Back on track—Better days ahead for rail, intermodal.

Trade Forecast 2009

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Section I: Rail Freight Sweet Spot

RAIL FREIGHT NETWORK POSITIONED FOR SUSTAINABILITY

On the subject of railroads, too many Americans decry the lack of passenger rail options, comparing our limited intercity network to high-speed rail services such as France’s TGV and Japan’s Shinkansen. What they often don’t realize is the North American rail system is superior to Europe’s for freight, and in this era of concern about global warming and carbon footprints, the United States has far more leverage over transportation’s carbon emissions with our robust rail system than does Europe. In Europe, railroads handle only about 10 percent of freight ton-miles; in the United States it’s about 40 percent. In the future, we’re much more likely to achieve significant highway conversions to rail here than in Europe, where passenger services dominate and determine the capacities of their networks. Our freight rail system, mostly a product of the private sector, and freed from many regulations since 1980, now runs at massive scale and is the most productive in the world.

What’s the outlook for rail and intermodal? A short time ago we might have been facing a skeptical audience if we claimed the outlook is bright. But, if we respect the savvy investment logic of Warren Buffett, who, with his recent purchase of the Burlington Northern Santa Fe (BNSF), went “all in” on rail as a cornerstone of the U.S. economy, the contention now seems a foregone conclusion.

In this article we review the fundamental characteristics of rail and intermodal traffic, look at how the railroads are weathering the great recession, and peek into IHS Global Insight’s crystal ball for rail and intermodal prospects over the next several years. We believe that shippers, particularly those that have moved away from rail over the years, should be assertive in re-considering rail’s role in their supply chains. Given the massive dislocation caused by the financial crisis and the major challenges requiring policy shifts that lie directly ahead—national energy security concerns, climate considerations, highway network congestion—it’s possible that we’ll look back in 20 years and see 2009-2010 as an inflection point for railroads’ share of the freight market, and particularly for domestic intermodal.
HEAVY DENSITY, LONG HAULS AND DIVERSITY

The railroads have two large sweet spots in the freight transportation landscape—intercity carload shipments of high-density bulk commodities such as coal, grain and chemicals, and long distance transport of intermodal trailers and containers (Figure 1). Trucks continue to dominate shorter hauls and always will, given their speed and flexibility.

FIGURE 1: Intercity Freight Ton-Miles by Mileage Bracket and Mode, 2007

Data source: IHS Global Insight Transearch database, 2007
A large railroad handles a greater diversity of commodities, equipment types and shipment sizes than individual carriers in any other mode. While coal is more than 40 percent of rail tonnage, it represents just 25 percent of rail revenue (Figure 2) because it moves in high-volume, low-cost unit train shipments of 10,000 tons or more.

“Merchandise” shipments include a variety of products, such as construction-related raw materials like crushed stone, sand and lumber; industrial inputs such as paper, ores, and metals; and some finished goods. These shipments account for just over one-quarter of rail tonnage, and approximately 21 percent of rail revenue. Agricultural products, mostly grain and fertilizer, account for about 15 percent of tonnage and revenues. Chemicals represent less than 10 percent of tonnage and about 10 percent of revenues. Many are surprised to see that intermodal comes in only fifth in tonnage at 7 percent, but second in revenue at 22 percent, lagging only coal.

**FIGURE 2: U.S. Rail Tons and Revenue by Commodity, 2008**

*2008 Tonnage Mix U.S. Railroads*

- Coal: 43%
- Ag Prds: 27%
- Chemicals: 7%
- Auto: 2%
- Intermodal: 8%
- Merchandise: 13%

*2008 Revenue Mix Big Four U.S. Railroads*

- Coal: 25%
- Ag Prds: 22%
- Chemicals: 10%
- Auto: 6%
- Intermodal: 16%
- Merchandise: 21%

Data source: IHS Global Insight Transearch

NOTE: Categories are based on 2-digit STCCs and are not comparable to railroad-reported revenue categories. For example, Ag Prds includes STCCs 01 (Farm Prds) and 20 (Food and Kindred Prds), but Food and Beverages are included in Merchandise at BN and CSX.

