

Smart trip planning

▶ **CEO TRANSITION**

Hans Hubschneider
says Goodbye

▶ **EMISSIONS**

Everyone calculates
the same way

▶ **BRIC SPECIAL**

Brazil – much more
than carnival and
Caipirinha



traffic mobility logistics.



Smart trip planning

THERE ISN'T A BETTER WAY to start saving: Software for route planning which automatically generates trip suggestions; that alone reduces costs by eight to fifteen percent. It's surprising that this saving potential is often left untouched.



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Dear Readers,

More than 30 years ago, Michael Sahling and I founded PTV in Karlsruhe. As we were open to new ideas and challenges the company quickly developed from a five-man enterprise to an international corporation.

Why am I telling you this? More than 30 years with PTV – three decades during which I led the company to sustained growth as managing director, member of the board of directors and CEO. “Watching PTV grow and being actively involved in shaping its future has always been exciting.” But now it’s time for me to say goodbye to PTV and to hand over to the next generation. I wish to thank you for the valuable cooperation and the numerous enriching discussions and projects. I have always strived to keep the balance between economic success and long-term stability, between focus on the staff and customers, a mission that helps to ensure mobility in our increasingly globalised world; and I am sure that the new leadership team will continue along these lines.

Our first product was PTV Intertour. The proven trip & transport planning software is now also making way for a new generation, as I am: PTV SmarTour is the new product which enables multi-user planning, calculation of pollutant emissions and more. The example of our customer Lekkerland clearly shows the great cost-saving opportunities that smart transport planning can offer.

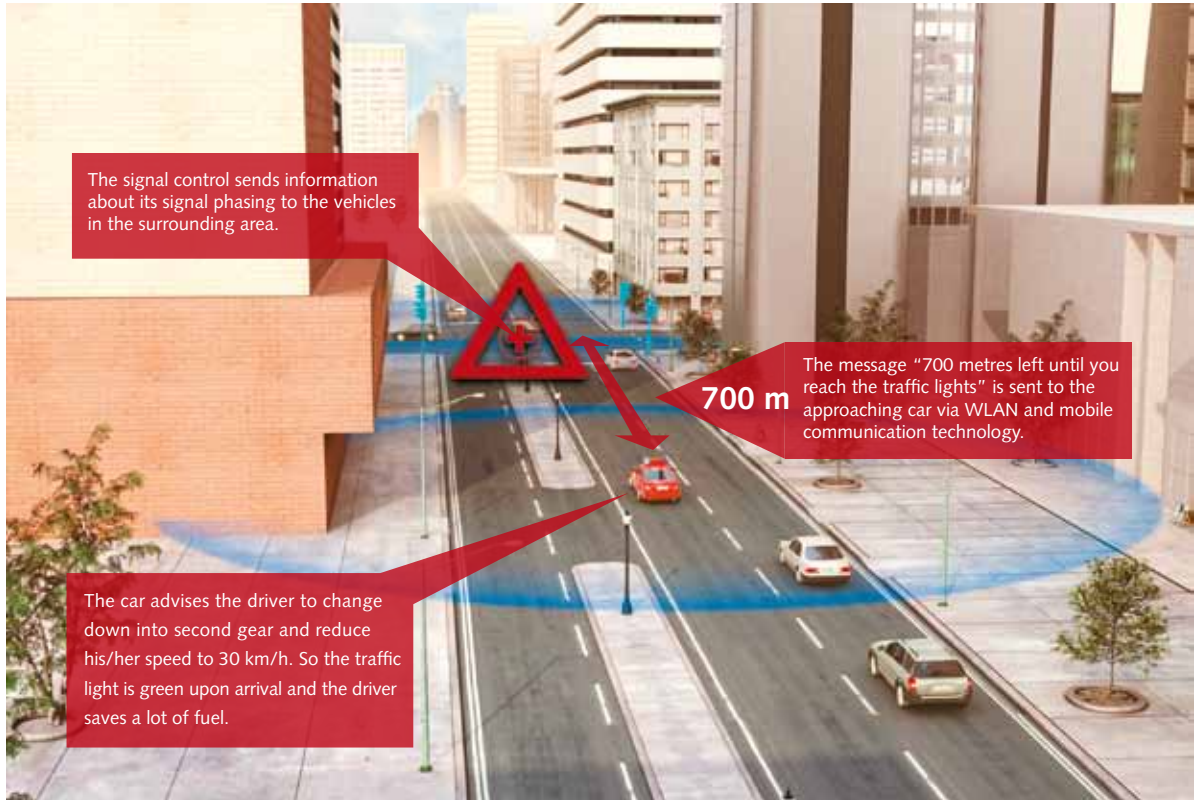
Unlocking potential is another key issue that the BRIC countries are currently dealing with. Because Brazil, Russia, India and China are growing markets with enormous potential. The countries' gross national product could grow even further if they improved their traffic and transport infrastructure. In a four-part special edition we will take a closer look at this interesting aspect.

It will be for Vincent Kobesen, my successor, to write the editorial for the next edition of the Compass magazine.

With best wishes,

Hans Hubschneider
Founder of PTV AG


P.S.: You can always contact me by e-mail at hans.hubschneider@web.de.



Voice-guided driving

IF ALL DRIVERS in the network used Car-to-X technology (C2X) which provides them with service information on green time, they could cut fuel consumption by five percent when approaching traffic lights. This is the result of a study conducted by EU research project PRE-DRIVE C2X. The follow-on project DRIVE C2X which is also funded by the European

Commission, will now test this result in seven regions in Europe. As part of this project, PTV is in charge of two work packages. ☺

 **A backgrounder on PRE-DRIVE C2X is available at www.ptvag.com/compass.**



Together we're strong

EUROPE, JAPAN AND THE USA have joined forces: As part of the ECOSTAND initiative the European partners support the global discussion about the standardisation of methodologies for the assessment of the impact of "green ITS" (Intelligent Transportation Systems) on energy consumption and CO₂ emissions. ECOSTAND was initiated in 2010 as part of the Seventh Framework of the European Commission. Additionally, there is an EU-US cooperation with different working groups dealing with standardisation, evaluation and applications. PTV is involved in both initiatives. Dr. Thomas Benz is head of the European project team focusing on the assessment of cooperative systems. A couple of days ago he went to Vienna to present the interim report at the first ECOSTAND symposium. ☺

Dr. Thomas Benz, Director Traffic Software Projects & Research at PTV Germany.



humedica e.V. is again collecting gifts from the heart for 2011. If you would like to make a donation of gifts-in-kind, please go to www.geschenk-mit-herz.de for further information.



Gifts on tour

DURING THE RUN UP TO CHRISTMAS 2010, more than 40 volunteer drivers of the relief organisation humedica e.V. travelled to 860 collection points across Bavaria to distribute "gifts from the heart" to children. PTV again supported last year's Christmas gift campaign with its route planning software map&guide. It helped the Gifts-From-The-Heart planners to coordinate more than 90 trips covering a total route length of 40,000 kilometres. They were extremely delighted with the efficient distribution, so that made us happy too. ☺

Silver Competency

NOW IT'S OFFICIAL: PTV has been awarded the Microsoft Partner label and has reached the silver certified level for its unique expertise and product quality. This is a clear signal that PTV products work well with Microsoft solutions, meaning they are compatible and can be easily integrated with other systems. PTV is one of the first

organisations to attain the Microsoft Silver Competency status: in November 2010, Microsoft realigned its partner network and created new structures with a strong focus on quality assessment, including product tests and reliable customer testimonials as concrete proof. ☺



Microsoft Partner

Silver Independent Software Vendor (ISV)



Bella Italia

ITALY IS NOT ONLY a great holiday destination, but also a bustling business hub. The good business relationship with the Italian mobility service provider Sistema in Rome has now led to an expanded cooperation and joint product development. PTV has acquired a 51% controlling interest in Sistema which has become the official distributor for PTV's ITS solutions in Italy. Perugia-based TPS will continue to distribute PTV's logistics and transportation planning products in Italy. ☺



Smart trip planning

There isn't a better way to start saving: Software for route planning which automatically generates trip suggestions; that alone reduces costs by eight to fifteen percent. It's surprising that this saving potential is often left untouched. Why's that? Some ask themselves if a software of this kind would be profitable for them at all. Others are scared of the work involved. And many aren't even aware of the amount of time, kilometres and therefore money which is being thrown out of the window.

OF COURSE NOTHING can be done without the schedulers: They are needed to take the right decisions in the hustle and bustle of the daily business routine. Whether a driver is temporarily absent due to illness or a customer does not accept the goods, they always know how to react in order to keep the vehicle fleet running. However, professional trip planning is not just all about fully automatic processes, but also about great saving potential that could never be tapped with manual planning methods.


