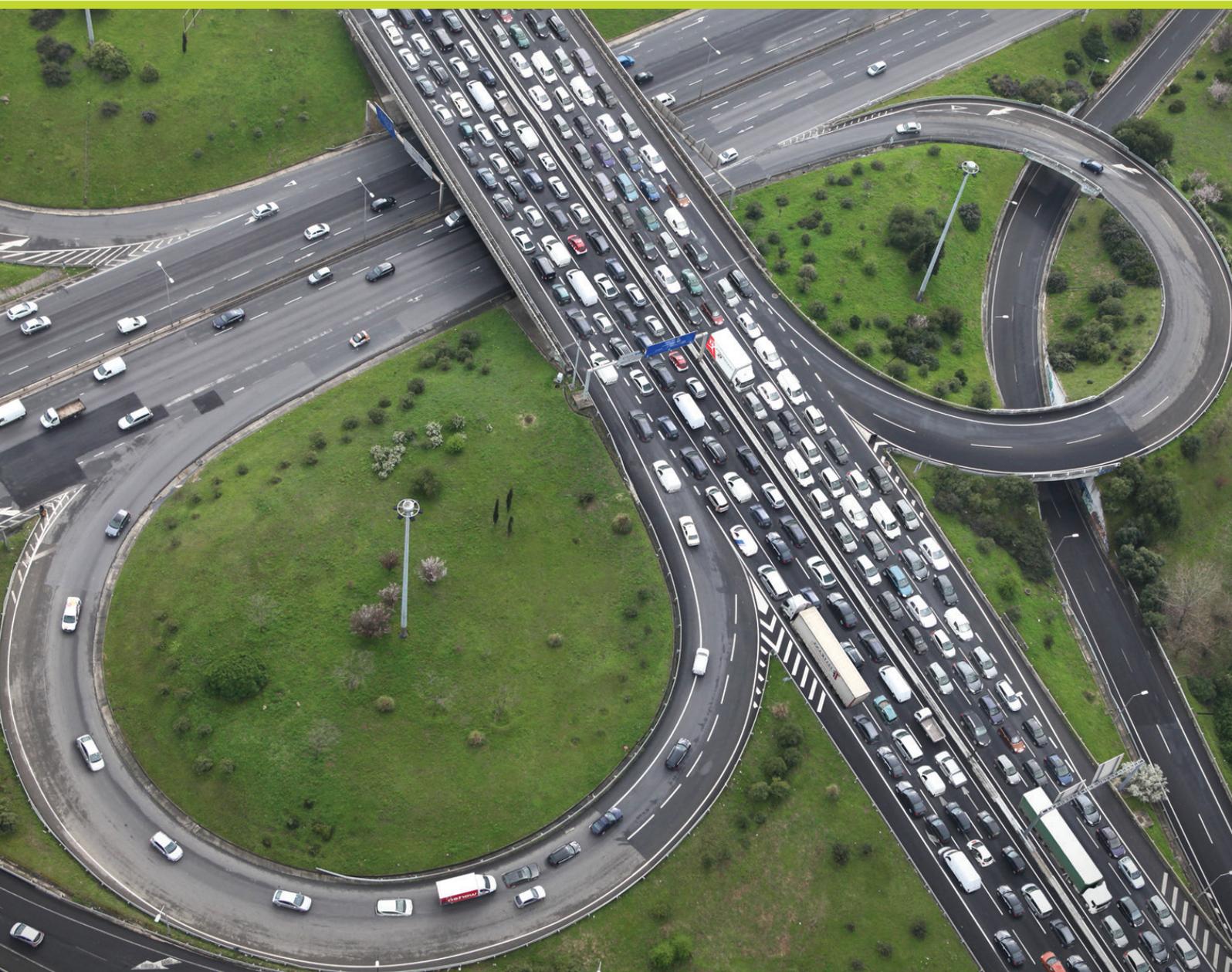


# TomTom South African Traffic Index



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## TomTom Traffic Index

It is our mission to get drivers to their destinations faster, safer and greener.

Over the years we have invested in new ideas and technologies with the aim of bringing significant benefits to drivers, businesses and society as a whole.

In 2007 we started a groundbreaking initiative that helped us to understand how we could guide drivers in a better way. We set out to build a more precise view of traffic flow over the entire road network to enable us to give drivers more exact route information and arrival times.

With the support of millions of TomTom customers we have captured anonymous travel time information in all the territories where we are active. Rather than relying on theoretical models, we are now able to understand real-life driving patterns by time of day, day of week, time of year and around special events. This initiative is unique in that we are able to capture, evaluate and redistribute vehicle-centric travel information on a global scale.

Over the years we have built the world's largest database of historic travel times and the most detailed and accurate real-time traffic information available. Based on the insights we gained we have developed advanced routing technologies that help millions of drivers get to their destinations faster, safer and with lower emissions of greenhouse gases.

Contrary to popular belief, there are often multiple ways to reach a destination and avoid traffic congestion. Finding the fastest route is a complex task. Now, thanks to advanced routing technologies, motorists can drive with dynamic navigation systems which quickly react and adjust routes to the ever changing traffic situations.

By helping drivers to find a faster route we can also demonstrate that the total available capacity on the road network increases. If a small percentage of drivers uses different (and faster) routes, congestion can be alleviated across the entire road network, thereby benefitting all drivers.

By offering a more accurate analysis of traffic flows, we help identify and pinpoint congestion trouble spots more effectively. And by routing traffic away from congested areas we can play a key role in easing congestion in cities and urban areas.

