

A photograph of four men sitting at a long table on a stage during a panel discussion. They are engaged in conversation. In the foreground, the backs of several audience members' heads are visible. A podium on the right side of the stage features the event's branding. The background consists of blue curtains and a projection screen.

EHS Today

Safety Leadership CONFERENCE

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safetyleadershipconference.com



How to Use Data and AI-Vision Processing for Engineering Changes and Injury Prevention

United Farmers of Alberta (UFA):
A Case Study



Speakers

Heather Chapman, MS, CSP, CHMM, CEAS

- Owner at Paradigm Safety
- Head of Ergonomics at Soter Analytics



Virginia Mackay, United Farmers Alberta (UFA)

- Senior Health and Safety Advisor
- Incident Investigation Specialist



The Importance of Behavior Change

The Need for Behavior Change in Manual Handling Industries

“We all know that changing habits takes constant reminders and it is easier said than done.

The Soter devices and the SoterCoach tutorials offered a great way to help our workers be more aware of the hazardous movements they were making and to self-trigger right away when the device is alerting them”

**Virginia Mackay, United Farmers Alberta
(UFA)**

The Challenge at UFA

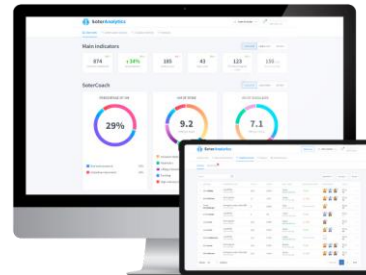
Ergonomic Injuries at UFA

- Predominant injuries: neck strains, back strains, pulled shoulders
- Behavior and complacency as root causes
- Need for proactive measures and habit changes

SoterCoach

Effective monitoring, proactive approach to injury prevention, influence on participatory and behavioural aspects of workers

- Wearable technology providing real-time feedback
- Detects high-risk spine movements and shoulder risks
- Encourages workers to learn safer movement patterns



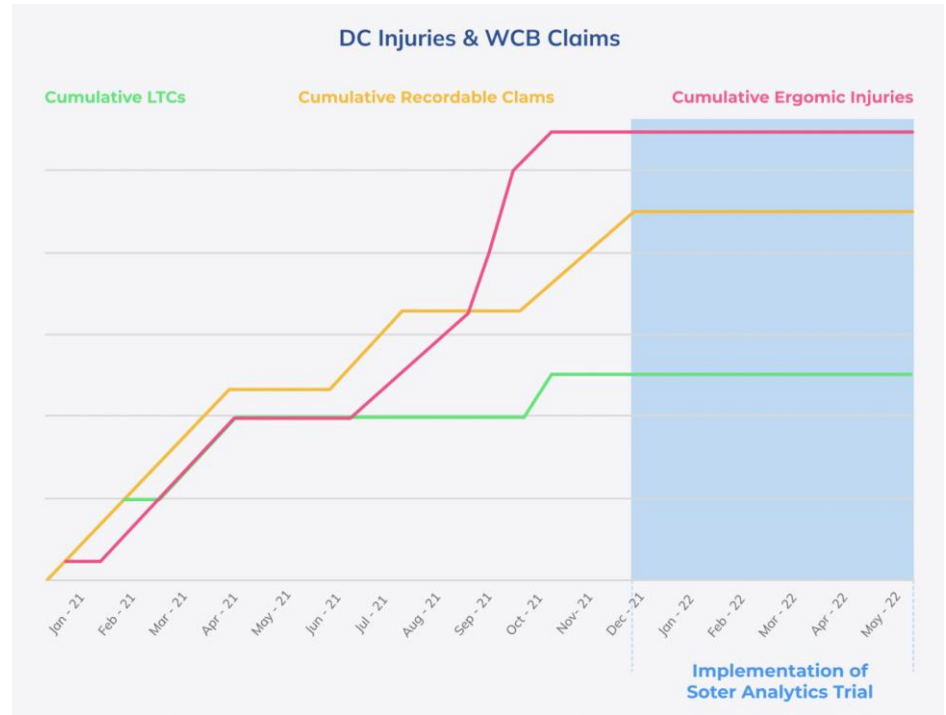
Implementation and Rollout

- Initial implementation in November 2021 at the DC
- Expansion to retail stores, yard areas, bulk petroleum, cardlock facilities



