

REAL TIME & HISTORICAL TRAFFIC

TomTom delivers a unique proposition



MAPS &
CONTENT

REAL TIME &
HISTORICAL TRAFFIC

LOCATION BASED
SERVICES

WWW.TOMTOM.COM/GEOSPATIAL



SUPERIOR LOCATION BASED SERVICES

HOW SEAMLESS COVERAGE IS COMMUNITY DRIVEN

THE FRESHEST MAP

The heart of location services is the map and TomTom delivers the most current digital map of the world.

Since 2006 TomTom has collected anonymous GPS measurements from its users. This unique community input is combined with knowledge harvested from local experts and it is combined with traditional sources including paper maps, field surveys, aerial and satellite imagery and mobile mapping vans. The result is a dynamic map full of enhanced content ranging from points of interest to 3D city maps. TomTom coverage extends over 200 countries and territories, encompassing more than 4 billion people and 40 million kilometres globally.



THE MOST ACCURATE REAL TIME TRAFFIC INFORMATION

Want to beat the traffic? Choose a better route. TomTom real time traffic products harness multiple data sources to keep drivers in control of their journeys. Road sensors and real traffic incident data are fused with the anonymous GPS measurements of TomTom device users to create a vivid picture of traffic conditions as they evolve.

This empowering data is made available to industry partners in the Consumer, Enterprise, and Government markets.

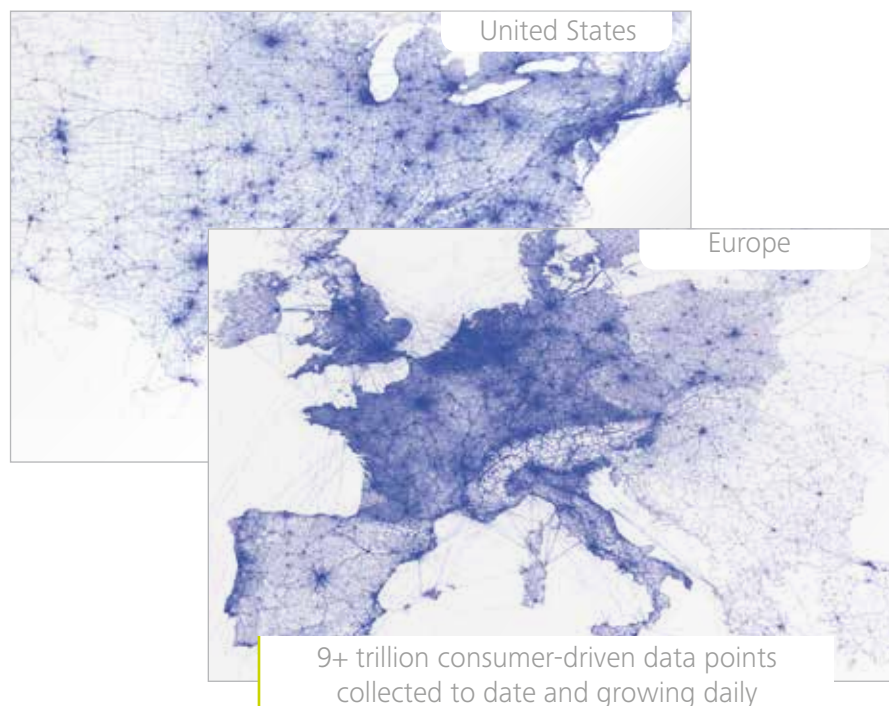


Real time traffic enables navigation with up-to-the-minute information



THE LARGEST RESOURCE TO PREDICT TRAFFIC FLOW

Whereas traditional technologies struggle to track the ever expanding traffic on our road networks, TomTom uses this to its advantage. More traffic means more TomTom customers and over 9 trillion consumer-driven data points have been collected from anonymous GPS measurements worldwide. This ever expanding historical traffic database allows industry partners to analyse travel times and bottlenecks across the complete road network.



