

SoterCoach

Strengthening Operational Efficiency

How SoterCoach:

- ▶ Strengthens operational efficiency
- ▶ Builds a positive safety culture
- ▶ Improves employee motivation to move well

**Make your workforce
injury free and productive**



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Low levels of motivation lead to absenteeism, presenteeism, a drop in retention rates, lack of engagement, and higher injury rates impacting on operational efficiency.

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Using SoterCoach to improve motivation and strengthen operational efficiency

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What is SoterCoach?

SoterCoach addresses risk from 'hire to retire'; providing solutions that target results for everyone, from individuals right through to management.

It is the first wearable solution & training program that uses AI to improve an individual's ergonomic safety.

The solution consists of a small, **lightweight wearable** device for workers that collects motion sensor data. This data is fed back to a companion app for users and an **online dashboard for management** detailing intelligent objective risk data and recommendations.

Throughout the program, biofeedback risk alerts are tailored to the individual and promote proprioception¹, encouraging individuals to develop better awareness of their own movement patterns.

Providing management with real-time detailed risk insights drawn directly from the sensors, the **Analytics Dashboard** guides proactive changes to processes and procedures for individual workers, sites, departments, job roles or tasks to improve safety, reduce risk and increase productivity .



The Soter device

The Soter device is a small lightweight wearable device that monitors and understands an individual's risk of injury via machine learning and AI.



The Soter device measures and monitors 10 at-risk back and shoulder movements in real-time



Works independently from the SoterCoach app



Provides real-time biofeedback to the worker via audio and vibration notifications



30+ day battery life, no Wi-Fi required



Can be mounted on any piece of existing personal hardware via customized smart adapters



The world's only ATEX certified ergonomic safety wearables

The SoterCoach Hub: A fully autonomous charging hub with an integrated tablet to launch and scale the solution in just minutes.



Simultaneous charging of up to 40 devices



Only 5 seconds to synchronize daily data



Independent from corporate IT-resources



Rapid multiple check-in/check-out options: via QR codes, employee badges, barcode scanners

The Soter device

Hazardous movements

Spine hazards



Poor bending



Back twisting



Intense bending



Awkward static posture



Repetition

Shoulder hazards



Arm elevation



Pushing & pulling



Overexertion



Static arm elevation



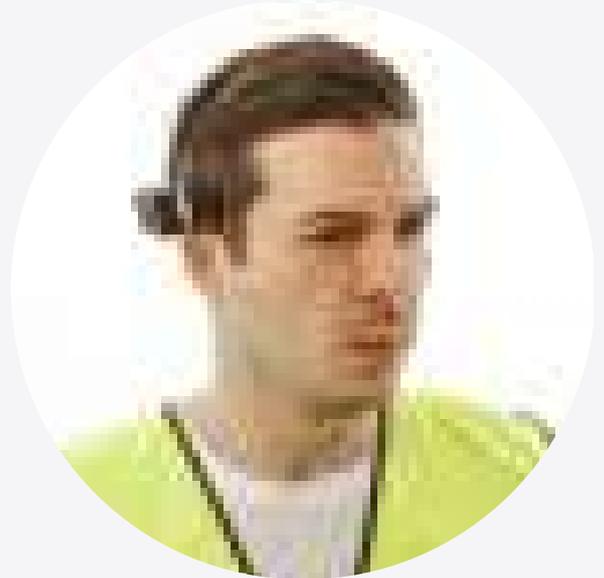
Repetitive arm movements

Multiple placing options

Headset - Spine Risk

A customized adapter so the Soter device can clip onto any style of headset.

The device is small and lightweight so workers can continue with their normal routine without feeling the extra weight and once on, there is no need to remove until the end of the program.



Armband - Shoulder Risk

Custom armbands designed especially for the Soter device. Workers can simply slip the device in place and clip the armband securely around the upper arm.

Easy to wear under clothes or any other required Personal Protective Equipment (PPE).

Helmet - Spine Risk

The Soter device can be attached directly to any helmets.

Light-weight and easy, workers don't have to remember to put them on and devices can be left in place until the conclusion of the program.



