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HOW DO YOU CUT COSTS

BY CUTTING CARBON?

BENEFITS OF CARBON REPORTING
FOR TRANSPORT AND LOGISTICS SERVICES
MAY 2015

IN COOPERATION WITH DR. JACQUES LEONARDI

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THE IMPORTANCE OF CARBON REPORTING:
INTRODUCTION

Low emission driving, CO_2 reporting and carbon reduction becomes more and more important with global warming and climate change.

AS BOTH POLITICS AND TRANSPORT companies are forced to act, having an eye on the carbon footprint of logistics services is more important then ever. The use of carbon reporting tools for transport and logistics services can be beneficial not only for an operator, but also for his client.

A large number of businesses in the UK are already taking action to decarbonise their transport or logistics operations. Most of the activities currently undertaken are extended to testing and using clean vehicle or electric vans, starting a new urban hub/depot, or implementing a more efficient routing system

for fleet management, and all these actions need improved information.

Essential information for decarbonisation action would include recording material flow, trips, fuel use and calculating CO_2 reduction. The benefits of carbon reporting described in this paper and the ease for which PTV provides scope 1 – 3 carbon reporting, should inspire others and would be easy to replicate.

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THE CARBON REDUCTION TARGET

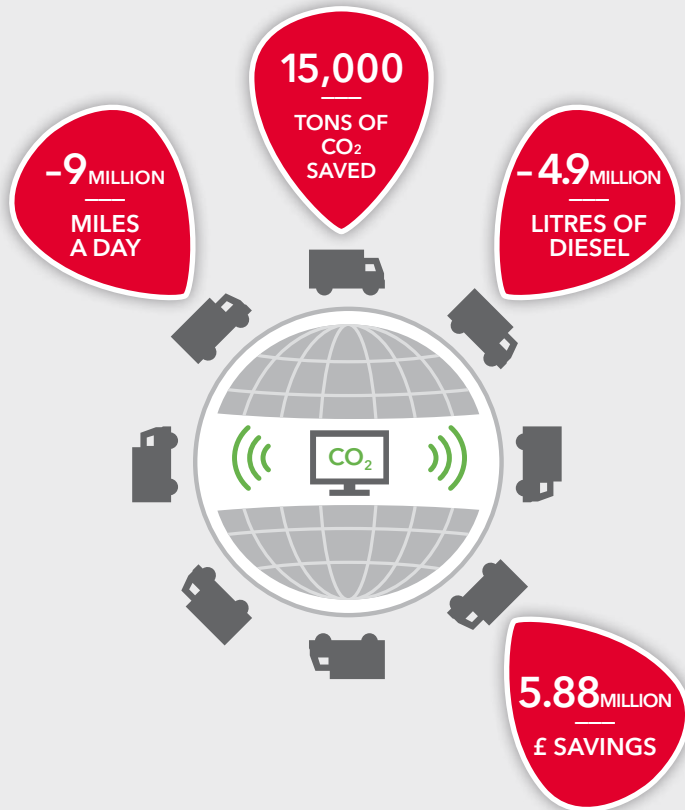UK intermediate climate change mitigation **objective for 2020 is to achieve about 34% CO_2 reduction** in UK.

The FTA has started its voluntary scheme „Logistics Carbon Reduction Scheme" with similarly ambitious targets.

NEED & BENEFITS
OF CARBON REPORTING

Reducing & reporting carbon with transport management software is directly related to reducing costs. With PTV solutions, our customers achieve:

15,000
TONS OF CO$_2$ SAVED

−9MILLION
MILES A DAY

−4.9MILLION
LITRES OF DIESEL

CO$_2$

5.88MILLION
£ SAVINGS

A specific development in recent years has been the introduction of a carbon reporting obligation for listed UK companies, and the need for haulage businesses and logistics service providers to report on client-specific carbon emissions and carbon savings.

FOLLOWING THE SAME model for costs reporting, and relating the trip data to the carbon emissions calculation data, some Transport Management Systems offer a reporting functionality dedicated to carbon reporting.

