

# PTV MobilityPlatform

Innovative web and mobility services



# Advanced toolbox for creating mobility and navigation services

The PTV MobilityPlatform is a modular and open software product offering service providers such as car manufacturers, wireless carriers, telematics service providers or mobility portals a component-based application framework. It allows them to quickly and cost-efficiently develop innovative mobility services across different communication channels.

The software product incorporates all key components which are essential for creating a wide range of mobility services and

developing them into a marketable commodity. To offer these mobility services, single platform components can be accessed and combined according to the customer's individual needs. The PTV MobilityPlatform can be accessed at PTV's hosting centre using the standard Web Services interface via an XML-based SOAP protocol, or an AJAX interface via JavaScript. This means that every platform component can easily be integrated into external systems independent of any platform technology.



# Use cases in a nutshell

Providing innovative services to mobile end-users means benefitting from a stronger customer relationship. An innovative service portfolio is the key to differentiation from competitors, retaining existing customers, attracting new customers and improving the corporate image. Service providers get a unique selling proposition in this dynamic market by positioning the brand name in every mobility service.



## Automotive/Navigation

- ▶ Mobility portals, travel planning services
- ▶ Display and selection of traffic information
- ▶ Traffic Info Alert for commuter portals
- ▶ Connected Navigation Services
- ▶ Services and contents (e.g. traffic information, weather forecasts) for different channels such as the Internet, iPhones or navigation systems

## Traffic management centres

- ▶ City map services
- ▶ Visualisation of traffic information (current traffic condition and traffic forecast) and level of service
- ▶ POI service = information portal
- ▶ Route calculation based on up-to-date traffic information and projected traffic data
- ▶ Comparison of different modes of transport regarding journey time and environmental factors

## Companies with a multi-branch structure

- ▶ Geographic search for the nearest point of sale
- ▶ Radius or corridor search
- ▶ Routing description – How to get here
- ▶ Control of regional offers for sale (e.g. special offers for a specific supermarket)

## Telematics Service Providers

- ▶ Toll calculation
- ▶ Subsequent calculation / Display of driven route for PAYD and the evaluation of driver behaviour
- ▶ Asset tracking
- ▶ Connected services, assistance or concierge services

## Mobility providers

- ▶ Door-to-door travel information including pedestrian routing
- ▶ Multimodal and intermodal routing
- ▶ Display of the current traffic situation
- ▶ Site plans (e.g. car parks, airports)

## Sophisticated functionalities

PTV MobilityPlatform offers prepackaged applications, allowing users to quickly develop the most common Internet or wireless mobility services. It provides the entire business logic for standardized mobility services by using the underlying PTV xServers and PTV TrafficInformation Services. PTV MobilityPlatform enables service providers to offer services with a very short time-to-market by simply adding the appropriate web frontend to the application code provided by PTV. The platform provides XML interfaces for a smooth integration of external applications and portals. Interactive Web 2.0 applications can easily be developed by means of AJAX servlets.



Mapping / POI search: POI along a route on a terrain map

Several convenience methods for:

### Mapping

- ▶ Map display centered around an address or coordinate
- ▶ Map request also available as rectangle (bounding box)
- ▶ Enrichment with additional data such as POI, traffic and weather
- ▶ Move and zoom functions with the map
- ▶ Map profiles for individual design options
- ▶ Display of additional information such as relief and elevation maps, environmental zones and building areas
- ▶ Interactive map with Ajax technology

### Routing

- ▶ Calculating routes with addresses or coordinates including stops
- ▶ Selecting the shortest, fastest or most cost-efficient route
- ▶ Taking different modes of transport such as cars, trucks, pedestrians or bicycles into account
- ▶ Avoiding congestion zones by using up-to-date traffic information and traffic patterns, which have an impact on the route selection
- ▶ Visualising the route as a map and itinerary
- ▶ Interactive routing via drag&drop
- ▶ Additional POI information along the route, e.g. weather and traffic data visualised on the map



Traffic Information / Routing:  
Route calculation based on traffic messages

### Geocoding

- ▶ Address search (converting address to coordinate)
- ▶ Reverse address search (find an address for a coordinate)
- ▶ Customer-specific weighting criteria can be configured
- ▶ Interactive geocoding using Ajax technology (auto-complete address field = when entering an address, the system suggests addresses after each character or number that is typed)



Routing: Drag&drop to change a route

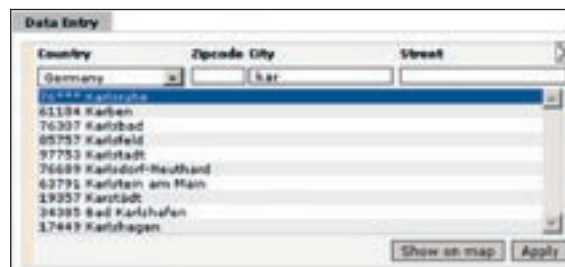
### POI search

- Radius search centered around a specific coordinate or address based on direct distance, travelled route or time

