



Grant Denholm

Consulting Principal

Qualifications Bachelor of Applied Science (Hons), Graduate Diploma in Maritime Management with Distinction, Master of Business Administration (Maritime and Logistics Management) with Distinction

Grant is a transport and supply chain specialist with over fifteen years of experience in port, terminal and landside transport operations, and is the Consulting Principal of Denholm Consulting. Prior to his current role Grant held various leadership and consulting roles in an international professional services advisory firm and in the Australian coal industry. He has undertaken and led a broad range of domestic and international projects for all modes and forms of transport and supporting infrastructure. Grant's interest and experience in supply chain efficiency and cost optimisation has seen him become an industry leader and innovator in adaptive and efficient transport systems at operational, strategy and policy level.

Projects Undertaken

PNG Medium Term Transport Plan

Australian Aid - TSSP | Papua New Guinea

As part of an Australian Aid capacity development programme to Papua New Guinea, supported development of the 2019-2022 Medium Term Transport Plan led by the PNG Department of Transport. Activities included consultation with, and consolidation of, transport sector agency infrastructure project information and policy and legislative needs, development of a project prioritisation process, and scheduling of projects within funding envelope constraints in order to produce the AUD 2 Billion + implementation plan.

Tug and Barge Operating Cost Model

Confidential Client | Pacific Rim

As part of a Business Case to support expanding services for a maritime operator in the Pacific region, undertook a transport cost and business cashflow analysis that would result from a proposed change in services. The work took into account the business impact of new capital, changed operational practices and a new revenue stream as part of the decision to pursue additional market opportunities.

Gulf Province Transport Feasibility Study

IFC | Papua New Guinea

In association with ERIAS Group, led the transport assessment of a study for the International Finance Corporation (IFC), as part of its agricultural supply chain development in Papua New Guinea to improve economic opportunities and development of the Gulf Province. The work has included a technical feasibility study of new transport options between Port Moresby and the

highlands via a vessel service along the Gulf coast, and interdependent landside infrastructure development at Kikori and other port locations, an assessment of potential demand that may arise with construction of the Erave to Samberigi Road, a systematic review of the needs and aspirations of stakeholders for transport in Gulf Province, consideration of possible economic, social and environmental impacts, as well as the identification of a potential PPP structure to encourage private sector participation.

TEARC Detailed Business Case

Building Queensland | QLD

Supported Building Queensland to develop the Detailed Business Case for the Townsville Eastern Access Rail Corridor (TEARC). As part of the project, led the development of a custom rail simulation model to assess the operational changes resulting from developing the infrastructure, and the impact of integration with the Port of Townsville's rail network.

Urban Rail Plans

Department of Infrastructure, Regional Development and Cities | Australia

Project Director for the Urban Rail Plans project for the Australian Government, which supports the "Smart Cities" policy and other city-based developments. The work included assessment of current urban rail systems, planning and future city development of new rail technologies and opportunities to enhance the rail system. Consultation and coordination were undertaken between Federal and state Governments to develop key directions for each city. Provision of stocktake reports, review and quality assurance of

technical reports, strategic and technical advice and modelling on key issues.

**NW Queensland Aquaculture Development
Department of State Development | QLD**

Led the review for potential aquaculture development and associated reforms to give greater decision tools to proponents and confidence to potential investors for tropical species aquaculture in NW Queensland. The scope of work, in conjunction with DAF, included development of Aquaculture Development Areas (ADA) in supporting the state-wide target of 450 hectares of aquaculture. The study assessed the viability of different business models for suitable species and identified supply chain infrastructure requirements to support their development.

**Infrastructure Productivity Framework
Confidential Client | Global**

For a global resources company, prepared an infrastructure productivity improvement framework as part of their productivity enhancement process.

**Western Range Iron Ore Project Feasibility
ArcelorMittal | Liberia**

As part of the feasibility study, and further optimisation study, undertook an options assessment of the outbound logistics system across 5, 10 and 15 Mtpa volume scenarios, and led the development of an end-to-end (pit-to-vessel) dynamic simulation model (inclusive of in-feed, processing, stockpile, rail, rolling stock, terminal and vessel components, as well as weather impacts and stochastic delays), to validate the proposed optimal operational system.

**Operational impacts of berth pocket depth loss
Confidential Client | Australia**

For a confidential client, provided an expert witness technical assessment on the operational and capacity impacts of berth pocket loss of depth in the absence of maintenance dredging. The work included the development of an analytical process and model to assess impact on the non-homogenous fleet as a direct result of incremental loss at depth at berth.

**Quarry Product Market Analysis
Confidential Client | Europe/Middle East**

For a confidential client, undertook a high-level market analysis of international quarry product export destinations. The preliminary market analysis included estimation of supply costs for aggregates, limestone, and armour rock to an international target, import infrastructure

capability, and an assessment of potential competitiveness for the supply of product.