What are the benefits of such carbon reporting for your own transport business?
- It can contribute to internal performance optimisation.
- You better understand why some operations use less fuel than others: decrease emissions and increase efficiency
- You can track the costs and benefits of innovations and changes.
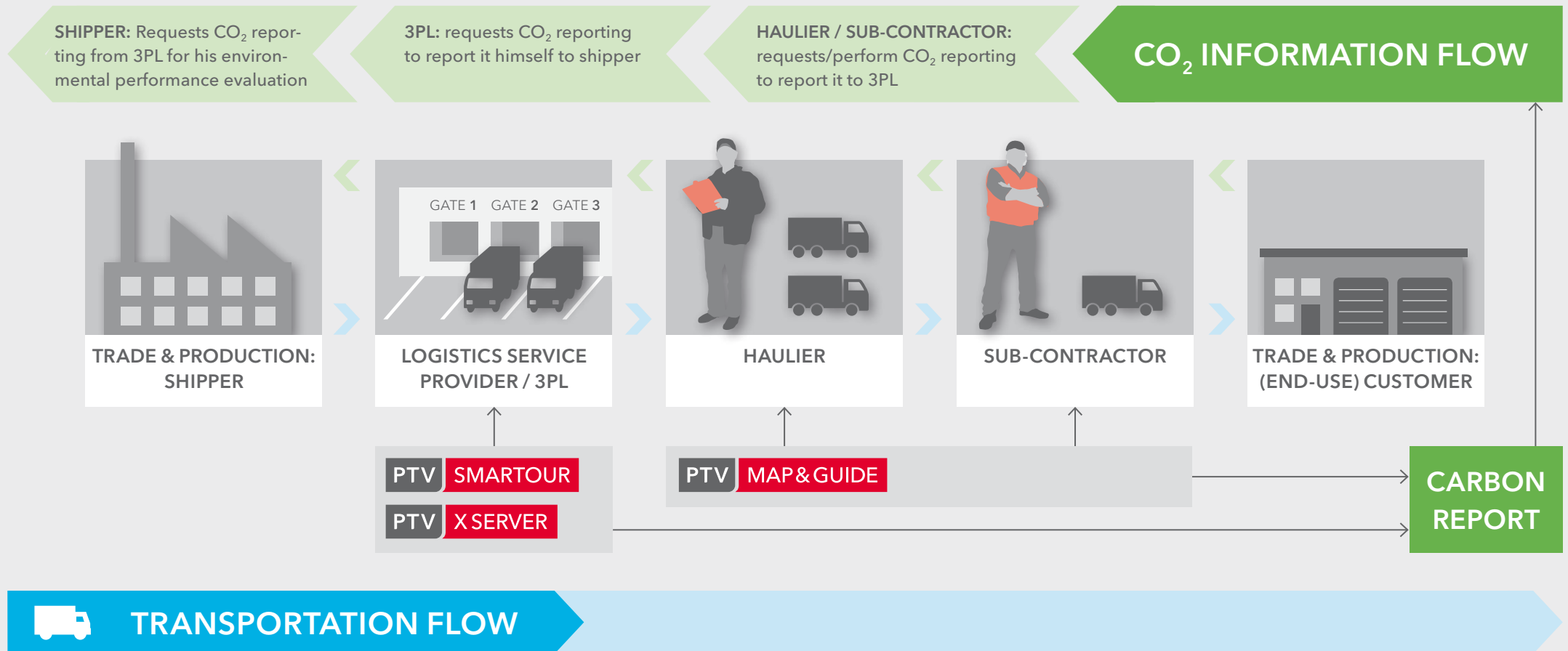- You are using an accurate and quick tool for costs estimates (fuel = 10–33% of total transport costs).

What are the external benefits for clients?
- Adding more information on the invoice allows the client to know the CO$_2$ emissions of its contracted transport operations.
- The IT supported calculation is easy to use and provides 'low cost' data.