Our historical archive of real travel times has paved the way for the creation of the TomTom Traffic Index – the most accurate and comprehensive barometer of traffic congestion in major cities all over the world.

## About the TomTom Traffic Index

With the publication of the TomTom Traffic Index we are aiming to provide the general public, industry and policy makers with unique and unbiased information about congestion levels in urban areas\*.

The methodology that is used in this report measures travel times\* during the whole day and during peak periods\* and compares these with measured travel times during non-congested periods (free flow\*). The difference is expressed as a total average percentage increase in travel time\*. We take into account local roads, arterials and highways. All data is based on actual GPS based measurements and for each city\* the sample size is expressed in total number of measured miles for the period.

As well as assigning and ranking the overall congestion levels of over 180 cities\* on different continents, the report evaluates the congestion levels\* in cities at different times of the day and on different days of the week.

Individual city reports include more detailed information such as the most congested day\*, time delay per year for commuters\* and congestion levels on highways\* and local roads.

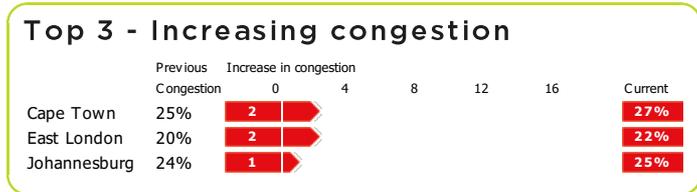
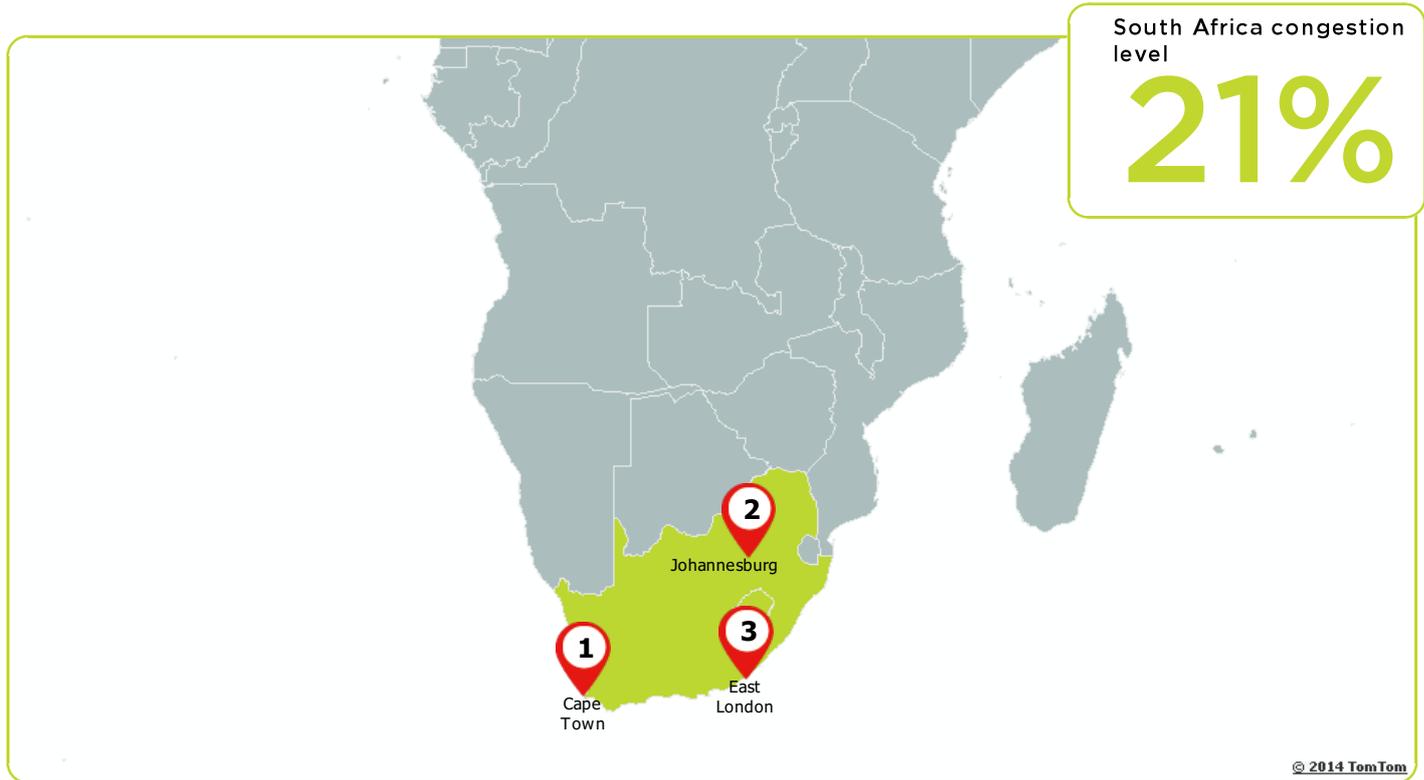
To download a copy of the report go to: [www.tomtom.com/trafficindex](http://www.tomtom.com/trafficindex).

If you would like to know more about TomTom's traffic solutions, please contact your local TomTom office or [sales@tomtom.com](mailto:sales@tomtom.com).

For questions or comments about this report, please contact us at [trafficindex@tomtom.com](mailto:trafficindex@tomtom.com).

