#### Timo Thornton, Account Manager

# SCS Speed Check Services

#### **Reduction in CO2 Emissions with SPECS Average Speed Enforcement**



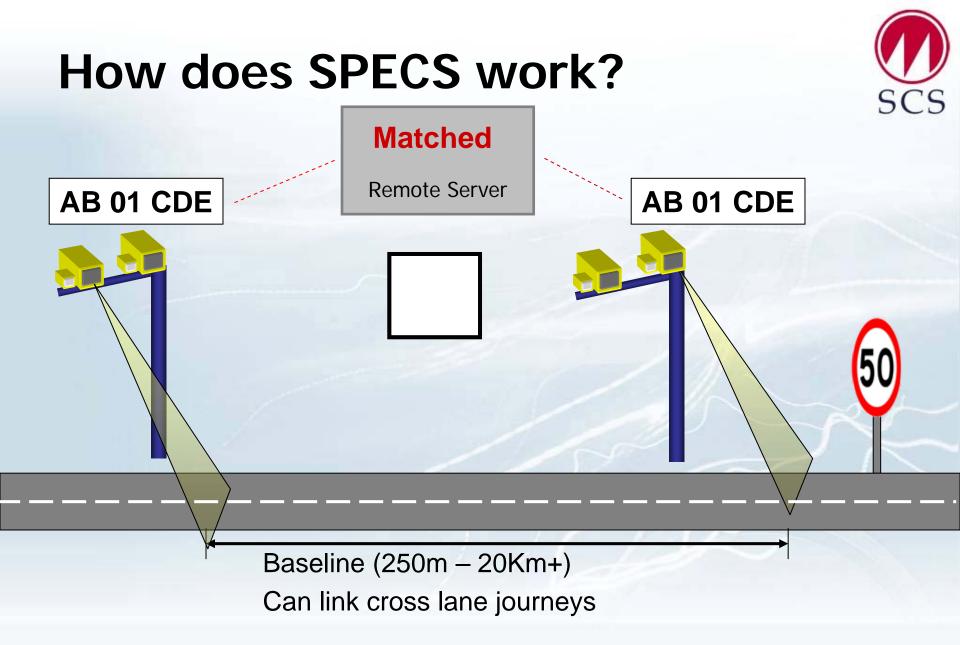


#### **Overview**



- 1. What is SPECS?
- 2. The 'known' SPECS benefits
- 3. Climate change & the environment
- 4. Changing driver behaviour
- 5. Fuel consumption and CO<sub>2</sub> emissions
- 6. True savings likely to be higher
- 7. SPECS<sup>3</sup>







#### The 'known' SPECS Benefits



- Reduction in deaths and serious injuries Typically 60%.
- Safer environment for road workers Over 200 roadworks installations.
- Compliance throughout the 'zone' Not just at camera locations.
- Smoother traffic flows Reduction in congestion.
- High level of driver compliance Fewer tickets issued.
- Fewer tickets issued Lower enforcement costs.
- Less 'revenue' raised Greater public acceptance.



## Climate Change & the Environment



- Passenger Cars are responsible for 13% of UK CO<sub>2</sub> emissions.
- Other sectors are reducing CO<sub>2</sub> emissions, transport is still rising.
- UK pledged to reduce CO<sub>2</sub> emissions by 60% by 2050.
- Road transport could double by 2050.
- Most current alternative fuels have CO<sub>2</sub> emissions upstream.
- Policy should encourage reduction in fuel use.

(The King Review of low-carbon cars, 2008)





## Changing Driver behaviour



#### **Public Information**

- 10 tips to help Protect our environment by using fuel efficiently
  - Regular servicing & oil level checks
  - Check tyre pressure monthly
  - Remove unnecessary weight
  - Close your windows, especially at speed & remove empty roof racks
  - Don't use air-con. unnecessarily
  - Start engine just before driving off/ turn off engine when stationary
  - Drive smoothly at reasonable speeds
  - Change up gears as early as possible
  - Try to anticipate traffic flow
  - Consider car sharing



The way you drive is not only impostant for you your families and others, it also matters to our environment. We transpoon retroducts industry and the farageon Commission after efficient driving to s to help you in duce fuel consumption and contribute to discover and sale: the styles, we hope you will find these tips helpful.

EU Commissioner by Energy

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#### 10 tips to help you drive more efficiently

- keep your car well serviced and check the oil level regularly. Consulty maintained cars can operate more efficiently and help
- Check your type pressure every month. Under inlated tyres car
- Remove unnecessary weight from your boot or back seats. The heavier the car, the harder the engine has to work and the more
- emply roof rade. This will reduce wind resistance and can lower your feel consemption and CO<sub>2</sub> emissions by up to 10%.\*\*
- increases fuel consumption and CO<sub>2</sub> emissions by up to 5%.
- Start driving soon after starting the engine at engine when stationary for more than one minute. Modern engines enable you to just get in and go, thus reducing fuel
- Every time you excelente or baile suddenly, your engine uses
- gears are more economical in terms of fuel consumption."
- Try to anticipate traffic flow. Look at the traffic as far ahead possible in order to avoid unnecessary stopping and stating
- Consider car sharing for work or leasure. You will help reduce

For more information <u>go to</u>





## **Changing Driver behaviour**



#### • Education



**Drive Smart** 

- Fleet & Driver training
  - Enhanced planning smoother driving
  - Decelerate Smoothly use engine braking
  - Use of engine torque low rpm
  - Compliance with Speed limits cruise control

