

# Studio LINQ

## Customer Case Study



# GKN Additive Helps Studio LINQ Get Product to Market

## Footwear Startup Relies on AM Experts for Successful Launch

Studio LINQ founder Tarik Kaddouri found himself in a jam when the manufacturer that was going to print his company's revolutionary footwear could no longer fulfill its role. Kaddouri needed to find an additive manufacturer that could partner with him to develop a product that had never been printed before. Thanks to the team at GKN Additive (Forecast 3D), Kaddouri was able to bring his concept to life.

### Studio LINQ Values a Partner With Vision

At his first meeting with representatives from GKN Additive in May 2021, Kaddouri explained his big-picture view of the business of footwear and human movement issues. He then revealed the unique cushioning structure his team had invented using architectural principles and ergonomics, and the feedback they had garnered from Olympic athletes.

As the founder of a startup, Kaddouri wears many hats: project management, innovation development, 3D design, algorithmic design, material development, product testing, procurement, quality control standards. He wants to inspire the world with 3D printed footwear that offers benefits to high-performance athletes.

Unfortunately, the project had gotten derailed because the primary factory Studio LINQ was using was no longer available due to an acquisition. Kaddouri found that the GKN Additive team not only comprehended his business model, but also showed a willingness

to shepherd his project in order to execute his vision in an efficient way.

"It was clear the other factory closing was a blessing in disguise, as the value alignment of innovation, transparency, and speed quickly led to an exciting 'aha' moment," Kaddouri recalls.

### Project Requires Flexibility

Injection molding could not create the footwear's unique new cushioning system; Studio LINQ needed an additive manufacturing provider who could offer the following:

- Machine and material access
- Deep understanding of Studio LINQ's business goals
- Organizational unity in accommodating customers
- Competitive cost

Kaddouri had considered other vendors: service companies, machine manufacturers, and 10 different material vendors — including international vendors in Taiwan and Italy. However, he chose GKN Additive for the access to 3D printing, as well as the team's knowledge of materials and a willingness to develop something nobody had created before.

"It's a hybrid of deep understanding, machinery, materials, and business operations for their customers' success," Kaddouri explains. "Other firms will say, 'That can't be done,' and move on. [GKN Additive leaders] make it a point to learn the business their customers are in and drive organizational unity to accommodate customer success."

### About Studio LINQ

**Founded:** 2018

**Headquarters:** Portland, Oregon (USA)

**Mission:** Studio LINQ is a brand and manufacturing company dedicated to enabling humanity in the climate crisis era with fashion, culture, design, sport, science, and technology.

GKN Additive went beyond prototyping for this project, working with Studio LINQ from development through production.

"Few organizations have the soft skills required for successful consumer goods," Kaddouri says. "The GKN Additive team knows not every project is designed for 3D printing yet, and they are willing to educate and bring customers along in the process."



GKN Additive printed the LINQ Purity Glide with HP Multi Jet Fusion using TPU 88A material.

"Additionally, there's an attention to excellence amongst the management team and the labor force that handles the parts themselves. It is evident in the finished product. There are times where Studio LINQ's demands in terms of product technicality and turnaround time were well outside the norms, and yet the team never skips a beat."

However, due to GKN Additive's global industry relationships, the team found an existing supply of material and was able to complete the part.

GKN Additive ultimately printed the shoes, which come in either black or white, with HP Multi Jet Fusion (MJF) using TPU 88A (BASF Ultrasint™ TPU01)

which was crucial because Studio LINQ wanted its cushions to be zero-waste.

Kaddouri explains, "Our needs of innovation development challenged every part of the process, stretching from file handovers to file reviews to material recommendations to unique quality-control needs, and then to printing and postprocess to finishing. One thing that I do not think gets enough credit or attention is the shipping element. GKN Additive shipments are handled with genuine care.

"From when we started to where we are now, we cut our lead time down significantly, have a standard operating procedure on how to handle LINQ's unique and proprietary parts, and have even grown our business due to the product adoption in the market," Kaddouri adds.

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— Tarik Kaddouri, Studio LINQ founder

### **Agility Informs the Development Process**

This unique project required nimbleness from the GKN Additive team, particularly because Studio LINQ shoes involve a cutting-edge take on footwear. As part of the process, Studio LINQ and GKN Additive went through various iterations to enhance the end-user experience while also making sure the designs were manufacturable.

The project ran into a roadblock when a particular material could not be imported into the United States.

material. Postprocessing involved media blasting, as well as vapor smoothing and a flex paint finish. The footwear offers three-way arch support as well as a structure that is designed to energize the wearer with hundreds of "mini trampolines" that disperse pressure while massaging and priming the muscle fascia.

The project leveraged several of the strengths of MJF, such as its excellent dimensional accuracy along with isotropic tensile and impact strength properties. In addition to its other attributes, MJF offers high reusability,

### **Studio LINQ–GKN Additive Partnership: a Good Fit**

As a result of the partnership, Studio LINQ was able to release its footwear and has been showcasing the revolutionary design at various high-profile events, including during New York Fashion Week. The company has also garnered awards as a global design firm for its innovative approach.

Kaddouri says that — most importantly — athletes rave about their LINQs.

"Together we've achieved something that's never been done before, and it makes a positive impact on the athletics landscape."

**Find out how GKN Additive (Forecast 3D) can take your product from prototype to production. Visit [forecast3d.com](https://forecast3d.com) today or contact us directly at (800) 549-5414 or [hello@forecast3d.com](mailto:hello@forecast3d.com) to learn more.**

## Front Cover

Studio LINQ footwear is designed using ergonomics and architectural principles.



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