



## **Poland Telematic - GREEN BOX**

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# GREEN BOX – What is it?



- Tracking
- Vehicle data communication
- Software / Reports
- Maintenance and support from RTL and Hands Free
- Training
- Communication



# GREEN BOX – Telematic System



## Fleet Management data unit

- Collects and reprocesses vehicle data through CAN
- Communicates through GPRS
- Journey recording and collection
- Automatic vehicle tracking through GPS
- Alarm / Alert functions
- Modular unit allowing multiple functionality
- Rugged – designed around the commercial vehicle environment
- Future proof – scalable platform allowing updates over the air



# GREEN BOX – Poland Trial



## March 2008

- Original Trial - 3 Vehicles

## June 2008

- Train the Trainer, Manchester UK

## July 2008

- Trial Extended – 9 Vehicles
- Added driver ID
- Introduced driver training

## September 2008

- Phase 3 – extended to 70 vehicles
- Developing training modules
- Introducing new safety reports



# GREEN BOX – Implementation



## May / Dec 2008

- Site Visits, pre-installation checks
- Research and development
- Installations

## Jan 2009 onwards

- Units reporting data
- depots start using data
- Collecting data for benchmarks

## April 2009

- Driver training
- Analyze trends
- Set benchmarks / targets



# Efficiency, Safety and Operational Reports



## Efficiency :

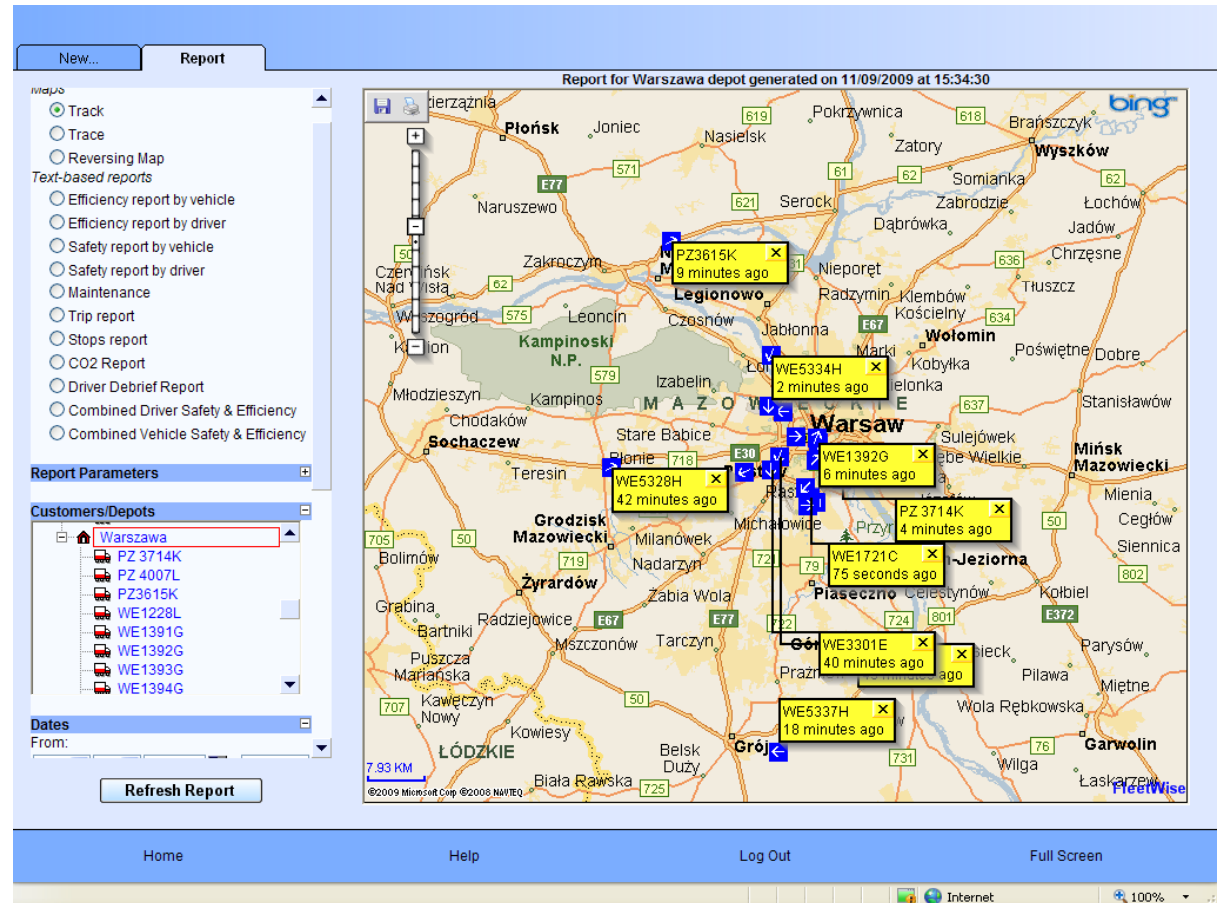
- Fuel Economy
- Drive Fuel Economy
- Idle Time
- Sweet Spot distance
- Top Gear
- CO<sub>2</sub> Emissions