SoterCoach App

The SoterCoach app is a companion app that synchronizes with the Soter device. The app presents individualized movement data and manual handling micro-learning tutorials to the user.



Workers are in control of their own learning experience and have their own unique login



20-day self-paced personalized movement training program



Enhanced user experience and social integration from the biofeedback and companion app



Daily bursts of relevant micro-learning manual handling tutorials to assist movement awareness and behavioral change



Visually pleasing important movement data for self-reflection



Workers do not need a phone while they are working, data from the Soter device can be synced at any time



Coaching and data can be delivered on a personal mobile phone or a communal tablet



Analytics Dashboard

The dashboard provides managers with a complete state of progress to improve behavior and drive a positive safety culture.



Immediate access to actionable data with full detailed reports



Configure according to organizational privacy policies



Sort by site, department, job role and task



View and manage the progress, workload and engagement of workers



Tailor ongoing training based on individual risk profiles



Gain insight to facilitate new workplace solutions, redesign processes, job tasks, equipment and training



The problem

Absenteeism impacts on operational efficiency and reduces productivity and output

Lost work days are one of the largest business operating costs. Each year, absenteeism costs the US economy as much as \$84 billion in direct costs and \$225 billion indirectly². In the EU, absenteeism costs a staggering \$470 billion annually².

Absenteeism costs



\$309
BILLION



\$470
BILLION

In 2019, the average absence rate² was 2.9% in the warehousing industry, 2.4% in construction and 2.5% in manufacturing.

Average absence rate by industry



2.9%
WAREHOUSING



2.4%
CONSTRUCTION



2.5%
MANUFACTURING

1.5 % = ACCEPTABLE ABSENCE RATE²

Anything above that is
PREVENTABLE

The problem

PRESENTEEISM

Presenting to work despite medical illness or injury

The rates of presenteeism (workers on the job with a medical illness or injury) are even higher than for absenteeism. Researchers estimate that in the last 12 months, approximately 40%³ of workers presented to work despite feeling pain or being otherwise unwell.



in the US
every year



to musculo-
skeletal pain
or injury



present to work
feeling unwell
ANNUALLY



The problem

A problem that is not always obvious, presenteeism flies under the radar, cutting productivity by one-third or more and costing the US economy more than **\$150 billion every year**⁴.

 \$150 billion \times  30% cost reduction =  \$45 billion

79%



One study found that as many as **79% of construction workers reported presenteeism related to musculoskeletal injury**⁶ in the last year.

75%



Another study estimates approximately **75% of workplace presenteeism was related to musculoskeletal pain**⁵.



Simply by targeting musculoskeletal pain it is possible to reduce the rate of presenteeism **by 30%, resulting in a cost saving of \$45 billion** in the US alone.

How SoterCoach Strengthens Operational Efficiency

SoterCoach provides not only an opportunity to invest in the safety and wellbeing of workers but also a solution that delivers a real Return On Investment (ROI).

Driving motivation through the self-paced manual handling training program provided by the device and companion app, employees are more engaged in their own well-being.

This results in increased productivity and reduced absenteeism and presenteeism that stem from workplace injuries and pain.

Additionally the SoterCoach companion app builds engagement by putting workers at the center of their safety, maximizing productivity through improving their individual ergonomic awareness.



An engaging solution that reduces ergonomic injuries by as much as 86%.