**MAPS &
CONTENT**

**REAL TIME &
HISTORICAL TRAFFIC**

**LOCATION BASED
SERVICES**

WWW.TOMTOM.COM/GEOSPATIAL

TomTom 

TRAFFIC

Traffic congestion is an issue that virtually every driver has to contend with at some point in their life.

It affects millions of people all over the world and has serious effects on drivers at personal, business and societal levels.

Today there are an estimated one billion cars on roads around the world. Traffic officials in every government are grappling with congestion and face challenges from affordability constraints, increasing emissions and drivers' growing needs.

After years of development and leveraging its 20 years of expertise with serving Governments, Consumer and Enterprise markets TomTom has on hand a viable, cost effective solution to reduce traffic congestion on a very large scale.

This doesn't involve building roads or introducing congestion schemes, but simply making our roads flow more efficiently. Millions of people driving as a collective with high quality traffic information at their fingertips will reduce traffic congestion for all.

TomTom's expertise can play a key role in helping reduce traffic congestion in countries across the world. Our innovative geospatial products are already helping Governments, Consumer and Enterprise better understand and use historical traffic information for their projects as well as provide real-time traffic information in key cities around the globe.

How we create and deliver traffic information



WHY TOMTOM TRAFFIC INFORMATION?

An exceptionally large number of live (community) input sources:

- Millions of connected GPS devices + many million GSM probes + millions of government road sensors + thousands of journalists collecting incident information.
- This large number of data sources leads to greater accuracy, increased confidence in data from our users as well as a better customer experience.

Mature and proven fusion engine:

- Class leading traffic information.

Frequency of data:

- Every second new road data is received.
- Every 30 seconds the traffic status is updated.
- Every minute (or less) all data is made available to our customers.

The ability to publish data on any road:

- Thanks to our OpenLR technology, TomTom can describe incidents or congestion on any road on any map, including secondary roads.

INDUSTRIES

Financial Services
Geo-Marketing
Government & Public sector
Insurance
Internet
Portable & Wireless
Retail
Transportation & Logistics
Utilities & Telecommunications

TRAFFIC PRODUCTS



TomTom Traffic



TomTom Traffic Flow



TomTom Traffic Route Times



Custom Area Analysis



Custom Travel Times



Speed Profiles

REAL TIME TRAFFIC

HISTORICAL TRAFFIC

MAPS &
CONTENT

REAL TIME &
HISTORICAL TRAFFIC

LOCATION BASED
SERVICES

WWW.TOMTOM.COM/GEOSPATIAL

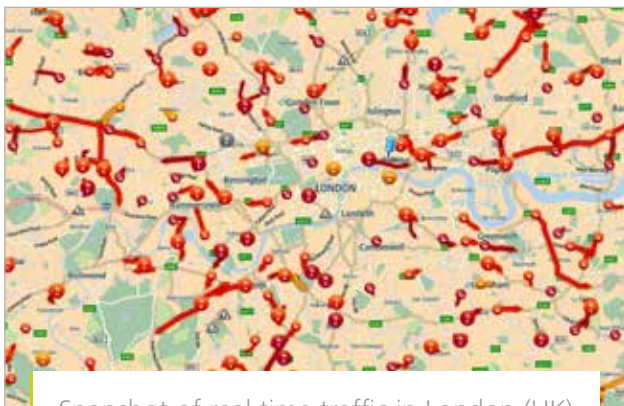
TomTom



REAL TIME TRAFFIC

Where are the traffic jams and accidents at rush hour? How fast is traffic moving on the overall road network?

TomTom real time traffic information is the most accurate, comprehensive and frequently updated in the world, helping you create location aware systems.



Snapshot of real time traffic in London (UK)

TOMTOM TRAFFIC

Where are the traffic jams and accidents at rush hour?

TomTom Traffic provides precise locations and delays caused by congestion on the road network. This enables routing programs to provide the fastest route based on actual current travel times.

