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Freight and Supply Chain Inquiry
Department of Infrastructure and Regional Development
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Gilead Logistics is an Australian transportation and logistics consulting business established in 2006. Our submission follows:

The preamble and terms of reference to this inquiry state that: “The Inquiry will contribute a strong evidence base for the development of the Strategy.” We at Gilead say that evidence presented, and moderation applied, should be fully visible and proved to be material.

Foreign Analogues

Several of the Inquiry’s terms of reference referred to the aspiration that our infrastructure should be compared to those of other nations with similar “characteristics”. We urge the inquiry to refrain from adopting a particular nation as our analogue for anything beyond specific logistical and freight tasks. In the broader sense we have no real foreign analogue in transportation terms. Our markets and ports are uniquely placed and require unique freight and logistical solutions.

We can benefit from examining best-in-class foreign sourced local solutions, and by evaluating the manner of application and performance of the individual Meccano-set pieces employed in foreign nations. Despite there being a limit to what we can design and build here, including in many instances highly developed software, there is no limit on how to best source, or deploy kit.

Sometimes, but not always, foreign analogues might be identified from reviewing operating performance & trade reports. Often, however, such reports lead down the wrong path because there is a failure to recognise and pay due respect to the unique characteristics of each market. None-the-less, foreign based local solutions for particular industries or applications may be very material for us.

Market Outlook

In the near future Australia's local economy is likely to be jolted, just as it has been in the past, by fast-changing events in global markets. On a local economy level, we are already overdue, and the geopolitical imbalances on a global level are self evident. While Australia's recent economic record may imply a "new normal" we prefer to commend Trevor Sykes's work "Two Centuries of Panic" and thereby imply a more likely return to the historically repeated courses of events.

As before in the shock scenarios that confronted Australia, it is likely in adverse circumstances that export markets will be more difficult to access, and imports will be less affordable. If such scenarios prevail, we believe that some industry previously off-shored will return to Australia. And, as a consequence, we ask "to where?"

Given available logistical capacity and corridors, it is unlikely that new production locations will be logistically viable adjacent to the existing port & urban precincts of Australia.

Hence, we do not want our submission to be contained by urban driven agendas. We will, however, address the urban freight task directly and commence with it.

Urban Transformation, a Logistical Perspective

In just a few decades a mighty Australian merchandise transportation & logistics market called finished goods import-distribution grew. In footprint terms, it first displaced production substantially located in our urban environments with import warehouse capacity. The effect of this trend was never adequately measured or mapped. Moreover, the consequent flow changes were never properly mapped. We rely upon inadequate modelling sourced out of intermediate point recorded traffic data (mainly from urban transit choke points), and guesses as to where traffic is sourced or destined.

Planners are now pushing logistical warehouse capacity to the fringes of the sprawled cities. This follows aggressive rates of net urban immigration & consumption growth. This was, and never will be, a credible plan.

Our submission will seek to explain this in terms of the nature of freight movements. We will also be addressing the many false demand signals that are being carried by interest groups. Implicit conflicted interests, like those of developers, whose yields and velocity of transactions are advanced by the restriction of supply, will always generate unreliable industry demand & traffic flow narrative.

We have, on average, built poorly designed (poor flow) warehouse & distribution facilities, with many sited in sub-optimal locales. It takes only a summary review of the dock design and the derived load velocity capabilities of EU, US, and Asian warehouse analogues, in comparison to the average Australian industrial estate warehouse, to note the deficit. Logistics now goes where it is cheapest, and it is displaced whenever better rents are available from other sectors.

In Sydney, dysfunctional urban planning, that which serves to extinguish logistical infrastructure from the urban theatre, is readily visible. We note that the former poorly designed Ashmore Estate warehouse project in Erskineville (where Toll Priority was located) is set to be developed into residential towers, while the shoddily built terraces (of no particular heritage value) in the surrounding area will be maintained.

We do not say that Toll's Erskineville facility was ever anything but a substandard generic box with poor vehicle handling velocity and capacity, we also do not say that Toll Priority's base customer traffic (incl. their location profile) wasn't substantially affected by lesser traffic in the banking sector and city sourced document transmittal. All we say is that the logistical needs of inner urban regions must be supported by either warehouse or transport, and that the planning decisions which in effect degrade warehousing, or transport hub, capacity are not being subject to sufficient scrutiny.

The political PR label heard in the above scenario is usually "urban consolidation", even when no existing low-density urban abode has been consolidated. We also note that the same import-distribution logistical capacity supply that grew out of closed production in the Alexandria-Mascot-Botany theatre is now being ratcheted out by medium density residential development. When we note that we don't see this to the same extent in the Port Melbourne precinct (beyond the Docklands development), and the port of Brisbane, it forms part of our relatively more optimistic view of the future recoverable prospects of Melbourne and Brisbane in comparison to Sydney.

NSW Government planners have imagined our cities based upon a dense and tight ring-road bounded intermediate European city model. This presumes that cities can effectively be logistically supported from the perimeter. Yet we have given little thought to the reality and logistical consequence imposed by our urban sprawl. If we are already sprawled, then we do not improve logistical functionality by building more residential towers. We do not necessarily solve urban logistical and choke point issues by creating rail bypasses for freight to move from a central port to the perimeter. Indeed, we are likely to increase congestion with the increased number and distance travelled of necessarily smaller vehicle movements from that perimeter returning imported goods product to the same urban theatre.

Further, the beyond freight movements from each of our ports (the same that justifies bypass in many international analogues) are presently low as a percentage of our inbound port traffic. As we become logistically smarter in respect of imports this bias toward localism of the ultimate delivery destination at the entry port will increase¹.

And hence, the interest in promoting this "by-pass-as-a-congestion-fixing-panacea narrative" is not logistically based, nor is it defensible in the majority of transactional applications.

¹ www.gileadlogistic.com/blog/transportation-architecture-network-fabric

E-Commerce

In our responses to specific scenarios raised by this inquiry we will make specific suggestions in respect of network design to serve E-Commerce deliveries in urban areas. Undoubtedly, some of the suggestions we will make recognise the irreversibility of government land-use planning decisions that have already crowded out logistical developments in much of the urban theatre. Notwithstanding this, we also wish to clearly state that there is more a tactical rather than a strategic bias framed within our design offering. The reasons for this are as follows:

1. E-commerce trends are being led by those with business models that have a remarkable level of similarity with dot.com era businesses that failed. Despite remarkable revenue growth their logistics cost trend as a percentage of revenue keeps rising. Stated measures to reverse the trend have in practice proved to do the opposite. The dominance of the “future earnings” projection as the basis of E-Commerce share prices is déjà vu.
2. E-Commerce delivery, in comparison to store delivery, increases the freight volume calculated transportation task by several fold. This is derived from the volume increase accrued by over-packing individual deliveries, and also by the difference when compared to inbound-to-store delivery where transport of shelf loadable like-with-like product generates a lesser transportation volume. As opposed, the E-Commerce merchant often delivers like-with-dislike in over-packs of the aggregated on-line consumer purchases. The only way to mitigate this occurrence is to place the order fulfilment task closer to the consumer.
3. E-Commerce locker deliveries will only serve to accentuate the excess over-packing volume issue at the collection facility. In volume terms, the short term storage location at “last mile” endures yet another layer of over-packing (carton/s-in-fixed-sized lockers).
4. Supermarkets are served by articulated trucks (semi-trailers) with like-for-like categories of product palletised and loaded aisle location ready. E-Commerce deliveries are presently usually made by small vans, and hence, the on-road vehicular traffic is increased before consideration is given to over-packing derived volume increases. Other shopping centre retail stores may be served inbound by smaller trucks, but by and large, the trend is universal.
5. Large shopping centres have sunken delivery docks that serve the need for parking, speed-of-unloading, & product handling by site trolley or pallet trucks. In contrast, small vehicles delivering to consumers must source parking, take more care in loose package loading and unloading, and bring their own trolley (which consumes vehicle load volume)².
6. The interests of transport operators and retailer/precinct managers are vitally opposed on the matter of passing trade at the collection handover point. The transport operator wants the transaction completed cleanly and quickly (high velocity), while the shopping centre operator seeks to monetise the dwell-time. This same conflict of interests will apply between the various respective interest groups contemplating the design, access and employ of handover locations in E-Commerce; and it is a matter of determining a functional

² www.citylab.com/transportation/2017/04/cities-seek-deliverance-from-the-e-commerce-boom/523671/

priority in the planning regimen. It is a given that Treasury and political interests are likely to align with developer driven sub-optimal transactional collection execution solutions. In part, we can observe this today in the case of Australia Post when observing the queues spilling out their doors onto the footpaths. In this instance, Australia Post's brand damage is likely already uncontrollable for the exact reason that they tried to be both an opportunistic retailer, and a delivery agent.