The Biofeedback

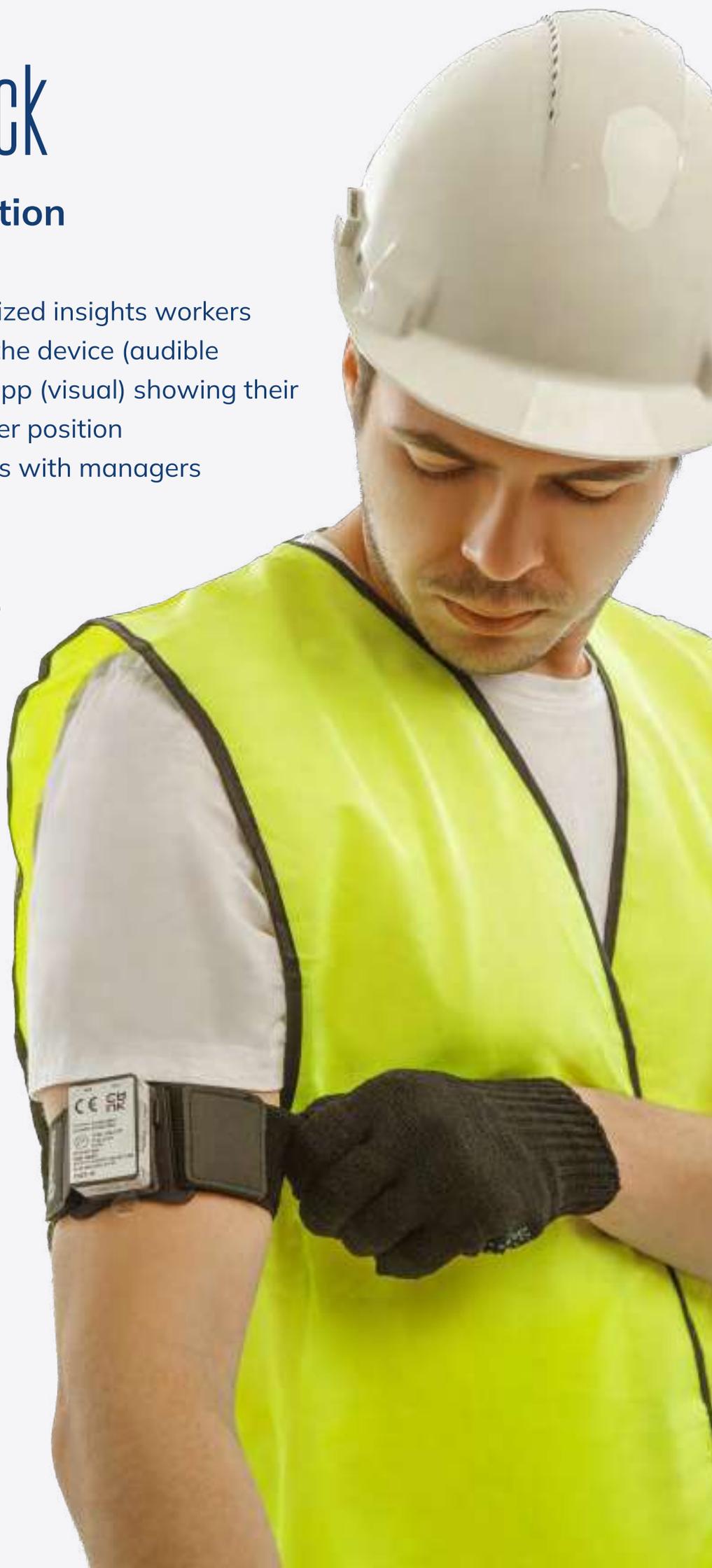
Starting a conversation

The knowledge and personalized insights workers receive from the solution via the device (audible and haptic) and companion app (visual) showing their results, puts them in a stronger position to participate in conversations with managers about their own safety.

These conversations provide the possibility to negotiate and act collectively with management to identify and implement solutions to any problems that may be contributing to their poor posture.

The SoterCoach training program provides a fair and equal power balance and has a large impact on driving increased motivation and positive safety culture to broaden engagement and operational efficiency.

With no GPS nor sensitive personal information required, SoterCoach is worker friendly.



The Haptic Biofeedback

How it works

The word haptic simply refers to the sense of touch, a non-language form of communication that conveys meaning through vibrotactile sensory cues or vibrational touch⁷.

Haptic biofeedback and risk alerts tailored to an individual, promote increased proprioception and movement development opportunities, aiding awareness and behavioral change⁸.

Imprinting movement awareness using this technique can greatly help with expanding and permanently changing workers' position sense and their own movement safety⁹.