Includes: CSX, NS, BNSF, UP

Data source: Railroad quarterly financial reports

NOTE: Categories are not comparable to Transearch tonnage categories, and groupings vary by railroad. For example, Fertilizer is included in Chemicals at UP, but in Ag Prds at BN and NS, and is a listed component of Merchandise at CSX. Food and beverage is part of Ag Prds at UP and NS, but is grouped in Industrial Prds (called Merchandise in the graph above) at BN and Merchandise at CSX.
Section III: How are Railroads Weathering the Great Recession?

Unprecedented Volume Declines

Mirroring the global economic decline, U.S. railroads have experienced one of their worst traffic downturns in history, with carloads down 17.9 percent and intermodal units down 16.2 percent year to date through the end of October, according to the Association of American Railroads (AAR). May was the nadir: average weekly carloads originated on U.S. railroads that month were the lowest since at least 1988 (when comparable AAR monthly data began), bottoming out at nearly 24 percent off of prior May’s activity (Figure 3). Intermodal traffic declines were not much better, down 19 percent in May from May 2008. While both the economy and rail carrier volumes have improved since May, monthly rail volumes still lagged 2008 in October, although comparisons will soon become much easier.

Figure 3: U.S. Railroads Volume Trend

Data source: AAR Weekly Railroad Traffic
Data are based on originations, exclude U.S. operations of CN and CP, and reflect revisions to original reporting.
In the year to date, volume changes for key commodities vary quite a bit (Figure 4). The steepest carload declines were experienced in sectors influenced by auto sales and the housing/construction markets—ores and metals (down 48 percent), transportation equipment (40 percent) and forest products (34 percent). Coal, the largest commodity group in terms of total volume, has actually experienced the smallest percentage decline (down 10 percent), but has YTD contributed the most to the overall carload shortfall (bubble size in chart). Chemical volumes, while down 13 percent year to date, have been a relative bright spot recently, with September carloads up 1.5 percent from 2008. This could be a sign of industrial companies restocking inventories after the slashing amidst uncertainty earlier in the year.

**FIGURE 4: Change in Rail Carload Commodities (YTD through Oct. 2009)**

Auto- and housing-related commodities have seen the biggest year over year declines.

Data source: AAR Weekly Railroad Traffic

Data are based on Carload origins, exclude U.S. operations of CN and CP, and reflect revisions to original reporting. Data shows YTD through week ending October 31, 2009.
Within intermodal, international container shipments have been hardest hit (down 24 percent), with domestic containers and trailers down only 8 percent. While viewing intermodal volume through an equipment lens distorts the actual mix of international versus domestic traffic, because some Asia-U.S. traffic is transloaded into domestic containers/trailers on the West Coast and some international containers are loaded back westbound with domestic freight, it is clear that new “regional intermodal” efforts aimed at gaining share in shorter hauls are providing some support for domestic intermodal volumes.

**RAILROADS’ RESPONSE HAS BEEN IMPRESSIVE**

Most impressive to many observers, however, is how well the railroads have responded to the unprecedented falloff in traffic, successfully positioning them for economic recovery.

Costs were managed down in concert with volume declines, and operating margins have been maintained near last year’s levels.

- The railroads’ ability to reduce costs dramatically is much different than in past recessions and is the result of a 25-year effort to variabilize their cost structures. Union Pacific, for example, noted in its third quarter earnings report in mid-October that its costs during the quarter were more than 80 percent variable (i.e., for every one percentage point drop in volume, costs dropped more than 0.8 percent).

- Operating margins have stayed the same or improved in 2009 versus 2008 for the composite of the four major Class I railroads, as shown in Figure 5. The large differential in second quarters between 2008 and 2009 was mostly due to the rapid increase in fuel costs in 2008, which, combined with the lag in fuel surcharge formulas, led to disproportionately higher costs as a percent of revenues in that quarter.
In addition to managing their costs, railroads through the third quarter of 2009 have been able to maintain overall price increases ahead of inflation, although increases in the third quarter showed a slowdown compared to those earlier in the year. This is in contrast to truckload carriers, whose rates have declined by anywhere from 3 percent to 20 percent in 2009, according to a Nov. 20 presentation given by Mike Regan, CEO of TranzAct Technologies, Inc., a leading freight bill processor. One explanation is that a high percentage of long-term rail contracts were rebid over the last several years, reducing the rails’ exposure to yield dilution during the downturn.

