LIFEBOOSTER

LifeBooster Solutions: Powering Safety and Operations

Warehouse Risk and Performance

Why Traditional Ergonomics Fails in Warehouses

Warehouse ergonomics is not a single job, a single task, or a single moment in time.

A food distribution DC, an e-commerce fulfillment center, and a manufacturing warehouse may all be called "warehouse operations," but their risk conditions can be fundamentally different. Facility layout, temperature zones, product flow, throughput pressure, automation level, and workforce composition vary dramatically. So does risk.

In warehouse environments, risk is not defined by job title. It's defined by what work looks like across a full shift: how many lifts are performed, at what heights, at what pace, under what production pressure, in what environment, and after how many hours of cumulative exertion.

A picker handling 200 units in a climate-controlled facility has a different risk profile than a picker handling 200 units at the end of a 10-hour shift in a heat-intensive zone, even if their job title is identical.

Traditional ergonomics methods were not designed to capture this kind of operational complexity. As a result, organizations are often forced to make safety, staffing, and investment decisions with an incomplete picture of exposure:

- Risk is assigned to job titles rather than measured across actual task sequence and shift exposure.
- Seasonal variability, overtime, and new-hire ramp periods often go unmeasured.
- High-risk scenarios are averaged away by role-level summaries.
- Return-to-work and modified dvuty decisions are made without objective exposure data.
- Capital investments in equipment, tooling, and automation are made on incomplete risk intelligence.

LifeBooster is built to make this complexity visible, measurable, and actionable.

LifeBooster: A Decision Engine for Real-World Warehouse Operations

LifeBooster combines ergonomic risk models, objective full-shift data, and operational context to produce decision-ready risk intelligence for warehouse operations:

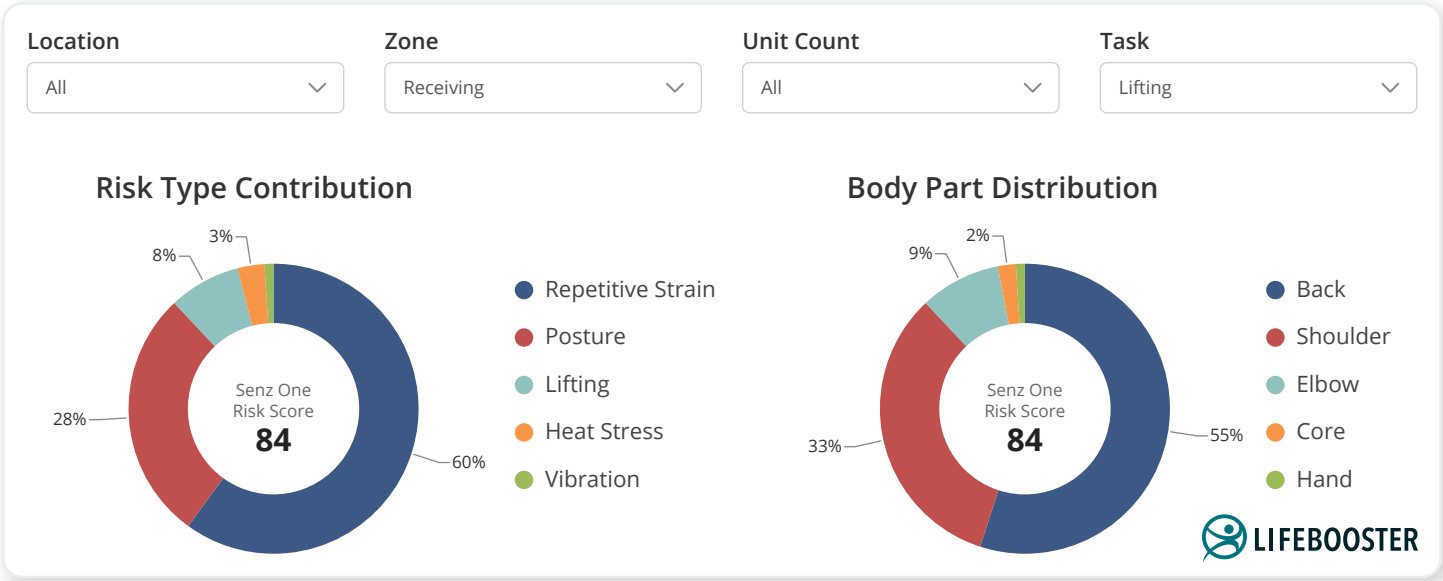
Industry Standard Risk Models	Full Shift Field Data	Operational Context
MSD · Heat Stress Hand-Arm Vibration	Not snapshots. Not sampled tasks.	Role · Zone · Shift Throughput

The result is not simply risk identification, but a **usable intelligence layer** that supports Operations, EHS, and Finance teams in making better decisions.

