UNCOMMON THINKING

Victorian FleetWise Program

Summary Report & Insights from the Pilot

Prepared for

Victorian Department of Transport, Planning and Local Infrastructure

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Glossary

AFMA	Australian Fleet Managers Association
CBD	central business district
CEO	chief executive officer
CO_2-e	carbon dioxide equivalent
EEO	energy efficiency opportunities
GHG	greenhouse gas
GLCH	Gippsland Lakes Community Health
MFB	Metropolitan Fire Brigade
NGA	National Greenhouse Accounts
NGER	National Greenhouse Emissions Reporting
RACV	Royal Automobile Club of Victoria
SNAP	SNAP Gippsland Inc.
VACC	Victorian Automobile Chamber of Commerce
VECCI	Victorian Employers' Chamber of Commerce and Industry
WaSIP	Waste and Sustainability Improvement Payment Program

Executive summary

In June 2011, Rare Consulting was commissioned by the former Victorian Department of Transport (now the Department of Transport, Planning and Local Infrastructure) to facilitate an industry engagement program designed to help private and public sector organisations improve the energy efficiency of their light vehicle fleet – based on the NSW FleetWise Initiative. This paper presents a summary of the participants' results, an assessment of the pilot project and insights which may inform any future program roll out.

The Victorian FleetWise program was undertaken as a pilot where twelve fleets were engaged to undertake the FleetWise program with a twelve month period to implement improvements. The participating organisations were: Bayside City Council, Bendigo TAFE, CitiPower Pty & Powercor Australia Ltd, City of Yarra, Eastern Health, Gippsland Lakes Community Health, Hepburn Health, Mars, Metropolitan Fire Brigade, Moonee Valley City Council, Noweyung, and SNAP.

The objectives of the pilot program were to:

- Build industry capability in identifying opportunities and improving the energy efficiency and GHG intensity of their fleets, and
- Determine the success of the FleetWise approach in reducing light vehicle GHG emissions

The fleets followed the FleetWise process shown in figure 1:

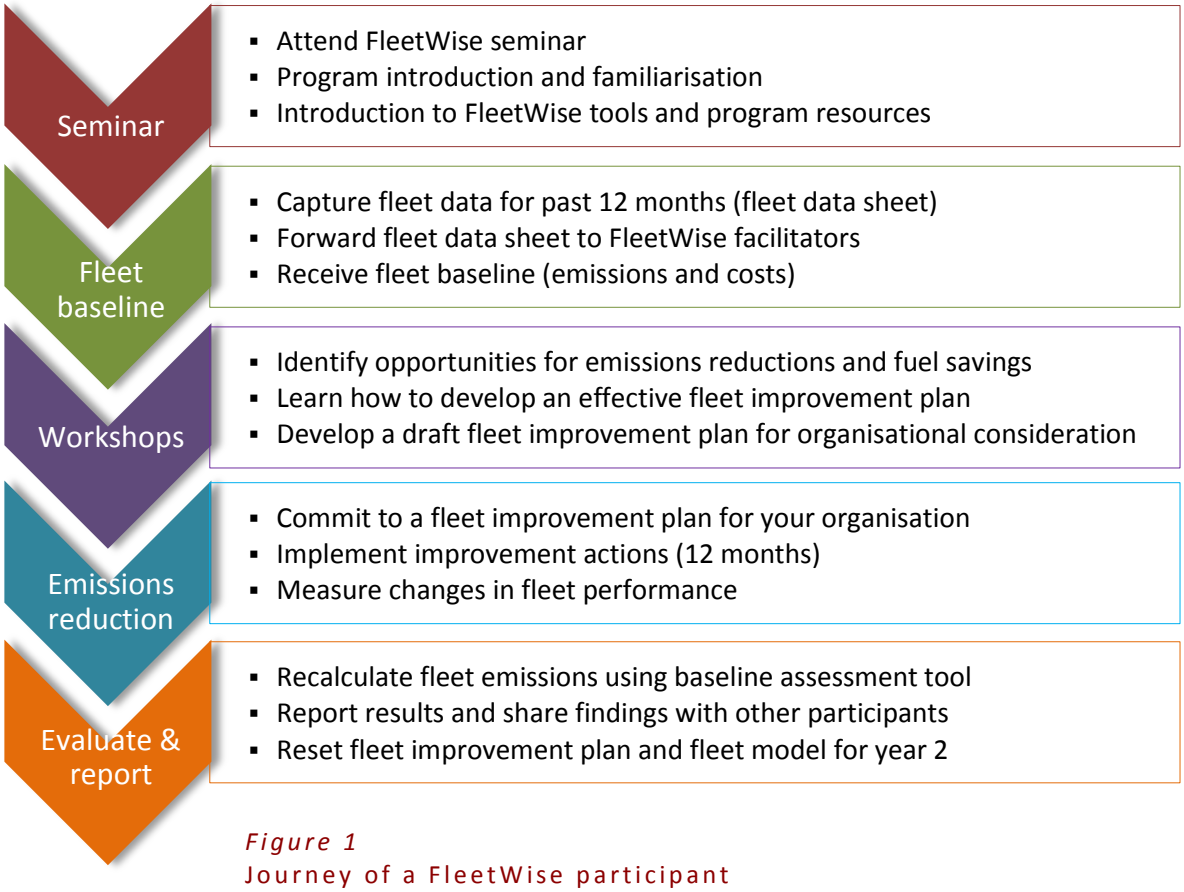

Figure 1
Journey of a FleetWise participant

SUMMARY OF KEY FINDINGS

This paper provides a discussion of the key findings and insights from the Victorian FleetWise program. Four main conclusions arise from this review of the pilot program:

1 The program was widely valued by Industry

- Participant experiences with the program were positive; with all participants completing their one-year assessment reporting in the feedback survey results that they would (and have) recommend FleetWise to others (refer appendix B).
- All participants completing their one year assessment were happy with their results, and proud to showcase what they had achieved. One participant (Citipower & Powercor) was nominated for the AFMA "Environmental Fleet Award" and "Fleet Manager of the Year" as a result.
- The survey results indicated that all of the participants found all of the FleetWise tools either 'very useful' or 'somewhat useful' (refer appendix B). Additionally, seminar attendees who did not formally enrol in the program reported that they were appreciative of the information provided to them.
- The response to the program reflects well on the Victorian government, with industry appreciative of the supportive nature of the program, as opposed to regulations.

2 The program was effective in achieving its objectives

- Industry capability was greatly increased with all participants citing that they were more confident performing a fleet assessment after one year compared to their initial baseline assessment for the program. All fleets appreciated that reliable data is crucial for monitoring fleet performance, and all participants subsequently improved their data collection practices
- The four different improvement categories (procurement practices, alternative fuels and technologies, fleet management practices and driver behaviour) provided participants with a range of different strategies to investigate – ensuring that all participants, regardless of where they were in their improvement journey, had improvement strategies available to implement.
- The aggregate GHG emissions for the fleets completing their one-year assessment reduced by 149 tonnes (2%). A positive result given that the majority of the fleets' businesses grew and improvements were in place for less than 12 months before reassessed.
- The average GHG intensity of the aggregate fleet decreased by 11 grams CO_2-e per kilometre (5%), with all individual fleets improving their intensity - ranging from 2.9 to 24.1 grams CO_2-e per kilometre (up to 9%).
- The average air quality score (as determined by the *Green Vehicle Guide*) improved by 0.16 (3%) overall, suggesting a reduction in vehicle-related air pollution.

3 Minor amendments could make FleetWise even more effective

- Future implementation of the program should ensure that regular updating of the scenario modelling tool is continued, to include the latest available technologies and to incorporate updated results.
- The revamped marketing approach that highlighted the economic as well as the environmental benefits was more effective in reaching those not in an environmental role and should be continued.
- Any promotional material should publicise the achievements of the pilot.
- Leveraging the networks of industry associations and representative organisations assists with recruitment and promotion.
- A hybrid version of FleetWise using the current Victorian model and the online NSW model would alleviate pressure on support resources. An online portal for fleet discussions could enhance shared learnings, which was an important benefit to fleets.

4 There is ongoing demand from industry for this kind of program

- All participants have requested continued participation in FleetWise, and further enquiries regarding participation in the program were received after registrations were closed
- Decisions to participate in programs such as FleetWise require internal approval, the time for which can vary between organisations. As such, interested organisations with longer decision timeframes may benefit from continuity in the program delivery.
- Although starting slowly, the pilot developed momentum. With some efficient promotion the pilot could easily expand to a successful wide reaching program.

Consideration of the report findings indicates that the design and implementation practices of FleetWise are sound and could support a broader roll-out of the initiative in the future.

1 Introduction

In June 2011, Rare Consulting was commissioned by the former Victorian Department of Transport (now the Department of Transport, Planning and Local Infrastructure) to facilitate an industry engagement program designed to help private and public sector organisations improve the energy efficiency of their light vehicle fleets (passenger cars and light commercial vehicles). The program was based on the NSW FleetWise initiative.

The FleetWise program provides a suite of tools and information resources designed to assist organisations with the investigation and adoption of fleet practices designed to improve energy efficiency, reduce GHG emissions and deliver fuel savings. The FleetWise program provides a framework for participants to benchmark their fleet operation and then provides face-to-face training and strategic services to help participants develop a strategic fleet improvement plan.

The Victorian Department of Transport, Planning and Local Infrastructure's FleetWise pilot program involved assisting the following twelve fleets through a twelve-month period, and collecting data both on their results and their experiences.

- Bayside City Council
- Bendigo TAFE
- CitiPower Pty & Powercor Australia Ltd
- City of Yarra
- Eastern Health
- Gippsland Lakes Community Health
- Hepburn Health
- Mars
- Metropolitan Fire Brigade
- Moonee Valley City Council
- Noweyung
- SNAP

This report provides an assessment of the Victorian Department of Transport, Planning and Local Infrastructure's FleetWise program both in terms of its success in enhancing industry capability, and in terms of improving the energy efficiency of the transport sector.

2 Background

2.1 NSW FleetWise initiative

Initially the FleetWise initiative was developed in 2007 by Rare Consulting for the NSW Department of Environment and Climate Change (now the Office of Environment and Heritage) as a strategic partnership between the government and corporations to reduce fleet emissions. These partnerships sought to advance collective action towards emissions reduction and maximise the sharing of knowledge in respect of (a) innovative and practical fleet practices, and (b) key barriers to emissions reductions and the nature of the opportunities to redress the same.

The genesis for the FleetWise initiative (originally named FleetSmart) was premised on the success of the Cleaner NSW Government Fleet Program, which commenced in July 2005. An review of this program's performance indicated that it resulted in (a) a reduction in the fuel costs for the NSW government fleet in the order of $3 million, and (b) a net reduction in GHG emissions from these vehicles of approximately 16%.

The initial NSW FleetWise pilot, held in the latter half of 2008, involved News Limited, Uniting Care, Sydney City Council, and Insurance Australia Group; it was then rolled out across NSW in 2009. Using a website portal, participants could upload their fleet data, assess their baseline and then request a workshop to assist them in developing a Fleet Emissions Reduction Plan. The majority of participants in the rolled out NSW program were local councils who, by participating in FleetWise, were eligible for a government grant through the Waste and Sustainability Improvement Payment Program (WaSIP).

A review of the program was undertaken in 2011. The NSW FleetWise program has since been incorporated into the NSW Sustainability Advantage Program, which includes light and heavy vehicle transport as well as other industry sectors.

2.2 Victorian FleetWise program

In 2011, the Victorian Department of Transport, Planning and Local Infrastructure launched the FleetWise program in Victoria, altering the NSW program design to incorporate feedback that was received in the 2011 review.

The alterations included a focus on fleet managers (as opposed to environmental officers) in order to engage with the person best able to implement improvement strategies, and the provision of Excel-based tools to be run with assistance from the facilitators, rather than by the participant alone.

Initially the Victorian Department of Transport, Planning and Local Infrastructure planned an immediate roll out of the program, aiming to engage 65 fleets by 30 June 2011 and a further 115 fleets between 1 July 2011 and 30 June 2012. The marketing process was handled by a third party, through a mailing list and invitations to attend complimentary information seminars. The seminars ran from June 2011 to November 2011, but despite a large number of attendees the sign-up rate was not as expected.

In March 2012, the Victorian Department of Transport, Planning and Local Infrastructure varied the engagement with Rare Consulting to include the recruitment of fleets in addition to program facilitation. From June 2012, the program was an intensive pilot involving twelve fleets, to be reviewed after twelve months.

This paper summarises the pilot project and provides an assessment at both an elemental level (i.e. assessment of the effectiveness of individual program elements) and an aggregate level (i.e. assessment of the overall performance of the fleets in reducing their emissions).

