

rocery retailers need visibility on inbound perishables shipments so they can manage inventory, streamline operations, prevent receiving issues and ensure product quality and safety. Many retailers still use passive data loggers, but with increasing supply chain complexity and consumer expectations for product availability and freshness, passive tracking is often insufficient.

That's because passive data loggers use after-the-fact data collection — which means that any issues are discovered after transport is completed. To view the data, retailers must collect data loggers from the shipment and then manually connect them to a computer to generate status reports. But by then, the damage is already done. It's too late to intervene to correct the problem en route, and it's too late to avoid the costs, lost time and customer dissatisfaction associated with a truckload of spoiled produce or other perishables.

The negative impact of continuing with passive tracking can't be understated. The United Nations World Food Program USA reports that mishaps and mishandling as food moves through the supply chain lead to about \$1 trillion worth of food waste annually.



\$1 trillion

The annual cost of food waste due to supply chain mishaps and mishandling, as reported by the United Nations World Food Program USA.



There's a better way.

Retailers can reduce product loss during shipment by using technology — from companies such as Tive — to track product condition and location in real time throughout a shipment's journey. Not only can real-time monitoring track the location of a shipment, but it can also identify variations in temperature, humidity, light and shock — all while it's happening, and often in time to intervene before it's too late and avoid losing the shipment to spoilage or damage.

This playbook outlines how to select the right real-time tracking solution and provides strategies to implement this time- and money-saving technology in your supply chain.



How To Select the Right Real-Time Visibility Technology

While any real-time shipment tracking provides a dramatic improvement over passive data loggers, not every option is necessarily equal. Identifying what's most important to your operation — and matching that with the right provider — is critical.

The top features retailers look for when converting from passive data loggers to a more powerful, real-time tracking solution include:

1. True real-time alerts

You need to know there's a problem as soon as it happens — so you can intervene and address the issue. Understand how the system will send you alerts, and when.

2. 5G capability

Look for trackers with 5G connectivity that monitor shipments' precise location and condition — to help ensure data accuracy. These trackers leverage advances in technology and telecom infrastructure, along with wireless networks and access points.

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A real-time alert system gives you the visibility you need to really take control of your supply chain, so you can move forward with initiatives around ensuring freshness and on-time delivery.

RAJAH NAGARAJAH
Team Lead, Food Vertical at Tive



3. Condition monitoring

Is the system limited to location and temperature, or does it also monitor other factors that impact perishables, such as humidity, light and shock? Compare capabilities with your current needs and what you anticipate as your business evolves or expands.

4. Cloud-based software platform

How is the software deployed? Is it on-premises or all by the cloud? Rajah Nagarajah, food vertical team lead at Tive, notes that ideal visibility software is cloud-based with real-time updates. Because cloud-based software generates automatic updates as data is collected, retailers and shippers aren't waiting on an IT specialist to update their system or load data manually from a logger.

5. Easy-to-generate, powerful analytics

Valuable insights from historic shipment data can be used to analyze everything from carrier performance to temperature excursion patterns. A real-time visibility platform that provides aggregated analytics can be powerful in improving future decision making.

6. Item-level monitoring

Having this detailed level of monitoring is essential, especially when a trailer is segmented into different temperature zones. This also ensures that the integrity of the product is monitored at all times, even before or after it is loaded onto the truck.

7. Ease of integration

The creation of new data silos should be avoided at all costs. Ensure that you partner with a visibility solution provider that has an open Application Programming Interface (API), which makes it easy for retailers to connect their existing transportation management systems (TMS), warehouse management systems (WMS), or other supply chain management (SCM) and enterprise resource planning (ERP) solutions to the cloud-based visibility platform.

8. Service and support

Supplier IT support during setup is especially important when integrating systems. Look for 24/7 customer service, as transportation is a round-the-clock operation.



9. Cost-effective reverse logistics and rebates

Maximize your return on investment (ROI) and support your sustainability efforts by looking for a solutions provider that issues rebates on real-time trackers that are returned through a smooth reverse logistics process.

10. Device supply

Some parts of the supply chain have yet to stabilize since the pandemic. It's important to know whether you can get the tracking devices you need when you need them.

11. Provider's reputation for innovation

Supply chain technology and retailer needs are always evolving. Look for a provider that's an innovation leader, not a follower.

12. Provider stability and longevity

Avoid repeated technology integrations — as providers come and go — by partnering with a supplier with a good track record and demonstrated stability.





Top 5 Features To Look for in a Real-Time Shipment Visibility Solution

- Data accuracy, assured by high-tech sensors that combine 5G cellular, GPS and WiFi triangulation for location accuracy within feet, not miles
- 2. Cloud-based software platform and data storage
- **3. Real-time alerts** that can be customized to match your specific needs
- **4. Easy-to-use** trackers and platform, with reliable support available as needed
- **5. Simple integration**, enabled by robust API and webhook capabilities, that allows you to integrate data from trackers into existing TMS, ERP and other IT systems





Step by Step: Implementing Real-Time Shipment Tracking in Perishables Shipments

Upgrading from passive loggers to real-time monitoring devices, such as Tive's Solo 5G trackers, is easier than you might think.

Replacing out-of-date devices with state-of-the-art alternatives typically takes less effort than starting from scratch. Here's how to make it happen in your organization.

Step 1: Review perishables data to identify your biggest pain points.

