



TomTom



Urban Maps Transit Introduction

February 2016

Urban Map Categories

Features



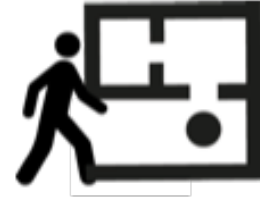
Pedestrian

- Indoor Paths
- Park Paths
- Pedestrian Crossings
- Pedestrian Passages
- Sidewalks
- Under/Over Pass



Transit

- Airports
- Train Stations
- Bus Stops/Stations
- Ferry
- Cycle
- Line information
- Schedule Information



Interiors

- Airports & Train Stations
- Shopping Malls & Museums
- Stadiums & Convention Centers
- Business and Education
- Healthcare
- Distribution & Manufacturing
- Indoor Paths & Indoor POI's

Urban Maps Strategy

- Giving the customer more options when planning a journey by extending the TomTom experience they are accustomed to within the car
- To build connected cities through the provision of Pedestrian, Transit and Indoor maps
- To provide a complete end to end navigation experience, true door to door routing
- To engage customers for more of their journey
- Connect and synchronise with other services - Traffic & Travel information
- New licensing opportunities:
 - Indoor positioning & mapping apps
 - InterModal & Transit apps
 - Automotive “last mile” and MultiModal navigation



Transit

Urban Maps Strategy

Transit Maps

- Promoting the use of public transport within cities, in line with global targets on reducing cars in cities
- Complete end to end Inter Modal routing
- Accurate positioning of Transit points
- Extended information of Transit information
- Providing user with dynamic data
- Large transit hubs also covered within TomTom Indoor maps
- Giving the user more options when planning a journey and extending the same TomTom experience they are accustomed within the car

TomTom Transit

Today

- Transit points are a category of POIs (Points of Interest)
- Basic information stored representing transit point location



TomTom Transit

Future

- Transit Points to be generated from external data
- Better accuracy, more granular data
- Link to transit APIs to provide dynamic data (timetables, delays etc)

The screenshot shows a map interface with a search bar at the top left containing "hampstead rd, london". A white overlay box on the left lists bus routes from a station. The routes are as follows:

Bus Line	Destination	Departure	Arrival
24	Grosvenor Road	1:20 PM	1:26 PM
29	Trafalgar Square	1:19 PM	1:21 PM
134	New Oxford Street	1:20 PM	1:20 PM
N29	Trafalgar Square	12:58 AM	1:06 AM
N279	Trafalgar Square	1:04 AM	1:24 AM

The map background shows streets including Drummond Street, Hampstead Road, Brook Street, Euston Road, and Warren Street. A "PLAN ROUTE" button is visible on the map, and a location pin indicates "Somers Town, Stop R Warren Street Stn Euston Rd, Hampstead Road, Camden NW1 2NU, GBR".

What happens to the data?

Transit provider data
(e.g.GTFS)



Transit provider API



TomTom Core Map



TomTom Transit Points



TomTom Maps API



TomTom LBS



TomTom Customers



What happens to the data

- TomTom does not re-sell transit data
- No additional charge is made for transit points
- Any data is used to improve what already exists in our data base
- Any API data is passed straight through our own LBS platform
- Free at point of use for consumer www.mydrive.tomtom.com
- Included in TomTom core map at no additional cost
- Generally free to end user via customer device apps (Apple iOS Maps)

Challenges & Opportunities

Now and Future

- Availability of “Official” data sources
- The current lack of standards
 - GTFS specifications run into more than 100 features
 - TomTom needs to create a stable and global standard
- Ensuring comprehensive cover within cities
- Non Commercial (restrictive) terms and conditions
- Smart connected cities included Pedestrian and Traffic
- TomTom Traffic can both support transit routing and define car volumes in cities