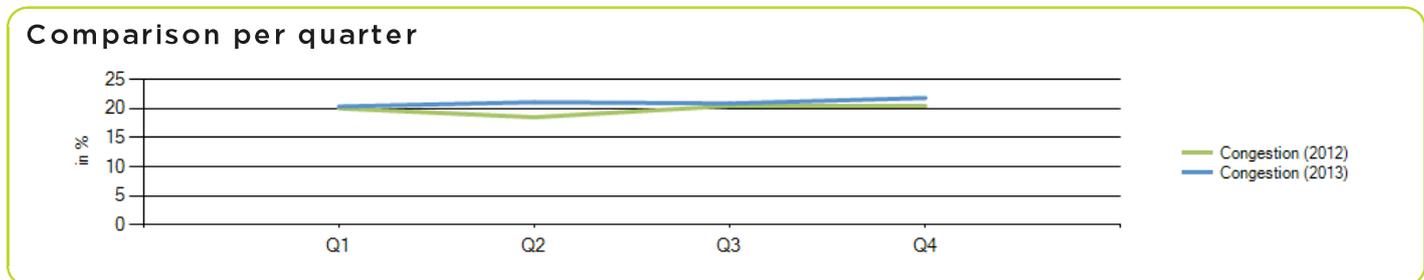
Note: words with a \* are explained on the keywords page at the end of the report.

# South Africa



### Evaluated cities

Rank	CI change	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	▲	Cape Town	South Africa	27%	71%	58%	20%	30%
2	▲	Johannesburg	South Africa	25%	60%	55%	15%	30%
3	▲	East London	South Africa	22%	47%	47%	11%	25%
4	▲	Pretoria	South Africa	22%	50%	43%	9%	27%
5	▲	Durban	South Africa	18%	42%	40%	11%	26%
6	▲	Bloemfontein	South Africa	12%	24%	22%	7%	16%



## South Africa

Rank	CI change	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	▲	Cape Town	South Africa	27%	71%	58%	20%	30%
2	▲	Johannesburg	South Africa	25%	60%	55%	15%	30%
3	▲	East London	South Africa	22%	47%	47%	11%	25%
4	▲	Pretoria	South Africa	22%	50%	43%	9%	27%
5	▲	Durban	South Africa	18%	42%	40%	11%	26%
6	▲	Bloemfontein	South Africa	12%	24%	22%	7%	16%



# Cape Town

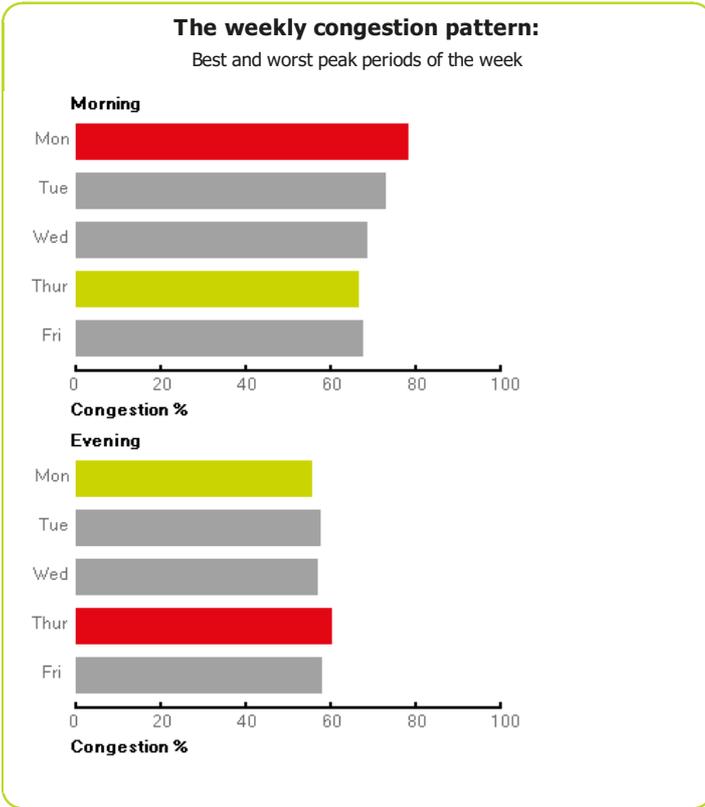


Congestion level

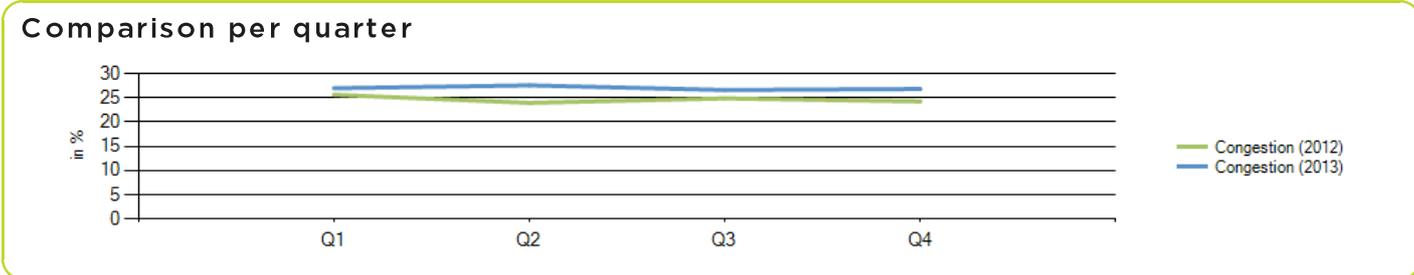
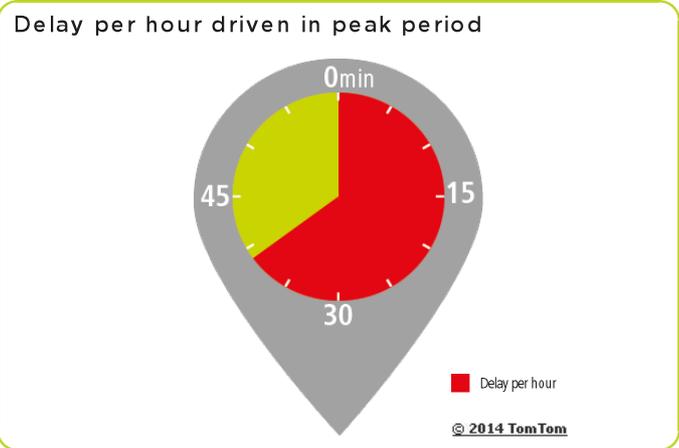
# 27%