7. Transport biased solutions employed at peak periods are more expensive than warehouse based solutions. Usually it means getting product from further away, and employing more rapid forms of transport. This applies at both the pre-distribution stage and the order fulfilment stage. The E-Commerce phenomenon in part is driven by consumer time deficits which nourished the growth of the late & instant on-line purchase decision for high-turn rate gifts. Giftware may be characteristically voluminous, but in comparison to transport solutions retailers have learnt to bias their floors toward it during peak periods. There is no opportunity to do this in the transport sector of the E-Commerce solution unless high-turn items are brought forward in the logistical theatre closer to consumers for fulfilment, and as a consequence are separated in delivery transactional terms from other purchases.

Australia's retail market will not break with global trends. There will be more E-Commerce in the short term (+11.5% annual growth according to Australia Post projections)³. In the medium term E-Commerce may not survive as it is presently structured, but it is likely that increased levels of activity will persist. Gilead recommends that the priority in dealing with these changes must be both to accommodate short term growth, yet more importantly provide adaptable solutions.

Urban Logistics

Returning to logistical planning in general, in this country we have a lot of real estate, and very long road and rail corridors. We also have a lot of inventory sitting on shelves at a considerable distance from the point of local consumption because storage facility costs are high. Urban storage costs are high due to increasingly constricted storage land supply. This in turn is driven by planning encroachments, and the lack of redevelopment of poorly designed legacy sites that might provide productivity gains.

If a planner's conception holds that, in the case of services industry infilling spaces previously occupied by production and logistics is just one industry replacing another, it is patently absurd in logistical & freight terms. Services industry areas are becoming the near-equivalent of the dormitory suburban area in respect of the directional flow of the freight task. Given the decline of paper based communication there is lesser volumes of back-load traffic from a commercial/financial services industry district. E-Commerce deliveries being consigned to workplaces make the imbalance worse. In the main, E-Commerce is not effected from retailers locally in such districts. Whether urban workers are housed in towers in a mixed commercial

³<https://acquire.startrack.com.au/register>

and tower precinct, or in a high density residential precinct, on current planning settings, delivery will be made from the fringes by increased numbers of small vehicles moving over long distances from “affordable” warehousing locations. Those vehicles will return over that same great distance to the fringe empty. These realities must form part of the transport-versus-warehouse consciousness developed by urban planners.

Gilead invites this inquiry to examine the diametrically opposed positions of industry stakeholders in respect of the PUD (Pick up and Delivery) propositions of the auto logistics industry based out of Port Kembla, as opposed to the MIST terminal interests based upon the rail freight bypass link from Port Botany. The former’s conclusion in respect of rejecting short haul rail and double-handling was included in the semi-completed but mothballed Maldon-to-Dombarton rail alignment cost-benefit study⁴. The auto logistics industry’s position was cited in the report as being against the employ of rail from port to the city fringe for distribution, this came despite the longer truck line haul distance from Port Kembla to the Sydney basin, or to pre-delivery facility destinations. In comparison, Port Botany landed containers are presently being delivered to ultimate consignees directly within Sydney or hubbed by rail closer in.

The MIST terminal’s interests, in respect of full container intermediation and onward delivery in the Sydney basin (as opposed to containers unstuffed, warehoused, and product later distributed), and the interests of operators of direct PUD of containers from Botany, are hence at odds. For a logistical cost-benefit analysis that serves trade to prevail in this same contest, close scrutiny must be paid to ensure future road usage charge even-handedness. This scrutiny must be particularly acute in respect of any environmental / congestion claim made by container rail freight urban bypass corridor users, given that the storage location may require ultimate delivery by trucking back into the city in corridors also used by low paid commuters housed in the south west who are often found to be working in the commercial districts of the city. It is noteworthy that the MIST project is reported to have received \$150 million in funding from the CEFC (Clean Energy Finance Corp)⁵, and yet our submission describes elements of effect that MIST activity could generate exactly the opposite to the claimed net clean outcome in the urban theatre.

In respect of MIST, in our judgement, if there were to be a growth of inland or interstate line haul volumes (derived of goods imported through Sydney port); or if there was expected significant industry derived market growth in the local south west Sydney area; then, given material evidence, we would be more supportive in our prognosis. However, in our estimation Sydney is presently losing import-distribution business to Melbourne and Brisbane, and it is likely to have a lesser share of national centralised imported inventories on current trends. This, in turn, means less beyond Sydney outbound traffic that would otherwise bolster MIST’s business case.

⁴http://investment.infrastructure.gov.au/publications/reports/pdf/Maldon_Dombarton_Feasibility_Study_Full_Report_Final.pdf

⁵ <https://au.finance.yahoo.com/news/qube-gets-backing-freight-interchange-030801114.html>

In respect of modelling business that is most suitable for distribution centres (DC) located in the near-beyond regions of an Australian city, the high volume sector that has made a good business case for it is the supermarket DC. Introducing inbound rail capability to the MIST style of DC is a good idea if the inland rail unit costs for intermodal traffic can be remarkably reduced by the introduction of a completely altered rail network model. One reason such DC locations work for this sector of business is the supermarket DC's relatively higher level of inbound volume sourced from the inland (local produce and derived manufactures). This means the inbound flow direction is substantially reversed, although import from the adjacent port remains a factor. These DC's feed full truckloads of consumption goods on single journeys via ring roads to shopping centre docks. This creates a different proposition to smaller trucks, those with multiple urban deliveries of either cartons or pallets that would carry other more import biased finished goods being distributed in the urban environment from the fringes.

Although we would like it to be very different, there is also no present policy trend prioritising inland production planning that we are aware of. As we do not see high speed inter-city rail passenger transport corridors as being any more viable across the inland than we see the coastal corridor, we don't see inland demographics increasing unless the new inland production locales become a factor. As a result, we conclude that the future of decentralisation is dependent upon global events, and the potential for on-shoring production, or greater levels of value-adding to extant primary production.

Given the Maldon-Dombarton rail corridor project entrails we are hardly surprised by the narrative course of the MIST terminal project. The most elemental difference to be noted between Maldon-Dombarton and MIST is the industry view of the negatives of double handling of vehicles on one side, and pro-double handling on the other, being diametrically opposed. It is noteworthy that Qube have a significant interest in that same relatively tightly held auto logistics sector⁶.

Adaptability

Upon examination, the planning basis of present and pending Australian freight and logistical infrastructure development projects can hardly be rated as adaptable. However, if we were to examine our past successes, and those of North America (through to the '60s), we would see that adaptability correlates with success over any extended term.

The Australian case of urban production sites being converted into logistics parks, from the 1970's forward, can be also cited as an example of successful adaptation, even if we acknowledge that we fell into the position, and then executed poorly.

More significantly, we note that the reason Australian trucking succeeded in the last half century, while other transportation infrastructure & logistics infrastructure lagged in productivity for many decades (during fast changing times from the 1960's forward), was down to that sector's adaptability.

⁶ www.prixcar.com.au/shareholders/

Productivity in the trucking sector was founded & sustained by the presence of the owner-driver baseline. Competitiveness & entrepreneurship was a consequence in the trucking sector despite the notorious anti-competitive efforts of the states, conglomerate leaders, and organised labour.

Political economy proponents in Australia do not lucidly illustrate the contemporary negative inertia brought to our economy by monopolist's (state & private) past follies. Hence, in competing with land price inflation and monopoly franchises, recognition of long-tailed liabilities "has no horse in the race".