NEED & BENEFITS
OF CARBON REPORTING

Carbon reporting is important for every stakeholder of the transportation chain:

SHIPPER: Requests CO_2 reporting from 3PL for his environmental performance evaluation

3PL: requests CO_2 reporting to report it himself to shipper

HAULIER / SUB-CONTRACTOR: requests/perform CO_2 reporting to report it to 3PL

CO_2 INFORMATION FLOW

GATE 1 GATE 2 GATE 3

TRADE & PRODUCTION: SHIPPER

LOGISTICS SERVICE PROVIDER / 3PL

HAULIER

SUB-CONTRACTOR

TRADE & PRODUCTION: (END-USE) CUSTOMER

PTV SMARTOUR
PTV X SERVER

PTV MAP & GUIDE

CARBON REPORT

TRANSPORTATION FLOW

THE PRINCIPLE OF
CARBON REDUCTION

»An optimisation can only be considered as a reduction if we compare it to a non-optimised situation.«

Compare trip data before and after an optimisation function.

WHILE PLANNING is essential to maximise efficient use of resources, a continuous process of checking and monitoring of progress is needed. The easiest way of doing this is to use data from a vehicle tracking system to monitor planned routes and events. Systems can be set up to automatically notify customers of in-bound deliveries, and also to remind them when, for example, the delivery is expected to arrive and if a delivery is delayed, due to unforeseen circumstances. Automatic job status updates in the Transport Management System as well as the estimated time of arrival (ETA) can also be achieved (picked up, en-route, delivered etc.) and communicated to all participants within the Supply Chain.

The same data can be used by managers and others to analyse actual performance, and to compare these with company targets, CO_2 emissions, Key Performance Indicators (KPI's) and Service Level Agreements (turn around times, waiting times, on time deliveries etc). This comparison of performance and target can also be done for new technology, comparing the performance with or without the new solution, or before and after using the new solution.

Ultimately, an optimisation can only be considered as a reduction if we compare it to a non-optimised situation. To achieve this, the data on the trip planning and trip completion needs to be used to document a reduced distance and reduced emission, when compared to the trip foreseen before implementation.

This BEFORE data needs to be compared with the AFTER data that we get after using the optimisation function of the tour planning system, in order to obtain the "effective" reduction data.

THE FTA LOGISTICS
CARBON REDUCTION SCHEME (LCRS)

How planning tools can contribute to its successful application:

FTA identifies the following main areas for carbon reduction actions, on which your time and effort should be focusing.

How can planning and calculation tools contribute?

Using the right vehicle for the right operation
- through vehicle specification, selection and maintenance
- through effective driver management and motivation

With PTV Map&Guide transport costs & CO_2 emissions can be calculated based on the specific vehicle type. The fill and load factor is improved with planning tools like PTV Smartour.

Managing fuel use
- monitoring vehicle fuel efficiency and, where appropriate, using alternative fuels such as biofuels which have a lower net carbon intensity if sourced responsibly

Fuel specifications are included in the carbon calculation features of PTV Smartour and PTV xServer.

Reducing vehicle miles and vehicle resource
- through effective routing and scheduling and better use of vehicle capacity

Tour planning systems, like PTVs solutions, support drivers and dispatchers with shorter routes suggestions, more efficient routing and scheduling information

PTV MAP&GUIDE
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The easy way of carbon reporting: PTV Map&Guide

PTV MAP&GUIDE Emissions report
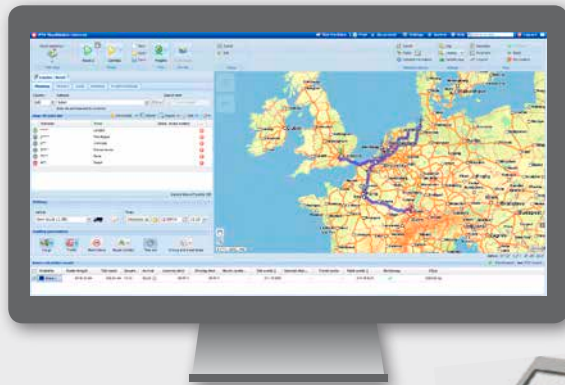
The PTV Map&Guide CO_2 emission calculator automatically includes information of the emissions caused when calculating truck routes.

