tosca

WHITE PAPER

Turnover, tariffs and trend-shifts:

Building strategic resilience in the food supply chain

Executive summary

The landscape of the workforce has vastly shifted. But the solution isn't coming from just one source.

With a 53% annual turnover rate in warehousing and transportation, labor volatility has evolved from temporary staffing gaps to a structural issue affecting the workforce.

Recent tariff implementations—including a proposed 10% universal tariff, as well as higher rates for specific countries—have created pervasive uncertainty about the cost impacts. Industry analysts project a 2.6% short-term increase in food prices, with seafood prices potentially rising by 20–30% due to import reliance.

The challenge for supply chain leaders is that these issues don't exist in isolation. Workforce shortages create bottlenecks, delays, and errors in operations, which in turn, increase costs while tariffs squeeze margins. The shift in consumer behavior adds further complexity.

But here's what forward-thinking companies understand: The right operational improvements create cascading benefits that address multiple challenges simultaneously.

This paper examines practical approaches to resilience in the face of a new labor reality by addressing interconnected challenges through workforce structure, consumer demands, packaging optimization, and strategic automation readiness.

At a glance

86% of food production and supply chain management professionals feel overworked, creating burnout that accelerates turnover.

Current tariff policies are projected to increase food prices by **2.6% in the short term**, with fresh produce rising **4% under all 2025 tariff actions.**

Food prices were already **2.8% higher in April 2025 vs. April 2024**

68% of consumers now expect year-round access to seasonal produce, driving sourcing from multiple regions.

Increasing complexity stemming from consumer demands along with workforce and efficiency challenges requires companies to address them all simultaneously to maintain profitability and future-readiness.

You're not facing a shortage—you're facing a shift

Warehouse wages rose 40–50% between 2020 and 2024 to reach an average of $18.99 per hour, yet turnover remains stubbornly high at 53% annually in 2025.

The food industry is undergoing a workforce restructuring that is shaking its foundations. The factors underpinning this restructuring are complex, starting with conflicting needs and expectations for workers and businesses.

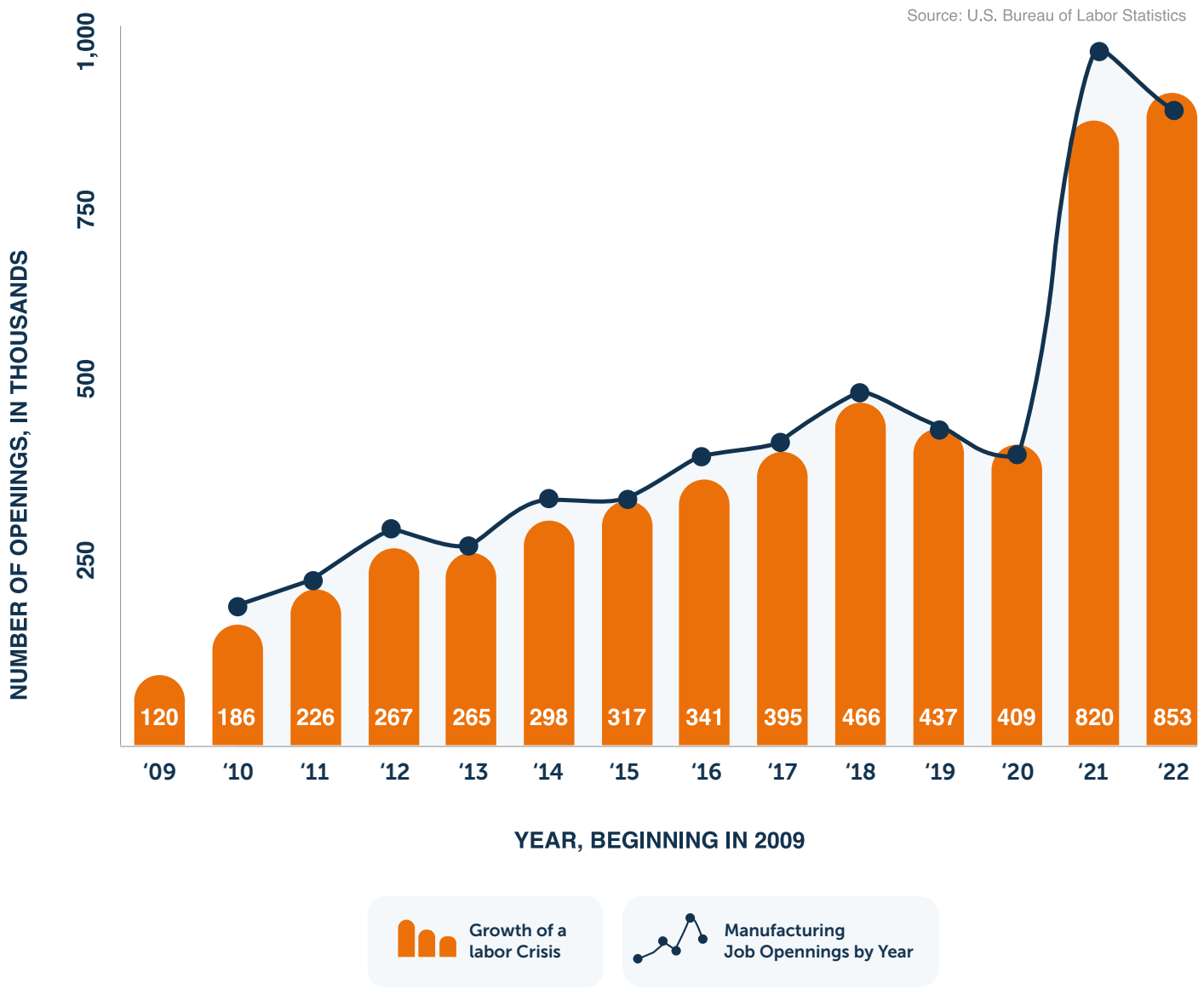
Dean Starovasnik, a supply chain consultant and client partner for enVista who has spent more than 25 years helping companies with supply chain challenges, puts it bluntly:

"Nobody wants to drive a forklift truck in a freezer on a Friday night, right? **But if you pay people $100,000, they'll drive a forklift truck in a freezer on a Friday night.** Of course, most companies can't afford that."

On one hand, warehouse wages have risen to an average of $18.99 per hour—a 40–50% increase since 2020. Rising wages generally bode well for industry growth, but for the food industry - recruitment and retention are still a struggle. This is compounded by recent shifts in policies, which have reduced worker availability in a field historically dependent on this labor pool.

Growth of labor crisis

The COVID-19 pandemic impacted the labor crisis in the fresh-food supply industry, but the data of average annual seasonally adjusted available manufacturing jobs shows the crisis was already brewing.



Where is the workforce going (and why)?

Food industry jobs in 2025 are competing against fundamentally different value propositions. While the industry has focused on wage increases, many workers are seeking roles that offer flexibility, purpose, and better work-life integration, and they're looking to other industries to find them.

Food Industry

Warehousing • Manufacturing • Distribution

- Fixed 8-hour shifts
- Physical demands
- Limited advancement
- Weekend/holiday work
- Temperature extremes

Healthcare Support	Modern Retail	Tech-Adjacent	Service Industries
✔ Meaningful work purpose	✔ Flexible scheduling	✔ Remote work options	✔ Social interaction
✔ Multiple shift options	✔ Customer interaction	✔ Skills development focus	✔ Tips and incentives
✔ Clear career advancement	✔ Climate-controlled environment	✔ Work-life balance	✔ Varied daily tasks
✔ Growing field security	✔ Part-time friendly	✔ Modern work culture	✔ Shorter shifts available
✔ Skills transferability	✔ Employee discounts	✔ Growth opportunities	✔ Team environment

The severity of this challenge is evident in current industry data, where 73% of warehouse operators report difficulties in finding workers. 65% of manufacturers name the attraction and retention of top talent as their top business challenge.

"Those are really difficult jobs,"

said Eric Frank, CEO of reusable plastic packaging and pooling company Tosca, comments on this.