**Biofuels Research Project
CEFC/ARENA | Australia**

For the Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA) was the transport specialist in a study to develop a comprehensive and consolidated knowledge basis to increase understanding of the biofuels markets. The work was used to assist policy makers engage with industry, the decision-making processes, and transaction structuring for investment opportunities. The work included collating research on the future domestic biofuels task with a particular focus on the transport sector, the current and potential future policy setting, transport sector fuel alternatives, and the ease of transition.

**Out of Gate Transport Cost Analysis
Confidential Client | QLD**

For an aspiring coal producer, undertook a high-level transport options analysis (rail and terminal) to inform the overall project assessment. The work included estimation of out of gate transport costs, identify constraints and cost impacts on a range of logistics strategies, as well as, identification of initial information to assist with service provider negotiations.

**Geraldton Port Master Plan
Mid West Port Authority | WA**

For the Mid West Port Authority, led the development and delivery of the Geraldton Port Master Plan. The process included significant stakeholder consultation, development of trade forecasts and fleet analysis to assess current and future infrastructure needs. The infrastructure needs were then translated into options and assessed against business needs to develop an aligned land and maritime master plan for the port.

**Townsville Port Infrastructure and Economics
Department of State Development | QLD**

Led the Infrastructure and economic assessment for the 30-year development planning of Priority Townsville Port master planning per QLD Sustainable Ports Act 2015. The project included the development of demand forecasts and scenario developments to inform the future infrastructure, land and planning needs of the port to into the future

**Broome Port Master Plan
Kimberley Port Authority | WA**

For the Kimberley Port Authority, led the development of the trade forecasts and calculation of resulting vessel and infrastructure demand to inform the land use planning as part of the port master planning process. The work involved definition of potential future scenarios across all commodities handled at the port and development of a trade model to produce throughput and vessel outcomes.

**Benchmarking – Mobile Equipment
Confidential Client | Global**

For a global resources company, prepared asset life, maintenance interval and productivity benchmarking reports for Open Cut and Underground mobile equipment. This work was used to inform internal procedure development.

**Technical Due Diligence – GCT North America
BCI | Canada/USA**

For British Columbia Investment Management Corporation (BCI), undertook a logistics and operational review to inform the risk and valuation process for the equity purchase in four container terminals in North America (GCT Vanterm, GCT Deltaport, GCT New York and GCT Bayonne).

**Aquaculture Options Assessment
Confidential Client**

Led the options assessment and commercial feasibility for a proposed aquaculture expansion. The project identified future project management requirements including gap assessment, MCA and financial assessment to identify the best cost to risk outcome for the project.

**Cairns Marine Precinct Growth Strategy
Department of State Development | QLD**

Technical lead for the analysis of priority developments (both infrastructure and non-infrastructure) within the Cairns Marine Precinct to support a long-term sustainable marine industry. The work involved an assessment of existing infrastructure, assessing future demand/requirements, development of strategic options and assessment of the options.

**Feasibility Study for Thailand Beef Supply
DAFWA | WA**

In association with AEC, led the supply chain assessment of live cattle and processed meat as part of a Prefeasibility Study for Beef Supply Chain Models for Thailand. The work included facility design and costing as well as Supply Chain

modelling assessment of domestic and international transport

**Mirambeena Rail Spur Extension
Landcorp | WA**

For Landcorp, led the trade assessment and economic analysis for a proposed spur line extension to connect the Mirambeena State Industrial Area at Albany in WA. The tasks included stakeholder consultation, development and qualitative assessment of potential alignment options, development of order of magnitude project and downstream infrastructure costs, an assessment of contestable freight demand, and an economic analysis of the project.

**Port Hedland Berths 1-3 Capacity Study
Pilbara Ports Authority | WA**

Led a study to analyse the effect of different trade scenarios on available capacity of Port Hedland's Eastside Berths 1-3 to service forecast demand and ship calls, including new commodity exports, such as lithium ore (spodumene). The study also assessed the impact on future Eastside berth utilisation from transferring some cargoes to a potential new infrastructure development.

**Maritime Operations Lead
KEPCO | Philippines**

Led the maritime logistics analysis for the Feasibility Study on the Pangasinan Coal Power Plant project. The project included assessment and cost modelling of coal and limestone sourcing options and maritime transport strategies, a review of maritime operations (including navigation approach and departure to the proposed maritime infrastructure location), and preliminary design of berth infrastructure based on the operations analysis.

