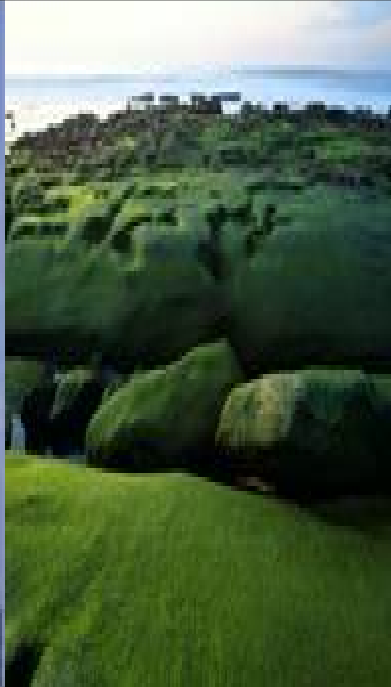

Supply Chain Efficiency

Increasing productivity but safely



Focusing on the key efficiency levers

With the ever increasing costs and difficulty to pass on these costs to your customer, today's operator is under constant pressure to find more efficiencies

The key transport costs* being :

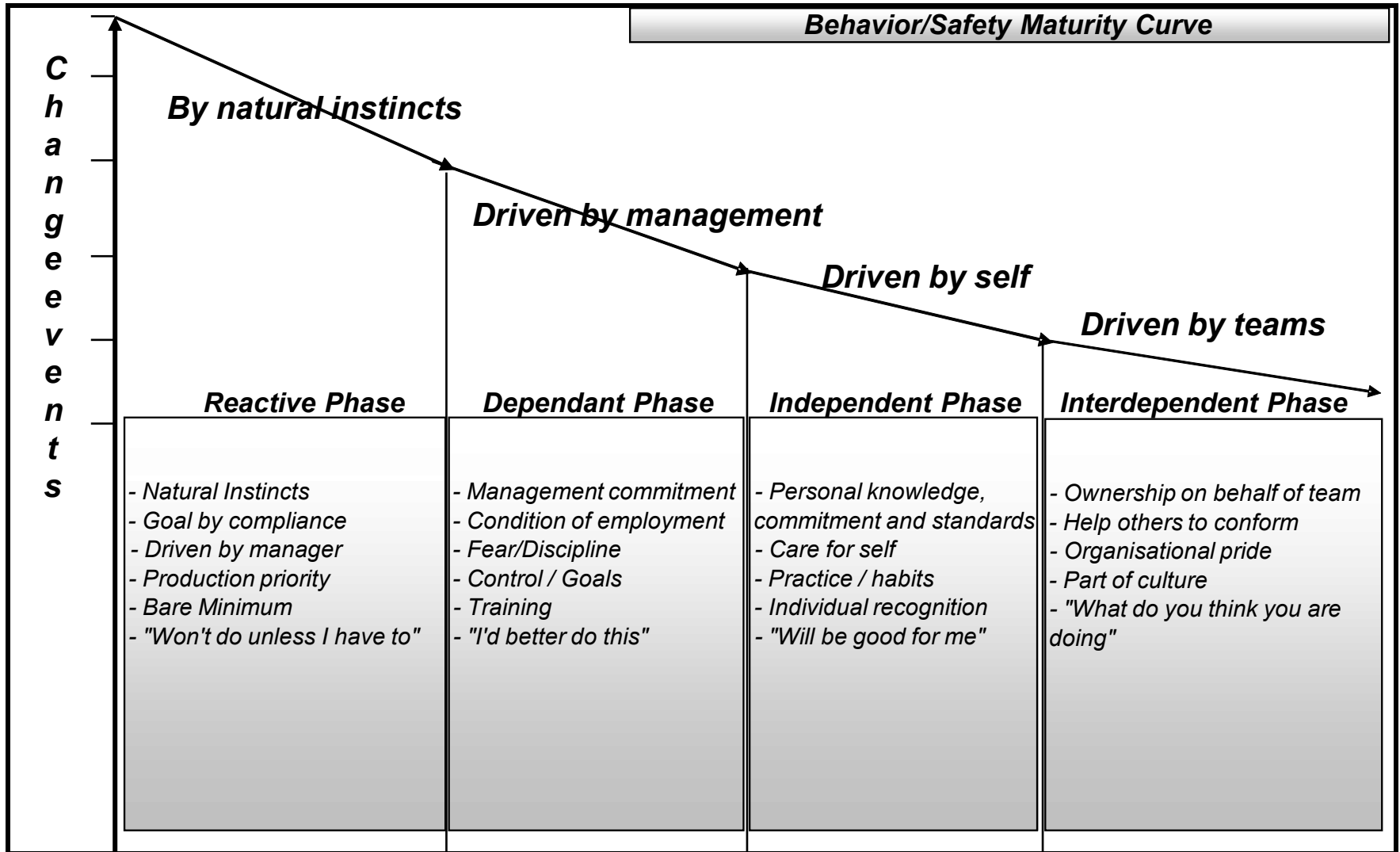
| | |
|---------------------|----------------------------------|
| Vehicle fuel | ~40% of the total operating cost |
| Driver employment | ~33% |
| Maintenance & abuse | ~12% |

The remaining elements being mainly fixed and more difficult to influence through efficiency programmes

How can we effect these costs and to what degree could it impact our profitability and what part can safety play?

** Based on 6*2 vehicle with 2:1 trailer mix, operating 100,000 miles at 8.5mpg*

The Behaviours/Safety challenge.... a journey we all need to make ?



The Safety Journey for me....

Why -Legislative requirements, Moral responsibility & Financial implications

Understanding the reasons and creating some next steps

2007 when with the organisation I started this journey...

Over 4000 vehicle accidents/ incidents

Lost Time Injury Freq. Rate (LTIFR) was 8.0 or double our warehouse colleagues

By end of 2008....

Commercial Vehicle accidents down 30%, driver LTIFR improved by almost 40%

What did we do....