The paper concludes with a summary of observations on the factors that might be considered in a wider roll-out, makes recommendations for future implementation, and presents case studies and feedback from each of the participating fleets.

2.3 National Strategy on Energy Efficiency

The Council of Australian Governments (COAG) adopted the National Strategy on Energy Efficiency in 2009 as a component of the National Partnership Agreement on Energy Efficiency. The focus of this strategy was to improve energy efficiency in:

- Helping households and businesses to transition to a low carbon future;
- Reducing impediments to the uptake of energy efficiency
- Making buildings more energy efficient
- Governments working in partnership and leading the way.

A measure under the second objective of reducing impediments to 'introduce voluntary measures to improve the performance of passenger vehicles' was based upon the roll out of the NSW FleetWise tool. The roll out of the New South Wales and now Victorian programs provided a means of the government assisting industry in removing the barriers (resources, knowledge, capability, tools) within organisations.

As per the 2012 COAG annual report, outputs and learnings from the FleetWise initiative are to be reviewed and incorporated into a national framework of measures to be made available in all jurisdictions.

Accordingly the Victorian pilot was an important step to progress this national goal.

3 The Victorian FleetWise pilot

The Victorian FleetWise program architecture is based on the NSW FleetWise initiative. FleetWise participants receive assistance in (a) calculating their fleet's environmental performance, (b) setting fleet improvement goals, and (c) calculating cost and environmental savings. The program differed from the NSW initiative in that it sought to rectify the issues that NSW had experienced by providing a more collaborative hands-on approach between participants and facilitators.

3.1 Objectives of the pilot project

The primary objective of the Victorian FleetWise program was:

- To build industry capability in identifying opportunities and improving the energy efficiency and GHG intensity of their fleets. This is important because it has cost implications and public good benefits in terms of emissions reductions.

In running the program as a pilot, a secondary objective was to:

- Validate the effectiveness of the FleetWise approach in reducing light vehicle GHG emissions in Victoria

3.2 Project elements

The pilot was conducted by way of a demonstration of the complete FleetWise initiative. As a consequence, the pilot was conducted in accordance with the key elements of the program, namely:

- **Fleet baseline**. The fleet performance in terms of emissions and emissions intensity over a selected 12-month baseline period, calculated using a Microsoft Excel based tool.
- **Scenario fleets**. The various hypothetical fleet scenarios used to guide the development of a fleet improvement plan.
- **Knowledge pool.** A number of documents provided to participants containing information about different opportunities to reduce emissions.
- **Fleet Scenario Model.** An Excel-based tool that estimates the likely reduction in emissions from implementation of selected improvement actions, based on the most recent available National Greenhouse Accounts (NGA) factors.
- **Fleet improvement plan**. A formal plan to be prepared by the participant outlining improvement actions and assigning responsibility and timelines for their implementation.
- **FleetWise facilitator**. An external consultancy providing step-by-step assistance throughout the whole FleetWise process.

The outline of how the elements fit together in the journey of a participant is shown in Figure 1.

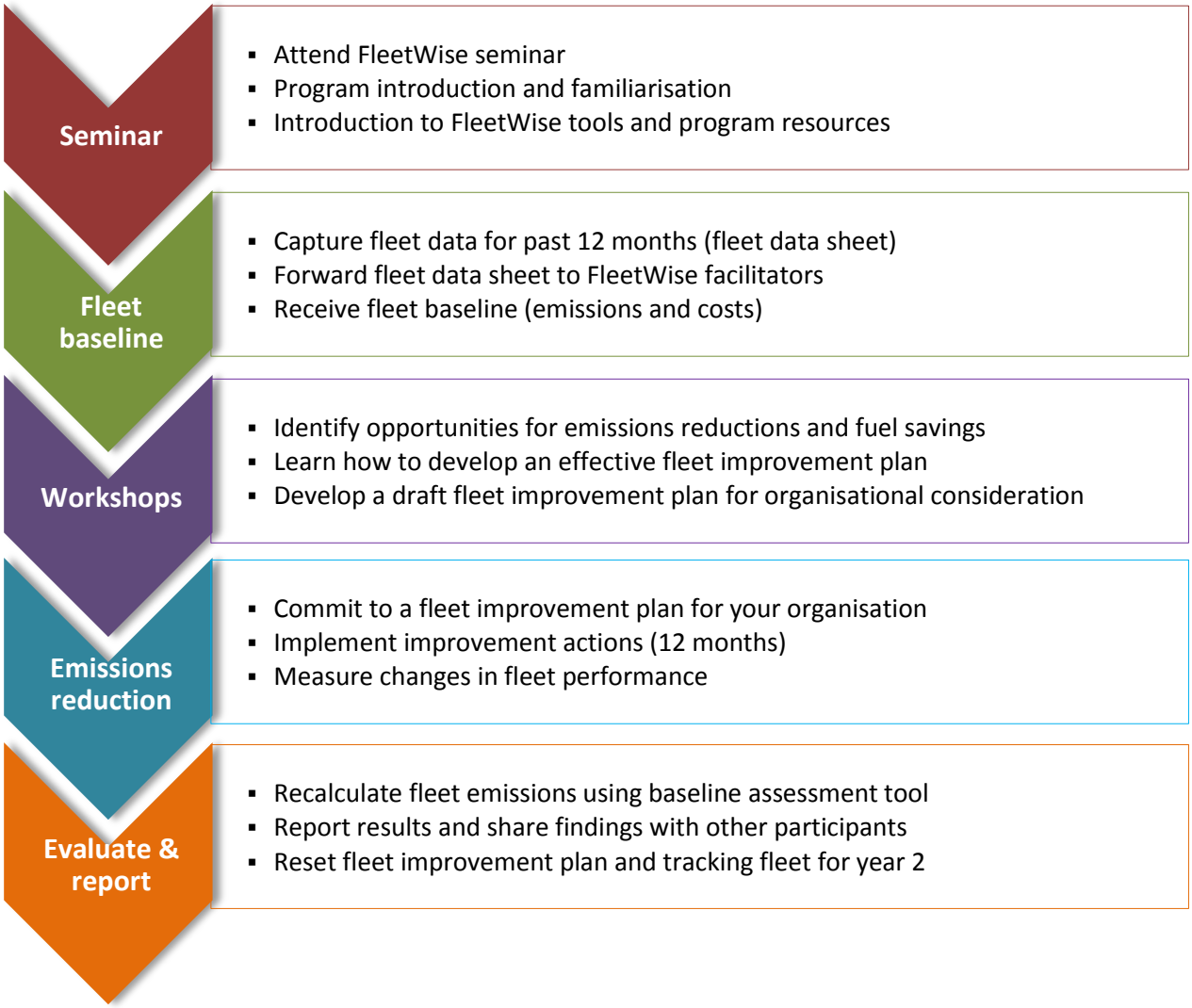

Figure 1

Journey of a FleetWise participant

3.3 FleetWise Products

The program was marketed as a government sponsored capacity building program, with a token $400 joining fee cost to participants.

In addition to the knowledge papers which were provided publicly on the Departments website, participants had access to the two Excel based tools, the scenario modelling workshop and assistance from the facilitators throughout the entire process.

During the pilot each organisation received a baseline assessment report, a one year assessment report and a case study. (All case studies are provided in Appendix A).

3.4 Project participants

A total of twelve organisations formally participated in the FleetWise pilot project, details of each organisation and a brief summary of their participating fleets baseline details are provided in Table 1.

Additionally, another two fleets had assistance in determining their baseline (Dulux and the Victorian Police) and a number of other fleets were engaged to the point of receiving information to help them improve their fleet without formally participating in the program.

The final group of participants represented a range of local government, corporate, health provider, not-for-profit, and service provider organisations – including metropolitan and regional operations in order to present a good cross section of Victorian fleets.

3.5 Project timing

The project technically commenced in June 2011; however, the pilot with the 12 set participants did not formalise until June 2012. The pilot was due to conclude in June 2013, however as each participant required a twelve-month period to implement improvements and then assess the performance, this was extended to ensure all willing to complete their participation could.

The time period selected by participants for their baseline period ranged between calendar year, financial year and fringe benefit tax year. Participant's choice was influenced by time of engagement, internal reporting and data availability. The time period used for each participants baseline is detailed in Table 1.

3.6 Technical resources

Rare Consulting provided technical and facilitation assistance throughout the pilot. This assistance extended to:

- calculation of fleet baselines,
- development of Excel-based tools,
- facilitation of project workshops,
- development of fleet improvement plans, and
- provision of technical advice to fleet participants on strategy development.

The level of assistance provided to individual participants varied depending on their existing internal capacity and need.

Table 1- Participant Overview

PARTICIPANT DESCRIPTION	FLEET INCLUDED	SIZE OF FLEET	PERIOD SELECTED	BASELINE EMISSIONS*	
				TOTAL	INTENSITY
Councils					
Bayside City Council (BCC) is a Victorian municipal council located in the south-eastern suburbs that is responsible for around 92,000 residents.	The entire light vehicle fleet including the light commercial vehicles for the Local Laws and Amenities Protection units, and passenger vehicles for pool and employee use.	73	1 April 2011 – 31 March 2012	361 tonnes of CO2-e	240 grams of CO2-e per kilometre
City of Yarra is a Victorian municipal council located 5 kilometres north of central Melbourne that is responsible for around 81,000 residents.	The entire light vehicle fleet including a mix of light commercial vehicles, and passenger vehicles	183	1 July 2011 – 30 June 2012.	649 tonnes of CO2-e	270 grams of CO2-e per kilometre
Moonee Valley City Council is a Victorian municipal council located in the northern suburbs of Melbourne, responsible for around 116,000 residents	The entire light vehicle fleet which included a mix of light commercial vehicles and passenger vehicles	112	1 July 2011 – 30 June 2012.	698 tonnes of CO2-e	291 grams of CO2-e per kilometre
Corporates					
MARS is a global food manufacturing corporation. In Australia they have four business segments – Chocolate, Food, Petcare and Wrigleys – operating from fourteen factory and office locations	The entire Victorian light vehicle fleet including a mix of light commercial and passenger vehicles.	215	1 July 2011 - 30 June 2012.	1783 tonnes CO2-e	243 grams of CO2-e per kilometre
CitiPower Pty & Powercor Australia Ltd are two of Victoria's five privately managed electricity distributors operating in metropolitan Melbourne and throughout central and western Victoria.	The entire light vehicle fleet, incorporating all passenger and light commercial tool of trade vehicles.	504	1 January 2011 - 31 December 2011	4354 tonnes of CO2-e	256 grams of CO2-e per kilometre

PARTICIPANT DESCRIPTION	FLEET INCLUDED	SIZE OF FLEET	PERIOD SELECTED	BASELINE EMISSIONS*	
				TOTAL	INTENSITY
Health Services					
Eastern Health is a metropolitan public health organisation providing emergency, medical and general health care to eastern Melbourne.	The entire light vehicle fleet including the ambulance fleet	277	1 April 2011 – 31 March 2012	740 tonnes of CO2-e	236 grams of CO2-e per kilometre
Gippsland Lakes Community Health (GLCH) is a regional health service provider in East Gippsland providing services in Aged Care, Clinical and Nursing, Community Health, Corporate Services, Family Youth and Children, Health Promotion and Koori Health	The entire light vehicle fleet which included a mix of light commercial and passenger vehicles operating in regional Victoria.	54	1 July 2011 - 30 June 2012.	247 tonnes of CO2-e	209 grams of CO2-e per kilometre
Hepburn Health Service is a regional health care provider in regional Victoria provider of health care services, residential aged care and health promotion activities within the Hepburn Shire of central Victoria.	Hepburn Health's participation extended to its entire light vehicle fleet including vehicles for the district nursing service, volunteers and a number of larger vehicles used as mini-buses to transport patients.	41	1 July 2011 - 30 June 2012.	176 tonnes of CO2-e	226 grams CO2-e per kilometre
Education					
Bendigo TAFE is a government owned technical and further education provider with three campuses in Bendigo and one in each of Echuca, Castlemaine and Maryborough.	The entire light vehicle fleet, incorporating all passenger and light commercial tool of trade vehicles. In addition, they included three larger buses in their emissions profile as they did not have a separate heavy vehicle fleet.	37	1 April 2011 – 31 March 2012	206 tonnes of CO2-e	208 grams of CO2-e per kilometre travelled
Service					
Metropolitan Fire Brigade (MFB) is a statutory authority constituted under the Metropolitan Fire Brigades Act providing fire and rescue services to metropolitan Melbourne	The entire light vehicle fleet which included a mix of light commercial and passenger vehicles	196	1 April 2011 - 31 May 2012	960 tonnes of CO2-e	274 grams of CO2-e per kilometre

PARTICIPANT DESCRIPTION	FLEET INCLUDED	SIZE OF FLEET	PERIOD SELECTED	BASELINE EMISSIONS*	
				TOTAL	INTENSITY
Not For Profits					
Noweyung is a not-for-profit disability enterprise providing a range of education training, community development, pre-employment, employment and advocacy services to their adult service users. Noweyung operates out of Bairnsdale and Orbost servicing the entire Gippsland area.	The entire light vehicle fleet including a mix of light commercial and passenger vehicles operating in regional Victoria	16	1 July 2011 – 30 June 2012.	125 tonnes of CO2-e	288 grams of CO2-e per kilometre
SNAP Gippsland Inc. (SNAP) is an incorporated non-profit organisation that provides a Psychiatric Disability Rehabilitation Support Service to adults with a mental health problem. SNAP have service outlets in East Gippsland, Wellington, South Gippsland, Bairnsdale, Sale, and Leongatha, in addition to providing home based support	The entire light vehicle fleet, which was a passenger vehicle fleet operating in regional Victoria.	15	1 July 2011 – 30 June 2012.	48 tonnes of CO2-e	206 grams of CO2-e per kilometre

- Emissions are estimated based on data provided

4 Assessment methodology

Given the two-fold objective of the pilot project, the effectiveness of the pilot was examined at two levels, namely:

- **PROGRAM LEVEL**: A quantitative assessment of the emissions savings derived by the program participants when considered at an individual organisational level and at an aggregated level.
- **ELEMENTAL LEVEL**: A qualitative analysis of the program effectiveness and participant satisfaction with each of the elements of the FleetWise program.