**PortLink - Direct Northern Road Link
Department of Transport | WA**

For the Department of Transport, undertook a freight contestability assessment and Benefit Cost Analysis. The work included stakeholder consultation, a review of freight flows for Western Australia, a review of previous studies and modelling parameters development of a first principles freight model to quantify underlying freight demand, an assessment of freight contestability that a reduced road distance may bring between the City of Kalgoorlie-Boulder and the Pilbara, and an economic analysis. In addition, the work included a review of how the proposed road development could support the development of a greenfield Inter Modal Terminal

in Kalgoorlie-Boulder, as part of the overarching WA PortLink project

**Quarry Preliminary Options Assessment
Pacific Basin Bluestone | TAS**

For Pacific Basin Bluestone, led the options assessment of a potential hard rock quarry in Northern Tasmania. The project included definition and comparative costing of operational options (product and scale), export infrastructure requirements and shipping to key domestic and target international markets. The project also included an assessment of supply competitiveness to identified markets in order to assess potential for market penetration.

**Economic analysis Mackay, Isaac, Whitsunday
North Queensland Bulk Ports | WA**

For North Queensland Bulk Ports, led the study to identify future economic and trade opportunities within the Mackay, Isaac and Whitsunday region, as a precursor to the future Port Development Plan. The project included a supply chain review, port trade forecasting with consideration for coal, petroleum, agricultural products and other potential trade opportunities, and a port technology review, to define potential actions for NQBP to initiate improvements in efficiency and/or unlock/protect trade

**Mendi Cement and Hydro Concept Study
Kumul Consolidated Holdings | PNG**

For Kumul Consolidated Holdings, led the commercial team in assessing the technical and commercial feasibility of both a hydropower scheme development and cement plant at Mendi in the Southern Highlands of PNG. The work included development of cement and power demand forecast scenarios, cost estimates and generating capacity of different site options, calculation and definition of the potential demand catchment, and development of a financial model to assess the commercial feasibility, including assessment of different commercial structures to fund the investment.

**Intermodal Demand Assessment-NQRSC
Department of State Development | QLD**

For the Department of State Development, undertook an intermodal terminal demand assessment. The study identified and analysed contestable demand and potential locations of intermodal facilities based on spatial distribution throughout the NQRSC corridor, particularly between Mount Isa and Charters Towers. The work involved determining immediate, medium- and long-term demand for intermodal facilities;

analysis of best-fit intermodal facilities; identification of efficiencies, opportunities, and constraints within the NQRSC for establishing intermodal facilities; and identification and analysis of appropriate cost sharing models for different model intermodal facilities.

**Frieda River– Lead Logistics Consultant
PanAust Limited | Papua New Guinea**

For PanAust Limited, led the transport logistics strategy development and analysis as part of the feasibility studies for the Frieda River Copper and Gold Project near Wewak in Papua New Guinea. The project included the review of operational constraints, development and assessment of operational strategies, initial design and costing (and tariff estimation) of supporting infrastructure required to support the logistics system, and construction logistics for the development of the project. The process has involved development of a Transport Economic Model for analysis and evaluation of different option combinations (in the order of 60,000), qualitative assessment (MCA and SWOT) for risk and success drivers of potential options in order to provide the lowest cost to risk outcome for the project.

**Logistics and Channel Capacity - TDD
Confidential client | Australia**

For the vendor, undertook a review and preparation of background reports for bidders on landside logistics and channel capacity for an iron ore terminal as part of the vendor technical due diligence process.

**Ruakura Inland Port
Hamilton City Council | New Zealand**

Expert witness acting for the Hamilton City Council as part of the EPA Board of Inquiry Hearing for the Ruakura Inland Port development and associated Plan Change. This work included peer review of port and landside logistics evidence submitted by proponent experts and the preparation of a statement of evidence to the NZ Planning and Environment Court.

**Review of Basic Engineering Study - Terminal
Yolanda - Valparaiso
EPV | Chile**

For Empresa Portuaria de Valparaíso, undertook a review of the maritime and land logistics functions associated with the Basic Engineering and Master Plan for Terminal Yolanda in Valparaiso.

Logistics and Channel Capacity - TDD

Confidential client | Australia

For the vendor, undertook a review and preparation of background reports for bidders on landside logistics and channel capacity for a container and general cargo port, as well as dry and liquid bulk terminal assets, as part of the vendor technical due diligence process.

Technical Due Diligence – Darwin Port NT Government | NT

For the Northern Territory Government, prepared background landside logistics reports on the Port of Darwin to inform bidders as part of the vendor due diligence. The analysis included description of the port precinct functions, maritime logistics and ship movements, and landside connectivity (road and rail) with the port catchment area

Northern Australia Infrastructure Audit Infrastructure Australia | Australia

Lead Ports and Supply Chain Advisor for the first Northern Australia infrastructure audit, aimed at informing the federal government white paper on Northern Australia. The audit studied transport (road, rail, ports and airports), energy (electricity, oil and gas) water and communications infrastructure critical for the economic development of Northern Australia over the next 20 years.

