



# Maps & enhanced content

Delivering high quality maps to enterprise, government, automotive and consumer markets

maps & content | real time & historical traffic | lbs

**TomTom** 

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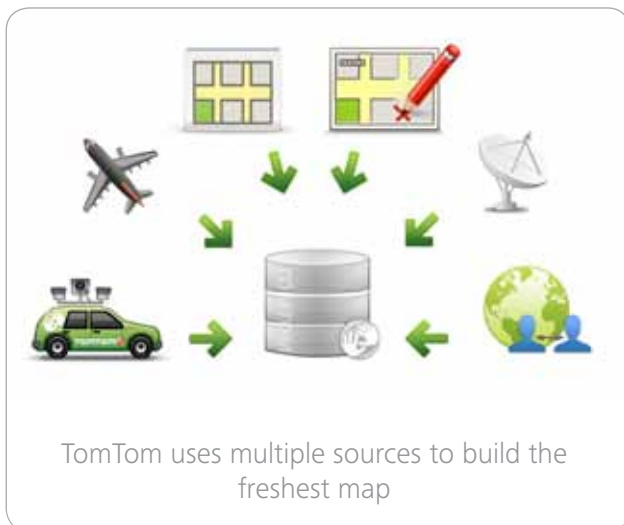
# Superior location based services

## 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 5 billion people and 35 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.

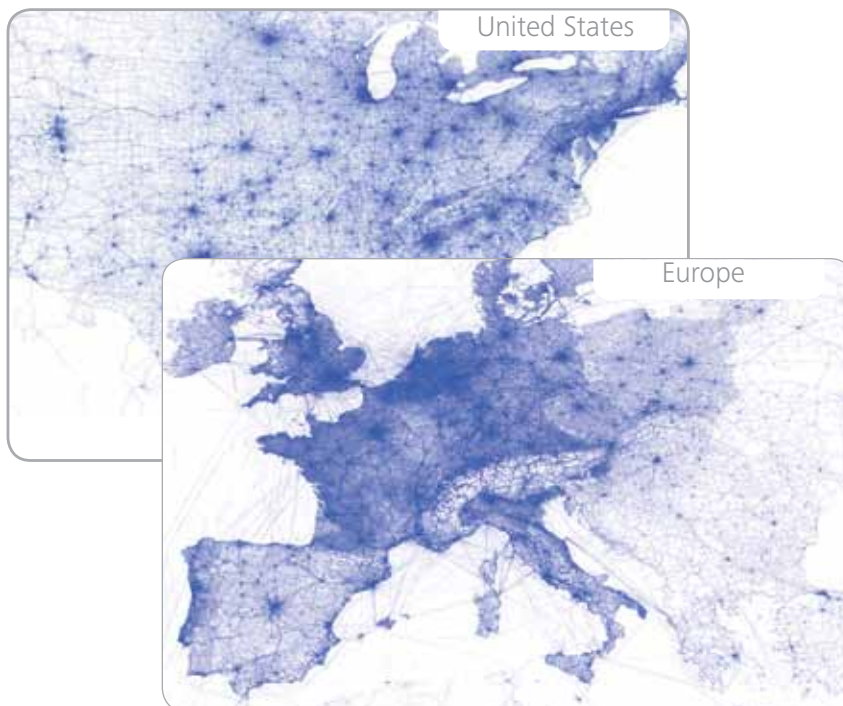


Real time traffic enables navigation with up-to-the-minute information



## 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 5 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.



5+ trillion consumer-driven data points collected to date and growing daily

# Map

With precision comes differentiation. By making the freshest and most accurate maps, TomTom gives partners the tools to separate themselves from their competition.