"Whether it's in the beef plants or at produce harvest facilities or out in fields, it's a lot of manual labor. You're in a freezer lifting heavy containers. You're out in a field under the blistering sun, bent over and picking produce. You're driving a tractor trailer across the country, gone from your family for weeks at a time. The conditions are pretty harsh, and because of that, there's a lot of turnover."

What does understaffing mean for product quality

When facilities operate below optimal staffing levels, operational errors increase measurably, which can impact product quality. **Food facilities operating with understaffed teams experience a 15–20% daily increase in spoilage rates,** which accelerates product losses in real-time.

But workforce challenges aren't an isolated problem. They're intrinsically connected with your operations in a way that can make supply chain issues difficult to solve.

Optimal Staffing

Adequate workforce allows for proper quality control procedures, regular safety checks, and time for thorough training. Workers can follow established protocols without rushing.

- Standard Procedures Followed
- Quality Checkpoints Met
- Food Safety Protocols Maintained

Stretched Resources

Reduced staff leads to time pressure and corner-cutting. Some quality control steps may be rushed or occasionally skipped to meet production demands.

- Time Pressure Increses
- Some Shortcuts Taken
- Training Time Reduced
- Overtime Fatigue

Understaffed Operations

Critical understaffing forces workers to rush through procedures. Quality control checkpoints are frequently missed, and food safety protocols suffer as staff focus on just getting through the workload.

- Procedures Skipped
- Quality Checks Missed
- Food Safety Compromised
- Error Rates Rise
- Worker Burnout

The reality is that **75% of voluntary employee turnover is preventable.** This means labor availability doesn't depend solely on compensation.

Positions are still built around traditional full-time commitment & job descriptions offer limited advancement.

This leads to essential positions remaining unfilled even as companies spend more on recruitment, overtime, and agency staff.

4 issues to look at if you want to address labor availability

Scheduling conflicts
Workers aren't just looking for 8-hour shifts anymore; workers want 4-day workweeks, weekend-focused schedules, and other flexible options.

Skill underutilization
Focusing solely on physical capabilities rather than problem-solving or technical aptitude.

Career plateaus
Limited advancement paths can drive high-potential workers to other industries.

Training gaps
When training is limited to immediate tasks rather than building transferable skills, employees are more likely to experience dissatisfaction.

E-commerce exacerbates these challenges, too.

"Now we pay someone else to walk down an aisle and find the stuff we want and get it to us," Starovasnik said. **"Whether it's Amazon or a grocery store, we're not there doing it anymore. Now someone else is, and we've got to pay that person."**

Identifying your workforce structure issues: Questions to ask your team

Use these questions to evaluate whether your current labor model matches today's workforce realities:

1. Does your current job structure reflect how today's labor market prefers to work, or is built around historical patterns that no longer apply?

2. Could your roles be redesigned to appeal to different worker segments (parents, students, semi-retired) without disrupting core operations?

3. Have you examined whether scheduling flexibility (such as 4-day compressed weeks or part-time options) might deliver better results than simply increasing wages?

4. Have you asked your current high-performers what would make their roles more sustainable and attractive long-term?

Consumers are looking for more, and it's hard to keep up

Distribution centers now handling up to 5 times more SKUs, with each product category requiring different handling protocols—all while operating with the same constrained workforce.

As companies struggle to fill positions and retain workers, new consumer behavior trends are adding operational complexity. And that complexity? It's making workforce challenges even harder to solve.

It's not that consumers are buying less or shifting to simpler products. They're demanding more from every interaction. Restaurant spending hit historic highs in 2023, $4,485 per capita, up from $4,004 in 2022.

However, simultaneously, 75% of consumers are actively trading down within grocery categories, switching to private labels and adjusting their quantities to manage costs amid tariff- and economically-fueled anxieties.

This situation creates what supply chain leaders refer to as "complexity creep." Instead of being able to focus on handling one demand well, operations have to excel at multiple service levels simultaneously.

What are consumers buying in 2025?

Restaurant-quality standards everywhere

Products that were once acceptable in bulk foodservice formats may get rejected if the packaging is damaged.

Every SKU needs to look retail-ready, even if it's heading to a back-of-house kitchen.

