THE STATE OF INTERMODAL:

HOW SHIPPING VIA RAIL IS CHANGING THE TRANSPORTATION INDUSTRY

SCHNEIDER

AMID MOUNTING DISRUPTIONS TO THE TRANSPORTATION INDUSTRY, NOW IS THE TIME TO BUILD RELATIONSHIPS WITH STRATEGIC INTERMODAL CARRIERS

The railway freight industry has come a long way since the 1800s when horses pulled train cars and few were using words like "network" and "efficiency" to describe the advancement in the movement of goods. Today, the U.S. rail network is a well-oiled machine used to cost-effectively move more than **40 tons of freight** – and counting – for every person in the country.

For companies that seek reliable and predictable service at competitive pricing, integrating intermodal into their transportation strategy can be a cost-effective decision.

WHAT IS INTERMODAL TRANSPORTATION?

Intermodal transportation is the movement of freight by combination of rail and road, typically in 53' shipping containers. This transportation method provides a consistent experience with over-the-road truck transportation. With North America's comprehensive railway freight network, intermodal makes shipments throughout North America a smart move.

It's vital, however, that shippers work with established, reputable intermodal carriers. Doing so ensures they are receiving the best overall value and expertise to quickly overcome supply chain disruptions.

When considering a strategic intermodal transportation strategy, it's important to consider recent and possible future disruptions to the market, including, but not limited to:

- Inefficiencies from railway conversions to precision scheduled railroading (PSR).
- Fluctuating accessibility and reliability of intermodal transportation equipment like shipping containers and shipping chassis.
- Ongoing and increasing shortage of truck drivers in the transportation industry and the looming challenge for using owner-operators or third-party drivers.
- Impending and continuing industry regulatory changes, such as the new electronic logging device (ELD) mandate final compliance deadline, the Drug and Alcohol Clearinghouse and **Assembly Bill 5**.
- Failing long-term spot market strategies for pricing loads.


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WHAT IS PRECISION SCHEDULED RAILROADING (PSR)?

Despite common belief, railway freight networks are not set in stone – they're malleable. With the growth in demand for transporting goods faster and more efficiently, rail companies have sought ways to optimize their networks and operations.

One way to do that is by implementing precision scheduled railroading (PSR). What is PSR? PSR is a rail improvement strategy that transports the same amount of freight with fewer rail cars and locomotives, while using a scheduled direct line of transport across a network.

Conventional rail shipments leave once the train is full, which can add to delayed delivery times for shippers. The PSR system model is more similar to experiences in an airport: The train leaves at the time scheduled whether freight is there or not.

The goals of using departure schedules and directly routed deliveries are to enable longer trains, faster speeds and less dwell time in terminals – to the ultimate benefit of the shipper moving its freight via intermodal.

In 2018, CSX rail company went through a conversion to PSR. In doing so, it removed ramps that had little volume and eliminated some lanes that shippers were relying on to move their freight. The conversion ultimately enabled a streamlined network with increased reliability and cost-effectiveness for shippers using CSX. However, it also caused major headaches for shippers during the transition period.

Elimination of lanes and increased dray length of haul ultimately reduced equipment and workforce needs (10%–12% in first year) and led to a streamlined transportation network.

