



MOBILITY MEETS BIG DATA



NEWSLETTER

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BIG DATA TO STREAMLINE
URBAN MOBILITY

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Operations in the urban transport sector can benefit significantly from an increasing amount of data available from different sources (e.g. road sensors, traffic cameras and vehicles themselves). In order to allow the urban traffic management centre (TMC) to keep the traffic flowing in the city's road network, TMC operators need accurate information on the traffic situation and must predict potential traffic to take appropriate decisions and inform travellers about road problems.

Better traffic policies are making cities more pedestrian friendly, cycling friendly and public-transport friendly. This however poses challenges to traffic management in terms of minimising traffic congestion while updating drivers and passengers on the traffic situation and potential disruptions. It can also compromise delivery of goods, loading/unloading of delivery trucks, vans, and maintenance vehicles by limiting access to the city centre and space. This is why freight transport needs tools to optimise routes and find suitable free parking places.

AN AMBITIOUS PILOT IN TAMPERE, FINLAND

To test how effective Big Data can be in enhancing the transport sector, TransformingTransport is launching a dedicated pilot in the Finnish city of Tampere, which is the largest inland city in the Nordic countries. The pilot coincides with major ongoing infrastructure works in Tampere, such as the construction of the tram network and the new arena on top of the existing railway tracks. Key partners in this TransformingTransport pilot are VTT Technical Research Centre of Finland Ltd, City of Tampere, Infotripla, Mattersoft and Taipale Telematics.

The Tampere pilot will provide novel tools for urban traffic management, complementing already available data sources. Traffic loops at signalised intersections already provide real-time

information on the number of vehicles, while data from buses, taxis and freight vehicles in circulation are also available. New data sources will include input on traffic disruptions from travellers through social media feeds. The feeds will be analysed and provide input to the TMC so it can make better decisions, communicate any issues to the public and take steps to avoid traffic or disruptions. The city of Tampere is installing many traffic cameras near intersections and main roads. The TT project will offer tools to ease monitoring by transport authorities

who will be able to analyse video images for traffic jams and disruptions.

The pilot will also provide tools to inform drivers and public transport users about traffic status and traffic disruptions through different channels, such as social media and smartphone apps.

In addition, the pilot will improve urban logistics through tools to streamline parking access of goods delivery vehicles based on a reservation system for dedicated parking places.



▲ Tampere city centre ©Visit Tampere, Suomen Ilmakuva Oy

VALLADOLID TACKLES URBAN MOBILITY AND FREIGHT

Valladolid will replicate urban transport solutions developed in Tampere. The urban mobility and freight pilot will improve freight delivery within the city, especially in the historic center. Expected benefits include a reduction of the freight-delivery-related traffic volume, less pollution and optimised use of load and unload zones.

The pilot is being developed by the CARTIF Technology Center, Valladolid City Council and Grupo Lince at local level, along with TomTom and PTV from Germany. Beyond replicating Tampere's solutions, Valladolid will develop specific ones to cover the city's needs, most notably a traffic simulation model that includes information from vehicles on the road. This will help predict the impact of local traffic regulation policies (e.g. regarding loading/unloading zones) on traffic and freight delivery within the city.

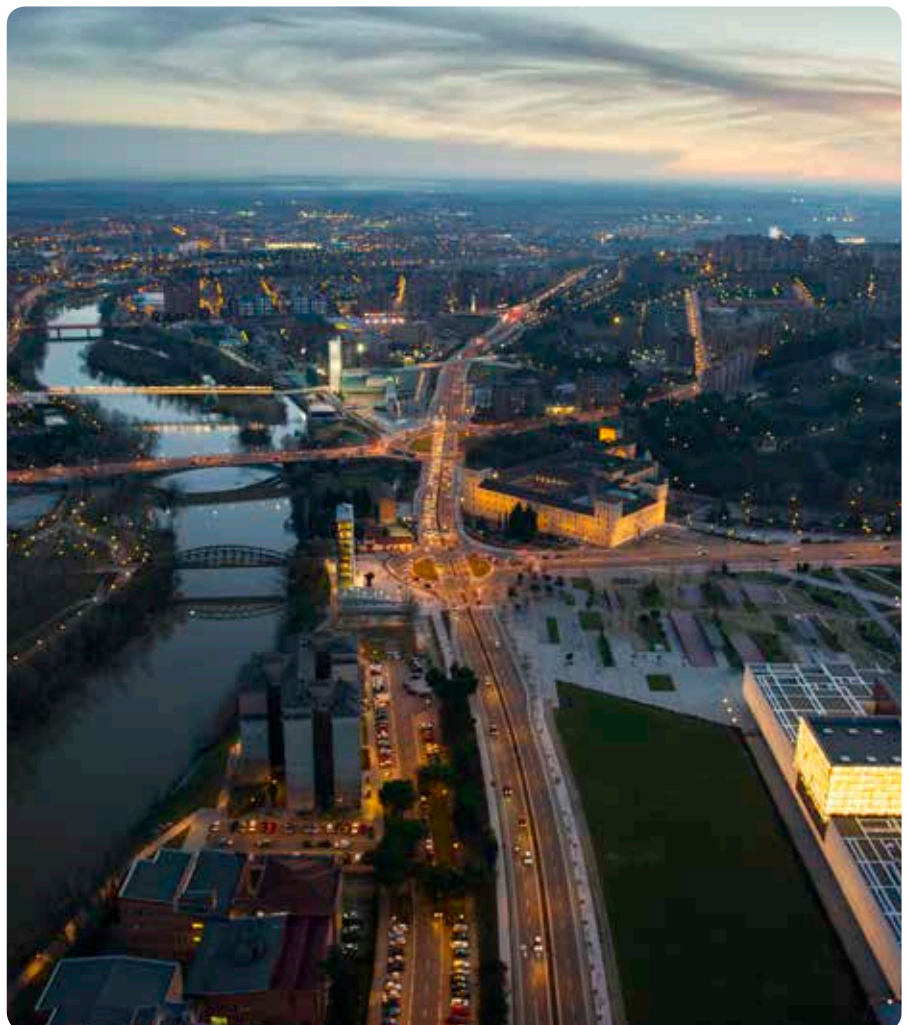
Overall, this model will allow the city to take decisions that can enhance freight delivery, while last mile delivery companies will profit from optimised management of current resources.

Actual traffic flow data have been provided by Valladolid City Council to develop this model. Additional information has already been extracted from meteorological data, and all data sets will be analysed using a knowledge extraction process that will support traffic improvements within the city. Different scenarios proposed by the City Council will be simulated to assess the effects of potential new policies on last mile delivery.

All data sets will be analysed using a knowledge extraction process that will support traffic improvements within the city.



▲ Valladolid skyline, Spain ©Shutterstock, 2017



▲ City of Valladolid, Spain ©Jason Hawkes



Typical winter weather
situation in Tampere,
©Visit Tampere, Alex Mazurov

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TransformingTransport - Big Data Value
in Mobility and Logistics Group



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