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CASE STUDY

Made Group NZ

Reducing physical strain at the source

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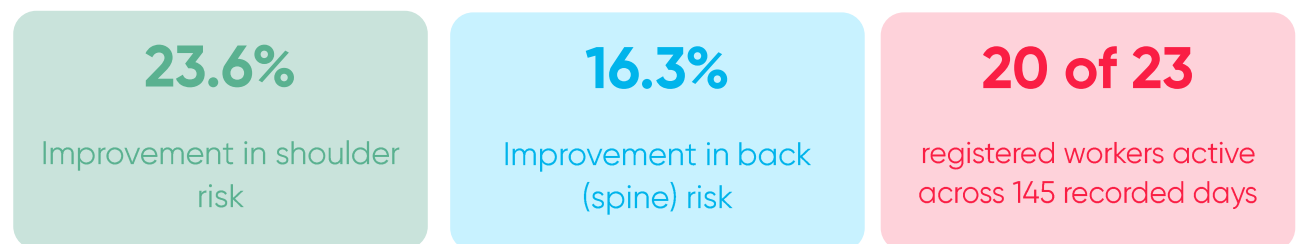
Introduction

In July/August 2026 Made Group NZ partnered with ShopCare to pilot wearable movement sensors alongside worker-led workshops. Over 145 recorded days, shoulder injury risk improved by 23.6% and back injury risk by 16.3%, with the biggest gains among workers who started at the highest risk.

Just as importantly, the pilot showed why risky movements kept happening – and what needed to change in the work itself. Made Group NZ is now redesigning its highest-risk tasks with its kaimahi/workers.

This pilot is an encouraging proof of concept, not a final verdict. It covered one site, one department and one role, and 16 participants had finished the programme at the time of reporting. The results are a strong early signal and a clear direction for the next phase – not a guarantee of long-term change.

The pilot measured higher-risk movements, not injury or claims rates. Reducing these movements matters because it tackles the cumulative strain that can turn everyday soreness into injury over time. Injury, claims and cost data will be part of the final review.



The challenge

Made Group NZ is a high-volume food and dairy manufacturer. Like many manufacturers, its frontline workers do a lot of manual handling and repetitive movement, often in tough conditions. Leadership wanted to see where risk was really concentrated – and act on the cause, not just monitor the symptoms.

What a typical shift can involve

- Lifting loads from 5kg to 20kg – oat bags, boxes and bulky jam containers, some without secure handles – up to hundreds of times a shift.
- Handling 14–15kg pouches near shoulder height, on fixed work surfaces that don't suit every worker's height.
- Repeated bending and twisting in confined picking areas and during low-level vat cleaning.
- Shifts of up to 12 hours in a two-degree chiller, with high noise and harsh lighting.



What we did together

Rather than rely on one tool, the ShopCare team combined three sources of evidence.

The idea was simple: use data to see which movements were risky, then sit down with the people doing the work to understand why those movements kept happening.

1. Wearable spine and shoulder sensors

23 frontline workers wore sensors that picked up higher-risk movements in real time and gave in-the-moment coaching, across 145 recorded days.

2. A 4D learning-from-work workshop

Workers looked at everyday tasks through four lenses: what makes work dumb (avoidable complexity), dangerous (exposure that builds up), difficult (a poor fit between task and person) and different (constant change).

3. Two detailed manual handling analyses

Close reviews of how specific tasks are actually done – including loads, heights, reach and grip.

What the data showed

Over the reporting window, the sensor data gave a clear early signal. The biggest gains came from workers who started at the highest risk.

Group	Start of pilot	End of reporting window	Change
Eight highest-risk shoulder workers	35.6 hazardous movements per hour	27.2 hazardous movements per hour	23.6% improvement
Medium-risk back group	12.3 hazardous movements per hour	10.3 hazardous movements per hour	16.3% improvement

Shoulders: the clearest priority

Shoulder risk averaged 20.7 hazardous movements per hour. Most of this (13.5 per hour) came from raising the arms high, with repetitive arm movement adding another 5.1. The eight highest-risk workers cut their hazard rate by almost a quarter – showing coaching can help.