Analysed where the accidents occurred

Improved driver communication & engagement

Set up a working party to review with the both truck and trailer OEM's, understand impact on specification & design

We worked closely with the H&S team in partnership to engineer out the risk

We created standard specifications “minimums & musts”

Key drivers for that I needed to understand to make the change

Legal

- *Manage HSE/EHO increasing pressure*
- *Comply with the New Corporate Manslaughter & Homicide Act 2007*
- *Deliver consistent approach to compliance*
- *Leverage internal expertise across UK*
- *Build a strong compliance reputation*
- *Develop improved due diligence framework*
- *Reduce SHE Enforcement Notices*

Moral

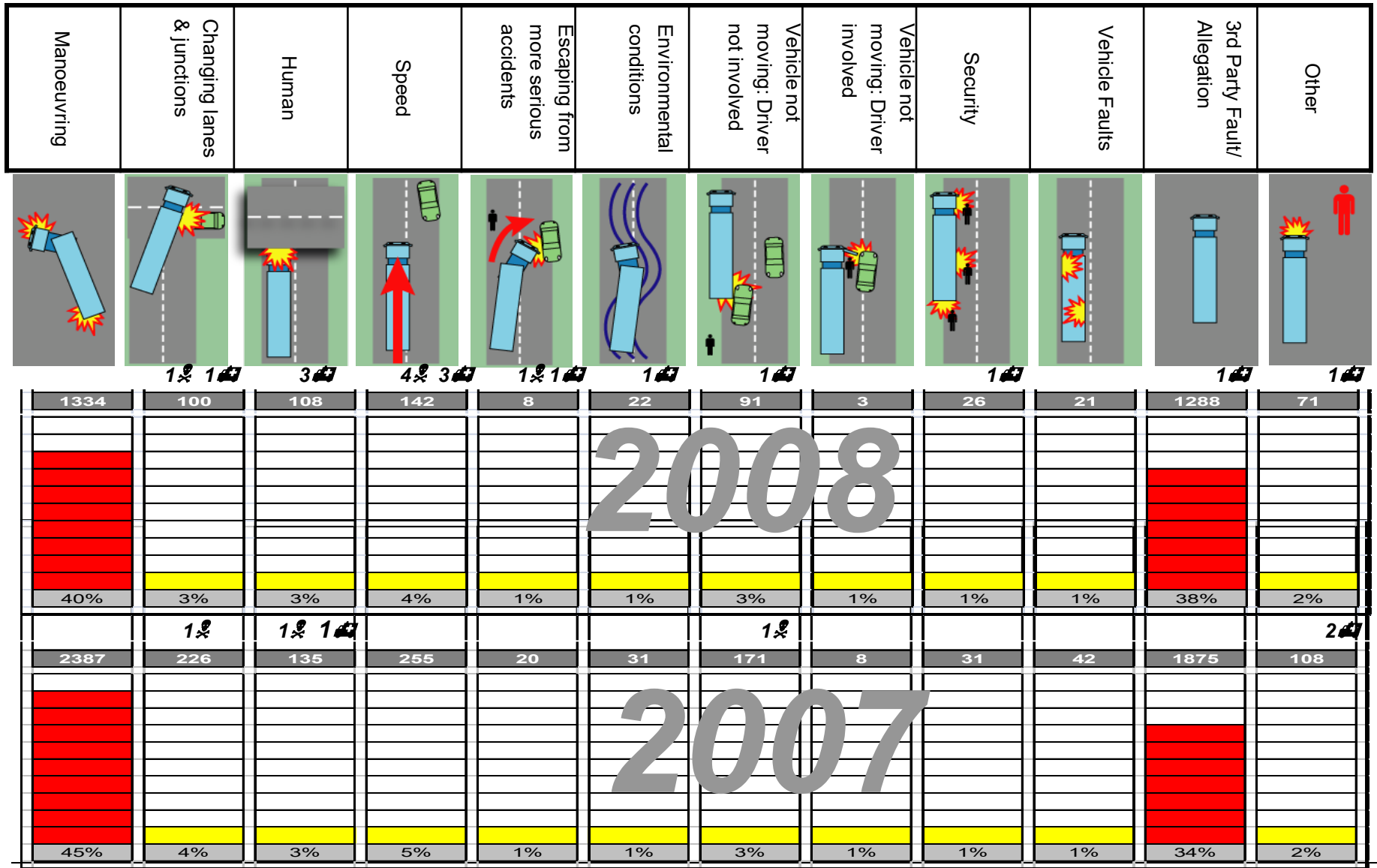
- *Drive positive 'Partnership' behavioural change towards accidents*
- *Enhance our CSR agenda*
- *7500 Recorded accidents 2007*
- *4000 CV accidents 2007*
- *1866 LT accidents 2007*
- *16,500 days lost*

Economic

Understand the costs:

- *Employers Liability Claims*
 - *Motor Vehicle Claims*
 - *Reduce cost of non work Days*
 - *Optimise safety resources*
 - *Optimise training*
 - *Reduce regulatory costs*
-

