

Reducing Rail Component Supply Costs and Risks Through Global Sourcing

With demand for rail freight services reaching record levels in the past couple of years, North American railroads and rolling stock builders have come to realize that their domestic supply chains for rail components are increasingly fragile. A wave of consolidations and capacity reductions have concentrated the component industry, giving suppliers more leverage and increasing prices. The situation is unlikely to change anytime soon, as only limited expansion is planned in some component sectors, while continued rail traffic growth will keep demand for components high. To avoid the prospect of either potential shortages or massive cost increases, it may be time for industry players to consider the opportunities to develop more robust strategies by sourcing components globally.

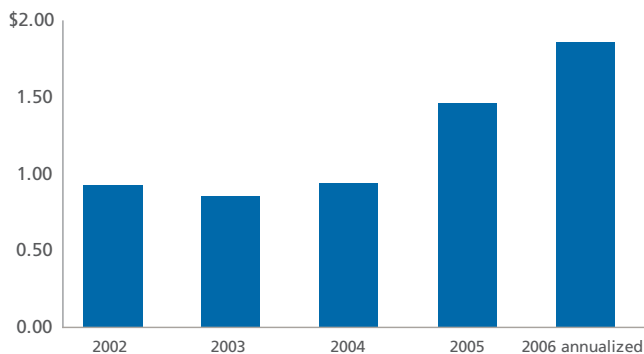
The Supply Crunch

Although the North American rail freight market grew strongly in the late 1990's, economic slowdown and merger-related issues caused it to hit the brakes between 2001 and 2003. As ton-miles dropped, so did the demand for new freight cars and railcar components. In response, a number of rail supply firms reduced capacity, exited the business, or were acquired and subsequently downsized. Freight wheel production, in particular, went through significant rationalization, with the number of domestic freight rail wheel manufacturers falling from approximately half a dozen in the 1990's to only two today: Griffin Wheel Company and Standard Steel.

Since 2004, however, rail has witnessed a rapid resurgence in demand, driving up requirements for both new car build components as well as replacement components. This upswing, coupled with a now smaller domestic component supply industry, has led to shortages of components across multiple categories, including axles, wheels, bearings, bolsters, couplers, and castings. Without sufficient parts supplies, the backlog of US new car builds reached the unprecedented level of 88,000 units in 3Q2006 (up from 61,000 units in 3Q2005). Given that forecasters are calling for continued economic growth (albeit moderately slower) and continued strong growth in rail revenue ton-miles and new car builds, the component supply situation is likely to only worsen over the near- to mid-term.

Exhibit 1 The rising cost of wheels

\$/kilogram, US wheel imports



Source: US Census import data.

Note: Price of US rail wheel imports has been calculated by taking the value of US rail wheel imports and dividing that into the total kilograms imported.

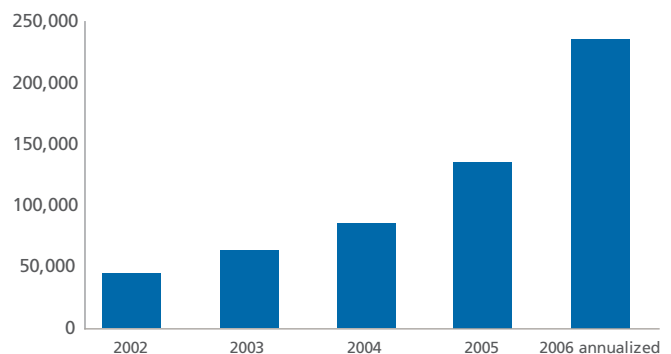
Not only are there fewer domestic suppliers, but those still in business do not appear to be planning any significant investments in new plant capacity. These factors have increased the leverage and influence of suppliers and reduced buyer negotiating power. Suppliers can not only direct their limited stocks to their largest/preferred customers, but can also raise prices markedly, as the cost to the builder or railroad of not having the component is typically greater than the incremental price increase. As an example, the price of freight rail wheel imports has approximately doubled since 2002, increasing from \$0.91 per kilogram to \$1.82 per kilogram (Exhibit 1). The result of all this for users? Shortfalls in car production, unprofitable component reconditioning, and increased downtime.