Ranking

Ranking of city compared to all cities in the report	1/6
Congestion level on highways	20%
Congestion level on non-highways	30%
Delay per hour driven in peak period	38 min
Delay per year with a 30 min commute	89 h



Most congested specific day	Fri 8 Mar 2013
Total network length	11 785 mi
Total network length highways	187 mi
Total network length non-highways	11 598 mi
Total vehicle miles	8 768 800 mi



# Durban

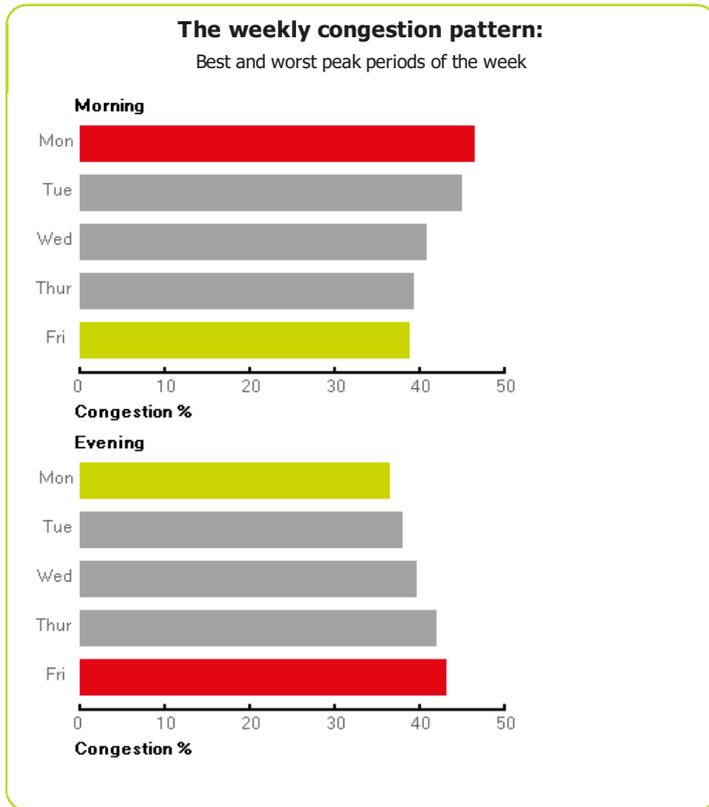


Congestion level

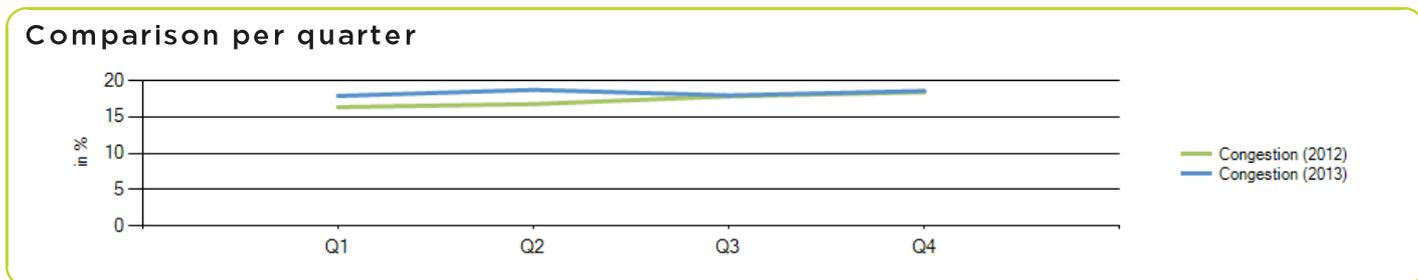
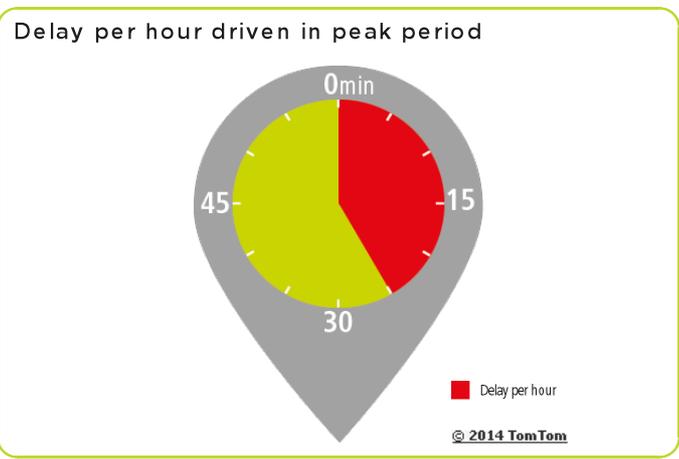
# 18%