Automatic trip & route planning

In order to create cost-efficient routes on the basis of the transport orders, several factors need to be taken into consideration: geography

(where are the customers located), time (business opening hours, delivery time slot, driving times and rest periods, regular sales calls) and vehicles (allocation of vehicle types to deliveries, availability of vehicles). The more complex the conditions, the more difficult it is for the scheduler to plan optimum routes. A professional trip planning software will relieve schedulers of a great deal of work: filled with the relevant data the system provides automatic route suggestions.

Using the software is profitable for everyone who manages a fleet of at least five vehicles. It supports users in the logistics sector, including third-party and distribution logistics and break-bulk traffic. And it is often already paid off within a year. It provides a greater overview of the daily processes and a clear saving of

trip length, trip duration and costs. Everyone who wants to know exactly how much they could save, can now use the Quick Check tool offered by PTV AG. Based on the customer's transport data, it calculates the optimisation potential that can be tapped using the software.

 **Ask for our Quick Check at www.ptvsmartour.com**



Lekkerland plans trips using PTV software.

Lekkerland: Trip planning which appeals to everyone

Operative excellence and one-hundred percent service are the demands that the Lekkerland group places on its logistics. With a blanket coverage network of 36 logistics centres, Lekkerland is in a position to provide reliable and flexible delivery to all its customers. In ten European countries 1,028 trucks are working to this purpose.

“Lekkerland delivers to every type of customer. We really do deliver across the whole spectrum, from the smallest order to bulk orders, divided into temperature and non-temperature-controlled assortments”, explains Apostolos Couvaras, Officer Corporate Transport at Lekkerland. Rüdiger Pfeiffer, Director Corporate Logistics, adds: “We deliver to around 131,450 sales points with our own fleet of vehicles. We drive around 260,000 kilometres a day – that’s nearly seven times around the world every day!”

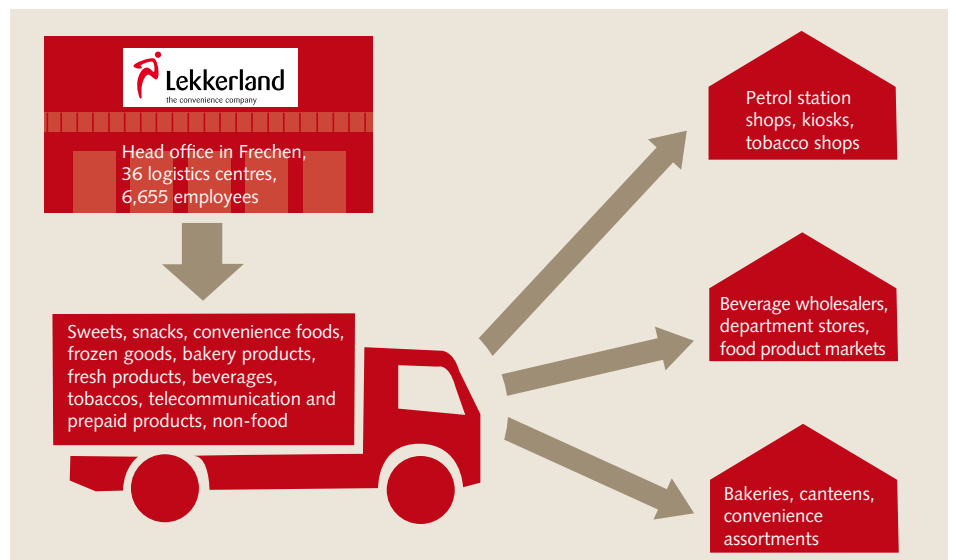
PTV software supports our schedulers by combining the every-day individual orders after or even during the order entry and then creates trip suggestions while taking preset parameters into account. “The software performs 80 percent of the work. The quality of the information that we have on these sys-

tems during planning is simply incredibly high. And so the employee can use this to make better decisions”, reports Couvaras.

Pfeiffer regards the scenario planning function as particularly valuable: “It provides us with the opportunity to simulate the urgent daily planning again later and to include corresponding optimisation aspects.” He is satisfied to summa-

rise: “At the time of introduction we assumed around eight percent of kilometres driven by the whole fleet would be reduced. And these expectations have definitely been fully met.”

 **More about trip planning with Lekkerland at www.ptvsmartour.com**





- 1 Faster and more direct access to the most important functions of each user interface
- 2 All orders, all trips and the most important data at a glance
- 3 Clear display of digital map
- 4 Extra visualisation of trips on a bar chart

The planner receives all information in a clear and transparent form on the modern usability-optimised interface.

World premiere for PTV SmarTour

Since 1st May there is a new generation of trip planning: Your schedulers need to plan vehicles from several workstations? You are supposed to plan mixed transports, for example pick-ups and deliveries in local and regional transport as round trip? The level of pollutant emissions also needs to be calculated? PTV SmarTour can do all this – and much more. The software is based on PTV xServers. This means it can be put together so that the user gets just the amount of applications and performance that is required. And the software can grow to meet new demands.

Customer requirements are fulfilled

To respond to its customers' feedback, PTV has added multi-user planning, one of the customers' "most wanted" features to its new software system. It allows them to use the program from several work stations so that the team of schedulers can jointly coordinate all trips and routes as part of their specific area of responsibility. At the same time they have a clear overview of the entire planning territory with all customers, depots, vehicles, commodity flows and branch offices. But it is also possible to plan separately while still having the overview of all transport runs scheduled by the other colleagues. Peering over the rim of the proverbial tea cup allows them to create new synergies and to provide true centralised planning. In this context, each organisation can choose its individual level of cooperation and integration - from "all together" to "everyone for themselves".

Multi-DIMA is the World's first distance matrix that runs automatically in the background. Many trip & route planning software products require a distance matrix, or in short DIMA. However, it does not always reflect real-life situations. For example, a passenger car is faster than a van, and the latter is faster than a forty-ton truck. Additionally, a truck cannot always take the same routes as a smaller vehicle. Therefore, PTV SmarTour provides a separate DIMA for each vehicle profile, which means that the planning results are a lot more realistic and suited to each vehicle within the same plan.

Different opening times of incoming goods departments, height restrictions, tail-lift requirements – a wide variety of different trans-

port data has to be included during the planning process. "Thanks to PTV SmarTour's algorithms it is possible to include all restrictions required to ensure smooth logistics processes," explains Sebastian Wehowski, Product Manager Logistics Software, PTV Germany.

A focus on usability

The modern user interface allows quick and intuitive access to all relevant features. Moreover, it can be customised to suit the clients' specific requirements. The user interface is built on standard programs and lets users work in their familiar system environment. "Users who work with Microsoft Office products will quickly get familiar with PTV SmarTour", says Wehowski.

Information relevant to planning is highlighted so that the scheduler can immediately see the main points. By selecting symbols, symbol sizes and colours users can quickly grasp the information on several subjects displayed on the digital map, such as customer priority via the icon, morning or afternoon delivery via the colour, the quantities via pictogram, etc. Wehowski: "The software is very user-friendly, coherent and efficient, and at the same time it is possible to customise it according to your needs." ☺

 **For more information, please visit www.ptvsmartour.com**

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Five good reasons for software-supported trip planning

1. Lower costs



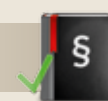
2. Shorten scheduling



3. Relieve scheduling



4. Observe rest periods



5. Keep key figures in mind



Knocking on Martin Kunzmann's door

COMPASS: Hello Martin! You recently joined PTV's management board in the U.S. What issues do you want to work on?

KUNZMANN: PTV is well-positioned to meet the challenges of the North American market. I now want to focus on new technologies and the creativity of my colleagues. In the U.S., there is a higher demand for simpler software solutions for standard applications. To further strengthen the market position of our transportation planning software, PTV Vision, we will adapt our new software releases to meet the specific needs of our U.S. customers.

COMPASS: How is the transportation planning software sector progressing in the U.S.?

KUNZMANN: I have the impression that it is developing positively. After the economic crisis passes new contracts will be awarded to engineering offices, which will use PTV software to plan and implement numerous smaller projects. However, we also anticipate a growing demand for our software solutions for increasingly complex issues.

COMPASS: Besides your consulting activities for PTV America, which is responsible for PTV Vision sales in the U.S., and for Mygistics, which is in charge of the ITS business, you are responsible for PTV NuStats' business operations. What do they focus on?

