The Logistics Tech Stack in 2025: Integrating Route Optimization With WMS, TMS, and APIs

In 2025, logistics software integration has become a cornerstone of efficient supply chain management. Legacy systems like Warehouse Management Systems (WMS) and Transportation Management Systems (TMS) no longer operate in isolation; they are converging into unified, API-connected ecosystems. Companies are leveraging API-based delivery routing solutions to seamlessly connect route optimization engines with their WMS and TMS, eliminating data silos and manual processes. The result is a smarter logistics tech stack that enables real-time decision-making, reduced costs, and faster deliveries. This whitepaper explores how integrating route optimization with WMS, TMS, and other platforms via open APIs is transforming logistics in 2025, and how Finmile's API-first approach fits into this modern stack.

The 2025 Logistics Tech Stack: From WMS and TMS to Unified Platforms

Warehouse Management Systems (WMS) and Transportation Management Systems (TMS) have traditionally been the backbone of logistics IT. A WMS handles inventory control and warehouse operations, while a TMS manages transportation planning—things like carrier selection, freight scheduling, and basic route planning. In the past, these systems often ran independently, each optimizing its own domain. However, the industry has learned that greater value lies in connecting them. Integrating WMS and TMS provides end-to-end visibility and a single source of truth for orders, inventory, and shipments. By combining data (e.g., inventory levels from WMS with shipment status from TMS), organizations can coordinate warehouse and transportation operations in sync.

Such integration leads to smoother and more efficient operations, unlocking new workflows and cost savings. Manufacturers and 3PLs report faster delivery cycles and reduced transportation costs when their WMS and TMS share data in real-time. For example, when an order is picked and packed in the warehouse, an integrated system can immediately schedule it onto a delivery route, accounting for truck space and route plans. This level of coordination yields faster delivery windows and dynamic adjustments—e.g., the ability to reroute or consolidate last-minute orders without chaos. In short, a unified tech stack means warehouses know what's happening on the road, and drivers/trucks operate with full context of warehouse readiness. The outcome is lower lead times, better customer service, and optimized resource utilization across the supply chain.

Why Route Optimization Needs to Be Integrated (Not Siloed)

Route optimization—the process of computing optimal delivery routes for fleets—has emerged as a critical capability in the era of same-day delivery and tight customer commitments. Many TMS platforms include basic route planning features, but advanced route optimization (especially for last-mile delivery) works best as a continuous, AI-driven process that reacts to real-time conditions (traffic, new orders, delays, etc.). To fully realize its benefits, route optimization cannot exist in a silo; it must be tightly integrated with the rest of the logistics tech stack.

When route planning is integrated with WMS and order systems, logistics managers gain the ability to adjust on the fly. For instance, an integrated system can check warehouse inventory and order priority before re-routing a driver, or automatically prioritize shipments based on downstream delivery commitments. Traditional setups where WMS and TMS exchanged data only in daily batches are giving way to real-time integrations. This means the route optimization engine can receive up-to-the-minute order data and inventory status, and in return publish delivery updates or route changes back to all systems instantly. The result is a more agile operation: if a new high-priority order comes in or if a truck is delayed, the system can recompute routes on the fly and update warehouse loading sequences accordingly.

The benefits of integrated route optimization are significant. Companies can minimize empty miles and avoid wasted fuel by dynamically combining deliveries. They reduce labor overtime because drivers follow efficient routes and complete more stops within shift hours. Customers experience improved on-time delivery rates, since the system proactively prevents delays by rerouting or reallocating resources as needed. In fact, organizations that leverage real-time, AI-driven routing in tandem with their WMS/TMS have seen major cost reductions (through shorter routes and fewer vehicles) and better service levels. Industry analyses show that tightly integrated WMS-TMS setups allow faster responses to events and lower transportation costs, directly contributing to customer satisfaction.

API-First Connectivity: The Glue of Modern Logistics Systems

How are these integrations achieved in practice? The answer is through open APIs and a modular, "composable" software approach. Rather than hard-coding one-off bridges between software, modern logistics platforms expose APIs (Application Programming Interfaces) that let different systems talk to each other in real-time. APIs automate communication and data sharing between systems, enabling complex workflows to be managed with minimal human intervention. In an API-driven

architecture, a WMS can automatically send new orders to a routing engine, or a TMS can query a WMS for inventory data, all through defined API calls. This machine-to-machine interaction eliminates errors from manual data re-entry and ensures that every system in the stack is working off the same up-to-date information.

