

## *Efficient Freight Movement for Melbourne*

### **What is the Project?**

The Department of Infrastructure (DOI) Victoria has engaged the consultant team of IMIS, John G Edhouse & Associates, and other\* specialist consultants to conduct the Freight Movement Model (FMM) project for Metropolitan Melbourne. The project will develop a database on current commodity and commercial vehicle movements in Melbourne and models to aid forecasting of future commodity and commercial vehicle movements in Melbourne.

The models will be designed so that they can generate estimates of a range of items, including:

- the growth and distribution of demand for commodity movements;
- the growth and distribution of commercial vehicle trips required to transport the commodities;
- the impacts of supply chain changes (e.g. technologies, business policies and processes) on the commodity and transport growth; and
- the need for transport infrastructure improvements and their impact on commodity transport.

### **What is the Value to industry?**

The FMM will substantially increase the DOI capacity to consider commodity movement in developing Melbourne's transport infrastructure. This should lead to improved efficiencies in commodity movements.

It will also be possible for the FMM to provide data and information which could form or provide inputs to industry key performance indicators (KPI's), aiding the management and planning for individual transport and supply node businesses.

### **What is the Timing and Scope of the Project?**

The FMM project will be conducted over the next 12 months and involve several stages, including industry consultation, travel surveys and FMM design and development.



### **Industry Consultation**

The initial consultation stage will: inform industry agencies and related businesses of the FMM project; assist in identifying KPI's which will have value to industry agencies and participating businesses; and seek business participation in the travel surveys.

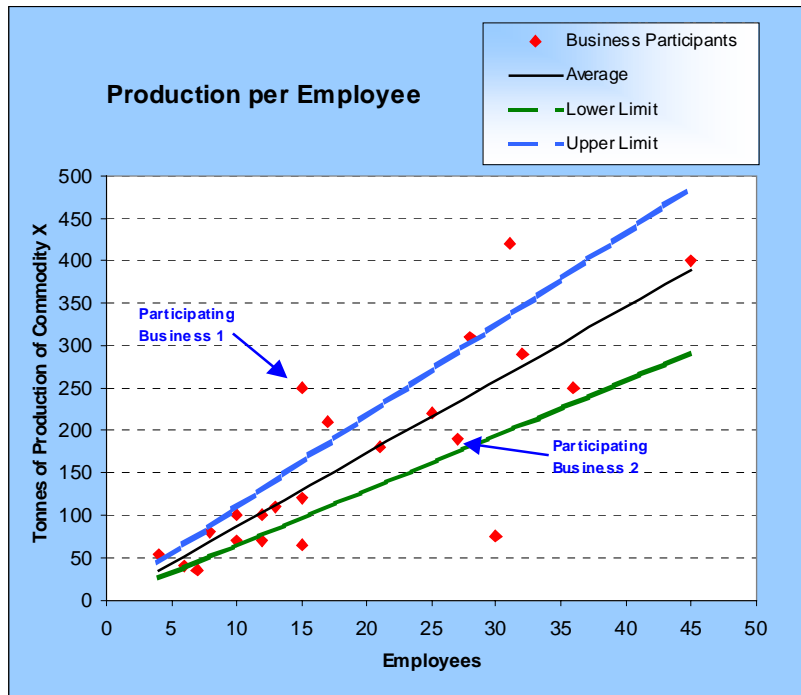
### **Travel Surveys**

The travel surveys will be conducted in major freight corridors in Melbourne to capture data on freight trips made through those corridors and the transport and supply node businesses associated with the trips.

Your business might be selected to participate in the travel surveys, and asked to provide details on trips (e.g. origin and destination) commodities carried (e.g. types, volumes) and characteristics of the business (e.g. employees). This data is essential for the FMM to have value to DOI, industry and individual businesses.

\* **The Consultant Team:** IMIS Pty Ltd, John G Edhouse and Associates (JEA), Applied Economics, Masson Wilson Twiney (MWT), Institute of Transport and Logistics Studies (ITLS)

## Production per employee



The production per employee KPI will provide the participant with an industry average for tonnes of commodity produced per employee.

