

TomTom Parking – less stress, more efficiency

Driving around looking for a parking spot frequently causes frustration for drivers resulting from the wasted time and late arrival at their appointments – and it also adds to noise pollution and CO2 emissions. Based on a recent study:

- Drivers are spending on average 20 minutes looking for a parking space globally
- In peak hours 30% of city traffic consists of people looking for parking

TomTom Parking

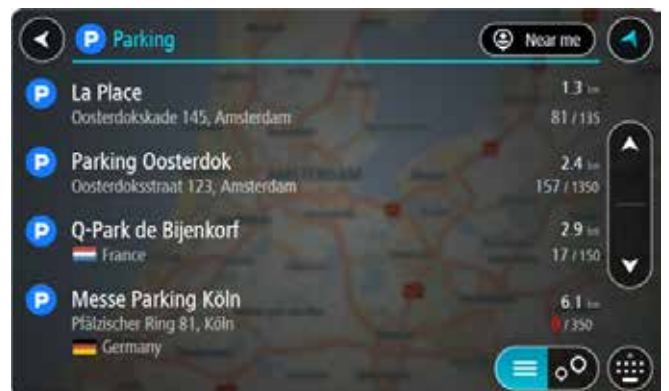
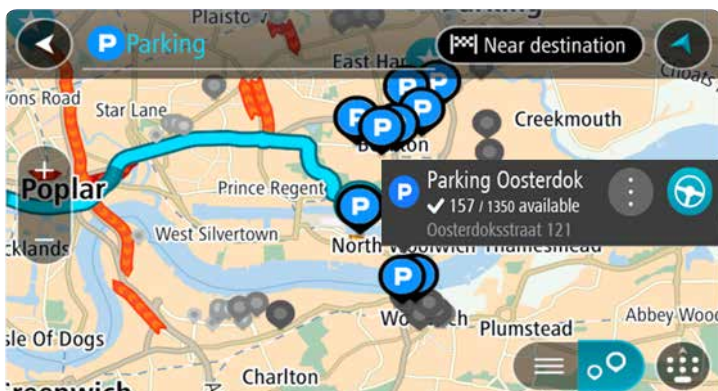
The parking service from TomTom aims to offer drivers a complete parking proposition, taking into account both:

- Off-Street Parking Service, and
- On-Street Parking Service

Off-Street Parking

Off-Street Parking is defined as spaces for vehicles to park which are located on private property rather than on public streets, usually in parking facilities like garages and lots. TomTom provides static and dynamic off-street parking information for off-street parking facilities in 54 countries. The following information is provided as part of this service:

- Real-time availability of parking spaces
- Pricing Information
- Number of disabled and motorcycle spaces
- Operating hours and maximum stay restrictions
- Additional services information (security surveillance, car-wash etc.)
- Vehicle sizing constraints



On-Street Parking

On-Street Parking is defined as parking for a vehicle that is permitted at the side of the driving street. TomTom provides an on-street parking service for 25 cities in Europe initially with the following information:

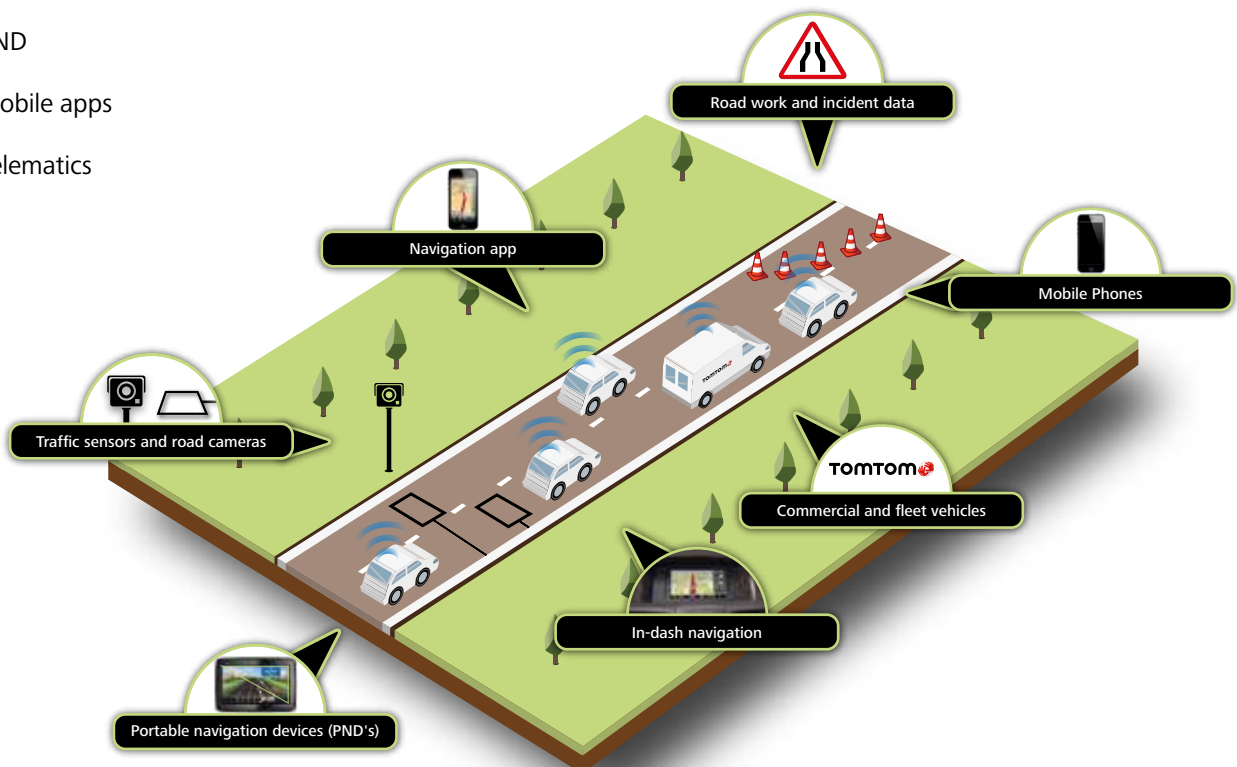
- Parking Profiles: indicating the probability of finding a parking spot on each permitted road stretch in the city - for each specific hour of the day and day of the week
- Average Search Time: An indication of the average time spent searching for an on-street parking spots based on your current location – for each hour of the day and for each day of the week
- Parking Restriction and Pricing information (selected cities only initially)