KUNZMANN: PTV NuStats specialises in market research and surveys. With our market studies, we deliver valuable data and insights regarding people's mobility and buying behaviour. In doing so, we assist public agencies in the regional and national transportation sector in collecting travel demand data and analysing customer satisfaction. PTV NuStats is a market leader in this field. An interesting client reference that I would like to mention is the USPS (United States Postal Service), for which we have carried out an annual customer satisfaction survey for the eleventh year running. USPS has also asked us to continue to conduct this study for the next three years. ☺



In June 2011, Dr.-Ing. Martin Kunzmann joined PTV as experienced interim manager for the U.S. As CEO of PTV NuStats in Austin, Texas, he is responsible for the company's business operations, and he also acts as the representative of PTV's Board of Directors as president of the U.S. holding.

PTV in the U.S.

Market Research & Surveys

PTV NuStats, Austin, TX
Dr.-Ing. Martin Kunzmann
www.ptvnustats.com

Transportation Planning Software

PTV America, Portland, OR
Steve Perone
www.ptvamerica.com

ITS Software

Mygistics, Portland, OR
Thomas Bauer
www.mygistics.com

Breakthrough change to Bogotá's urban transport

Uncomfortable and highly polluting, Bogotá's public transport system is characterised by an ageing bus fleet. At the same time these privately run buses are extremely inefficient as they are operated without any fare and timetable system. And of course this has a negative impact on both the economy and environment.

BOGOTÁ, the capital city of Colombia, has therefore decided to radically change their transport network: A new integrated transport system which combines "Bus Rapid Transit" and buses is currently being implemented. But how is it now possible to find out to what extent this advanced urban transport system helps reduce air pollution? Transportation experts from the

Colombian University de los Andes and PTV, Germany, have developed a new modelling technique in VISUM in order to evaluate how the different measures in motorised private transport and public transport influence each other. It allows planners to assess the traffic conditions before and after the implementation of the new transport system, in particular the journey time, speed and emissions. ☺

Bus Rapid Transit is a mobility concept which includes segregated bus lanes for bus services with frequent headways, including separate signal synchronisation.



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CEO transition at PTV

Dr.-Ing. Hans Hubschneider founded PTV more than 30 years ago. He now steps down, handing over to Vincent Kobesen. Together with Hans the Compass team reviews the events of the past 30 years.

In the 1970s a colourful mix of scientific employees met at the Institute of Traffic Engineering of the University of Karlsruhe and formed a creative team which focused on traffic behaviour and transport procedures. Not only experts in the fields of civil engineering, economics, physics and mathematics, but also IT specialists were members of this team because the emerging computer technology offered new ways of research.

Traffic flow simulation and the implementation of operations research were key areas. The application of operations research in traffic and transportation also was a promising career path for Hubschneider after the completion of his doctorate. Together with Michael Sahling he founded "PTV Planungsbüro Transport und Verkehr GmbH" in Karlsruhe in November 1979.

Operations Research (OR):

OR aims to develop and use mathematical methods in order to support decision-making processes.

(Sources: Gabler Wirtschaftslexikon)

Towards expansion

Our first projects included the development of a planning method for dial-a-bus services in the Lake Constance region, location and distribution planning for the Raiffeisengesellschaft Schleswig-Holstein, public transport network planning for local transport in Mannheim and transport plan-



PTV founder Hans Hubschneider (l.) hands over to the new CEO, Vincent Kobesen.

ning for the Spaten brewery in Munich. These projects also were the basis for the first PTV software products: INTERTOUR for interactive trip and route planning and INTERNETZ for interactive public transport network planning.

PTV entered the 1990s as a rapidly growing company: PTV founded affiliates, each specialising in different key areas, and it was involved in numerous shareholdings and partnerships. In addition to transport and route planning

as well as transportation planning and traffic simulation, the company also focused on traffic telematics. In 1997, all PTV companies with offices at seven different locations moved into the PTV building on Stumpfstraße in Karlsruhe. For Hubschneider this was a particular milestone in the company's history: "Being 'visible' as a company had an immense symbolic power for me. Moreover, I was strongly involved in the first construction phases," remembers the 59-year old PTV founder.

Visible merger

Two years later the visible change became official: the four largest PTV companies merged with the holding company and became "PTV Planung Transport Verkehr AG". PTV continued its focus on traffic, logistics and mobility, but it now turned into a global organisation. The technological achievements included map&guide's hazardous goods routing, the mobility portal reiseplanung.de, the first route planner with qualified and TÜV-certified emis-

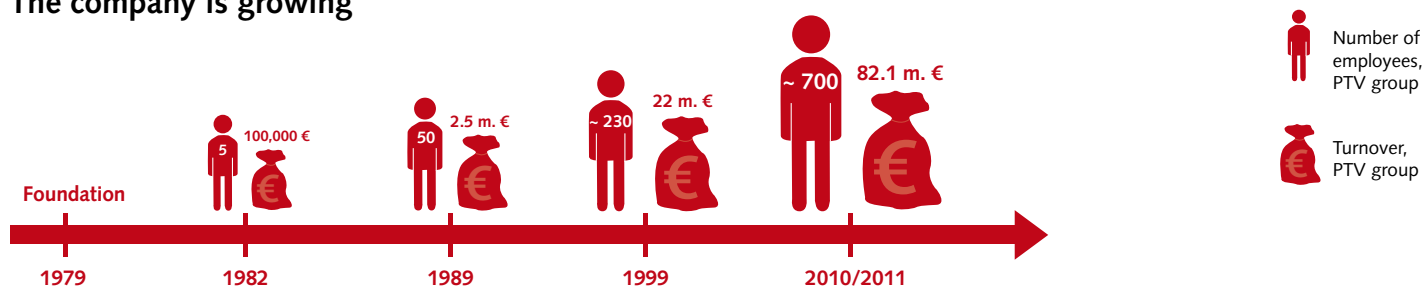
sions calculations. "In the 1990s we decided to focus on traffic simulation which proved to be a successful strategy," says Hubschneider. "The simulation software VISSIM was and continues to be our top product for internationalisation."

Building bridges

However, Hubschneider is not only proud of PTV's product innovations: "PTV always succeeds in building bridges and bringing together traffic

and transportation related topics. For example, the combination of public transport and transportation planning as in VISUM was completely new," explains Hubschneider. And with PTV Intelligence we are currently developing a new approach that combines logistics and strategic transportation planning. "Now, the biggest challenge will be to secure future mobility in a sustainable manner. This is where PTV can contribute its extensive experience and expertise across the different business areas," says Hubschneider.

The company is growing



Vincent Kobesen – the new CEO

Since July 1, Vincent Kobesen has been running PTV's global business operations. The 49-year old Dutchman has been associated with the company for nearly 20 years and he founded today's PTV Benelux. Since 2008 he has been a member of the PTV Board and head of PTV's business field Logistics Software.



COMPASS: Will the leadership change affect PTV's business policy?

KOBESEN: No. Three years ago we started our programme "Focus, Optimisation and Growth". And now is the time for growth. PTV already has offices in more than 90 countries. But there are a lot of markets where we can still improve our market position, I'm thinking here of South and Central America, the Middle East, Asia and the US in particular.

COMPASS: Does this also mean that there will be no change in leadership style?

KOBESEN: Hans Hubschneider's leadership style made PTV grow well. It would not make sense to do everything in exactly the opposite way. But I will of course develop my own style of leadership and I suppose that is a very natural progression. It is said that one of the characteristics of the Dutch is to communicate in a more candid and straight-forward manner

and I think that this is the right approach for a modern company with an international clientele. So we will continue our journey on this path.

COMPASS: And where will this journey take us?

KOBESEN: Our vision is to plan and optimise everything that has to do with moving people and goods on a global scale. ☺

100 hours

Sales representatives will have an average of 100 hours a year more for their customers if a professional solution is available.



Travelling salesmen in the IT era


One third to a half of sales reps' time is spent in their cars. That's time that they're not with the customer. For this reason, more and more sales managers are turning to software to support their sales reps. Complementary, decentral solutions are gaining in importance.

THE DIRECT CONNECTION to an existing CRM system enables decentral, operative trip planning. This is because the customer data can be carried with the sales rep: Using an extended client interface, the sales rep can compile both daily or overnight trips and can perform call sequence optimisations on a

mobile device. If any changes to appointments are made, a suggestion function creates a list of alternative contacts along the remaining daily trip and shows these on the map. But strategic questions must first be answered centrally: Sales solutions such as PTV Map&Market/Premium create potential analyses, location and territory planning and use these to create long-term master call trips which can be easily imported to the CRM system. In corresponding CRM systems the trip planning components are already integrated with the PTV xServer. ☺



User-friendly territory planning for travelling salesmen

 [Read more about PTV Map&Market at www.ptvag.com/software/geomanagement-sales-force-management/](http://www.ptvag.com/software/geomanagement-sales-force-management/)

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Summer sun festival

The ground shakes when more than 50,000 people dance to the songs of Bad Religion and Razorlight at "Das Fest", the giant summer festival in Karlsruhe. During the breaks the displays next to the stage continue to provide information on emergency exits and escape routes.