Australia can't afford another productivity debacle, as we had with the ports & rail in the post-war king dollar era. Although our economy was forced to open to the world, our transport efficiency was a can that got kicked down the road for decades due to the obstructive efforts of politically affiliated anti-competitive interest groups. The port and rail morass was fated well before stamp duty and developer interests seriously entered into the urban politico-logistical fray; so the one interest group, or the other, isn't the source of the issue.

From the 70's forward our trading economy was opened on a ratcheted basis under US leadership. However, if there is any impending fracturing of global trade, the ensuing changes are likely to come upon us far faster. Given the aforementioned possibility, it is now an existential imperative that adaptability becomes among the highest priorities that we place when developing any transportation and logistics infrastructure plan. Freight & logistic interests must also be brought back inside the umbrella of the Commonwealth's general forecasting and planning regime, and be given the opportunity to stare down treasury's short-termism when necessary.

The first thing to acknowledge, when developing a sound perspective on future infrastructure demands in our economy, is that we had little local policy influence in respect of opening our economy in the past. We do not move world events, nor can we resist them.

It is indisputable, that if a set of collective actions made it sustainable, the major world trading economies (including the Eastern producers) would all act to maintain present levels of western purchasing power in the short-to-medium term. Countervailing this though, we note the fear of deflation being widely reported, and this fear is evident in market interventions. We also see reactionary ideas from America such as that suggesting China might be encouraged to issue their treasury debt in USD (in order to keep western purchasing power alive). These are canary-in-the-coal-mine events, or "grey rhinos" as they are lately being labelled.

We do not need to make any specific prediction of how the course of events will unfold from the above scenario, for our punditry we need only argue that our relative national purchasing power, a significant part of which is derived of Australia's services in washing carry-traded Dollars/Euros through debt and commodity prices, is at risk. The flow on from this would be in the lower levels of foreign sourced wholesale funding for Australian banks if western-eastern trade imbalances and

commodity/energy deficits were to decline as contemporary US policy has set as its objective⁷.

We can already demonstrate that merchandise trades in the global economy are becoming less polarised⁸, and that large hub and spoke networks are being challenged for relevance. Even among the surveyed US establishment, in respect of shipping, this has become an orthodox view⁹. Gilead has made this same case when we saw smaller ports, and smaller trades, taking greater shares of global trade¹⁰.

Smaller trades are not easily crafted (we recognise this after spending significant amounts of time in the '90s supporting Austrade and being theirs in the Western Sydney Export Centre). At that time there was little success among SME exporters because inbound distribution channels in destination markets were controlled at hubs by larger players. Decentralisation globally would see this situation altered, and in less liquid times locally, more medium-large businesses would be attracted to export. In the face of potential trading difficulties elsewhere, smaller regional trades may provide significant new opportunities for Australia if our infrastructure planning is mindful of them, and new low cost regional port projects are given a good hearing.

In respect of shipping, Gilead has long described the large ocean liner shipping companies of the world as having entered into precarious structural positions¹¹. The effects of this can be observed in the present forced mergers of liner operations, and in the depth of laid up tonnage in the global container fleets.

At this point we have completed our view of the global context from which we believe an Australian transportation and logistics infrastructure plan should emerge. Recently Gilead published a series of articles on Australian Transportation Network Planning¹², in that 10 part series we provided a wider local context to the views we will be expressing here. We set about this task due to our view of ensuing generational change, but we have been covering disruption and tech for several years. Our record of punditry over past decades (in respect of evolution in the transportation sector globally) is solid, and we stand by our views¹³.

⁷ <http://money.cnn.com/2017/07/14/news/economy/china-us-trade-talks-100-days-trump-xi/index.html>

⁸The Rise of the North-South & South-South Trades: www.gileadlogistic.com/blog/improving-supply-chain-networks-part-3

⁹ <http://transportsurvey.nortonrosefulbright.online/>

¹⁰ Ports & Ships that Serve: www.gileadlogistic.com/blog/improving-supply-chain-networks-part-5

¹¹ Ports & Ships – is the Lesser to be the Greater? www.gileadlogistic.com/blog/improving-supply-chain-networks-part-2

¹² www.gileadlogistic.com/blog/australian-transport-network-planning-part-1-of-the-series

¹³ www.gileadlogistic.com/blog/transportation-brands-culture-disconnecting-with-value

Energy

We have no particular expertise in the energy industry but we note the rapid emergence of US shale. From one minute Australian interests are about to employ an LNG import terminal offshore from Los Angeles to supply Australian LNG to the US, and the next the US is snapping at our heels vying to be the world's largest LNG exporter.¹⁴ There is also dot-com feel to proffered US shale oil production costs and the longevity of production. As we are reliant on imported diesel and avgas, and are now substantially so for petrol, we should not plan freight infrastructure without considering, at a minimum, the means of adapting to fast price rises and threats to import security. We note that the Commonwealth has recently sought to increase strategic reserves marginally due to our declining refining capacity and diversity of production sites, so that reflects at least partial recognition of the issue.

Strategic Outlook Consensus

The essence of our recommendation to this inquiry is that Australia must develop of a consensus view of the broad landscape & nature of transportation infrastructure needs.

Transportation and logistics is almost necessarily a fragmented industry. Those prominent transportation & logistics service provider names featured among analysts usually each have limited competencies. Conglomerates in the transportation and logistics sector have often been observed failing after overreach beyond their leadership's ability to understand and administer subsidiaries.¹⁵ Our point here is that undertaking a wide ranging inquiry where ultimately the sourcing proves to be from a limited number of better resourced contributing parties may be problematic from the outset.

It strikes us that the issue of problematical data gathering and quality is not new, or so says our personal experience after preparing ABS survey data for two decades or so. The transport markets hardly ever allow an individual enterprise to contribute data codified & weighted in such a way that a wider general trend will accurately appear (as a consequence of the aggregation of the data across the industry). The sight of ABS staff now being moved on to new working lives by way of redundancy isn't just about emergent technologies, or recent respondent disinterest; this is a long run issue that won't likely be solved by any presently affordable means or survey methodology.

Despite the weight of voices usually heard when transport and logistic industry questions are raised, the share of logistics and supply chain services performed by the recognised industry sector remains small in comparison to that performed or tightly contracted by trading & production businesses themselves. This is a universal feature found in most market economies. When we say "tightly contracted" here, we mean that the principal is the substantial stakeholder in the network design, even though third party contractors (3PLs) may execute in one or many sectors. Australian trading and production businesses, however, often express their interests narrowly &

¹⁴ <http://splash247.com/iea-data-predicts-us-will-become-worlds-second-biggest-lng-exporter-2022/>

¹⁵ www.gileadlogistic.com/blog/transportation-brands-culture-disconnecting-with-value

reactively in respect of functional logistical requirements and planning issues. There is often only so much resource, even in respect of allocation to political lobbying, and logistics doesn't make the top of the power point slide in the boardroom.

The above is very different in Germany, where trading & production businesses normally have a main board director with both logistical academic qualifications and line logistical management experience.

In comparison to 3PLs, in seeking to explore broader logistical planning issues, it is usually better to engage most trading & production businesses in a collegiate environment inclusive of senior management, as government once did in the now distant past¹⁶.

Recently at Gilead we wrote extensively criticising the quality of the work of ARTC surveys, reports, & lack of data for analysis observed on the Inland Rail Project reports delivered in the last decade.¹⁷ We chose at that time to compare these ARTC inquiry processes and reports with the same 1974 Bureau of Transport and Economics Report into the required redevelopment of an intermodal terminal to serve the Port of Brisbane referred to above.

The abovementioned Bureau of Transport and Economics Report arose out of a clear consensus having been reached on the impending direction and characteristics of trade. The 1974 report was executed within a 3 month timeline, with high ranking responsible officers having spent considerable time in the field with a diverse number of industry managers. The project team delivered a concise and clear set of objectives & requirements. Subsequently, the wisdom of the investment in the Port of Brisbane's intermodal terminal was proved. The Commonwealth's agencies and/or consultancies patently must rediscover this manner of execution, and more particularly, that same work ethic, conscientiousness, and succinct reporting methodology.

