Poland Telematic - GREEN BOX

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Warsaw, 24th September

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 – scaleable 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



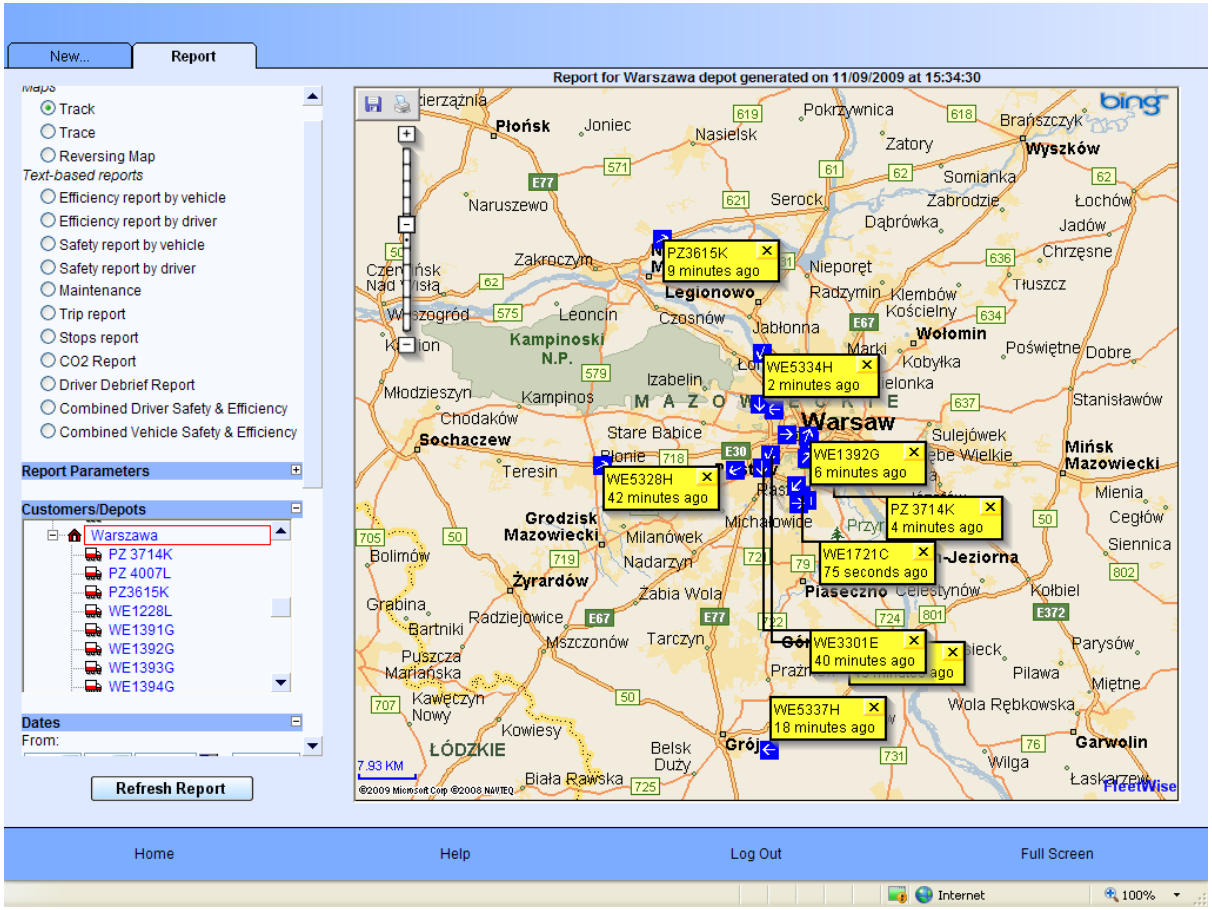
Efficiency, Safety and Operational Reports

Efficiency :

- Fuel Economy
- Drive Fuel Economy
- Idle Time
- Sweet Spot distance
- Top Gear
- CO_2 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 **To:** 30 May 2009

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%
Average	**18.74**	**17.51**	**1404.90**	**7.13%**	**87.58%**	**1.62%**	**62.22%**

Depot: Centralny **From:** 01 July 2009 **To:** 31 July 2009

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%
Average	**18.69**	**17.36**	**3639.93**	**4.79%**	**86.06%**	**7.28%**	**55.80%**

Vatiance	**-0.05**	**-0.15**	**2235.03**	**-2.35%**	**-1.51%**	**5.67%**	**-6.42%**

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%
Average	**0.80**	**20.91%**	**0.73%**	**0.13%**	**0.01%**	**12.95%**

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

Driver	Harsh Braking	Service	Engine Brake	Over Rev w/o Fuel	Over	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%
Average	**0.00**	**20.11%**	**0.50%**	**0.03%**	**0.03%**	**9.66%**

Variance	**-0.80**	**-0.80%**	**-0.22%**	**-0.10%**	**0.03%**	**-3.29%**

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_2 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

* Assuming 10 ton truck

Nestlé Waters direct

Thank You

Safe driving | Nestlé