Supply chain by design

Modeling allows shippers to become more efficient, reduce costs, and improve resiliency.

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<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling plane bellies</td>
<td>20</td>
</tr>
<tr>
<td>TOTE at head of the line</td>
<td>26</td>
</tr>
<tr>
<td>Intermodal's potential</td>
<td>32</td>
</tr>
<tr>
<td>SCPA aims high</td>
<td>39</td>
</tr>
</tbody>
</table>
The next intermodal niche

Truck and rail transporters find money in the movement of liquid bulk tanks.

By Eric Kulisch

As transportation costs rise freight moves to modes never previously thought possible. High-value goods, such as electronics that typically moved internationally by air, now often go by sea. Traditional less-than-truckload users have adapted and consolidate shipments into truckloads to get better pricing. Intermodal rail, once only considered an option for 1,200-mile-plus lengths of haul, is gaining favor in the East on routes of 500 miles or less. UPS even uses intermodal rail for line-haul of parcel shipments to cities.

Meanwhile, intermodal has become the biggest line of business for freight railroads in recent years, overtaking traditional commodities such as coal and agriculture. Railroad investment in equipment, terminals, people and software led to better service and a more extensive network of ramps, which in turn convinced shippers to shift more of their cargo from truck to the truck-rail mode.

Intermodal’s success converting dry-van freight from highway to rail has encouraged entrepreneurs to expand into other commodities, including specialty grains. A handful of rail logistics providers, for example, have recently launched refrigerated container service for perishable and frozen foods, and at least one other company is preparing to enter the market.

Now, the trend towards intermodal is spilling over into the liquid bulk market, spurred in large part by the worsening shortage of truck drivers in the United States.

In September, Quality Carriers, the largest bulk chemical hauler in North America, announced the launch of a new bulk intermodal service in the western United States that it plans to gradually roll out nationwide, as well as to Canada and Mexico.

And Schneider, the nation’s largest privately held for-hire trucking company, is expanding fleet capacity for the bulk intermodal service it began in 2012.

“We could see 50 percent of our business in this space and 50 percent in trucking” as the product grows in popularity, George Grossardt, senior vice president and general manager of Schneider’s bulk division, said.

Schneider’s bulk revenue in 2013 was $223 million, placing it among the top 10 tank carriers, according to industry publication Bulk Transporter.

The innovation making the transition possible is a new, specially designed 40-foot tank container with a frame on either end that attaches to a chassis, and doesn’t sacrifice capacity.

Shorter 20-foot international tank con-
tainers sometimes used for domestic hauls are also not ideal because their height restricts them from fitting in normal loading bays and wash racks in chemical terminals.

The new unit operates and acts like standard, stainless steel tank trailers common in over-the-road applications, executives at both Schneider and Quality Carriers said.

Bulk intermodal, they said, offers three advantages to shippers: capacity, payload and price.

The biggest plus is new capacity in a severely constrained driver market. Motor carriers are finding it difficult to retain or hire qualified drivers for long-haul routes at the same time as the driver pool is aging and fewer younger drivers are entering the industry. Low pay, a difficult lifestyle, a federal reduction in hours of service that limits per-mile earnings, and increased scrutiny of driving behavior by safety regulators have made trucking a less appealing career for many.

Grossardt said about 15 percent of the bulk transport market is in the long-haul space — distances above 350 miles.

“The hardest driver to hire is the long-haul, over-the-road driver. So this service allows you to play in that long-haul market with regional guys. Plus, if I keep the capacity level the same I can haul more loads and satisfy more customers because I’m not going to cut their capacity commitment,” he said.

A regional driver can haul five to seven loads compared to a driver tied up for a week with a load going from the Midwest to the West Coast.

“So, it’s a great alternative for people who are looking to secure incremental capacity,” Grossardt added.

Shorter routes allow carriers to use day cabs, which are about 3,000 to 4,000 pounds lighter than a sleeper cab. Shippers, in turn, can fill the tanks with about 48,000 pounds of product and remain within the 80,000-pound gross vehicle-weight limit.

“We estimate the shippers should be able to get between 3 percent and 7 percent more payload per shipment versus over-the-road [truck],” Randy Sturtz, president of Tampa, Fla.-based Quality Carriers, said.

Quality has one of the largest fleets of stainless steel tanks and parent company Quality Distribution owns an extensive terminal network in North America.

Intermodal also offers a modest cost savings because of rail’s fuel efficiency. There also can be single-digit line-haul savings depending on the lane and commodity, Grossardt said.

At worst, it keeps a lid on price at a time when trucking costs are going up, he suggested.

Quality is currently offering service on corridors between the Gulf Coast and California, and the Gulf and Chicago on the Union Pacific Railroad.

Sturtz said the bulk transportation provider plans to have 100 40-foot liquid intermodal containers by the end of the year and 500 units by the end of 2015.

The carrier is leasing the container and chassis equipment under long-term contracts from EXSIF Worldwide, a large global supplier with a fleet of 44,000 tank containers. EXSIF is part of the Marmon Group, a subsidiary of Berkshire Hathaway.

The marketing rights, including the patent, are owned by International Transport Equipment Corporation. EXSIF has sold and leased containers under an arrangement with ITEC. The tanks are manufactured by CIMC in China.

Bulk intermodal shipments are relatively common in Europe, EXSIF President Jeremy Bergbaum said.

There is no definitive data on the size of the over-the-road bulk transport market, but experts speculate it is about $3 billion to $5 billion. The intermodal opportunity is sizable, assuming a long-haul market share in the 10 to 20 percent range, Sturtz said.

Quality has started shipping with two of its top 10 customers and others are looking at possible lanes to test the intermodal product, he added. It plans to be in all major markets by next summer.

Green Bay, Wis.-based Schneider, for its part, owns several hundred pieces of equipment after starting out with fewer than 100, Grossardt said. It buys the tanks from EXSIF and the chassis from Transworld.

In the first half of 2014, Schneider’s bulk intermodal volumes increased 75 percent, the company announced in July. The demand prompted the motor carrier to expand its service offering throughout North America, including to parts of Canada and Mexico. It also plans to double its trailer fleet in the next year and add more ramp locations beyond the 14 in its network.

“We continue to grow this service offering. We’re over several dozen customers now,” Grossardt said.

One of them is BenchMark Energy Corp., a refiner and supplier of glycerin for commercial processes, which is using the bulk service into Mexico. Chief Executive Officer Mark Bateman, in a testimonial provided by Schneider, said the service streamlined the border crossing process and eliminated the need for transloading, enabling the company to move shipments in days, instead of weeks.

Customer acceptance was slow at first, Grossardt admitted, until Schneider started taking clients to rail yards to show them how the valves worked, and how tanks were put on chassis and loaded into wellcars.

The carrier said most shipments arrive within 24 hours of the time it would take for a load to move by highway.

The only operational issues are providing some minor training to railroads on how to handle the containers and making sure there are enough chassis available because grounding containers is not desirable, Grossardt said. Both companies also must provide to the railroads a complete list of hazardous materials that could travel in the intermodal equipment before they will accept the shipments.

About 35 percent of Schneider’s bulk volume is classified as hazmat.