Value and premium in the same order

The same consumers contributing to private-label growth are also purchasing premium convenience items.

Distribution centers handle both economy and luxury SKUs, which have different handling requirements, storage needs, and damage thresholds.

Occasion-based complexity

Different food sources serve completely different needs: restaurants for social experiences, delivery for convenience, grocery for value, and meal kits for cooking education.

Each occasion has different quality expectations and packaging requirements.

The meal kit industry perfectly illustrates this complexity. **The market reached $20.54 billion in 2022 and is projected to grow to $64.27 billion by 2030.**

But customer retention rates tell the real story: HelloFresh at 9%, Blue Apron at 15% after 11 months. That means 85–91% of customers quit within a year. What this means is that this mode of purchasing isn't replacing regular dining habits; it serves specific occasional needs, which means supply chains must support both regular grocery operations and specialized meal kit fulfillment.

Another challenging (yet pervasive) consumer expectation is the desire for instant access to various types of food.

"We've lost seasonality,"

says Judson Armentrout.

"For example, you grow strawberries in the wintertime in California, but consumer preference and demand say, 'I want strawberries year-round.' That adds the complexity of figuring out where we are sourcing things from, transportation routes, and things like that."

Responding to consumer behavior changes: How to evaluate your team

Ask your team the following questions to determine how consumer-aware your practices are:

1. Is your packaging designed to protect the quality that consumers expect from retail-ready products?
2. Have you considered how shelf life impacts purchasing decisions in an inflationconscious market?
3. Are your distribution systems equipped to handle the increased complexity of the mix due to shifting consumer preferences?

Building for future-readiness while protecting today

Warehouse automation market reached $26.5 billion in 2024 and is growing at 15.9% CAGR through 2034, but success depends on building the right foundation first.

This is where all the connected challenges come together: Companies need solutions that address today's workforce and efficiency issues while building platforms for tomorrow's opportunities.

When pressure to address labor issues mounts, making the right investments becomes critical. Recent data indicates that 60% of businesses, including nearly 85% of large enterprises, have adopted labor-replacing automation within the past year.

Starovasnik puts the automation trend in perspective: "The increase in demand for automation driven by the lack of labor has been consistently in the 15% range, give or take 5%, for a couple of decades. What the pandemic did was spike a significant demand in automation very rapidly across a wide variety of industries, not just distribution."

However, one of the most dangerous decisions a company can make is to automate without first conducting a thorough and honest appraisal of its information systems. Often, these companies pay for seven-figure full-scale automation while technology such as their warehouse management systems is woefully outdated, or even non-existent.

Instead, the foundation for successful automation starts with operational basics, not with automation itself.

Companies that successfully navigate begin by taking a methodical approach. This might include steps like the following:

These steps give teams more control over daily operations while making it easier to introduce automation later. When key workflows are consistent and materials are easy to handle, the machines don't have to correct for variability. That reduces downtime, protects capital investment, and avoids operational slowdowns during rollout.

Don't overlook the importance of your information system and its infrastructure. Companies without modern, integrated, fully functional information systems are wise to start their improvement efforts there, again, to find savings that leave capital for higher wages.

An upgraded warehouse management system is essential for any company interested in automation and comes with several ancillary benefits. For example, it improves inventory management by reducing losses and lowering operational expenses.

"Warehouse management systems are the brains of a warehouse. A brain transplant can take a while, depending on the operation, but it's a necessary prerequisite to run an automated facility."

Dean Starovasnik

Readiness check for automation investment

Use these questions to assess whether your operation has the foundation to support automation without adding risk:

1. Are your highest-variability processes documented, mapped, and simplified?
2. Can your current team absorb minor system changes without loss of throughput?
3. Have you tested any automation workflows in a limited environment before scaling them up?
4. Does your packaging support repeatability across shifts, teams, and facilities?
5. Do your data systems capture real-time product movement, labor usage, and downtime?

If the answer to most of these is no, automation might not be the next step. After Starovasnik finishes his consultation with his clients, only around 20% of them decide to proceed with automation. A large part of the reason is the upfront cost of large-scale automation.