We recommend that this inquiry adopts only evidence-based likely trends in the nature and flow of trade when shaping narrative. Further, proponents that might bring scenarios reflecting the safety of projecting incremental change should stand on no firmer ground than others. However, we cannot let policy development be led by the PR efforts of tech conglomerates that seek to bolster their market liquidity by means "Notoriety Over Materiality" PR efforts¹⁸. That same PR is employed in order to hold precarious debt ratings, and obscure a lack of operating earnings. They do this by means of claiming to be sourcing miraculous future technology based cost cutting or earnings growth generating solutions. The success of these PR efforts in entering into general media delivered market reports & academia means care must be taken to identify them as a class, and to subsequently discount them.

¹⁶ Bureau of Transport Economics Report Feb, 1974)
https://bitre.gov.au/publications/1974/files/report_012.pdf

¹⁷ www.gileadlogistic.com/blog/the-walk-on-by-proposal-for-the-eastern-australian-inland-rail-development-australian-transportation-network-planning-part-5

¹⁸ www.gileadlogistic.com/blog/amazon-first-class-pr-minds-see-notoriety-ruling-over-materiality

If, in Australia, we can make limited investments that make us better prepared for external market shocks, and they can create a better freight transportation network model in the here and now, we should prioritise them.

Rail Competition

In respect of the enquiries' call to develop policy that would encourage "efficient pricing and competitive access arrangements for key infrastructure assets", Gilead is critical of the contemporary policy regimes of the ARTC and ACCC.¹⁹ We do not believe that an academic, by means of studying the past financial reports of carriers, and making essentially commercial judgements based upon user submissions, will ever source the required level of commercial acumen to deliver access decisions that prioritise the future volume growth, and derivable network efficiencies, required to optimise shared infrastructure assets in public ownership.

ROIC based pricing determinations are just cost-plus scenarios, and they will perform no better than any other arrangements of that genre seen in the past. In effect, the access regime as it stands is continuously at risk of reaching arbitrary determinations based upon obscure policy positions. If levers are continuously pulled, and duopolies are implemented and micro-managed by government, we will surely only end up exactly where we were with the ports in the 80's.

Gilead's rail network contentions are:

1. An ARTC network model must initially be designed with future performance and network growth as its primary objective
2. Pricing must penalise under-performing above-rail operations in order to encourage investment in better rolling stock and operational execution
3. A competition model should be defined that allows operators to achieve near maximal economies, yet also see user income growth dependent upon achieving long-run network growth
4. The threat of business loss at the margins of a user's natural area of advantageous operations should be at such levels that it will have a material affect on income (there should be no absolute territorial franchises)
5. Modal competition must be as open as is practicable

Global Merchandise Trade Prognoses

The Gilead sea-change prognoses in respect of global merchandise trades²⁰ has the emerging environment as one of fracturing trades with smaller ports in aggregate gaining greater shares of the global economy. We explained the observed pre-

¹⁹ www.gileadlogistic.com/blog/inland-rail-competition-australian-transportation-network-planning-part-9

²⁰ *Ports & Ships – is the Lesser to be the Greater?* www.gileadlogistic.com/blog/improving-supply-chain-networks-part-2

conditions, and referenced supporting evidence some years ago, but it is only more recently that similar narrative is entering into the mainstream lexicon globally.^{21 22}

The above would reverse the recent course & style of much of the hub and transportation infrastructure development in the Asia Pacific theatre. This previous course in AP in the past 30 years held that port volume growth & centralisation was an essential pattern. Gilead's broad contentions have for some time been:

1. Super-sized regional hub ports will not serve emergent global trades effectively in future
2. Super-sized container ships (ULCVs) are ill suited to emergent global trades
3. Hub-skipping (the employ of smaller ports directly served) is likely to be ascendant in future
4. More diversity in trades will lead to a need for more highly automated small ports and ships
5. The better employ of the transport cycle in supply chain optimisation will see a reduced employ of inbound centralised (eg: national) distribution centres

Smaller Automated Geared Ships & Coastal Ports

Gilead believes the above opens a pathway for the future return to the employ in Australia of more diverse container vessels and sailing loops (especially in regional international shipping – including the Indonesian archipelago and to/from other smaller ports in SE Asia). These same vessels may serve our coastal shipping by means of cabotage.

Australia is likely not equipped to lead in the construction of a class of smaller geared container carrying ship that may change the shape of international shipping networks. Yet this particular style of highly efficient and more automated small container ship will need to emerge in global trade in order for extant port hub and spoke networks dominance to be challenged. To be successful, this class of ship will need to be built in scale at the larger & most efficient shipyards in the world. That doesn't mean, however, that Australia cannot be active in exploring their design and potential employ (following our early-adopter heritage).

In the immediate South-East Asian theatre, the more that lightly crewed ships proliferate, those same that might employ minimal port-based infrastructure, the more Australian trade potential may be served. Those same independent entrepreneurial characteristics that have made trailer-load trucking a success globally may, in future, serve as a part of the growth fabric of regional shipping. Hence, we have in the past referred to this potential class of ship as the Liberty Ship after the US WWII supply ship of the same name²³.

²¹ <https://theloadstar.co.uk/cost-advantages-of-ultra-large-container-vessels-are-disappearing-due-to-low-oil-prices-and-overcapacity/>

²² <https://theloadstar.co.uk/terminals-will-suffer-catastrophic-economic-failure-next-years-warns-analyst/>

²³ https://en.wikipedia.org/wiki/Liberty_ship

Given the lower capital nature of the envisioned smaller port infrastructure, Australia may be able to position itself wisely in advance. Moreover, we can continue the trend already established in Australia in leading in the deployment of port automation suitable for small ports (such as that based on the automated straddle carrier).²⁴ We can make further efforts to use technology to depopulate port precincts and increase the bias toward the employ of remote security. These features will be directly transferable to future smaller regional ports, or even re-emergent city port terminals (the latter form part of Gilead's E-commerce urban distribution model covered later).

More significantly, we should take a far harsher view of the future efficacy of high cost new near-coast rail corridors in respect of freight. These same intermediate regions are often found to be already served by overnight transit road services to capitals and hub ports. In terms of a modal future for heavy weight cargoes from these regions, they are early candidates for revived coastal & regional trade served through redeveloped historical local ports.

Gilead have cited evidence in our earlier reports of Asia Pacific "feeder" trades now emerging in Asia²⁵. Some are now referring to a significant sector of these trades as emergent under a "One-to-more" label (one recent study covered trade between smaller regional Chinese & Japanese ports)²⁶. Another recently emergent label speaks directly to the "go smaller" trend, and it is called "reverse cascading"²⁷. This term refers to smaller ships from regional/feeder trades displacing bigger ships in more primary trades. This reverses the 30 year trend that saw the largest ships of a generation entering the world's busiest trade lanes, which in turn set off a process of "cascading" where larger vessels were subsequently displacing smaller vessels in each and every lower volume trade.

Despite illustrating our own case with past reports on intra-regional trade growth statistics (these references are visible within Gilead articles directly referenced here), we still rely on anecdotal evidence when observing trends because the precise nature of trades is hardly ever easily discerned by from port and regional trade figures. More visible, however, is the attention regional authorities are paying to smaller port developments such as we now often see mentioned in Indonesia and across Asia major.²⁸

²⁴ Smaller Efficiencies www.gileadlogistic.com/blog/improving-supply-chain-networks-part-6

²⁵ The Rise of the North-South & South-South Trades www.gileadlogistic.com/blog/improving-supply-chain-networks-part-3

²⁶ China-Japan Port Networks Suitable for Short Sea Shipping (p305/341)
<https://trid.trb.org/view.aspx?id=1419113>

²⁷ <https://theloadstar.co.uk/reverse-cascading-carriers-benefit-owners-smaller-containerships/>

²⁸ <http://www.maritime-executive.com/article/indonesia-starts-five-port-projects>

Australian Relative Competitiveness

Before returning to the matter of competition, when we specifically address questions listed in this inquiry, we wish to cover some general observations in respect of relative competitiveness.

Relative competitiveness in transport and logistics efficacy cannot be judged from raw data in most instances. These are lessons Australia slowly absorbed in the past after many became obsessed with crane rates in our ports. The inefficiency was there to be righted, but the “crane rate” obsession ultimately proved counterproductive. Some factors, those that are immovable hindrances hard wired into the nature of our markets, can merely be mitigated. In transportation, there are times that back-load volumes and densities necessarily mean running empty. Seasonal factors will have us continuing to see equipment idle in slack season, and otherwise that the market can be undersupplied in the peak season despite optimal efforts. You can only be as efficient as market opportunities allow, despite the best & most worthwhile creative endeavours.

