



Introduction

TPI Composites, Inc. (TPI) has been providing composite wind blades since 2001. Headquartered in Scottsdale, Arizona, TPI is the only independent wind blade manufacturer with a global footprint. In 2020, TPI accounted for approximately 13% of all onshore wind blades on a MW-basis globally and more than 10,600 wind blades were produced. TPI enables many of the industry's leading wind turbine original equipment manufacturers (OEMs) to outsource the manufacturing of a portion of their wind blades, thus expanding their global wind blade capacity.

With tremendous competition in the wind energy and transportation industries, the company has implemented rigorous procurement and quality management systems across its processes to maximize customer satisfaction. TPI leverages its procurement expertise, Advanced Product Quality Planning standard (APQP) and APQP4Wind, and a dedicated supplier model to manufacture advanced composite products to customers' exact specifications.

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By planning and implementing quality measures up front with suppliers who can reliably deliver high-quality materials on time and on budget, TPI reduces risk, occurrences of non-conforming material and improves the timely launch of new products. However, TPI was managing its suppliers entirely by hand via spreadsheets, email and shared drives. It was seeking a centralized supplier portal to add transparency in communication, drive accountability and further improve supplier quality.

The Challenge

Wind turbine production demands a keen focus on quality, and manufacturers are subject to regular audits by their customers; these audits not only evaluate each facility but the supply chain as well. With global operations, including manufacturing facilities in China, Mexico, India, Turkey and the United States, TPI works with suppliers around the world. Many of those suppliers also have numerous facilities or fulfill orders for multiple TPI locations.

However, each TPI location had its own approach to managing its suppliers and – like many global operations – it did not have a centralized source of supplier data. As a result, when seeking information about suppliers, delays were common: someone would email a colleague several time zones away and await a response via email the following day... or the next. It was also common for data to be duplicated. This was a significant challenge when needing to act quickly in response to a customer audit of a production facility. The complexity of this global operation, particularly when paired with the high degree of specialization, led the company to seek a more streamlined and transparent approach to supplier quality management.

TPI's Supplier Quality team embraced a preventative approach to supplier quality, a shift from quality control to quality assurance, and sought standardization and simplification of processes to reduce time to market and increase efficiency. The Supplier Quality team, led by Pamela Lynch, began to search for a supplier portal that would pull this information into a single access point, facilitate communication, provide robust customizable reporting, and drive accountability.

They agreed that, as a global business, TPI needed a global solution. It needed to be highly configurable, user friendly, and a solution that made it easy to get data in – and out. It needed to be an objective resource for tracking and reporting supplier data, providing accurate and up-to-date metrics to users at all levels. As the team identified its business requirements, it considered not only in-house options but also a range of off-the-shelf solutions.

Lynch found that Blume Global uniquely fulfilled TPI's requirements: "We had reviewed a variety of solutions, but they all seemed too cumbersome and not as flexible. We chose Blume Global for its usability and configurability, its reporting capabilities, and its customer service. Blume Global seemed like a solution that we would be able to hit the ground running and use."

The Solution

TPI initiated its Blume Global implementation in Q1 2020 and went live in August, rolling it out to suppliers with the 2020 RFP/RFQ cycle for materials for 2021. In just more than six months, TPI began to manage its PPAPs, NCRs and SCARs in Blume's solution. There are now a few dozen daily users at TPI, as well as users at each supplier site. More than 400 suppliers are managed and engaged in the Blume Global platform.

During the implementation, the Blume Global team built a relationship with TPI, responding to questions and suggesting approaches to configuration. Regular check-ins and work sessions ensured the TPI team was receiving a solution that met its business requirements. They also equipped the team to confidently orient suppliers to the system. This hands-on support continues today.

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William Heern, senior supplier quality engineer at TPI, noted: "We needed something highly configurable. That was one of the things that was very attractive about Blume Global's solution: It does what we've asked it to. The Blume Global team works with us and finds a way to make sure the system functions for us."

The Results

In the short time since Blume Global's sourcing solution was rolled out, TPI has begun to realize tangible benefits. The portal provides actionable reporting for executives, as well as accountability and transparency for suppliers.

Sites can provide instant information during customer audits. In fact, TPI has had no failed audits since implementation and has not only improved its audit scores, it has exceeded targets set by management. In one instance, a facility auditor was asking about two suppliers. However, those two suppliers were actually the same company – one Supplier Information Card simply reflected an older company name. It was quick and easy for Heern to search the solution and retrieve all records related to that supplier, allowing TPI to avoid a lower score for not having complete supplier quality documentation at the time of the audit. Previously, it could have taken weeks to discover this information, but with Blume Global, it could be shared via video conference while the auditors were on site.

Blume Global has dramatically improved the company's response time in communication across regions. There's no longer any need to send an email inquiring about a supplier; the information is all in Blume's platform. Further, Blume Global has eliminated meetings. Complicated scheduling across time zones was doubly wearing as a global pandemic raged and covid meeting fatigue set in. Blume Global provides a holistic view of suppliers with multiple locations and reduces – or eliminates – qualification delays.

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TPI is benefitting from better insight into what actually needs to be improved, instead of relying on hunches. Lynch noted, "Data drives the behavior, especially when you're also starting to see data that you didn't see before." SCARs are closed out, on average, 50% faster. There is less redundancy – and therefore, less work is involved – in PPAPs. The transparency and up-to-date information have improved supplier quality and accountability to a remarkable extent: TPI saw suppliers with as much as 45% improvement.

One of the big things we wanted to do was parse data down to exact features within multiple sites across the organization, with multiple suppliers. And you can break that data down as little or as much as you want. Simple customer reports have become better, and the analytics give you day-to-day information right away," added Heern. "I often just use the configurable main dashboard – at a glance, it shows me everything I need to know, right there."

Looking Forward

While the initial implementation has focused on Supplier Quality, TPI is hoping to roll out additional functionality. Next steps will see Blume Global's solution integrated with enterprise systems, so that it truly becomes the go-to resource for supplier management.