Ranking

Ranking of city compared to all cities in the report	5/6
Congestion level on highways	11%
Congestion level on non-highways	26%
Delay per hour driven in peak period	24 min
Delay per year with a 30 min commute	65 h



Most congested specific day	Tue 26 Mar 2013
Total network length	9 821 mi
Total network length highways	213 mi
Total network length non-highways	9 608 mi
Total vehicle miles	6 385 173 mi



# East London

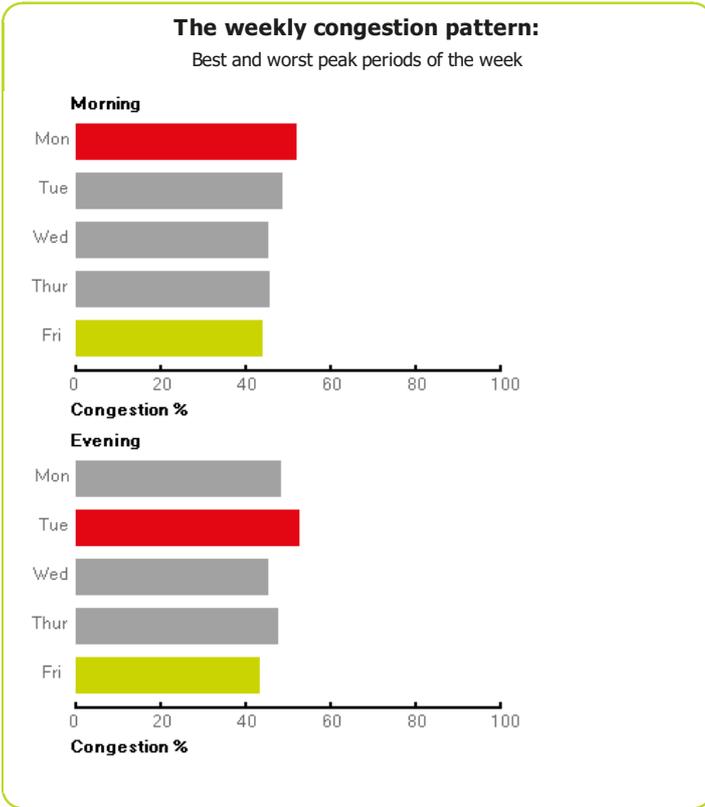


Congestion level

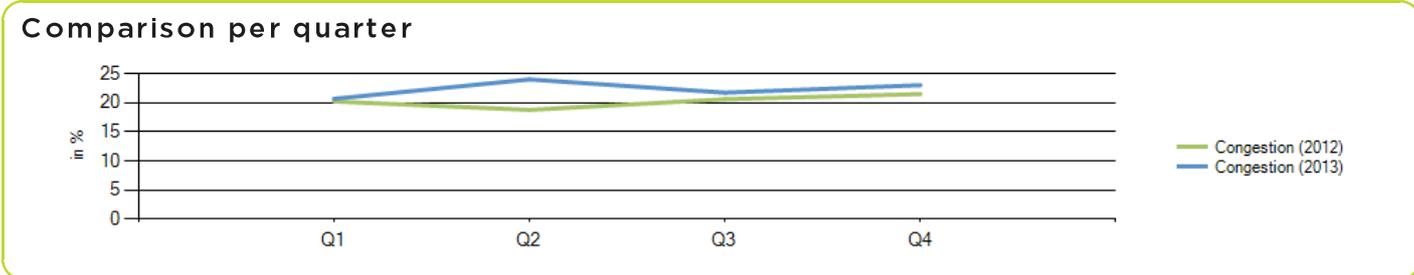
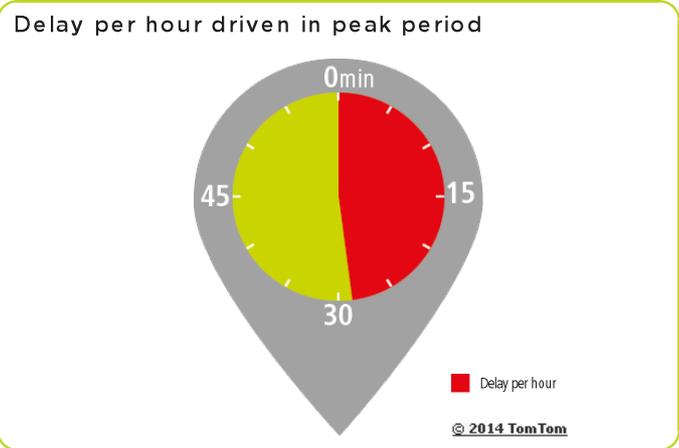
# 22%

Ranking

Ranking of city compared to all cities in the report	3/6
Congestion level on highways	11%
Congestion level on non-highways	25%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h



Most congested specific day	Fri 31 May 2013
Total network length	1 507 mi
Total network length highways	29 mi
Total network length non-highways	1 478 mi
Total vehicle miles	192 296 mi



