INSTRUMENTAL

Improved customer satisfaction and saved $953K per year by validating root cause in two weeks

Owlet

Overview

"This one's for the babies."

That's the theme that Owlet championed when they listed on the New York Stock Exchange and announced that they had served over 1 million babies. It's also the theme that has driven its product and manufacturing decisions since it launched in 2013. Owlet creates products and accessories that monitor babies' sleeping patterns, including a sock that monitors heart rates and a camera that observes sleep environments to give parents peace of mind while their babies sleep.

This case study highlights how Owlet improved customer satisfaction using the Instrumental app to identify and validate quality improvements.

Problem

From the start, Owlet has made a point to work with manufacturing partners that understand its mission to create high-quality products. That's why, when Owlet learned their product wasn't working as designed for some customers, they turned to Instrumental to rapidly identify the root cause and make process improvements to deliver high-quality products and improve the customer experience.

They suspected the failures were due to something wrong with their waterproof potting process. Unable to travel to their Contract Manufacturer (CM) in China during the Covid-19 pandemic, they struggled for four months to get through a failure analysis process remotely but still couldn't pinpoint the root cause.

Large replacements due to quality issues
They were missing consumer expectations and quality targets and facing additional costs due to replacements.

Lack of data and visibility from CM
The contract manufacturer was unable to collect and share crucial data, and the team could not travel due to the Covid-19 pandemic.

Unsuccessful failure analysis for four months
Complex failure modes made failure analysis tricky.

Solution

They leveraged Instrumental stations to capture images of the failed units to confirm their suspicion about the potting material and rolled it out to their overseas contract manufacturer.

✓ **Virtual teardown using aggregated product data**

With the help of their CM, they captured images of their 2000 returned units and 100 new units with a different curing process and uploaded them to the application. Then using Instrumental's Visual Search, which uses AI algorithms to find anomalies and similarities in image data, they quickly and accurately identified the product failure's root cause.

This meant the curing process needed to change to correct the product failure.

Results

Because of Instrumental, the manufacturing team quickly and accurately identified the root cause of a product failure affecting their customers.

❝ A core product was being returned at higher rates, and in less than two weeks, Instrumental helped us discover the root cause. This allowed us to respond quickly and deliver an even better product to our customers, all from our home offices.

Mike
Manufacturing Engineering Manager

8X faster
< 2 weeks for process improvement and failure analysis

$953K
Savings per year by avoiding replacements

One month
Breakeven

❝ **Without Instrumental**, fixing the issue and delivering customer satisfaction would have been **slower, harder, and more expensive**."

Burc Sahinoglu
Chief Technology Officer