By incorporating TomTom Traffic into a navigation solution, drivers can determine the quickest route to their destinations by considering “live” road conditions.

The data in each TomTom Traffic file includes road delays allowing routing programs to evaluate the true travel time to each destination.



TomTom Traffic only includes roads that are experiencing congestion or incidents at a particular time

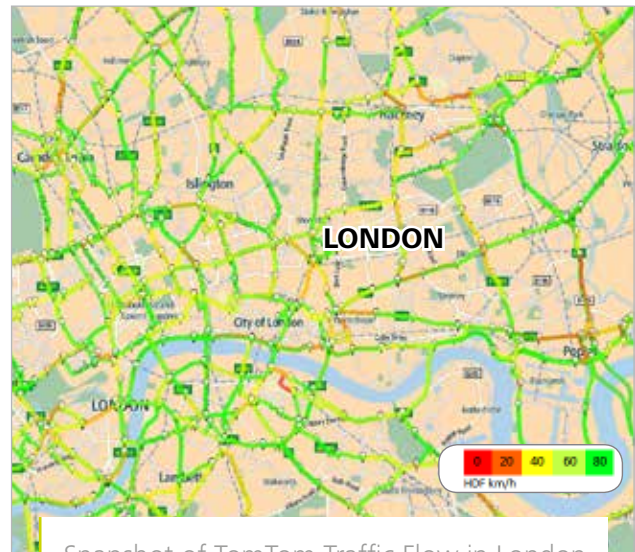


TOMTOM TRAFFIC FLOW

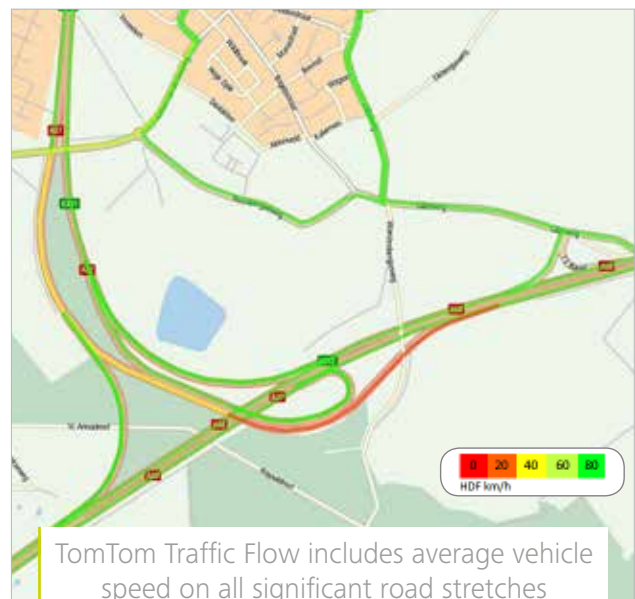
How fast is the traffic moving on the overall road network?

TomTom Traffic Flow delivers a real time, detailed view of traffic speeds on the entire road network, designed for easy integration into traffic management systems or calculating current routing travel times.

The data used by TomTom Traffic Flow comes directly from TomTom's real time traffic information, and is refreshed every minute. For each road segment the file includes the total travel time / speed observed currently and a quality indicator. This enables traffic control centres to determine relative levels of road service over wide areas, and personal navigation device and smartphone manufacturers to benefit from dynamic routing and display.



Snapshot of TomTom Traffic Flow in London



TomTom Traffic Flow includes average vehicle speed on all significant road stretches in the area of interest

TOMTOM TRAFFIC ROUTE TIMES

TomTom Traffic Route Times is a turnkey solution providing highly accurate real time travel and delay times for a specific route either on a temporary basis or for permanent solutions.

Key to this data is its flexibility. Travel times and delay statistics are delivered without the need to build infrastructure or install and maintain hardware. Data can be sent continuously to roadside information systems or on a temporary basis to mobile systems used during roadworks, events or emergencies..