LifeBooster answers questions traditional methods cannot:

- Which roles, shifts, and warehouse zones are the true drivers of cumulative MSD risk — not just which tasks look risky on paper?
- At what point in the shift does exposure materially accelerate, where should rotations or break strategies be timed,and which roles show the steepest exposure curves?
- Which engineering controls or automation investments will meaningfully reduce exposure across the workforce, and which will not?
- Which workers returning from injury are being reintroduced into tasks that actually match their tolerance?
- What is the risk cost of peak period throughput targets — and how can scheduling absorb it?

This is the difference between documenting ergonomic risk and managing it.



Representative Sampling: Designed for Variability, Not Averages

Effective warehouse solutions depend on capturing the variable conditions that actually drive exposure, not averaging them away. LifeBooster programs are intentionally designed to reflect the real complexity of warehouse work, tasks, environments, and operating conditions.

Worker Variability

- Stature, reach, and strength
- Tenure and training level
- New hires versus experienced workers
- Workers on modified duty or return-to-work programs

Task and Role Complexity

- Receiving: inbound volume, trailer unloading postures
- Shipping: palletizing, packing, and scanning
- Picking: zone versus batch, floor versus overhead picks
- Material handling: pallet jack, hand trucks, and other manual tools
- Rework / certifiers: tasks involving repetitive fine-motor activity or sustained static postures
- Manual workers operating alongside forklifts and other mobile equipment *

Environment and Operations

- Temperature zones (ambient, refrigerated, frozen)
- Facility layout and travel distance over the course of the shift
- Shift structure, including 8, 10, and 12-hour models, and rotating shifts
- Peak periods, overtime, and changing throughput demands
- Level of automation and human-machine interaction points

* Manual workers operating alongside forklifts often carry a distinct risk profile. The forklift operator is usually assessed; the worker supporting the flow around the vehicle often is not. LifeBooster captures both.

Rather than asking "What is the average risk for a picker?", LifeBooster asks:

"Which combinations of worker, task, zone, shift timing, and throughput pressure create the highest - and most addressable - risk?"

What works for one warehouse does not work for all warehouses.
That is how organizations move from generic ergonomics programs to targeted operational decisions.

Decision-Ready Outputs for Warehouse Operations

LifeBooster produces outputs designed to inform operational and safety decisions, not just document them.

RISK PROFILE BY

Throughput or Production Volume

Identify the volume threshold at which cumulative MSD exposure accelerates. Peak period staffing, mandatory rotation, and overtime decisions can be made before injury trends emerge.

RISK PROFILE BY

Consecutive Days Worked

Understand whether four or five day work runs produce meaningfully different exposure curves. Scheduling is grounded in fatigue and recovery data, rather than labor availability.

RISK PROFILE BY

Hour Into Shift

Pinpoint when workers cross into elevated exposure territory. Time job rotations, breaks, and modified task assignments to where they actually matter.

RISK PROFILE BY

Worker Tenure

Distinguish new hire exposure patterns from experienced worker patterns. Onboarding strategies can avoid placing inexperienced workers into the high risk tasks on day one.

RISK PROFILE BY

Warehouse Zone

Compare Receiving, Picking, Shipping, and Rework using a common risk currency. Prioritize capital and ergonomic interventions based on exposure rather than assumptions.

RISK PROFILE BY

Task Assignment

Match workers returning from injury to tasks within their exposure tolerance. Return-to-work decisions are grounded in objective data rather than subjective task descriptions.

Turning Compliance Documents into Living Risk Intelligence

For most organizations, Job Hazard Analyses (JHAs) and similar task-assessment documents are created for compliance, then filed, forgotten, and left to expire while the work itself continues to change. Continuous data capture through Senz™ changes that by making those records current, defensible, and operationally useful.

Compliance and Currency

- Assessments will always reflect work as it's being done, not how it was documented three years ago.
- Documentation is audit-ready at any time, without a scramble to locate or verify.
- Each assessment is tied to a timestamp and a defined methodology, improving defensibility in claims and regulatory review.

Operational Value

- JHA data becomes a living record — updating as work changes due to new equipment, layout shifts, or seasonal task changes.
- Eliminates the observer effect — workers are not acting differently because someone is watching with a clipboard.
- Each hazard in the JHA carries quantified exposure data behind it, not just a checklist entry.

