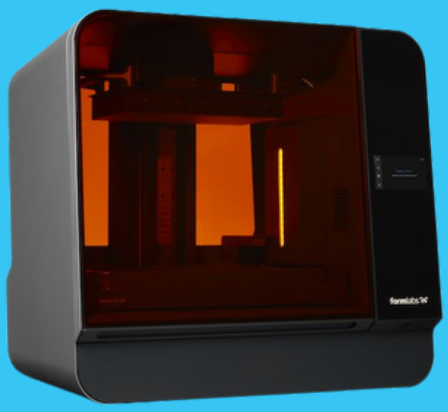


Photo credit: Formlabs Inc.

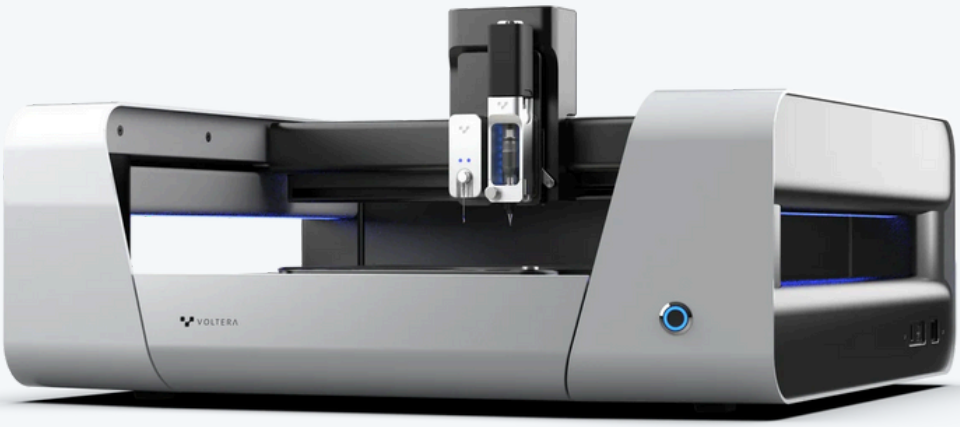


Photo credit: Voltera Inc.

PRINTED ELECTRONICS (DIRECT INK WRITE):

Voltera NOVA (added in 2025)

The most recent addition to the lab, the NOVA system, enables startups to prototype stretchable circuits, embedded sensors, and printed functional materials. Key features include a 220 x 300 mm print area, modular tool heads, automatic material detection, and a vision-guided microdispensing system. This tool supports the development of wearable electronics, medical sensors, and other applications requiring flexible substrates.

Startup Impact & Success Stories

The Prototype Lab's capabilities have directly impacted startups at various stages of product development, helping them avoid costly manufacturing delays and establish a local-first approach to innovation. From low-fidelity mockups to fully functional components, the lab has enabled entrepreneurs to test, iterate, and scale faster.

SwiftPaws, a pet health and wellness company that gained national visibility on Shark Tank, used the lab to print over 300 production parts for their flagship lure coursing system. With long overseas lead times threatening to delay shipments, the lab offered a fast, local alternative to get them back on track. The ability to fulfill orders with quality 3D-printed parts helped them maintain customer satisfaction and momentum following their televised success.

Tomahawk Robotics, a defense tech startup that was recently acquired by AeroVironment, leveraged the lab in its early stages to prototype mission-critical hardware. With complex geometries and fast-changing specifications, the lab enabled rapid iteration while protecting sensitive IP and reducing the time to secure government contracts. Their experience reflects how quick-turn prototyping can play a strategic role in both development and defense compliance.

Kalogon

Kalogon, creators of the world's first smart seating system for wheelchair users, used the lab to test new configurations of their patented pressure-sensing cushion. The team was able to quickly print enclosures and integrate electronics, allowing for user testing and data collection without delays. This capability accelerated their go-to-market timeline and helped them demonstrate early value to investors and healthcare partners.

Adonai Fitness, a strength training startup founded by Thomas Gallia, transformed an early idea into a manufacturable product using the resources of the lab. With support through each phase of prototyping, the product was refined for durability and strength testing. Gallia was able to showcase his prototype at the University of Tampa's pitch competition—where he won first place. The experience exemplifies how physical product support can increase a founder's confidence and competitiveness.

The House of Dreamz, a wellness-focused brand launched by Angela Ross, brought a patent-pending pregnancy support product to life with help from the lab. After years of development, the lab enabled Ross and her team to finally realize a functional prototype, positioning them to generate traction and feedback. Since launching, the company has received positive reviews, media features, and new opportunities for strategic growth—all made possible by access to rapid prototyping.

Workforce Development

Beyond startup acceleration, the lab serves as a talent development hub where students and young professionals gain hands-on experience in advanced manufacturing, electronics, and design for production.

Since 2023, the Prototype Lab has supported more than 15 interns from local and regional institutions, including the Florida Institute of Technology (Florida Tech), Eastern Florida State College, and the University of Florida. Interns are paired with local startups to gain exposure to real-world design challenges and build practical skills in prototyping, CAD, fabrication, and systems thinking.