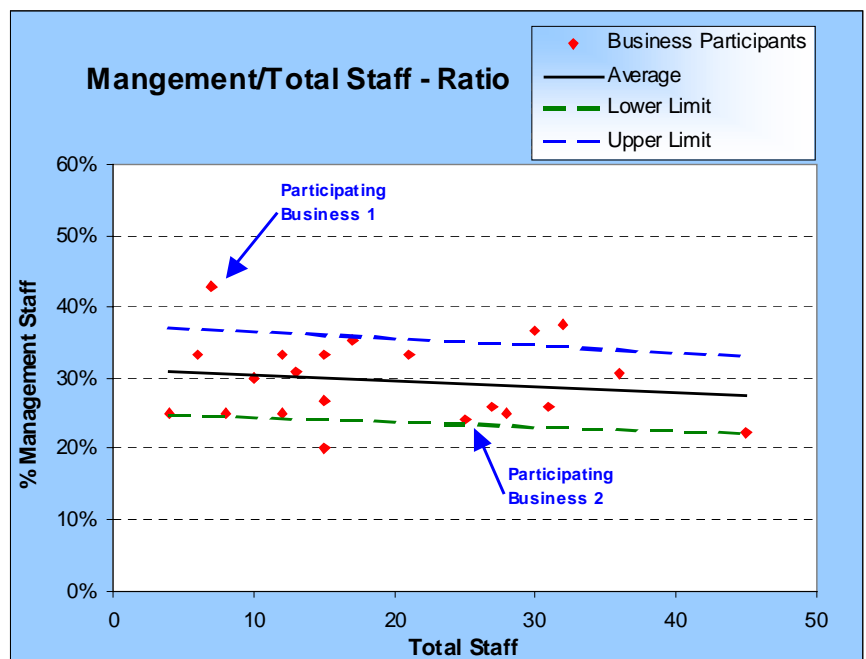
In the example (left), participating business 1 has a significantly higher commodity production rate per employee than the industry average. Participating business 2 has a lower than industry average production rate, but falls within the average variation for the industry.

The KPI graphs and charts will not provide any identification of individual participating businesses other than to indicate the performance of the participating business (to which the indicators are being provided) relevant to the industry average.

## Management to Total Staff Ratio (MTSR)

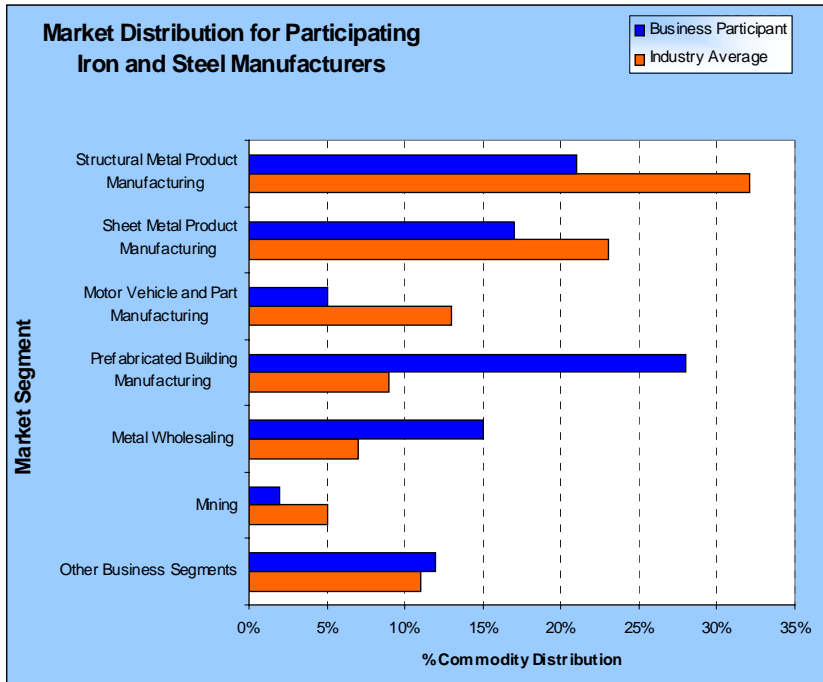
This KPI will provide the participant with an industry average for the ratio of Management, Sales and Administrative staff to total staff.

In the example (right), participating business 1 has a significantly higher MTSR than the industry average. Participating business 2 has a lower than industry average MTSR, but falls within the average variation for the industry.



# Key Performance Indicators - Production

## Market Distribution



The Market Distribution KPI will provide the participant with an industry average, for a specific industry, for the distribution of Commodities to significant market segments.

In the example, left, the participant is from the Iron and Steel Manufacturers Market Segment. The participant's business differs from the industry average in the distribution of commodities to Structural Metal Product manufacturing, being less than the industry average. The participant also provides more than the industry average into the Prefabricated Building Manufacturing market segment.

The KPI allows the participant to position its business relative to the industry market. The participant may use this KPI to develop marketing plans according to its understanding of the value of and ease of entry into various markets.