**Figure 5**: Class I Railroad Operating Performance, 2009 versus 2008  
(Weighted average of BNSF, CSX, NS, UP)

Data source: Railroad quarterly financial reports, Norbridge analysis
**SERVICE PERFORMANCE IMPROVED, SUSTAINABLE**

Railroads have pointed to their improving service metrics—speed, reliability and customer satisfaction—during the recession as evidence that they are providing increased value to shippers.

- Union Pacific (UP) highlighted these achievements in its third quarter report:
  - “Customer Satisfaction Index of 88 is an all-time best, up 5 points.”
  - Freight car cycle days have improved to 8.4 days, also an all-time best, and down from 10.4 days in the same quarter of 2006.

- BNSF noted in its presentation accompanying its third quarter results:
  - On-time performance exceeded third quarter 2008 in every major business line, and improved to 92 percent from 86.7 percent in the third quarter 2008.
  - BNSF’s measure of car velocity, miles per day, improved to 229.2 from 205.5 in the third quarter 2008 and 195.2 in the third quarter 2007.

- CSX reported for third quarter:
  - On-time arrivals of 79 percent, up from 67 percent in third quarter 2008.
  - Train velocity of 21.8 mph, up from 20.1 mph in third quarter 2008.

- Norfolk Southern (NS) reported in its third quarter call that its recently tabulated 2009 Customer Satisfaction Survey yielded the following results:
  - 10 percent improvement in service consistency.
  - 6 percent improvement in customer satisfaction with transit times.
  - Donald Seale, NS Executive Vice President and Chief Marketing Officer, added, “Service consistency is the No. 1 priority for most of our customers and the magnitude of improvement here is significant for future price support.”
Industry-wide improvement in railroad system velocity is well documented. As shown in Figure 6, western railroads have achieved “All Trains” velocity above 26 mph for most of this year, which far exceeds their typical speeds from 2006-2008. CSX and NS have also shown improvement. The velocity improvement shown by the western railroads for 2009 came across all five reported train types: manifest, coal unit, grain unit, automotive and intermodal. Intermodal speeds in particular are significantly faster and more consistent than several years ago. In some lanes, such as BNSF’s Los Angeles/Chicago corridor, expedited rail intermodal services are actually faster than solo-driver trucks even on a door-to-door basis, and equally reliable.

FIGURE 6: Big Four U.S. Railroad “All Trains” Velocity 2006-2009

A skeptic might suggest that service performance has only improved because volume is down, increasing network fluidity. If you stick with this argument, service performance should remain high for several years until—but only until—industry volumes fully recover to the highs of 2006-2007. But we believe there is more going on here.
After hitting the “capacity wall” for the first time in decades in 2003-2004, North American railroads heavily invested in improving all aspects of rail capacity to enable growth—expanding track capacity, upgrading signals, improving yards and terminals, adding new locomotives and maintaining rolling stock. During a down economy, the railroads have done well managing costs while continuing to maintain their track and equipment, even completing selective strategic investments aimed at future growth.

**RAILROADS CONTINUE TO INVEST**

Railroading is one of the most capital-intensive industries, with about 40 percent of revenue going towards capital expenses and maintenance expenses related to infrastructure and equipment. During past downturns, railroad capex has often fallen dramatically. For example, in 1982 when freight revenue declined 11 percent year over year, capex declined more than 21 percent. In 2009, however, railroads have continued to maintain and invest in capacity, despite the pressures caused by the large reductions in volumes in the past year. As shown in Figure 7, projected reductions in capital expenditures have been milder than revenue and volume (revenue ton-miles or RTMs) declines in 2009.