Meat Processing Feasibility Study

Central Highlands Development Corp | QLD

For the CHDC analysed the feasibility of Emerald as a location for a meat processing plant to identify the economic viability and market demand and provide recommendations for future actions. This included an assessment of supply chain capability and costs to establish the competitive positioning of the proposed facility and ability to secure market share.

Technical Due Diligence –Export Terminal Confidential client | Australia

For a confidential client, reviewed the landside logistics and capacity of infrastructure to inform potential bidders as part of the vendor due diligence.

Technical Due Diligence –Port

Confidential client | Australia

For a confidential client, prepared landside logistics reports to inform bidders as part of the vendor due diligence. The analysis included description of the terminals, landside connectivity (road and rail), and an assessment of trade flows

Iron Ore Port Scoping Study

Confidential client | Australia

Undertook a study to develop a revised port design for the export of ferrous products. The work included a range of concept design options, preliminary capital and operating cost analysis, an evaluation of funding options, potential tariff estimation - including an assessment of impact on potential mining projects, and an assessment of potential governance arrangements

Mine Development Due Diligence

Confidential client | Guinea, Africa

For a Chinese investor, undertook a supply chain analysis as part of an African mineral resource technical due diligence. The analysis included a review and assessment of the rail and barging export supply chains for the proposed mining operation prior to purchase

Due Diligence Red Flag Report

Confidential client | Australia

As part of the Due Diligence process, undertook a transport services and supply chain risk review (red flag) for the potential purchase of an iron ore mine by a Chinese resources and processing company

Super B Double access at Port Botany Transport for NSW | NSW

Technical Lead to examine opportunities to enable 109 tonne Super B Double access across the port precinct and identification of practical options to support a dedicated revenue mechanism. The work included assessment of the feasibility of recouping the associated road infrastructure costs, a benefit cost analysis for implementing access, analysis of the function and implications of a charging model; and an analysis of the administrative and operational requirements to support the charging options.

Furneaux Island Shipping - Review of Essential Shipping Services

Department of State Development | TAS

Undertook an assessment of current and forecast financial viability of operating a Furneaux Islands shipping service (in particular for Flinders Island and Cape Barren Island) with recommendations on to the optimal arrangements to ensure the maintenance of essential shipping services.

NW QLD - Strategic Development Study

MITEZ | QLD

In association with AEC Group and Elliott Whiteing, was the lead ports advisor for a scoping

study to lay out the strategic development potential and priorities for North West Queensland

Intermodal Terminal Options Study
Confidential client | QLD

Undertook a site selection and concept design study for a potential intermodal terminal development in North West Queensland. The study included analysis of a number of sites for the green field development to support energy and resources projects in the region

Quarry Business Advice
Sydney Trains (RailCorp) | NSW

Provided advice to Sydney Trains as part of a detailed business review process into quarry and recycling activities for the supply of ballast. The work included the development and qualitative assessment of potential business strategies, financial analysis of the proposed strategies, and development go-to market and implementation strategies.

FSO/STS Logistics, Capacity and Economics
Horizon Oil | Papua New Guinea

Undertook a strategic review of maritime logistics options for an FSO and STS operation near the mouth of the Fly River in PNG. The project included definition of river transport options, storage and transfer operations, vessel fleet and shipping market analysis, and cost estimation.

Technical Due Diligence – Newcastle Port
NSW Treasury | NSW

For NSW Treasury, prepared background landside logistics reports on the Port of Newcastle to inform bidders as part of the vendor due diligence. The analysis included description of the port precincts, landside connectivity (road and rail), and an assessment of trade flows within the port, areas of specialisation, and an assessment of road and rail capacity within the context of trade growth for the world's largest coal export operation

Gravel Supply Logistics and Cost Study
Horizon Oil | Papua New Guinea

Undertook a study to estimate the upper limit cost for the supply of gravel to construct the Elevala Access Road from a range of quarry sources in PNG. The work included definition of the supply chain from quarry sources within PNG to the Western Province, transport and barge fleet requirements, calculation of potential freight costs, and identification of material risks

Port and Rail Advisory Services
Shandong Energy Australia | Queensland

Undertook a study to estimate potential transport costs from a potential mine development via the Port of Abbot Point and Port of Hay Point in Queensland. The work identified land transport routes, estimated preliminary capital (rail only) and operating costs (road and rail) for different volume scenarios and estimated potential export terminal charges.

Maritime Logistics Study – Hawsons Project
Flinders Ports/Carpentaria Exploration | SA

For Flinders Ports and Carpentaria Exploration, undertook a maritime logistics analysis as part of the Pre-Feasibility Study for the export of magnetite product from Port Pirie in South Australia with transhippers. The project included the identification and review of suitable vessel conversions, and an assessment of navigational constraints and operational limitations to facilitate transhipment to large bulk carriers in the Spencer Gulf.

