

Do More with Less:

Optimise shuttle bus operations to improve customer satisfaction and reduce carbon footprint

Background

Our customers were dissatisfied with our shuttle bus service and an internal customer survey revealed that only 37% of respondents had rated the shuttle bus service as 'Excellent' and 'Good'.

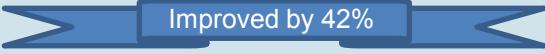
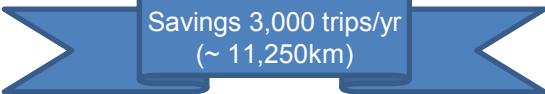
Aims

1. To improve customer satisfaction and safety of the shuttle bus service.
2. To reduce carbon emission by optimising the use of resources.

Method

1. Conduct a study to determine the peak hours of demand for shuttle bus service.
2. Gather feedback from both external customers and staff for service improvement.
3. Incorporate the learning points from points 1&2 above into the scope of service in our Request for Proposal (RFP) to guide us in the selection of a suitable vendor.
4. For safety reasons, one of the requirements in the RFP was for drivers to operate on at least 2 shifts per day with a relief driver during break times.

Results

Indicator	Before	After
% Rated as 'Excellent' and 'Good' on Overall Standard of Service Provided (Internal Customer Survey)	37% (Jul 2012) , 152 respondents	79% (Mar 2014), 146 respondents 
% Rated as 'Excellent' and 'Good' that The Driver is Alert and Careful when Driving (Internal Customer Survey)	52% (Jul 2012)	80% (Mar 2014) 
Average Number of Complaints	8 cases/ month From 16 Oct 2012 – 13 Dec 2012: 16 cases	1.5 cases/ month From 1 Jul 2013 – 9 Apr 2014: 14 cases 
Number of trips (Corresponds with carbon dioxide (CO ₂) emission) 	About 28,000 trips/year	About 25,000 trips/year  translating into approximately 1.26 tonnes of CO ₂ emission/year and other greenhouse gas emissions (methane, nitrous oxide, hydrofluorocarbons) which can contribute to global warming (using carbon footprint calculator from www.carbonfootprint.com)
Optimise Scheduling (Peak/Off-peak)	All day: 4 buses (15 hrs/day)	Off-peak: 2 buses (7 hrs/day) Peak: 4 buses (8 hrs/day)

Conclusion

By determining the peak hours and gathering feedback from customers, we managed to increase the KKH shuttle bus service customer satisfaction by 42% and increase the perceived safety by 28%, while optimising the use of resources and reducing carbon emissions into the environment (estimated to be 1.26 tonnes of CO₂ emission/ year).