**FIGURE 7: Big Four U.S. Railroad Changes in Capital Plans**

![Capital Expenditure Plans vs. Revenue and RTM Changes YTD](chart)

Data source: Railroad quarterly financial reports, Norbridge analysis
Strategic investments in new capacity have often been the first to be shelved during revenue declines, but significant projects have been moving forward or announced in 2009, particularly for new intermodal facilities:

- BNSF’s expanded Memphis intermodal facility is expected to be operational by early 2010. The $200 million investment in the 185-acre facility will enable up to 1 million new lifts, nearly doubling BNSF’s capacity in Memphis. Investments in greater efficiency and a reduced carbon footprint include automated gates to reduce truck turnaround times through the terminal, electric cranes replacing diesel ones, and an operations management system that integrates global positioning system (GPS) guidance of trucks, trains and containers.

- Construction began in August on UP’s $370 million intermodal terminal in Joliet, Ill. The 785-acre site should be able to handle 500,000 containers per year and the initial phase is expected to open in June 2010. Key to the facility’s success is the concurrent buildout of an adjacent 1,900-acre site in the CenterPoint Intermodal Center-Joliet, which can accommodate up to 20 million square feet of warehouse distribution and manufacturing space.

- CSX broke ground in August on its new Northwest Ohio Intermodal Terminal, the cornerstone of its $840-million National Gateway initiative. The new terminal will feature wide-span cranes and fully automated gates, and is planned to employ more than 200 people when fully operational in 2011.

- NS selected sites for the three new terminals that will anchor its Crescent Corridor project, the first phase of which would be completed by early 2012, and continued the extensive work on double-stack clearance on the Heartland Corridor between Norfolk and Columbus, Ohio.
**Section IV: What Does the Future Hold?**

**Traffic Outlook: Recovery and Beyond**

Most economists predict a gradual but slow recovery. As shown in Figure 8, the current Transearch forecast from IHS Global Insight (IHS GI) shows virtually no growth in rail carload tonnage and about 2 percent growth in intermodal tonnage in 2010 versus 2009. IHS GI expects a return to freight growth in 2011-2012 with year-on-year growth of more than 6 percent in intermodal in 2011 and almost 7 percent in 2012, and near 4 percent growth in carload tonnage during each of those two years. This brackets the expected growth in truckload tonnage (5 percent in 2011 and 6 percent in 2012).

**Figure 8: U.S. Freight Tonnage Forecast**

Forecast Tonnage Index for U.S. Rail and Truckload Freight (2009=100)

Data source: IHS Global Insight Transearch
Coming out of the recession, the commodities that experienced the greatest declines—metallic ores and metals, transportation equipment and forest products—will sharply rebound as the automotive, housing and construction industries recover (Figure 9).

IHS GI forecasts coal tonnage to grow at 1.6 percent over the 10 years from 2009 to 2019, close to its historic 1982-2007 growth rate of 2 percent. Intermodal is expected to grow at 3.6 percent over the next 10 years, well ahead of total carload tonnage’s 2.2 percent rate, but below its rate of 5.2 percent during the 25-year boom from 1982 to 2007.

**Figure 9:** Compound Annual Growth Rates (CAGRs) for U.S. Rail Freight Selected Commodities

Data source: IHS Global Insight Transearch. Product groupings based on 2-digit STCCs, as shown.
While these forecasts indicate significant increases over 2009 traffic levels, it will take several years to recover to historic volume highs. For example, IHS GI believes that intermodal tonnage will not exceed 2007 levels until 2013, and total carload tonnage will finally cross above 2007 levels in 2015. Clearly, the rail network will have ample capacity over the next five years to sustain very good service, and this capacity should provide opportunities for targeted railroad marketing initiatives to support growth.

GROWTH FOCUS: REGIONAL INTERMODALISM

In a survey conducted by Norbridge in fall 2008, we asked shippers why they didn’t use intermodal more (Figure 10)¹. Service (transit time, reliability) was often mentioned as an inhibitor by both current users and non-users of intermodal. About half of users also mentioned price as an impediment, although few non-users mentioned price. But a surprising number of shippers mentioned misalignment of rail with their business (“no offering” cited by users and “supply chain processes and systems” cited by non-users) as a key inhibitor.