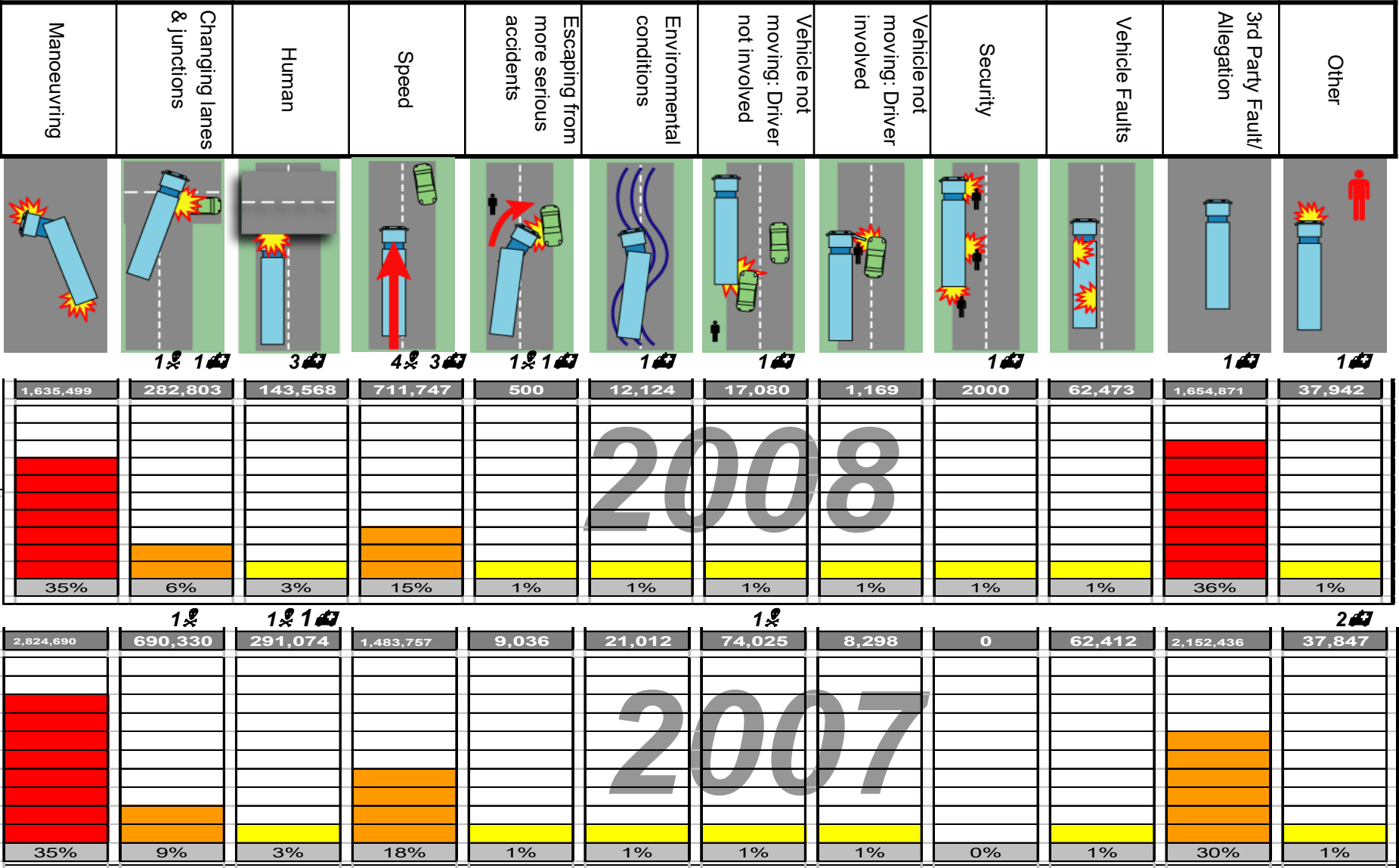
Accidents – types and distribution



⚰ - Fatality

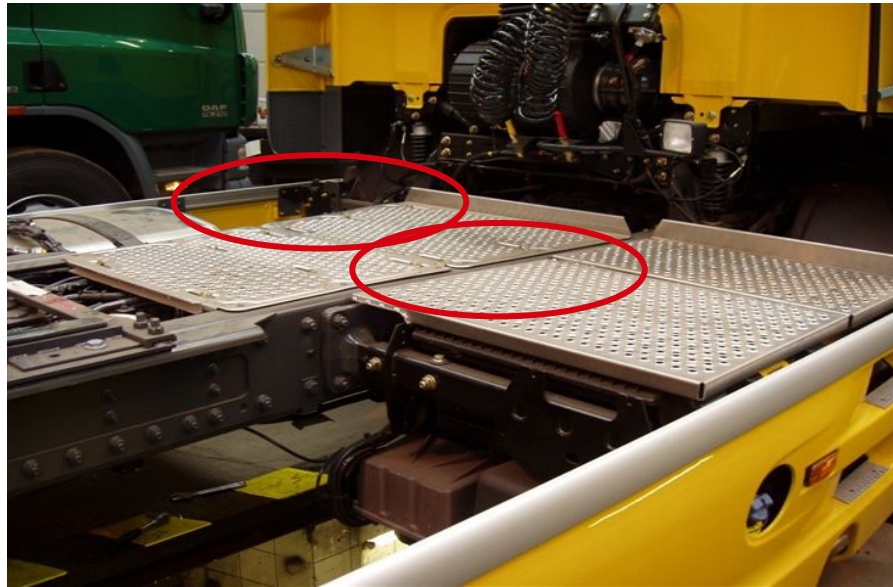
🚗 - Serious injuries

Accidents – costs distribution



☠ - Fatality
 🚗 - Serious injuries

Making a change- redesigning the catwalk



Poor Design

Exposed Open Areas

Varying Platform Levels

Good Designs

Full Width with Chassis Infill

Level Platform

Punched Aluminium or Other Surface

Suitable Grip

Factory Grab Handles (3 Points of contact needed at all times)



Ground Coupling- the “Safe Susie”