The findings arising from each of the assessment tasks were then used to (a) derive key conclusions about the performance of the pilot program, and (b) provide guidance in respect to any future expansion of the FleetWise initiative. The success of the pilot program was measured on how well each objective was met.

A summary of the methodology applied to each of the above assessments is provided below.

4.1 Program level

The performance of the program was also assessed on a program level by comparing the fleet emissions of each participant on a 'before and after' basis. The emissions profile as determined in their baseline assessment was compared to the emissions profile as determined in the one year assessment to quantify what improvement was made. This analysis is provided in Section 5.

4.2 Elemental level

The effectiveness of each element of the pilot program was assessed through joint consideration of participant feedback and observations made by the external facilitator throughout the course of the trial. A description of each of these **criteria** is provided below –and the assessment provided in Section 6.

4.2.1 Facilitator observations

The program elements were considered by the facilitator in terms of the following criteria.

- **MAXIMISE ENVIRONMENTAL INTEGRITY.** The methodology and tools should be beyond reproach – ensuring that as a government initiative it possesses a high degree of environmental integrity.
- **MAXIMISE SYNERGY WITH OTHER VICTORIAN GOVERNMENT OBJECTIVES.** FleetWise should assist in reducing the total GHG emissions from the Victorian transport sector.
- **PROGRAM FLEXIBILITY.** The ability to accommodate a range of corporate motivations for participation. Including (a) a desire to reduce carbon footprint (b) a desire to attract young workforce talent to organisations with green credentials (c) improved economics of fleet operation, (d) partial compliance with energy efficiency opportunities legislation and (e) corporate reputation benefits.

- **ACCOMMODATE ORGANISATIONAL COMPLEXITY.** Including human resource complexities associated with retention of high value staff, and potential industry unrest with perceived safety concerns and economic disadvantages**.**
- **MAXIMISE RESOURCE EFFICIENCY.** To reduce the demand and potential demand on limited government resources.
- **BALANCE PUBLIC TRANSPARENCY AND COMMERCIAL SENSITIVITIES.** FleetWise as a government program should involve public reporting, while being respectful of any commercially sensitive information to participating fleets.
- **CATALYSE PROGRAM GROWTH.** Sufficient promotional material and recognition provided to participants to encourage further enlistment.
- **ACCOMMODATE VARIABLE FLEET ARCHITECTURE.** Fleet improvement options should cater for the different types of vehicle classes (i.e. salary packaged vehicle, tool-of-trade vehicle, and company-owned pool vehicle).

4.2.2 Participant feedback

Following the reassessment of fleet performance after 12 months, and the development of a case study, participants were asked to complete a short survey on their experience with FleetWise. Participants had the option of completing the survey online, over the phone or in person with the facilitator. The survey sought to canvass the views of participants in relation to aspects of the FleetWise program. These aspects can be summarised as follows.

- Areas of the organisation that were involved in FleetWise.
- Motivation for participation.
- Inclination to recommend FleetWise to others.
- The data collation process – baseline year compared to first year.
- The success of the scenario modelling workshop in providing confidence in the use of the FleetWise tools.
- The value obtained from each of the tools, the facilitator and each of the knowledge pool documents.
- The degree to which their fleet improvement plan was implemented and reviewed.
- The impact of FleetWise on their fleet management practices.

This feedback is incorporated into the elemental assessment presented in Section 6. Additionally an overview of the survey results is provided in Appendix B.

5 Key Findings - Program results

A summary of the overall results from the pilot program provides an assessment at a program level, as per Section 4.1. This is presented in Table 2 for the fleets that completed the one-year assessment. A review of the data gives rise to the following specific observations about the emissions savings derived from the conduct of the pilot project.

- The average air quality score (as determined by the *Green Vehicle Guide*) improved by 0.16 (3%) overall, suggesting a reduction in vehicle-related air pollution.
- The aggregate GHG emissions for the fleets completing their one-year assessment reduced by 149 tonnes (2%). A positive result given that the majority of the fleets' businesses grew and improvements were in place for less than 12 months before reassessed.
- The average GHG intensity of the aggregate fleet decreased by 11 grams CO_2-e per kilometre (5%), with all individual fleets improving their intensity - ranging from 2.9 to 24.1 grams CO_2-e per kilometre (up to 9%).

These results demonstrate a positive outcome, in Rare's experience fleets will generally improve their GHG intensity by 10% per year dependent on the improvements implemented. All participating fleets were satisfied with their results especially considering that the majority of fleets did not set their fleet improvement plans until a few months into the first year with many focussing on improving policies and data collection methods first, and therefore expecting more savings to be realised in year two.

Table 2 Summary of program results

Performance measure	Aggregated change
Air quality score	+0.16 (3% improvement)
Total GHG emissions	-149 tonnes (2% improvement)
Average GHG intensity	-11.0 g CO2-e/km (5% improvement)
Total kilometres	+968,121km (3% increase)
Total vehicles	84 (6% increase)

5.1 Individual fleets

All fleets completing their one-year assessment saw an improvement in their fleet emissions intensity. Table 3 below provides an overview of the performance of each of the participating fleets. Further details on the fleets that completed their one year assessment are provided in their case study in Appendix A.

As noted in Table 3 a range of different improvement strategies were implemented across the participating fleets, highlighting the different types of fleets and different scope for strategies.

Table 3 Summary of fleet performance

Fleet	Baseline				Improvements implemented	One-year assessment				Change		
	Fleet size	Total GHG	tonnes CO_2-e per km	AQ score		Fleet size	Total GHG	tonnes CO_2-e per km	AQ score	Total GHG	tonnes CO_2-e per km	AQ score
Bayside City Council	75	361.5	238.6	5.73	Updated procurement policy, participated in electric vehicle trial, incentivised smaller vehicles, direct injection and turbo charged option, green travel plan, data improvements, collaboration between fleet and environment.	84	404.7	217.8	6.22	43.2 (12%)	–20.8 (-8.7%)	0.5 (8.7%)
Citipower & Powercor	504	4353.9	255.9	4.73	Built a fleet data module within SAP fleet to improve the data collection/reporting process, updated procurement policy to consider GVG ratings and formalised their sustainability objectives, increased number of diesel and hybrid vehicles.	597	4290.3	244.4	4.78	–63.6 (-1.5%)	–11.5 (-4.5%)	0.05 (1. 0%)
Eastern Health	277	740.4	236.5	7.08	Updated procurement method to include GVG ratings, undertook a fleet utilisation review, phased out older vehicles, implemented an online pool vehicle booking system.	259	766.5	232.4	7.17	26.1 (3.5%)	–4.1 (-1.7%)	0. 09 (1.3%)
GLCH	54	246.6	208.6	6.32	Downsizing vehicles so they were fit for purpose, diesel vehicles, car pooling between their two sites, educated drivers on appropriate use of fuel cards to improve data reliability.	55	309.7	203.8	6.54	63.1 (25.6%)	–4.8 (-2.3%)	0.22 (3.5%)
Hepburn Health	41	175.7	226.2	6.57		40	177.7	213.3	6.03	2 (1.1%)	–12.9 (-5.7%)	–0.54 (-8.2%)
Mars	215	1783	243.2	6.44	Tyre maintenance, driver training, travel reduction	203	1,584.4	230.4	6.47	-198.2 (-11.1%)	-14.6 (-6.0%)	0.03 (0.4%)

Fleet	Baseline				Improvements implemented	One-year assessment				Change		
	Fleet size	Total GHG	tonnes CO_2-e per km	AQ score		Fleet size	Total GHG	tonnes CO_2-e per km	AQ score	Total GHG	tonnes CO_2-e per km	AQ score
MFB	196	959.6	274.0	6.1	Encouraged sustainable transport alternatives through myki availability and 'ride to work' day.	209	970.3	271.1	6.17	10.7 (1.1%)	–2.9 (-1.1%)	0.07 (1.1%)
Noweyung	16	124.9	287.8	4.69	Updated procurement policy to consider GVG ratings, downsized vehicles, purchased smaller turbo charged engines, purchased a hybrid.	16	108.7	263.7	4.93	–16.2 (-13.0%)	–24.1 (-8.4%)	0.24 (5.1%)
SNAP	15	47.7	206.1	6.67	Reduced fleet size, and upgraded all but one vehicle in their fleet.	12	31.2	202.4	7.42	-16.5 (-34.5%)	-3.7 (-1.8%)	0.75 (11.2%)

5.2 Fleet - Lessons learned

Each fleet shared their learnings with the others through their case studies (Appendix A). An overview of these lessons as observed by the facilitator is as follows:

- **A GOOD DATA SET IS KEY TO RELIABLE RESULTS.** In order to monitor their performance fleets needed to have access to accurate data. Accordingly the first step for participants was ensuring the reliability of their data capture and collection processes. The majority of fleets incorporated this in to their fleet improvement plans, and once reliable good practices were instated fleets found the process much easier. There were a number of instances during the baseline assessment process where assumptions had to be made to cater for missing and/or erroneous data. (Note that in all instances assumptions were conservative in order to prevent over-estimating future improvements). However, during the one year assessment there was minimal requirement for the use of assumed data.

  Some fleets opted to establish automatic FleetWise reporting in their existing data systems which would generate the information required to run the assessment, others found it sufficient to educate drivers on correctly recording odometer readings at the fuel pump.

- **GET IT RIGHT FROM THE START WITH AN APPROPRIATE PROCUREMENT POLICY**. The NSW FleetWise trial identified that '*improved vehicle procurement practices provided the greatest opportunity for emissions reduction in the short term while also being a prerequisite strategy for adoption of the other improvement actions*'. Accordingly, the Victorian program ensured this was the first action for participating fleets. A clear procurement policy that takes into consideration the environmental performance of the vehicle - in addition to upfront and ongoing maintenance costs, resale values, and importantly that the vehicle is fit for purpose – ensures that the most appropriate vehicles for the organisation are chosen from the beginning and provides the base on which to build other improvement actions.

  Fleets achieved this via a number of different ways: some fleets (eg. Eastern Health, Noweyung) incorporated a ranking tool into their procurement strategies that took into consideration each of the criterion including environmental performance in order to determine the most suitable vehicle for each use; while others established a set of pre-approved vehicles dependant on the use, or a general guide of 'purchase diesel or hybrid in the first instance' (eg. Citipower). For those where vehicles were offered as part of the package, one strategy was to financially incentivise the greener option to encourage employees to make this choice (eg. Bayside City Council).

- **SENIOR MANAGEMENT ENDORSEMENT ENSURES EASE OF IMPROVEMENT IMPLEMENTATION**. Participating companies whose CEO was involved either directly (Noweyung, SNAP) or had instigated the organisation's involvement (GLCH) had less resistance in implementation of improvements particularly around behavioural/cultural change/ HR policy or similar. While the enthusiasm of the individual who was the main FleetWise contact played a large role, a commitment from the top ensured that competing priorities did not detract from participant commitment and ability to dedicate time.