Leading solution providers have embraced this API-first philosophy. For example, Manhattan Associates (a major supply chain software vendor) recently highlighted that they use a "unified portfolio architecture" of microservice APIs to connect warehouse and transportation applications. This composable approach allows customers to mix and match modules (WMS, TMS, yard management, etc.) without needing custom integrations for each combination—the APIs ensure data flows seamlessly among them. The days of nightly batch updates and clunky EDI transfers are dwindling; in their place, real-time API links keep WMS and TMS in lockstep, wringing out inefficiencies and delays in information flow.

Crucially, open APIs also mean that new services (like an AI route optimization engine) can be plugged into a legacy tech stack with minimal disruption. Instead of replacing an entire TMS or WMS, companies can augment their legacy systems by connecting an external route optimization platform via API. This is a game-changer for firms with significant investments in existing software—they can modernize capabilities (such as dynamic routing, real-time tracking, etc.) by adding on an API-based service, rather than ripping out and replacing core systems. In 2025's logistics landscape, a platform's ability to integrate is as important as its feature set. Logistics software buyers prioritize solutions that boast robust API connectivity to ensure any new tool can slot into their current operations. Finmile's platform is a prime example of this trend, built from the ground-up with integration in mind.

Finmile's Open API: Plugging Into Any WMS/TMS Ecosystem

Finmile is an AI-powered delivery management and route optimization platform designed to integrate seamlessly with clients' existing systems. Unlike monolithic legacy software, Finmile was architected with an API-first philosophy, allowing it to act as a "drop-in" enhancement to almost any logistics tech stack. 3PLs and enterprises can connect Finmile to their WMS, ERP, TMS, e-commerce platforms, or custom applications via a well-documented REST API. This means Finmile can pull orders from an order management system, optimize routes, and push the plans and tracking updates back into the TMS or other execution systems without manual steps. By offering scalable solutions that integrate with existing systems, Finmile enables companies to upgrade their delivery capabilities (route planning, dispatch, tracking,

etc.) without overhauling everything else.

At a high level, integrating Finmile into a logistics environment works as follows: the WMS/OMS feeds orders (with details like addresses, time windows, parcel info) into Finmile's routing engine; Finmile's AI optimizes the delivery routes considering fleet capacity and real-world constraints; the optimized routes are then fed into the TMS or delivery management system for execution, and drivers receive their stops via a mobile app or interface (which Finmile can provide or integrate with existing driver apps). Throughout this process, Finmile's system exchanges data with the legacy systems via API—updating order statuses, sending ETAs, and even receiving real-time delivery confirmations that can flow back into the WMS and customer-facing platforms. The entire workflow operates as a cohesive whole, even though under the hood multiple systems are involved.

Figure: Finmile's open API serves as a hub, enabling bi-directional data flow between legacy systems and the AI route optimization engine.

Finmile can connect with a variety of platforms—for example, ingesting orders from e-commerce (Shopify, TikTok Shop), syncing with enterprise ERPs and WMS (NetSuite ERP, Oracle WMS), and updating dispatch or delivery management tools (like Bringg or in-house TMS). This API-centric integration ensures that each component of the tech stack—from warehouse to last-mile—operates from a single, real-time version of truth.

In real-world deployments, Finmile has demonstrated the value of this integration-focused approach. Retailers and 3PLs have plugged Finmile into their existing workflows and seen immediate gains. By using live feeds of orders and inventory from connected systems, Finmile's engine can schedule routes that minimize empty miles and reduce the number of vehicles needed. For instance, Finmile's clients have achieved up to 42% fewer routes required to deliver the same volume of orders, by intelligently consolidating stops and optimizing drop sequences. Fewer routes and smarter sequencing translate to roughly 35% fewer miles driven, saving fuel and vehicle wear-and-tear. With more efficient routes and automated planning, companies have also slashed delivery costs (often on the order of 30-40% reductions in fuel and labor) and improved their on-time performance (Finmile's platform supports 99%+ on-time delivery rates in dense urban operations). Perhaps most importantly, these improvements come without needing to change existing WMS or TMS platforms—Finmile augments them. As one industry description notes, Finmile's technology "optimizes delivery routes in real-time, taking into account variables like traffic and weather to reduce delivery times and operational costs," all

while empowering businesses to offer Amazon-level delivery speed and reliability by leveraging their current systems.