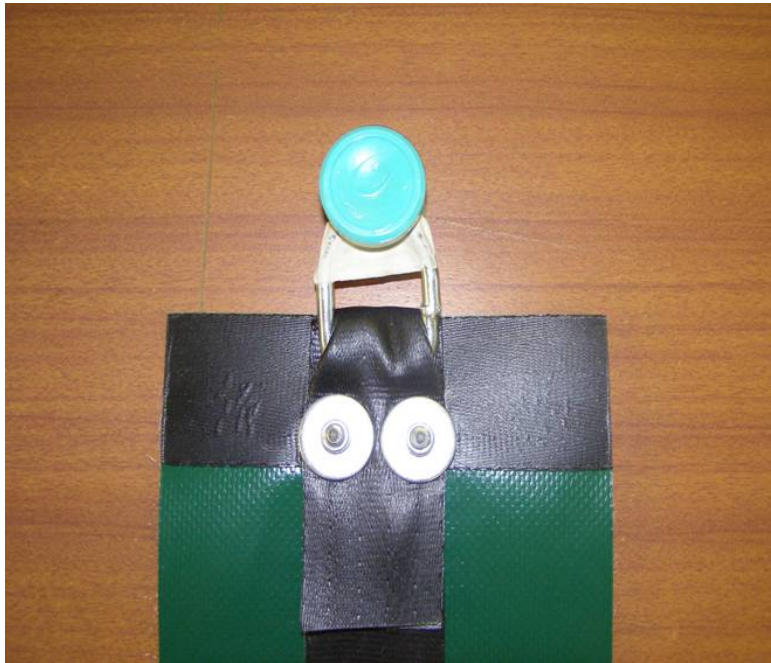


Designed in conjunction with both drivers and trailer manufacturer – The “Safe Susie” fully removes the need to access the catwalk and has safety features built in

Curtain Operation – New Designs

Significant number of occasions with drivers pulling muscles/ straining shoulders. By modifying the roller design from a single wheels to a 4 wheel design we both reduced the risk of an accident and actually saved money- with a lubrication free solution

Old Design



New Design



Additional £170 initial cost/trailer

4 rollers & “T” chassis prevents twisting

Lube free bearings

No maintenance at height

Saves money over a 7 yr life cost +

Drivers find the new curtain significantly easier to use and removed this issue

Fuel Management Toolkit

- *Compilation of facts, processes and instructions to aid operators to improve management of road fuel and improve economy.*
- *Toolkit comprises:*
 - *driver instruction*
 - *videos plus modular instruction*
 - *information sections*
- *CD format chosen to allow best distribution and user friendly format*

Application to the Business

- *Professionally produced "Toolkit" launched to BU executive teams and rolled out to operators through engineering managers*
- *Engineering managers work with each operational businesses to ensure understanding and correct application*
- *Engineering manager follow up with introduction of Fuel Economy Improvement Workbook methodology*
- *Encourages cost business and divisional league tables- Who's the best!!*



Benefits/Facts/Figures

- *Good feedback from most operations on benefits of Toolkit in fuel economy drive*
 - *Fuel MPG figures across all BUs generally show year on year improvement 3-5%*
 - *Feedback from driving instructors and other colleagues confirm that the Toolkit is instrumental in these improvements*
 - *Savings in CO2 emission should be around 20,000 tonnes per year.*
-

Tracking & telematics solution components



Map Client

Real-time Vehicle updates

Grouping

Vehicle activity playback

Right click messaging

Radial, Polygonic & Corridor Geofences

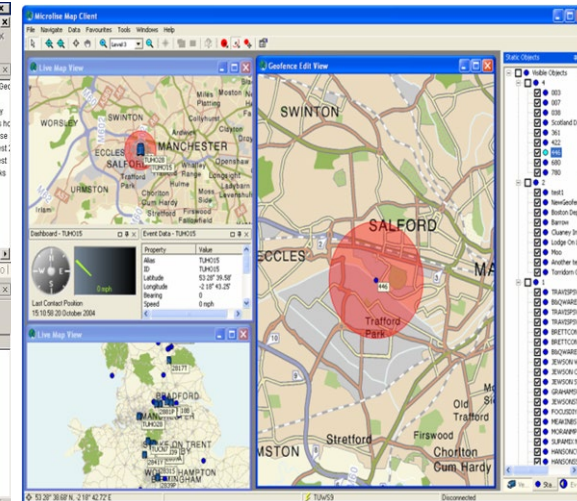
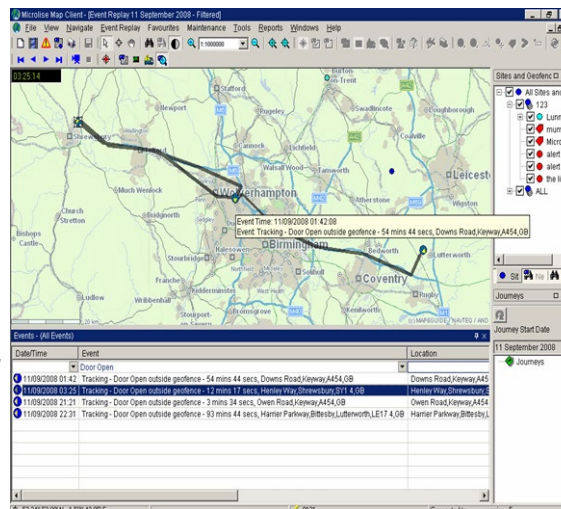
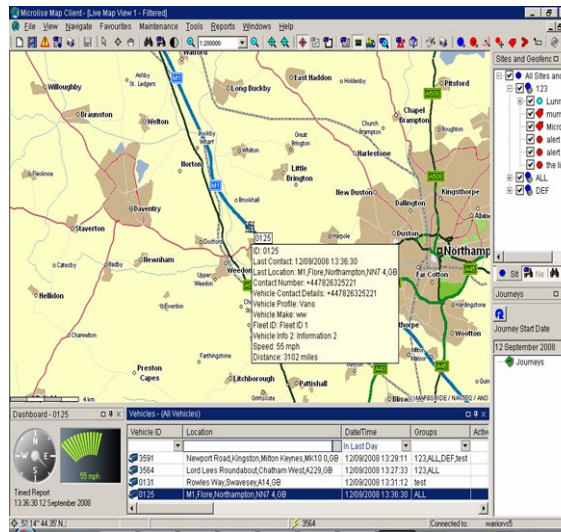
Traffic Info

Posted Road speeds

Find nearest vehicle

Point to point routing

For customers using Journey Management and Debrief, the Map Client is typically used by exception, to understand where a vehicle is when late, to look at traffic issues, to see who could do a rush job etc..