KARLSRUHE is just one example of many open air festivals that will be taking place this summer. Whenever there is a large crowd of people, it is important to have a sound plan. For example, there are legal guidelines that ensure people's safety, in particular at specific event locations, such as stadiums. Another

important aspect is the experience of organisers and emergency services that coordinate city festivals and open air events. Moreover, simulations help planners to create quantitative analyses by means of "What-if scenarios?"

With VISSIM they can generate scenarios for realistic crowd modelling. Based on various parameters, the software provides calculations and animations which enable the planner to forecast possible bottlenecks. Even if these scenarios always depend on the basic data available, they can help the planning team to instantly simulate possible dangerous situations in order to avoid them in real life. ☺



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Vienna is illuminated – and optimised signal control systems ensure smooth traffic flow.

Vienna provides light signals

Illuminated Vienna. Besides the Prater with its big wheel and numerous other attractions Vienna has a modern lighting concept for the entire city: approximately 1,200 traffic lights contribute to the visual experience. The Municipal Department MA 33 “Illuminated Vienna” is in charge of traffic light control which is also a key issue of the recently ended research project CooperatiV.

Since the establishment of the ITS Vienna Region, a joint project of the city of Vienna and the Austrian provinces of Lower Austria and Burgenland, transportation consultants and engineers have been implementing high quality transport services for all road users. In this context, CooperatiV ensures a more efficient and well balanced traffic flow by means of traffic-responsive network and signal control systems. “Travel time can be cut by ten per cent,” says Thomas Epp, project manager at PTV Austria. “Reduced idle times help minimise driving times, fuel consumption and air pollutants. Traffic-responsive control

is nothing new, but the use of a model that makes up for missing count data is. Based on the count loops we calculate the traffic volumes and feed the control systems by our partner Gevas with the relevant data. We have successfully optimised 14 systems within ITS Vienna region,” explains Epp. Without the model it would have been necessary to install another 50 traffic count loops that cost around €10,000 to €20,000 each. The clear conclusion: “CooperatiV is a convincing reference project, in particular for other cities that use few detection systems and want to reduce their pollutant emissions,” says Epp. ☺

 www.wien.gv.at/verkehr/licht/ and www.anachb.at/ueber-its/partner

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What does traffic-responsive control mean?

Unlike local control methods and decision-making algorithms at network level, traffic-responsive methods allow for signal-actuated control that can be used within a larger scope for network-wide mathematical modelling, optimisation and proactive planning.

Top iPhone app

iPhoneWelt (iPhoneWorld) rated the Bayern-Info app for traffic information in Bavaria as top iPhone application. The handling is excellent, according to the iPhoneWelt experts. Here they are not alone: “Brilliant app. Thanks to the traffic overview with bars ranging from green to red it is no longer necessary to constantly use maps,” says the iPhone user Spino in his comment posted on iTunes App Store. The BayernInfo app developed by PTV can be downloaded free of charge from this website.



1,000 kilometres

That is the total length of the routes which trucks have to pay extra road toll for. This new guideline applies to Germany's four-lane trunk roads with direct motorway access and a distance of at least four kilometres. The government expects to increase its annual revenue by 100 million euro.

5,05 million

The film “Papa allein zu Haus” (Dad home alone) was broadcast by ZDF on May 16. Alongside Götz George the transportation planning software PTV Vision played a brilliant supporting role: In “Dad home alone” George plays a transportation planner who will retire shortly and whose family life gets shaken. The film which was broadcast on Monday evening achieved a market share of 15 per cent and ranked 2nd.





Design of Doha Parkland

Aspire Zone is one of the most advanced sporting venues in the Gulf Region with the vision to facilitate and promote the use of non-motorized modes of transport within the Aspire Zone and around Doha.

THIS ASPIRATION WAS ROOTED in the fact that the non-motorized modes of transport are one of the most common forms of physical exercise. Active transportation also provides significant benefits to reducing vehicle emission and roadway congestion on one hand, and increasing public fitness and health benefits on the other.

Enjoyable cycling & pedestrian environment

Aspire Park, one of Qatar's finest landscapes and largest recreational parks in the Gulf Region, is home to some of the most developed cycling and pedestrian routes for recreational purposes in Doha. Aspire Zone initiative to expand the recreational facilities is the first step in the implementation of the recommendations from the Qatar National Bicycle Master Plan (QNBMP). The Aspire vision is to provide all pedestrians and cyclists within the Aspire-wide

area with enjoyable and welcoming environment that is safe, efficient and convenient all year-round.

The main goal of the study was to propose the feasible plan of bicycle and pedestrian routes within the existing right-of-way and to provide the design guidelines for efficient and functional layout design, cross-sections, crossings types, and supporting facilities which are needed to guarantee high comfort and quality of service. The study was divided into two distinctive phases: Planning Phase and Design Feasibility Phase.

The Planning Phase

Planning Phase involved the development of the primary spine of bicycle and pedestrian network called Aspire-Wide System (AWS). AWS connects residential compounds, community parks, and recreational facilities with the high-order facilities at Aspire Zone. Secondary Access

System (SAS) was developed primarily as the feeder system to the AWS routes. It also provides local residents with closed loops for access to local points of interest and transit stops. PTV also planned for park areas and supporting facilities to improve accessibility, connectivity and continuity of the bicycle and pedestrian routes. The Plan offers the network of interconnected pedestrian and cycling facilities consisting of off-road pedestrian footpaths, on-road bike lanes, and mixed-use signed-only cycling routes, as well as roadway exclusive multi-use bicycle lanes and sidewalks.

The Design Feasibility Phase

Design Feasibility Phase focused on the development of cross-sections for various functional roadway classifications, including multi-use off-road bicycle/pedestrian facilities, multi-use boulevard pathways, shared bicycle lanes, and signed only routes as per local design standards

(Doha, Dubai, Abu Dhabi) and best practices worldwide (AASHTO).

Sustainability and Green Transportation at PTV

Transport is one of the major carbon dioxide emitting sectors and its emissions are still growing (as distinguished from other sectors) mainly due to motorized road transport. Particularly, this holds true in the fast developing regions such as the Middle East. The sustainable way forward requires careful transport planning and investment into renewable energy and alternative modes of transport. Although one might think that the bicycle is the last mode

to be considered in the local environment, this project shows both the willingness of the local entities and of PTV's team to take the sustainable way forward.

The project team at PTV Dubai deployed the principles of sustainable transportation planning and practical innovative ideas while developing the plan for the integrated bicycle and pedestrian paths and facilities in Doha. As such, an expanded network of on- and off-road pedestrian and cycling facilities provides improved access to convenient travel modes that are practical alternatives to the private automobile. The improved facilities also play a major role in supporting public transit use by encouraging

people to combine walk-transit and bike-transit trips. The study encourages and supports active transportation and healthy living and foster better understanding of the negative effects of motor vehicle use on the environment. It also offers the residents of Doha the opportunity to choose more environmentally friendly transportation and recreational activities that improve health and quality of life.

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Bicycle and Pedestrian Plan



Selected Cross-Sections

Common ground for calculations

Since 2008, a committee has been working on a European standard that allows carriers to calculate their power consumption and greenhouse gas emissions on a common basis. The committee is acting on behalf of the European Committee for Standardization (CEN). Compass spoke to Marc Cottignies, Chairman of the CEN working group.

“Without a standard, the calculation methods vary and there’s only little transparency.”

COMPASS: Why does Europe need a standard for calculating energy consumption and greenhouse gas emissions?


COTTIGNIES: Nowadays, if you want to submit an attractive offer in logistics, you’re bound to list the energy consumption and greenhouse gas emissions of your transport runs. And it’s actually a positive development in terms of ecological sustainability. But without a standard, the companies’ calculation methods vary and lack transparency. And this might lead to customers questioning the validity of their results. A European standard provides a clear structure for everyone.

COMPASS: Transparency is one thing, the economic aspect another.

COTTIGNIES: That’s right. Currently companies are investing a lot of time and money in establishing their own scientific calculation methods. A standard allows them to establish and further develop calculation methods based on commonly accepted rules. I believe this procedure is reliable and trend-setting. We can expect methodological decisions to be coordinated like this among several transport areas. After the deadline – which is currently 3 years – a revision of the standard might lead to a more exact version.