Workforce and Training

- New-hire onboarding can be grounded in real exposure data rather than generic task descriptions.
- Supervisors can reference actual risk levels when briefing workers on high-exposure tasks.
- Learning team conversations can begin with shared data rather than anecdote.

Expected Value for Warehouse Operations

For large scale warehouse operations, precision matters. LifeBooster enables Fleet and EHS leaders to:

- Avoid over-investing in equipment, automation, or process changes that don't materially reduce exposure and deliver limited or uneven benefit across the workforce.
- Align scheduling, job rotation, and staffing strategies with measured cumulative exposure data.
- Support defensible return-to-work and modified duty decisions using objective task-level risk profiles.
- Create a common risk language across sites for corporate-level comparison and prioritization, and capital planning.
- Strengthen documentation for WCB, claims management, and regulatory engagement.
- Validate whether interventions are actually reducing risk, rather than assuming they are.

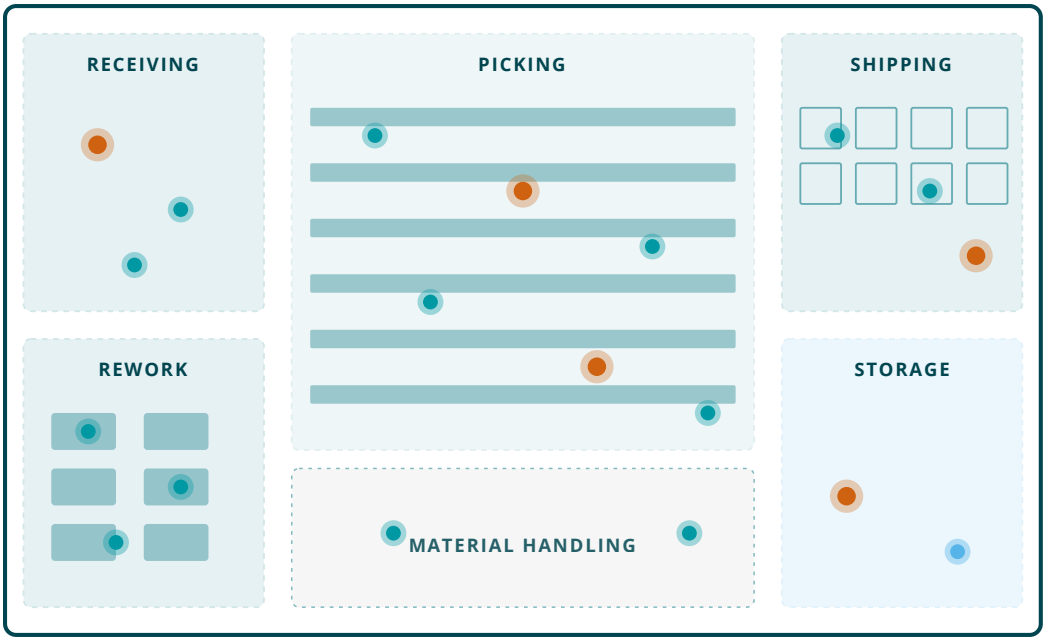
Beyond the Baseline: Informing Smarter Decisions

The baseline data capture is not the end point. It creates the operating dataset needed to validate interventions, scale across sites, and track change over time. Phase 2 opportunities include:

- Expansion across additional facilities.
- Seasonal programs to capture peak period and overtime exposure.
- Before/after validation of implemented controls.
- Longitudinal tracking of risk and injury trends over time.
- Application to adjacent job types (e.g., fleet / service delivery operations).

The same risk intelligence generated during the baseline can also inform:

- Facility and workstation design decisions (pre-build or during retrofit).
- Job rotation design that balances risk across task types and body parts.
- Training prioritization by worker profile and exposure level.
- Workforce planning decisions that account for cumulative exposure during high-volume periods.
- New-hire ramp strategies using lower-risk zone and task profiles during onboarding.



Measure

Compare

Validate

At Warehouse Scale

Why LifeBooster

LifeBooster does not replace ergonomics expertise. It extends that expertise into real operating conditions, where shift length, throughput pressure, workforce variability, and operational cost all shape risk.

For organizations with mature EHS programs, LifeBooster provides what has historically been difficult to achieve: the ability to measure, compare, and validate ergonomic decisions at warehouse scale.

Schedule a discovery session to identify where cumulative exposure is actually being created across your warehouse operation.

Our team will walk you through the technology, help you evaluate the right baseline approach, define a representative sampling strategy, and determine which roles, zones, shifts, or throughput conditions warrant the closest attention.

The result is a clearer starting point for better safety, operational, and investment decisions.

Ready to transform your warehouse operations? **Reach out today**.