# Johannesburg

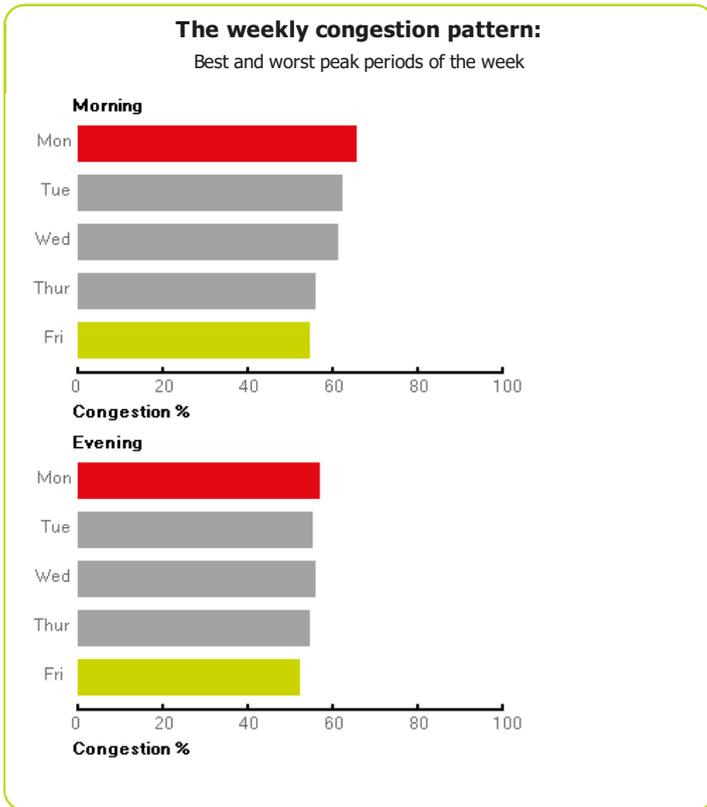


Congestion level

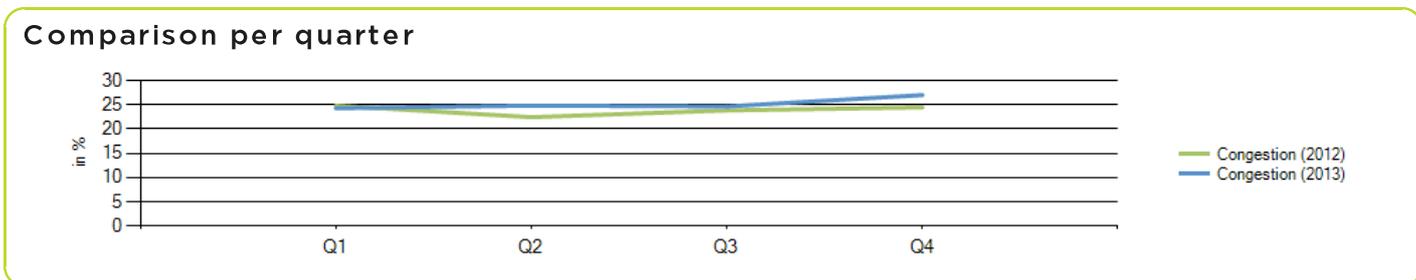
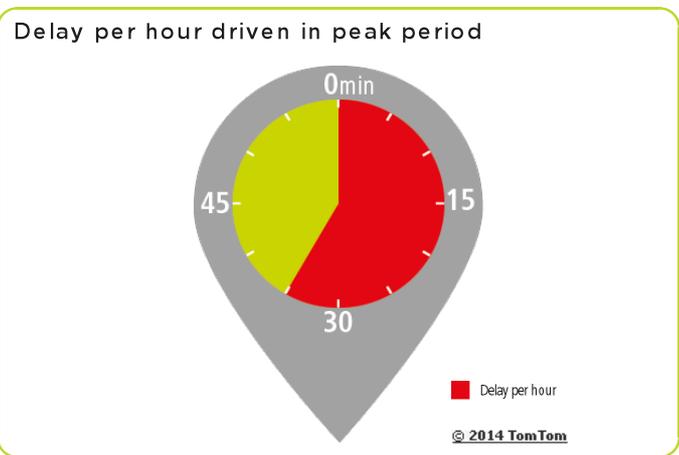
# 25%

Ranking

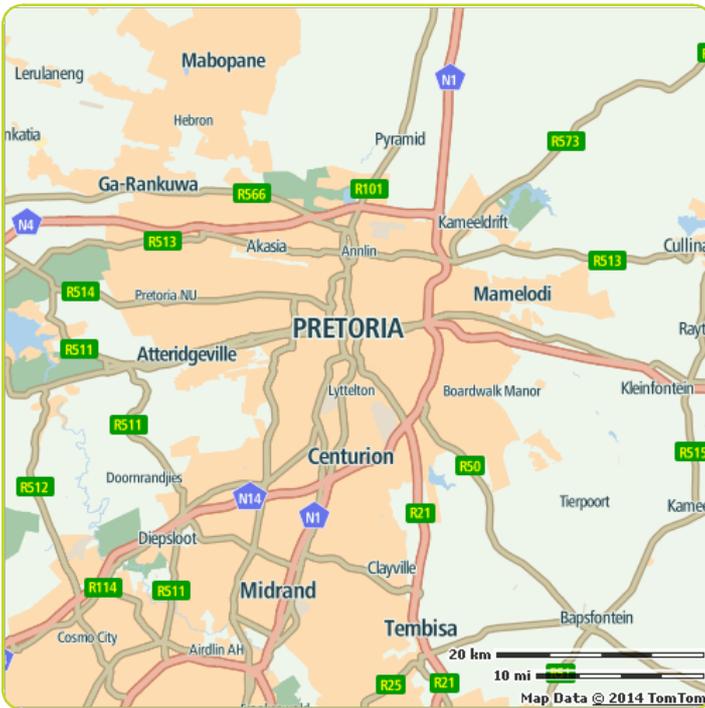
Ranking of city compared to all cities in the report	2/6
Congestion level on highways	15%
Congestion level on non-highways	30%
Delay per hour driven in peak period	34 min
Delay per year with a 30 min commute	83 h