To illustrate, consider a retailer using Oracle WMS for warehouse operations and Shopify for online orders. Finmile's API can pull new Shopify orders as they come in, check Oracle WMS for inventory availability and ready-times, and then create optimal delivery routes for those orders. The planned routes (with sequencing, timing, and carrier/driver assignments) can be sent to the retailer's TMS or a platform like Bringg for execution. As deliveries occur, Finmile can webhook delivery status (completed, delayed, etc.) back to the retailer's ERP (e.g., NetSuite) to update order records. All of this happens through API calls and webhooks, ensuring data consistency across systems. The COO gains a unified dashboard of the entire operation, and the delivery teams avoid juggling multiple disconnected software tools.

Integration Architecture: Finmile API Schema

Finmile's API is organized around modern REST principles, making it straightforward for developers to integrate routing functionality into existing systems. Key components of the Finmile API include:

- **Orders Endpoint:** Allows external systems (e.g., WMS, OMS) to send order and delivery data to Finmile. Each order record can include details such as recipient address, service time, delivery time window, priority, and any special handling notes. For example, an OMS can POST new orders in batch to Finmile's /api/orders endpoint in JSON format. Finmile stores these pending deliveries for route planning.
- **Vehicles & Drivers Endpoint:** Provides a way to define the fleet resources available for deliveries. Through this endpoint, clients can register vehicles (with attributes like capacity, shift start/end, home depot location, etc.) and drivers (with skills or certifications if relevant). This data ensures the route optimization engine respects real-world constraints (vehicle capacity, driver work hours, etc.). For instance, a 3PL's dispatch system could PUT an updated list of available trucks each morning to /api/vehicles so Finmile optimizes using the correct fleet roster.
- **Route Optimization (Planning) Endpoint:** This is the core of Finmile's API—the ability to request an optimized routing plan. Clients invoke a route optimization job by calling an endpoint such as /api/optimize (method POST), including references to which orders (or a timeframe of orders) to plan and which fleet profile to use. The API supports various parameters to tailor the optimization, such as specifying a maximum route duration, enabling constraints like driver breaks, or multi-depot

routing for multi-warehouse operations. Upon receiving the request, Finmile's optimization engine processes the data and returns a Route Plan object.

- **Route Plan & Dispatch Endpoint:** After optimization, Finmile provides the results via a Route Plan API. The optimized route plan includes the sequence of stops for each vehicle, estimated travel and arrival times for each stop, and other metadata (total distance, ETA compliance, etc.). Systems can retrieve this plan with a GET request (for example, GET /api/route/{plan_id}), or receive it via webhook once ready. The plan data can then be consumed by the TMS or delivery management system for execution. Finmile's plan output is designed to be machine-readable and easily mappable to legacy systems—e.g., each stop is linked to the original order ID, so the WMS/TMS can cross-reference and update order statuses to "out for delivery."
- **Tracking & Status Updates:** Finmile's API also facilitates real-time tracking and event updates. As drivers carry out the routes (using Finmile's mobile app or an integrated third-party app), status updates (like delivery completed, or exception events) can be reported back. Finmile exposes webhook notifications for key events (such as proof-of-delivery, failed delivery attempts, delays) which client systems can subscribe to. This ensures that the WMS, OMS, and customer service portals are instantly updated with the latest delivery status. For example, Finmile can POST back to a client's endpoint when an order is delivered, triggering an update in an ERP or sending a confirmation to the end-customer.
- **Developer Support and Security:** Finmile provides full API documentation to its customers along with technical support to assist in integration. The API uses standard authentication (such as API keys or OAuth tokens) to secure access. Data exchanged (orders, routes, tracking info) is transmitted over HTTPS and can be encrypted at rest on request, aligning with enterprise IT security requirements. This ensures that while the Finmile API is open and integrative, it also meets the compliance and safety needs of large organizations.