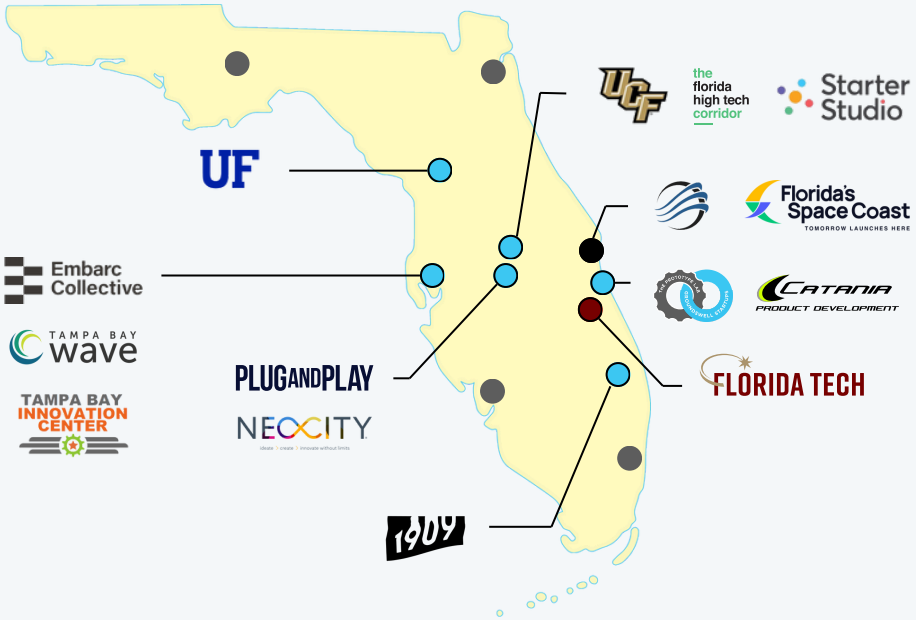
In 2025, five interns are currently active in the lab, contributing to both startup support and internal projects. Several interns have transitioned into full-time roles within the region's hardware and aerospace sectors, reinforcing the lab's role as a pipeline for talent retention.

Collaborations & Regional Partnerships

The Prototype Lab plays a vital role in strengthening the innovation ecosystem across the Space Coast and beyond. Groundswell has established strategic relationships with the following partners to expand the lab's reach and increase its impact:

- The Economic Development Commission of Florida's Space Coast
- The North Brevard Economic Development Zone
- Catania Product Development
- Embarc Collective (Tampa)
- Florida High Tech Corridor
- Starter Studio (Orlando)
- Vertex at Florida Tech (formerly CAMID)
- UF Ignite (Gainesville)

Additionally, Groundswell has worked with faculty at Florida Tech to offer continuing education opportunities and facilitate research projects that leverage the lab's capabilities for interdisciplinary work.



Community Investment & Cultural Identity

Thanks to public and private investment in Brevard County's innovation future, the Prototype Lab exists. The $500,000 ARPA grant was used to outfit the lab with advanced equipment and perform essential capital upgrades to the Groundswell campus, including office renovations and roof repairs.

Bud Deffebach, a local entrepreneur and co-founder of Groundswell Startups, generously donated the building housing the lab. His ongoing contributions to Brevard's tech ecosystem continue to shape the future of innovation on the Space Coast.

To celebrate the creative spirit of the lab, Groundswell commissioned a full-scale mural by local artist Christopher Maslow. Known for his dynamic work across the southeast, Maslow transformed the lab interior into a vibrant, street-art-inspired space that reflects the experimental and hands-on nature of prototyping.

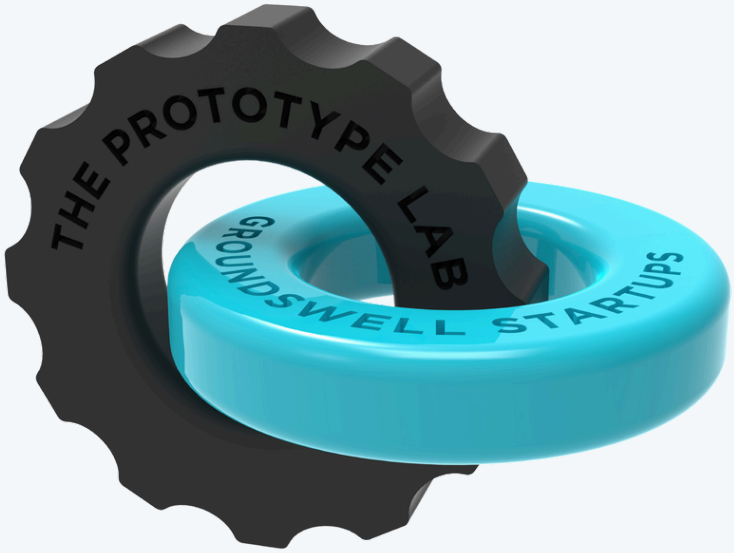
In addition, Groundswell's first 3D mural was created by XR artist Shelby Vecchio, a member and local creative whose work blends fine art and emerging technology to celebrate innovation through immersive design.

Looking Ahead

As of 2025, the lab continues to evolve in response to startup demand and the growing need for domestic product development infrastructure. New investments in electronics prototyping, smart manufacturing, and batch production workflows are enabling startups to pursue more ambitious innovations while staying local.

The lab has supported product development across more than ten industries, including robotics, defense, medical devices, consumer electronics, wearables, and mobility.

In the years ahead, Groundswell's Prototype Lab will continue to expand access to cutting-edge tools, foster technical mentorship, and accelerate the growth of founder-led companies across the southeastern United States.



Let's Build the Future, Together.

Groundswell Startups is fueled by founders, makers, mentors, and supporters who believe in the power of local innovation.

Whether you're a startup, investor, partner, or champion of community-driven growth, we'd love to connect.

Visit us:
www.swellstartups.com

Email:
prototype@swellstartups.com

Follow us:
Instagram and LinkedIn

Address:
2412 Irwin Street,
Melbourne, FL 32901