Sourcing Beyond the Borders

Component shortages, escalating prices, and high sustained demand are leading some railroads and builders to realize that their current sourcing strategies and supply base present major obstacles to continued growth and profitability. With fewer domestic options, these companies are beginning to look to the international market for new sources of supply. For example, imports of rail wheels have grown from approximately 44,000 in 2002 to a projected level of 230,000 in 2006—more than a fivefold increase (Exhibit 2).

Exhibit 2 The rapid rise in US rail wheel imports

Total number of wheels



Source: US Census import data.

Note: Number of wheels is an approximation based on the total number of kilograms of wheels imported divided by ~400kgs/wheel.

Dealing with unknown, foreign suppliers, however, requires railroads and builders to develop robust new global sourcing strategies—significantly different from their habitual dealings with domestic suppliers—if they are to minimize geopolitical and other risks. But Oliver Wyman has found in our work with railroads and car builders that developing a successful approach to global parts sourcing can be an extremely valuable business strategy, helping to:

- **Achieve cost savings with new suppliers:** Global suppliers are price competitive, as they are able to leverage lower-cost labor markets, the global steel supply, and available capacity.
- **Drive cost savings with domestic suppliers:** Utilizing new global suppliers can provide negotiating leverage with existing suppliers.
- **Lower sourcing risk and improve component technology:** Railroads and builders can mitigate the risk of a too-limited supply base by reaching out to new suppliers, as well as improving the technology and capacity of the global supply base over time.

Establishing such an alternative foreign supply base is no simple task. A new set of challenges emerge when one expands into a different geopolitical environment. Most critical of all is the process for identifying qualified suppliers, which should ensure that each supplier:

- Has regulatory (AAR) approval or the potential to obtain it
- Is financially stable and credible, with no history of breaking contracts
- Has available capacity or is adding capacity
- Is willing to invest in quality control and testing processes, supply reliability, etc.

Beyond this, one must also negotiate and manage the costs associated with overseas supply, identify the appropriate domestic/global supply mix and positioning (i.e., obtain secondary sources and sup-

plier leverage while not damaging domestic sources and risking cutoff), and establish appropriate grievance/claims procedures and jurisdictions.

Reducing Global Supply Risks

The risks associated with foreign sourcing of components can be reduced, through the design and execution of a rigorous global sourcing strategy. Such a strategy can ensure that key risks are identified and mitigated at each step in the process—before they can become critical deal breakers.

Oliver Wyman has developed five key questions that companies can use to focus their efforts in designing a global sourcing strategy—the answers to these will provide the foundations for the global sourcing approach that best matches a company’s needs (Exhibit 3).

What are the highest priority spend categories?

A critical first step is to prioritize spend categories based on several factors, including size of spend, supply constraints, proprietary nature of the product, and feasibility. With prioritized spend categories, companies can begin identifying those suppliers around the world that present possible new supply bases.

Where are the target countries/suppliers?

The next step is to identify countries with positive trade relations and tariff structures, a good economic base, attractive suppliers, and a mature supply base. Over the past several years, the number of countries that might offer alternate supply bases, depending on the component, has improved substantially. Regions that may offer alternative supply sources today include:

- **China:** Although China’s transportation infrastructure is still under development, steady economic trade expansion and rail supplier maturity make it favorable for global sourcing.
- **India:** A stable and market-oriented democracy, India’s political and economic policies have created a friendly business environment, making it a favorable sourcing site.