- **BUY-IN IS NEEDED FROM THE FLEET MANAGER.** As a result of experiences in the NSW FleetWise program, the fleet manager or person/s with authority to alter the fleet was specifically involved in the process. There was only one fleet where this was not the case, where the environmental officer had difficulty gaining fleet co-operation and was limited in the range fleet improvement strategies that could be put forward as a consequence.
- **OPEN COMMUNICATION ENHANCES EMPLOYEE BUY-IN AND CAPITALISES ON CROSS DEPARTMENTAL SYNERGIES.** FleetWise participation was most effective for organisations who involved a number of departments in the process, eg Fleet and Environment, who then worked together to develop and implement improvement strategies. Additionally, clear messages to employees were important and also open lines of communication between the fleet manager and the drivers – providing information and reasoning behind any changes in addition to receiving feedback on the practicality of any new vehicles or strategies implemented. GLCH received good results from publishing a regular newsletter on fleet improvements educating employees (ie: fleet users) on the benefits and what was involved, which lead to a greater uptake of car-sharing in their instance.
- **LOW COST SOLUTIONS ARE EASY AND EFFECTIVE,** particularly with respect to return on investment. Raising capital can be difficult when a vehicle is not yet scheduled to be changed over. Accordingly, the fleets made use of the 'softer' solutions – and found them to be highly rewarding. For example, educating drivers, restructuring policies, providing alternative transport means (myki cards, electric bicycles), and promotion of car sharing.

Additionally, there were a number of lessons learned on vehicle type and usage:

- As predicted, the smaller engine, turbo charged vehicles provided the same power as the larger engines while using less fuel.
- As expected, hybrid vehicles report a lower fuel consumption rate, particularly when used in settings that capitalise on the regenerative braking (urban driving in congested areas). Notably, a regional fleet still recorded positive results with hybrid usage in non congested areas.
- As noted in the scenario tool, fuel availability needs to be considered when considering improvement options – for example one fleet could not consider ethanol as it was not available within the vicinity of their operations. This reinforces that every fleet is different (in terms of vehicle type, operations, drivers, location) and improvement actions need to be tailored specifically to what is suitable for the particular organisation.

Greatest improvements were made by those who were in the early stages of examining opportunities for fleet improvement (CitiPower, Noweyung) and therefore had the greatest potential for reduction. Fleets that were already operating at a low intensity in relation to the Australian average vehicle (eg. SNAP) had a lower percentage improvement as they were at the more challenging end of their fleet improvement journey.

5.3 Incomplete one-year assessments

As noted, a number of the fleets did not, or were not able to complete their one-year assessment and case study. However, each of these fleets went on to implement valuable improvements to their fleet operations as a result of their participation in FleetWise and exposure to the FleetWise tools and materials. They were as follows:

- **Bendigo TAFE**.

  Strategies which they committed under their sustainability strategy included use of an electric bike for travel between campuses, co-ordination of fleet trips between regional campuses, and a review of the green travel plan.

- **City of Yarra**. The City of Yarra achieved carbon neutrality as an organisation since their baseline year and has received a number of Keep Australia Beautiful Sustainability Awards.

  Strategies which they included in their FIP for further investigation included: Direct injection and supercharged vehicles, electric vehicle trial, improved tyre maintenance, improved trip scheduling and internal car sharing, environmental driver training, utilisation of nearby car-shares, promotion of telecommuting and cycling.

- **Moonee Valley City Council**.

  Strategies which they were implementing through their FIP included: Light loading of commercial vehicles, and improved tyre maintenance.

6 Key Findings – Element Assessment

This section evaluates each of the program elements using the methodology described in Section 4.2, and provides insights for future implementation of the program.

6.1 Enlistment process

Over the course of the Victorian FleetWise program the enlistment process ranged from:

- group seminars held at the then Department of Transport, with invitations sent by a third party;
- one-on-one discussions through direct contact from the facilitators with fleets;
- tailored discussions with umbrella organisations who could in turn market to their members and networks (e.g. VECCI, VACC, RACV, LeasePlan);
- promotion through the then Department of Transport website;
- promotion at industry association events (eg. Presentation at AFMA breakfast)
- word of mouth (from existing participants to sister organisations – i.e. Noweyung to SNAP and GLCH).

Program participants were engaged via a mix of enlistment processes, with a range of participant organisation representatives - fleet managers, environmental officers and CEOs.

The original Departmental objective to engage with 181 fleets was met through a combination of the above - 93 were engaged directly by Rare (including seminar attendees), and the remainder were engaged through the industry association events and umbrella organisation marketing.

6.1.1 Assessment findings

Following the low conversion rate of group seminar attendees, the Department changed its enlistment process in January 2012, focusing on a one-on-one approach and targeting umbrella organisations (see Section 5.2 for further discussion on the introductory seminar process). This approach, while more time intensive, allowed for discussions to be tailored to the specific fleet or organisation, which fleets found more beneficial.

Motivations for participating included: reducing their impact on the environment; developing a green travel plan; comparing their performance to other fleets; reducing fleet costs; and optimising fleet efficiency. One participant reported that there was an internal push for more environmental vehicles and that FleetWise provided them with a baseline from which to work.

During the enlistment process, it was observed that while a number of environment officers were keen to participate, there was resistance from the fleet or asset managers, who may have incorrectly perceived their organisation's participation in FleetWise as a criticism of their current performance and a 'green hassle'. While, this tension was diffused following the articulation of the economic as well as the environmental benefits of optimising fleet efficiency, fleets that engaged only through their environment division had difficulty in implementing improvement strategies.

6.1.2 Program insights

The main insights regarding the enlistment process were as follows:

- Marketing material should continue to promote the range of benefits (environmental and economic) and highlight the different motivations for participating in order to capture a wider audience.
- The fleets that involved different sections of their organisation (i.e. fleet and environment) found it beneficial in that they were able to cover a broader scope of opportunities.
- An organisation's participation must involve someone who has authority to implement changes to the fleet, such as the fleet manager. Additionally, participants who had senior executive endorsement were greatly advantaged in having the ability to fast-track improvement strategies
- Using umbrella organisations in the promotion of FleetWise provides an effective mechanism in program marketing without the burden on governmental resources. This was best illustrated by the involvement of LeasePlan who saw FleetWise as an opportunity to provide an additional service to their members.
- Fleets want to benchmark. At the onset, fleets were all interested to hear of the benefits that other organisations had achieved through participating in FleetWise. The experiences and results achieved by the pilot participants are a valuable marketing tool that can be leveraged and promoted through a range of mediums, including website, media releases, newspaper features, talk-back radio and relevant trade shows.

6.2 Introductory seminars

A series of group introductory seminars were held between June and December 2011, before transitioning to the one-on-one seminars that took place between January and June 2012.

The seminars provided participants with:

- a general overview of the genesis of the initiative
- the wider strategic context relating to fleet costs and fleet emissions
- an overview of the program and its key elements
- an introduction to the concept of fleet baselines
- a demonstration of the FleetWise tools.

The seminar concluded with a facilitated discussion on the challenges of reducing fleet emissions and some of the potential actions that could be implemented to reduce emissions in the future, and the process of signing up to the FleetWise program.

6.2.1 Assessment findings

While the group seminars were aimed at providing a generic overview, the audience's knowledge varied. A number of attendees who did not sign up reported that they were out of their depth with the technical content of the seminar. The majority of attendees, however, found the information seminars highly informative – with some not having a fleet of their own but attending for information gathering purposes.

6.2.2 Program insights

The results of the assessment suggest that the tailored approach is more successful for program recruitment. Audiences can be limited to one group or small groups from similar organisations, and the information and technical material provided can be tailored to the audience.

6.3 Fleet baseline assessment

Once a commitment was made to participate, organisations were asked to provide fleet data for the purposes of calculating the baseline emissions of their fleets. This process was undertaken by the external facilitator, and involved discussions with each fleet manager.

The collected data was analysed by the external facilitator using an automated spreadsheet tool (developed using MS Excel) and the results were subsequently communicated to each participating fleet through a baseline assessment report.

6.3.1 Assessment findings

A review of this element of the FleetWise program gave rise to the following principal observations:

- A number of participants found the data collection process difficult as the data provided by the organisation (or by fuel card providers) was not in an easily extractable format. Participants reported that the process was easier the second time around, once they had implemented improvements to their data collection processes and were familiar with the process.
- For some fleets, construction of the fleet baselines was relatively laborious, involving a degree of interpolation to account for missing or incorrectly recorded data (especially annual kilometres travelled). In a few cases, the relatively high percentage of missing or spurious data resulted in manual review of fleet records on a vehicle-by-vehicle basis by the external facilitator. Such an approach is unlikely to be practical for large numbers of fleets.
- The air quality score determination was an onerous task requiring the facilitator to determine the air quality score rating in the *Green Vehicle Guide* on a vehicle-by-vehicle basis. (In contrast, the NSW FleetWise web based tool incorporated a software link to the *Green Vehicle Guide*.) It is expected that if this was to be done by participants, particularly those with lean resources, then many would choose to omit this analysis step.
- All participants expressed a high level of satisfaction (and understanding) with the metrics adopted for the baselining of fleet emissions in terms of air quality and GHG emissions. Particular comments related to the integrity of the process by the use of the NGA factors for emissions calculations, and the appropriateness of the intensity metric in providing a means to track their fleet improvements without skewing from any business growth.

6.3.2 Program insights

The main insights regarding the baseline assessment were as follows:

The Excel tools adopted by Victoria, in lieu of the web based tools used in NSW, allow participants greater transparency and insight into their data. However, they bring with them a resource burden in manually reviewing data and calculating the air quality score.

As fleets improved the quality of their data collection, the time impost lessened, and, only additional vehicles to the fleet required new air quality scores to be manually determined. Even so, it is recommended that any future version of the program develops a means to incorporate the automatic air quality score calculator similar to the NSW FleetWise program.

The compilation of data for the baseline assessment was an important lesson for the majority of fleets, with many establishing improved collection and internal reporting processes as part of their improvement plan.

6.4 Scenario modelling workshops

Following the completion of a baseline assessment, participants attended a one-on-one scenario modelling workshop. These were held between May and September 2012.

The workshops provided participants with:

- an overview of the range of improvement opportunities detailed in the knowledge pool documents and how they might affect their fleet;
- a detailed discussion of fleet baseline assessment results;
- identification of areas for improvement;
- tuition in the use of the scenario modelling tool;
- assistance in drafting a fleet improvement plan.

Participants were encouraged to invite additional representatives from their organisation to the workshops in order to increase organisational buy-in and create a greater scope for improvement implementation. The City of Yarra, for example, held an additional half-day workshop (run by the FleetWise facilitators on behalf of the Department) for various representatives across council to identify and work through the most appropriate and beneficial improvement strategies in detail.

6.4.1 Assessment findings

The initial intention was that scenario modelling workshops were to involve a small group of participants. However, this changed as the fleets completed each of the phases at different times. Moonee Valley, for example, completed its baseline assessment prior to even the enrolment of a number of other fleets.

Feedback showed that a number of participants were still hesitant in using the scenario modelling tool post the workshop. They were, however, appreciative of the additional assistance subsequently provided to them in navigating the tool.

In addition to the potential changes in GHG emissions, fleets were also interested in discussing whole-of-vehicle-life economics.

6.4.2 Program insights

Scenario modelling workshops were most effective when attendees were aware of the needs and operation of their existing fleet and had the capacity to make the changes they were investigating. Those participants who, as a result of FleetWise, developed alliances between different divisions of their organisations, benefited greatly by gaining a broader understanding of their own business and the potential benefits that they could achieve through internal collaboration. For example:

- The City of Yarra was able to cover a broader spectrum of potential improvements due to the range of employees in attendance at the workshop.
- Bayside City Council's participation featured an environmental officer teamed with the fleet manager. This provided both an additional resource and breadth of scope.

Confidence in using a new tool generally grows over time and exposure, and any initial hesitation following the workshop in using the FleetWise tools dissipated over the year as participants became more familiar and comfortable using them. Having participants practice using the tool during the workshop environment was important in building initial familiarity, and access to the ongoing assistance from the facilitators provided peace of mind.

6.5 Knowledge papers

A total of four resource documents were developed prior to the program to provide participants with strategic and technical guidance on the assessment of potential emission reduction actions. The papers covered four key areas, namely:

- vehicle procurement
- alternative fuel and vehicle technologies
- operational behaviours
- environmental legislation and policy.

These documents were also available to the public on the Department of Transport website.

6.5.1 Assessment findings

Participant feedback on the knowledge pool papers was positive, with participants commenting on the quality and usefulness of information provided. Fleets referred to the knowledge pool documents in more detail after the scenario modelling workshop, once they had identified some potential strategies and were requiring additional information; however, those who had taken the time to read them beforehand were more prepared for the workshop.

