

2024 SmartWay Leader: Lineage

ABOUT COMPANY



Lineage, Inc. is the world's largest global temperature-controlled warehouse real estate investment trust (REIT). Lineage's network includes over 480 strategically located facilities that total over 84 million square feet and approximately 3.0 billion cubic feet of capacity across countries in North America, Europe, and Asia-Pacific.

For more information, visit our website:

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SMARTWAY *PROFILES IN LEADERSHIP* AREA OF EMPHASIS.

Influential Collaboration — Those intentional cooperative endeavors that advance freight sustainability, including modeling and championing accountability, inspiring market and industry transformations impacting how freight is moved and sharing successful efficiency strategies within the freight industry.

"Combining our leading facility footprint, a railcar network and data-driven transportation management systems enables us to further optimize freight, create greater efficiencies, generate greater supply chain visibility and provide a new ease of doing business for our customers."

- Greg Lehmkuhl, President and CEO, Lineage

ADVANCING LOGISTICS WITH SUSTAINABLE RAIL SOLUTIONS.

Lineage Inc.'s ("Lineage") move to diversify supply chain resources with rail transportation is a strategic shift in its logistics management offerings, embracing rail and other non-road alternative modes to provide economic and sustainable goods movement choices. Rail cars offer a significant capacity advantage, capable of holding an average of four times more cargo than a typical truckload. Shifting inventory to rail transportation can reduce the number of trucks on the road, help alleviate road congestion, and improve transportation efficiency. Estimates indicate a single gallon of diesel fuel can move a ton of freight over 470 miles via rail². In general, rail freight consumes an average of three times less energy per ton-mile, relative to moving the same goods by truck². Some industry sources project that "moving freight by rail instead of truck lowers GHG emissions by up to 75 percent".³

In response to demand for more efficient and sustainable cold-chain options, Lineage introduced integrated refrigerated and insulated railcar solutions to provide customer options that can help reduce waste and spoilage in the food supply chain. The acquisition of Cryo-Trans is a major component of Lineage's commitment to investing in creative and end-to-end solutions for its customers.



Cryo-Trans, which owns more than 2,220 refrigerated and insulated rail cars and provides real-time technology to facilitate tracking of over 40,00 rail shipments annually, brought extensive expertise in sustainable and cost-efficient long-haul transportation options to Lineage extending the company's mode-integrated services. ⁴.

According to Lineage, this integration is potentially transformative, emphasizing the optimization of freight, enhanced operational efficiencies, and greater supply chain visibility facilitated by Lineage's strategically located facilities and advanced railcar network. This combination of Cryo-Trans rail operations and cryo facility network enables Lineage to offer customized rail options that are tailored to diverse customer needs.

Real-time tracking capabilities, provided by GPS and door sensors on railcars help ensure thorough monitoring and traceability throughout each shipment's journey. These competencies are crucial for customers seeking reliable and efficient transportation solutions across extensive distances. One pilot that demonstrates this need is Lineage's deployment of an innovative rail solution for a quick serve restaurant customer and its potato producer shipments from the Pacific Northwest to Wilmington, Illinois – a trip spanning approximately 2,000 miles for these perishable products. This movement is made possible through the design of a digitally connected network to form a cold chain – with railcars as "modes" and warehouses as "nodes" – that is verifiable, robust, and capitalizing on efficiencies at each step.

In 2023, Lineage successfully managed hundreds of intermodal loads, with a notable 24 percent increase recorded in the first half of 2024. This growing demand signal for effective rail solutions has spurred Lineage's commitment to more sustainable transportation, particularly in the redistribution segment of its business.

REFERENCES:

- (1) https://www.up.com/customers/track-record/tr030822-12-train-facts-you-might-not-know.htm#:~:text=Because%20rail%20cars%20can%20hold,that%27s%20a%20lot%20of%20trucks!
- (2) https://www.energy.gov/sites/default/files/2024-12/doe-eere-modal-reports_rail-energy-emissions-action-plan.pdf
- (3) https://www.aar.org/issue/freight-rail-climate-change/
- (4) https://www.onelineage.com/news-stories/lineage-first-temperature-controlled-warehousing-refrigerated

OUTCOME/ RESULT/ IMPACT

- Capitalizing on fuel-efficiency of rail movement relative to over-the-road modes.
 - Creating opportunities for intermodal shifts where the movement requirements align with rail characteristics.



- Expanding rail offerings for climate-controlled goods.
 - Using real-time rail and truck telematic monitoring technology to improve confidence in cold-chain quality.
 - Investing in additional assets to accommodate positive market response and customer demand.

"LEADING THE WAY": TRANSFERABLE LESSON LEARNED.

Intermodal transport and the incorporation of rail services into supply chains have well studied sustainability benefits that are supported by real-world experience. Intermodal cold chains may require investment in technology to provide customers confidence in the condition of goods needing controlled environments. Real-time tracking capabilities, enhanced by GPS and sensors on railcars (and trucks), help build customer confidence in and enhance logistics troubleshooting.

Call-Out Benefit

Rail miles are inherently more energy efficient – using an average of three times less energy per ton-mile compared to a typical long-haul truck—and can reduce the environmental and societal impacts of road congestion by reducing the number of truck miles in goods movement.

Intermodal offerings and rail services are particularly popular within Lineage's redistribution segment and are sending signals that expansion of this offering may be warranted.

CONCLUSION.

Demand for intermodal offerings and rail services are increasing in popularity within certain segments and, with additional investment in cold-chain technology integration at each step of goods movement, can provide significant sustainability benefits.

SmartWay Profiles in Leadership

Profiles in Leadership is SmartWay's newest recognition initiative. Beginning this year, EPA will recognize freight sustainability leadership actions of SmartWay Affiliates and eligible SmartWay Partners (Logistics companies, Air carriers, Barge carriers and Rail carriers). EPA developed this recognition concept after hearing that Affiliates and Partners would like to see greater opportunities for recognition of sector leadership. EPA SmartWay created this new type of recognition to provide additional opportunity for advancing freight transportation sustainability.

SmartWay defines leadership in this context as the ability to drive change, influence industry, lead freight efficiency performance, and sustain freight-related environmental excellence. *Profiles in Leadership* is an official SmartWay program acknowledgement of leadership demonstrated by investments that are strategic, financial, and innovative, which will yield future environmental and efficiency benefits.