Tracking & telematics solution components



Driving Style Reports

Innovative Energy Rating Reports
Groups, Vehicle and Driver based
Each category can be ranked and weighted by group / operation type
Includes costs & CO2

Shows performance against benchmark (average fleet performance) and target
Target is the level you wish to get each vehicle over (normally a percentage increase across each group)

A saving is any improvement in fuel consumption above the benchmark
A further saving opportunity is any further improvement that could be made to exceed the target

FUEL AND EMISSIONS REPORT

Selected Group: Multiserv - Roundoak - Selected Driver: All Drivers
 21/06/2009 - 27/06/2009
 Driver: Beckett Mark

| CARBON OUTPUT (LBS) | FUEL USED (GAL(S)) | DISTANCE (MILE(S)) | TOTAL COST | COST PER MILE(S) |
|---------------------|--------------------|--------------------|------------|------------------|
| 1389.48 | 54.00 | 348.14 | £203.59 | £0.58 |

| | 1006 | 1706 | 2406 | 2406 | 2706 | 1406 | 2106 |
|----------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Fleet Fuel Economy Average (MPG) | 6.33 | 6.47 | 5.85 | 6.24 | 5.79 | 6.11 | 6.45 |
| Distance Traveled (Miles) | 284.85 | 488.25 | 276.42 | 256.01 | 168.80 | 307.48 | 348.14 |
| Fuel Used (Gals) | 42.25 | 60.85 | 47.42 | 48.83 | 29.64 | 50.37 | 54.00 |
| Total CO2 Output (Lbs) | 1401.73 | 1547.77 | 1025.35 | 1058.06 | 747.88 | 1296.10 | 1339.48 |
| Total Cost (per Mile) | 0.60 | 0.57 | 0.54 | 0.60 | 0.43 | 0.63 | 0.58 |
| Fuel Economy Against Target | -14.30% | -9.76% | -28.82% | -15.49% | -21.71% | -17.23% | -13.74% |
| Fuel Economy Against Benchmark | -18.34% | -9.36% | -17.10% | -11.54% | -18.85% | -13.49% | -16.81% |

COST PER MILE(S) AND FUEL ECONOMY ANALYSIS

Bar chart showing Cost per Mile (C/M) and Fuel Economy (MPG) from 1006 to 2106. C/M values range from 0.43 to 0.60. MPG values range from 5.79 to 6.47.

DRIVER / VEHICLE DETAILED KPI REPORT

Selected Group: - Selected Driver: Beckett Mark
 21/06/2009 - 27/06/2009

| GROUP AVERAGE | PERIOD SAVINGS ACHIEVED* | PERIOD SAVINGS OPPORTUNITY** | YTD SAVINGS ACHIEVED* | YTD SAVINGS OPPORTUNITY** |
|---------------|--------------------------|------------------------------|-----------------------|---------------------------|
| C | £10.60 | - | £82.72 | - |
| | TOTAL MILES: 348.15 | TOTAL ENGINE RUN: 21:27:42 | AVG MPH: 22.66 % | AVG MPG: 16.55 |

| TOTAL RATING | ACCEL > 10% | CRUISE CONTROL | EXHAUST BRAKE | GREEN BAND DRIVING | HARSH BRAKING | OVER REVVING | OVER SPEED | FUEL ECONOMY |
|--------------|-------------|----------------|---------------|--------------------|---------------|--------------------|------------|--------------|
| C | D | D | F | A | B | A | A | C |
| VALUES | 13.90 % | 0.00 % | 1.97 % | 44.41 % | 0.00 % | 0.19 % | 0.00 % | 88.24 % |
| | 8255:28 | Nil | 09:25:19 | 09:20:40 | Nil | Ac Intery 09:15:36 | Nil | 6.45 MPG |

IMPROVEMENT FOCUS:
 Improve Driver Control: Try to review your route in advance to identify areas where cruise control could be employed.
 Reduce Over Driving: Try to increase the accelerator gradually, make the right gear selections and use momentum to your advantage to increase over run.
 *Savings achieved are estimated based on the improvements across the reported fleet from the benchmark value.
 **Savings opportunities are estimated based on the variance across the reported fleet against target values.