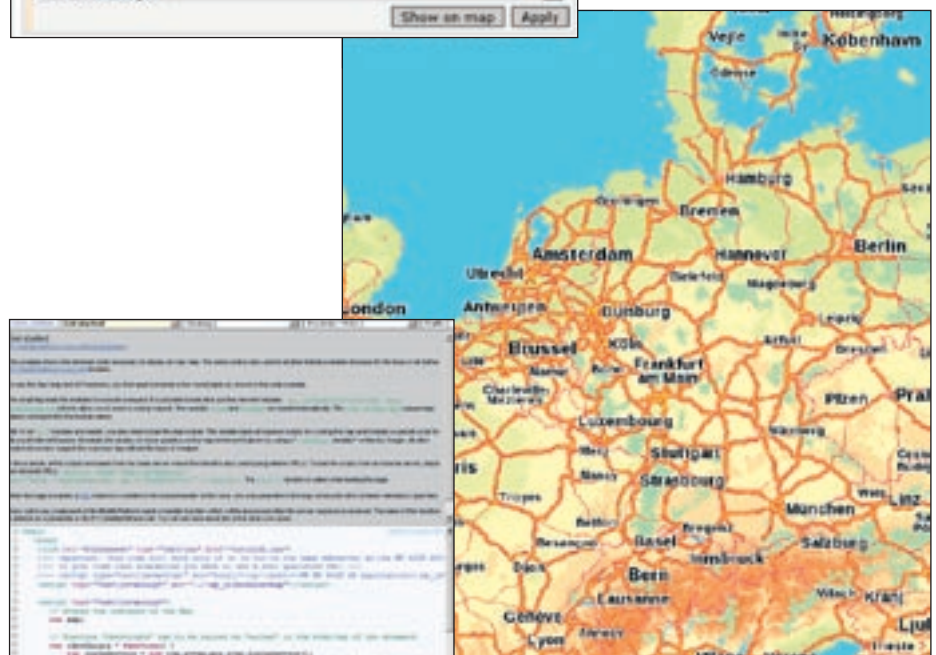
### Traffic information

- ▶ List or map with traffic information by country or region
- ▶ Display of traffic messages for a street or road
- ▶ TrafficAlert functions for:
  - Traffic monitoring for defined user profiles
  - Monitoring of a specific route (e.g. the fastest route from Karlsruhe to Stuttgart), a specific road (e.g. motorway A8) or region
- ▶ Different data available:
  - Current traffic flow information
  - short-, medium- and long-term traffic forecasts
  - Speed per road section and time interval (time graphs)

Geocoding: Auto-complete address field



Quick start: Interactive Ajax tutorial



# Your advantages

**Better service** The provision of a unique geo data source and generic geo core functions across all levels of the platform leads to consistent services across all applications and electronic channels.

**Flexibility** Mobility services based on the platform can easily be adapted and integrated into other platform technologies to meet new business requirements or changing market conditions. We offer data from two major map suppliers (Navteq and TeleAtlas) but individual content can be provided as well.

**Up-to-date content** The platform provides up-to-date content, such as map data or traffic information. Route calculations are based on this traffic data or on traffic forecasts (e.g. predicting traffic over a 4-hour period).

**AJAX for web applications** AJAX functionalities can easily be included in your web application thanks to PTV AJAX Servlets.

**Individual design** As the platform is multi-client capable, users can create individual map layouts and administer POI data according to their specific requirements by means of a web-based POIAdministrationService.

**Configurability** Numerous search and filter criteria for the selection of POI and traffic data provide a wide range of information tailored to fit the customer's individual requirements. For example, petrol stations, which can be reached within a given time slot or distance, are displayed along the selected route.

**Environmental protection** By taking the current traffic condition or forecasts into consideration or by calculating routes based on green zones, it is possible to significantly reduce carbon emissions.

**Short time-to-market** The interactive Ajax tutorial enables users to quickly and easily test the platform functions and to create prototypes (use/adjustment of commented code samples) without any access restrictions.

**Investment protection** The open, scalable platform, which complies with a widespread standard, minimises financial risks by providing companies with a future-orientated basis for their mobility service initiatives.