In the same vein, the increased body awareness assists with presenteeism due to the workers simply taking more notice of their physiological system.

This ownership and personalized insight they receive results in a reduced likelihood to take time off and a higher inclination to feel engaged on the job, creating a more efficient, more productive workplace.



The Haptic Biofeedback

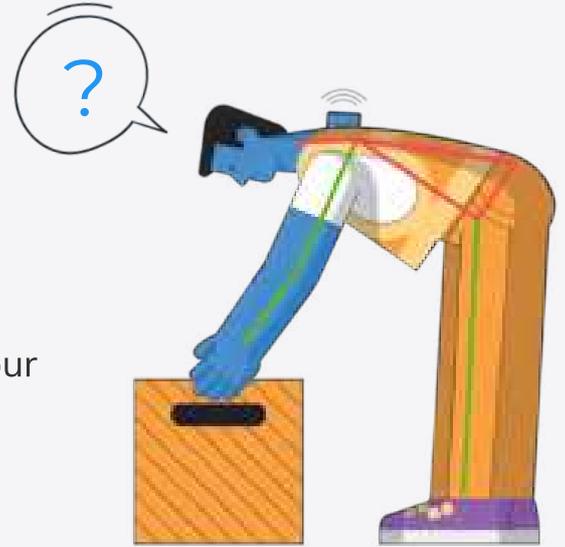
The 4 Steps to Behavior Change

1

AWARENESS

Real-time biofeedback from the device:

- Initiates questions on movement behaviour
- Kick starts AWARENESS



2

NEURAL LINKS

The AWARENESS creates NEURAL LINKS from the brain to the muscle



3

INTERNAL LEARNING

NEURAL LINKS establish the INTERNAL LEARNING process: Each time the device provides feedback self-correction is initiated



4

NEW MOVEMENT BEHAVIOR

NEW MOVEMENT BEHAVIOR is established and controlled WITHOUT feedback from the device



The Analytics Dashboard

The analytics dashboard showcasing all the data received from the devices provides the link between the workers and management. The insights provide real data for guided coaching and are tailored to not only individuals but teams, groups, job roles, job tasks and sites.

Access to the data provides comprehensive support for all risks at an organization or individual level.

This insight with detailed reporting, efficiently pinpoints areas requiring change, thus improving ergonomic processes to facilitate strong safety cultures driving engagement and productivity.



Tracking many psychosocial factors in the workplace, user reports identify safety champions as well as workers resistant to change, key information in the promotion of safety culture in the workplace.



The dashboard further displays work and task intensity and timelines for hazard fluctuations throughout shifts or weeks, which provides data on organizational work factors target work-rest cycles or job rotation.

The Analytics Dashboard

Moreover, repetitive hazardous movements around common tasks may be identified and reviewed for the implementation of task modification, substitution, or the introduction of new tools and aids.

Data from the Soter dashboard is leveraged to affect the hierarchy of controls. Traditionally, the same level of insight and progression towards improvement have been triggered by an injury and resulting investigation or extensive observation and subjective tools which are resource intensive (time and cost), reactive and synthetic.



Training Comparison

SoterCoach vs Conventional manual handling training

Manual handling training is not only costly (between \$150 - \$1,000 per worker) but it also leads to a loss in productivity as employees have to spend time away from the job in a classroom. Research has shown that traditional manual handling training is not an effective means of preventing workplace injuries¹⁰ and does not create any sustainable behavioral change in the long-term.

One-on-one coaching is another costly risk mitigation method (as much as \$1,500 per worker) and whilst it may be effective in small organizations, it is not scalable as the movement coach can only be in one place at a time.

Workplace redesigns can cost **more than \$10,000**. But without proper data analytics, these redesigns are often based on short-term, observational data which means that they are likely ineffective at addressing the real underlying risk factors and therefore they usually do not mitigate injury risk.