Hence, in Australia we cannot cut and paste transportation network models made in the USA, Germany, or Japan. Similarly, we won't be able to aspire to achieve the US articulated truck market's old “dollar per mile” scenario anytime soon. Similarly if the constitutional basis of the market requires more transport, and less storage, you will necessarily spend comparatively more on transport. That doesn't mean that your supply chain cost is necessarily negatively affected by higher transportation rates; they may be an essential component of achieving higher turn rates of the inventory concerned (which can be the commercially sensible priority). This need not only be applied to high cost inventory either, as it can also be seen with low-turn inventory retained for extended lengths of time for sound commercial reasons²⁹.

We chose to speak of international supply chain issues first here because the Australian economic fabric has been substantially shaped by the gravity of our state port hub infrastructure. In the domestic transportation sector, only trucking has substantially broken free of the downstream affects of historical regulatory restraints of trade. In the bulk road sector, however, even liberal axle weight & unit load limits mean that sector can only open port competition between states at the margin.

The latter day forebears of the BTRE and Productivity Commission should pay more regard to the benefits that deregulation of the trucking sector brought to the Australian economy. If a solid rail network model is built, one that encourages competition between ports, an economic boost of equivalent weight can be expected in the rail & port sectors. This will not be achieved through lever pulling and the anointing of champions but rather by supplying the appropriate rail network model.

²⁹ www.gileadlogistic.com/blog/red-hot-stock

Australian Transportation Infrastructure Development

Gilead has written a series on Australian Transportation Infrastructure Development focusing primarily on rail and the opportunity afforded by the proposed Melbourne-to-Brisbane Alignment construction³⁰. We will not cover the case we have made for the shape of our proposals in detail here but the key recommendations are:

1. The inland rail project should be built on the ARTC proposed alignment
2. Transshipment rail hubs (hump yards) should be built at Cootamundra NSW and Narromine NSW
3. An intermodal terminal should be built at Toowoomba
4. Economic planning should prioritise new industrial development at sites within clusters that can feasibly access rail transshipment locations by means of local/regional rail service along the inland rail corridor
5. Local rail freight service access should be re-established as a planning policy priority for industrial land use development
6. Cluster hubs around transshipment sites should encourage intermodal operation diversity and innovation
7. Distributed intermodal terminals (down to US rail ramp scaled sites) should be prioritised in preference to large- scale regional intermodal terminals in order to better serve network economics
8. The ARTC Access & Pricing Policy Model must be redeveloped

The above issues in respect of reporting and relative competitiveness do not in any way diminish the need for contestability and sustainability in transport and logistics markets that require access to competitive and reliable infrastructure.

Responses to Inquiry Questions

[G] – Gilead Reponse

1.5 Consolidated Questions

In responding to questions set out in the paper it would be appreciated if, where relevant, respondents could:

- Identify where they are in the supply chain (in terms of the system (i.e. import/export, intra/inter domestic or urban freight) and the specific commodity(s) being transported;

[G] Gilead is a transportation and logistics consulting business. Our fields of expertise include merchandise & project transport operations across all modes, with specific sector experience split between the carrier operating sphere, the forwarding sector, and the 3PL/4PL space.

- Identify the priority issues, whether they be ‘regulation’, ‘productivity’, ‘technology’ or ‘infrastructure’; and
- Identify the time horizon for each issue.

³⁰ www.gileadlogistic.com/blog/final-rail-cluster-hubs-australian-transportation-network-planning-10

- [G] Regulation, Rail Access and Pricing Regime – 2 year horizon
- Productivity – Rail Network Model – 5 year horizon
- Productivity – Urban Unit Load Based Distribution Centres – 5 year horizon
- Technology – Virtual Warehouse/Beacon Applications for Unit Loads/Rail Wagons – 5 year horizon
- Infrastructure – NSW Rail Transshipment Yards – 5 year horizon

2.1 What is moving where, why and how?

- What infrastructure is used in your supply chain and how well does it perform?

[G] Gilead field interviews in inland NSW suggest that non-bulk rail services are presently uncompetitive in terms of price, frequency of service, traceability, transit, and on-time running.

- What changes would you like to see to make your supply chain work better?

[G] Gilead recommends a regional rail network model that creates higher traffic density in and out of new efficient inland transshipment hubs. These should be accessible by local and regional rail services serving a cluster of intermodal terminals and large industrial sites.

- What data gaps are you aware of in relation to Australia's freight and supply chains?

[G] A dearth of published data & weak survey methodology was evident in the various reported ARTC Inland Rail Alignment studies

2.2 Competitiveness in the Australian freight sector

- In your view, is Australia's freight system internationally competitive?

[G] On occasion, in spite of achieving near-absolute competitiveness in operating execution, it may not always follow that reported performance will equate well with foreign standard measures. Objective measures may not even translate between same-looking transportation services operating in markets with different operating characteristics. The latter may be influenced by various factors including different levels of infrastructure (that may still indeed be locally optimal in feasibility terms), traffic density, wage costs, natural geographical features/climate, among others.

Simply, if you have a marketable product to move you have to get down to it, and optimise according to local characteristics. You must do so within the practical limits of infrastructure spending & regulatory impost in your given environment. Hence, the best designed freight system in the world may never find itself placed well globally by many of the said standard measures.

However, one characteristic noted globally, is that in the trucking industry, where the owner-driver is able to obtain finance, and navigate the regulatory

environment, they naturally form a base from which competitive transport markets and industry proliferate. Given present levels of owner-driver access to the transport market in Australia, trucking is fairly healthy in the sense of the offer to market; but watch must be kept on driver ages as it is the canary-in-the-coal-mine of supply and sustainability. Factors due for scrutiny if average driver ages keep increasing include access to finance, regulatory risk, lifestyle, & increased levels of societal-normalised family commitments.

Besides subsidised island services, Australia hardly has a coastal shipping industry presently. In the future, global trends may provide the small ship infrastructure that leads to a renaissance in the sector in the medium-to-long term. The more that a coastal trading vessel can be operated as in the manner of an owner-driver operated truck, the more competitive coastal shipping will become³¹. Cabotage is an available area to explore for sector gains, especially in the long distance outsize & heavy equipment sector, but the dominant roll-on-roll-off carrier serving Australia has shown little interest in the market in past decades.

- What are the key indicators which tell us this?

[G] Seriously? Crowd-sourcing in this respect is not a good idea.

No key input or operating indicator in transportation or logistics can be extrapolated outside the narrow confines of its specific market. Yield is the operating measure that counts to service providers - input costs, performance, or revenue can vary widely. Even if broader indicators like diesel consumption, tonnes/km, or log book data capture may produce data – that data may not be material at a local level if (say by-way-of-one-example-among-many) back loads are not available in a specific market. Further, sometimes specific markets change substantially and quickly. In such cases the key indicators will only track changes better measured elsewhere. If markets decline, transportation service providers and assets must move to new or growing markets.

- How important is freight movement to your business competitiveness?

[G] Improving the competitiveness of our transportation and logistics industry clients is our business

- Are regulatory factors affecting productivity for your business? How could this be improved?

[G] Shared use infrastructure access regimes are problematic in design and execution. The trap is in feigning an interest in fairness being offered to market participants and new entrants, which in turn can mean that regimes must act unfairly in the best interests of sustaining an optimal transportation

³¹ Smaller Efficiencies www.gileadlogistic.com/blog/improving-supply-chain-networks-part-6

network model. In rail especially, the network model's competitive interests, & network ROIC, must come before conferred access rights & ROIC for individual market participants. In respect of the Hunter Valley, it should not be surprising that the access & pricing regime has of its very methodology and nature bred a kindergarten level entitlement culture among users³².

3.1 Urban Growth Pressures

- What are the key issues for freight in Australia's major cities?

[G] Local rail freight service infrastructure has been forsaken in cities. Much industrial production has been forsaken also, but the output has been replaced by imports being imported through the same port capitals. Too much import centralisation is occurring; this in turn increases the long-distance freight task.