ALL OF THE RELEVANT emissions of CO_2, air pollutants, and other greenhouse gases are calculated depending on the vehicle configuration, empty weight and load weight, together with the road and traffic situation (uphill and downhill terrain, road type, etc.) The software enables the production of detailed emissions reports for routes and trips. It facilitates the reporting on CO_2 emissions based on the French decree, which requires CO_2 reports for all transports within, to and from France, thereby making it possible to calculate CO_2 for contractors.

The calculation of carbon emission is performed according to the new European standard for calculating fuel consumption and transport services BS DIN16258.

The features of PTV Map&Guide facilitating CO_2 reporting are:
- Emissions calculation of CO_2 and other pollutants
- Offsetting of CO_2 emissions via myclimate
- Detailed emissions reporting

PTV MAP&GUIDE: TEST IT FOR FREE!

Get the 30 day demo version and detailed emission reports: ptv.to/co2report

PTV **SMARTOUR**
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Beneficial transport scheduling for carbon reduction: PTV Smartour

PLANNING PARAMETERS

REPORTS, ANALYSES, KPIs:

PTV Key Figures App

## Vehicle Scheduling and transport management is at the heart of every transport operation.

FIXED ROUTE or milk-round planning can be done with a transport management software, while for more complex operations there is specialised route scheduling software that uses algorithms to calculate the optimum routes and vehicle loadings.

To know how much each trip for a client's order is expected to cost, a transport management system can allow you to merge data for cost and rate per trip, vehicle fuel consumption and drivers' hour data. The calculation can be based on data from previous similar trips.

PTV SMARTOUR

The optimisation software PTV Smartour allows the system to provide a reduced mileage while optimising the available vehicle capacity.

This optimised set of trips is the core effect of the CO_2 reduction.