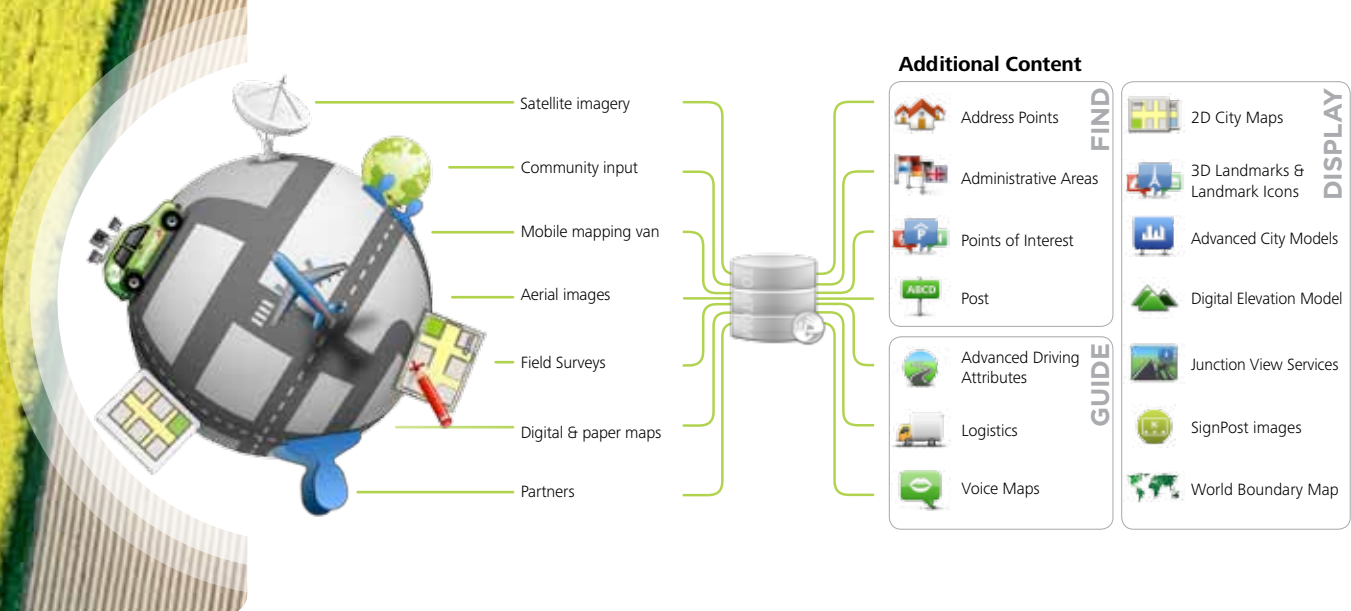
Business intelligence, personal navigation, itinerary planning, geocoding, geo-spatial analysis, fleet management, customer support, business expansion and automotive applications are just some of the areas being exploited by enterprise and government partners. With TomTom, complex geographic relationships are easily understood and analysed so organisations can respond rapidly to changing market conditions and achieve significant cost savings.

Real world examples are numerous: Insurance partners benefit from accurately locating policyholders in relation to risk data sets like wind, hail and flood zones. Road planners can identify and fix congestion bottlenecks.

National and international chain stores correlate TomTom map data to pinpoint the exact placement of their next branches.

Consumer, enterprise and government partners worldwide rely on TomTom to build some of the most innovative solutions in their industries. With TomTom such rich, fresh and accurate data is at your fingertips so the only limit is your imagination.