Vehicle: WX57BFY Driver: Beckett Mark

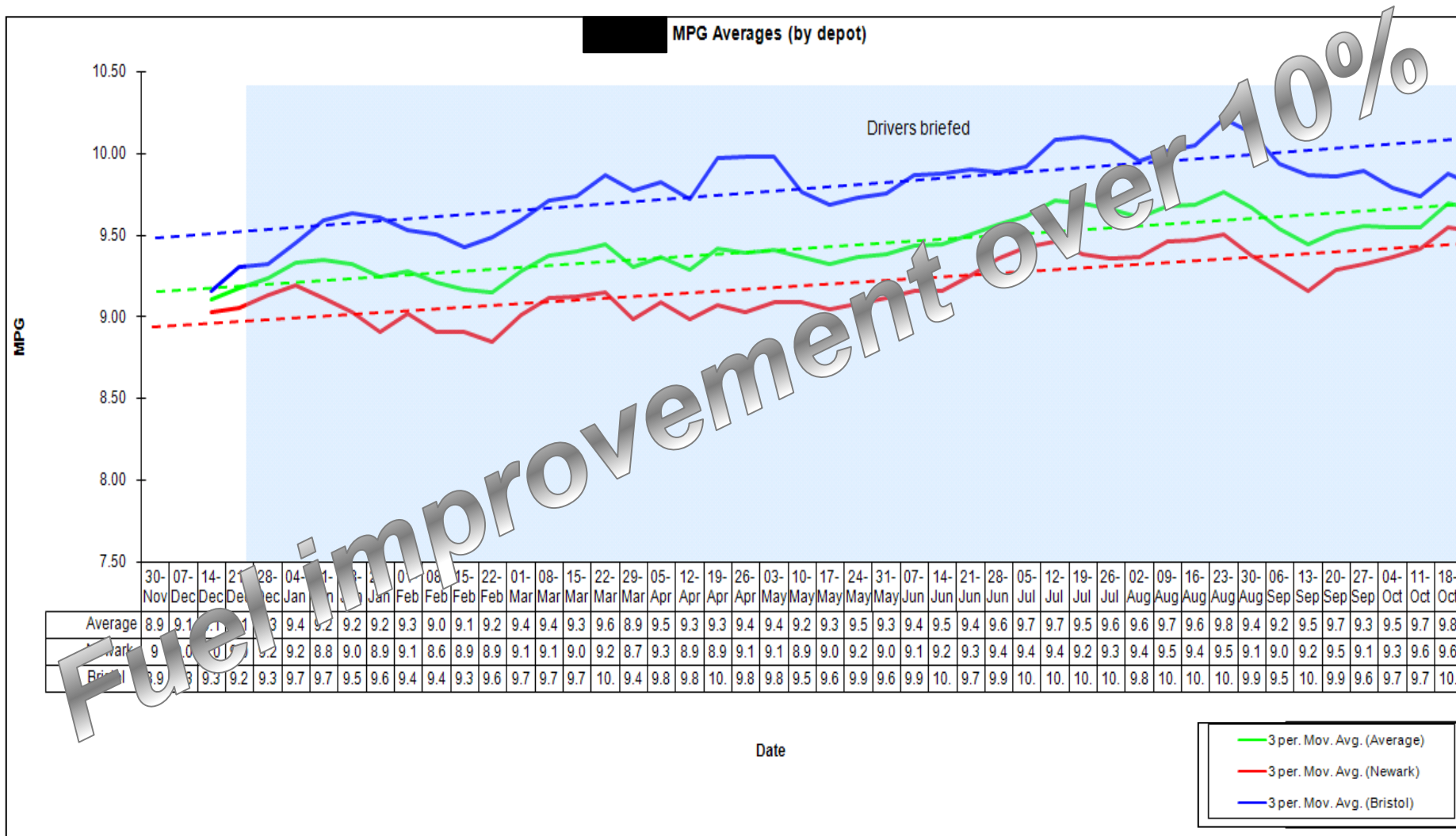
| Parameter | Value | Duration | Notes |
|---------------------|---------|-----------|---|
| Vehicle Utilisation | 12.77 % | 21:27:42 | As a % of Analysis Period |
| Driving Time | 98.03 % | 21:02:23 | Engine on time minus excessive idling (As a % of Vehicle Utilisation) |
| Excessive Idling | 1.97 % | 00:25:19 | As a % of Vehicle Utilisation |
| Standing Time | 87.23 % | 146:32:17 | Engine off time during analysis period (As a % of Analysis Period) |

Vehicle Utilisation: 87.23% (Standing Time), 12.52% (Driving Time), 0.25% (Excessive Idling)

Engine Running Time: 98.03% (Driving Time), 1.97% (Excessive Idling)

| Parameter | Value | Duration | Notes |
|-------------------------|------------------|----------|---|
| Throttle at > 95% | 13.90 % | 02:55:28 | As a % of Driving Time |
| Green Band Driving | 44.41 % | 09:20:40 | As a % of Driving Time |
| Cruise Control | 0.00 % | 00:00:00 | As a % of Driving Time |
| Coasting Incidents | 0.00 per hour | - | Moving in neutral, or when clutch engaged |
| Speeding Incidents | 0.00 per hour | - | No. of instances per hour of driving time |
| Over Revving Incidents | 0.00 per hour | - | See Gear Report for details |
| Harsh Braking Incidents | 0.00 per hour | - | No. of instances per hour of driving time |
| Power Take off | - | 00:00:00 | Total Time for Vehicle Utilisation |
| Exhaust Brake Usage | 63.40 per hour | 00:54:02 | As a % of Driving Time |
| Service Brake Usage | 82.27 per hour | 03:47:46 | As a % of Driving Time |
| Gear Engagements | 254.66 per hour | - | As a % of Driving Time |
| Average Engine Torque | 22.65 | - | As a % of Engine Reference Torque |
| Average Speed | 18.64 MPH | - | |
| Maximum Speed | 59.65 MPH | - | |
| Odometer Reading Start | 84413.25 Mile(s) | - | |
| Odometer Reading End | 84939.16 Mile(s) | - | |
| Odometer Distance | 392.11 Mile(s) | - | |
| Fuel Consumption | 6.37 MPG | - | |
| Carbon Emissions | 1584.75 lbs | - | Calculation based on IPCC guidelines |

Customer X MPG averages by site



Teardrop Trailer

Customer's challenges, needs or issues

Customer needs:

- Involvement in innovations which can be used as PR collateral for DHL & customer
- To create more economic and environmentally friendly trailer which would meet the requirements of Environmental & corporate reduction targets

Challenges:

- No specialised knowledge in building trailers

DHL helped to develop and test the right product allowing customer to differentiate and promote their brand.