Most congested specific day	Fri 29 Nov 2013
Total network length	25 612 mi
Total network length highways	375 mi
Total network length non-highways	25 236 mi
Total vehicle miles	60 340 288 mi



# Pretoria

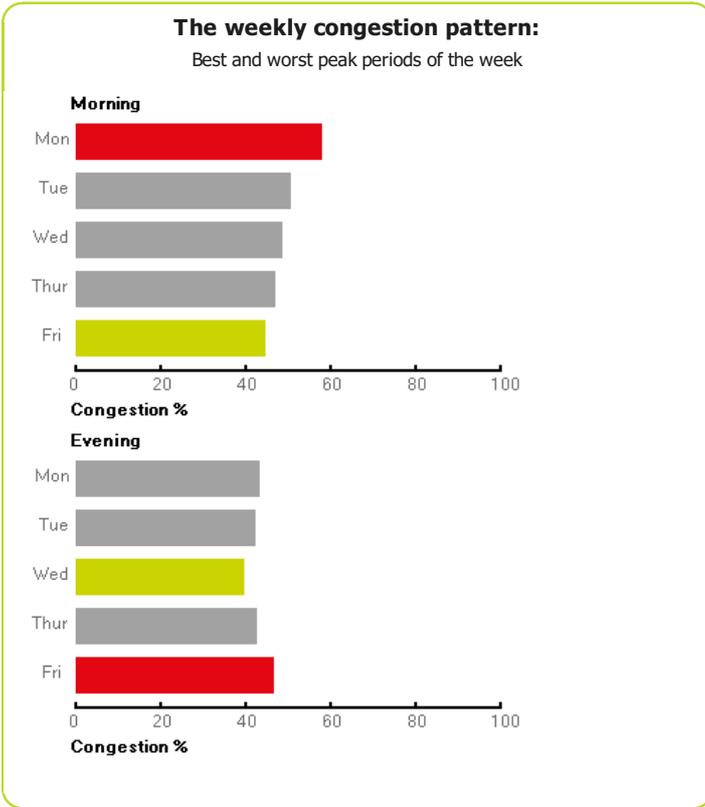


Congestion level

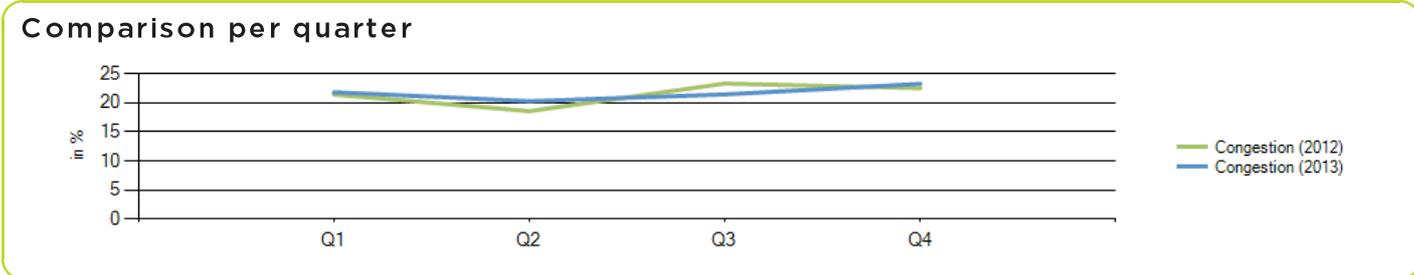
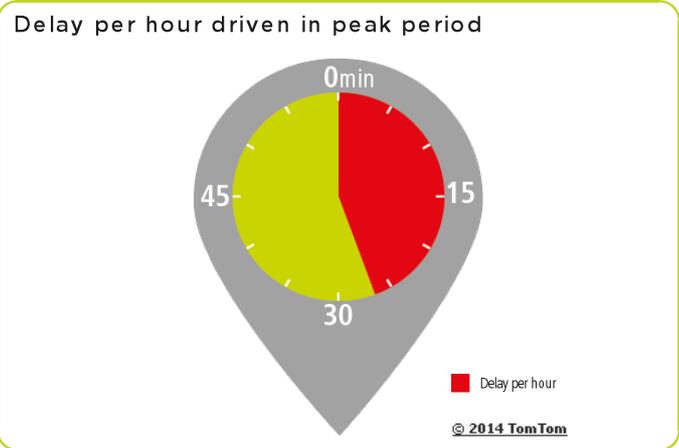
# 22%

Ranking

Ranking of city compared to all cities in the report	4/6
Congestion level on highways	9%
Congestion level on non-highways	27%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h



Most congested specific day	Mon 11 Feb 2013
Total network length	7 276 mi
Total network length highways	106 mi
Total network length non-highways	7 169 mi
Total vehicle miles	16 411 098 mi



## Evaluated cities

### South Africa

Rank	City	Country	24/7	Morning peak	Congestion Level (%)		
					Evening peak	Weekdays	Weekend
1	Cape Town	South Africa	27	71	58	31	14
2	Johannesburg	South Africa	25	60	55	29	9
3	East London	South Africa	22	47	47	25	12
4	Pretoria	South Africa	22	50	43	25	10
5	Durban	South Africa	18	42	40	21	9
6	Bloemfontein	South Africa	12	24	22	13	7