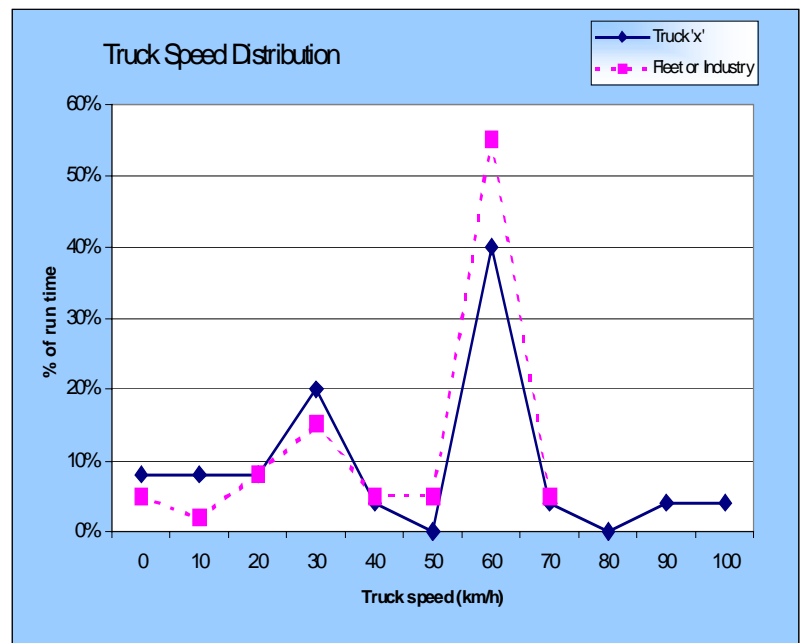
# GPS Key Performance Indicators - Transport

The truck Speed Distribution KPI will provide the participant with an industry average for the distribution of average truck travel speeds for the delivery of various commodities.

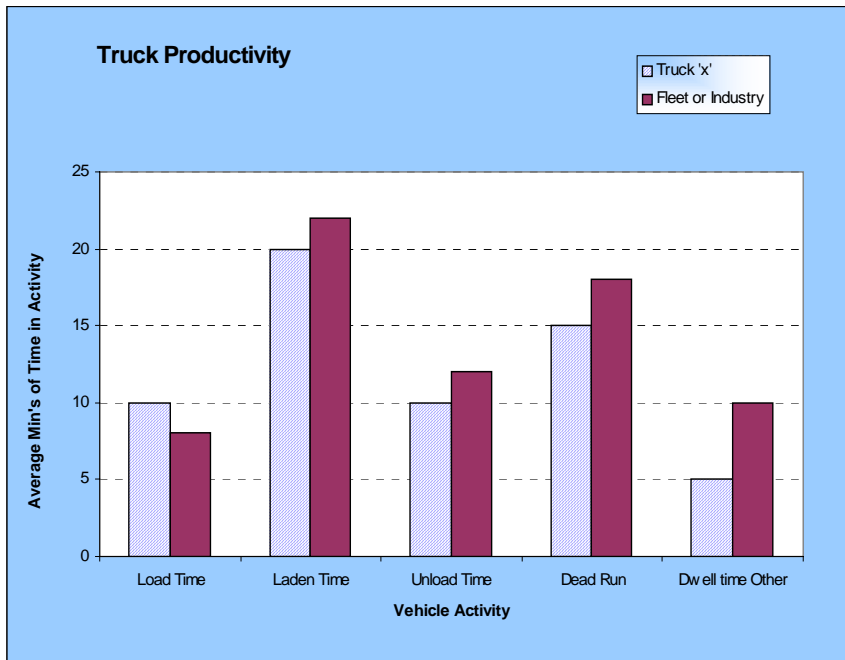
In the example, right, the participant fleet spends more time traveling at 30Km/hr than the industry average and less time traveling at 60Km per hour than the industry average.

The KPI allows the participant to analyse fleet truck speeds, relative to its industry, in order to determine influencing factors such as: whether its business or distribution outlets are optimally positioned relative to its market and efficient delivery routes; and whether appropriate vehicles are being used for the transportation of its commodities.

## Truck Speed Distribution



## Truck Productivity



The truck productivity KPI will provide the participant with an industry average for the average minutes of work time its fleet spends in load and unloading, laden and unladen and dwell time on an average trip.

In the example, left, the participant fleet spends above industry average time in load, and below industry average time in all other statuses.

The KPI allows the participant to analyse fleet activity to determine areas where there may be an opportunity for improvement. In this case, an understanding of the load procedures and facilities at the transport depot may identify an opportunity to change processes and increase efficiency.

# Key Performance Indicators - Transport

## Trip Length Distribution

The Trip Length Distribution KPI will provide the participant with an industry average for average distribution of trip lengths e.g. on average, 22% of all trips made to deliver commodity 'x' are between 5 and 10 kilometers long.

In the example, left, the participant 'truck x' has a higher % of trips in the 5 to 10km bracket and a lower % of trips in the 30km to 35km bracket than the industry average.

The KPI allows the participant to analyse its average trip lengths in order to match those to Contractual agreements, perceived market locations and industry benchmarks etc.

This KPI adds value to the truck productivity KPI by defining average trip lengths enabling informed comparison with industry bench marks.