The solution

SoterCoach vs Conventional manual handling training

Ergonomic intervention	Description	Soter's advantage
Traditional manual handling training	<p>½ - 1 day loss of productivity (classroom)</p> <p>Emphasis on theory</p> <p>General guidelines</p> <p>Little consideration for anthropometric variability</p>	<ul style="list-style-type: none"> In-situ training (no loss in productivity) Habit-forming biofeedback Multiple languages Micro-learning tutorials/ customisation and task based training possible
Personalized manual handling training	<p>Bespoke training for tasks or individuals</p> <p>Requires reinforcement and supervision to ensure standards</p> <p>Narrow reach for an organization with diverse tasks, roles, and locations</p>	<ul style="list-style-type: none"> Personalized and self-paced coaching Considers individuals stature, strength, fatigue Non-gender bias recommendations
Ergonomist site visit and observation Task risk assessment	<p>Human observation subjective and narrow</p> <p>Human behaviour tends to change while observed</p> <p>Limited perception of intensity and repetition</p>	<ul style="list-style-type: none"> Identifies, categorizes, and monitor high-risk employees, tasks and roles Multi-site evaluation
Align investigation	<p>Reactive intervention</p> <p>Open to litigation pathways</p>	<ul style="list-style-type: none"> Quantitative data and objective assessment driven workplace insight

Benefits

Six ways your company can benefit from using SoterCoach

1

Improve Productivity

One in three accidents at work are caused by manual handling¹¹. Soter wearables help organizations to prevent back and shoulder musculoskeletal injuries by up to 55% in a short period of time. The result is a significant positive impact on productivity through the reduction of lost workdays and employee turnover.

2

Drive Down Claims Costs

According to OSHA, a singular back injury is estimated to cost an organization as much as \$70,000 on average¹². These injuries can lead to costly insurance claims ultimately driving up premiums. Yielding a high ROI, SoterCoach helps organizations around the globe to see a 50% reduction in claim costs on average.

3

Build Reputation Through Engaged Workers

Soter wearables places workers in the center of safety culture via the self-learning process and personal improvement programs; achieving a 93% positive feedback rating among users. Engaged employees are more likely to have increased job satisfaction and loyalty to their organization. Making them less likely to leave their job and more likely to make positive recommendations about their place of employment, building the reputation of the brand.

Benefits

Six ways your company can benefit from using SoterCoach

4

Utilize the Knowledge of Empowered Workers

The human-centric design of Soter wearables facilitates an approach that fosters cooperation between management and workers. The AI-driven technology empowers workers to take ownership of their own safety; putting them on equal footing to have informed conversations with management. Incorporating the expert knowledge of the workers who perform tasks day to day generates new insight to optimize processes and minimize injury.

5

Receive Continuous Accurate Data

The Soter devices have a battery life of 30-days so they can be connected to any personal work equipment without needing to be removed until the desired length of the program is completed. Workers will not forget to wear their devices. Take advantage of the maximum benefits of implementing a SoterCoach ergonomic safety program based on complete, reliable data analytics and insights to facilitate good decision making.

6

Implement Rapidly With Flexibility

With easy-to-understand instructions and tutorials, SoterCoach can be implemented within 1 hour for 100's of workers. With a 100% online roll-out including personalized support from the dedicated Soter Customer Success Team, no additional implementation costs and site visits are needed. Target a wide range of departments, areas or roles with truly flexible implementation whether it be for a small group, a cluster of teams or a large company-wide project.

Wincanton - 250 days of no lost time injuries



Wincanton, a leading supply chain partner for British businesses deployed the SoterCoach solution which reduction in **250 days with no lost time injuries.**



A reduction in manual handling risk to Wincanton colleagues across the operation



A reduction in the cost of musculoskeletal injury to the business



Pioneering a 'safety first' culture protecting colleagues when they are at work



A reduction in downtime for both colleagues and management



Bringing this technology into our teams has empowered our workers to tell us about their safety.

Mark Douglas,
Continuous Improvement and Projects Manager at Wincanton



250 Days No Lost Time Injury

250 Days no LTI
Retail Warehouse

As of 2019

As of 2019 - 30%
reduction in spine
hazards per hour

110 days



Given the size of the site, SoterCoach seemed like an ideal ‘intervention’ tool to give colleagues feedback on how they were performing their roles and allow them to ‘self-coach’ their own behaviour and what really crystallised it for me was when the sites passed the 250 days without a lost-time injury.