The above features of the TomTom On-Street Parking service can be used in conjunction with suitable navigation device (or Smartphone app) functionality to enable the following use-cases:

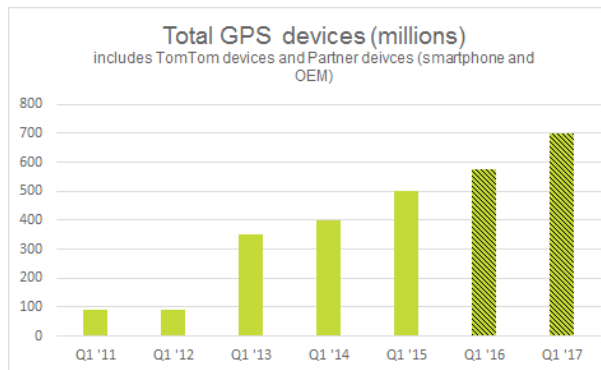
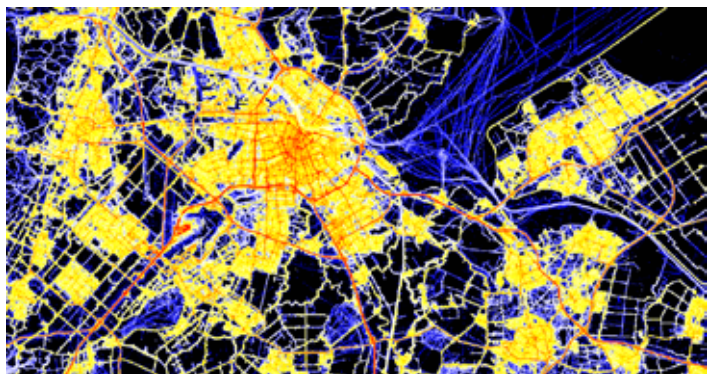
- Smart routing to highly probable parking locations near your destination
- Street parking information along the route approaching the destination
- Improved ETA calculations – taking into account parking search times

The TomTom on street parking product is built on TomTom’s vast community of GPS probe data. TomTom collects data from over 450 million GPS devices globally:

- Smartphone partners
- Automotive OEM partners
- Fleet management systems
- TomTom PND
- TomTom mobile apps
- TomTom Telematics



TomTom’s collected GPS probe data is expected to grow significantly in the coming years creating a unique position for TomTom to solve the on-street parking challenge.



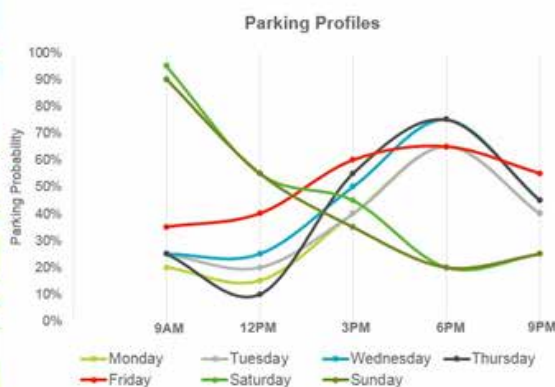
TomTom generates on-street parking information from GPS probe data by using sophisticated algorithms to detect ‘parking searches’. It uses information within the trace which reflect the behaviour of a driver when searching for a parking spot. From these ‘parking searches’ TomTom can derive the following on-street parking information:

- The parking probability (i.e. the chance a driver can park on a particular road segment)
- The average search time (i.e. the average time it will take a driver to find a parking spot after crossing a particular road segment)

TomTom generates this information for every time of the day, day of the week which will result in historical parking profiles. An example of such a profile for a street can be found below:



On-Street Parking Map



Parking Profiles



With ever-increasing parking search times, drivers are seeking better ways to park and are often trying to find the optimal route to find a parking space. TomTom’s parking profiles enable navigation applications to route drivers to a parking space quickly and in the most comfortable way. By selecting the quickest route to park the benefits for the driver are numerous:

- Reduction in parking search time
- Saving money by consuming less fuel
- Lower stress levels by having a comfortable parking route