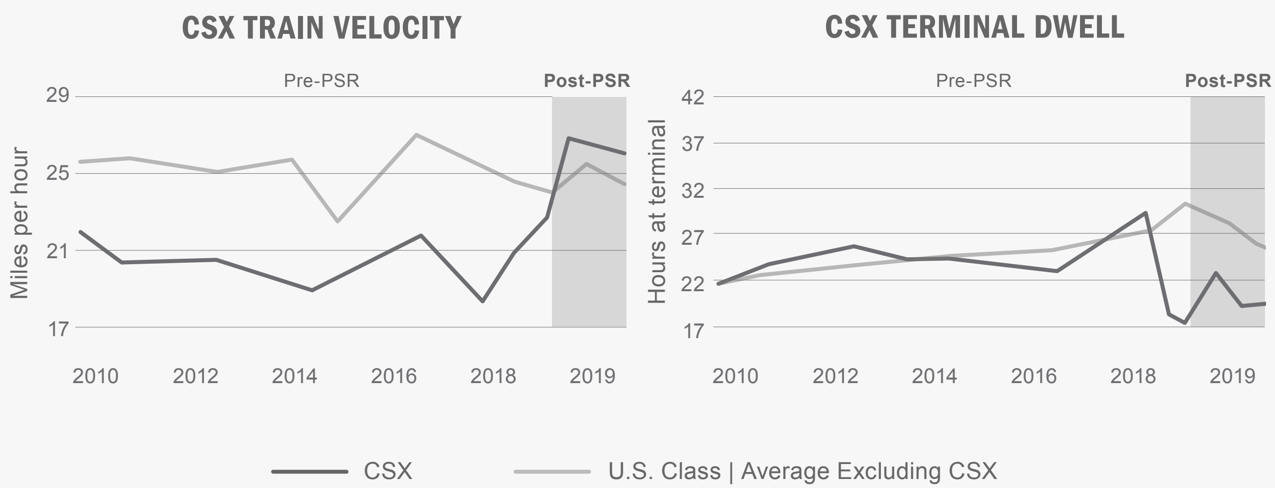
Norfolk Southern and Union Pacific railroads have announced plans to follow CSX in the implementation of PSR, which will prove to be a significant challenge for shippers using their networks.

Shippers using railroads that will soon implement precision scheduled railroading can expect to experience uncertainty and disruption in their supply chain for some time, with possible consequences such as:

- Ramp closures that may drastically alter existing shipper networks.
- Poor service resulting from scheduling complexity of an upended network.
- Increased costs from loads converting to competitive networks or to truck from intermodal during transition periods.

Despite the initial disruption the PSR system can produce, it has resulted in positive outcomes for shippers ranging from improved service to increased on-time delivery and reliability of railway freight.

CSX OUTPACES U.S. CLASS AVERAGE



Source: CSX

PRECISION SCHEDULED RAILROADING (PSR): SUGGESTED ACTION STEPS FOR SHIPPERS

When considering the impacts of PSR, shippers need to be mindful of the disruption that the implementation can create on supply chains. Shippers with a sole intermodal carrier operating on Norfolk Southern or Union Pacific will soon discover they are not diversified enough to overcome the disruptions that are likely to occur during precision scheduled railroading implementations.

Shippers can diversify the rail networks their freight runs on by working with a provider like Schneider, which operates on a network that has already implemented PSR. In doing so, shippers can stay ahead of the evolution of railway freight transportation and achieve consistently reliable intermodal service.

Because Schneider is also a **multimodal carrier**, it can move shippers' freight through other modes of asset- and non-asset-based transportation. It also means a company such as Schneider can help diversify a shipper's supply chain by using transportation modes that make the most sense from a cost and service standpoint.

By diversifying transportation modes, shippers can mitigate the disruption experienced from the impending implementation of precision scheduled railroading – and boost their bottom lines.

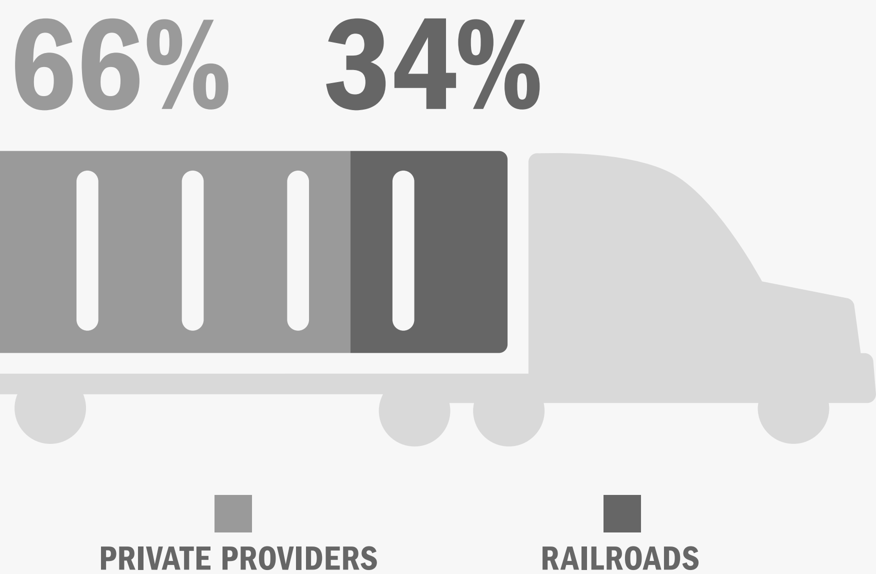
WHAT TYPE OF EQUIPMENT IS NEEDED FOR SHIPPING INTERMODAL?

