PTV GROUP
the mind of movement

SUCCESS STORY

Road safety in Basel-Stadt

THE SWISS CITY IS DETERMINED TO MAKE ITS ROADS THE SAFEST IN THE WORLD

● — **PROJECT GOAL**

Basel-Stadt, the safest city in Switzerland when it comes to traffic, wants to become even safer. The city is working in close cooperation with the cantonal police on a traffic model in PTV Visum, which contains all accident data in addition to mobility supply and demand.

● — **RESULTS**

The systematic recording of all accidents enables the cantonal police to identify road sections with an increased risk of accidents and to analyze potential infrastructure improvements

Accidents on the road are only caused by human error – so the general misconception. In reality, accidents are often not unforeseen events that are solely attributed to an error by those involved, but other factors and causes play a decisive role. If accidents occur more frequently at a particular intersection or a route corridor, it is worth taking a closer look at the type and circumstances of the accident. Are there possibly deficiencies in the infrastructure or is the traffic regulation unclear at this point?

A NATIONAL ROAD SAFETY AGENDA
For years, Switzerland has been committed to increased safety on its roads. In 2012, the Swiss parliament adopted the "Via Sicura" action programme that set the goal to significantly reduce the number of severe and fatal injuries. Thanks to many actions and persistent efforts, the number of road deaths in the country was reduced by 34% between 2010 and 2016.
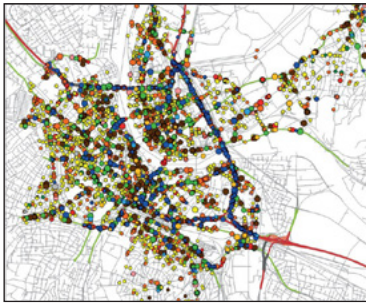
BASEL-STADT MOVING FORWARD
The implementation of the "Via Sicura" is being driven forward most actively by the Basel-City Cantonal Police. They are consistently implementing packages of measures and achieving positive effects. It goes without saying that the principles of road safety (speed, lights, right of way) are an integral part of police checks. In addition, children of all age groups are being trained in schools. The public is sensitized to this topic by means of posters and flyer campaigns. The infrastructure safety instruments (ISSI) required by ASTRA are now gradually being introduced and further developed in operation.

Road safety has long been an integral part of the traffic planning processes in the city of Basel and is implemented in an integrated manner.
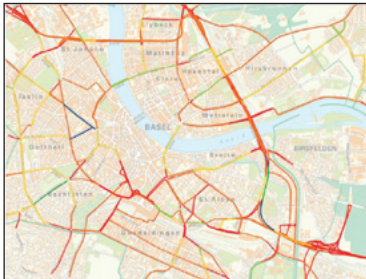
Model built with PTV Visum, configuration with PTV Visum Safety, adaption of the program environment to Swiss guidelines, import of the JSD accident database, PTV Visum Safety Training

- Project name: Traffic Safety Basel-Stadt
- Customer: Cantonal Police Basel-Stadt
- PTV Group provides: Software, Professional Services, Training
- Implementation: 2016-2017

PTV Visum Safety - Accident black spots by categories

Network safety analyses NSM

To this end, the Traffic Department has recently started working with a traffic model in PTV Visum. This model reflects the current traffic reality. It is subdivided into the districts of the city and contains the current transport offer, the settlement structure (homes, workplaces) and mobility behavior. In addition, the accident data of the Basel-City Cantonal Police have been included.

IDENTIFYING BLACK SPOTS

The 3,300 entries collected since 2011 have been transferred to the network structure and now show accident black spots, i.e. critical road sections with increased accident risk. The accidents and network data are then used for accident forecasting and analysis. In this way, the particularly critical points in the network can be evaluated according to their traffic significance and marked using route coloring. Interactive tables identify anomalies and support the police in creating an emergency ranking.

The so-called Network Safety Management (NSM) helps to evaluate potential improvements of the infrastructure at the identified network sections also with regard to avoidable accident costs. Equipped with the appropriate tools, the Basel-City cantonal police also want to optimize traffic control at construction sites. To this end, the Traffic Department is relying on the so-called Road Safety Impact Assessment (RIA), which enables a risk assessment of existing and future infrastructure.

Simplified accident prediction models in PTV Visum Safety can be created for different road types. The information on traffic volumes from the traffic model can be used to draw a balance with regard to the predicted occurrence of accidents for individual roads or the entire network. In addition, various scenarios can be examined in advance.