Solution

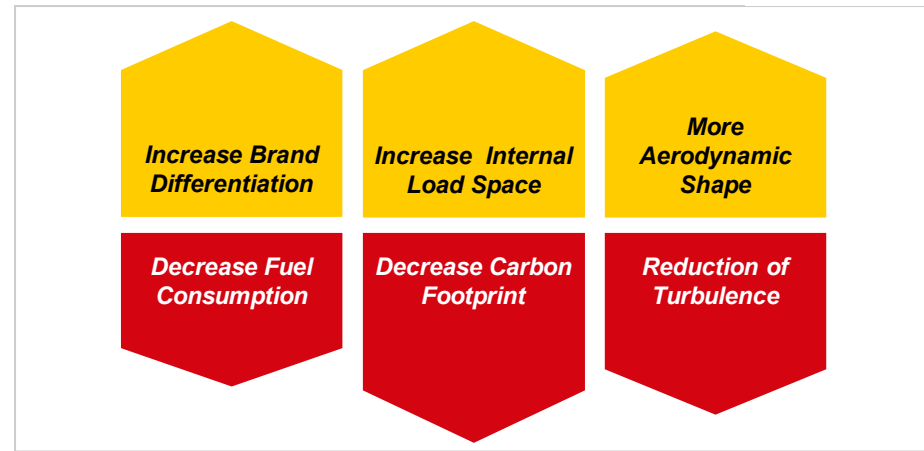
Teardrop trailer built by Donbur Bodies Ltd. with cooperation of DHL for many of its customers

The trailer not only saves fuel and reduces carbon footprint but also increases internal load space and utilises lighter and more recyclable materials.

*The trailer is now available in taut-liners, boxed trailers, temperature controlled trailers and smaller rigid
The "tear shape" can be altered to meet customer specific requirements of internal height requirements*



Value delivered to customer



Areo-dynamics: Bulkhead air deflectors

Customer's challenges, needs or issues

Customers needs:

- *Access to best in class fleet specification and design*
- *Costs reduction*

Challenges

- *High trailers with poor aerodynamics*

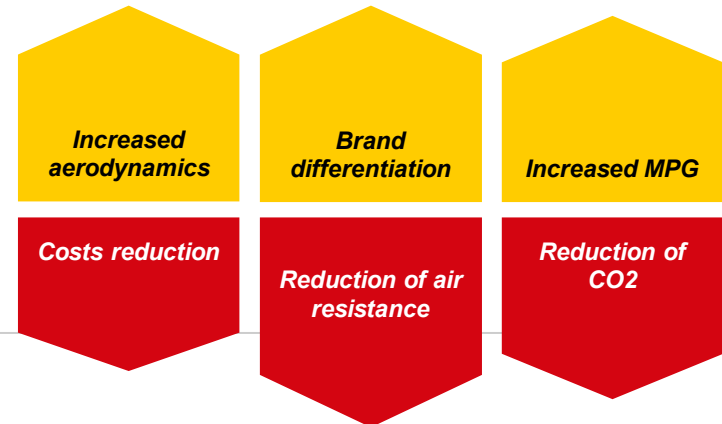
DHL's involvement resulted in innovative and simple approach to reduce the air resistance on the trailer and reduce the fuel consumption.

Solution

DHL's close cooperation with customers and suppliers made it possible to design a new Bulkhead Air Deflector for high trailers. The product was developed by Donbur trailer manufacturer and resulted in better aerodynamics and thus, increased fuel economy. Moreover, TKMaxx benefited from brand differentiation of innovative and 'greener' fleet.



Value delivered to customer



Hybrid Diesel/Electric Trucks

- *DESC have two early prototype HEVs under evaluation throughout 2008/9*
- *These initial two were both parallel hybrid systems from the truck manufacturers, operating at 8 tonne range*
- *Working with Volvo an 18T is being launched in March 2010*
- *Working with a third party on a series hybrid that will provide increased efficiency*

Potential & Experience

- *Hybrids have the capability to capture energy from re-gen braking and to use this to assist in powering the vehicle using torque blending via a linked electric motor.*
- *This allows a potential reduction in diesel usage up to 30% on the right applications*
- *There are no range limitations as with electric vehicles.*
- *However, the current commercial model is not particularly viable- Too costly based on throughput Vs. Cant get lower cost till volumes increase*



Benefits/Facts/Figures

- *Good feedback from operators and drivers on simplicity of trucks to drive*
- *Performance good, no issues vs. standard trucks*
- *Figures to date suggest economy benefits of around 16%*
- *Both hybrids are at early development stages and have potential for optimising of engines and improvement in power management systems*

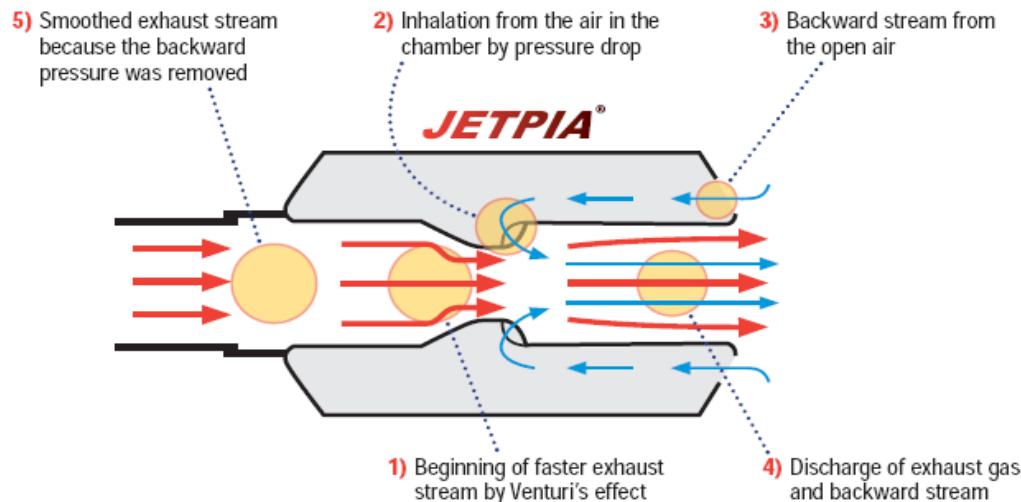
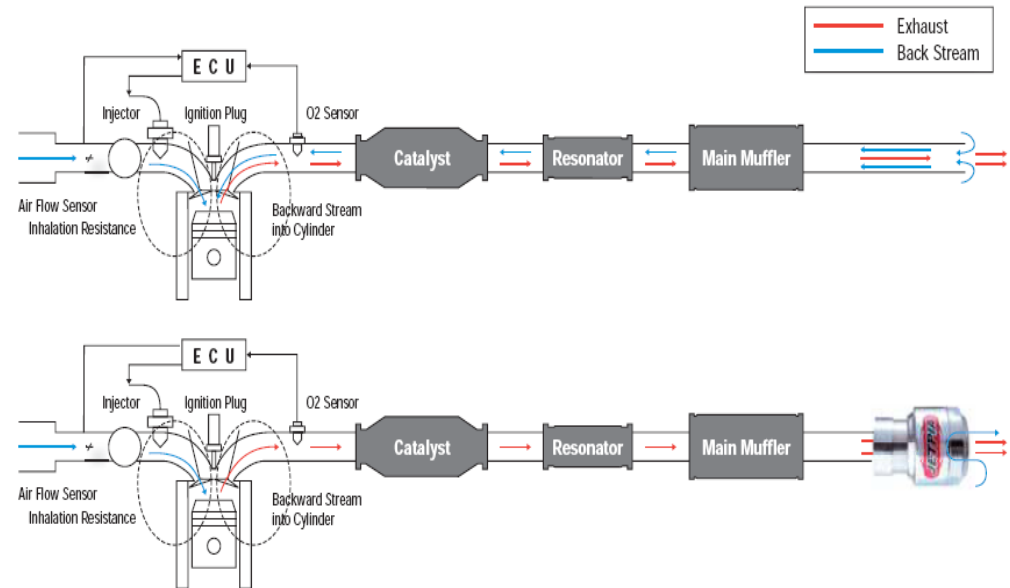
Jetpia- Exhaust gas management