When demand for capacity increases, so does demand for equipment – and at an increased cost to providers. In the last couple of years, providers have been able to reinvest in their business because the shippers developed long-term relationships with them. Now, more than ever, it's becoming more difficult for providers to maintain the same amount of support for equipment such as shipping containers and shipping chassis when shippers switch providers throughout the market demand cycle.

SHIPPING CONTAINERS

Railroads once owned 100% of the shipping containers used to deliver railway freight. Shipping containers are large, standardized boxes used across different modes of transport (from ship to rail to truck) without the need to unload or reload the goods into different shipping containers. Today, railroads own only one-third of all available 300,000+ U.S. shipping containers. That has placed the responsibility for equipment supply and maintenance squarely on transportation providers' shoulders.

2019 OWNERSHIP OF SHIPPING CONTAINERS



*Numbers consistent over last three years.
Source: Schneider

Container availability isn't the only equipment providers can find in short supply; most providers may also be waiting for shipping chassis before they can move shippers' railway freight.

SHIPPING CHASSIS

Shipping chassis are wheeled steel structures designed to carry intermodal shipping containers that can be put in a shared chassis pool (a collection of chassis that a provider can grab from rather than paying for, maintaining and storing its own).

Though the chassis pool helps a provider save costs by not owning and maintaining its own intermodal equipment, shippers can frequently experience a delay in their railway freight because the chassis they need may not be available from the pool.

In addition to possible delays from lack of chassis, the weight, configurability and condition of chassis in the shared pool may vary.

- **When using chassis from the shared pool**, the shipper cannot know what loading weight to expect. This can cost a shipper at weigh stations because the provider may receive a heavier chassis that puts it over weight regulations on various roadways. Many shippers pack less freight into their shipping containers to overcome this, resulting in them shipping more loads and spending more money.
- **Not all chassis are configured the same**. Some can work with any shipping container, but there are others that cannot. Accidentally connecting a shipping container with an inappropriate chassis can be a recipe for disaster for the provider and the shipper.
- **Without any stake from providers**, and with railroad companies disinterested in maintaining a healthy chassis pool, chassis in the shared pool are not regularly maintained. Inconsistent maintenance can result in breakdowns, delivery delays and a dent in a shipper's bottom line.

INTERMODAL SHIPPING EQUIPMENT: SUGGESTED ACTION STEPS FOR SHIPPERS

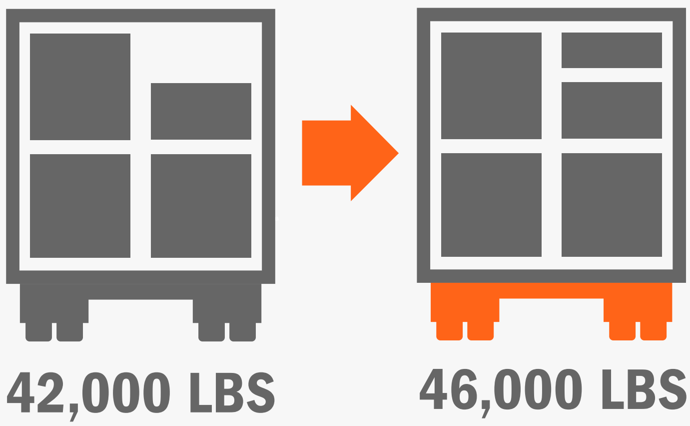
In focusing on moving railway freight from Point A to Point B, railroads are shifting investments from shipping equipment to ramp and network efficiencies. In a market with cyclical demand, not all providers are willing or able to invest in intermodal equipment and dray capabilities to make up the difference.

Shippers need to consider this railway freight evolution when looking at their intermodal carriers and shipping strategy. It's important to align with providers that are interested in supporting the market through equipment investments, and paying the rates to allow them to do so.

Year over year (2017–2018), Schneider has **increased its intermodal shipping containers** by 24% compared to an all other private provider increase of 7.7% in the same time frame, and in 2018, it added more than 4,200 intermodal containers to support needed capacity.