Customisable map layout  
– green zones with an  
impact on routing



Display of a traffic forecast,  
in Munich on a Friday at 7 am



Customisable map layout –  
cyrillic map based on TeleAtlas

# Reference customers and projects

---

## Verkehrsinformationsagentur Bayern GmbH

- ▶ Since 2009 the Verkehrsinformationsagentur Bayern GmbH (VIB) has been providing an intermodal travel information service for tourism and leisure in the Free State of Bavaria. This has been operated from the [www.bayerninfo.de](http://www.bayerninfo.de) portal. Emphasis is placed on displaying current traffic conditions and forecasts as well as multi-vehicle travel information for bike, car, bus or rail. PTV is involved with the set-up, maintenance and technical operation of the portal. Additionally, the traffic and transportation experts at PTV are responsible for creating the high quality travel forecasts and dynamic routing for the online service.



## Varta hotel and restaurant guide

- ▶ Varta provides an online hotel and restaurant guide with more than 40,000 hotels and restaurants at [www.varta-guide.com](http://www.varta-guide.com). The entire portal is based on the PTV Mobility Platform. It includes a wealth of detailed information and a very user-friendly hotel and restaurant locator, with map features for the display of search results or individual hotels and restaurants. Numerous hotels and restaurants can be booked online.



## WirelessCar

- ▶ WirelessCar is a telematics division that is part of the Volvo group. It provides various telematics services for Volvo Trucks, Volvo Cars, Volvo Construction and other automobile manufacturers. All services for geocoding address data, map displays and route calculations are based on PTV technology.



## OMV

- ▶ OMV offers its transport customers a new, unique mobility information service: the OMV Fuel Navigator calculates the routes suitable for truck travel, optimises refuelling stops and displays OMV petrol stations including the current rates throughout Europe. In addition, the route planner calculates the road or motorway tolls for almost every European country. The portal provides information in 16 European languages.



▶ Traffic Software  
Logistics Software  
Transport Consulting

**PTV AG**  
Stumpfstr. 1  
76131 Karlsruhe  
Germany

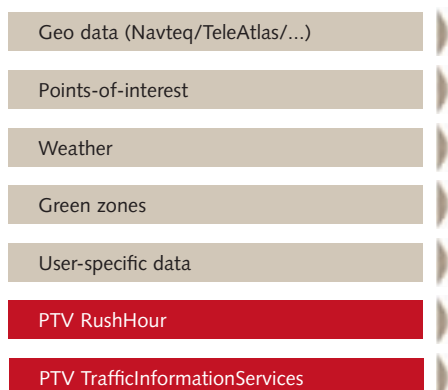
Phone: +49 721 9651-7722  
its@ptv.de  
www.ptvag.com

# PTV MobilityPlatform – for improved mobility services

## Target groups

- ▶ Automotive/Navigation
- ▶ Traffic management centres
- ▶ Mobility providers
- ▶ Companies with a multi-branch structure
- ▶ Telematics service providers

**Please contact us and we'll be glad to help you creating innovative web and mobility services!**

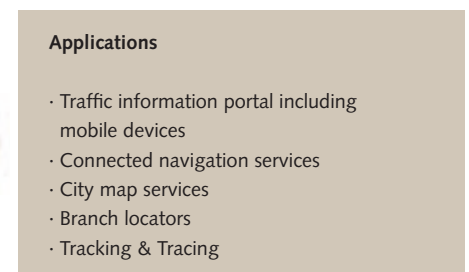
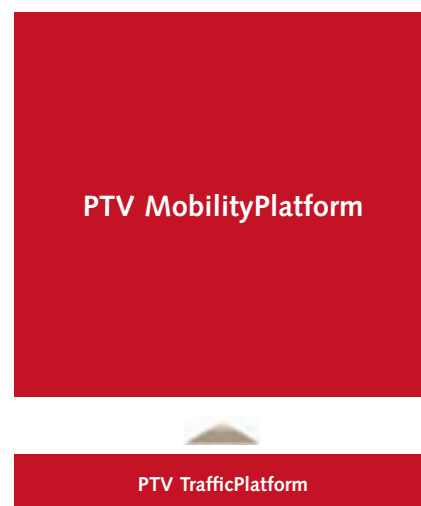


## Applications

- ▶ Traffic information portals including mobile devices
- ▶ Connected navigation services
- ▶ City map services
- ▶ Branch locators
- ▶ Tracking & Tracing

## Advantages

- ▶ Software as a service (SaaS)
- ▶ Geospatial core functionalities
- ▶ Several convenience methods for mapping, routing, geocoding and traffic information
- ▶ Up-to-date content (map and traffic data)
- ▶ Standard web service interfaces and interfaces and Ajax API
- ▶ High availability and security
- ▶ Individual customisation
- ▶ External hosting possible



The PTV Group provides cutting-edge software technology and consulting to enable customers to meet their mobility needs. It helps people plan and manage traffic and transportation, provides them with the latest traffic reports and assists them in optimising their long-term resource allocation.

The ITS division sees to an efficient and sustainable use of the traffic infrastructure by supplying intelligent traffic management tools. PTV aims to optimise traffic by offering solutions for analysis and simulation in real-time and for forecasts.