King Island Shipping Services
Department of State Development | TAS

Currently undertaking a study to identify a long-term sustainable shipping service for King Island. The project involves analysis of the historical shipping demand (including development of freight forecasts), benchmarking of the existing shipping service with other Australian and international examples, development of potential shipping options, model development and quantitative analysis of options, and provide recommendations regarding the most appropriate shipping solution for King Island.

Brine Transport Options Study
Confidential Client | QLD

For a project proponent, undertook a cost analysis for the transport of brine waste from a proposed Coal Seam Gas development in Queensland. The analysis included cost and fleet size estimation for a number of alternative truck tanker combinations from site to an authorised discharge location.

NQRSC Demand Analysis Study
Department of State Development
Infrastructure and Planning | QLD

Undertook a study to estimate future potential transport volume within the Mt Isa to Townsville corridor. The approach included the development of a modelling tool and analytical process to forecast the transport volumes of mining and minerals products, general freight, fuel, acid, sugar, cement and cattle. The outputs of this

project will be used as inputs into a transport infrastructure capacity analysis

**King Island Livestock Supply Chain
Department of State Development | TAS**

Undertook a livestock supply chain study for the movement of cattle between King Island and Tasmania following the closure of the local meat processing facility. The study involved consultation with key stakeholder to define the livestock supply chain, identify key constraints and risks, and develop a range of strategies to reduce operational and commercial risk, and assist in the delivery of an efficient transport system.

**Bauxite Hills Prefeasibility Logistics
Cape Alumina | QLD**

For Cape Alumina, led a maritime logistics analysis as part of the Pre-Feasibility Study for the proposed Bauxite Hills project. The project included development of maritime strategies using a range of transshipment technologies, barge types, and export ship sizes for different production rates, barge loading locations and landside infrastructure to determine the likely operational requirements, the maritime transport cost, the preferred transshipment strategy, and make recommendation on further actions (as part of future studies) to be considered in managing maritime transport for the project.

**Infrastructure Competition Review
Confidential Client | Australia**

As part of the due diligence process for a potential investor in bulk commodity port and rail infrastructure, undertook a competition review of existing and potential future infrastructure assets to identify opportunities and threats to current and potential future throughput tonnage

**Ship Repair and Maintenance Competitiveness
Confidential Client | Australia**

As part of a Business Case development, undertook an analysis into the regional (Asian and Australian) competitiveness of the existing (and potentially new) ship repair and maintenance yards in the supporting mining, oil and gas, and subsea sectors.

**Viability for Servicing Floating Production
Storage and Offloading (FPSO) vessels
Department of Commerce | WA**

As part of the Feasibility Engineering Design (FED) study for the Pilbara Fabrication and Services Common User Facility (PFSCUF), undertook a viability assessment on servicing Floating Production Storage and Offloading

(FPSO) vessels at the proposed development. The study examined the Market (service demand and regional fleet), Infrastructure Capability (navigation, berths and land backing), and Competitive Advantage (total cost and services coverage) for the proposed facility, and its likely ability to secure repair and maintenance contracts

**Sugar Transport Options Study
Confidential Client | WA**

For an international investment company, undertook a transport cost analysis for the transport of bulk raw sugar and molasses from a sugar mill to export loading facilities in Western Australia. The analysis included cost and fleet size estimation of each product type for a number of alternative vehicle combinations. The output of the study helped inform the client of the likely cost of transport, workforce size and key risks to the project.

**Pilbara Fabrication and Services Common
User Facility Market Demand Study
Department of Commerce | WA**

As part of business case development for a fabrication and services facility in the North West of Western Australia, undertook industry engagement, assessment of market demand and definition of requirements to support the mining, oil and gas, subsea, housing and construction, defence, paramilitary and search and rescue sectors.

**Module Transport Logistics Study
Confidential Client | QLD**

Undertook a review of transport logistics options for pre-fabricated modules to be used in the construction of a processing facility in Queensland. The study examined the physical and regulatory constraints for the transport of oversize and over mass project cargo by rail, road and barge from multiple Australian entry ports to a number of site locations. The outcome of the study determined the maximum freight (size and mass) envelope and identified operational and cost risks that may have a material impact on project delivery.

**Iron Ore Terminal Staging Options
Confidential Client | Australia**

Undertook a supply chain logistics and cost analysis as part of a staging review for an iron ore terminal development. The analysis included assessment and transport cost estimation for aspiring producers within the terminal catchment to identify the viability of operations related to potential staging alternatives for the facility.