DIN EN 16258

DIN EN 16258 stands for the standard “Methodology for calculation and declaration on energy consumptions and GHG emissions in transport services”. Prompted by ADEME, the European Committee for Standardization (CEN) started working on a standard. Since the end of March a first draft version of the CEN is available which was created by national European committees and the German Institute for Standardization (DIN). A committee of approx. 70 members from 13 European countries worked on the draft. Among them were experts of goods and passenger transport, as well as PTV AG.

 www.nadl.din.de





Marc Cottignies has been working for ADEME, the French Agency for Environment and Energy Management, for 10 years. The specialist engineer works in the “Transport and Mobility” Department and is responsible for the “Carrier” area of Goods Transport Processes. Within the framework of an inter-ministerial program, he develops concepts for transport demand management. Before joining ADEME, the 44-year old worked as a logistics manager for large chain stores.

COMPASS: What issues is the standard committee concerned with?

COTTIGNIES: Well, first of all we define the areas the calculations shall refer to. Then we look at the cases in which several transport services are involved and how energy consumption is best distributed among them. In addition, we formulate recommendations regarding the data used in calculations and information that logistics providers should also communicate, besides the results calculated.

COMPASS: What does the draft standard cover?

COTTIGNIES: The draft covers vehicle and energy-related processes. For vehicle-related processes, we follow the so-called tank-to-wheel approach, i.e. all means of transport, all vehicles, the energy consumption per vehicle and all mileage, including deadhead mileage, are used for the calculation. For energy-related processes, we apply the well-to-tank approach. Here growing crops for fuel, energy generation, refining, processing and distribution are considered for all phases of energy production.

COMPASS: Where are the limitations of calculating quantitative energy consumption and greenhouse gas emissions?

COTTIGNIES: The draft standard doesn't include non-operative processes, such as greenhouse gas flows. Secondary transport processes that aren't carried out by the transporting vehicles aren't accounted for either. That would be the cranes, pallet trucks or conveyor belts. The draft norm also doesn't consider the production and maintenance of vehicles and transport infrastructure.

“The draft accounts for vehicle and energy-related processes.”

COMPASS: Can we look at the actual calculation process? What steps does it include?

COTTIGNIES: I'll try to demonstrate it, using a practical example. Let's assume we want to provide the following service: We need to transport a parcel from A to B via a land freight network. In a first step, we have to identify the individual segments of this transport run. In our example, the parcel is transported via a light-duty commercial vehicle on its pick-up trip from A to a first stop-off point. It is then loaded onto a different means of

transport and via a semi-trailer it is brought to a second stop-off point. Another light-duty commercial vehicle, on its delivery trip, finally takes it to B, its destination. So, for this service, we can identify three segments. In a second step, we calculate the energy consumption and greenhouse gas emissions for each of the segments and add them.

COMPASS: How does the draft standard handle allocations, e.g. when a trip includes goods from different customers, or deadhead mileage?

COTTIGNIES: Concerning allocations, the draft standard recommends calculating the fuel consumption of the entire trip and then distributing it among the customers according to the ton kilometres. We, however, recommend that the calculations are based on the smallest possible distance, e.g. direct distance, and not on the actual distance driven. Because the vehicle doesn't take the direct way to the customer, but first stops by other customers. It's also important to include deadhead mileage in the calculations. Theoretically, service providers can count deadhead mileage for the outward journey for each transport run. In practice, however, they will use an average value for a more global calculation, namely the percentage of empty transport mileage. ☺



Modern in Portland: Fixies, Hightech bicycles with minimum equipment.



The term "modal split" stands for the share of the traffic volume over various forms of transport.



Portland's well-founded concept "Bike and Ride".

Portland optimises bikeway network

Sam Adams, Mayor of Portland, Oregon, USA, has set himself a clear goal: 25 percent should be the cyclists' share of the modal split in his city by 2030. In order for enough of the over 582,000 inhabitants to jump on their bikes, the first job is to create an optimum infrastructure and to understand how cyclists choose their routes. An upgrade of the PTV Vision VISUM software makes this possible.

IN TIMES OF HIGH PETROL PRICES and congested roads, sustainable transport systems come to the fore. The cyclist is becoming more important. Bikeways in Portland already add up to 520 kilometres. In order to increase the cyclists' share of the modal split Adams has firmly set the 25 percent mark in his Bike Masterplan 2030.

To achieve this the transportation planners at the City of Portland Office of Transportation are following three approaches: to plan, extend and maintain an extensive network of bikeways, to enable bicycles to be safely parked and to emphasise the positive effects of bicycling to the public. But how can you encourage people to use their bicycles? And which routes do they choose?

Reference project by the Portland State University

Thomas Friderich, Director Marketing Traffic Software at PTV, accompanied a revolutionary reference project by the Portland State University: from March to November 2007, 162 cyclists received small pocket computers which could be attached to their bicycle frame. A GPS signal recorded all bicycle rides. Before the start of the ride, information on the reason for the journey and the planned route had to be entered. Scientists at the University evaluated this information together with the recorded routes in extensive calculations. Last summer PTV integrated the algorithm which was gained from this into the transportation planning software VISUM, making it quick and user-friendly.

The results are also surprising for bicycle fans: "cyclists will take a detour of 80 percent into account in order to be able to use a well structured bikeway", says Friderich. "Transportation planners need to know this. We have added these findings into VISUM. We can display cyclists' preferences, we can define and optimise different types of bikeways and harmonise them with other forms of transport - for an optimum transportation network." ☺

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From door to door


People in Sweden should be able to travel easily and comfortably. Samtrafiken has devoted itself to this task. A collective of over 40 Swedish public transport operators continuously works on this mission.

BY ROAD, RAIL OR WATER – travellers in Sweden can choose daily from over 200,000 trips. These stop at around 50,000 way stations. To plan their journeys, numerous travellers use the collective's online timetable information – ResRobot.se. As of March, it offers a routing covering all modes of transportation and presents itself with a modern look and feel. For the services, software from strategic cooperation partners HaCon and PTV is used.

"As of 2010, Samtrafiken is converting all its passenger information systems to our HAFAS

system", reports Dirk Esters, Head of Business Development at HaCon, a software provider from Hannover. "With the relaunch of ResRobot we have now introduced the intermodal routing system in all of Sweden. The intermodal routing system by HaCon and PTV has already proven itself in many European countries." With ResRobot, passengers can now enter any start and destination address. As a result you will get a detailed route description from door to door. Other than car roads and pedestrian paths, it also contains all transport connections from about 40 public transport

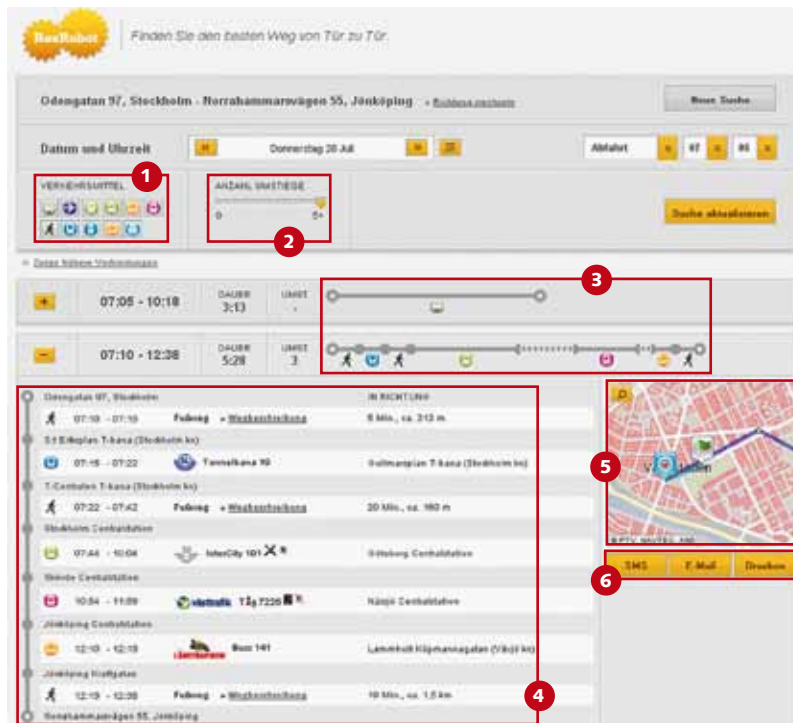
operators – from train, bus, metro and tram to ferry and airplane. ☺

 **Take a look and try it out at**
www.ResRobot.se

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Comfortable planning, relaxed trip



- 1 With a click of the mouse the unwanted transportation modes can be disabled.
- 2 In a tab, the number of changeovers can be conveniently filtered.
- 3 Bar graphs display the connections with the individual trip sections. Waiting times at a way station are graphically emphasised and easily recognisable.
- 4 In the detailed view, the passenger sees the used

- 5 transportation mode and operator for individual trip sections at a glance. The car roads and pedestrian paths are calculated by PTV xRoute Server. PTV xMap Server is used for the digital map. The Ajax technology allows you to zoom seamlessly in the zoomed-in part and to quickly scroll in the visible section.
- 6 The timetable can be printed out as well as sent out as a text message or e-mail. All providers that

are specified in the connection overview are linked. As a result, additional information about individual railway stations – such as site plans and services – are easily accessible by mouse click.