The data is refreshed every minute allowing traffic control centres to deploy variable message signs (VMS) suggesting alternative routes. Event managers can schedule travel information to be displayed around special events. Even kiosks in shops and petrol stations or screens in hotels and corporate offices can take advantage of TomTom Traffic Route Times' detailed, granular data for specific local route data.



TomTom Traffic Route Times power VMS signs displaying times for popular routes



HISTORICAL TRAFFIC

TomTom lets you access the largest car centric database of more than 9 trillion anonymously-collected data points, providing analysis to predict driving behaviour across the road network.

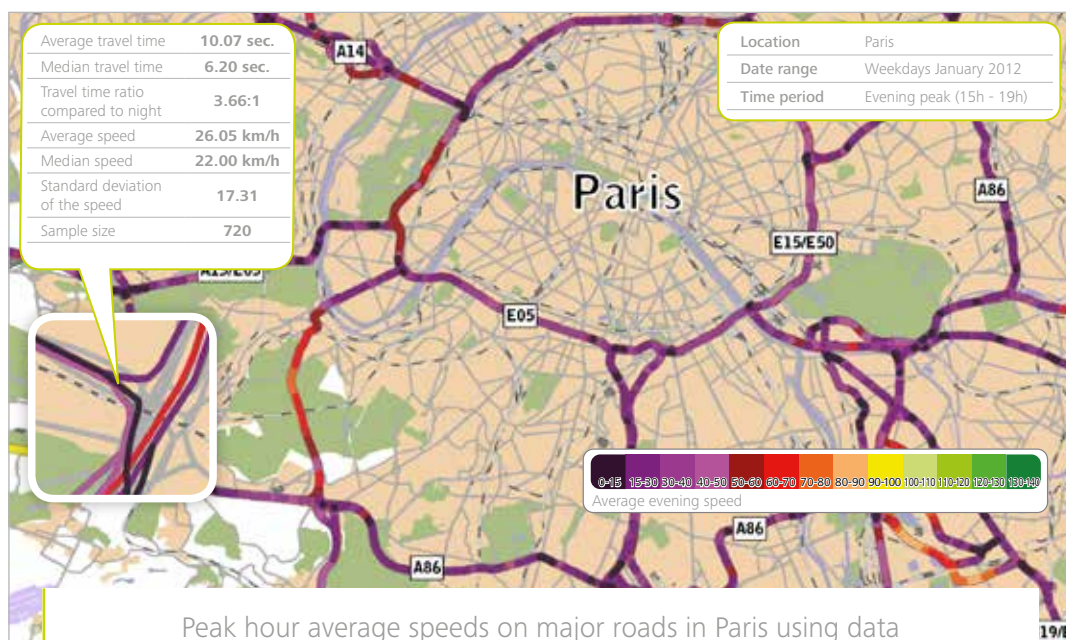
CUSTOM AREA ANALYSIS

TomTom's ever-expanding historical traffic database has over 9 trillion data points with over 6 billion new records being added each day – with many roads having more than 20,000 measurements. This makes it possible to obtain actual driven travel times and speeds on any stretch of road over any period of time and time of day.

Custom Area Analysis covers all roads, from major motorways to local and destination roads, throughout Europe and North America and selected other countries including South Africa, Australia and New Zealand. It provides highly granular speed

and bottleneck information for small or large road networks around the world to support sophisticated traffic modelling tools and better analyse road conditions and traffic performance.

There is no need to purchase road collection hardware such as cameras, and loop sensors. With Custom Area Analysis it is possible to gather statistics on the road network as a whole, from Interstates through arterials to the local street level.