Start with your most consistent problem areas. Review existing analytics to determine which perishables product category generates the greatest financial losses through spoilage (or theft) and shopper disruption because of damage during shipment. It might be a popular but fragile fruit or perhaps a protein or dairy product that travels farther than most.







Step 2: Work with the visibility solution provider to design a proof of concept with the category's top suppliers.

Piloting a state-of-the-art solution will help you understand what the data looks like, how all entities are adopting it and how your team uses it. A pilot program also reassures stakeholders that the new standard operating procedure is an improvement.

Start by determining which functions in your organization will use the data. The right system will generate information that benefits not just transportation but also quality control, sales, procurement and other departments. Identify the data they'd like to receive, then work with your visibility solution provider to ensure you have a user interface that makes that information easy to access.

Next, work with your provider to seamlessly integrate its technology with your TMS, ERP and other IT systems. This can be achieved via an open API or webhooks, with support from your provider's IT support team provided as needed to assist in the integration.

As that's happening, educate your stakeholders about how they will benefit from the technology. Key benefits include reduced waste and spoilage, less disruption and improved retailer relationships. Provide them with specifics on how to acquire and use the real-time tracking devices.

Step 3: Review preliminary data and adjust processes or systems, as necessary.

A proof of concept validates that software integrations work as expected and gives any new internal processes a trial run. Software adjustments can be more obvious than those involving employees, so it's important to include those individuals in a post-pilot review.

With real-time data monitoring, you'll want to make certain that employees have successfully integrated the new processes into their workflows. Have they replaced post-shipment data downloads with real-time access to shipment conditions? Is the information flowing to them as expected? How are they using it? Are they seeing the positive impact you expected?

Step 4: Roll out to remaining (or selected) suppliers by sending compliance letters.

When introducing new hardware, technologies or processes, communicating with all stakeholders is important. Detail in writing the what, why and how with real-time monitoring devices. This includes information about how they can acquire and use your selected monitoring devices. Premier service providers can provide you with a supplier letter template upon request.

Highlight the advantages to suppliers in this communication. For example, Tive's Solo 5G tracker benefits include the following:

- Simpler device operation and fast setup
- Fewer time-consuming, expensive insurance claims
- Higher customer satisfaction
- Improved food safety, trust and accountability



Step 5: Leverage the data.

Drive internal and external change with strategic analysis that helps identify what's happening across different lanes with different commodities. For example, identifying patterns helps with inventory planning and procurement decisions. In addition, when suppliers access and use the data, they can initiate any necessary changes in their processes.

lmpl	Implementation Steps Checklist:	
	Identify the biggest pain point(s).	
	Design a proof of concept.	
	Assess early data.	
	Roll out.	
	Leverage the data.	





Overcoming Obstacles

Replacing passive data loggers with real-time trackers is an investment; smart, real-time tracking devices may cost more than passive loggers, but the benefits are myriad. The implementation process can also incur costs for upgrading outdated or legacy ERP systems with more powerful technology.

But while better solutions may cost more and require budgeting by retailers and shippers, they generate improvements that go beyond perishables monitoring. Real-time tracking can save money, improve food safety, eliminate surprises upon delivery, reduce waste and spoilage, improve inventory management, and increase customer and consumer satisfaction.

Moreover, the expense of replacing damaged perishables far exceeds the initial investment in real-time trackers. Brian Pacula, a partner at digital consulting firm West Monroe, advises incorporating quantitative and qualitative costs when calculating ROI. It's about more than the cost of lost product, he says.

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It's about more than the cost of lost product. You can estimate the real-cost impact of lost product using data from insurance claims and other resources, but there's also a lot of qualitative disruption that happens on the dock when a problem is discovered. The shipment has to be quarantined, the driver is delayed, and so on — not to mention consumer frustration when the food they're looking for isn't available.

BRIAN PACULA
Partner at West Monroe





While adding the qualitative impact helps retailers see the value of real-time monitoring, Pacula says, many realize the positive financial impact by looking at product value alone. "If you can calculate some percent of the cost of a full truckload shipment, it becomes a no-brainer to do this and hedge some of your risk. A refrigerated load that's running 500 miles is pretty pricey," he says.

The investment is supported, Pacula says, by progressive organizations that reduce siloing — and give the transportation function a "seat at the table" in the boardroom.

"In these situations, transportation leaders are able to elevate the business case and justification, get heads nodding around the table, and get approval," he says.

Real-Time Monitoring with Tive

Protect your inbound perishable shipments with Tive's real-time trackers and cloud-based visibility platform. Tive leverages advances in technology and telecom infrastructure such as 5G, along with access to wireless networks and access points, to accurately monitor the location and condition of shipments — throughout their entire journey.

This means Tive can detect problems, such as delays or temperature excursions, while there is still time to save the shipment or replace delayed inventory with merchandise from an alternative supplier.

Don't wait. Learn how you can start using this innovative technology for mitigating transportation risk in your perishables supply chain. To learn more and connect with a Tive specialist, go to https://www.tive.com/food.







ABOUT TIVE

Tive is the global leader in real-time, end-to-end shipment visibility solutions. More than 600 global shippers, logistics service providers, and retailers use Tive to monitor shipment location and condition in real time, gain actionable insights, and ensure end-customer satisfaction. Tive's cloud platform, patented sensor technology, and 24/7 Live Monitoring services reduce excursions and delays, minimize rejected loads, and decrease theft, damage, and spoilage. Customers count on Tive to ensure that shipments are delivered on time and in full—because every shipment matters. For more information, visit www.tive.com.

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