

coal from Central America or buy natural gas on spot markets—costly alternatives. "They took chances with their safety stock," recalls Rick Navarre, CFO at coal company Peabody Energy, which operates three huge mines in the Powder River Basin: "I think they've changed their view now."

A lot of supply-chain managers have changed their view about safety stock. JIT manufacturing may be standard operating procedure among U.S. businesses, but the approach requires finely tuned, well-synchronized supply chains. And while managers have long worried about transportation snafus in less-developed countries, they're growing increasingly concerned about bottlenecks closer to home—on American highways, in rail yards, and at deepwater ports, the so-called "last mile" of the supply chain.

It's hard to assess the extent of the problem. Few executives are eager to talk about missed shipments. (Motorola, Best Buy, and Dell all declined interviews.) Moreover, finance departments typically do a poor job of calculating the hit to earnings from botched consignments. But in announcing a new infrastructure initiative in May, then-Secretary of Transportation Norman Mineta estimated that freight bottlenecks and delayed deliveries cost U.S. businesses \$200 billion a year. Says AMR Research senior vice president of strategic research Kevin O' Marah: "Financial calculations go out the window if your goods are floating off the coast of California while your promo is being rolled out in stores."

The shipping news isn't likely to get much better, either. America's 50-year-old interstate highway system is in desperate need of repair. Plans for new port facilities are few and far between. Rail lines

require double-tracking. And nobody seems to want to drive a truck anymore.

At the same time, U.S. businesses are sourcing more from Asia and Europe. All told, the World Shipping Council reckons cargo movement in the United States (both domestic and international) will increase by roughly 60 percent between now and 2020.

And logistics experts predict that the mounting tide of cargo may overwhelm the nation's aging transportation network. If so, the last mile could become one gnarly stretch. "It's a tightly strung system," warns O'Marah. "A minor bump along the way can turn into a major problem."

ROAD WORRIERS

These days, just getting a load on the road is an accomplishment. A wave of mergers and acquisitions in the trucking industry—including YRC Worldwide's \$1.5 billion purchase of USF Corp. last year—has left customers with only a handful of national carriers to consider. "Over the past three years, demand has clearly outstripped supply," notes Tim Coats, vice president, supply-chain logistics, strategy and grain, at General Mills. "Many companies have been caught short."

Given the capacity constraints, trucking operators have become very choosy about the routes and customers they will service. Some operators have shut down marginally profitable routes or lines that no longer fit with their strategic goals. Last year, for example, YRC shuttered USF Dugan, a line it acquired when it purchased USF a few months earlier. USF had itself shut down Red Star, a Northeast-based carrier, following a union strike in 2004.

Most truck firms have also negotiated rate increases with customers. The rise in diesel-fuel prices has not slowed their

Mediocre Grades

2005 report card for America's

AVIATION	D +
BRIDGES	C
NAVIGABLE WATERWAYS	D-
RAIL	C -
ROADS	D
TRANSIT	D+

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momentum, either. Many have simply passed the costs on to customers in the form of fuel surcharges—a telling sign of the carriers' newfound leverage. "The situation has completely shifted," says Beth Enslow, supply-chain service director at the Aberdeen Group consultancy. "Manufacturers and distributors used to have the upper hand in setting prices."

Now carriers have the advantage, a situation that is not likely to change anytime soon. The volume of domestic truck freight will likely top 15 million tons in about three years (a nearly 50 percent increase from 1998), says the Department of Transportation (DoT). If that happens, competition to secure cargo containers could become downright fierce, particularly during the peak holiday shipping season from August to October. "It's definitely become a seller's market," says Tom Giovingo, executive vice president at third-party logistics provider Fidelitone.

To lock in cargo capacity, some businesses have started to strengthen their ties to national carriers. At General Mills, for example, the cereal maker's management has identified the company's busiest deliverer routes (called lanes). On arteries where the volume is consistently high, the company attempts to negotiate dedicated service from cargo haulers. "We want trucks on those lanes available to General Mills 100 percent," says Coats, who points to lanes between Cedar Rapids, Iowa, and Palmyra, Pennsylvania, and from Buffalo to Chattanooga as particularly crucial.

Other businesses have started sharing sales data with carriers. The idea? To line up trucks as early as possible. Procter & Gamble not only discloses figures for actual customer demand, but also short-term forecasts for expected demand. Joe Duckworth, North American physical distribution purchasing group manager for the consumer-goods giant, adds that the company is also looking at providing longer-term forecasts to its carriers.

Carriers, too, have concocted some

A Matter of Necessity

Top reasons why companies embark on supply-chain risk-management initiatives.*

- Logistics/delivery reliability
- Reduced commodity and material cost volatility
- Reliability/continuity of supply
- Inventory management
- Overall supply-network cost

*Companies with annual revenues of at least \$15 billion
Source: AMR Research