Backs: lower overall, but part of everyday work

Back risk averaged 5.6 hazardous movements per hour – mostly from poor bending (2.8), twisting (1.1) and repetition (1.0). No workers were in the highest-risk back band at the end of the reporting window.

Small movements add up quickly, though. One sensor recorded 68 spinal twists in a single shift.



What workers told us

The feedback we received from workers was just as valuable as the data we received. It revealed a consistent gap between work as imagined and work as done.

People were adapting good practice to fit the space, equipment heights, packaging and pace they had to work with. A sensor could correctly flag a risky movement – but for many workers, that movement was still the only workable way to get the job done.

// The technology identifies and coaches hazardous movement; the 4D evidence explains why the movement occurs. Value comes from using both together to reduce exposure at source. //

[ShopCare pilot report, Made Group NZ](#)

This changed the focus of the pilot – from coaching individuals to redesigning the tasks themselves.

What sits behind the risky movements

4D lens	What workers described
Dumb – avoidable complexity	Materials moved between three warehouse locations, creating double or triple handling. Supplier boxes arriving the wrong way round and needing to be turned. Inconsistent alarms.
Dangerous – exposure that builds up	Repeated shoulder-height lifting and twisting, 5–20kg loads, unstable containers, busy forklift areas, cold work and long shifts.
Difficult – a poor fit between task and person	Confined spaces that prevent good lifting positions, surfaces too high for shorter workers, low-level cleaning and bag handling, and containers with poor grips.
Different – constant change	New ownership, products, managers and technology, seasonal layouts, temporary staff and a changing pace of work.

Workflow and environment add to the load

- Limited staging space means frequent small-batch moves, and congestion means reaching around, over or under conveyors.
- The two-degree chiller encourages people to move faster.
- Noise and hearing protection make communication hard. Some teams bang on walls or equipment because there's no buzzer or radio.
- Dark date codes on dark packaging, under harsh blue-tinted lighting, make workers lean in closer – turning eye strain into posture strain.



Good for safety, good for operations

These issues are operational as well as physical. The same conditions that cause strain also cause delays, rework and errors – so fixing them pays off twice.

A strong foundation to build on

The pilot didn't start from scratch. Workers recognised plenty that was already working well:

- A family-like culture, where teamwork and practical conversation help prevent drops, errors and delays.
- A warehouse management system that has improved storage discipline and picking accuracy.
- Stopping double stacking – a change that can take longer, but that workers value because it clearly reduces risk.
- Pre-shift stretching, job rotation, daily handovers, AI camera awareness and managers who pay attention to health.

Workers were honest about their frustrations with layout and equipment – around a third (34%) of workshop comments were negative. But they framed their feedback constructively, as a way to make work more practical and productive.

What's changing

The next phase combines worker-led learning with engineering and work design changes that reduce exposure at the source. Stretching, job rotation and reminders stay in place – but as supporting controls, not substitutes for changing the task.

Priority	What we found	What's changing
1. Shoulder height and arm reach	20.7 shoulder hazards per hour, mostly from raised arms. 14–15kg pouches handled near shoulder height. Surfaces too high for shorter workers.	Lower pouch hand-off points. Trial adjustable platforms and lift tables. Reset work heights. Keep frequently handled items between hip and chest height.
2. Bending, twisting and low work	5.6 back hazards per hour. Confined picking, vat cleaning and floor-level bag handling.	Raise bag storage. Redesign vat cleaning and transfer. Improve access clearances. Review forklift orientation. Test mechanical assists.
3. Material flow and packaging	Double or triple handling across three warehouse locations. Boxes that need turning. Containers without handles.	Map the end-to-end flow and remove avoidable hand-offs. Work with procurement and suppliers on box orientation, grips, stability and date-code contrast.