Handling 7 million journeys

Les Taxis Bleus is a company that acts as an intermediary between its clients: on the one hand, customers looking for taxis; on the other, the taxi drivers themselves. An average of some 100 people manning the call centre are therefore responsible for providing the interface between passengers and drivers, 24 hours per day, 365 days per year.

IN THE 1990S, Les Taxis Bleus developed an in-house mapping tool for entering addresses and calculating the time and distance between the taxi position and the customer pick-up point. The system is complex to maintain in the face of a constantly changing road traffic plan.

Today, the objective is to optimise and simplify the mediation between passengers and drivers. The call centre had to be equipped with a tool providing up-to-date, real-time mapping and ever more efficient functions, particularly in terms of processing times. Having consulted the mapping solutions available on the market, Les Taxis Bleus opted for PTV and its xServer components. "The core of the solution is complete, and its multiple components will allow us to develop our solution as we see fit. Furthermore, the tools are robust, extensively tried-and-tested and regularly updated. This offers us a real guarantee of quality and sustainability," says Patrick Del Vecchio, CIO of Les Taxis Bleus.

Geocoding and pick-up time

The starting point is the geocoding of customer addresses. Each street name entered must be checked. Once validated by the tool, the "X, Y" position is sent to the driver on his or her on-board system, to enable automatic guidance to

the pick-up address and so avoid any errors. "It is an extra service that we offer to the drivers, allowing them to save time when picking up customers and keeping incidents related to address searches to a minimum," says Del Vecchio.

The tool then manages the pick-up time. "In view of the volume of calls and the quantity of requests sent out, the search engine must be efficient and highly available in order to respond in real-time with reliable results," he explains. Lastly, the tool will make it possible to improve the current methods for searching for the taxi closest to the passenger's departure address.

Blue taxis, green taxis

With a view towards sustainable development, Les Taxis Bleus has expanded its service offering with Les Taxis Verts. "As a co-founder of the 'Kilom'ètre' programme (play on words in French between "kilometre" and "being"), we are sensitive to the issue of reducing the carbon footprint of our network. When our customers ask for the "Taxis Verts" ("Green Taxis") service, we can now use the PTV tools to calculate the quantity of carbon emissions over the distance travelled," explains Del Vecchio.

For improved reliability

The taxi business in the Paris region is affected throughout the year by certain events, such as Bastille Day on 14 July, for example, when taxis cannot operate in the Champs Elysées area. Using the Road Editor function available with xServers, the call centre can close off a given geographical sector on the map. The route calculation will then take account of whether or not this zone is accessible. The result that this produces is very precise in terms of distance and journey time.



The call centre of Les Bleus has to handle 15 to 20,000 calls per day.

"We have regular customers, and in order to keep them loyal we need to provide them with a quality service: for the passengers, this means reliable response times and accurate distance calculations; for the drivers, validated addresses, accurate pick-up times and faultless navigation to the pick-up address," concludes Del Vecchio. ☺

Facts & Figures

The business of Les Taxis Bleus in Paris and the Paris region is intense:

- 15 to 20,000 calls per day with peak periods in the morning and evening
- 7 million journeys per year
- 13 million passengers per year

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Maximum flexibility

Queisser Pharma's customers range from small pharmacies to major healthcare chains. Therefore, it is a difficult task to effectively coordinate all sales activities. The PTV Map&Market/Premium planning software assists the manufacturer of well-known pharmaceutical brands, such as Doppelherz and Protefix, in efficiently managing its sales team.

Axel Kaempfe's office at Queisser's headquarters is the heart of the company's sales organisation. About 35 sales representatives visit customers throughout Germany and present Queisser's wide range of healthcare products. "Our team has to call on pharmacies on a regular basis whereas major healthcare chains have narrow time slots for sales calls limited to a few weeks during the year," says Kaempfe. Just to mention one of the many different challenges the sales team has to cope with in order to plan optimal sales call routes. "Until two years ago, we used another tool for planning sales call routes and customers visits. However, our complex planning process was too complex for this solution."

Finding a better solution

Did Queisser encounter any problems when using the new software after its implementation and customer data storage? "It was extremely easy to install PTV Map&Market/Premium and the program runs absolutely reliably," summarises Kaempfe. He can now quickly react to short-term changes. For example, just a few mouse clicks in PTV Map&Market/Premium and pharmacies that were recently closed are replaced by newly opened shops. Additionally,

the system allows a fairer distribution of sales territories by considering factors such as turnover, time required for customer visits and driving costs.

Each member of the sales team receives a well-structured itinerary based on the optimal sales call route, the call times and the customer data. Additionally, data that might be required for taking new customer orders during the visit can be transferred to the employee's mobile device. PTV and GML jointly developed this innovative technology.

Getting the results

"Thanks to PTV software, we can now handle everything faster and more efficiently. Customer contacts have been substantially increased with the same number of sales representatives," says Kaempfe. "This program helps us optimise the workload. It improves employee motivation, and thus increases customer loyalty."



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Transportation modelling without frontiers

The Iron Curtain has gone – in the meantime, the Czech Republic, Hungary and Slovakia have become members of the European Union. As a result, the Centroe region is now intensifying economic integration which in turn creates an increasing demand for mobility.

The economic integration in the Centroe region has led to increased traffic volumes. Infrastructure projects in public and motorised private transport are therefore becoming increasingly important. To be able to assess the impacts of future construction projects, more and more decision-makers are opting for transport models. They want to analyse both the benefits and possible unintended effects on infrastructure development which cannot always be provided by simple trend analyses.

Transport model closes gaps

For administrative and financial reasons current transport models often stop at the borders of political administrative units. This also means that they usually cannot model the effects of transnational infrastructure projects or

projects in areas close to borders. The project “Transport model AT-SK” now closes this gap: it will be the first transnational, intermodal travel demand and traffic assignment model for the regions of Vienna, Lower Austria, the Northern and Central Burgenland, Bratislava and Trnava. The project stakeholders plan to include the adjacent regions of West Hungary and South Moravia.

From three to one

The project team has to deal with the challenge of combining and merging three separate transport models with all their specific difficulties. In this context, the team has to consider different coordinate systems and projections, diverse route and intersection typifications, the same route and intersection numbers in diffe-

rent networks, transnational public transport connections and many other aspects.

The main scientific task will be to investigate the impacts of data quality, the level of detail of the studied area, meaning the number of zones, and the choice of the demand model. To this end, four traffic generation models – MUULI- a four-level trip-end model, VISEM and VISEVA – are filled with the same data (as far as possible). The project team hopes that more detailed input parameters will allow them to make statements on output quality improvement.

The Austrian project team consists of the Institute of Transport Sciences, Research Division Transport Planning and Traffic Engineering, and the Technical University of Vienna.

The Institute of Transport Planning, Technical University Bratislava, is part of the Slovakian team. The project "Transport model AT-SK" started in October 2009 and ended in September 2012. 85% of the programme for transnational cooperation "Slovakia–Austria 2007–2013" is funded by the European Funds for Regional Development (EFRE) and 15% is co-financed by other national institutions. Every six months these institutions can participate in expert meetings and discussions. After the project they are allowed to use the results without having to pay for them. ☺

Optimising waste transportation

Gielen Recyclage specialises in waste collection, processing and transportation. The waste is deposited at the branch in Genk from where the entire transportation process is coordinated. The company uses the PTV Intertour trip planning system in order to optimise its waste transportation and unloading operations.

Centrope – a portrait


It is an invented word that describes a joint initiative which encompasses the region of Central Europe. The Kittsee Declaration of 2003 marked the launch of the Centrope initiative which covers an area of 54,500 km² and more than 7.2 million people who live in the Czech Region of South Moravia, the Slovak Regions of Bratislava and Trnava, the Hungarian Counties of Győr-Moson-Sopron and Vas as well as the Austrian Federal Provinces of Vienna, Lower Austria and Burgenland. The aim of Centrope is to turn the entire area into one of Europe's strongest economic regions.

