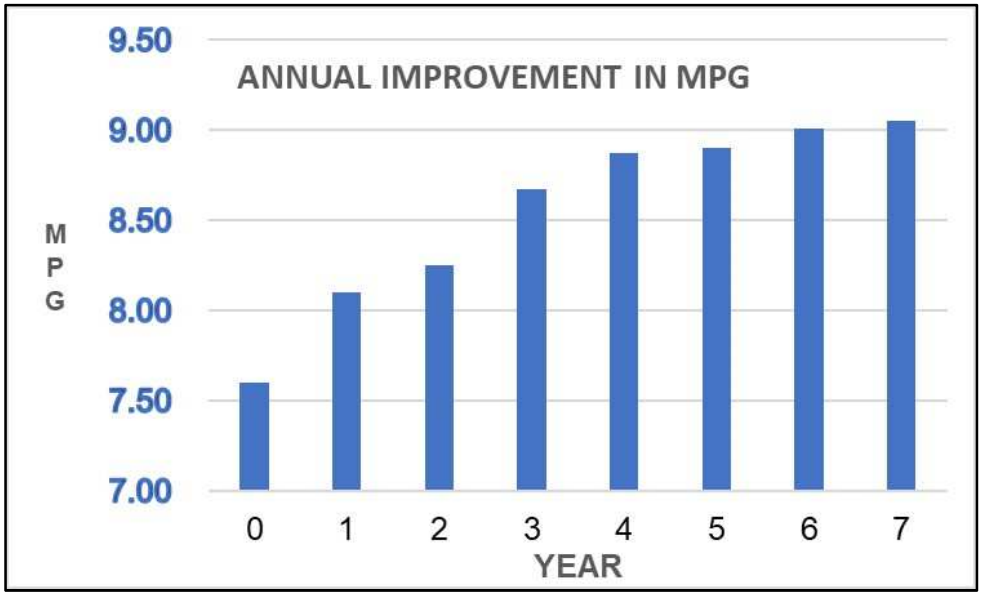
19.1% IMPROVEMENT FLEET SIZE 650+

A 19.1% improvement in fuel consumption for a fleet of more than 650 vehicles operating at weights up to 44 tonnes was achieved over seven years. This was a major project examining all aspects of the fleet fuel consumption. The company – Somerfield – is now owned by the Co-operative Group. The scale of the fleet operations added a certain element of complexity as it consisted of fourteen Regional Distribution Centres (RDCs) and one National Distribution Centre (NDC) supplying 2,500 stores. Transport assets consisted of 646 tractor units plated at 31,000 kg for distribution work and 44 tonnes for trunking work with 1,250 semi-trailers. The trailers were split 50:50 between ambient and composite types. There were also 40 rigid vehicles. The core fleet travels 56,000,000 miles annually.

Chart 1 below shows the year on year improvement. The baseline fuel consumption was 7.60 miles per gallon (MPG).

Chart 1 Large Fleet year on year improvement



The first step was to develop a fuel consumption management system that produced accurate and timely data. When this was completed and the baseline figure established a complete review of the fleet was undertaken. This review focused upon the vehicles, mainly their configuration including powertrain, the drivers and their fuel-efficient driving skills and the operational profile of each of the centres including the geographical conditions.

Improvements in fuel efficiency were identified and fell into three groups. Firstly, short term, with some almost immediately. Secondly, medium term, which would take up to two years to implement and involved also conducting research and evaluating products at a test-track. Thirdly, long term, which could take up to four years, which

was due to the life cycle of the tractor units. The rigid vehicles were a smaller group and their percentage of the annual fuel consumption so small that obviously the focus had to be on the tractor units. Semi-trailers were operated for ten years. The individual year on year improvements can be seen in Table 1 below. The improvement is shown in both MPG and as a percentage.

Table 1 Year on Year Improvement in Fuel Consumption

YEAR	MPG	IMPROVEMENT	IMPROVEMENT %
0	7.60		
1	8.10	0.50	6.6%
2	8.25	0.15	1.9%
3	8.67	0.42	5.1%
4	8.87	0.20	2.3%
5	8.90	0.03	0.3%
6	9.01	0.11	1.2%
7	9.05	0.04	0.4%
		1.45	**19.1%**

Key fuel saving and emission reduction interventions introduced included.

- Introduction of regional fuel champions.
- Identify and investigate instances of poor fuel consumption.
- A safe and fuel-efficient driver training programme.
- A driver education programme.
- Individual and site competitions introduced.
- A complete review of vehicle configuration especially powertrain.
- Moving some tractor units between distribution centres where their current specification was more suitable and fuel efficient.
- Evaluating interventions including aerodynamic aids and fuel-efficient tyres at the Motor Industry Research Association (MIRA) Proving Ground. Now Horiba MIRA.
- Detailed specification of new tractor units taking into account where they were to be located.
- Detailed evaluation of new vehicles from manufacturers as part of the procurement process in the Whole Life Costing analysis.

The list above is not exhaustive. This programme took seven years to complete and the financial savings began almost immediately. A lot of the interventions that were introduced had no cost, in that the equipment was simply used differently. In other cases, it was merely a matter of spending money more wisely rather spending more money.