Implementing a policy that encourages the employ of rail bypass to move containers from wharf to city fringes must preclude double dipping on rent at franchised locations that in outcome might fail to add net value on many measures.

If our present elevated national purchasing power returns to mean as a result of global merchandise trades becoming less polarised, then some industrial production is likely to be on-shored. At Gilead we believe the optimal sites for this production to be located are highly likely to be along the main inland rail arteries. Given that this proves to be the case, a substantial share of rail manifests originated or destined to our major East Coast ports will be able to bypass near-city intermodal terminals, and be originated or destined to/from inland rail transshipment yards/ports directly (ie: there will be no need for urban fringe intermodal/transshipment terminal intermediation).

- How can Australia's urban networks better prioritise passenger and freight services in the most effective manner possible?

[G] This is an example of circular referencing. Local urban rail freight has long before been de-prioritised and the position is not significantly recoverable. Bypass rail infrastructure appears to have been prioritised in order to free road/rail congestion for urban passengers, but it also serves to encourage the release for re-development of urban warehouse stock into residential developments. This maximises short term stamp duty receipts while creating a long-term logistical liability. It is yet to be recognised that it will create a remarkable net increase in urban road freight traffic movements..

³² www.accc.gov.au/system/files/Aurizon%20Submission%20-%202017%20HVAU%20Consultation%20Paper.pdf

- How are our cities and supply chains being impacted by changing consumer behaviours such as online shopping?

[G] We have covered this topic extensively in our past publications and provide references^{33 34 35 36 37 38 39 40} (sub-references are linked in each article)

Moreover, in respect of the Australian inner metropolises we have three recommendations.

- i) Reservation for logistical facility mandated use land within urban (re) development plans (funded by real urban consolidation)
- ii) The employ of parcel-racked side-loader delivered unit loads as manned parcel distribution centres located at reserved public spaces inclusive of parking, and/or sidewalk accessible locations in high density areas
- iii) The employ of parcel-racked unit loads for manned distribution from reinstated harbour city-port terminal locations or barges located at tethered floating docks⁴¹

- What are the critical last mile issues you face in urban areas?

[G] “Last mile” is in practice presently a misnomer for Australian urban distribution (as it is elsewhere in the world). In practice, in the case of franchise carriers operating sub-depots, or for Australia Post, parcel delivery distances are usually 5-15km from base. Otherwise with national carriers the average will exceed this on a depot-to-door basis. Distribution centres and carrier terminals are located significantly further away from their urban customers than they were 30 years ago.

We have long before arrived at a point where we are constrained in getting large consolidated loads of individual deliveries to a point within the “last-mile” theatre other than through shopping centres. Converted shop sites

³³ www.gileadlogistic.com/blog/that-nexus-between-inventory-transport-markets

³⁴ B-2-C Price Point Pains www.gileadlogistic.com/blog/1

³⁵ www.gileadlogistic.com/blog/amazon-first-class-pr-minds-see-notoriety-ruling-over-materiality

³⁶ www.gileadlogistic.com/blog/disruptive-tech-mobile-apps-transportation

³⁷ www.gileadlogistic.com/blog/lumpiness-trampolines

³⁸ www.gileadlogistic.com/blog/transportation-architecture-network-fabric

³⁹ www.gileadlogistic.com/blog/transportation-brands-culture-disconnecting-with-value

⁴⁰ www.gileadlogistic.com/blog/transportation-logistical-frameworks

⁴¹ <http://try.tdocks.com/info/>

supplied out of shopping centre docks, converted car parks, new locker parks built on resumed green space are all unlikely solutions to create new supply.

The first among the facility/vehicle traffic growth issues encountered in handling more of E-Commerce parcel deliveries is the expanded over-packed carton volume in comparison to retailer sold product. This comparative volume expansion is also applicable at any conceived intermediate transport hub location or collection locker.

New solutions are needed to place and/or store deliveries within the “last mile”. We will initially address the limitations for delivery or collection and later work backwards. A recent Gilead article referenced US trends in mother-ship package vans, trolley deliveries, & the return of parcel offices/lockers of various configurations⁴². So “last mile” in congested overseas cities is presently widely perceived as being best served by the “vehicle-plus-trolley” combination. At the same time, these reports recognise that the present course is not sustainable, and that this becomes manifestly apparent during peak periods.

The reference in this inquiry to drones merely reflects the PR success of E-marketing & distribution corporations that need to convince financial markets that their present lack of profitability will be cured by miracle tech-based physical distribution solutions⁴³. Defying gravity to deliver cargo by means of a rotary wing device has severe economic & practical public liability limitations⁴⁴.

Operating ground drones, as presently deployed in hospital wards, is currently practical only in confined navigable areas. Future ground drone applications must confront obstacles like entry into the place of consumer receipt, and secure handover. For ground drones to be economic they would also likely need to carry multiple deliveries and hence be imposing. They may otherwise be commendable for city office buildings except that personal E-Commerce volumes destined to staff have already reached levels that can overwhelm most city building’s practical receiving capacity.

Returning to the prospects for last mile storage locations, we will follow by expanding on our earlier mentioned concept of employing unit loads delivered by container sideloader trailers. These ULDs would be deposited & secured (anchored) in publicly accessible locations.

As cited in the earlier cited example of E-Commerce shipments in Washington DC, US deliveries are carried to the parking location in an internally racked US market specifically styled package car. These are larger than vans typically employed in Australia. The load bays of these larger

⁴² www.citylab.com/transportation/2017/04/cities-seek-deliverance-from-the-e-commerce-boom/523671/

⁴³ www.gileadlogistic.com/blog/amazon-first-class-pr-minds-see-notoriety-ruling-over-materiality

⁴⁴ www.gileadlogistic.com/blog/transportation-brands-culture-disconnecting-with-value

racked package cars could be the generic design basis for unit loads that are delivered to locations within the “last mile”. We base our opinion on our experience of reviewing package cars with Purolator Courier and UPS in the US where we noted the load versatility made possible by their configuration.

A unit load derived of the above configuration could be constructed on a double-ended (doors at each end) basis. This would see greater unit capacity yet retain the maximal manageable load space (in effect this would form 2 x regular package car load bays). Such unit loads could be fitted with a self-contained long-life power source sufficient for scanning systems with burst upload, GPS, lighting, and security.

If one were to contemplate building a compartmentalised / internal locker configured unit load the internal space loss would likely prevent them from being effective within publicly accessible urban space constraints. This means that the open parcel racked arrangement within the unit load is likely to be a superior concept. This comparison will hold in the same manner with permanent collection-site lockers.

From the ULD delivered site, trolley operators (or any other means of courier) could be employed to handle “last mile” delivery for destinations within feasible range.

A significant benefit provided by employing unit loads as intermediate storage / distribution / collection locations, in comparison to re-instating traditional parcel offices in the urban environment ⁴⁵, is that they could be more readily scaled up during peak periods. They may also be stacked given access to site based stairs. And unit loads can be shuttled into sites at off-peak periods at relatively low cost.

Unit loads could be assembled at locations where attendant manning and subcontractor deliverers can feasibly be shared between transport and logistics enterprises.

As in the case of preparing the US styled racked package cars for delivery runs, units can be loaded on a first-in-last-out-basis. Priority can be given to consumer/retail groups for earlier designated deliveries (eg: for a food/grocery /milk/bakery early delivery to commercial premises by trolleys or other means of local courier within the immediate area).

It would be also be beneficial to contemplate mixed loads of deliveries and collections so that the ULD is more immediately “workable” at the urban site (ie: loading early deliveries in the aisles last, loading late by-appointment collections first). Conceivably, by way of example, a ULD could be delivered in the early hours of the morning to site with consolidated shipments for delivery & collection, accessed for several waves of delivery priority in the morning, and then have residual shipments made available for collection in the

⁴⁵ www.gileadlogistic.com/blog/local-rail-freight-australian-transportation-network-planning-part-7

PM, before the ULD is returned to the urban fringe based hub in the post peak period in the evening to be then replenished with the next day's delivery traffic.