"The first question is **'Does automation really make sense?'**" he said.

"Part of my job is to help clients understand that although automation seems like a very attractive, bright, shiny toy that the boss wants, the payback on that investment in automation may be a dozen years. Most firms aren't willing to invest in such a long term."

Five questions that can help you address automation so it pays off in the long run

1. **Does automation make sense right now?**
If you're just thinking about the complex, change-your operation kind, no. Not to start with, anyway. Start with "preparation automation"—standardized processes and packaging that work with existing systems while preparing you for future technology.

2. **Do I have a broad enough perspective to improve efficiency?**
Consider fresh eyes—external consultants or cross-functional internal audits. Assessments can find dozens of hidden inefficiencies and save the cost of multiple positions in year one. Sometimes the most substantial gains come from cutting out steps you didn't realize were unnecessary.

3. **Are our systems and processes fully optimized?**
Start with the fundamentals. Find where you have time-wasting activities like box assembly and breakdown and complex handling processes, and standardize where possible. Making these changes often deliver immediate results—without capital investment.

4. **Is there 'low-hanging fruit' that can be plucked to save money?**
The answer is almost always yes—and packaging decisions are one of the "low-hanging fruit" that can yield immediate impact. Switching to RPCs can reduce labor by up to 53% in some applications, reduce disposal costs, and increase worker safety.

5. **Do I have buy-in from the right people?**
Buy-in is key to successfully adopting new processes—and automation is no exception. Involve people in discussions from the start, don't just try and sell them on solutions. Include supervisory leadership, floor leads, and ops managers in the planning process. When people contribute to the solution, they can become advocates rather than obstacles to change.

Protect margins with smarter packaging decisions

RPCs can reduce retail labor by **up to 53%** in egg departments alone.

Here's where workforce challenges flow into operational efficiency:
When you're short-staffed, each inefficient process becomes exponentially more costly.

While reimagining roles addresses part of the labor challenge, understanding consumer shifts allows companies to match labor supply with demand. Proactive companies are simultaneously refining their approach and the work itself, improving training, adjusting facility layouts, implementing targeted technology solutions, and reevaluating packaging decisions.

Why packaging plays an outsized operational role in the food industry

Among these approaches, packaging choices—particularly the shift from traditional corrugated boxes to reusable plastic containers (RPCs)—offer substantial benefits.

High-quality RPCs are made of food-grade polypropylene, a type of plastic that is impermeable, washable, and able to prevent the penetration of bacteria or fungus. When paired with the right washing and food-safety practices, these containers can be used and washed hundreds of times without risk of food-contamination incidents.

But that's just the tip of the iceberg when it comes to how they complement broader operational needs.

Judson Armentrout, founder of Building Block Solutions and former supply chain leader for Kroger, explains how these elements work together:

"The advantage with RPCs is you're able to get more on a truck going from the supplier to the distribution center, so you're reducing your transportation spend and reducing emissions.

You're also able to keep the product from getting compressed by other products, so you're able to deliver a better product to the shelf consistently than what you wind up with going through in boxes."

Better Storage

Exact sizing maximizes storage within each RPC. Standardized footprints and greater strength enable these stackable containers to reach new heights, maximizing cube utilization and reducing the number of trips.

Reduced Packaging Labor

Traditional packaging often involves significant manual labor for assembling and disassembling boxes, pallets, or crates. RPCs, being durable and stackable, eliminate the need for constant repackaging.

Faster Loading & Unloading

The standardized design of RPCs makes them easy to stack and handle. This results in faster loading and unloading processes, reducing the time and labor required for these tasks.

Increased Safety

RPCs have ergonomic handles to prevent back strains, which can take valuable workers offline. RPCs also stack much more safely, which reduces or eliminates collapses that cause injuries.

