

# 50 States, 50 Stories

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## Oregon Manufacturer Lives and Works Hard to Maintain American Manufacturing Competitiveness

*By Doug Barry*

Many people never tire of hearing stories about small businesses succeeding in an increasingly consolidated multinational, borderless world. Especially when it involves manufacturing, there are divisive national politics over how to maintain and drive global competitiveness for American businesses.

Thomas Biju Isaac's story involves travel from India to the United States, then to China, then back to India. The result is a thriving multinational headquartered outside Portland, Oregon, that employs 50 people doing highly specialized contract manufacturing for three different industries: telecommunications, medical devices, and aerospace. With no easy paths to success, especially with protectionism on the rise and some pundits predicting the end of globalization, Isaac appears unperturbed.

He's accustomed to challenges. Born in India, he traveled to Rensselaer (RPI) in upstate New York to attain an MBA after his Bachelor's in Mechanical Engineering in India. After graduating, he joined General Electric, worked there for fifteen years in various leadership roles, finally leading a product line with sales of \$100 million. But it wasn't enough.



He recalls: "I left GE because I wanted to work with a smaller company and get more immediate feedback on my actions. In a big company there are too many variables that can positively or negatively affect your results. In a small company, if you're good, you'll hear it; if you're bad, you'll hear it also."

As President and CEO of Allied Technologies, he's done a lot of listening and learning since arriving in 2014 when a leveraged buyout enabled him to join and lead the company. He likes the maneuverability of small firms. "Big companies have a lot of bureaucracy—and that's not meant to be pejorative. The departments and policies in big firms help you navigate issues. In a small company, there is none of that. A positive when one must move quickly and negative when optimal risk management is required."

So far, the positives are ahead.

He said people expect small businesses to be nimble, which is generally true, but he doesn't want Allied to make decisions too quickly either. One decision he is clear on is to keep growing but only at a measured pace in the segments proactively selected for growth. "We are growing, but don't want to go too far beyond our capabilities to manage scalable growth. Through COVID and natural attrition, we got staffing numbers to where we are now, which seems to be the most efficient for us." Allied Technologies has employees in China, and now has a wholly-owned operation in India, where there is room to grow.

What he doesn't want is to get satisfied with a certain level of productivity and then stop growing. He said that many small businesses succumb to that approach. Similarly, most small businesses aren't interested in international markets or think it too risky. Not Isaac. The world is his oyster, a colossal collection of customers.

He chose the industries he works in for practical reasons. For aerospace, he says, business cycles are longer, with higher degree of risk management and a reputation for long-term supplier relationships. That means better predictability and cash flow for the company. For telecom, Allied makes internet and optical control devices for 4G and 5G communications devices. The demand is increasing, and the products lend themselves to supply chain diversification, quick turnaround on prototyping, and lower volume manufacturing in the USA with high volume in lower-cost countries.

### **Aging demographics meets advanced manufacturing**

During the last few years, ATI started manufacturing orthopedic products including implant screws

that go into shoulders, spines, ankles, femurs, and other body parts. In medical devices especially, his customers want the highest quality as these are human implants. This industry is served by small-scale businesses with potentially suboptimal operations, risk management, and labor. Consolidation by private equity or strategic buyers are driving economies of scale across smaller businesses and across geographical regions and reducing diversification of suppliers. "I saw that happening and decided we should expand our international manufacturing solutions to offer additional options to our customers." Given supply chain problems, it's important to avoid having all eggs in one basket. "We're diversified, manufacturing now not only China but also India."

*Previously, there were no tariffs, and now they are 20-25%. The impact has been over a few million dollars over three years.*

Orthopedic products are different in that they are almost always designed in the United States or Europe. Nearly all implants are manufactured in the United States for the North American market. Implants manufactured in China are typically for China or Asian consumption. Having ATI's manufacturing structure has enabled global customers to feel that they have a single supplier that can grow their market diversification along with them.

