OPTURION
Intelligent Decision Support

Tactical Planning - Schneider Electric

Background

Schneider Electric provides energy management and automation hardware, software and services.

Schneider's Australian operations contacted Opturion to investigate the cost-effectiveness of their transport operation, and to determine if it would be beneficial to change to a different operating and cost model. After an initial one day analysis, Schneider decided to procure a more comprehensive analysis based on six months of delivery data.

Booking System

Schneider operates distribution centres (DC) in each Australian state and territory. From these DCs, electrical equipment is delivered to business customers using a 3PL provider.

The contract at the time was based on a simple cost model, it was suspected that that model was not very effective for Schneider, as they showed interest in having more control over the transport execution. E.g. to allow it to give preferential time windows to particular customers.

The analysis was based on the following model:

- A diverse fleet of vehicle types is available: 1 tonne and 2 tonne vans; 4, 6, 8 and 12 tonne taxi trucks; and semi-trailers;
- Fatigue management as per Standard Hours (National Heavy Vehicle Regulator)
- Each vehicle type has a set cost per hour, which varies by state and by whether it operates within or outside a metropolitan area;
- No stem and return mileage to be considered;

Furthermore, we considered the following scenarios:

- Metro deliveries only vs including outer-metropolitan
- Deliveries between 7am and 1pm vs between 7am and 3pm

In total, this results in (up to) 4 scenarios per state.

Expectation and Analysis

There were certain expectations at the start of this exercise, some of which were confirmed by the analysis, some of which were not. It was expected that:

- The cost to serve for outer metropolitan jobs would be substantially higher than that of metropolitan ones;
- Fewer, but larger, vehicles would be used;
- By allowing deliveries up to 3 pm, there would be a reduction in the cost.

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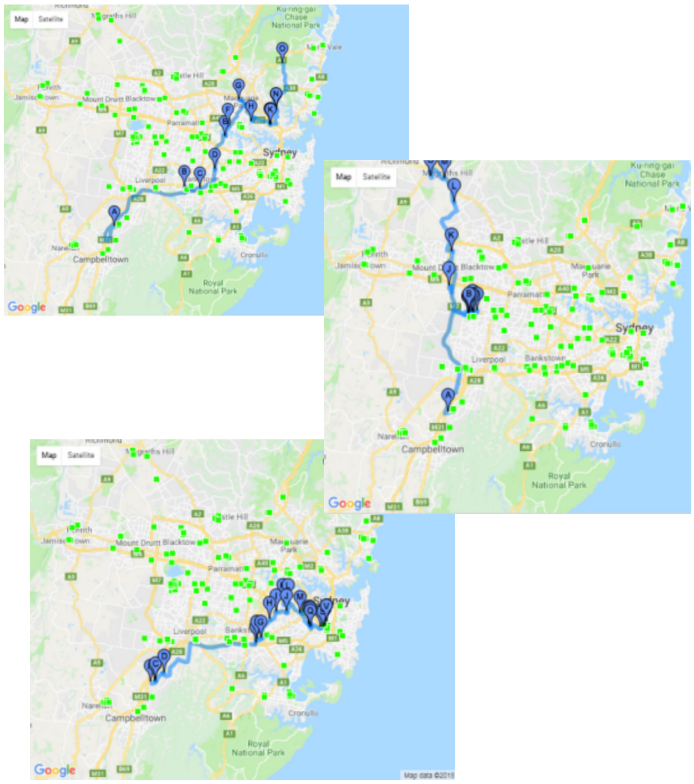
The analysis confirmed the first expectation. However, because vehicles do not need to return to base, it is often beneficial to have routes radiating outwards from the DC. Vehicle capacities, nor time windows, were much of a constraining factor in this case.



The Result

The results did show that there was a substantial benefit in changing to a cost per hour model. The 3PLs pass on their costs in one form or another, so it is essential that they operate in the most efficient way.

In order to preserve the cost effectiveness of the new transport model and to guarantee that delivery routes are as efficient as possible, Schneider mandated the use of the Opturion solution by their 3PL.

Since then, the Opturion optimiser, is utilised daily for all the runs by sequencing the number of drops done by each driver, and calculating an optimised route for the deliveries radiating outwards from the DC's. The optimised routes are then carried out by Schneider's 3PL.

Further Information

Please contact Opturion for a demonstration, or give us some data that we can use to identify potential benefits.

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