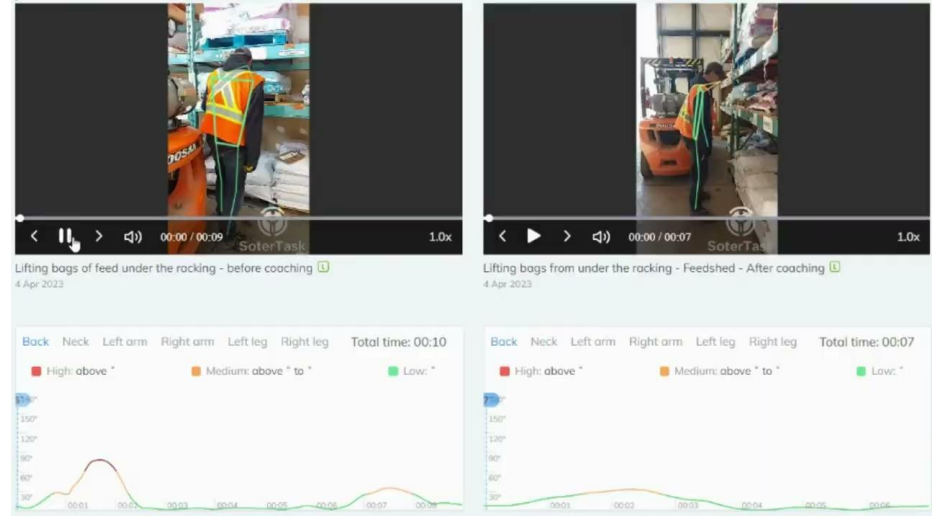
Results and Impact

- 86% Reduction in Ergonomic injuries
- 67% Reduction in recordable WCB claims
- 43% Improvement in spine hazards per hour
- 11x Return on Investment



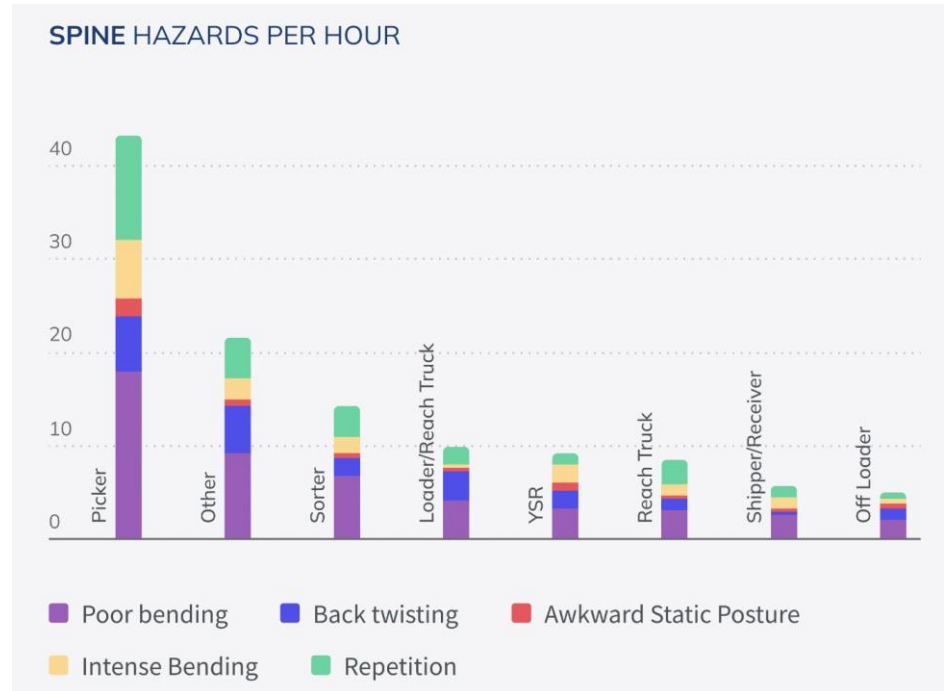
Direct and Indirect Benefits

- Reduced training costs, supervision requirements, and claims costs
- Empowerment and autonomy for employees
- Improved lifting techniques