FIGURE 10: Barriers to Increased Intermodal Use

“What are the main inhibitors to shifting significant volume to intermodal?”

<table>
<thead>
<tr>
<th>Factor</th>
<th>Intermodal Users</th>
<th>Intermodal Non-Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>76%</td>
<td>73%</td>
</tr>
<tr>
<td>Price</td>
<td>9%</td>
<td>55%</td>
</tr>
<tr>
<td>Supply Chain Processes/ Systems</td>
<td>24%</td>
<td>82%</td>
</tr>
<tr>
<td>No offering by 3PL or other providers</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Ease of doing business</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Damage</td>
<td>10%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Percent of interviewees mentioning

Data source: Norbridge interviews of transportation buyers
Note: Ordered top to bottom by total mentions by users and non-users.

¹ The same question was asked of rail carload shippers, who indicated the challenges they face when considering mode conversions to rail. Survey results are available on our website at www.norbridgeinc.com.
Our main takeaway was that if intermodal could “connect the dots” to offer more lane options with reasonable service, shippers would have more opportunity and inclination to use it. One respondent said, “If there were more rail ramps where we need them, the length of haul required for price parity with truckload could decrease from 750 to around 500 miles.”

Recognizing that the relative economic advantage of rail versus highway will likely improve coming out of the recession (see productivity discussion below), and that trucks dominate the shorter haul lanes today (see Figure 1), the railroads are targeting development of “regional intermodalism,” to encompass more corridors of 500 to 1,000 miles. The eastern railroads have taken the lead, investing in broad-based corridors, launching new services, and encouraging their channel partners to pursue volume.

As a result of these initiatives, and customers’ newfound willingness to consider a lower cost option, CSX and NS have been able to maintain strong domestic intermodal volumes thus far in 2009. For the first nine months, CSX’s domestic intermodal volume was up 1.4 percent versus 2008, and increased from 51 percent of total intermodal units to 59 percent. And, as reported by NS Executive Vice President and Chief Marketing Officer Donald Seale in early September, the railroad’s domestic intermodal volume was down just 3 percent year-over-year for the January-to-August time period, and was 41 percent of NS’s total intermodal volume, up from 34 percent during the same period in 2008.

As one example of a new regional service, although it targets largely international traffic, in September CSX started service between Buffalo and the New York-New Jersey and Philadelphia area ports. The service uses the Buffalo Intermodal Container Transfer Facility that CSX opened in 2008, and targets the large Toronto market. Ocean carriers reacted favorably. “We commend CSX Intermodal for its efforts to introduce new shorter-haul services at East Coast ports that will allow ocean carriers to leverage the many advantages of rail when moving goods to their final destination,” said Gordon Dorsey, senior vice president and U.S. operations manager for Maersk Line.
On the strategic level, the eastern railroads are pursuing large-scale investments and partnerships to boost intermodal capacity. Among these longer term efforts are:

- **CSX’s $842 million public-private partnership, the National Gateway,** which promises to increase capacity between the major East Coast ports of Baltimore and Norfolk, Va., and the upper Midwest by establishing double-stack clearance (so containers can be stacked on top of each other on trains, greatly improving efficiency) along the Interstate 70/I-76 route from Washington, D.C., through Pittsburgh to Cleveland, as well as clearing the I-95 route between North Carolina and Baltimore.

- **NS’s Heartland Corridor,** a public-private partnership aimed at traffic moving between Norfolk, Virginia and Columbus, Ohio, and on to Chicago. It’s well underway and on track for completion in 2010. In addition to a new intermodal terminal in Columbus, which opened in 2008, the multiyear effort has required work on 28 tunnels along the route and the elimination of 24 overhead obstacles to provide 20-foot, 3-inch clearance for double-stack trains. When completed, transit times from Norfolk to the Midwest will be reduced by a day, providing significant savings to shippers.