Port of Melbourne Container Mapping

Port of Melbourne Corporation | VIC

Undertook an assessment of current and future transport impacts for port related container freight movements. This work involves estimating the impact on road and rail capacity that result from decisions relating to a range of alternative Melbourne Port System development scenarios.

TEARC – Preliminary Economic Analysis

Queensland Rail | QLD

Undertook a benefit cost analysis for the Townsville East Access Rail Corridor development. This work involved a review of the long-term commodity exports from the Mount Isa to Townsville corridor, an assessment of tonnage risk, and economic evaluation of the project

Phillips River Transport Options

Tectonic Resources | WA

Undertook a transport options study for the export of containerised concentrate products. This work involved a review of port, road and ship transport options to identify the best cost to risk transport strategy

USG Heavy Industry Hub (Industry Analysis)

Department of Trade and Economic Development | SA

As part of the feasibility study to develop a heavy industry hub in the Upper Spencer Gulf (USG) Region in South Australia, undertook an industry analysis to identify the key issues to relevance to provide a better understanding of the mining industry and its likely service needs; mining supply chain issues and how the needs change through construction and operations phases; and understand how other mining regions have met their service needs.

Bulk Water Freight Concept Study

Confidential Client | Australia

Undertook an options study for the sea transport of potable water as part of a drought management strategy

Iron ore Logistics Analysis

Dragon Resources | WA

For Dragon Resources, undertook a logistics and transport cost analysis for the development of their proposed Greenfield iron ore mine in Western Australia. The analysis included cost estimation and identification of material transport risks (operational and commercial) for the alternative strategies utilising a combination of road, rail, barge, and port options. As part of the analysis,

the modelling identified fleet and personnel requirements, as well as fuel demand, the cost of mobile capital, and the annual cost of maintenance.

Enhancing Business Competitiveness by Addressing Disconnects in Land-side Sea Freight Transport Supply Chains

Department of Innovation, Industry, Science and Research | Canberra

Undertook analyses for the Australian Government that will contribute to an understanding of the potential to enhance the competitiveness of Australian businesses by addressing disconnects in land-side sea freight container transport supply chains.

Coal Haulage Traction Analysis

QR Networks | QLD

Undertook an analysis of the 'economics' of diesel and electric locomotive traction. This work involved reviewing previous analytical work undertaken by the infrastructure provider, a comparative cost analysis of diesel versus electric traction and identification of emerging implications from the analysis.

Cloncurry Multi-user Load-out facility

MITEZ/Queensland DPI | QLD

Undertook a site selection, concept design, and financial analysis for a proposed multi-user load-out facility in Cloncurry. The study included consultation and analysis of a number of sites around Cloncurry for the green field development to support Xstrata's Ernest Henry Mine Magnetite exports and other project developments in the region.

Mine Logistics Cost Model

Darwin Port Corporation | NT

Developed a flexible logistics cost model for assessing the cost of transporting product by different modes from mine gate to discharge port.

Mine Life Extension – Logistics Feasibility

Ok Tedi Mining Limited | Papua New Guinea

Undertook the logistics analysis for the Mine Life Extension Definitive Feasibility Study. The analysis included estimation of existing infrastructure capacity, design and recommendation of transport (road, air and maritime) strategies, and financial/operational cash flow modelling of applied strategies for the life of the project.

Strategic Ports Plan

Confidential Client | Australia

Developed a series of technical background and discussion papers to underpin the development of a market segment driven Strategic Ports Plan.

Transport Infrastructure Priorities Study

Ausaid TSSP | Papua New Guinea

Developed a quantitative assessment framework and process to assess the comparative economic benefits of transport infrastructure maintenance, rehabilitation, and new construction projects as part of a country development plan. The outcome provided a consistent and robust analysis to inform clear prioritisation of spending on transport infrastructure across all modes (road, air and maritime) to allow the Government to allocate scarce financial and other resources in providing the greatest economic benefit to the nation.

Bulk Fuel Distribution Facility Concept

Confidential Client | QLD

Undertook a review of the maritime and landside associated with a proposed fuel distribution facility in Queensland.

Iron Ore Export Cost Benchmarking

Confidential Client | Australia

Performed a benchmarking/pricing assessment to establish the fairness of a proposed tariff for the use of port and rail services in the export of bulk iron ore

International Coal Rail Comparison

Confidential Client | Canada

Investigated railway access arrangements and transport costs of Australian coal haulage and compared this with other major international coal export supply chains.

Catchment Container Demand Study

Confidential Client | Australia

Provided an independent assessment of the potential future catchment container demand that would result from a change in shipping services.
Lead Modeller

Darwin Port - East Arm Expansion

Dept of Planning and Infrastructure | NT

Provide advice, transport chain operational cost modelling, and benefit cost analysis for commodity exports related to the Port of Darwin East Arm Expansion project. This work examined the change in supply chain transport costs (all modes) to market, and the resulting effect on central corridor mine project viability through lower cost pathway achieved by port capacity expansion.