Also, with its new lightweight company-owned chassis, shippers can dependably move up to 700 pounds more than the common pool chassis for a total of 46,000 pounds with a day-cab tractor. Since the weight of all Schneider chassis is consistent, shippers know how much weight they can haul with every load, can pack more freight in fewer loads and can **save up to 10% on transportation costs**.

SCHNEIDER-OWNED CHASSIS ENABLE SHIPPERS TO INCREASE PAYLOADS UP TO 10%



To lead in customer service, Schneider has employed mobile service trucks and technicians at ramps to ensure equipment is maintained and operating at peak performance to reduce delays.

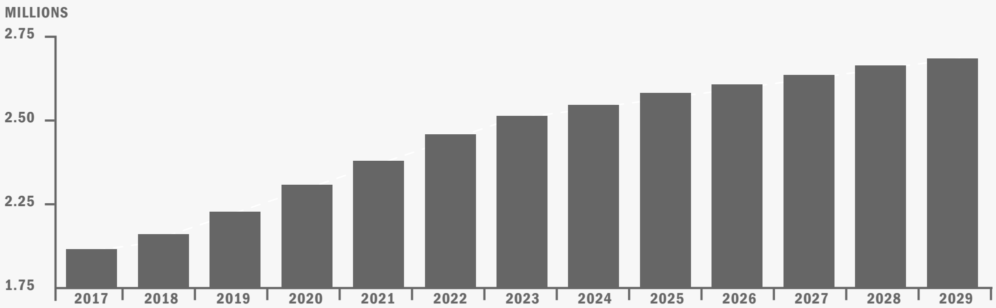
There are enough unknowns and surprises when managing a supply chain – equipment doesn't need to be one of them. By aligning with providers that are investing for the future and have a clear strategy to keep freight moving, shippers can achieve peace of mind over the long-haul.

HOW DOES THE SHORTAGE OF TRUCK DRIVERS IMPACT INTERMODAL CAPACITY?

Truck drivers remain hard to come by for all providers as unemployment is at an all-time low and many truck drivers across the industry are reaching retirement age. Add in the legalization of marijuana reducing the qualified driver pool and younger workers gravitating to higher paying jobs with different lifestyle options, and it's no surprise that smaller carriers are struggling to stay afloat.

In fact, by the end of 2018, over 60,000 more truck drivers than available were needed to meet the demand to haul freight in the U.S., according to the **American Trucking Associations**. Over the next decade, the trucking industry will need to hire roughly 110,000 truck drivers per year to meet anticipated demand.

DEMAND FOR TRUCK DRIVERS CONTINUES TO GROW



Today, more than 68,000 truck driving jobs are unfilled. By 2029, more than 1.1 million new drivers will be needed to meet freight hauling demand.

Source: ATA

The shortage has forced transportation providers to prioritize freight transportation opportunities that allow their networks to keep efficiencies high, costs low and truck drivers happy. Among the various driving opportunities available for those interested in trucking, intermodal transportation strongly stands out as a way to meet these needs.

Intermodal transportation is attractive to truck drivers because it allows them more time at home, predictable work hours for work-life balance and competitive wages. Because quality truck drivers find intermodal transportation appealing, they are more likely to enter (and stay) in that line of work. Therefore, shippers have access to more reliable capacity and service with their intermodal freight.

Company drivers are not the only source of driver power; owner-operators also keep freight moving. Many providers have relied on owner-operators, but transportation providers are starting to experience the struggle of keeping up with employment requirements.

Legislation is on the horizon as state governments look to address the misclassification of workers, starting with **California's Assembly Bill 5,** which requires strict tests before companies can classify workers as owner-operators.

TRUCK DRIVER SHORTAGE: SUGGESTED ACTION STEPS FOR SHIPPERS

It's been commonplace in the industry for intermodal carriers to use **independent contractors**, but lawsuits have been mounting and are resulting in hundreds of millions of dollars in settlement agreements – **pushing some providers into bankruptcy**. With many providers still relying on independent contractors to move their shippers' railway freight, it's more important than ever to work with a company that employs its own intermodal dray truck drivers to reduce service risks.

