

DOMESTIC FREIGHT SERVICES

Value delivery to customers through network optimisation

by Chinthaka Abejwickrama

THE NEW ZEALAND freight task is estimated to be around 225 million tonnes, with the road transport industry carrying more than 92% of this. Our freight task is growing at 1.3 times our real GDP, a relatively higher growth rate than the rest of the OECD due to our export-based freight demand created by the primary product industries such as dairy, forestry, meat and pip fruit.

Due to industry collaboration, those companies with substantial market share of these commodity products hold significant country-wide freight transport networks. Together with the retail (consumption) and domestic manufacturing markets, they create the road transport freight tasks that make up the strategic freight corridors of the country.

More than 80% of the total New Zealand freight task is moved within the Auckland, Northland, Waikato and Bay of Plenty regions, indicating that the majority of the freight task is short haul. Only 18% of the freight volume contributes to long-haul transport demand.

There is no single carrier who has the capability and capacity to provide a comprehensive transport solution covering the geographic scope of the country, or even more than one region. Many carriers have specific regional and local strengths, but lack overall regional and national coverage with consistent capability.

This means customers with significant country-wide freight tasks have to contract multiple carriers with varying degrees of capability and capacity in order to create uniform transport solutions in an optimal manner across the whole network.

Freight service providers

The supply side of the New Zealand road transport industry is heavily fragmented. There are more than 5000 transport operators owning just over 20,000 commercial vehicles, with the majority (up to 92%) of

the operators owning less than five trucks. Only 6% of the operators own more than 20 trucks, and a handful of operators own more than 50 trucks. This demonstrates the substantial challenge faced by customers with significant freight transport networks spread across the country.

Over the last two decades New Zealand has seen increased centralisation of the freight management tasks of the large freight owners, similar to the trends seen in the more mature US and European markets. Transport companies have evolved as lead logistics providers by offering a single freight desk, consolidating the multi-site multi-carrier operations environment through transaction workflow transport management systems.

However, the transport-company-provided single freight desk limits value-creation potential due to the inherent conflict that exists between the company's own asset utilisation and pure market optimisation.

The lack of specialised independent freight management service providers has not only hindered the freight owner's ability to evolve out of the current model to reap the full benefits of transport optimisation available, but has also reduced the carrier's ability to maximise its asset utilisation across the total market capacity available. Netlogix's service offering targets this gap in the market.

Domestic transport requirements

As in any industry, in the long run almost all of the fixed and variable costs are subject to domestic CPI (consumer price index), PPI (producer price index) and other cost impacts, except fuel which is exposed to global macro-economic conditions and the socio-political environment. This cost impact, adjusted for transport capacity availability, national freight transport demand, and long-run optimisa-

tion opportunities embedded structurally in the freight corridors, sets the market transport rate for any given route in the short run (up to two years) with variation over time and a long-term continuous trend upward.

Freight owners who have significant domestic transport requirements spread locally, regionally and nationally can cap their exposure for shorter periods and seize the benefits due to their scale, reputation and certainty. This capping of costs creates certainty in the short run, but denies the opportunity to maximise value due to the fixed nature of the price.

This can be mitigated by contracting a multitude of carriers with different rates for a single route, but this in turn brings complexity – the bigger the carrier mix and the spread, the higher the value and complexity. Not only does it deny optimisation opportunities for the short-run transport network, it also provides no certainty beyond two or three years (some customer contracts offer only a one-year term) for carriers to invest in assets to sustain the levels of service demanded by their customers.

The Netlogix solution

Netlogix brings together high-tech transport management systems, comprehensive business processes and people capability and capacity, and adopts a mix of strategies to keep the short and long-run freight cost below the fixed-term-rate model, with no compromise on service delivery and improved carrier asset utilisation. Netlogix provides this by contracting multiple carriers for each route to improve rates, optimising loads by consolidating less than truck load (LTL) consignments to full truck loads (FTL), determining optimal drop routines and targeting complementary customers with directional product flows.

Netlogix employs around 12 staff and

uses an OPSI transport management system, together with cloud-based finance and purpose-built business processes to manage the complex freight transport requirements of its customers. On a typical day, Netlogix moves more than 500 full truck-and-trailer loads across the country from its customers' manufacturing and distribution centres to their end customers, secondary processing centres and ports for exports.