Prince of Wales Bay Layup Berth Prefeasibility **Department of Economic Development and Tourism | TAS**

Reviewed the commercial viability of a proposed layup berth and in-water ship repair facility in Prince of Wales Bay, Tasmania as part of a prefeasibility study.

Coal Mining Technical Due Diligence

Confidential Client| QLD

Undertook a supply chain logistics analysis as part of a Queensland coal mine due diligence. The analysis included assessment and cost estimation (rail, road and port) of the import and export supply chains for transport alternatives to support the proposed mining operation.

Coal Resource Due Diligence

Confidential Client| QLD

For the Adani Group Undertook a supply chain logistics analysis as part of a Queensland coal resource technical due diligence. The analysis included assessment and cost estimation (rail, road and port) of the import and export supply chains for transport alternatives to support the proposed mining operation prior to purchase

Rail Technical Due Diligence

Confidential Client| London

Undertook a review of the coal haulage activities and revenue of a major rail operator as part of a Technical Due Diligence.

Intermodal Terminal Development Options

Confidential Client| NSW

Prepared concept options for the development of an intermodal terminal on a previous industrial site.

Regulatory and Operational Interface Advice **Mine Development Feasibility**

Shenhua Watermark | NSW

Provide specialist regulatory-operational advice for mine to port logistics interfacing - as part of the proposed 10 million tonne per annum green-field development feasibility study.

PNG Ports Strategic Review and Development **PNG Ports Corporation/AusAid | PNG**

In conjunction with KPMG, reviewed implementation success of strategic recommendations for the ports of PNG, specifically related to the planning and management of its infrastructure assets. The review made recommendations to assist the port corporation in dealing with supply chain efficiency

and integrated transport system to accommodate growth in container and break-bulk volumes, fuel imports and distribution, and palm oil exports.

**Development of a Port Land Use Strategy
Darwin Port Corporation | NT**

Undertook trade and vessel forecasting used in the analysis of current and future port capacity to 2030.

**Transport economics review
Confidential Client | Australia**

Ship, port and landside transport cost analysis of coastal shipping, including the breakdown/proportion of cost elements to identify the likely cost impact of a proposed pricing changes.

**Pilbara Freight Study
Dept for Planning and Infrastructure | WA**

Undertook a study on the major supply chains in the Pilbara Region to inform future transport infrastructure development

**Marine Analyst/Lead Modeller
Department of State Growths | TAS**

Assessment of Arrangements for Tasmanian Government Support for Furneaux Shipping
Undertook independent review of the appropriate role for the Tasmanian Government in the support of shipping services for the Furneaux Group of Islands, and the best structure for the Government to fulfil the role.

**Oil and Gas Platform Supply Vessel Base
Transport Cost Comparison
Confidential Client | Australia**

Cost analysis for oil and gas platform supply vessel base locations including cost estimation of the transport value chain for delivering supplies (fuel, water, muds, and pipes) from origin to platform.

**Transport and logistics study
Ok Tedi Mining Limited | Papua New Guinea**

Undertook a logistics pre-feasibility analysis for the conversion of current open pit mining to underground operation. The analysis included an audit of existing infrastructure and capacity, design and recommendation of transport (road, air and maritime) strategies, and financial/operational cash flow modelling of applied strategies for the life of the project.

**Advice on Bulk Terminal Infrastructure
KPMG Bahrain | Qatar**

Provided specialist sub-consultancy advice to identify key infrastructure specifications and

operational requirements for the development of a multimodal bulk receipt and despatch facility.

**Regulation of Intrastate Aviation
Confidential Client | Australia**

Review of regulatory developments in intrastate aviation to assist the client better understand the future impact on their business.

**Status and Future of the Tas Rail Business
Department of State Growth | TAS**

Undertook a freight and logistics review as part of a status report on the Tasmanian rail business, to project its likely financial position over the next 10-years. This work brought together the findings of a financial/operational model to provide an overview of the Tasmanian rail business and highlight key factors that will determine the business' health into the future.

**Operational Policies for a Marine Services
Company**

KPMG Kuwait | Kuwait

Specialist sub-consultancy advice to develop a policy and procedures frameworks for a Kuwait based maritime services organisation, including a notional set of documents for corporate and business line activities.

**Review of Hobart Working Port
Tasmanian Ports Corporation | TAS**

Conducted an independent review of the current activities and industries utilising the port of Hobart and examined the likely future role of the port in the context of the Tasmanian state and wider national and international supply-chains.

**Nickel Mine Infrastructure Feasibility Study
Confidential Client | WA**

Undertook identification and assessment of logistics options and associated capital works for import and export of products for a proposed Nickel mining operation.

