

Intermodal: where to?

With South Africa's high logistics costs increasingly in the spotlight – and hampering our ability to compete in the global marketplace – the time is ideal for an 'intermodal renaissance' that will enable South African companies to leverage the strengths of both road and rail transport.

ROAD CONGESTION, fuel price uncertainty, and toll and environmental issues are further motivators for companies to join the intermodal renaissance at grass roots level, thereby helping to shape a logistics strategy that holds vast, untapped potential. The key to successfully entering these uncharted waters is, however, doing so with the right logistics partner.

Intermodal has been a discussion point for more than a decade, and has been hotly debated by a multitude of organisations and institutions – from government to Transnet to the private sector. In 2007 Maria Ramos in fact commented that growth in major corridors could only be addressed through sustainable intermodal solutions. Putting intermodal into the limelight again is Transnet's recent forecast of an increase in its general freight volumes (from 200 to 350 million tons by 2019), along with a 13% hike in its market share in intermodal traffic – taking it to 92% by the end of the decade. Transnet Freight Rail CEO, Siyabonga Gama, was quoted recently citing three commodities that definitely need to be

moved by rail, namely agricultural products, chrome and granite. He also indicated that trucking companies are now customers of Transnet, focusing on the movement of goods over 'the last mile' to their destination. This is an early indication that logistic service providers are making a move from road to rail in southern Africa. IMPERIAL Logistics' own intermodal transport strategy embraces the need to convert appropriate products from road to rail transport in southern Africa.

COMBINING THE STRENGTHS OF ROAD AND RAIL

This intermodal renaissance combines the strengths of both road and rail, to offer southern African companies the best of both transport modes. Far from being a threat, as perceived by some, it is an absolute opportunity, even an imperative. Utilising a hybrid form of transportation, intermodal unifies trucks, rail and sometimes cargo ships into one transportation system, utilising intermodal containers, so that shippers do not have to pack and

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unpack their cargo each time the mode of transit changes. Intermodal, in a nutshell, improves efficiency and safety.

Rail is more economical and fuel efficient than road transport, with long-haul trains being between three and four times more fuel efficient than trucks, which is one of the reasons Warren Buffet bought all of the remaining shares of BNSF (one of the major Class 1 railways in the USA). When asked at the time why he did this, Buffet responded by stating that trucks have reached the peak of efficiency, while trains have not. Transnet CEO, Brian Molefe, clearly concurs, since he stated in a recent interview that the total supply cost of rail is 23% less than that of road.

Further factors in rail's favour are its environmental benefits – less noise and air pollution and lower carbon emissions. Recent studies have shown that CO₂ emissions of trucks are up to five times more than other modes of transport. The hybrid transport solution presents unique benefits by combining the cost advantage presented by economies of scale over long haul with superior service qualities of road trucks and their flexibility over short distances. As a result, intermodal can offer competitive rates to customers over several years because of the stability of rail's cost structure and long-term payback period. With a carbon tax on the cards, the 'greening of the supply chain' issue is not just about being environmentally aware. This is also an important, financial consideration going forward.

LEVERAGING THE BENEFITS OF RAIL TRANSPORT

Additional benefits of rail transport are lower road maintenance, policing and accident costs. Our growing population

is contributing to an ever increasing number of road users, more congestion on our roads, and more strain on our road infrastructure. And while our roads are becoming increasingly congested, it is a well-known fact that general freight rail corridors have excess capacity, while the current investments in the rail industry will also create additional capacity in the next few years.

South Africa is in fact perfectly placed to reap the rewards of an intermodal transport strategy that combines the benefits of road and rail. Our main economic hub is Gauteng, which is some 600 km away from the nearest point of entry. This distance provides an ideal opportunity to leverage the advantages of rail, which yields the greatest economic benefits over long distances, and volume transport.

With South Africa's high logistics costs a widely acknowledged impediment to our global competitiveness, a move to intermodal transport, and the associated cost benefits, would contribute to turning this around. The total logistics costs in South Africa in 2010 amounted to R339 billion, or 12.5% of GDP (Gross Domestic Product). In Europe and the USA, it accounts for approximately 7% or 8% of GDP. Our high logistics costs, 53% of which are spent on transport, need to be addressed in order for South Africa to compete in an increasingly global marketplace. According to a recent statement by Transnet's Molefe, the Transnet Market Demand Strategy will lower the cost of doing business in South Africa by an equivalent of 0.5% of the country's GDP. The benefits of intermodal clearly outweigh the uncertainties. There has long been consensus on the benefits of rail,

but it is time to move from consensus to action. There must be some trade-off between cost, speed and flexibility, but for the right company, and the right cargo, and in collaboration with the right logistics service providers, intermodal is an opportunity to be seized now. Intermodal in southern Africa will benefit the total supply chain.

COLLABORATION IS KEY TO SUCCESS

The challenges associated with rail have, in the past, deterred companies from considering this mode of transport, but the success of intermodal lies in collaboration – in particular with a trusted, experienced logistics service provider (LSP). Intermodal transport is complex, so the key is to have multiple parties coordinated by one LSP offering a seamless intermodal solution. This LSP also needs to provide the visibility that has, in the past, been a challenge associated with rail transport.

While the intermodal renaissance is still in its infancy in South Africa, and it will be some years before we see the results of Transnet Freight Rail's R206-billion investment in rail projects, forward-thinking companies should make the move to intermodal transport now. In order for it to be the complete solution that it has the potential to be, significant investment in our rail and port capacity is a priority, along with an increase in mechanisation, and investment in technology. The tide is turning, and in partnership with the right LSP, companies can make the move to intermodal transport now, thereby spearheading the intermodal renaissance, and leveraging the advantages that rail plus road have to offer. □

Table 1 A breakdown of transportation energy efficiency (as adopted from Lipow G 2007) indicates that rail transport of freight is 10 times more energy efficient than freight transport by trucks

Intercity Freight Movement and Energy Use in the United States, 2000			
	Trucks	Waterborne commerce	Class I railroads
Number of vehicles (thousands)	2 643	41	20 ^a
Ton-miles (billions)	1 093	646	1 466
Tons shipped (millions)	4 089	1 064	1 738
Average length of haul (miles)	717 ^b	607	843
Energy intensity (Btu/ton-mile)	3 200	508	352
Energy use (trillion Btu)	3 498	328	516

^aNumber of locomotives

^b717 miles is for general freight (less than truckload); based on data from the Eno Transportation Foundation, the average length of haul for specialised freight (truckload) is 286 miles

Source:

http://www.saice.org.za/downloads/monthly_publications/2013/2013-Civil-Engineering-May/#/0