## Safety :

- Harsh Braking
- Service Brake / Engine Brake
- Over Revving
- Speeding
- Out of Gear Coasting
- Reversing Report
- Seatbelt Report

## Operational :

- Journey Management
- Driver Hours
- Stop Report



# Efficiency Report by Driver



## Efficiency Report by Driver for Nestle

Depot: **Centralny**

From: **01 May 2009**

**30 May 2009**

To:

Driver	Fuel Economy	Drive Fuel Econ	Distance	Idle Time	Sweet Spot Distance	Over Rev	Top Gear
	L/100km	L/100km	KM	%Time	%Distance	%Distance	%Distance
Driver 1	19.24	17.35	3437.10	6.14%	91.16%	2.36%	55.37%
Driver 2	18.25	17.70	560.60	8.19%	88.12%	1.71%	58.94%
Driver 3	18.73	17.48	217.00	7.07%	83.46%	0.78%	72.35%
<b>Average</b>	<b>18.74</b>	<b>17.51</b>	<b>1404.90</b>	<b>7.13%</b>	<b>87.58%</b>	<b>1.62%</b>	<b>62.22%</b>

Depot: **Centralny**

From: **01 July 2009**

**31 July 2009**

To:

Driver	Fuel Economy	Drive Fuel Econ	Distance	Idle Time	Sweet Spot Distance	Over Rev	Top Gear
	L/100km	L/100km	KM	%Time	%Distance	%Distance	%Distance
Driver 1	20.27	18.53	4334.40	4.14%	87.79%	5.35%	48.66%
Driver 2	18.22	17.43	3427.20	3.61%	77.29%	14.92%	55.02%
Driver 3	17.58	16.13	3158.20	6.61%	93.11%	1.58%	63.73%
<b>Average</b>	<b>18.69</b>	<b>17.36</b>	<b>3639.93</b>	<b>4.79%</b>	<b>86.06%</b>	<b>7.28%</b>	<b>55.80%</b>

<b>Vatiance</b>	<b>-0.05</b>	<b>-0.15</b>	<b>2235.03</b>	<b>-2.35%</b>	<b>-1.51%</b>	<b>5.67%</b>	<b>-6.42%</b>
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# Safety Report by Driver



## Safety Report by Driver for Nestle

Depot: **Warszawa** From: **01 May 2009** To: **30 June**

Driver	Harsh Braking	Service Brake	Engine Brake	Over Rev w/o Fuel	Over Speeding	Out of Gear Coasting
	Count	%Distance	%Distance	%Distance	%Distance	%Distance
Driver 1	1	23.67%	0.01%	0.00%	0.03%	18.79%
Driver 2	0	19.96%	0.53%	0.03%	0.00%	10.14%
Driver 3	0	16.02%	1.86%	0.00%	0.00%	15.92%
Driver 4	0	22.05%	0.00%	0.00%	0.00%	12.17%
Driver 5	3	22.84%	1.24%	0.10%	0.00%	7.72%
<b>Average</b>	<b>0.80</b>	<b>20.91%</b>	<b>0.73%</b>	<b>0.13%</b>	<b>0.01%</b>	<b>12.95%</b>

Depot: **Warszawa** From: **01 July 2009** To: **30 August**

Driver	Harsh Braking	Service Brake	Engine Brake	Over Rev w/o Fuel	Over Speeding	Out of Gear Coasting
	Count	%Distance	%Distance	%Distance	%Distance	%Distance
Driver 1	0	20.81%	0.00%	0.00%	0.00%	14.24%
Driver 2	0	19.78%	1.00%	0.03%	0.00%	7.28%
Driver 3	0	19.15%	1.42%	0.00%	0.00%	7.57%
Driver 4	0	21.96%	0.11%	0.00%	0.00%	8.41%
Driver 5	0	18.83%	0.00%	0.00%	0.00%	10.79%
<b>Average</b>	<b>0.00</b>	<b>20.11%</b>	<b>0.50%</b>	<b>0.03%</b>	<b>0.03%</b>	<b>9.66%</b>

<b>Variance</b>	<b>-0.80</b>	<b>-0.80%</b>	<b>-0.22%</b>	<b>-0.10%</b>	<b>0.03%</b>	<b>-3.29%</b>
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# GREEN BOX – some key results



## FUEL ECONOMY L/100KM



April 09; **20.55 per 100 KM**  
August 09: **19.62 per 100 KM**



**increased 4.5%**



## SWEET SPOT DISTANCE (%)



April 09; **Average 78.47%**  
August 09: **Average 80.60%**



**increased 2.1%**



## HARSH BREAKING



April 09; **Average 5**  
August 09: **Average 4**



**reduced 20%**



# GREEN BOX – Benefits



## Commercial benefits

- Reduction of fuel consumption by ca. 5% = 950-1350 PLN/year/truck\*
- Reduction on CO<sub>2</sub> emissions
- Longer vehicle life expectancy
- Operational efficiency
- Reduction of maintenance costs by 15% on:
  - Brakes
  - Suspension

## Safety benefits:

- Reduction of major accidents from 19 to 9 comparing H1 08/09
- Improved overall driving standards
- Improved driver safety
- Focus on driver best practices
- Encourage and reward high safety driving standards



Thank You