Mark Douglas,
Continuous Improvement and Projects Manager at Wincanton



Travis Perkins - 55% reduction in manual handling injuries



Travis Perkins Group, UK's largest distributor of building materials achieved a 55% injury reduction



The SoterCoach solution was implemented across a very large and diversely located workforce, with workers within branches conducting daily manual handling tasks, including delivery drivers.

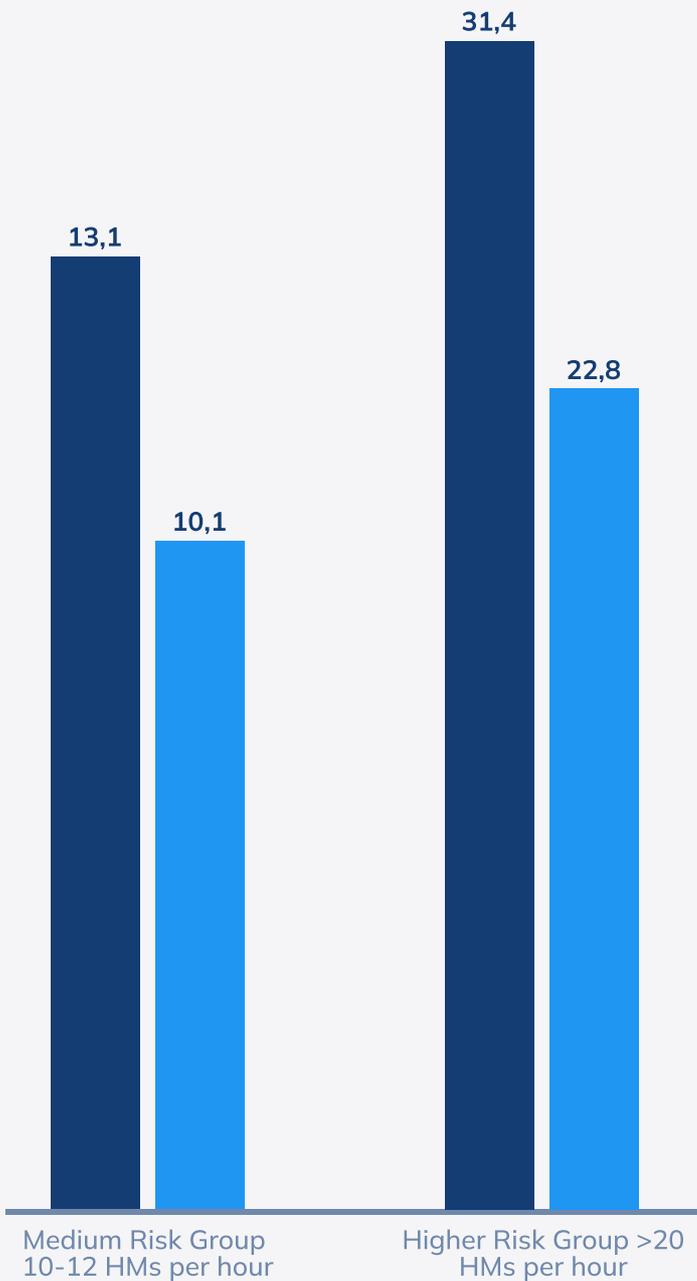
“ We found the set up really easy, it was pretty much step 1, 2, 3 and the colleagues easily linked the devices to their mobile phones. Tracking their own data created a really positive engagement and during the debriefing sessions the colleagues continually wanted to know more about their results and how they could do things differently.