Exhibit 3 Building a global sourcing strategy – key questions

<p>1 What are the highest priority spend categories?</p> <ul style="list-style-type: none"> • Areas of significant spend? • Current supply constraints? • Technology issues? • Feasibility and projected timing? • Proprietary nature of product? 	<p>2 Where are the target countries/suppliers?</p> <ul style="list-style-type: none"> • Where are the most capable suppliers? • Maturity of supply base (i.e., ability to meet AAR and carrier specs)? • Country economics? • Other country issues (logistics, politics, currency, etc.)? 	<p>3 How should the carrier approach the opportunity?</p> <ul style="list-style-type: none"> • Source directly? • Source through U.S. suppliers with global contacts? • Source through agents, partners, or distributors? 	<p>4 How much value will be created?</p> <ul style="list-style-type: none"> • Cost savings from new global suppliers? • Cost savings by improving leverage with incumbent? • Guarding against shortages? • Creating better technological alternatives? 	<p>5 When do we initiate pursuit and expect to realize benefits?</p> <ul style="list-style-type: none"> • How long will it take to develop potential suppliers and test/approve products? • When will the carrier begin to realize benefits? • What resources are required to execute and manage the strategy? • When do we initiate the strategy?
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- **Czech Republic:** One of the best-developed countries in Eastern Europe, the Czech Republic benefits from robust economics and membership in the EU.
- **Poland:** Poland offers political and economic stability, coupled with membership in both the EU and the WTO.
- **Brazil:** A large and diverse economy with sound fiscal and monetary policies has created an attractive investment and business environment in Brazil.

How should the carrier/builder approach the opportunity? Companies have several options for managing supply opportunities, including sourcing directly from the supplier, going through North American suppliers with global contacts, or using agents or other distributors (Exhibit 4). In addition, companies can choose not to pursue global supply

alternatives outright, but simply leverage the knowledge they have gained regarding these sources to win more favorable terms from their domestic suppliers. Deciding on the best approach will depend on the perceived risk/reward tradeoffs, as well as the nature of the spend and its geographic concentration.

How much value will be created? The decision to pursue a global sourcing strategy will ultimately hinge upon the amount of value that it creates (Exhibit 5). Consideration of value in this context, however, should include not only the per part savings net of incremental transportation/tariff costs, but also the additional leverage gained with current domestic suppliers (and what that translates into in terms of future contracts), the prevention of shortages, and potentially improved component life/performance through the use of alternative technologies.