Improved Automation & Handling Efficiency

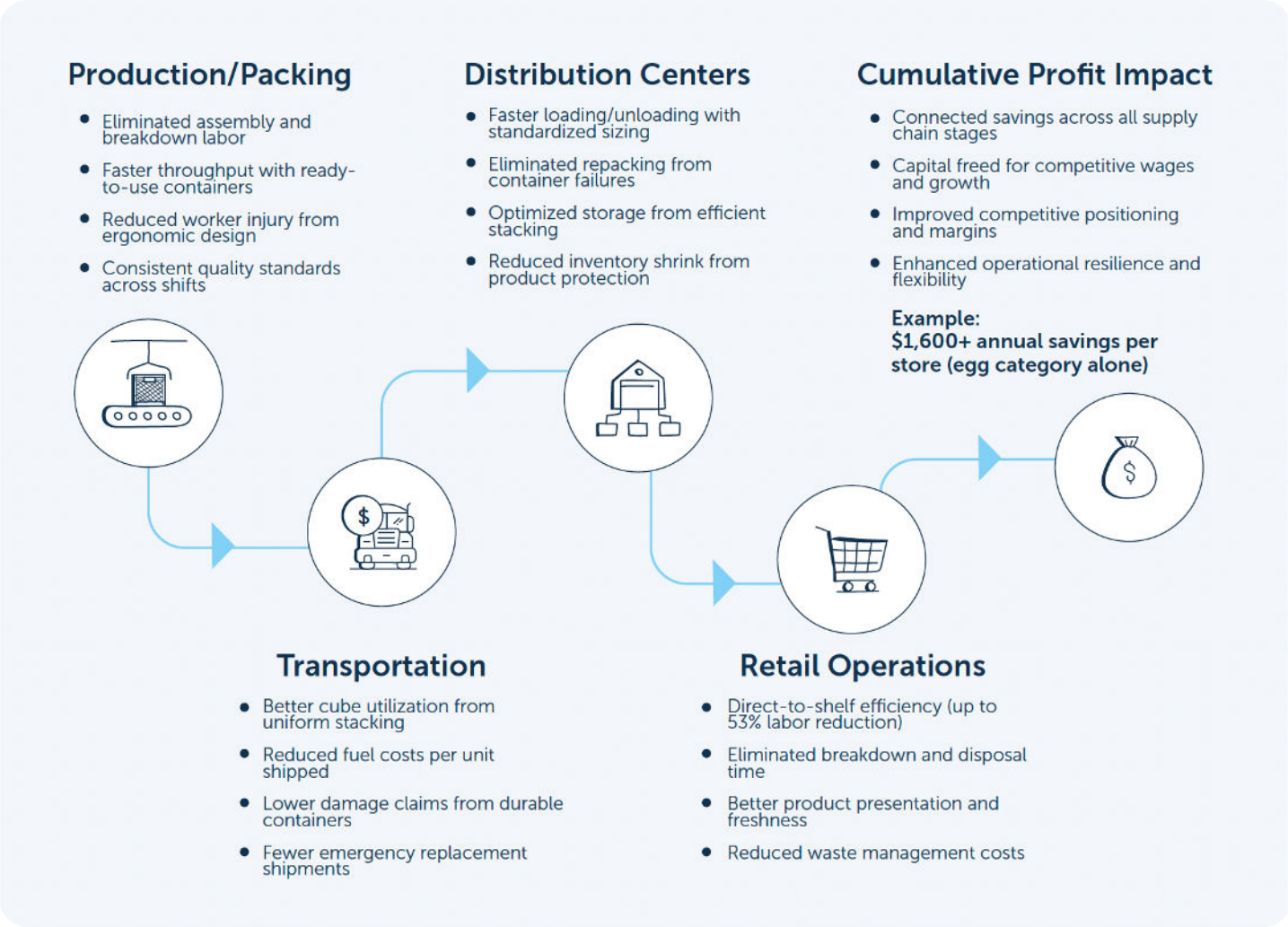
RPCs are designed for durability and standardized dimensions, making them suitable for use in automated processes. Automated systems, such as conveyor belts and robotic arms, can efficiently handle these containers with minimal human intervention.

The profit margin/packaging impact down the supply chain

Here's where packaging strategy lines up with business strategy. When workforce shortages force you to do more with less, the systems you rely on can either multiply your problems or help solve them.