The knowledge pool papers allowed the knowledge to be shared beyond the fleets formally enrolled in the pilot. One organisation, for example, decided not to enrol as they had already set their environmental fleet strategies (that is 50% hybrids and looking into electric vehicles). They were, however, appreciative of the provision of knowledge pool papers to supplement their internal resources.

6.5.2 Program insights

The knowledge pool papers were useful in increasing corporate knowledge about the practical strategies that could be advanced to reduce fleet emissions. They were in an easy-to-read format,

which doubled as promotional material for the program. In order to remain current these documents need to be updated every 12 months (the legislation paper potentially more frequently as legislation changes).

6.6 Fleet improvement plans

The scenario modelling workshop was designed to assist fleets in drafting an internal fleet improvement plan. The summary page of the scenario modelling tool provided a fleet improvement plan template. An example fleet improvement plan is shown below in Figure 2.

Proposed actions	Estimated no. of vehicles	% fleet application	Timing to realisation	Responsibility	Key implementation milestones	Due date
1. VEHICLE PROCUREMENT PRACTICES						
1.1. Replace 8 cylinder with 6 cylinder vehicles	15	6.1%	When vehicles due to be turned over	Fleet Manager	As vehicles end their lease	30 March 2013
1.2. Replace large 6 cylinder with smaller engine 6 cylinder	15	6.1%	When vehicles due to be turned over	Fleet Manager	As vehicles end their lease	30 March 2013
2. ALTERNATIVE VEHICLES AND FUEL TECHNOLOGIES						
2.1. Substitute hybrid electric vehicles	20	8.1%	When vehicles due to be turned over	Fleet Manager	As vehicles end their lease	30 March 2013
2.2. Substitute LPG vehicles (dedicated)	10	4.0%	When vehicles due to be turned over	Fleet Manager	As vehicles end their lease	30 March 2013
3. FLEET PRACTICES						
3.1. Improved fleet scheduling/improved trip planning	100	40.5%	Immediate	Business unit managers	Purchase of GPS equip	1 September 2012
3.2. Reduced vehicle load (for service vehicles)	5	2.0%	Immediate	Parks & Gardens Manager	Conduct audit of kit	1 August 2012
4. DRIVER PRACTICES						
4.1. Introduce environmental programme	50	20%	Short term	HR manager	Staff training	31 December
4.2. Encourage corporate cycling programmes	10	4%	Immediate	Sustainability Manager	Development of program	31 December 2012

Figure 2

Example Fleet Improvement Plan

Throughout the workshop the facilitator worked with participants to identify potential improvement strategies that would be suitable for their fleet to include in their fleet improvement plan. The participants took the strategies back to their organisation for internal review and approval, before a completed plan was provided back to the facilitator for record.

6.6.1 Assessment findings

All fleets prepared a fleet improvement plan. A couple of participants reported reviewing it throughout the 12-month period with the remainder leaving it to review after their one-year assessment.

The implementation of the identified improvement strategies required the influence and buy-in from a person with the authority to actually implement the change. For one fleet where the environmental officer was the FleetWise representative, the actions identified in the fleet improvement plan were not implemented due to resistance from the fleet department. Following the learnings from other fleets this fleet is now in the process of obtaining senior management support to facilitate the collaboration between the environment and fleet teams.

6.6.2 Program insights

Fleet improvement plans should be developed by, or at least in conjunction with, the fleet manager and the person who is to be responsible for implementation. Organisation-wide adoption of an improvement plans is greatly enhanced by both endorsement from the CEO or senior management, and by linking the objectives of the fleet improvement plan to other internal organisational policies. Amending the template slightly to include a section for senior management sign-off would ensure that all sections were completed and realistic commitments and timelines set.

6.7 Case studies

Twelve months after the baseline assessment, participants underwent the same process of data collation and assessment to determine their first year results. Although the assessment was undertaken by the external facilitator on behalf of participants during the pilot program, the participants were able to complete the assessment themselves following their involvement in the program.

Participants were provided with an assessment report detailing the changes to their fleet's performance following implementation of improvements over the previous 12 months. They then worked with facilitators to compile case studies detailing their experiences.

The facilitator drafted case studies using the participants' assessment results and any observations of their fleet. Participants then shared their specific learnings and experiences for inclusion.

6.7.1 Assessment findings

In terms of the program objective to increase industry capacity, an important element is enabling fleets to collaborate among themselves and share their learnings and experiences. The case studies not only facilitated this but provided marketing collateral that participants could use. For example, Powercor, following nomination for the AFMA Fleet Environment Award, used information from their case study as supporting material; and Bayside City Council are to incorporate theirs in their annual sustainability report.

During the baseline assessment stage, a number of fleets were interested in how their fleet performed in relation to other participants. The case study pack, to be provided to participants, will provide a means for them to benchmark their performance against the other fleets.

6.7.2 Program insights

It is valuable for participants to feel that they are part of a group and to share experiences with their peers – both successes and shortcomings – in order to continue to build capacity across their organisation.

In addition to the case studies, group workshops where participants can get together and showcase their experiences would be beneficial if planned far enough in advance to ensure good attendance.

6.8 Future implementation considerations

The existing participants, following their success with their first twelve months of improvement actions are enthusiastic to continue participating in the FleetWise program, if it were to be rolled out as a formal program.

The original roll-out of FleetWise in Victoria was in line with the COAG objective for an eventual national roll-out, and was seen as the first step before partnering with NSW. However, in NSW FleetWise has since been absorbed into the NSW OEH Sustainable Advantage Program, which covers light and heavy vehicle transport, as well as a range of other industries.

Should the Department decide to continue FleetWise in a similar fashion to the pilot program – the following insights are from the experiences of the individual fleets, and the observations of the external facilitator, and are worth considering in any future implementation of the program.

- The target audience needs to involve the people who can implement the change (i.e. the fleet manager), and endorsement of participation or involvement from senior management is highly beneficial.
- The effect of staff turnover on program participation can be mitigated if multiple areas of the organisation are involved, and more so if there has been senior management endorsement.
- Use umbrella organisations. Use industry associations for communications to, and involvement of, their members – as was implemented in the latter stages of the pilot marketing.
- The current program architecture, roles and responsibilities worked well. Government ownership provides credibility, and having an external facilitator provides the technical capacity and resources to assist participants with their assessment and improvement implementation.
- A hybrid version of this model and the NSW online version would alleviate the time and resources required to undertake the assessment – mainly for the air quality score calculation.
- Participants were all interested in how they compared to other fleets, and what the experiences of the other fleets were. An option to expand on the ability to share learnings could be through an online portal where participants can share experiences and ask questions of the facilitator, and other participants can see the response as well as keep track of their performance. A way to provide motivation could be to include awards for ‘most improved’, ‘lowest intensity’ and the like. In addition, an annual event could be held where fleets could showcase their experiences and findings.
- Branding. Currently the Victorian FleetWise program has no ‘brand image’ and participants would like to be able to include something on their own websites to identify their participation – this would double as marketing for additional participants.
- It is important to provide participants with continual support to maintain their motivation and prevent them from feeling overwhelmed.
- A formal participant contract for fleets to sign that acknowledges that the Department is funding their participation and in exchange they are required to share their learnings, would aid in preventing organisations from disengaging due to the belief they no longer require assistance.

7 Conclusions

This paper provides a discussion of the key findings and insight from the Victorian FleetWise program. Three main conclusions arise from this review of the pilot program:

7.1 The program was widely valued by Industry

- Participant experiences with the program were positive; with all participants completing their one-year assessment reporting in the feedback survey results that they would (and have) recommend FleetWise to others (refer appendix B).
- All participants completing their one year assessment were happy with their results, and proud to showcase what they had achieved. One participant (Citipower & Powercor) was nominated for the AFMA "Environmental Fleet Award" and "Fleet Manager of the Year" as a result.
- The survey results indicated that all of the participants found all of the FleetWise tools either 'very useful' or 'somewhat useful' (refer appendix B). Additionally, seminar attendees who did not formally enrol in the program reported that they were appreciative of the information provided to them.
- The response to the program reflects well on the Victorian government, with industry appreciative of the supportive nature of the program, as opposed to regulations.

7.2 The program was effective in achieving its objectives

- Industry capability was greatly increased with all participants citing that they were more confident performing a fleet assessment after one year compared to their initial baseline assessment for the program. All fleets appreciated that reliable data is crucial for monitoring fleet performance, and all participants subsequently improved their data collection practices
- The four different improvement categories (procurement practices, alternative fuels and technologies, fleet management practices and driver behaviour) provided participants with a range of different strategies to investigate – ensuring that all participants, regardless of where they were in their improvement journey, had improvement strategies available to implement.
- The aggregate GHG emissions for the fleets completing their one-year assessment reduced by 149 tonnes (2%). A positive result given that the majority of the fleets' businesses grew and improvements were in place for less than 12 months before reassessed.
- The average GHG intensity of the aggregate fleet decreased by 11 grams CO_2-e per kilometre (5%), with all individual fleets improving their intensity - ranging from 2.9 to 24.1 grams CO_2-e per kilometre (up to 9%).
- The average air quality score (as determined by the *Green Vehicle Guide*) improved by 0.16 (3%) overall, suggesting a reduction in vehicle-related air pollution.

7.3 Minor amendments could make FleetWise even more effective

- Future implementation of the program should ensure that regular updating of the scenario modelling tool is continued, to include the latest available technologies and to incorporate updated results.
- The revamped marketing approach that highlighted the economic as well as the environmental benefits was more effective in reaching those not in an environmental role and should be continued.
- Any promotional material should publicise the achievements of the pilot.
- Leveraging the networks of industry associations and representative organisations assists with recruitment and promotion.
- A hybrid version of FleetWise using the current Victorian model and the online NSW model would alleviate pressure on support resources. An online portal for fleet discussions could enhance shared learnings, which was an important benefit to fleets.

7.4 There is ongoing demand from industry for this kind of program

- All participants have requested continued participation in FleetWise, and further enquiries regarding participation in the program were received after registrations were closed
- Decisions to participate in programs such as FleetWise require internal approval, the time for which can vary between organisations. As was the case for Warrnambool City Council, where the time between finding out about the program and receiving approval to join was in excess of nine months.
- Although starting slowly, the pilot developed momentum. With some efficient promotion the pilot could easily expand to a successful wide reaching program.

Consideration of the report findings indicates that the design and implementation practices of FleetWise are sound and will support a broader roll-out of the initiative in the future

Appendix A

Case studies

Bayside City Council Case Study

August 2013

1 Introduction

Bayside City Council participated in the pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to evaluate the usefulness of the FleetWise program.

2 About the organisation

Bayside City Council (BCC) is a Victorian municipal council located in the south-eastern suburbs, responsible for nearly 97,000 residents in the suburbs of Beaumaris, Black Rock, Brighton, Brighton East (part), Cheltenham (part), Hampton, Hampton East, Highett (part) and Sandringham.

Transport use by the Council and the community was identified in the Bayside Environmental Sustainability Framework as a target area to reduce environmental impact.

3 Nature of the fleet

As at 30 March 2012, 75 vehicles from the BCC fleet were analysed as part of the FleetWise program. These vehicles were estimated to produce approximately 361.5 tonnes of GHG emissions (CO_2-e) at an average intensity of 238.6 grams of CO_2-e per kilometre travelled.

The fleet includes a mix of light commercial vehicles (LCV) for the Local Laws and Amenity Protection units, with passenger vehicles for pool and employee use. In addition to the standard pool vehicles, employee allocated passenger vehicles are also available for use in the pool. The BCC fleet featured a number of LPG vehicles.

The Council lease their vehicles and the fuel usage was recorded by fuel cards.

4 Fleet improvement actions

The fleet management team implemented the following strategies over the 12-month period April 2012 – March 2013.

- BCC established a Fleet Policy including the council's objective to be Carbon Neutral by 2020 and for fleet decisions to reference the *Green Vehicle Guide*.
- BCC participated in the Victorian Electric Vehicle Trial, establishing a permanent recharge point within their infrastructure. BCC have trialled the Mitsubishi iMiev, Nissan Leaf, and Holden Volt.
- BCC improved accessibility of their IT server so that employees can work from home.
- Employees entitled to a vehicle as part of their package were encouraged into smaller, more fuel efficient models by the restructure of vehicle charges, which made the smaller vehicles more financially attractive to employees.
- Incorporation of direct injection and turbo charged vehicle options.
- BCC developed a Green Travel Plan, including the provision of myki cards for employee public transport use, and participation in global corporate challenges to encourage employee walking.
- Regular collaboration between the Fleet Administrator and the environment team on the environmental performance of the fleet and implementation of improvements.
- Fuel card users were educated in the importance of accurately allocating their usage.