- **NS’s Crescent Corridor,** a public-private partnership aimed at traffic moving between the Southeast and Northeast, from New Orleans, Memphis, Birmingham and Atlanta to and from Philadelphia, New York and New Jersey. The Crescent Corridor leverages the lessons NS has taken from its experience with the Heartland. According to a recent government filing detailed on the next page, the more than $2 billion initiative would be “one of the single-largest additions of new freight transportation capacity in America since the Interstate Highway System.” The corridor plan calls for building five new intermodal terminals and expanding six others.
The success of joint efforts to date, such as Southern California's Alameda Corridor completed in 2002, has built momentum and awareness of the benefits of intermodal freight. A good indication of this is the growing participation by both state and federal government in public-private partnerships such as the Heartland Corridor, Crescent Corridor and National Gateway. As experience with these partnerships has grown, both sides have become better at identifying and communicating benefits. This facilitates rational allocations of capital and helps limit any later second-guessing of decisions.

Pennsylvania is one state that plays a key role in both the National Gateway and Crescent Corridor. Governor Edward G. Rendell has been a supporter of both efforts. In early November, Pennsylvania and Norfolk Southern agreed to invest $11 million ($5 million from the state and $6 million from NS) in NS's Philadelphia Navy Yard Intermodal Facility to nearly double its size. The Philadelphia yard is a bookend for the Crescent Corridor. As reported in the Philadelphia Business Journal on Nov. 2, “With its proximity to the port, rail lines and major highways, this yard is an optimal intermodal location,” Rendell said. “This project will create jobs as well as relieve highway congestion. The Crescent Corridor could mean as many as 26,000 jobs created and retained in Pennsylvania over the next 10 years.” The $5 million put up by the state is part of a larger $45 million commitment it agreed to in August. The partners are also looking for large-scale federal funding: Rendell teamed up with NS and the states of Virginia, Tennessee, Alabama and Mississippi, and on Sept. 14 applied for $300 million in Transportation Investment Generating Economic Recovery (TIGER) discretionary grant funds from the 2009 American Recovery and Reinvestment Act (ARRA). When the corridor is fully operational in about 2020, annual benefits to Pennsylvania should include about 10 million gallons of diesel fuel saved, and a reduction of 10,000 tons of carbon dioxide emissions, according to NS.

On Nov. 16, Rendell participated in an event celebrating the construction work near Philadelphia establishing double-stack clearance as part of CSX's National Gateway project. “I am proud to support this environmentally friendly, cost-effective double-stack improvement project that will provide long-term economic benefits for Pennsylvania and the nation,” the governor said. This project was funded by $10 million from Pennsylvania, more than $12 million from CSX, and $10 million from federal sources. On Sept. 15, the day after Rendell applied for the TIGER funds for the Crescent Corridor, Ohio Gov. Ted Strickland, on behalf of the governors of Pennsylvania, Maryland, Virginia and West Virginia, applied for $258 million in TIGER discretionary grant funds for completion of the National Gateway.
Adding to the momentum in the domestic regional intermodal market, J.B. Hunt Transport Services (“Hunt”) and NS announced Nov. 5 that they had entered a multiyear agreement that provides a “platform to accelerate the conversion of traditional truck traffic to cost effective, environmentally friendly intermodal transportation with service that is competitive with truckload moves.” Many observers have since surmised that the deal could lead to increasing conversion of truck traffic to intermodal east of the Mississippi River in the way that Hunt’s 1989 deal with the Santa Fe (the Burlington Northern merger with the Santa Fe was approved in 1995, after the J.B. Hunt deal with the then-independent Santa Fe) changed modal patterns in the West. Hunt is already taking advantage of the economic downturn to increase share—it reported in its recent third quarter press release that intermodal load volume grew 9 percent versus the same period last year.

OUTLOOK: RAIL PRODUCTIVITY ADVANTAGE

So, while the railroads have adjusted to a new lower level of activity, the trucking industry in contrast struggles with overcapacity and bidding wars. Looking forward, we believe rail is better positioned to benefit as the economy gradually improves and the playing field tilts in their direction.