Overall, the Finmile API schema is designed to be comprehensive yet flexible. Developers can choose to use as much or as little of the platform as needed—for instance, some may use Finmile solely for route optimization calls (feeding the results into their own system), while others use the full loop (orders in, route plans out, and tracking updates back via Finmile). The modular endpoints (Orders, Vehicles, Optimize, etc.) enable this adaptability. By adhering to an API-first model, Finmile essentially acts as a set of building blocks that integrate into a company's existing logistics software, rather than a black-box system. This approach accelerates integration projects and positions Finmile as an "API-based delivery routing" solution that complements legacy systems rather than competing with them.

Conclusion: Smarter Logistics Through Integration

The logistics tech stack of 2025 is defined not by a single all-encompassing software, but by how well different systems talk to each other. WMS, TMS, order management, and route optimization tools each excel in their domain; when connected via modern APIs, they form a powerful, unified platform. As discussed, integrating route optimization with WMS and TMS through APIs yields tangible benefits—from faster response times and lower transport costs, to improved asset utilization and a more transparent supply chain. Perhaps most importantly, it enables superior customer service: accurate, real-time visibility for customers and on-time, reliable deliveries.

For COOs and CEOs, these integrations translate directly into competitive advantage and ROI. Automation of routing and data exchange means managers can handle higher volumes with the same resources, or scale up without a linear increase in headcount. Meanwhile, strategic visibility (a single source of truth across warehouse and transportation operations) empowers better decision-making and proactive problem solving. The API economy in logistics also future-proofs operations—new technologies (drones, autonomous vehicles, advanced analytics) can be slotted in as they mature, thanks to the flexible integration framework already in place.

Finmile's success with an API-centric model exemplifies where the industry is heading. By plugging into existing "legacy" systems and modern cloud platforms alike, Finmile proves that you don't need to start from scratch to achieve state-of-the-art logistics. Incremental integration can yield massive improvements: in deployments, Finmile routinely delivers outcomes such as double-digit percentage reductions in routes, miles, and fuel usage, and corresponding increases in delivery speed and reliability. One Finmile update succinctly put it: "No extra hardware. No new fleet. Just smarter routing that uses what you already have better." In an age where every mile matters for both cost and sustainability, this kind of integrative optimization is not just a convenience, but a necessity.

In conclusion, the logistics tech stack in 2025 thrives on integration. Companies that embrace API-driven connectivity and best-of-breed components will outperform those clinging to isolated, outdated systems. Route optimization, when woven into the fabric of WMS/TMS via open APIs, unlocks levels of efficiency and service quality unattainable in silo. Finmile's open API and integration-ready platform is a compelling option for organizations seeking to upgrade their delivery capabilities and build a truly connected logistics ecosystem. By tying together routing intelligence with warehouse and transport management, logistics leaders can achieve the holy grail of supply

chain management: faster, cheaper, and greener deliveries—all in one unified flow.

Sources:

1. Megan R. Nichols, "Reasons you need to integrate your WMS and TMS," Explore WMS - Strategy (Updated April 30, 2025)
2. Extensiv, "Single Source of Truth: Integrating Your TMS and WMS," Extensiv Blog (Mar. 10, 2021)
3. Ben Ames, "API links can wring the waste out of TMS and WMS connections," DC Velocity (May 23, 2023)
4. Start Up Energy Transition, "Fin Mile Logistics - AI-Driven Eco-Delivery Solutions Provider," Company Profile (2025)
5. Finmile (LinkedIn post), "Sustainable logistics... smarter routing," Finmile LinkedIn Updates (Oct 2025)
6. https://www.explorewms.com/integrate-wms-tms.html
7. https://www.extensiv.com/blog/single-source-of-truth-integrating-your-tms-and-wms
8. https://www.dcvelocity.com/articles/57539-api-links-can-wring-the-waste-out-of-tms-and-wms-connections-manhattan-associates-says
9. https://nextbillion.ai/blog/logistics-route-optimization
10. https://finmile.co/whitepaper23-fin-Revolutionising-Logistics-and-Shaping-the-Future-of-Delivery-Through-Intelligent-Software.pdf
11. https://www.startup-energy-transition.com/set100-database/fin-mile-logistics-limited/
12. https://uk.linkedin.com/company/finmile
13. https://finmile.co/faq