### **Manufacturing engineering**

ATI engages in a practice called manufacturing engineering where the customer designs the product, and his company does the prototyping and develops the manufacturing engineering processes for production. In this way, ATI provides the high-end, customer-centric support from Oregon, and then has the flexibility to move production according to the customer's preferences. For telecom customers, in addition to supporting the North American market with domestic manufacturing, they manufacture and sell in China for China. Clients include electronic contract manufacturing service (EMS) companies that make small component parts for mobile electronics.

Is the pricing that much different than manufacturing in Oregon? He says raw material costs are not significantly different, with China being a little cheaper and having shorter lead times for availability. Labor costs, however, are significantly cheaper in China or India. The other big difference is that operational efficiency in China is better than in the United States. For example, a factory in China can run at 80% overall equipment efficiency because of their ability to add nights and weekends shifts, which is tougher to do in the United States.

Is IP theft a concern? "We were extremely cautious in finding partners with a similar working culture and philosophy and come with strong recommendations. We insist on strong contracts and protections based on American law and American courts. It may not give me much protection at the end of the day, but it helps me sleep better."

*Not being able to travel to China for going on three years has impacted what he does in China. Videoconferencing, he says, is not an adequate substitute.*

Isaac used his former GE connections to find manufacturing partners in China that more easily mesh with his preferences on work culture, efficiencies, and processes. He cautiously ramped up deals before cementing the relationships. He heard about bad experiences so before taking the leap, ATI qualified the partner with in-person and remote audits, early prototyping, and production work before creating a joint venture facility.

Another impact to the supply chain diversification strategy of ATI is tariffs. Tariffs on metallic components were introduced several years ago, but he said they are navigating through it. Previously, there were no tariffs, and now they are 20-25%. The impact has been over a few million dollars over three years. The damage would be greater if not for foreign trade zones in destination markets. "As a small company, our pricing power is limited, so we absorb more of the costs." At the same time, tariffs also shook up the supply chain and allowed Allied Technologies to gain new customers in new markets.

Isaac has not applied for tariff exceptions or lobbied his Congressional members. "Tariffs have forced the United States to reassess supply chains and the strong reliance on China. If we as a country don't diversify our suppliers, we'll have higher risk of supply chain disruptions caused by shipping delays, the next pandemic, or other geopolitical concerns." His customers are currently willing to pay a slightly higher price for manufacturing outside of China. "They value risk management and supplier geographical diversification more."

## **Manufacturing networks**

With so many business issues—global, national, and local—Isaac is also an active networker. He belongs to the Entrepreneurs Organization (EO); VISTAGE, an organization for CEOs; the local chambers of commerce of the city and region; and has applied to be nominated to the US-India CEO Forum led by the US Secretary of Commerce. He's also a frequent client of the US Commercial Service's Portland Export Assistance Center, a source of business matchmaking and market intelligence in China and other countries. "They are really a great resource," he exclaims.

He seeks all the help he can get because of multiple challenges such as the huge shipping crunch during the pandemic that doesn't show signs of abating anytime soon. Things that used to take a week via air freight now take two weeks or more. Not being able to travel to China for going on three years has impacted what he does in China. Videoconferencing, he says, is not an adequate substitute.

Despite his plan to diversify more of ATI's manufacturing, he believes the world's most populous

country will be good market for the foreseeable future and his company. Sales in China, India, and other countries will by far exceed exports of his products from China to the United States.

Does this mean the end of globalization as we know it? One might argue that it is another adjustment. A course correction and diversifying geographical concentration risk rather than a radical transformation with trade returning to previous norms and more local production for local consumption.

His biggest worry now is not trade wars, tariffs, inflation, or a potential recession, which some economists predict is looming. It's finding enough skilled workers to fill vacancies and enable growth. He can't find enough people with technical skills who are willing to relocate to Oregon. The United States needs to also invest in vocational and technical skilled trade schools so that key manufacturing, design, engineering can stay or eventually come back. He added that China is also facing labor shortages but nothing close to what's going on in the United States.

Time to change professions? "No, I'm an optimistic person—things will be better. But we will pivot, doing more automated production and design in the United States. We expect China and India to also grow, even faster than the United States, and we'll be there too."

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