In addition to a carbon footprint about two-thirds lower than highway moves, railroads are likely to increase their competitive position versus trucks because of the likely trend in productivity gains for each mode. We believe the railroads have many opportunities to improve productivity, and trucking firms have relatively fewer (Figure 11).
Part of the reason for this very different outlook is that many trucking companies already operate very efficiently, for example, they have already aggressively reduced empty miles. But unfortunately, the “factor cost” headwinds are against them:

- **Driver availability** will tighten again as the economy picks up, pushing up wages for experienced qualified drivers.
- **Diesel fuel prices** have already resumed their upward drift after declining to less than $2.10 per gallon in March 2009, and now hover around $2.80, while discussions continue regarding raising both federal and state fuel taxes. Further increases will disproportionately impact trucking, as compared to rail.
- **Tractor capital costs** are expected to be about 10 percent higher for the 2010 models, designed to meet new emission standards, and with uncertain impacts on fuel efficiency (miles per gallon).
- **Highway infrastructure costs**—paid through taxes, licenses, tolls and delays from congestion—will likely increase over the long term as the bill for maintaining and revitalizing the nation’s highways and bridges comes due.
Certainly motor carriers are exploring many ways to improve productivity, particularly in fuel efficiency, for example, with reduced idling. But the sum of the opportunities to reduce motor carrier costs, given how tightly they are managed today, is limited, and much of the factor cost inflation is not within the control of the individual carrier. Liberalization of truck size and weight limits may be a means to greater productivity, but to date the political environment, concerns about infrastructure wear and tear, and differing views within the trucking industry, have not been conducive to such reforms.

In contrast, the railroads have plenty of opportunities to drive down costs per unit, and most of the opportunities are within their control. Railroading is still a relatively high fixed cost business compared to trucking, and much more capital intensive because of the railroads’ direct financial responsibility for their right of way—track and signals. The railroads are still just scratching the surface in marshalling the three big drivers of productivity improvement—process, software and hardware. Through a combination of process improvement initiatives, information technologies to improve utilization of all assets, and new material technologies aimed at equipment and track, the railroads have a long way to go before they tap out of ways to drive better performance.

In the long run, the fundamental competitive advantage for rail and intermodal gets stronger, and it is the railroads themselves who can make it happen, driving new productivities and leveraging their cost and green advantages into new markets that meet shippers’ needs.
The long-term favorable trends for rail freight—continued investment, sustainable higher levels of service, increasing number of lane offerings, and a growing advantage over highway economics and capacity—will indeed drive modal conversion long term by virtue of the rails’ availability, cost effectiveness and environmental appeal.

If you as a shipper haven’t recently considered rail as a possibility, now is a good time to explore it. As we emerge from the recession, truck capacity will tighten, firming rates and reducing attractive highway options. Ask yourself these questions:

- When did we last examine the network structure and modal mix at our manufacturing and warehousing locations? When will we next look at it?
- Did we consider rail routing availability when we chose our facility locations? Do we have a mechanism in place to consider rail routings in future location decisions?
- Have we looked at rail carload and intermodal prices and service recently for our traffic flows and taken note of the differentials vs. truck?
- Do we have systems and process inhibitors that create a “blind spot” for our possible use of rail and intermodal?
- What steps are we taking and plans have we made to reduce the carbon footprint of our supply chain?

To identify the opportunities for rail, shippers can conduct an objective “business fit” analysis—matching current truck volumes against rail offerings, particularly intermodal, and see what “fits” or might fit in the future given the expected buoyancy in truck rates as we recover from the recession. Several railroads and intermodal service providers have network analysis tools that allow shippers to set price, service and carbon footprint criteria to identify the “sweet spot” for feasible rail conversions. And most of the railroads offer a quick Web-based carbon calculator feature for shippers to do some quick math on emissions. With these tools, shippers can begin to identify how and where mode conversions can provide immediate benefits, and how internal decision processes—TMS (transportation management systems) decision criteria, process changes at existing facilities, and location decisions about future facilities—can help position their networks to take advantage of rail and intermodal as their lane offerings strengthen and expand.
NOTE: Dean was named vice president of network strategy at BNSF Railway Jan 2010, so please do not send emails to his norbridge email account. Thanks! Tom