Vimel Budhdev
Head of Health, Safety and
Environment at Travis Perkins

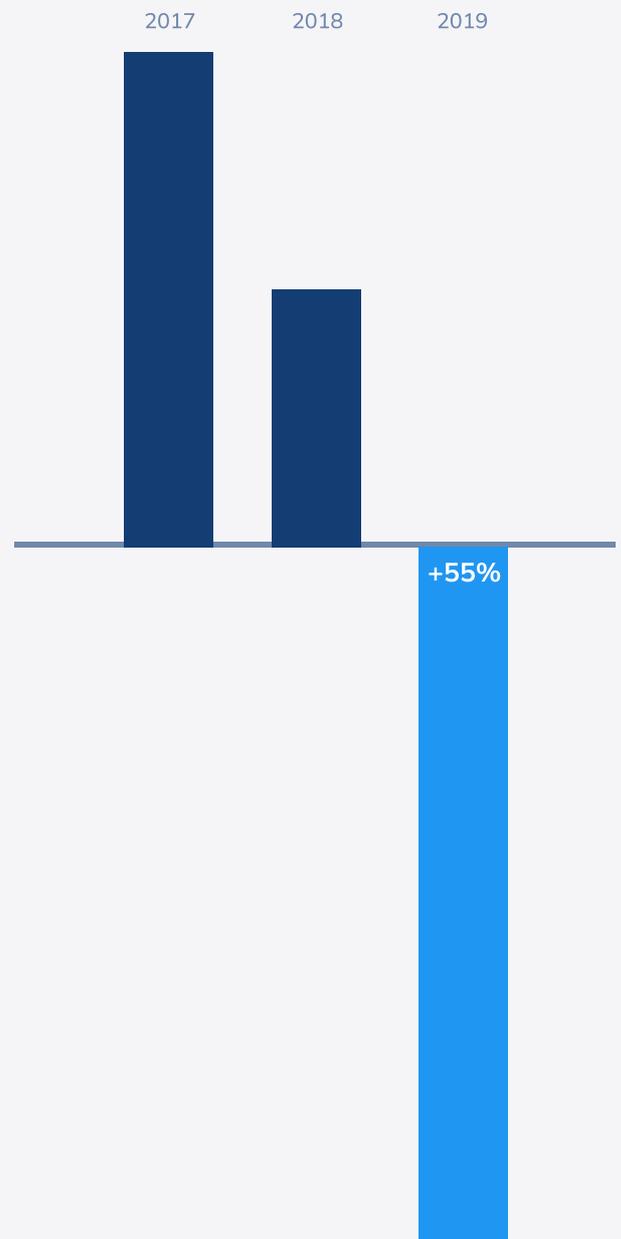


Travis Perkins - 55% reduction in manual handling injuries

Hazardous Movement (HM) frequency per hour at start and end of program by risk group



Y/Y Manual Handling Injury Reduction



START

END

Case Studies



UFA Co-operative is one of Canada's largest and most dynamic farm and ranch supply operations and petroleum distribution networks.



UFA has consistently developed programs, looked at online/face-to-face training, strategized new safer practices, warm-up stretches; they've done it all. And although all these solutions have been beneficial, they found them to be short-term and unsustainable.

In November 2021 UFA rolled out the SoterCoach program on their pickers, sorters, and receivers at their distribution centre. Then, as a result of the resounding success, continued in their retail stores, yard areas, bulk petroleum and cardlock facilities.

The longitudinal data shows that, before introducing Soter's solutions, the number of injuries and claims was consistently increasing. In Dec 2021, after Soter's solutions were implemented, the results show a plateau in both claims and injuries:

86% Reduction in Ergonomic injuries

67% Reduction in recordable workers' compensation claims (WCB)