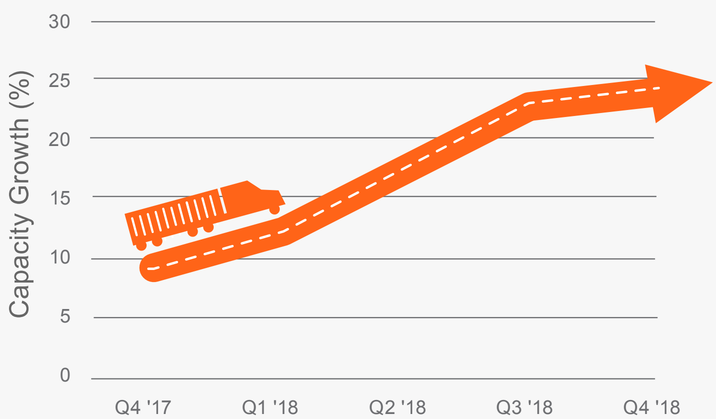
If you're working within the state of California, it's mission critical. With **Assembly Bill 5** signed into law and taking effect in January 2020, businesses will need to take one of the following paths:

- reclassify contractors as bona fide employees
- verify the owner-operators can perform their work as they wish, are in a different line of work from the company contracting with them and operate their own business

Both options are laborious and costly for businesses. To ensure streamlined operations and maintain lower labor costs, shippers need to work with providers that employ their own trained and true truck drivers.

Within Schneider's Intermodal transportation division, 98% of dray drivers are company drivers, uniformed and trained to follow the highest safety standards. Rest assured, the truck drivers Schneider retains are the most qualified candidates to move shippers' freight safely, securely and legally. While a urinalysis is required by federal law and removes approximately 1% of unqualified candidates, Schneider goes multiple steps further by investing millions in hair follicle testing and other practices to remove additional unqualified candidates.

SCHNEIDER INTERMODAL CAPACITY GROWS 14% YEAR-OVER-YEAR



Source: Schneider

Last but not least, driver retention is crucial. Schneider puts a very high focus on **shipper of choice** strategies with customers to retain truck drivers. By evaluating customer freight characteristics and truck driver treatment characteristics via driver feedback collected on its rate my location app, Schneider helps customers identify and make improvements and increase driver retention. This ultimately keeps shippers' freight moving.

“We’re following the mantra we had when times were bad and focusing on being a shipper of choice. We’re sticking with the people who stuck with us [in 2018]. This is a cyclical industry, and relationships matter.”

– JOHN JANSON,
Global Logistics Director,
SanMar

WHAT DOES THE UPCOMING ELECTRONIC LOGGING DEVICE (ELD) MANDATE DEADLINE MEAN FOR SHIPPERS?

With the final **ELD mandate** deadline arriving in December 2019, market productivity will likely be negatively impacted.

As with any regulatory change, intermodal carriers are expected to see issues with the technology switchover or decide to close their business altogether.

As intermodal carriers with a productivity loss in the market, they will likely be forced to delay loads. In a data-filled world, all transportation providers review freight characteristics to see if a shipper is making it easy for a provider to handle its freight.

CARRIERS ARE SCORING SHIPPERS BY LOOKING AT SPECIFIC VARIABLES

- Dray length of haul less than 50 miles
- Open appointment windows
- Drop and hook instead of live load
- Average dwell time less than one hour

ELECTRONIC LOGGING DEVICE MANDATE: SUGGESTED ACTION STEPS FOR SHIPPERS

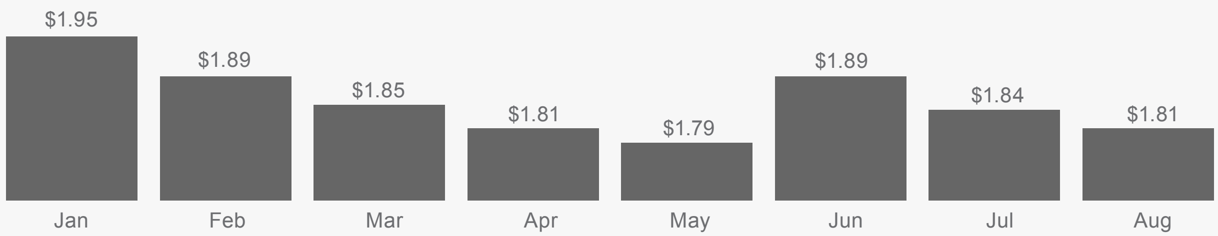
Even in a loose market, shippers being scored and ranked poorly by providers are facing a premium price to get freight moved. As continuing regulations such as the ELD mandate are implemented, being a **shipper of choice** will be more important than ever.