#### Dashboard

- Fuel consumption read-outs
- Speed limit warnings

#### Costs

- Congestion Charging
- VED Tax bands
- Fuel Tax













## Fuel consumption & CO<sub>2</sub>



If burnt efficiently in stoichiometric conditions, burning 1 litre of unleaded petrol produces:



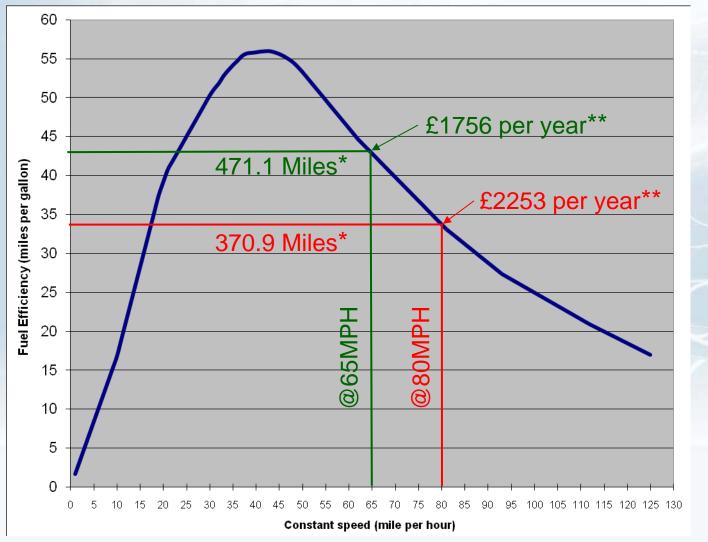
This equates to 10.7kg CO<sub>2</sub> per gallon.



## **Typical Fuel Economy**



Mid-sized Hatchback (eg. 1.6 Golf) at different constant speeds.



\*Per tank = 11 Gallons (50 Litres)

£55.45

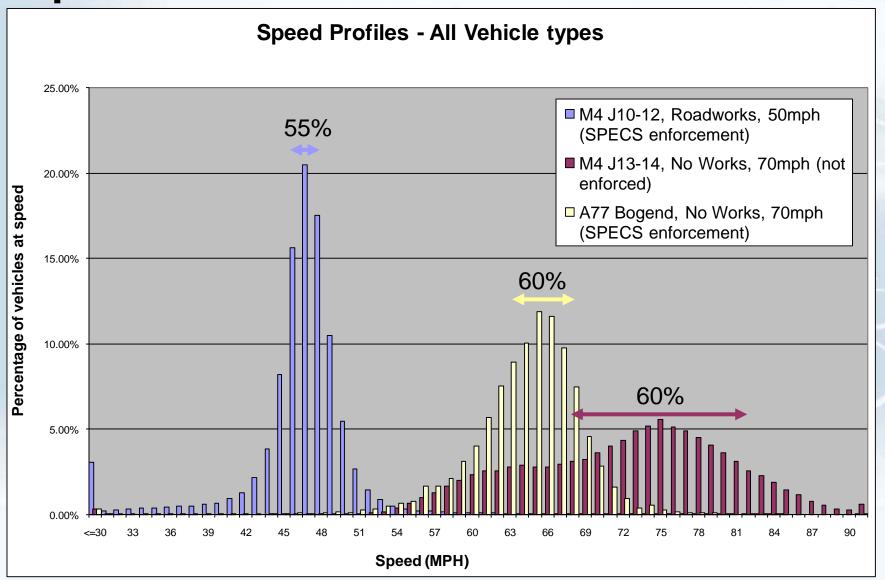
\*\*Based on 15,000 miles per year.

Cost saving: £497

CO<sub>2</sub> Saving: 1449Kg

## Driver behaviour with and without speed enforcement





### Fuel Consumption and CO2 results



Based on the typical car fuel consumption and the speed profiles for different speed limits and enforcement regimes. With AADT of 73,435 (excluding HGVS)

	Non-enforced 70mph Limit	SPECS Enforced 70mph limit	SPECS Enforced 50mph limit
Average Fuel Consumption (MPG)	38.48	43.35	54.40
Fuel saved annually (gallons per mile)	0.00	79,190.47	206,302.64
CO2 Emissions (Kg/M)	0.279	0.248	0.197
Annual CO2 Emissions (Tonnes per mile)	7,484.21	6,636.87	5,276.77
Annual CO2 Reduction (Tonnes per mile)	0.00	847.34	2,207.44
Saving	0%	11%	29%



## True savings likely to be higher



- MIDAS data on unenforced motorway hides variation.
- Wide speed distribution leads to more variation in individual speeds.
- Drivers within SPECS enforced areas tend to drive smoothly and consistently at the speed limit.
- Reduced congestion, as well as reduced speeding.
- Less stressful driving environment.
- Driver financial benefits reduced vehicle wear... on top of the increased fuel economy.



## SPECS3 has arrived...



#### SPECS<sup>3</sup> uses the principles of SPECS with improved functionality:

- Every camera is an entry and an exit camera.
- Journeys calculated between all active cameras.
- Rear-facing cameras can be used.
- All entry lanes and all exit lanes can be monitored.
- Dedicated fibre optic is not necessary.
- Public telecoms networks used:
  - ISDN
  - ADSL (and SDSL)
  - GPRS
  - 3G
  - LANS/WANS



#### Safer, smoother traffic flows

www.speedcheck.co.uk