43% Overall improvement in the number of spine hazards per hour

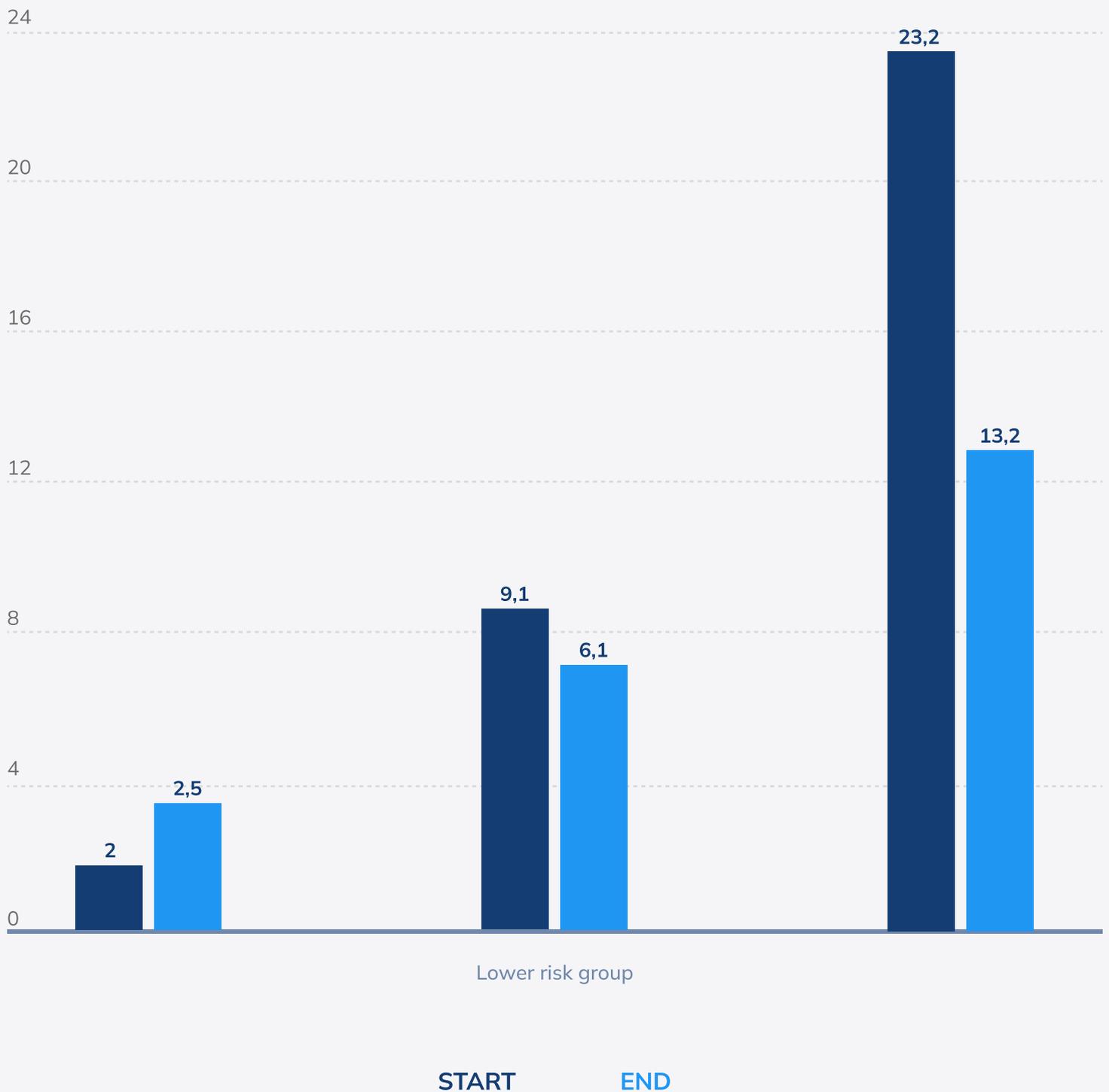
This equates to an 86% reduction in total ergonomic injury costs with an 11 x Return on Investment.

Case Studies



Overall hazardous spine movements per hour October 2021 to May 2022

41% improvement for Highest risk workers



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About SoterAnalytics

Fit for all industries and workers, smart wearables, and AI-driven end-to-end safety solutions, proven in the workplace to reduce back and shoulder injuries by 55%.



REDUCE INJURIES
and repetitive movements
in your organization



REDUCE LOST WORKDAYS
Achieve up to 30% reduction in
lost workdays



IMPROVE PRODUCTIVITY
Ensure smooth operations and
reduce employee turnover



REDUCE DOWNTIME
Minimize cost exposure with
demonstrated benefits

[BOOK A DEMO >](#)

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