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THE FIRST STEP was to perform a geographic analysis of the existing customer database. The customers were then classified into ideal 'standard trips'. After the customers had reviewed the proposals and put forward their requirements and wishes, these 'standards trips' were further optimised. It was at this point that PTV Intertour was introduced in order to add the final changes, using the standard trip structure as a basis.

trips were less straightforward, as the drivers had to plan them themselves. By using PTV Intertour, transportation is coordinated in a more systematic and efficient manner. Since all trips are now known in advance, there is greater control and changes can be dealt with swiftly. ☺

 www.ptvbenelux.com

Greater control

During each trip, between fifty and one hundred collections are processed. Previous

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Optimising waste transportation: Gielen Recyclage is part of the Gielen NV group, headquartered in Kortesseem, Belgium.



Brazil – much more than carnival and Caipirinha

BRIC, the abbreviation of Brazil, Russia, India and China, has become a synonym for growth. Since the turn of the millennium, these countries have developed into up-and-coming markets. Economic growth also means a growth in traffic volume and therefore the need for a better infrastructure. In a four-part special Compass will be introducing the concerns of each country. Starting us off is Brazil.

LONG CONVOYS tail back from São Paulo airport towards the city centre. Bumper to bumper these car bodies drag slowly along. Scenes like these are part of every-day life in Brazil. Covering hundreds of kilometres “stop-and-go” congestion dominates the road network in the cities every day. There are too few roads for the increasingly immense bulk of traffic.

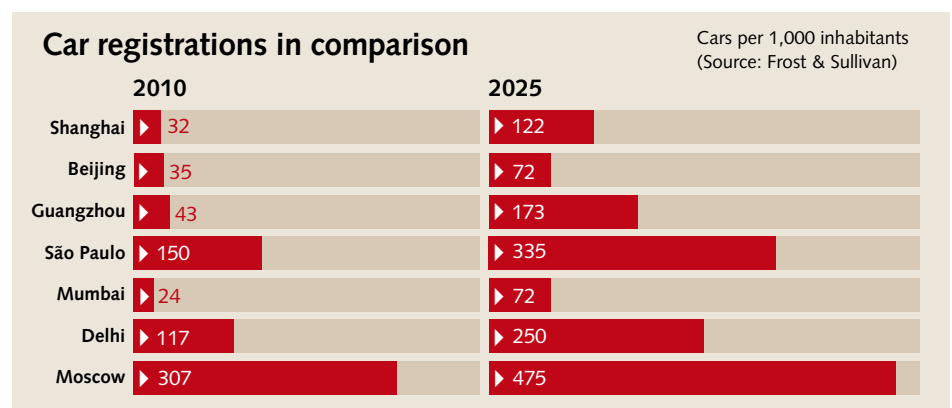
“The number of people moving up to the middle-class in developing economies is growing exponentially, so the number of people who have greater disposable income to afford their own vehicle also increases”, says Franck Leveque, Vice President of Growth Consulting at the management consulting company Frost & Sullivan. “In Brazil in 2010 there were 146 cars for every 1,000 adult citizens. It is estimated that this will increase to 156 in 2015”. With an increase of around seven percent, the growth of car registrations compared to the other BRIC countries is relatively moderate: Frost & Sullivan predict an increase of nearly 24 per cent for Russia. In 2015, India is expected to record

an increase of car registrations by over half again; in China even double so much (see diagram). So where is Brazil getting its economic power from?

Standing strong after the crisis

The country is rich in raw materials: It exports agricultural products such as meat and counts

as one of the largest suppliers of iron ore. Its deposits cover the worldwide iron requirement for the next 500 years. Also more than half of all processed gemstones and precious metals – including silver, diamonds and gold – are from here. The gross domestic product (GDP) has risen on average by nearly four per cent in the last 10 years (see diagram) and stood at an estimated 1,911 million US dollars in 2010.





PTV in Brazil

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Our customers such as Dersa, EGL Engenharia, Contém Construções e Comércio Ltda. and CET Companhia de Engenharia e Tráfego use PTV Vision to develop and implement various projects, including transportation modelling, transportation planning, traffic engineering.

Not even the economic crisis could effect this development. "Brazil didn't fall as much as other nations during the crisis because the domestic market makes up 60 percent of the GDP", explains Oliver Döhne from Germany Trade & Invest (GTAI), the foreign trade and inward investment agency of the Federal Republic of Germany.

That would have been different 20 years ago: Then the country melted into chaos causing hyperinflation and national bankruptcy. The economy was susceptible to external shocks. "In order to move away from the constant ups and downs, the then government under President Fernando Henrique Cardoso laid the foundation for more stability", says Döhne. It created an independent central bank, whose primary task is to fight inflation, and created a solid financial system with strict financial market regulations. "In addition the government strengthened the domestic market by planning social redistribution", says Döhne. That strengthened the purchase power of the poorer groups in society which in turn benefited the whole Brazilian economy. Today the country can unfold its entire potential in the Amazon and run to catch up with the industrial nations. A topic which takes place of priority is the traffic infrastructure.

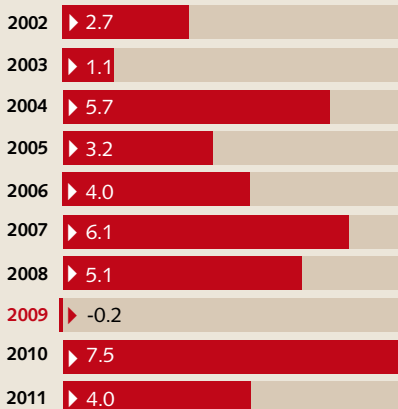
National vs. private

The road infrastructure in Brazil is very heterogeneous: "While the network under concession to private operation and maintenance is in good quality, the rest of the network is in really bad shape", reports Sideney Schreiner, Managing Director of PTV Brazil. "Poor construction techniques along with bad maintenance and heavy traffic

(referring to both weight and volume) create an inefficient and dangerous scenario." An extremely high number of deaths in road accidents and low average speeds dominate the publicly maintained roads.

The government knows about this problem and has invested in the road infrastructure generously in recent years; in 2010 alone nine million US dollars were pumped into the road sector. This noticeably improves traffic conditions, but it's not enough: In 1997 only 7.9 per cent of the 41,867 kilometres, which the national transport association (Confederação Nacional do Transporte, CNT) evaluated provided good to excellent traffic conditions. Last year this could be said of 41.2 per cent of 90,945 kilometres evaluated.

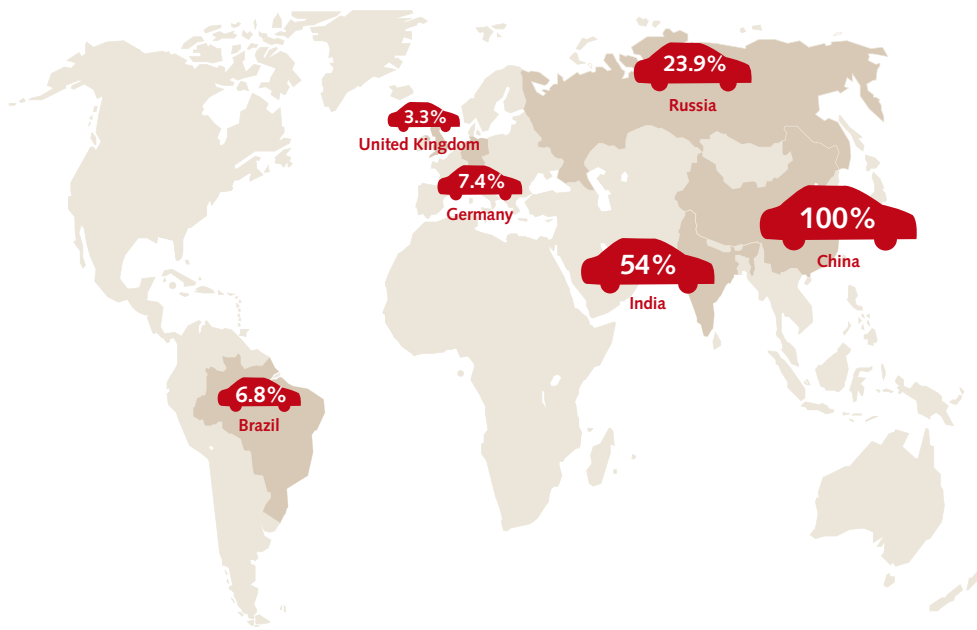
Development of the Brazilian gross domestic product



Change in %, real
Source: GTAI, Status: May 2011

Look at the motorways

If only the motorways are considered, the result looks even bleaker: The CNT evaluates the traffic conditions at only 25.4 percent as good to sufficient. That represents 23,149 kilometres of the tested 90,945 kilometres evaluated by CNT in 2010. "We are far from our goal," comments José Casadei, Press and Communications Manager from ABDIB (Associação Brasileira Da Infrastrutura e



Increase in car registrations until 2015 compared to 2010 (Source: Frost & Sullivan)

Indústrias de Base). The Brazilian infrastructure association has therefore proposed that the government increases investments in the national motorways and at the same time increases concessions in private economy. They have the possibilities and means of implementing plans. "We are convinced that

12,000 road kilometres could be reconstructed within 30 months with the help of concessions or Public Private Partnerships", says Casadei. Experience has shown that this process also has other advantages: There has been an increase in tax revenue from private economy as well as the traffic users' improved comfort and safety. The competitive position is also good for the Brazilian economy.