BCC are also in the process of developing an internal eco-driving program. Implementation will begin in 2014.

5 Results

A follow-up assessment of the emissions performance of the Bayside City Council fleet was undertaken in March 2013.

At 31 March 2013, Bayside City Council's fleet had grown to 84 vehicles, with 45 vehicles replaced since 31 March 2012.

Analysis of the fuel and odometer data showed that total kilometres travelled by the fleet increased by 22.6%, **however due to improved fleet efficiencies** total fuel use increased only by 5.7% and the overall GHG emissions only by 11.9%*.

The assessment revealed **an 8.7% improvement in GHG intensity** (20.8 grams of CO_2-e per kilometre) and an average air quality score improvement of 0.49.

**The electric vehicles were not able to be included in the results - as such the results are expected to be understated.*

6 Summary and learnings

The experience of Bayside City Council in the FleetWise program gave rise to the following observations which are relevant for all program participants.

- Linking FleetWise to the Green Travel Plan and having the executive stamp of approval helped in the implementation of improvements.
- The financial incentives for employees to choose more fuel efficient cars in their packages was an effective strategy, in that while the option to choose a less efficient vehicle was still there, employees often chose the more affordable option.
- The direct injection turbo charged vehicles allowed smaller, fuel efficient engine vehicles to be procured without sacrificing the vehicle power.
- The FleetWise Scenario Model allowed potential strategies to be compared in order to focus on strategies that provided the most benefit.
- Bayside City Council involved both the fleet management and environmental team in FleetWise participation. Collaboration between the two divisions allowed for greater scope of improvement implementation and meant that more could be achieved.
- Educating drivers on the appropriate use of fuel cards improves the accuracy of the data.

"FleetWise provided a tool to assist with proactively reducing fuel use, emissions and fleet costs"

Kerryn Greshner

Fleet Administrator
Bayside City Council

"FleetWise has helped to inform fleet procurement decisions and behaviour change programs"

Leanne Stray

Environmental Sustainability Officer
Bayside City Council

CitiPower Pty & Powercor Australia Ltd Case Study

April 2013

1 Introduction

CitiPower Pty & Powercor Australia Ltd participated in a 12-month pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to evaluate the usefulness of the FleetWise program.

2 About the organisation

CitiPower & Powercor are two of Victoria's five privately managed electricity distributors owned by Cheung Kong Infrastructure Ltd and Power Assets Holdings Ltd (listed on the Hong Kong Stock exchange) and Spark Infrastructure (listed on the Australian Stock Exchange).

CitiPower & Powercor operate as one to manage the poles, wires and equipment delivering electricity to over a million homes and businesses in metropolitan Melbourne and throughout central and western Victoria.

3 Nature of the fleet

As at 31 December 2012, CitiPower & Powercor's light vehicle fleet included 504 vehicles. These vehicles were estimated to produce approximately 4354 tonnes of GHG emissions (CO_2-e) at an average intensity of 255.9 grams of CO_2-e per kilometre travelled.

About 30% of the light vehicle fleet were light commercial vehicles used to carry equipment to maintain power poles, which can be located at remote locations around the State.

CitiPower & Powercor use LeasePlan to help manage their light vehicle fleet. As part of this process, LeasePlan highlight exceptional vehicles (20% variation to the norm) for Citipower & Powercor to investigate. Additionally, CitiPower & Powercor keep abreast of new technology as it becomes available in the market.

4 Fleet improvement actions

The company implemented the following fleet strategies over the January 2012 – December 2012 period.

- Amended the procurement policy to consider GHG emissions and fuel efficiency, in order to formalise their sustainability objectives within the fleet while maintaining vehicles as fit for purpose.
- Increased the number of diesel and hybrid vehicles in the fleet, when appropriate.
- Built their own fleet data module within SAP fleet to capture data on all vehicles used within the period including retired ones. (This was able to be used for the baseline period and the first year data.) They structured a specific 'FleetWise' report that would extract the required data for a set period.
- Implemented a monthly fuel validation process, where the data system would highlight potentially erroneous data based on historical litres per kilometre and provide corrections when needed.
- Educated drivers on the importance of correctly recording odometer readings.
- The fleet manager shared the findings with the environmental team to facilitate internal collaboration.

Some initiatives for potential implementation next year are:

- Provide all drivers with an eco-tips factsheet, to be stored in each vehicle as a reminder of how to drive more safely and more fuel efficiently.
- Continuing to remove older less efficient vehicles.
- Looking into the new LPi technology.

5 Results

A follow-up assessment of the emissions performance of the CitiPower & Powercor fleet was undertaken in March 2013.

In line with the growing business, the total light vehicle fleet grew in size to 597 vehicles (as at 31 December 2012), and the kilometres travelled were 3% higher than in the baseline year. The larger fleet included an additional four hybrid vehicles and 69 diesel vehicles.

The assessment revealed a reduction in overall GHG emissions by 63.6 tonnes (1.5%), and a fleet-wide **improvement of 11.5 grams of CO_2-e per kilometre** (4.5%). This reduction was attributable to the switch to more fuel-efficient vehicles and to driver training strategies.

6 Summary and learnings

CitiPower & Powercor started the program by improving their data collection system, and amending their procurement policy. By using this policy to change the structure of their fleet, they will continue to achieve emissions reductions in the years ahead.

Participation in the FleetWise program gave rise to the following observations, which are relevant for all program participants.

- A more fuel efficient fleet is both environmentally and economically beneficial. Despite the increase in total mileage travelled, CitiPower & Powercor purchased 4.6% less fuel. There was a negligible premium on the capital purchase.
- Ensuring vehicles are fit for purpose optimises the investment in them and can improve efficiency.
- Ensuring that all relevant data is continually validated and located in one place allows for a much easier and streamlined data collation process and provides more reliable results.
- Awareness-raising via a driver eco-tips factsheet is a low cost alternative to implementing a formal eco-driver training program. This measure can immediately reach a large number of drivers and increase their awareness of the importance of efficient driving, and what actions they could take individually.

'FleetWise provided us with the tools and processes to extrapolate and interpret our fleet data to enable us to capture and monitor the CO_2-e emissions of our light vehicle fleet'.

Ron Carr, Light Vehicle Fleet Manager, CitiPower Pty & Powercor Australia Ltd

Eastern Health Case Study

April 2013

1 Introduction

Eastern Health participated in a 12-month pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to evaluate the usefulness of the FleetWise program.

2 About the organisation

Eastern Health is a metropolitan public health organisation providing emergency, medical and general health care to eastern Melbourne.

It employs more than 8300 people in seven hospitals, four residential care facilities, a number of mental health facilities, two state-wide services and a number of community-based facilities.

3 Nature of the fleet

At 31 March 2012, Eastern Health's fleet included 277 vehicles. These vehicles were estimated to produce approximately 740 tonnes of GHG emissions (CO_2-e) at an average intensity of 236.5 grams of CO_2-e per kilometre travelled.

The average annual kilometres of the fleet are relatively low, so fleet improvements that involve a cost premium (e.g. hybrids) need to be evaluated to determine whether they can provide a return on investment.

Prior to enrolling in the FleetWise initiative, Eastern Health had established an internal business case for attaching GPS units to vehicles to undertake a fleet utilisation review.

As a public health organisation the choice of fleet vehicles for Eastern Health is limited to those on the Victorian Government's approved vehicle list.

4 Fleet improvement actions

Eastern Health implemented the following fleet strategies over the April 2012 – March 2013 period.

- A fleet utilisation review (supported by GPS data location data monitoring) in order to remove unnecessary vehicles and to ensure that those included in the fleet were fit for purpose.
- An online vehicle booking system that included 'service due' notifications.
- Phasing out of older vehicles within the fleet.
- In collaboration with the Sustainability Manager the Fleet Manager developed a power to weight ratio spreadsheet to be used for vehicle procurement decisions. The spreadsheet allowed comparison of like for like vehicles against a range of criteria including power to weight ratio, air pollution, and fuel economy.*

**Air pollution and fuel economy were compared based on the relevant scores in the* Green Vehicle Guide.

Some initiatives earmarked for implementation next year are driver education, monitoring tyre pressure, continued replacement of older vehicles, replacement of all 6-cylinder wagons with 4-cylinder vehicles and the procurement of vehicles using small capacity turbocharged petrol engines.

Following the Victorian Government's decision to promote Australian made vehicles within the State fleet when appropriate, Eastern Health will also be following this policy where Australian vehicles are fit for purpose and meet the environmental requirements.

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5 Results

A follow-up assessment of the emissions performance of the Eastern Health fleet was undertaken in April 2013The fleet utilisation review had removed 18 vehicles from the fleet. However, due to the nature of the organisation the total kilometres travelled had increased by 5%. This growth was due to the ambulatory program expanding, and the shuttle bus that was in operation for staff while one of the hospitals was being renovated.

The assessment revealed a slight increase (3.5%) in the total GHG emissions of the fleet, but an **improvement in GHG emissions intensity of 1.7%** to 232.4 grams of CO_2-e per kilometre travelled. The overall increase could be attributable to the increase in kilometres, offset by the improvement in the efficiency of the fleet by the strategies implemented.

There was a significant improvement in the efficiency of light commercial vehicles in the fleet, but since no new vehicles were purchased in this segment of the fleet, this improvement has been attributed to the removal of the older vehicles.

The assessment also revealed an improvement in the average air quality score of 0.09.

6 Summary and learnings

Eastern Health has started the program by right-sizing their fleet, putting in place the online booking system, and amending their procurement policy. These internal measures have established good processes for the future, and it is expected that the energy efficiency of the fleet will improve further next year.

The experience of Eastern Health in the FleetWise program gave rise to the following observations which are relevant for all program participants.

- Optimising fleet size (number and type of vehicle) is economically beneficial as it can reduce the number of vehicles purchased and associated maintenance, and it enables better use of the remaining fleet.
- Growing businesses may give rise to increased kilometres, which will increase total emissions. Monitoring emissions intensity can provide a more accurate measure of how well efficiency improvement measures are working.
- There can be a trade-off between air quality and GHG emissions. For example, diesel vehicles may have a better GHG emissions intensity than a petrol vehicle, but may be worse in terms of air quality. For this reason it is very important to have clear objectives and priorities guiding the fleet strategy.
- As would be the case with most organisations, financing fleet improvements is a challenge. The vehicle scoring spreadsheet is an example of a low-cost initiative that can be effective in improving the fleet.
- Eastern Health was fortunate in that their internal database was already set up to provide the fleet manager with easy access to all the information required to monitor the performance of their fleet for the FleetWise program. Reliable data is crucial to measuring current practice and for tracking any improvements. Establishing these systems might be the first step toward better fleet performance.

‘The key is access to good baseline data’.

Paul Hammond, Vehicle Fleet Manager, Eastern Health

Gippsland Lakes Community Health Case Study

June 2013

1 Introduction

Gippsland Lakes Community Health (GLCH) participated in a pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to evaluate the usefulness of the FleetWise program.

2 About the organisation

GLCH is a high-profile health service provider in East Gippsland with a work force of 300 staff and 500 volunteers.

It provides services in the following areas: Aged Care, Clinical and Nursing, Community Health, Corporate Services, Family Youth and Children, Health Promotion and Koori Health.

3 Nature of the fleet

The GLCH fleet operates in regional Victoria, based in Lakes Entrance, Bairnsdale, Bruthen and Paynesville.

At 30 June 2012, the GLCH fleet included 54 vehicles, involving a mix of passenger and light commercial vehicles.

These vehicles produced approximately 246.6 tonnes of GHG emissions (CO_2-e) at an average intensity of 208.6 of CO_2-e per kilometre travelled.

4 Fleet improvement actions

GLCH implemented the following fleet strategies over the June 2012 – June 2013 period.

- Ensured vehicles were fit for purpose. This included downsizing individual vehicles by replacing 6-cylinder vehicles with 4-cylinder vehicles where possible.
- Continued to look at introducing diesel vehicles into their fleet where appropriate.
- Encouraged and raised awareness of car sharing for meetings – particularly between two sites (Lakes Entrance and Bairnsdale).
- Educated drivers on the importance of appropriate use of fuel cards, and the difference between different octane levels.

In the next 12 months GLCH is planning on reducing the overall size of its fleet and downsizing individual vehicles where appropriate.

5 Results

A follow-up assessment of the emissions performance of the GLCH fleet was undertaken in June 2013.