Product summary

When an engine is operating and exhaust gases are generated, the high pressure of this process not only forces the exhaust gasses out, but causes a vacuum effect, which creates a back stream (valve overlap timing) of air from outside the exhaust, and the exhaust gasses themselves.

This back stream forces this “dirty” air back inside the engine, which then processes these impurities.

Jetpia is designed to prevent this back stream by creating a Venturi that does not allow the air to be sucked back down the exhaust in the first place.



The result of this is a reduction in exhaust back pressure and a cleaner combustion process which should provide:

- A reduction in harmful exhaust gasses
- Improved fuel economy
- Initial tests on 7.5T rigids & Sprinter vans are producing results between 5-14% respectively

Accept – not everything will work

B100 Bio-diesel Trials

- *Joint project with key retail customer*
- *Opportunity to re-use waste cooking oil from "Customers business" as a fuel in the distribution vehicles*
- *Project developed with third party "Argent Fuels", using a fuel derived from re-cycled cooking oil (RCO) and Tallow (meat processing waste)*
- *Substantial emission benefit from CO2 output of (RCO) vs. new bio feedstock's*
- *One vehicle trial as risks of problems with engine or fuel are potentially high with B100*
- *Problems encountered with fuel becoming too viscous in cool delivery hose even before temperatures drop to freezing*
- ***Trial aborted January 2008, fuel not considered viable at this composition.***



Volvo FLE on B100 at Customer premises

Benefits/Facts/Figures

- *Potential 80% reduction in CO2 output*
 - *16% reduction in fuel economy is a major set-back*
 - *Increased cost of some £3k per year per vehicle due to reduced fuel economy, extra service costs and fuel heating requirement.*
-

Focusing on the efficiency levers

| | % Cost to operate | Change Lever | Benefit | Pot. margin impact |
|---------------------|--------------------------|-------------------------|----------------|---------------------------|
| Fuel | 40% | Driver behaviours | 5% | 2.0% |
| | | Speed control | 2% | 0.8% |
| | | Aerodynamics / | 5% | 2.0% |
| | | Controls | | |
| Driver | 33% | Less accidents | 5% | 1.7% |
| | | Less absence | | |
| | | Claims-ELI? | | |
| | | Less driver turnover | | |
| Maintenance & abuse | 12% | Driver behaviours (w&T) | 5% | 0.6% |
| | | Service freq | 2% | 0.2% |
| | | Cost awareness | 5% | 0.6% |
| Total | | | | 7.9% |

Biggest challenge after actually delivering above is to not lose this through increase taxation and margin erosion with the customer and finding yourself back at starting point!

Conclusion- Doing nothing is probably not good enough!

Striving for efficiency is something that within logistics and transport we simply have to do.

Against us, we have the added pressures of:

- Increasing legislation- business & employee
- Fuel tax and general taxation
- Road congestion
- Higher truck prices
- Customer demands & expectations

Being big or the biggest, doesn't necessarily guarantee survival

Those companies whom are agile, flexible, creative & most innovative will survive and prosper

News

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Austrian haulier bankruptcies increase 62%

11 May 2009

Austrian hauliers are among t according to an association th

Creditors Association **AKV Eui** subject of bankruptcy investig 62% on the year before.

News

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Boalloy Fastruck faces winding-up order

29 October 2009

Boalloy Fastruck Bodies, the Stratford truck manufacturer whose fortunes were revived when transport icon Edward Stobart (pictured) **took over the reins two years ago**, has gone into compulsory liquidation



p by the British Gas Trading presented a petition to the



DAF warns over likely price rises

04 December 2009

DAF is warning that truck prices will have to rise next year to compensate for the fall in Sterling against the Euro, which has pushed the Dutch manufacturer's costs up by more than 36%.

Speaking to journalists at the firm's annual end-of-year briefing on Wednesday (2 December), UK MD Ray Ashworth said: "One of the major



So thank you and good luck!



THE NEW DON-BUR TEARDROP TRAILER

$$F_{\text{Drag}} = C_D A^{1/2} \rho V^2$$



Fig. 1: Airflow illustration



Fig. 2: Turbulence illustration



10% FUEL SAVING
10% ADDITIONAL CUBE
20% LESS FLEET CO₂

FIGURES SUPPLIED AND VERIFIED BY DHL ON A HARKS & SPENCER CONTRACT