



DRIVING SAFETY EFFICIENCIES AT A LEADING AUTO MANUFACTURER

Proving the importance of safety data
in operational decision making

INTRODUCTION

At one of North America's leading car manufacturers, the process for assigning route schedules is relatively random and doesn't proactively take the ergonomic safety of its workers, or Industrial Athletes, into account. With 14 plants in North America, 100,000-plus associates, and more than a million cars produced each year, this auto manufacturer is an expert in efficiency and lean manufacturing practices. Inherently, and without intervention, the potential risk of injury can be high and unpredictable.

SITUATION

In order to achieve the perfect intersection of worker safety and continuous operational improvement - in line with the "Kaizen" method to manufacturing this company helped put on the map - it is vital that the plant's material handlers deliver equipment and parts on time. Each trip for equipment - or, route - represents a unique and distinct process that has the potential to cause injury for teammates.

With greater than 2,000 different routes across the network, manual observations for a route's ergonomic impact are time-intensive, subjective, and difficult to track. To bring route safety in line with the rest of the company's stringent optimization methodology, a wearable sensor solution was sought for speedy implementation.

SOLUTION

StrongArm Technologies was identified as that solution, and deployed the FUSE Risk Management Platform to assess each route's safety profile - assigning Safety Score, a comprehensive, actionable ergonomic risk metric ranging from 0-100.

Using Safety Score to assess the ergonomic impact of the different routes provided key insights and actionable recommendations for safety and efficiency improvements.

Specifically, StrongArm was able to assess the risk profiles of different route schedules to better understand which route order is safer, and to unlock which teammates, or combination or teammates, are better suited for certain routes.

ROUTE SCHEDULE	SAFETY SCORE	INCREASE IN RISK
A -> B -> C -> D	68.8	96% 
B -> C -> D -> A	73.4	62% 
C -> B -> D -> A	81.6	-
B -> D -> A -> C	76.1	41% 

ROUTE	% TIME HIGH RISK
A	80%
B	60%
C	40%
D	30%
E	20%

BENEFIT

StrongArm's ability to integrate FUSE data with the company's existing production data proved to be a powerful and efficient engine for improvement. StrongArm was able to offer actionable solutions for improving route scheduling safety. Additionally, FUSE data showed high correlation to the current risk assessment process, suggesting the possibility of replacing the current time- and cost-intensive system with the FUSE Platform.

“Route scheduling is incredibly complex, and changes all the time. FUSE data allowed us to approach it in a much more proactive way than we ever could before.”

— Healthy & Safety Specialist

24,770

**Hours of Data Collected
During 8-week Pilot**

50%

**Reduction in Risk of Injury if Certain
Routes are Scheduled Before Others**

90%

**Higher Risk of Injury Identified for
Individual Teammates Running the
Same Routes**

SUCCESS

Through scheduling optimization, high-risk worker coaching, and critical engineering improvements along targeted routes, this auto manufacturer can visibly reduce injury rates while improving overall efficiency and efficacy.

The FUSE Pilot successfully demonstrated the ability for FUSE data to serve as an objective system by which to assess an organization's ergonomic risk and enact operational changes that improve safety and efficiency.

“My job involves moving materials from one location to another, in every combination you can imagine. It's amazing to me that this little sensor can impact how that's done across our entire facility.”

— Auto Manufacturer Industrial Athlete