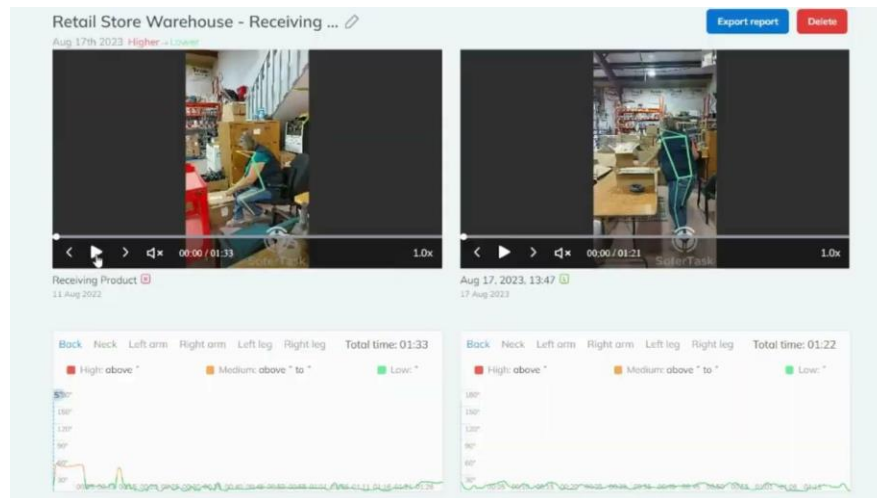
Leveraging Data for Improved Safety

- Use of data to identify high-risk tasks and workers
- Specific findings: **pickers, sorters, poor bending, repetitive twisting**
- Successful risk mitigation through data-driven strategies



Data-Driven Task Risk Assessment & Mitigation

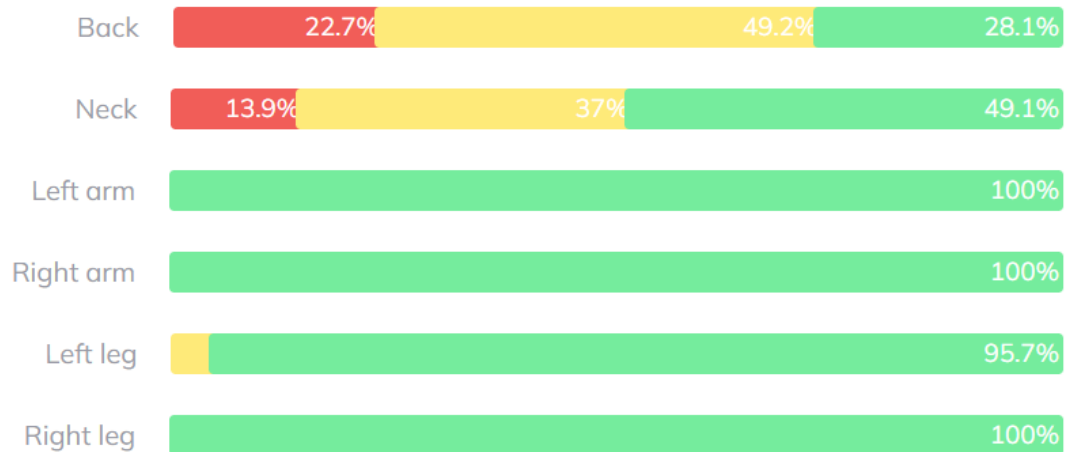
- Insightful data from wearables pinpointing high-risk tasks and roles
- Identified issues: poor bending, repetitive twisting among pickers and sorters
- Targeted improvement strategies based on data
- Utilization of vision processing technology for deeper risk analysis



Pallet Wrapping Risk & Projected Change



Time split by body position risk



Wrapping Up

- Technology can help address all levels of the hierarchy of controls
- This technology is being used in all industry sectors including manufacturing, pharma, logistics, food/beverage, insurance
- Quick information and large data sets on the dashboard
- Use cases: new hires, risk identification, JSAs, kaizen events, behavior modification, job descriptions, return to work, early intervention, training
- Scale your evaluations from anywhere



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