Strategic providers like Schneider work with shippers to become a shipper of choice if their freight characteristics or actions need improvement.

WHY SHOULD INTERMODAL SHIPPERS USE CAUTION IN THE SPOT MARKET?

There are brief moments in time that railway freight capacity is generally available and cost-driven shippers may receive lower rates by primarily using brokers on the spot market. What is the spot market? The spot market is a public financial market in which commodities are traded for immediate delivery and cost is based on the goods being shipped. Spot market rates are usually paid by brokers, versus standard shippers that providers are otherwise contracted with. Yet, the spot market remains a volatile option for cost-efficient intermodal shipping.

DAT SPOT MARKETS RATES REMAIN INCONSISTENT THROUGHOUT 2019



Source: DAT.com

While the spot market is a short-term strategy for possible cost-efficiency, capacity will inevitably tighten, forcing shippers to lean back on major, asset-based intermodal carriers to keep their goods moving.

Unfortunately, shippers that try to return to the provider they used prior to using the spot market may find the provider has removed ramp service, truck drivers and intermodal equipment from the areas where they now need them. Shippers in this precarious position may face major supply chain disruptions and put their business at risk.

SPOT MARKET PRICING INSTABILITY: SUGGESTED ACTION STEPS FOR SHIPPERS

It's important for shippers to consider the long-term repercussions of drastic changes to their supply chain or vendor network by way of the spot market. If they pull large amounts of railway freight from their major providers to go to the spot market, the provider will be forced to find freight to fill that gap. If they cannot fill the gap, then they need to remove their resources from the previously used ramps. It can take longer than a shipper would hope to replace those resources.

When shippers choose to work with asset providers like Schneider, a long-term transportation solution specific to the shipper's business is developed. This includes providing and strategically placing intermodal equipment, truck drivers and supplemental capacity in the areas the freight moves to and from.

Schneider also works to provide competitive pricing, so shippers can reap the benefit of cost-efficient intermodal freight transportation that helps the bottom line regardless of the spot market's ups and downs.

WHAT TO CONSIDER WHEN LOOKING FOR AN INTERMODAL PROVIDER?

Incorporating intermodal carriers into a transportation strategy or shifting to a provider with strategic multimodal expertise can significantly reduce the headaches that come with long transit freight.

Shippers need to look for intermodal providers, like Schneider, that have a vast network, multimodal service offering and customer-first priority. For signs of staying power in a market that's ever-changing, look for intermodal carriers that invest in intermodal equipment, drivers and expertise to keep customers' freight moving.

WHY DO INTERMODAL SHIPPERS CHOOSE SCHNEIDER?

While some providers are leaving the market due to the cost of doing business, keeping up with regulations and increasing driver pay, equipment costs and insurance premiums, Schneider stands out.

Strategic intermodal carriers like Schneider make it seamless for shippers to integrate reliable, consistent, truck-like intermodal transportation service into their mix. By offering a step-by-step onboarding process with its specially trained intermodal new business implementation team, shippers will feel confident that they're being set up for long-term success.

Schneider's Intermodal onboarding process checklist includes:

- Network alignment and assimilation into provider base.
- Single channel of communication with a proactive expert.
- Beneficial check-in routine to ensure loads are moving efficiently.
- Series of resources to help become a shipper of choice.

Though it seems odd to apply "revolutionary" to a mode that first revolutionized transportation nearly 200 years ago, the term can still be a fitting description of railway freight today. Shippers that strategically manage their transportation mix to include intermodal can reap the benefits of their freight reaching its destination safely, reliably and cost-effectively.

CONNECT WITH A SCHNEIDER TRANSPORTATION EXPERT TODAY TO DISCUSS HOW SCHNEIDER INTERMODAL CAN DELIVER COST-SMART, CONSISTENT CAPACITY FOR YOUR BUSINESS.

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"The most important action strategic shippers can take to obtain and keep long-term capacity at fair, market-driven costs is to diversify their carrier base and modes to include expert carriers in intermodal transportation."

– JIM FILTER,
Senior Vice President and General Manager,
Schneider Intermodal Division

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