**Mineral Bulk Shipping Costs
Confidential Client | New Caledonia**

Undertook a transport options study to determine capital, operating and charter costs of a barge and bulk carrier coastal shipping fleet.

**Qatar Ports Operating Company
Qatar Petroleum | Doha, Qatar**

In conjunction with KPMG – Qatar, undertook a feasibility study into separating the port activities of Qatar Petroleum into a separate operating company.

Outbound Logistics Study

BlueScope Steel | Port Kembla, NSW

Undertook a logistics analysis of outbound processes for BlueScope Steel Port Kembla operations. This work encompassed all components of the logistics operation from the mill to the ship's hold and provided future logistics options relating change in shipping practices and planned infrastructure development.

Princes Highway Corridor Strategy

NSW RTA | NSW

Developed a strategy for the Princes Highway, Illawarra to Victoria corridor to assist in identifying appropriate strategic objectives and outline short term and long-term priorities.

Transport Energy Model for Victoria

Department of Transport | VIC

Development of a modelling tool to assess the impact of proposed policies related to changing transport energy use in Victoria.

Infrastructure Programs for Addressing Supply Chain Blockages

Australian Logistics Council | Australia

Review of supply chain blockages to inform the ALC's Transport and Logistics Strategy and develop an integrated plan of action.

Newcastle Airport and Port Corridor Strategy

NSW RTA | NSW

Development a strategy for the Newcastle Port and airport corridor roads to identify appropriate strategic objectives and outline short term and long-term priorities. NSW Roads and Traffic Authority

Review of Freight Pricing

Confidential Client | Australia

Analysis of freight loading and capacity data used in the assumptions of a freight pricing model.

Pilbara Port Authority Concept and Implementation Study

WA Government | WA

Independent assessment of the most effective structural model for a new Pilbara Port Authority, including the timing and transition issues for implementation.

Review of Pacific Transport Development

United Nations ESCAP | Bangkok

Drafted the UNESCAP flagship publication on developments in the transport sector within the ESCAP region.

Review Regional Shipping and Port Development

Korean Maritime Institute / United Nations ESCAP | Bangkok

Review of forecasts and shipping trends that will characterise world liner shipping to 2015; in particular the maritime container shipping system serving United Nations ESCAP member countries

Transport Issues Papers

Sea Freight Council of Queensland | QLD

Prepared a report on improving road transport efficiency to highlight improved access for B-Doubles and Super B-Doubles to the Port of Brisbane and other Higher Mass Limits routes.

Citylink Review of Heavy Commercial Vehicle Transurban Limited | VIC

Analysis of heavy commercial vehicle composition to forecast productivity trends and toll sustainability.

Marine Sector Skills Review

National Marine Safety Committee | Australia

Review and identification of trends in skills shortages and competencies experienced in the Australian maritime market.

Brisbane Airport Link Tunnel Bid

Leightons contractors | Queensland

Analysis of traffic count data for commercial vehicle estimates and forecasts, as part of traffic modelling assumptions review for the Brisbane Airport Link Tunnel bid.

Analyst

Pre-Feasibility Assessment Sectional Rail Realignment

Confidential Client | NSW

Assessment of Hunter Valley coal supply chain gains as a result of sectional rail realignment.

Benchmarking Study

Port of Melbourne Corporation | VIC

Developed and applied a wide range of comparative performance indicators for the Port of Melbourne.

Review of Ship Purchase Finance Modelling

KPMG Bahrain | Bahrain

Specialist sub-consultancy review of ship purchase financial modelling assumptions, as part of a business case for the purchase of a fleet of cellular containerships.

**Review of Future of Australian Rail
Manufacturers, Engineers and Suppliers
Australian Rail Industry Corporation | Australia**
Performed a quantitative and qualitative review of the market position and barriers facing ARIC member companies for Australian and overseas markets.

**Update of Inner Harbour Economic Analysis -
Channel Deepening
Fremantle Port Corporation | WA**
Review of major national liner services and related trade forecast impacts for Fremantle Port to inform an economic assessment of channel deepening.

**Senate Inquiry into Workforce Challenges in
the Transport Industry
Sea Freight Council of Queensland | QLD**
Preparation of a submission for senate inquiry into transport industry skills and labour challenges.

**Review Regional Shipping and Port
Development
Korean Maritime Institute / APEC | South Korea**
Review of forecasts and shipping trends that will characterise world liner shipping to 2015; the maritime container shipping system serving APEC member countries.

**Review of Crane Impacts
Crane Industry Association of NSW | NSW**
Provided a technical and economic response to current axle load and tyre width restrictions for the use of all-terrain cranes. This included a critique of the technical argument for current restrictions, an assessment of the social and economic consequences of current policies, and a critique of the relevant policies and practices for NSW.