## How we make maps



# Map quality definitely matters

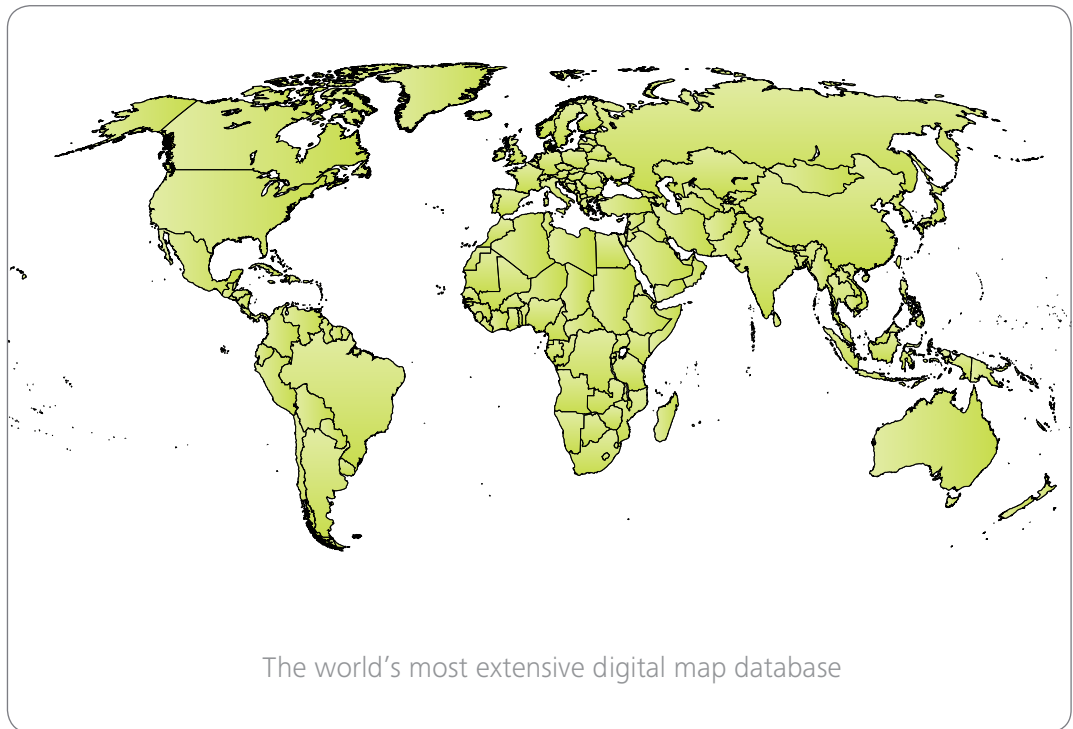
We are a map making company with over 20 years' expertise. Continuous investment and over 2,000 persons help us provide the freshest and most accurate maps with best-in-class safety and attributed navigation.

Our unique 'hybrid' map-making delivers content of certified quality. We use an innovative approach which combines traditional sources such as satellite imagery, field surveys, mobile mapping vans and fleets with rigorously controlled community input.

We are committed to develop our maps even further with the objective of reaching 100% coverage while continuing our best-in-class safety and navigation map attribution.

*"Our maps are there for those who care about quality and reliability."*

	MULTINET	CONNECTPLUS	CONNECT		MULTINET	CONNECTPLUS	CONNECT
<b>Functionality</b>				<b>Markets</b>			
Turn-by-turn navigation	✓			Financial Services	✓	✓	(✓)
Basic navigation	✓	✓		GeoAnalytics	✓	✓	✓
Routing and display	✓	✓	✓	Government	✓	✓	✓
Geocoding	✓	✓	✓	Insurance	✓	✓	✓
				Internet	✓	✓	✓
				Portable & Wireless	✓	✓	
				Retail	✓	✓	✓
				Transportation & Logistics	✓	✓	✓
				Utilities & Telecommunications	✓	✓	✓



## MultiNet

Over 20 years TomTom has been creating the world's most extensive digital mapping database. The pinnacle of this hard work is MultiNet, a road network database with detailed and rigorously tested data designed for application providers in highly developed countries.

MultiNet is suitable for the most demanding high-end applications including turn-by-turn navigation and traffic telematics. It is the foundation for TomTom customers in every market supporting all segments, from Enterprise to automotive. More than 50,000 global sources provide MultiNet with a constant stream of updates which are delivered on a quarterly basis. This means partners can be sure of the richest, freshest and most accurate mapping data.

MultiNet is more than just maps. It also incorporates added functionality such as turn-by-turn directions, road signage, intersections, positioning centrelines for drivable roads and streets and major POIs. All information is consistently formatted with global specifications, enabling application developers to combine and expand their geographical coverage seamlessly.