Peak hour average speeds on major roads in Paris using data from Custom Area Analysis

MAPS &
CONTENT

REAL TIME &
HISTORICAL TRAFFIC

LOCATION BASED
SERVICES

WWW.TOMTOM.COM/GEOSPATIAL

TOMTOM



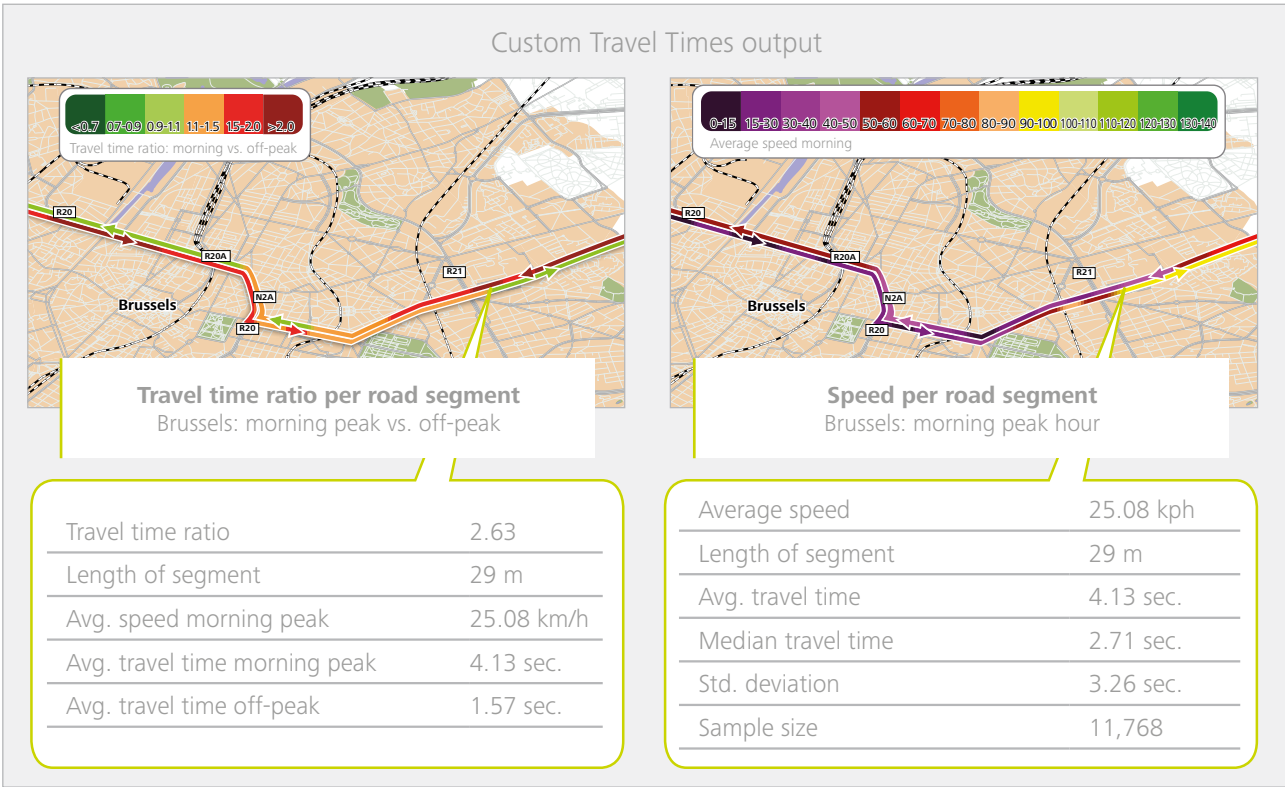
CUSTOM TRAVEL TIMES

With consumer driven roadway data becoming more valuable to traffic planning and roadway network analysis, engineers are seeking data to support extremely sophisticated traffic models and to assist in analyzing road conditions and traffic performance.

TomTom Custom Travel Times provides highly accurate speed and bottleneck information for individual road segments using historical traffic data. It covers all roads, from major motorways to local and destination routes, throughout Europe

and North America and a number of other countries including South Africa, Australia and New Zealand, and can be customised to fit your needs.

TomTom has a legacy of developing innovative navigation and traffic-related solutions from years as a leading provider to the market. The historical traffic information collected gives valuable insight into the traffic situation on the road network throughout the day.





