SUPPLY CHAIN PERSPECTIVE

PROJECTS & CONSTRUCTION

QTLC

QUEENSLAND TRANSPORT
AND LOGISTICS COUNCIL

Overview

Construction activity is a major contributor to the Queensland economy, providing 10% of gross value added (GVA) product. The sector comprises [1]:

- residential building (houses, units)
- non-residential building (offices, shops, hotels)
- engineering construction projects (roads, bridges, water and sewerage) and major projects, such as mine developments and industrial plants and factories.

(Projects are classified as major if they have a value greater than $100m, and minor if they are valued below that figure.)

Dimensions

In Queensland in 2013/14, construction started on 33,664 residential buildings. In the same period, $7.4b was invested in non-residential works and $35.9b in engineering construction works.

Queensland is coming off the back of unprecedented levels of major project construction activity, with more than $18b worth of projects undertaken in 2013. Major construction activity is forecast to decline to approximately $9.5b by 2015/16, rising again to $12b by 2018[2].

Major project works include[3]:

- roads and bridges
- railways and harbours
- water and sewerage
- electricity, pipelines and telecoms
- mining and heavy activity.

In Queensland, estimated expenditure for supply chain modal network infrastructure (road, rail and sea) in the coming 12 months includes[4]:

- national networks: $1.6b
- state networks: $3.08b
- local networks: $243m.

1 Experimental Estimates of Gross Regional Product 2010/11, Queensland Treasury and Trade March 2013
2 Building and Construction Industry Forecasts, Master Builders Australia June 2014
3 2014 Major Projects Report, Queensland Major Contractors Association and Construction Skills Queensland February 2014
4 Queensland Transport and Roads Investment Program 2014-15 to 2017-18, Department of Transport and Main Roads

The Australian Government provides financial assistance to local governments in Queensland through grant programs that include a designated road component. In 2013/14, the road component was $670.9m[5].

People in projects and construction

The construction sector employs 28,700 people full time, has a large transient workforce, and is dominated by small businesses[6]:

- 26,700 businesses employ less than 19 people
- 1,860 employ between 20 and 199 people
- 77 employ more than 200 people.

Of these, 4,250 businesses have a turnover of more than $2m a year.

5 Financial Assistance Grants to Local Government, Department of Infrastructure and Regional Development
6 ABS 816501 Number of Australian Businesses 30 June 2012

Key nodal infrastructure

The projects and construction supply chain is difficult to quantify in terms of identifying the number of movements. The freight task occurs at multiple levels in a project, including:

- early civil earthworks to prepare sites for ramp up
- initial civil earthworks to establish services and foundations
- early structural works
- installation of major components
- providing services including water, air, electrical and waste
- enclosing and waterproofing
- operational readiness and commissioning.

Domestic and international transport tasks are required (as relevant) for:

- earthmoving, trenching and benching
- formwork and structural casings
- concrete delivery, piling and tilt slab erection
- steel and other structural components
- brick and block work
- machines and rotating equipment (if a process facility)
- heavy lifts and OSOM, and plant and equipment movements
- TEU movements for international shipments and temporary storage
- fuel and asphalt
- staff amenities and people moving
- floor coverings
- consumable deliveries.

For the purpose of this report, the above movements are included in other Supply Chain Perspectives prepared for this project, including:

- OSOM
- fuel
- general freight
- TEU.

Key nodal activity points to consider in network design include:

- ports
- quarries
- water sources
- concrete batching plants
- hardware supply points and distribution centres
- fabrication and manufacturing operations
- industrial estates.

Freight movements, transport mode, main routes, key nodal infrastructure and change in the supply chain

The data for transport movements generated by projects and construction have not been captured separately.

Other Perspectives prepared for this project - relating to TEU, general freight, OSOM and fuel movements - include projects and construction information.