

ASSESSING INTERVENTION EFFICACY FOR A WORLD-RENOWNED BREWING COMPANY

Evaluating Exoskeletons for Material Handling

INTRODUCTION

Operating in 70 countries and employing more than 70,000 Industrial Athletes™, the world's second-largest brewery was looking for new and innovative ways to reduce the risk of injury for its workforce.

With more than 150 years in operation, this world-renowned brewing company (the largest in Europe) was intimately familiar with the types of manual material handling injuries that can occur when producing and distributing millions of barrels of beer every year. As demand for its products surged, injury rates among critical frontline workers began to spike.

SITUATION

To address this challenge more proactively, the brewery simultaneously piloted a number of top exoskeleton models in an effort to determine the best solution in an efficient and measured way.

But there was a problem: The company not only needed a quantitative and objective measure of exoskeleton efficacy - difficult when comparing products from various companies on a tight timeline - but the ideal solution also needed to be operational both inside their vast network of warehouses and out in the field.

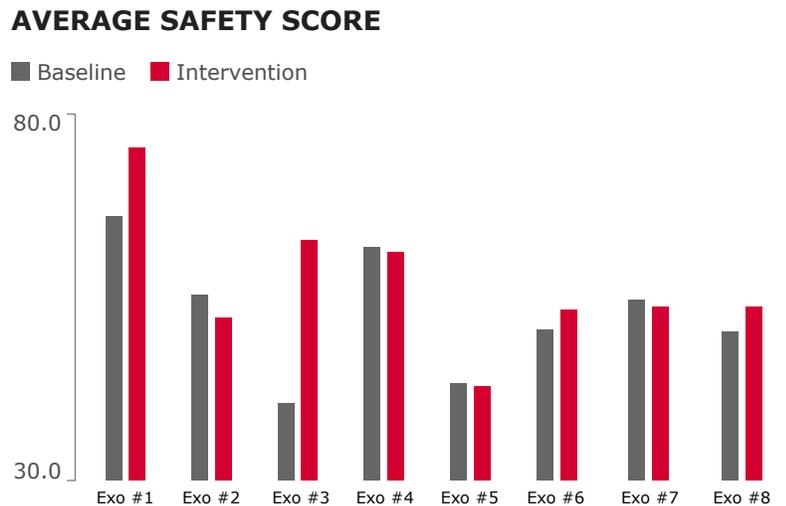
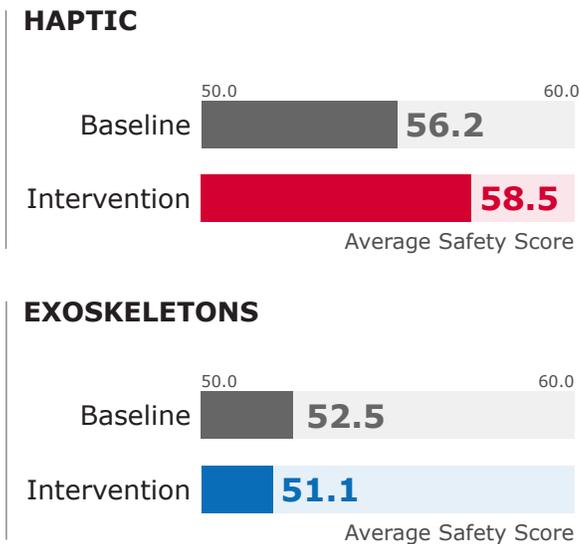
SOLUTION

StrongArm deployed the FUSE Risk Management Platform to three different facilities in cities across France. For three months, the delivery drivers and warehouse associates wore the FUSE Sensors in conjunction with various different exoskeletons in order to assess ergonomic benefit.

By determining a baseline Safety Score for each individual, and then monitoring how that metric is affected by various different exoskeletons, StrongArm effectively and rapidly measured the

efficacy of the different exoskeletons in a scientific manner to offer insight on long-term viability and purchasing decisions.

Critically, much of this assessment needed to be done outside of the warehouse - in the box truck, on the delivery routes, and in bustling stores, restaurants and warehouses. The FUSE Sensor can be checked out from a central location with no range restrictions, providing the perfect vehicle to assess ergonomic risk on the go.



12,682
Hours of Data Collected

134.25%
Difference in Risk Reduction
Results from the Best
Exoskeleton to the Worst

27.75%
Decrease in Risk of Injury
for Those Using Haptic
VS. Exoskeletons

BENEFIT

With the FUSE Risk Management Platform, StrongArm was able to quickly and effectively measure the ergonomic risk of the company's thousands of Industrial Athletes, both before and after implementing various exoskeletons by leveraging its proprietary Safety Score, a comprehensive, actionable ergonomic risk metric ranging from 0-100.

Using Safety Score, StrongArm could accurately compare dissimilar exoskeleton solutions and see how they stacked up against StrongArm's own Haptic Vibratory feedback inherent in the FUSE Sensor.

SUCCESS

At the conclusion of the three-month testing phase, the StrongArm FUSE Platform collected nearly 13,000 hours of actionable safety data, effectively pinpointing the best exoskeleton option for the brewing company across various individuals and subsequent job functions.

Quick and quantitative assessment lead to meaningful recommendations for purchasing decisions of exoskeletons based on FUSE data: One particular exoskeleton solution was proven to decrease associate injury risk by a staggering 71.25%.

Unlike other solutions, the FUSE Sensor is able to objectively measure any safety intervention. Whether implementing an administrative shift change, or an engineering control, a haptic behavioral study, or a mechanical exoskeleton - the FUSE Platform can measure its effect on individual and group safety.

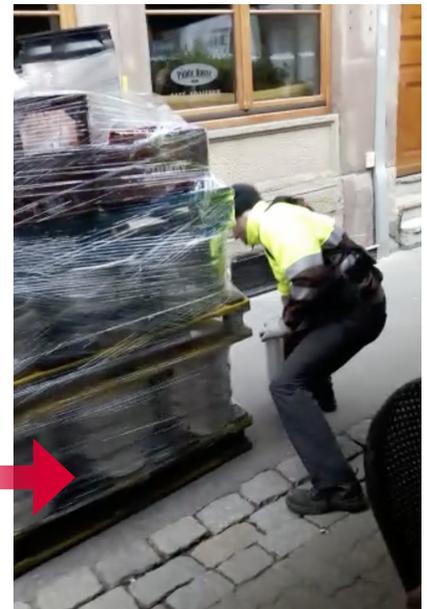
Overall results were led by StrongArm's Haptic feedback system, however, where users on average saw a 30% greater reduction in injury risk than those in the exoskeleton test groups.

“StrongArm's look into exoskeletons has made us much smarter than we could have imagined. We very much like the FUSE Platform and the opportunities it can help us identify for improving safety.”

— Corporate Safety Lead



Without Exoskeleton



With Exoskeleton