Smarter Systems for Increasing Customer Productivity & Growing Aftermarket Revenue

Shape Technologies Group is devoted to a single goal: delivering advanced manufacturing process solutions that propel their customers to success. Whether it’s in aerospace, transportation, food, fabrication or other industries where highly engineered products are manufactured, chances are you’ll find them there — at the cutting edge.

Shape Technologies Group had acquired several providers of industrial equipment used in manufacturing facilities by customers such as Tesla, Baker Hughes, Schlumberger, Georgia Pacific, and SpaceX.

What they needed was a way to differentiate their products and their business at several levels – operations, sales and service, financial, and customer experience.

To achieve their goals, they sought to become a more data-driven company, with rapid feedback loops and continuous improvement across their enterprise and inside their customers’ operations. Shape needed an experienced Microsoft partner to help transform their multiple product lines of standalone factory machinery into a unified connected product system. The solution would need to integrate data from their equipment, their enterprise systems (CRM, ERP, etc.), and other sources to deliver business outcomes including asset management, predictive maintenance, and yield optimization.

A Triple Threat of Technical Challenges

1. **Data collection**: Shape needed a data collection strategy at the edge. With multiple product lines, sensors, PLCs, and protocols in use and no gateway or data management tools in place, they needed a flexible, unified approach for rapidly connecting legacy and future machines to the cloud.

2. **System integration**: They also needed to integrate data from their equipment in the field to their existing enterprise systems and customers’ operations. Predictive maintenance, notifications, and upsell opportunities require the combination of data from each machine with customer information, parts availability, and internal organization details. Unfortunately, this information was trapped in data silos across different business applications, from their CRM to their ERP and other enterprise systems.

3. **Speed to market**: Shape needed a production-quality solution fast. They needed to connect their machines at the edge to the cloud, integrate with several other systems, and have web and mobile applications available for their teams and customers before their competition did.

"We chose Bright Wolf for their experience at the industrial edge and commitment to rapid delivery. They were able to quickly understand both our business and technical needs and helped us build a flexible connected product solution, based on Microsoft Azure, and designed to give us a strong competitive advantage going forward."

- Daric Schweikart, VP of Information Technology

Bright Wolf designed a flexible solution for connecting multiple product lines to cloud analytics and business systems for Equipment-as-a-Service offerings and optimizing aftermarket sales & maintenance contracts.
Connected Product Solution Overview

Bright Wolf provides the solution to all three challenges. Based on lessons learned and best practices from almost a decade of development on large-scale connected product solutions, Bright Wolf’s platform accelerators and connected product expertise enables industrial equipment manufacturers to connect their machines and gateways to cloud services fast, integrating industrial data with enterprise services and business applications for a pilot launch in just a few weeks. The customizable system runs inside Shape’s own Azure environment, so their IT department can maintain control over their entire solution.

Bright Wolf solves the complexity common to all IoT systems, providing consistent enterprise APIs, enabling the Shape engineers to focus on the applications and business logic that provide value to their customers rather than building IoT infrastructure. Bright Wolf provides development, maintenance, and operations support for continued acceleration of Shape’s digital transformation journey.

Steps in the Digital Transformation Journey

Shape began with a Raspberry Pi for initial testing, then moved to an industrial edge gateway as the project progressed from an initial machine in a lab and following a roadmap across product lines and customer sites. Each system has 100’s of sensors continually producing operational data, and 50 key measurements are sent securely to the cloud.

Inside their machines, water and air are pressurized up to nearly 100,000 psi - enough to cut cleanly through hard metal. During the cutting process, data from the industrial control systems, including temperatures, pressures, and cycle counts are closely monitored. Some values such as temperature rise slowly, whereas others like cycle counts increase every few hundred milliseconds.

Data from the field enables rapid iteration on improvements to equipment, increased uptime, and lower service costs. Based on usage patterns, Shape can become aware of customers who are operating machines at maximum capacity, presenting an upsell opportunity for Shape by sending an automatic alert to the account team. This puts the Shape team in a position to show customers how they can increase profits by upgrading to higher capacity equipment using an ROI calculator made possible by this same data.

The result? Shape can sell more equipment, and Shape’s customers can grow their businesses faster. That’s digital transformation across the entire value chain, and the start of a sustainable competitive advantage.

A trusted partner for industry leaders with a new vision for a connected world

Bright Wolf provides a proven path for delivering industrial IoT solutions and accelerating enterprise transformation.

- Digital Strategy Workshops
- Transformation Readiness Evaluations
- Customizable Platform Accelerators
- Rapid Deployment, Iterative Feedback
- Flexible Engagement Models
- Repeatable, Proven Success
- Microsoft Azure & AWS IoT Solutions

Bright Wolf Platform Accelerators

SpringBoard Cloud Industrial IoT application engine and secure data management infrastructure

GearBox Edge Suite Connect and optimize every machine with network/hardware independent protocol translation clients, local historian, and edge analytics.

GearBox Device Manager Dynamically configure and control devices and fleet behavior with web-based device management applications.