TRAFFIC STATS

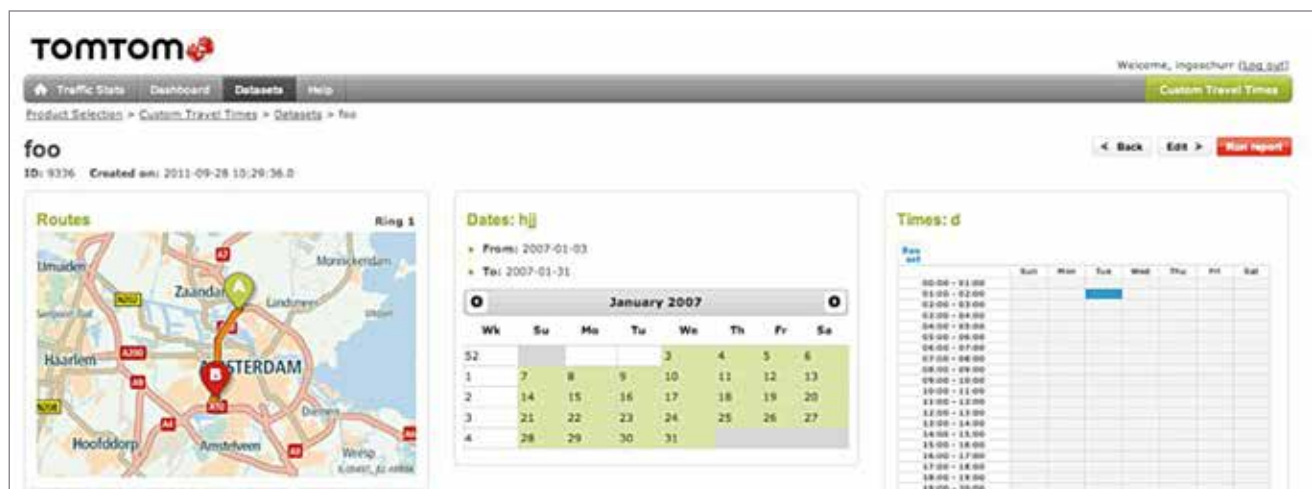
TomTom lets you access the largest historic traffic database in the world available for governments and enterprises via our web-based Traffic Stats portal.

Measure location accessibility for site selection, identify road network bottlenecks and noise emission hotspots, perform before and after studies relating to infrastructure changes or analyze intersection design and performance. No roadside equipment, surveys or field studies required; all you need is an internet connected computer to get this rich traffic data at your fingertips.



Traffic Stats is the web portal providing direct access to historical traffic data

- Access to TomTom historical traffic products anywhere & anytime.
- Tailor-made reports available within 24 hours.
- Data can be downloaded for use in other applications / traffic modelling tools etc.



MAPS &
CONTENT

REAL TIME &
HISTORICAL TRAFFIC

LOCATION BASED
SERVICES

WWW.TOMTOM.COM/GEOSPATIAL

TomTom

SPEED PROFILES

Traditional navigation systems rely on road size and legal speed limits to calculate route times. This results in routes and ETAs which are static, regardless of time or day and ignores the hurdles that influence daily travel.

Speed Profiles is different. It is a comprehensive database of actual historic roadway speeds. These are attained by aggregating billions of GPS measurements to offer precise speeds for specific times of day and days of the week. With Speed Profiles routes adapt dynamically to the time of departure and incorporate local knowledge. The

optimal route on Monday morning may differ later in the day or even on Tuesday morning.

Armed with Speed Profiles, ETAs are highly accurate and fastest route can be advised according to the day and time - so minimising driver stress levels, travel costs and environmental impact. Deployment effort is minimal thanks to a compact data footprint and with wide coverage of highways, urban, rural and secondary roads it delivers a seamless country by country experience.