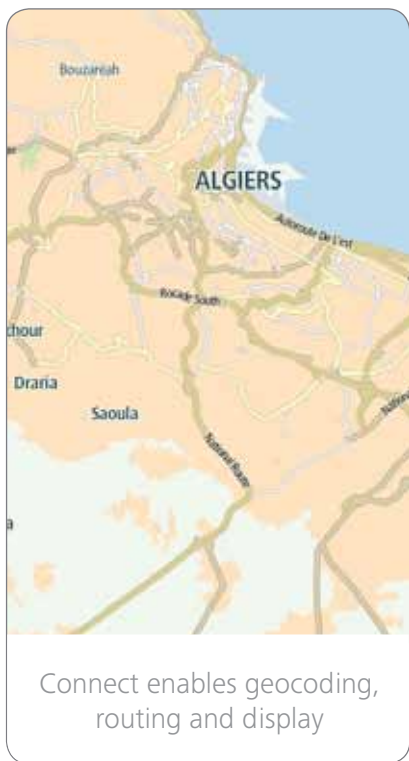
## ConnectPlus

While MultiNet covers a significant portion of the globe, certain geographies have yet to be incorporated into this top-tier database. Many application providers have an urgent need for data in every corner of the world and they are turning to ConnectPlus.

ConnectPlus was created in response to growing demand for navigable coverage in key geographic regions such as Africa, South America, and Asia Pacific. ConnectPlus supports basic mapping, routing and navigation functions, and allows cross-border routing to link the ConnectPlus road network seamlessly to the MultiNet database.

One day the entire planet will be covered with the richness and level of detail present with MultiNet. Until that time, TomTom understands the need for an effective solution for a single, global digital map.

With ConnectPlus the result is greater coverage for partners in more regions in the fastest possible timeframe.



## Connect

When personal navigation is not required, Connect is the answer. Connect marries basic routing and displays functionality with geocoding which makes it ideal for Internet, wireless and enterprise applications in areas where MultiNet and ConnectPlus are not available. When combined with MultiNet and ConnectPlus, TomTom covers the globe. As TomTom's digital map data continuously matures, many countries will transition towards the ConnectPlus or MultiNet format.

This smooth advance isn't only demonstrated by TomTom's evolving database: Connect itself is linked to TomTom's navigable coverage for seamless, cross-border routing. With MultiNet, ConnectPlus and Connect, TomTom provides distinct types of digital maps to balance the demand for expanded geographic coverage with stringent quality standards. The result is a single, global digital map solution.



# Enhanced content

The map is the heart of TomTom's location-based services. In creating the world's most current digital map, TomTom has laid the perfect foundation for adding enhanced content that will enrich the properties of the maps as well as the customer experience.

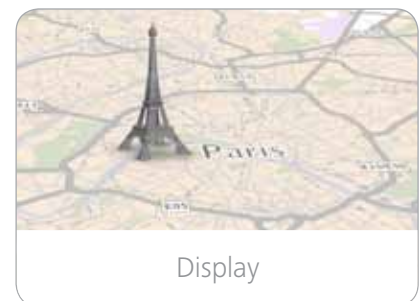
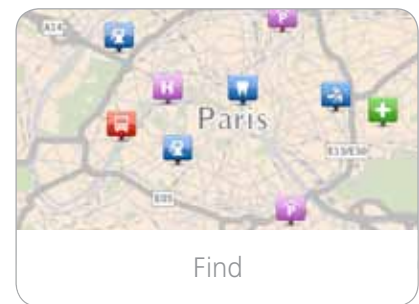
MultiNet is enriched by a portfolio of enhancement products that can be broken down into 3 categories: Find, Guide and Display.

**Find** is about helping users find locations of people, places and products important to their daily lives.

**Guide** is about generating accurate, safe, efficient and customisable routes in real time, with clear visual and audio instructions.

**Display** makes the visual side of navigation more realistic, more detailed and more useful for end users.

By coupling MultiNet with enhancement products that enable Guide, Find and Display capabilities, TomTom can add real value and increase the potential for applications.