It is more likely that individual transport companies would control their own ULD's at site for practical reasons. However, shared third party facilities might be the only practical option in some urban locales. If the short term storage and collection facilities are operated by third parties or local authorities, beside the levies upon transport users, offsetting the cost of failure of consumers to collect packages according to schedule may present the opportunity to levy collection centre storage charges as a cost recovery initiative. This has recently been made more tenable in the age of swipe payment. To bring this practice into being the legal compatibility with carrier terms and conditions, including storage and handover liability, would need to be assessed and legislation considered.

In Australia's port-based major cities there is the supplementary opportunity for bringing unit loads containing packages for collection or delivery into reinstated city-port terminals or to tethered docks by means of coastal shipping shuttles/barges. The potential gains from employing coastal shipping to move these unit loads to such city-port terminals is not very different in concept to the logistical design being employed in Sydney to remove the new Sydney Harbour rail tunnel earth that in the past major infrastructure projects been moved by continuous shuttles of heavy trucks with dog-trailers. In both instances, the matters addressed in parallel are site loading congestion and arterial traffic congestion.

3.2 Port Corridor Pressures - Protecting Land, Sea and Air Connections

- Do you face, or expect in the future to face, problems moving your freight through Australian air, land or sea ports?

[G] Sydney's airports have impending international freight/capacity congestion issues. Based upon current trajectories, an increase in the number of wide-body international flights into SKSA is to be expected as Badgerys Creek capacity supply lessens the number of SKSA slots required for domestic narrow-body flights.

The global air freight world is slowly returning to the dominance of belly capacity in passenger planes as opposed to pure freighter aircraft. We also note QANTAS's return of wide-body services on the Trans Tasman routes as evidence of the difference that even comparatively low levels of freight yield can make to the returns of regular combination passenger/freight flight operations. Unless alarming regulatory events intervene, we expect that the full freighter share of our international air cargo market will continue to decline.

We also believe that there is an opportunity to considerably increase perishable capacity on Canberra outbound wide-body passenger flights to Asia

if the present exploration of that passenger market proves it to be viable and sustainable. A specific plan is required.

- How can Australia's maritime channels be appropriately maintained and able to accommodate bigger ships?

[G] Gilead believes this question to be based on an errant supposition. Ships must be right-sized for markets and operate with the required frequencies to serve trade. Nobody trades with an objective of increasing port profits. We also reference a report counterintuitive to the question as follows that suggested that shipping fuel efficiency has indeed been observed to have declined as ship sizes grew into the ULCV class⁴⁶.

- How are other countries dealing with the landside implications related to distributing cargo from bigger ships?

[G] Gilead says that the answer is not well. White elephant port automation infrastructure projects in Europe built after faith-based ROIC projections, crisis in port turnarounds in the largest ports, and diminished ROIC have spread across the global port terminal industry.

We cite Port of Rotterdam's Financial director Paul Smits in 2014: "We are not surprised by the fall in profit. The massive investments of the past few years have caused our long-term debt rise to €1.3 billion, which also means a rise in our interest charges." This was despite 3.1% revenue growth at the time. Profitability fell again in 2015, and yet again 2016, and is said by the US Journal of Commerce to have flat-lined in the first half of 2017.

As global carriers are being forced to consolidate (merge) the port congestion issue becomes amplified by the consolidation into the deployed larger vessels.

3.3 End-to-end supply chain integration and regulation

- How effective is your supply chain at transitioning your freight between modes and across boundaries?

[G] In our published series on Australian Transportation Network Planning we described the need to understand transshipment as conceived in Australia as being not just about transport mode, or even rail gauge changes. We have cited the case of rail branch line rolling stock/traction requiring cargo transshipment at main line junctions⁴⁷. In respect of other design enforced blockages, we also cited the ARTC suggested case of the grant of transit priority (a subsidy) planned to be accorded to express rail line-haul for cargo originating from Melbourne or Brisbane and destined to the opposite

⁴⁶ <http://theloadstar.co.uk/new-mega-boxships-not-as-fuel-efficient-as-those-delivered-25-years-ago-claim/>

⁴⁷ www.gileadlogistic.com/blog/spineless-australian-transportation-network-planning-part-3

correspondent city. This would in effect (based upon the extraordinary yet unproved future growth projections of the intercity express traffic volumes) reimpose a form of non tariff barrier to interstate rail trade. If so, this would lessen the inland producer's ability to readily access port competition at optimised bulk rail operating costs. The net projectable effect is diminished levels of export competitiveness and producer yield. This situation immediately reminded us of the Ghan viability modelling fiasco; but also that the interests of the NSW State Port Authorities and Graincorp favour east-west rail flow over north-south.

- What regulations do you have to deal with in your supply chains?

[G] Not a question we will address directly

- How could any of them be simplified?

[G] Not a question we will address

- Are empty containers a problem for you?

[G] Our past specific experience with demurrage issues that suggests that the diversity in carrier offering is the most practical restraint upon industry practices that have at times got out of hand from the consignee/shipper point of view. While much is said of 20' containers to justify demurrage it is 40' container demurrage that is often paid to the shipping lines at disproportionate rates as compared to the actual cost of the container. If shortage of 40' equipment was currently an issue in other global markets (as it was said to be several years ago), and it was severely negatively impacting upon the shipping lines, then the turnaround at empty container parks would be far faster than it is today.

Industry consolidation means that relying on the aforementioned competitive style of market restraint is an increasingly fragile proposition. The enactment of law, or entry into an ACCC sourced undertaking, that limits the maximum shipping company demurrage claim to be equal to the present outlay cost of a replacement container of the same type, always strikes us as a sensible starting proposition.

In respect of supply for shippers, and the required surety of turnaround for container lines, especially in respect of the effect of the import/export imbalances in the 20' container market (and that of other specialist equipment markets), further options can be explored if particular effort is made by the carrier and shipper cohort to consider and agree to implement specific counter measures.

Shippers must acknowledge that the employ of under-utilised (by volume) 40' containers for export of containerised bulk commodities must be a part of the solution, because if the alternative means rotating/positioning empty 20' containers inbound to Australia, the latter cannot in the end serve their economic interests, nor their export market competitiveness. Inland, port, and

destination charges will be raised by the aforementioned scenario so the shipping lines must also be ready to negotiate incentives for the 40' being so employed.

Tactically, neither encouraging supply by greater price incentive offers for 20' import pricing on the one hand (the exporter interest position), or loading more bulk export commodities in under-utilised 40' containers (the shipping line interest position) on the other, has never been significantly realised in practice. An accord would see both interests meeting in the middle.

Technology may improve visibility, and make a difference at the margin for availability and utilisation, but we have seen insufficient will for stakeholders in the market to buy into exploring the potential. The scope of a visibility project for availability constrained equipment should be narrow. It may possibly afford users priority in access to that equipment pool when agreeing to utilise it. However, at times, no amount of technology will save a shipping line from having to bird-dog the turnaround of specialist, or even 20' equipment, in short supply.

The above are acknowledged complicated issues in the real world.

3.4 The Air Freight Market

- Are our airports appropriately integrated into surrounding freight networks?

[G] Gilead believes in the systemic merits of constructing / deconstructing aircraft container unit loads at off-airport premises⁴⁸. For example, we have proposed that Cootamundra is a suitable intermodal location to construct and feed perishable air freight containers for produce from the MIA to Canberra airport for existing and future international passenger flights.

- Are there any international examples of where airports are used more effectively in freight networks?

[G] This question is dependent on the relativity levels tied to capital investment and land availability in the respective market internationally. In most so-called model markets, high level capital investments have been heavily subsidised, often this coincides with limited access to land that requires more intensive and centralised terminal operations. In Australia, if ROIC cannot be assured, we cannot expect to pursue the aforementioned development paths no matter how attractive the foreign facility appears to be at first glance.

The higher relative levels of competition between airports in some regions offshore must also be recognised as contributing to the suppression of airport authority rent expectations in some markets; this in turn is often influenced by

⁴⁸ www.gileadlogistic.com/blog/in-praise-of-unit-loads-hubs

the relative distances between competing airports and shippers in various geographies.

Evolved terminal solutions in foreign markets also need to be considered carefully as they address specific local regulatory environments and trade dynamics (eg: cut flowers in Amsterdam/ramp handling for project cargo in Houston).