At 30 June 2013, the GLCH fleet included 55 passenger and light commercial vehicles, nine of which were replaced in the assessment period.

The total annual distance travelled by the fleet increased by 28% on the fleet baseline year, resulting in a 20% increase in total fuel consumption and 26% growth in total GHG emissions (63 tonnes of CO_2-e).

The assessment revealed that improvements implemented under the FleetWise program resulted in **a 2% improvement in GHG emissions intensity** (203.8 grams CO_2-e per kilometre travelled), and a 0.22 improvement in the average air quality score.

Note that as GLCH joined FleetWise after the pilot inception, their results are based on a shorter implementation period. As such it is expected that the full benefit of their improvements will be observable in the subsequent assessment period.

6 Summary and learnings

The experience of GLCH in the FleetWise program gave rise to the following observations which are relevant for all FleetWise participants.

- CEO endorsement resulting in support for behavioural/cultural changes required when implementing improvement strategies.
- The promotion of car sharing between sites was a simple and effective strategy, with the majority of staff now sending emails out to car share prior to travelling.
- Communication across different divisions when selecting vehicles ensures staff co-operation and a mutual understanding of vehicle selection that is fit for purpose.
- Geographical and operational requirements should be taken into consideration when selecting vehicles and implementing policies. For example: safety considerations associated with wildlife on the road, suitable vehicles for country terrain, and fuel availability – GLCH found a limited to no provision of E10 in their areas.

Ensure consideration is given to whole of vehicle costs when selecting vehicles. For example, GLCH found that while one of their diesel vehicles was fuel efficient, it incurred significant servicing costs due to an expensive filter system, thus impacting the overall savings of the vehicle.

- Growth in business operations led to increased mileage making it important to ensure efficiency is optimised to mitigate the potential increased emissions and fuel costs associated with increased travel.
- A good data set is key to accurate results. GLCH encountered some difficulties with fuel cards and fleet data not being captured or being incorrectly recorded (e.g. additional fuel being purchased with personal credit cards and not being recorded against the mileage) – as such, assumptions needed to be made in the assessment. Drivers have since been informed of the importance of properly using fuel cards and GLCH is looking to minimise the occurrence of uncaptured data.

'I found the whole exercise quite beneficial. I was worried about the additional work initially, but the findings speak for themselves. It really helps to look at your fleet on an annual basis'.

Wayne Dahan, Fleet Manager, Gippsland Lakes Community Health

MFB Case Study

May 2013

1 Introduction

Metropolitan Fire and Emergency Services Board (MFB) participated in a 12-month pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to also evaluate the usefulness of the FleetWise program.

2 About the organisation

MFB is a statutory authority constituted under the Metropolitan Fire Brigades Act providing fire and rescue services to metropolitan Melbourne.

The area covered is more than 1,000 square kilometres, four million residents, workers and visitors, and billions of dollars of assets and infrastructure.

MFB operates out of 47 stations across five districts within Melbourne, has a training facility in Burnley, and a head office located in the CBD.

3 Nature of the fleet

As at 31 May 2012, MFB's light vehicle fleet included 196 vehicles. These vehicles were estimated to produce approximately 959.6 tonnes of GHG emissions (CO2-e) at an average intensity of 274 grams of CO2-e per kilometre travelled.

MFB's light vehicle fleet comprised of 20% light commercial vehicles (utes and vans), and the remainder passenger vehicles, including a number of hybrid vehicles.

4 Fleet improvement actions

MFB planned to implement the following fleet strategies over the May 2012 – April 2013 period.

- replacement of approximately four petrol vehicles with gas or hybrid equivalent (utes and a sedan)
- promotion of ride to work day
- MYKI cards available for travel between sites during work hours

5 Results

A follow-up assessment of the emissions performance of the MFB fleet was undertaken in May 2013, and at 31 May 2013, the MFB fleet had grown and included 209 passenger and light commercial vehicles.

The total annual distance travelled by the fleet increased by 2% on the fleet baseline year, however the total fuel use decreased slightly by 0.2%, and the total GHG emissions increased by 1% (11 tonnes of CO2-e).

The assessment revealed that improvements implemented under the FleetWise program resulted in **a 1% improvement in GHG emissions intensity** (271.1 g CO2-e per km travelled), and a 0.07 improvement in the average air quality score.

6 Summary and learnings

The experience of Metropolitan Fire Brigade in the FleetWise program gave rise to the following observations which are relevant for all FleetWise participants.

- Having a fast, reliable public transport between major office sites and offsite meeting venues in the inner city can make MYKI attractive to senior staff.
- Vehicle supply restrictions can mean opportunities are missed. MFB's preferred local manufacturer was unable to produce LPG vehicles during the year. Vehicles to be changed over at this time were therefore replaced with equivalent petrol vehicles.
- Resale value is still a significant factor in vehicle choice. Resale of hybrid vehicles was less than the fuel savings over the three year life of the vehicle.
- Fleet improvement strategies need to be owned by both the fleet manager and operational management. Without the accountability for environmental targets by these roles, opportunities are limited. For the next term MFB has assigned accountabilities to these roles and incorporates quarterly progress reporting to the Executive Leadership Team against the targets.
- The hybrid vehicles within the fleet were recording an average fuel consumption rate of 8.1L/100km

"Participating in this program pilot helped us better understand the challenges and opportunities available to meet our transport greenhouse gas emissions targets."

Miriam Powell/ Caroline Van Oosterom, Environmental Leadership Co-ordinator, Metropolitan Fire Brigade

Noweyung Case Study

June 2013

1 Introduction

Noweyung participated in a pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to evaluate the usefulness of the FleetWise program.

2 About the organisation

Noweyung is a not-for-profit disability enterprise providing a range of education training, community development, pre-employment, employment and advocacy services to their adult service users.

Noweyung operates out of Bairnsdale and Orbost servicing the entire Gippsland area.

3 Nature of the fleet

Noweyung's fleet operates in regional Victoria, providing fleet vehicles to support people who have a disability. This is through community access and inclusion, training and development, specialised one-on-one support services, supported accommodation services, plus for supported employees who work across three Australian Disability Enterprises operations. Noweyung also operates three vehicles as part of the management team's remuneration packages.

At 30 June 2012, Noweyung's fleet included 16 vehicles, involving a mix of passenger and utility vehicles. These vehicles were estimated to produce approximately 125 tonnes of GHG emissions (CO_2-e) at an average intensity of 288 grams of CO_2-e per kilometre travelled.

4 Fleet improvement actions

Following the initial FleetWise assessment, and becoming aware of looking at ways of improving the Noweyung fleet environmental performance, Noweyung chose to implement the following fleet strategies over the June 2012 – June 2013 period.

- A review of current and future fleet needs in consultation with the *Green Vehicle Guide*. Fleet needs were balanced between support needs required and the best green guide vehicle to support those needs within the allocated budget. Accordingly, the procurement strategy became to purchase greener vehicles where possible and practical to do so, and to procure smaller motor vehicles, or better performing vehicles green guide wise, if appropriate for support needs.
- Downsize vehicles where appropriate. Noweyung replaced a 3.8 litre people mover with a 2.2 litre wagon.
- Procure turbo charged vehicles when appropriate, to allow a smaller engine to provide the same power and performance as a larger engine. Noweyung replaced their 3.0 litre diesel utes with 2.2 litre turbo diesel utes.
- Noweyung replaced a 2.4 litre Toyota Camry with a new Toyota Prius hybrid.

5 Results

A follow-up assessment of the emissions performance of the Noweyung fleet was undertaken in June 2013. At 30 June 2013, Noweyung's fleet included 16 vehicles, involving a mix of passenger and utility vehicles, with seven having been replaced since 30 June 2012.

The total kilometres travelled by the fleet had reduced by 5%. However, due to the improved fleet efficiencies, the total fuel use had reduced by 13% (which equated to a 6.3% fuel cost reduction).The assessment revealed a reduction in the total GHG emissions of the fleet by 16.2 tonnes of CO_2-e (13%) in line with the reduction in total fuel use, and an **improvement in GHG emissions intensity of 8%** to 263.7 grams of CO_2-e per kilometre travelled.

The assessment also revealed an improvement in the average air quality score of 0.24.

6 Summary and learnings

Noweyung has started the program by amending their procurement strategy to incorporate emissions ratings when purchasing a new vehicle. This internal practice will ensure that they continue to select green fit for purpose vehicles and will continue to benefit from fuel and emission savings.

The experience of Noweyung in the FleetWise program gave rise to the following observations which are relevant for all program participants.

- The 2.2 litre wagon provided the same support services as the 3.0 litre people mover, while achieving a 2.2 litres per 100 kilometres efficiency improvement and better meeting the needs of the people they were supporting.
- The turbo charged utes performed the same as their predecessors power-wise, while using an average of one litre less fuel per 100 kilometres.
- The hybrid vehicle within their fleet achieved a fuel consumption rate of 5.2 litres per 100 kilometres and was the most fuel efficient vehicle within the fleet. Hybrids are known to be most beneficial when operating in urban areas where they can capitalise on their regenerative braking. However, this vehicle was also used for longer regional trips and still recorded the low fuel consumption rate.
- Some specific driver training was required for the new hybrid vehicle. Additionally, minor ongoing driver training through each relevant dealership for new vehicles occurs and Noweyung drivers constantly have input back to management on the performance of vehicles they use. This is to ensure there is no compromise on the support services for the people they support.
- Noweyung's CEO was the primary contact for participation in the FleetWise program. Having participation endorsed at a senior level allows for easier implementation of improvement strategies.
- Noweyung was fortunate in that they were already regularly recording their monthly fleet details and accordingly did not have trouble compiling their FleetWise data sheet. Reliable data is crucial to measuring current practice and for tracking any improvements.
- In comparison to the other participating fleets, Noweyung was a relatively small fleet. However, they managed to make a large reduction, showing that no matter how small the fleet, big improvements and savings can be made.

'Noweyung's Board and Management have been delighted with progress made by its fleet through the FleetWise program. Environmental fleet greenhouse gas emission reductions were achieved, generally higher than our targets, without reducing any service support or employment services. This program strongly supports Noweyung's Environmental Policy.'

'Noweyung has actively advocated with other community services to participate in the FleetWise program'.

Ernie Metcalf, CEO, Noweyung

SNAP Case Study

August 2013

1 Introduction

SNAP Gippsland Inc. (SNAP) was one of twelve organisations participating in a pilot of the Victorian FleetWise program.

The purpose of the pilot was twofold: to assist participating organisations improve the energy efficiency of their fleets, and to also evaluate the usefulness of the FleetWise program.

2 About the organisation

SNAP is an incorporated non-profit organisation governed by a community managed Board of Governance that provides Psychosocial Rehabilitation and Recovery Services to adults with a serious, enduring mental health problem.

SNAP delivers outreach service in the Shires of South Gippsland, Bass Coast, Wellington and East Gippsland and has service outlets in Bairnsdale, Sale, and Leongatha.

3 Nature of the fleet

SNAPs fleet operate within regional Victoria and staff deliver outreach services to rural and remote communities.

SNAP's participation extended to its entire light vehicle, which at 30 June 2012, included 15 passenger vehicles, (14 leased and one owned).

These vehicles were estimated to produce approximately 47.7 tonnes of GHG emissions (CO2-e) at an average intensity of 206.1 grams of CO2-e per kilometre travelled.

4 Fleet improvement actions

Following the initial FleetWise assessment, SNAP chose to implement the following fleet strategies over the July 2012 – June 2013 period.

- Remove any unnecessary vehicles from the fleet
- Replace vehicles with more fuel efficient alternatives based on the green vehicle guide recommendations
- Reducing the need for travel where possible (ie route optimisation, car pooling)

5 Results

A follow-up assessment of the emissions performance of the SNAP fleet was undertaken in July 2013.

At 30 June 2013, SNAP's fleet included 15 passenger vehicles, all of which except for one were new.

The total kilometres travelled by the fleet had reduced by 33% and the fuel use by 34%.

The assessment revealed a reduction in the total GHG emissions of the fleet by 16.5 tonnes of CO2-e (35%) in line with the reduction in total fuel use, and an **improvement in GHG emissions intensity of 1.8%** to 202.4 grams of CO2-e per kilometre travelled.

The assessment also revealed an improvement in the average air quality score by 0.75.

6 Summary and learning's

The experience of SNAP in the FleetWise program gave rise to the following observations which are relevant for all program participants.