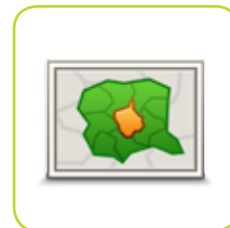
## Find

**Address Points** delivers the ultimate in geocoding accuracy by pinpointing discrete, actual street addresses to physical buildings or property parcels. TomTom further incorporates address data from many private and government sources hence avoid the application of interpolated address ranges used by most rival geocoding products.

**Administrative Areas** offers commercial grade boundaries of municipal and census defined geographic divisions in the United States and Canada. Changes are tracked along with shifting legal boundaries to help steer analysis and key strategic initiatives.

**Points of Interest** provides over 38 million POIs globally allowing users to find the people, places and services they need. Basic POIs are contained in the core MultiNet database, with a premium dataset available separately and validated quarterly to ensure accuracy and currency.

**Post** drives enterprise efficiencies with cartographic representations for valid postal codes in the United States and Canada. It extends the functionality of MultiNet by providing detailed point and boundary representations of postal districts, linking to municipal and census layers for additional analytical capabilities.





## Guide

**Advanced Driving Attributes** are TomTom's portfolio of content, such as slope and curvature, which is compliant with Advanced Driver Assistance Systems (ADAS). They offer an array of attributes typically unavailable to manufacturers' spanning major and minor roads to enhance safe and efficient driving.

**Logistics** is a comprehensive, global digital map database specifically designed for fleet owners and operators who manage large trucks and other road restricted vehicles. It helps save time and money by enabling large truck or fleet-specific routing solutions.

**Voice Maps** allows speech technology to be integrated into map applications, taking the quality of spoken instructions and voice recognition to a much higher level. They help developers differentiate their solutions and make driving safe and more efficient enabling a much better user experience.



# Display

**2D City Maps** responds to the growing demand for more realistic map displays allowing end users to quickly recognise their surroundings. It is available in two detail levels with outlines of buildings, visible land use and railways infrastructures shown for the most essential cities around the globe.

**3D Landmarks & Landmark Icons** provide realistic and easy to recognize reference points with three dimensional representations of famous buildings and monuments. Available in three sizes to suit devices of different performance and memory, these visual waypoints enhance navigation and appeal to travellers.

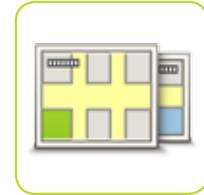
**Advanced City Models** are easily integrated three dimensional representations of major city centres which bring clarity and reality to the map. Four detail levels are available from simple shoebox models to photo-realistic textured models providing a superior end user experience in more cities than ever before.

**Digital Elevation Model** makes it possible to display the contour of the earth's hills and valleys on devices and in applications across Europe, North America and Asia Pacific. Through use of Digital Elevation Model, roads, satellite imagery and other two-dimensional information can be draped over accurate altitude data to enrich the user experience in navigation and other applications, adding the benefit of 3D display.

**Junction View Services** provide drivers with more accurate, detailed display and visual guidance instructions when approaching a decision point or manoeuvre situation. Its implementation can lead to safer and more confident driving.

**Signpost Images** are a graphic representation of the signpost information which is stored in MultiNet, TomTom's global navigable map.

**World Boundary Map** delivers realistic and accurate visualisation of border patterns globally with physical, political and geographical features. It is fully integrated with MultiNet to enable display enhancements.



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## About TomTom

Founded in 1991, TomTom (AEX:TOM2) is the world's leading supplier of location and navigation products and services focused on providing all customers with the world's best navigation experience. Headquartered in Amsterdam, TomTom has 3,500 employees and sells its products in over 40 countries.

TomTom Licensing is the division of TomTom dedicated to delivering relevant, fresh and high-quality digital maps, and dynamic content, to a wide range of business customers. Our product portfolio includes the world's freshest digital maps covering over 200 countries and territories globally, as well as the most accurate real time and historical traffic products.

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