Brazil – data and facts



City: Brasilia

Surface area: 8.5 million km²

Population: 190.7 million

Population density: 23 inhabitants/km²

Population growth: 1.2 %

Business languages: Portuguese, English

Currency: Real (R\$); 1 R\$ = 100 Centavos

Exchange rate: 1US\$ = 1.584 R\$ = 1; 1 € = 2.287 R\$

Important trade partners/main suppliers:

China, USA, Argentina, Germany (4th in the list)

Important trade partners/main buyer countries:

China, Argentina, The Netherlands, Germany (5th in the list)

Source: GTAI; Status: May 2011

This is also similar to how PTV transportation expert Sideney Schreiner views the situation. However he feels that an increase in concessions must include stricter regulations for the contracted companies. "Planning and construction of capacity expanding projects usually take too long; and when completed, are usually no longer enough to cope with the higher demand during the construction period," he says. A vicious circle.

Getting sporty

An accelerating factor in extending the infrastructure were two major sporting events which Brazil will soon be hosting: The football World Cup 2014 and the Olympic Games 2016. Attention has been concentrated in particular on extending the capacity of the airports and local public transportation. "For example in São Paulo none of the public airports are connected to the rail network. This is standard in every European city", says Döhne,



who has researched the different building projects in the study "Brazil 2014/2016". Therefore São Paulo now plans to operate an express train between the city centre and the international airport Guarulhos. And the city of Manaus is currently building a monorail. In other areas it will boil down to bus corridors with state-of-the-art busses that are connected to a modern electronic traffic management system.

Generally, experts are expecting urban transport in the hosting metropolises to have long-term benefit from the modernisation brought around by both of the sporting events. "A majority of drivers will start using public



The traffic infrastructure

Paved network: 211,768 km

Rail network: 29,637 km

Usable waterways: 43,000 km

Airports: 67

Source: ABDIB

transport as it provides shorter driving times and more comfortable journeys”, predicts Schreiner. “Long-distance transportation will also profit because demand for domestic flights is high. The larger capacity at airports will mean that flight operators will be able to extend their service and reduce prices. That relieves transportation on the roads.” According to a study of the Brazilian Institute for Applied Economic Research IPEA (Instituto de Pesquisa Econômica Aplicada), the target for 2014 is a 57 per cent increase in capacity from 94.5 million passengers a year to 148.7 million. However this study also shows that by the time the project is finished, demand will be higher than the supply.

Awareness of the whole picture

So the question arises: why not plan and build accordingly from the start? “In Brazil transportation planners are fighting with two challenges: Technology and data”, explains Schreiner. “Often older technology is being used which is based on outdated demand models”. In addition the data would turn out to be unreliable and expensive. The consequences can be felt everywhere in the country – both economically and socially.

Most cities don't have a well-founded transportation masterplan. Attempts would normally

have been made to solve existing or potential problems. However plans to manage future scenarios are rarely made. PTV is working on creating a greater awareness of these problematic aspects. “Training and support which often includes much more than the simple use of the software is a highly demanded service”, reports the transportation expert at PTV. “Our customers receive training in the most state-of-the-art technology in transportation modelling which can then be used for their projects in the whole of Brazil.”

And what does the situation with goods transportation look like? Because in the end there is the danger that high logistics costs will slow down the entire economic growth. These costs can be traced back to the strong regional differences in the infrastructure and an antiquated rail network. Above all the Amazon region in the North is badly connected. “Air transportation has increased in recent years, providing a more efficient connection between the North and the rest of the country”, says Schreiner.

In addition waterways are gaining importance. “I think this is also the most viable scenario for the region. The maintenance of roads, especially inside the rain forest area is complicated and expensive.” He advocates an efficient, integrated and multi-modal network which connects existing, local roads with regional waterways and airports. The fact is: If Brazil manages to optimise its transportation infrastructure then the country can achieve even more economic growth. “If additional deficits such as the education system, innovation and bureaucracy are also cleaned up, Brazil could even achieve an additional two per cent in growth”, summarises the economic expert Döhne. ☺

Sharing knowledge, exploring visions

IDEAS, EXPERTISE AND EXPERIENCE are the essential ingredients of innovative projects. The PTV Vision International Users Group Meeting combines all of them: PTV Vision users and everyone interested in transportation planning will have the opportunity to find out more about the latest trends and methods for advanced intermodal transportation planning at this year's meeting in New York, in September. You will learn how the new software functionalities in VISUM and VISSIM can help make your work easier. Moreover, users will share their knowledge and experience in using PTV Vision for their daily business operations and individual projects. ☺



Join us at this year's PTV Vision International Users Group Meeting in New York, September 13 – 14. Reserve your place now!

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35 Master students from Newcastle University visited PTV in Karlsruhe.

A truly international crowd

THE UNIVERSITY OF NEWCASTLE is considered one of the top universities in the UK and attracts many students from around the world. In May, 35 Master students specialising in Transport took part in a study tour to Germany during which time they also visited PTV. "Following the success of last year's study tour of the Master students from Newcastle University who also spent two days in Karlsruhe, this meeting has become an annual event as part of the Master's Degree programme in Transport," says Paulo Humanes, PTV Account

Manager Traffic Software. During the one-week programme, the students were given the opportunity to attend lectures on interesting topics, such as the Stadtmobil car sharing scheme and the Karlsruhe U-Strab (new underground tram system). They also went to Frankfurt to learn more about German Rail. "PTV organised a rich week during which I discovered various new aspects of mobility," says Jean-Pascal Allain, one of the Master students who participated in the study tour. ☺

Berlin Calling

PTV IS PLEASED to announce the 9th PTV ITS Conference to be held in Berlin in late November. The theme for this year's conference is "Seamless Traffic Intelligence" with a strong focus on the dovetailing of traffic infrastructure and services as the key to success for ITS (Intelligent Transportation Systems). The conference attracts key players from various industries, including hardware and software providers, routing and navigation providers as well as traffic management centres. ☺



This year's PTV ITS Conference will take place in Berlin from November 23 - 24. Reserve your place now!

Berlin – exciting metropolis and venue for the 9th PTV ITS Conference

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Dear Reader,

Would you like to suggest an interesting topic, start a discussion or have you used PTV products for challenging tasks? Your comments and suggestions are always welcome! Please contact PTV AG, Redaktion PTV Compass, Stumpfstraße 1, 76131 Karlsruhe, Germany or send an e-mail to public.relations@ptv.de.

The PTV AG editorial team

Meet PTV at international events!

13.09. – 14.09.2011	PTV Vision International Users Group Meeting, New York				
26.09. – 30.09.2011	World Road Congress, Mexico City				
03.10. – 05.10.2011	Intertraffic India, New Dehli				
05.10. – 06.10.2011	CRM-expo, Nuremberg				
10.10. – 12.10.2011	European Transport Conference (ETC), Glasgow				
17.10. – 20.10.2011	ITS World Congress, Orlando				
19.10. – 21.10.2011	BVL-Kongress, Berlin				
25.10. – 26.10.2011	PTV Vision Anwenderseminar, Dresden				
15.11. – 16.11.2011	PTV Mapware Conference, Karlsruhe				
23.11. – 24.11.2011	PTV ITS Conference, Berlin				
12.12. – 14.12.2011	Gulf Traffic, Dubai				
	Traffic Software		Transport Consulting		Logistics Software

Train your brain with PTV

The race

Sandra, who is athletic and Peter, who is somewhat unfit, had a race against each other around a circular area with a diameter of 150 metres in opposite direction. They both started at the same spot but Sandra didn't start until Peter had already ran 1/8 of the distance (i.e. 1/8 of the circumference). Sandra didn't think much of Peter's speed and started dawdling – until she met Peter. At this point Sandra had gone 1/6 the distance. How much faster than before must Sandra run in order to win the race? ☺



Adapted from: "Mathematische Rätsel und Spiele. Denksportaufgaben für kluge Köpfe" ("Mathematical puzzles") by Sam Loyd and Martin Gardner.
© 2003 DuMont Buchverlag, Cologne, p. 336



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