The transport task includes bulk cargo, such as wood residue and coal, which requires constant monitoring of demand through various means (including CCTV), to very time-sensitive pick-up and delivery driven timber products, wood pulp, paper reels, recycled fibre and packaging products.

Long-distance and inter-island transport moves are routed through Netlogix and third-party-managed cross-docking facilities across the North and South Islands. These cross-docking facilities enable Netlogix to move inter-island and long-distance freight efficiently by utilising the carriers with regional and national distribution networks.

Netlogix uses more than 100 carriers across the country to manage its day-to-day transport demand as no single carrier has the capacity or the regional or national

reach to provide true national service from Kaitiāia to Invercargill.

Technology at work

Netlogix deploys OPSI-PLATO systems to manage its complex transport task. OPSI-PLATO is a suite of next-generation fully integrated workflow systems that bridge the gap between primary and secondary transportation tasks. OPSI-PLATO also manages the entire workflow process from a customer's ERP system that generates a transport request via EDI interfaces. Phone/email transport orders complete load build, carrier selection, carrier allocation and acceptance, pick-up and final delivery, including a one-stop billing mechanism for customer and individual carrier transaction settlements. It complements other cloud-based plug-and-play applications to provide a unique blend of technology and methods specifically targeted at addressing the emerging needs of the New Zealand transport markets.



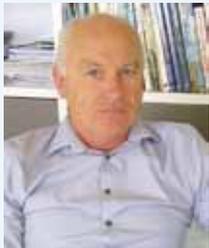
OPSI Systems is headquartered in South Africa and in the recent decade its products

have been widely used across Australasia by leading transport providers and companies with complex transport demands. Netlogix's decision to use the OPSI-PLATO transport management system as its core engine was based on its scalability, state-of-the-art enterprise planning platform, four-tiered architecture and its 10-step transaction workflow management.

OPSI-PLATO features complex heuristic optimisation modules. Its optimisation module (business logic tier) caters for almost all of the variables you would find in any complex transport task or challenge within New Zealand – or any part of the world.

Our OPSI-PLATO transport management system, together with our experienced staff, established business processes, and initiatives that concentrate on rate optimisation, asset utilisation (by minimising empty backhaul transport legs, for example) and using economies of scope and scale, provides Netlogix with a leading edge and unmatched capacity to improve costs and service delivery for its customers and carriers under demanding and complex circumstances.

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Letter to the editor

6 April 2013

Dear Sir ...

It was exciting to read in the March issue of the redevelopment of Christchurch into a smart, thrilling and vibrant city.

But I was shocked that no mention was made of creating a suburban rail system using the existing rail infrastructure, which at minimal cost would do much to blunt the main road corridor traffic peaks, decongest the city centre, promote a one-city atmosphere and provide a most satisfactory way to shift all those cruise-ship passengers around the varied delights of the greater Christchurch area.

The great drawback is that the railway corridors do not come nearly close enough to the city centre, but that can be so easily fixed. Picture a double-track alignment leaving the Main North Line in the Addington area (where a new station would serve those smart office towers), east across South Hagley Park, past the hospital, along Tuam Street adjacent to the Sports, Justice and Emergency Services precincts, to platforms at the new transport centre. From there it passes the new stadium before swinging south to join the Lyttelton line at Waltham.

All three radiating lines (to Lyttelton, Rolleston and Rangiora) would be directly linked to the city centre, and all passenger traffic would be segregated from freight in the busiest central zone of the rail network. The central transport station would include a platform for long-distance trains so arriving passengers would no

longer alight in a suburb miles from the attractions of the city.

Some former double-track areas would need to be reinstated, and modern signalling installed, but still this would cost only a tiny fraction of the money spent on urban rail in Wellington and Auckland in recent years, and yet could support attractive, fast and frequent services with no outward sign of having been built on a shoestring.

As-new SA train-sets (perhaps about 10) would of course be transferred from Auckland, and equipped with a quieter, greener motive power unit at each end to give first-class level-crossing safety, acceleration rates, economy and reliability.

Existing mechanical maintenance facilities at Waltham could be renovated modestly to support the fleet. Structures clearances should allow for future electrification.

The new Christchurch will be such a handsome and liveable city it would be tragic to 'spoil the ship for a half-penny worth of tar'. Great cities, even great little cities, use rail services to improve their quality of life, and history will judge us harshly if we miss this historic and affordable opportunity to re-introduce them to Christchurch.

*Yours faithfully,
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