Figure 1. Traditional estimation of travel times from A to B - one value for all times of the day

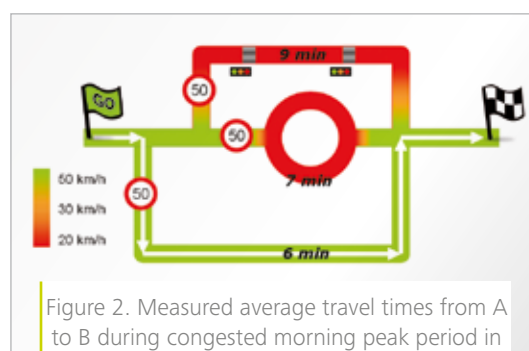
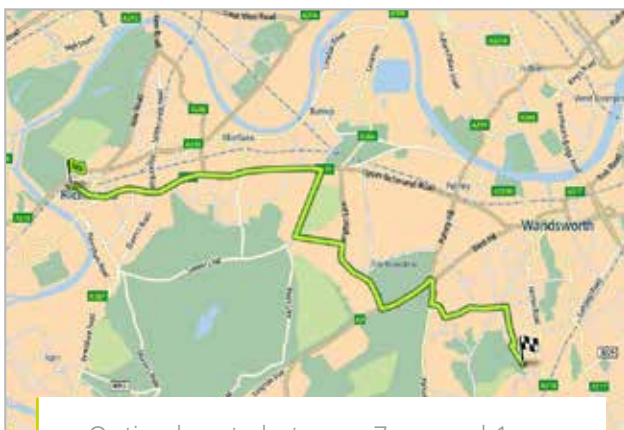


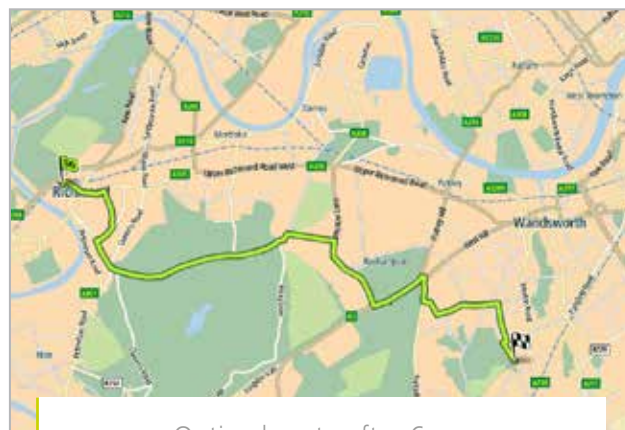
Figure 2. Measured average travel times from A to B during congested morning peak period in Speed Profiles shows a different picture of the fastest route



Speed Profiles generates optimal routes that are calculated using speeds for specific times of day and days of the week



Optimal route between 7 am and 1 pm



Optimal route after 6 pm



WHY PARTNER WITH TOMTOM?

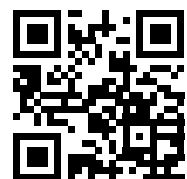
Through innovation, TomTom keeps pace with the ever-changing world by delivering products which improve your business, drive efficiency and reduce costs. Contact us today to discover how we can benefit your business.

You will find more information about our products on: <http://www.tomtom.com/geospatial>

MAPS, TRAFFIC & LBS

Discover our high-quality digital maps and Real time traffic and Historical traffic content.

www.tomtom.com/geospatial





The freshest map

TomTom delivers the world's most up-to-date digital maps. Covering over 200 countries and territories, our maps encompass more than 40 million kilometres globally.



The most accurate real time traffic information

TomTom real time traffic products create a vivid picture of traffic conditions as they evolve, keeping drivers in control of their journeys.



The largest resource to predict traffic flow

With a database of over 9 trillion anonymous GPS measurements, TomTom historical traffic products provide analysis to predict driving behaviour across the road network.

**MAPS &
CONTENT**

**REAL TIME &
HISTORICAL TRAFFIC**

**LOCATION BASED
SERVICES**

WWW.TOMTOM.COM/GEOSPATIAL