- Reducing the kilometres travelled directly correlates with less fuel being consumed. By reducing the amount of travel undertaken by their fleet SNAP was able to reduce their fuel consumption by a massive 34%.
- SNAP's CEO led the participation in the FleetWise program. Having participation endorsed at a senior level allows for easier implementation of improvement strategies and continuity of participation.
- Newer vehicles benefit from improved fuel efficiencies due to the continual advancements in automotive technology. Leasing their vehicles meant that SNAP was able to easily upgrade their whole fleet to capitalise on this.
- In comparison to the other participating fleets, SNAP was a relatively small fleet – however they managed to make a large reduction, showing that no matter how small the fleet big improvements and savings can be made

"The opportunity to participate in the FleetWise Program, which was presented to me by Noweyung LTD, has meant that SNAP looked very closely at its fleet and its impact on the environment. By making small changes such as route optimisation for the case loads of staff (without reducing service) and upgrading our lease vehicles we have achieved huge reductions in kilometres travelled, fuel usage and costs."

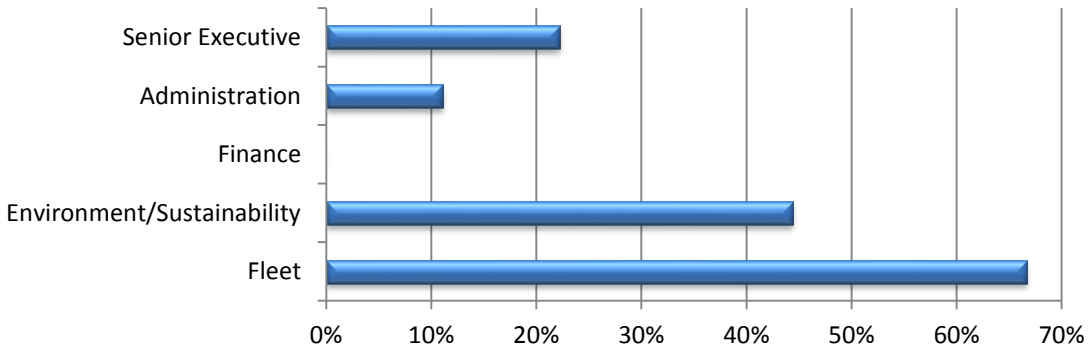
Chris McNamara, CEO, SNAP

Appendix B

Survey Results

Survey Monkey was used to gather feedback from participants following the completion of their one year assessment and case study. The results from these were used in evaluating the different program elements. The questions and results are as follows:

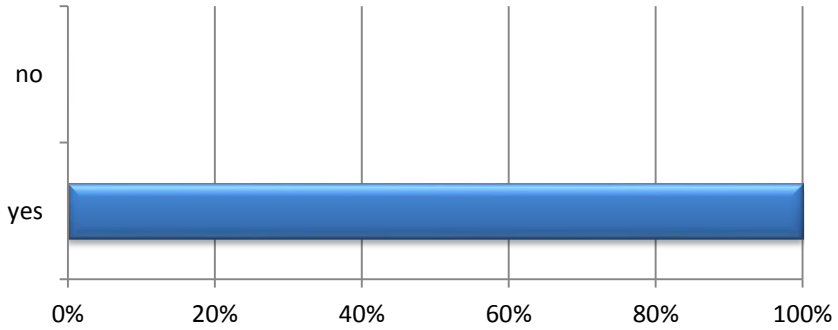
What areas from your organisation have been involved in the FleetWise program?



What motivated your organisation to participate in FleetWise?

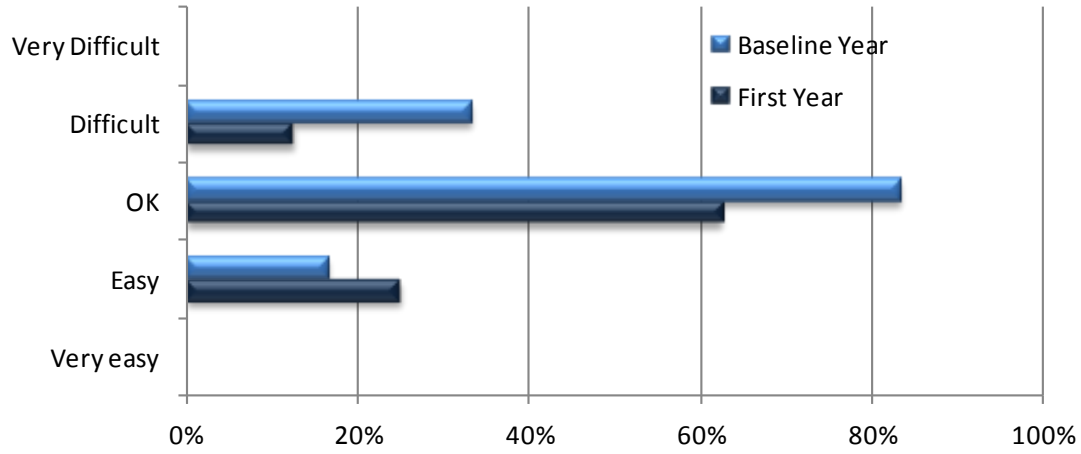
Answers included environmental motives, fuel efficiency improvements, reducing costs, and benchmarking against other fleets.

Would you recommend FleetWise to other organisations?

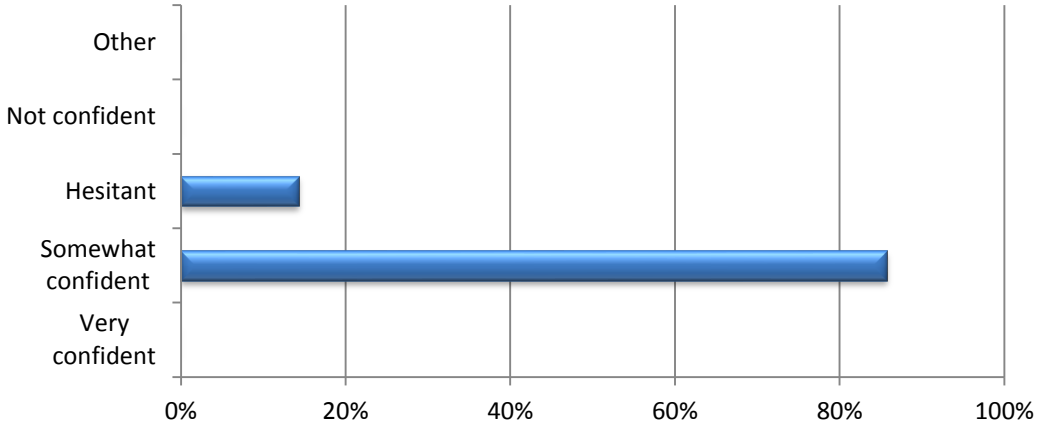


How did you find the data collation process?

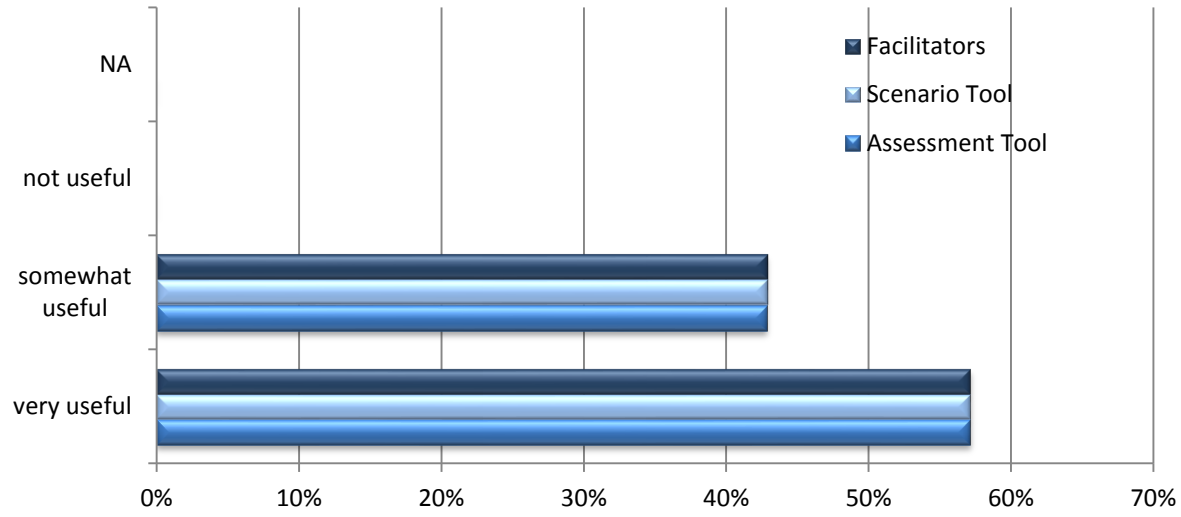
This graph shows that participants found the data collation process easier the second time around.



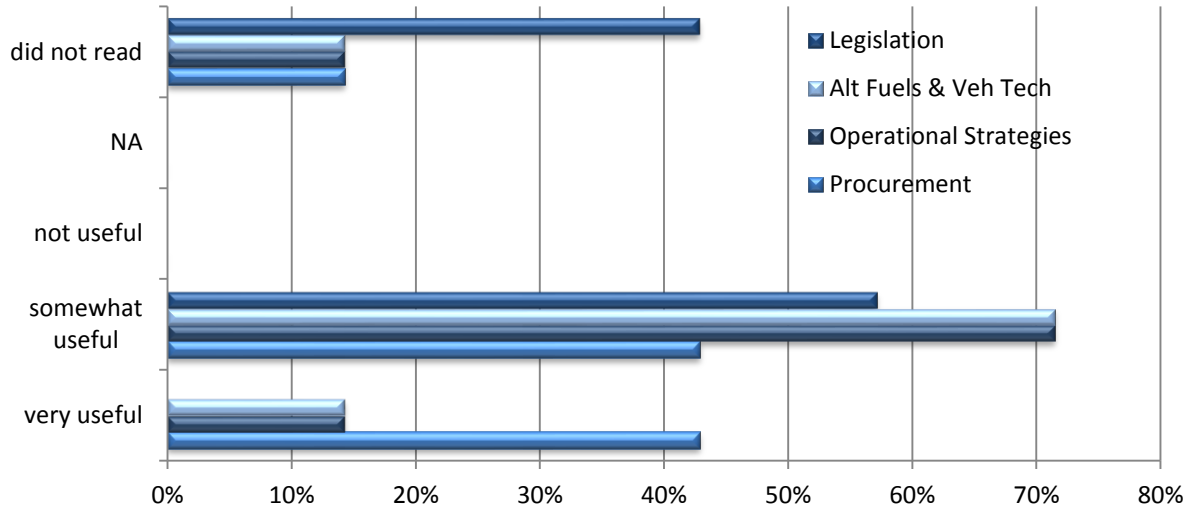
Did you leave the workshop feeling confident in your ability to use the FleetWise Scenario and Assessment Tools?



How useful did you find the FleetWise tools?

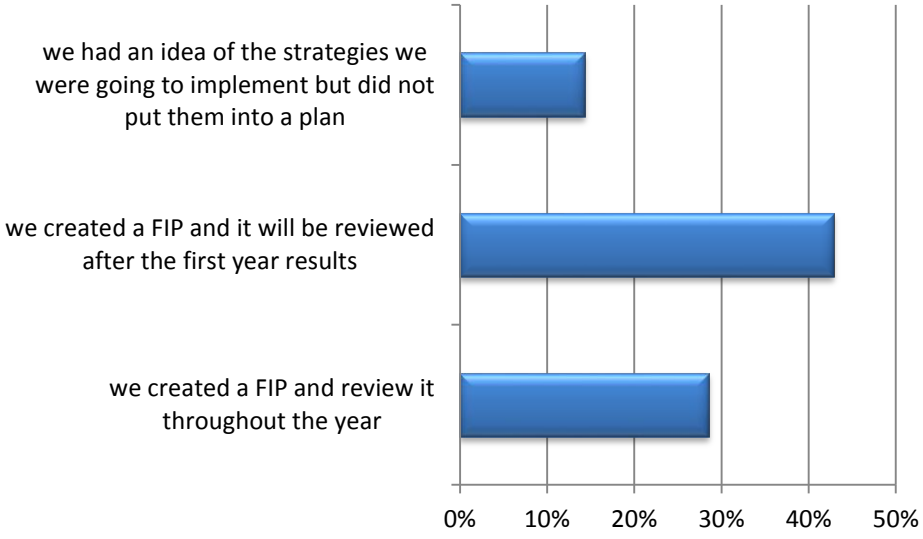


How did you find the knowledge pool documents?



While a couple of participants had not read all or one of the knowledge pool papers – those that had found them useful. The participant who had not read any of them – had instead sought information directly from discussions with the facilitators.

Did your organisation create a FIP and is it reviewed regularly?



How has participation influenced your fleet management