Relatively higher levels of regulatory intervention seen in Australia, including inspections related to the protection of agricultural and ecological interests, require provision of storage space that may not be feasibly provided in on-airport precincts. Hence many citations of foreign models meet the immediate riposte “won’t work here”. Again there are elements to be found abroad in specific areas of best practice that we can adapt, but the subject is too broad to approach here.

- Can Australia be making greater use of air freight?

[G] Australia is a very accomplished user of air freight, especially internationally. Our freight rates per tonne/km have traditionally been very competitive. In the 90’s and early 00’s we had issues with accessing sufficient & sustainable inbound freighter aircraft capacity when the B747-400 passenger aircraft underperformed for cargo load-ability at maximum takeoff weight on our routes from the EU/US (this capacity/yield issue was skilfully managed by our key airline managers). The freighter cargo flights serving Australia from the EU and US have historically relied on the relatively higher return revenues afforded by Asia-EU or Asia-US cargo in order to cover round trip costs. Hence these same operators provided little air freight capacity to Australian exporters.

Gradually our orientation has swung more toward Asian terminus/originating routes which mainly employ the newer twin engine passenger fleet aircraft. They, in turn, are performing better lifting belly loaded air cargo at most flight sector operating ranges. The ultra-long range wide-body hub busting planes that will service the Middle East, EU, and the Americas are yet to fully enter service and they should again also increase the industry’s capacity and competitiveness.

One global trend that we need to watch is the emergence of long ranged narrow-body aircraft which do not effectively lift air cargo. The A321 has a range of 7500km. If these aircraft were to displace wide-bodies in the fleets of airlines servicing Australia it would adversely affect cargo capacity. Of course freight brings revenue that is treated as defraying passenger flight operating costs, but we have seen in the past that fleet acquisition decisions have sometimes ignored this potential if fleet inventories / maintenance costs are better contained by employing a less diverse fleet system-wide.

The other more immediate threat to cargo operations, costs, and capacity available to shippers is the security costs and embargoes implemented as a result of the responses to global terror threats. Australia cannot sustain

existing levels of capacity or market competitive pricing if forced to rely upon freighter aircraft services. We are absolutely reliant upon continued market access to passenger aircraft belly space on international flights. Terror event derived lawfare could deprive us of international passenger aircraft belly capacity; it might drive new long range narrow-body airliner sales that don't lift cargo, it could expand integrated express carrier market shares as opposed to the traditional forward/carrier complement that provide the backbone of the Australian market's capacity, and it could even create a further non-tariff barrier to certain markets. Fearful speculation is cheap, but these issues are warrantable threats to the air freight industry globally, and particularly to Australia given our market characteristics.

In many circumstances shippers will rightfully seek to make less use of air freight. The crafting and communication of optimal solutions from the air carrier/forwarding industry for specific potential markets becomes the critical factor in sustaining an industry that accesses the premiums paid for this form of transport. The air cargo market evolves continuously and hence this process is ongoing. However, once the capacity of the industry to provide solutions is understood by skilful Australian traders, they have in the past found the opportunities, and the industry has simply executed.

3.5 Changing Technology

- What emerging technological trends do you think will impact on your supply chain?

[G] Systems integration between ERP systems and carrier/3PL systems

[G] UX is a potential high gain area in logistical tech in that it can be stratified according to user capability (optimised for each class of user). For instance, most high volume transportation operations do not actively track consignments, because to do so in an interventionist manner would downgrade productivity. Diagnostics of recorded event information too must be employable. In an engineered process environment only actionable alerts should be prioritised at the user interface. There are user groups with distinctly different productivity based data needs. These groups may include cargo handlers & drivers, maintenance staff, financial analysts and auditors, operational management, 3rd party partners, vendors, and most importantly shipper/consignee customers. In large operations the network modellers (financial and operational) also have distinct needs as opposed to their operational/transactional colleagues.

[G] Blockchain engagement between unrelated parties of mixed organisational sizes is a likely trending subject. Already the letter of credit (L/C) application is being trialled by an Australian bank and partners⁴⁹. In respect of blockchain we believe the greater opportunities are biased toward less integrated operations⁵⁰. For freight & logistical parties doing business on an arms length

⁴⁹ <https://thefinanser.com/2016/08/applying-blockchain-trade-finance.html/>

⁵⁰ www.gileadlogistic.com/blog/transport-enterprise-structure

basis with counterparties in a logistical theatre, blockchain could establish the basis to secure liquidity and cut transactional costs. Innovation in financing operations is a distinct possibility. The issue at hand in terms of investment capital required to develop blockchain backbone systems is that transportation conglomerates with fewer subcontractors, those with existing market power that normally invest in innovation, and those that deploy their integrated systems with subcontractors, may be less motivated to develop or deploy these solutions.

[G] In terms of the historical record it is possible to contemplate how Blockchain may have been developed and applied, within a confined domain, in Australia in WWII as we ran our command economy. Freight and logistics would be a key consideration, and it would represent an opportunity for useful deployment in such circumstances if they ever were to return.

- When are these impacts likely to be felt and how does Australia's freight infrastructure need to be adapted to make best use of likely changes?

[G] For the industry professionals that create transport & logistical solutions, freight infrastructure is like Meccano set pieces. An industry professional is not necessarily seeking high-tech pieces. In fact, in terms of operational execution, the lower tech solution is often more highly regarded. Operating cost, performance, and reliability are the three criteria that determine whether specific technology solutions add value.

[G] In any established operating transportation and logistics environment it is always necessary to recognise and appreciate the extent of capabilities of existing systems before entering into a redevelopment project. The rate of failure in technology redevelopment projects is almost always proportionally related to the level of aptitude of the CEO, the scale of the project, and to the level of hands-on experience in the specific subject areas of the developers.

- Do you feel you can make use of the technology you need?

[G] This question contains a circular reference.

4.1 Capacity Forecasting

- Any data or insights you are willing to contribute to assist in capacity forecasting assessment would be appreciated

[G] In merchandise transport, long range forecasts based upon demographics, GDP projections, & exchange rates are the best we have seen of a miserable bunch.

4.2 Key Drivers of Change for Use in Scenario Planning

- The Inquiry welcomes views on what factors and key drivers of change should be considered in the scenario planning analysis.

[G] Lesser dollar bloc purchasing power

- The Inquiry is also keen to identify key functional elements of supply chains through case studies demonstrating how Australia's freight system is working on the ground, including case studies about things working well, as well as examples of the problems and where improvements can be made. Identification of potential future trends in supply chains would be valuable.

[G] In 2006 we suggested that containerised grain's export volume growth prospects were very good. This view was met with scepticism among the leadership group of the international shipping lines at the time. Beside the major grain marketing companies, the logistical growth opportunity will follow the marketing potential of containerised grain. This is within the domain of the traders & marketers. The major grain marketers in Australia have taken an interest in containerised grain but they are naturally biased toward bulk shipping. We note cross-over operations like Namoi Cotton (ASX: NAM) that also load grain have publicly reported significant growth in the sector⁵¹, together with past reported growth with regional specialist operators like Croker in the Riverina⁵².

We further propose that in future a marketing company's traders may source and move forward inventories of loaded shipping containers to intermodal facilities within proximity of inland transshipment rail hubs (in low humidity environments). In doing so these traders may access a cycle from order-to-sailing potentially reduced to 7 days elapsed.

4.3 A National Freight Performance Network

- The Inquiry is particularly interested in views on the potential need for a national freight performance framework and the likely key indicators.

[G] Gilead does not recommend this. We were approached by a prominent foreign/ western institute to assist them with a survey series looking at reporting these same factors in Australia. We declined because we were unable to conceive a wieldy means of proceeding beyond cumbersome frequent direct sampling. If there is to be any proposal to undertake measurement it must be scrutinised during the development process by industry professionals, those that have personal operating experience in each specific subject of measure.

Please contact us if further clarification is required on any detail in our submission.

E.&O.E.

⁵¹ <http://www.namoicotton.com.au/media/34918/annual-report-2017.pdf>

⁵² <http://www.crokergrain.com.au/our-story>

Yours Faithfully
GILEAD LOGISTIC SERVICES PTY LTD

A handwritten signature in black ink that reads "Ross Delaney". The signature is written in a cursive style with a large, looping flourish at the end of the name.

Ross Delaney
Director

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