Find out more information at
smartour.ptvgroup.com

SOLUTIONS TO SUPPORT

CARBON REPORTING & REDUCTION
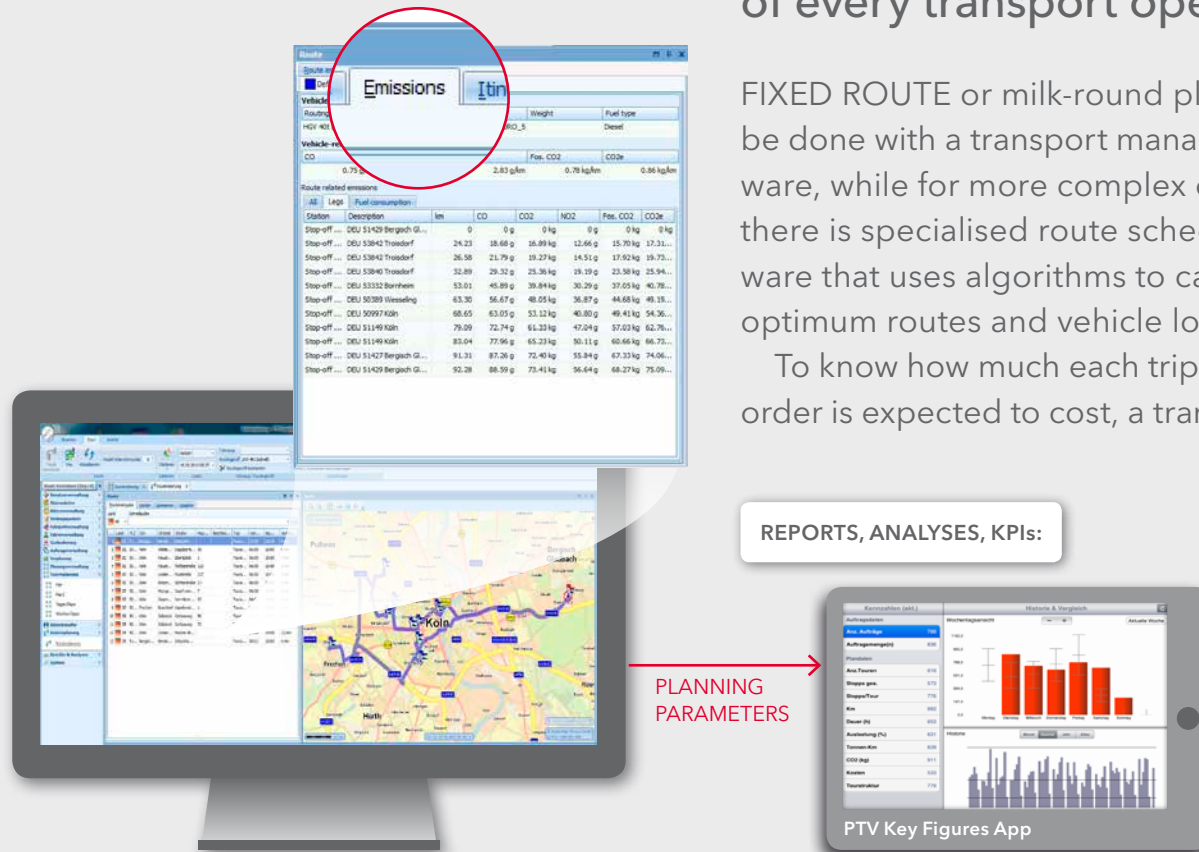
Developer components for carbon reporting: PTV xServer
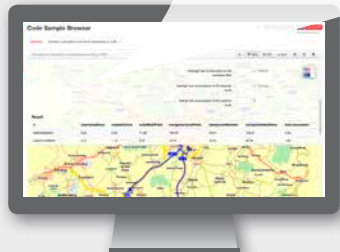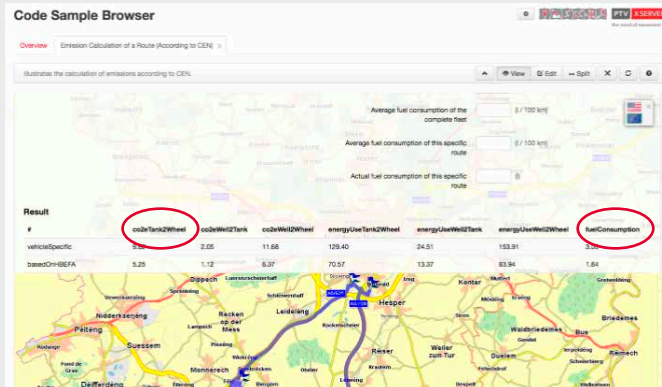
If you already have your own transport management software solution just integrate the emission calculation use case into your own software. PTV xServer are components that can be integrated via standard interfaces into your own user-interface.

This enriches your existing transport management for example with carbon reporting. In the shown example, reporting carbon emissions out of the fuel consumption data of an optimised trip is illustrated with data from Luxembourg.

The trip data is entered into the PTV xServer Code Sample Browser with the integrated link to the routing and mapping features. Then the system calculates the fuel consumption, based on average values of the company and the standard emission factors. CO_2 values are obtained and can be used for Scope 1 or Scope 3 reporting.
The final product is a report on the CO_2 emissions of this trip. PTV xServer for Carbon reporting can be integrated seamlessly into your existing route optimisation system environment.

**PTV XSERVER
TEST IT FOR FREE!**

Calculate the emissions for your own trip!
ptv.to/carboncode

COMPETITIVE
ADVANTAGES

As shown, the demand for green logistics and carbon reportings for transports is constantly growing among the transportation chain.

As both politicians and transport companie are forced to act, implementing and focusing on carbon reporting & reduction will be a fundamental competitive advantage for logistics companies. You can act purposefully and verifiably when you know how much your fleet emits. Therefore, carbon reporting is a proof of better quality in business services as companies can prove that they are dealing with their own environmental aspects. That leads to a better image and competitive advantages.

Major companies such as Hermes Transport Logistics have already led the way for green transportation with PTV solutions. Get on board and benefit yourself from carbon reporting of transport and logistics services.

WATCH AND SEE: ▶

See how HERMES benefits from Carbon Reporting: ptv.to/hermes

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