Exhibit 4 Approaches for building global component supply chains

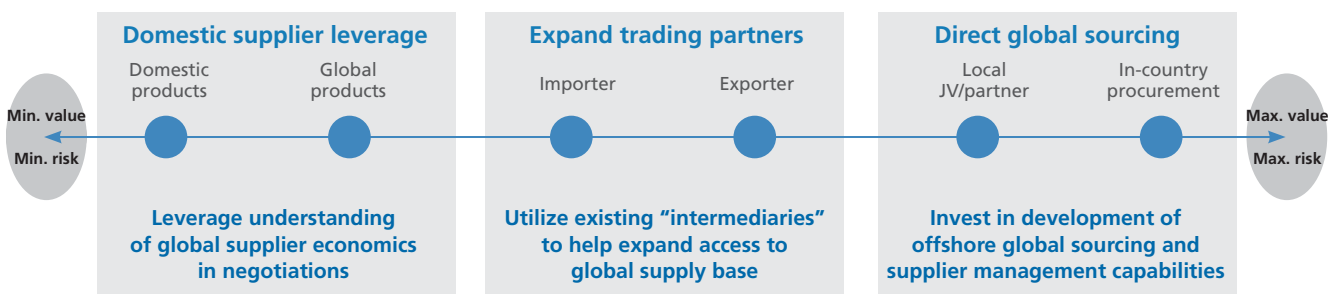
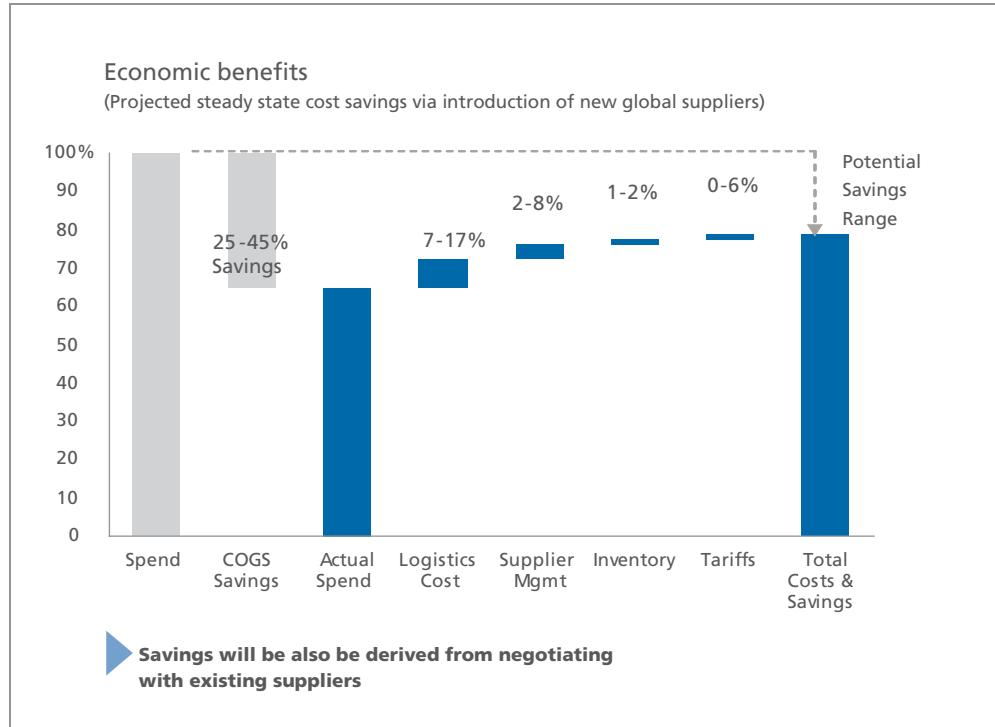


Exhibit 5 **A global sourcing benefits framework**

Economic drivers

Cost of goods
<ul style="list-style-type: none"> • Raw material • Direct labor • Overhead
Logistics
<ul style="list-style-type: none"> • Transportation • Logistics management
Supplier management
<ul style="list-style-type: none"> • U.S. agent • Importer/exporter • Carrier employees
Inventory
Tariffs

▶ Each driver is both country and commodity specific (e.g., transportation cost for rail from China)



When do we initiate pursuit and expect to realize benefits? With high-level priorities in place, and based on preliminary savings estimates and country/supplier assessments, the final step is to plan and execute the sourcing process with a select set of suppliers. At this stage, planning and execution of a global sourcing strategy will closely resemble more traditional sourcing processes, including issuing an RFP, shortlisting suppliers, conducting negotiations, and organizing operations to accommodate new suppliers. During this step of the process, companies seeking global suppliers will also need to conduct additional due diligence and planning on several fronts, such as:

- Ensuring the facilities, processes, and personnel of the supplier(s) are of the caliber required and/or that appropriate quality-control process can be introduced
- Developing robust supplier cost models to prevent money being left on the table

- Establishing detailed and realistic contract terms with effective dispute resolution mechanisms
- Creating an effective internal process for managing and working with new global suppliers
- If a vendor is not approved for selling into the North American rail market, jointly developing a plan for obtaining AAR approval

In summary, a successful global sourcing strategy can give back control of the component supply chain to railroads and rolling stock builders, ensuring that they are not at the mercy of supplier cost increases or disruptive component shortages. Global sourcing opportunities continue to improve, and seeking them out can give companies leverage, costs savings, and access to new technologies far beyond what a domestic-only supply network offers. ❖

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If you would be interested in discussing Oliver Wyman's perspectives on developing global sourcing strategies for the rail industry, please contact your Oliver Wyman account partner or one of the following partners:

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Oliver Wyman

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Oliver Wyman's Rail Practice

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