## Keywords

Keywords	Definition
Average Free Flow Speed	Measured average road speed during a Free Flow situation.
Average Observed Speeds	Average Observed Speeds within specific time periods.
Cities	TomTom evaluated capital cities as well as cities with a population of over 800 000. Next to the cities that meet these criteria, additional key cities are chosen and added in some countries.
City	See Cities.
Congestion Level	See TomTom Congestion Level.
Delay per hour driven in peak period	Delay in minutes per hour driven during morning and evening peak times compared to Free Flow situations. For example, 22 minutes delay per hour at peak times indicates that a one hour journey driven at Free Flow times will take an additional 22 minutes at peak times.
Delay per year for commuters	See Time delay per year for commuters.
FRC	Functional Road Class, an industry standard that defines different road categories. FRC0 = highways, FRC1 = major roads of high importance, FRC2 = major roads, FRC3 = secondary roads, FRC4 = connecting roads FRC5 = local roads.
Free Flow	See Free Flow situation.
Free Flow condition	See Free Flow situation.
Free Flow situation	A journey made without any delay caused by traffic congestion. This most typically occurs during the night, but can happen at any time of the day.
Free Flow Speed	See Average Free Flow Speed.
Highways	FRC0 and FRC1.
Most congested day	See most congested specific day.
Most congested specific day	The day with the highest Congestion Level.
Non-highways	All FRC classes except FRC0 and FRC1.
Peak hours	See Peak period.
Peak period	Based on real traffic measurements, the busiest one-hour-long period in the morning period and the busiest one-hour-long period in the evening period were determined for every evaluated city.
Road network	In this report all speed measurements on navigable roads within the urban areas contribute to the statistics.
Time delay per year for commuters	Total accumulated delay per year with a 30 minute commute. Based on 230 work days per year and two peak periods per day.
TomTom Congestion Level	Increase in overall travel times when compared to a Free Flow situation. For example, a Congestion Level of 12% corresponds to 12% longer travel times compared to a Free Flow situation.
Total network length	Total length of the evaluated network in miles.
Total network length highways	Total length of the evaluated network in miles for FRC0 and FRC1 only.
Total network length non-highways	Total length of the evaluated network in miles for all FRC classes except FRC0 and FRC1.
Total vehicle miles	Total distance covered by all TomTom user measurements, used for this specific report.
Travel time	TomTom's historic traffic database contains over ten trillion ( $10 \times 10^{12}$ ) anonymous speed measurements. These speed measurements are used to calculate the travel times on individual road segments and entire networks.
Urban area	Geographical area that takes population size and network layout into account. Speed measurements within the defined urban area contribute to the statistics.
Urban network	The road network in an urban area.

## Explanation of tables and figures

### Continent or country overview page

Section	Description
Congestion Level	Average Congestion Level across all cities evaluated in the report.
Map of the continent or country	Image of the continent (or country) showing the most congested cities.
Top 3 - increasing congestion	Top 3 cities ranked by the largest increase in the Congestion Level compared to the previous year.
Top 3 - decreasing congestion	Top 3 cities ranked by the largest decrease in the Congestion Level compared to the previous year.
Top 10 cities / evaluated cities	Cities ranked by Congestion Levels.
• Rank	Rank according to Congestion Levels.
• CI change	Change in the Congestion Level compared to one year earlier.
• Congestion	Congestion Level.
• Morning peak	Average Congestion Level during morning peak periods on work days.
• Evening peak	Average Congestion Level during evening peak periods on work days.
• Highways	Average Congestion Level for highways only.
• Non-highways	Average Congestion Level for non-highways only.
Comparison per quarter	Change in Congestion Level over the past quarters.
• Congestion	Average Congestion Level for all the cities evaluated in the report.
• Worst average morning peak	Highest Congestion Level during the 5 morning peak periods (work days) in all cities evaluated in the report. Available in Quarterly reports, not available in Annual reports.
• Worst average evening peak	Highest Congestion Level during the 5 evening peak periods (work days) in all cities evaluated in the report. Available in Quarterly reports, not available in Annual reports.

### Pages for cities

Section	Description
Congestion Level	Average Congestion Level across all roads in the city.
Ranking of city compared to all cities in the report	Ranking of the city according to Congestion Level compared to all cities evaluated in the report.
Congestion Level on highways	Congestion Level for highways only.
Congestion Level on non-highways	Congestion Level for non-highways only.
Delay per hour driven in peak period	Delay in minutes per hour driven during morning and evening peak times compared to Free Flow situations. For example, 22 minutes delay per hour at peak times indicates that a one hour journey driven at Free Flow times will take an additional 22 minutes at peak times.
Delay per year with a 30 minute commute	Total accumulated delay per year with a 30 minute commute. Based on 230 work days per year and two peak periods per day.
The weekly congestion pattern	Average Congestion Levels for the 10 peak periods in a week (morning and evening peak hours on 5 working days).
Comparison per quarter	Change in Congestion Level over the past quarters.
• Congestion	Average Congestion Level across the city.
• Worst average morning peak	Highest Congestion Level during the 5 morning peak periods (work days). Available in Quarterly reports, not available in Annual reports.
• Worst average evening peak	Highest Congestion Level during the 5 evening peak periods (work days). Available in Quarterly reports, not available in Annual reports.