This visual maps the operational impact of packaging decisions across your supply chain. Benefits build on one another at each stage: labor savings at retail, reduced damage in transportation, faster throughput in distribution. Each improvement makes the next stage more efficient.

Smart Packaging Choices: Profit Margin Protection Down the Supply Chain



As Armentrout notes, efficiency gains extend beyond handling:

"You're also able to keep the product from getting compressed by other products, so you're able to deliver a better product to the shelf consistently than what you wind up with going through in boxes."

Building pallets or loading carts manually is also a tough job that leads to a disproportionate number of worker compensation claims and contributes to general job dissatisfaction, Starovasnik said.

Stacking corrugated boxes of varying sizes can be a maddening and dangerous puzzle. Grocery distribution center pallets are an amalgamation of a variety of different products, with boxes weighing anywhere between 20 and 50 pounds. When boxes crush in transit, the entire pallet can collapse and spill products when the truck door is opened.

"One of the advantages with RPCs is you don't wind up with any of that crushing," Armentrout said. **"So you save time at the store, eliminating those damaged pallets coming in that have to then be rebuilt and all the product damage and everything that's associated with it."**

That "everything that's associated with it" is shrink, and it is often extremely costly. Tosca CEO Eric Frank said his company's RPCs are shown to decrease shrink dramatically.

"Most of the time, we can cut shrink by up to 50%," he said. **"That means less trucks, less shipments, less food waste, and helping not just financially but from a cultural standpoint with the greater good."**

Again, the emphasis isn't on reducing headcount through this switch.

Most companies involved with the fresh food supply in America are in no position to do this. Instead, it's to increase efficiency so that the existing labor pool can do different tasks, and receive a higher salary to keep them from wandering away to other companies, whether inside the industry or not.

Packaging impact assessment: Questions for operations leaders

Conducting this assessment often reveals hidden labor inefficiencies that can be addressed through strategic packaging decisions without major operational disruption.

1. Which packaging-related tasks currently consume the most staff hours in your operation?
2. How could standardized packaging complement your training programs and safety initiatives?
3. Are there areas where packaging improvements would allow you to redeploy labor to higher-value activities?
4. Have you measured the impact of packaging failures on schedule adherence and overtime requirements?

Finding and retaining good labor is more challenging than ever before

The labor market has changed, and maybe for good. But those changes may also be good for your business.

The same can be said for consumer expectations or tightening margins. While these situations are business stressors, they can be a catalyst for improved efficiency and growth.

The businesses that are making operational changes aren't throwing money at the problem or rushing into expensive automation projects. Instead, they're targeting solutions that resolve multiple issues at once.

- Some are **redesigning roles** to match how people want to work.
- Others are **eliminating time-wasting processes** that frustrate both workers and managers.
- Many are **switching to packaging that works better** with their existing systems and prepares them for whatever comes next.

These aren't dramatic business strategies. They're practical changes that make operations run smoother, reduce the daily headaches that drive good people away, and free up money to pay competitive wages. The companies that figure this out first will have their pick of the available workforce.

These same changes are ones that are a pathway to automation and gaining the competitive advantages that come along with its efficiency.

Your next move doesn't have to be complicated. Start with the changes that make the biggest difference for your specific operation, and build from there

Tosca reusables eliminate waste at every turn to maximize performance, support sustainability, and save you money

Automation Readiness
Standard sizes, durable containers

Quality Assurance
Contaminant-free and hygienic assets, traceable with IoT, and less purge

Operational Efficiency
No debris or line jams and zero capital outlay

Sustainability
Eliminate packaging waste, food waste, and reduce CO_2 emissions

Labor Savings
No wasted time at the bailer or box failure clean up

Product Protection
Reusables protect products in transit, reducing shrink

Transportation Savings
More product on the trucks from higher stack

Why partner with Tosca?

tosca

- **Collaborative relationship** that brings a wealth of expertise to solve your supply chain challenges
- **Broadest portfolio** of pooled reusable plastic packaging designed to meet your specific needs
- **Innovative products,** services, and technology solutions to future-proof your supply chain

Learn more about Tosca's solutions at toscaltd.com