4. Communication, environment and fatigue	Two-degree chiller, high noise, harsh lighting and shifts of up to 12 hours.	Install consistent buzzers, visual alerts or radios. Trial task-specific lighting. Review task length, pacing and recovery. Strengthen induction.
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Progress to date

Made Group NZ is now running a 90-day, worker-led improvement programme. A cross-functional Learning Team – workers, supervisors, maintenance, procurement and health and safety – is trialling one change at a time before deciding on a wider rollout.

The first two focus tasks are shoulder-height pouch handling and jam container transfer. Both combine high exposure, clear worker evidence and realistic engineering or packaging fixes. Forklift rotation and vat cleaning come next.

During the pilot we achieved:

- 23.6% improvement in shoulder risk and 16.3% improvement in back risk, with the biggest gains among the highest-risk workers.
- No workers remained in the highest-risk back category at the end of the reporting window.
- A clear, evidence-based list of priority tasks, agreed with the people who do the work.
- A trusted channel for worker knowledge, with a Learning Team in place to act on it.

The 90-day plan

Timing	What happens	What progress looks like
Weeks 0–2	Appoint an executive sponsor and the worker-led Learning Team. Confirm the two priority tasks. Capture baseline exposure, task flow and worker feedback.	Named team and owners. Baseline agreed. Current-state task maps completed.
Weeks 3–6	Run one-to-two week trials: lower hand-off height, adjustable platform or lift table, raised storage, better container grip, communication aids and lighting. Change one thing at a time.	A trial log with photos, measures and worker comments. Prestart briefings updated.
Weeks 7–10	Compare safety and operational results before and after. Standardise what works across shifts. Pick the next task.	Less exposure or fewer handling steps, without hurting quality or throughput.
Weeks 11–13	Review the pilot, capture worker feedback on the devices, gather cost and benefit information, and recommend next steps.	A leadership decision on wider rollout and the next site.



You said, we did, we learnt

Progress is shared through a simple 'You said / We did / We learnt' update. Workers and leaders can see what's being tested, what changed and what the evidence shows – which keeps trust high and people speaking up.

How the pilot's success will be measured

Area	What's measured	Why it matters
Exposure	Shoulder and back hazards per hour by task; time above shoulder height; bending and twisting frequency.	Shows whether high-risk movement is actually reducing.
Work design	Load weight, hand-off height, reach distance, handling steps, route distance and grip quality.	Links each improvement to the change that caused it.
Operations	Cycle time, waiting, communication delays, rework, picking and batch-code errors, throughput.	Tests whether safety and performance improve together.
Worker experience	End-of-shift discomfort, ease of the task, device comfort and confidence that concerns lead to action.	Confirms the approach works for the people using it.

Lessons for other manufacturers

Every site is different, but the Made Group NZ pilot offers some practical lessons you can apply to your own business:

- Use data to find the hotspots, and people to explain them. Sensors show where and how often risky movement happens. Workers show why.
- Treat a risky movement as a design signal, not a compliance issue. If the task forces the movement, coaching alone won't fix it.
- Start small and focused. Pick one or two high-exposure tasks and change one thing at a time so you know what worked.
- Look for changes that help safety and operations together. Double handling, packaging and communication gaps cost time as well as strain.
- Bring procurement and suppliers in early. Box orientation, grips and date-code contrast are often decided before goods reach your site.
- Show people their input makes a difference. Acting visibly on worker feedback builds the trust that keeps improvements coming.



Working with ShopCare

ShopCare is a charitable trust working to transform health, safety and wellbeing outcomes for the New Zealand retail sector and its supply chain, including the manufacturers and warehouses that keep shelves stocked.

We work alongside manufacturing and warehousing teams to combine wearable ergonomic data with on-the-ground worker insight. That helps leaders act on the causes of physical strain, not just the symptoms.

Interested in a pilot at your site?

We'd love to hear from you. Email info@shopcare.org.nz to talk about how a similar approach could work for your team.



Ngā mihi

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