TomTom North American Congestion Index

Disclaimer

TomTom Congestion 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 Congestion Index – the most accurate and comprehensive barometer of traffic congestion in major cities all over the world.

About the TomTom Congestion Index

With the publication of the TomTom Congestion 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 compares travel times* during non-congested periods (free flow*) with travel times* in peak hours*. The difference is expressed as a 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 80 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.

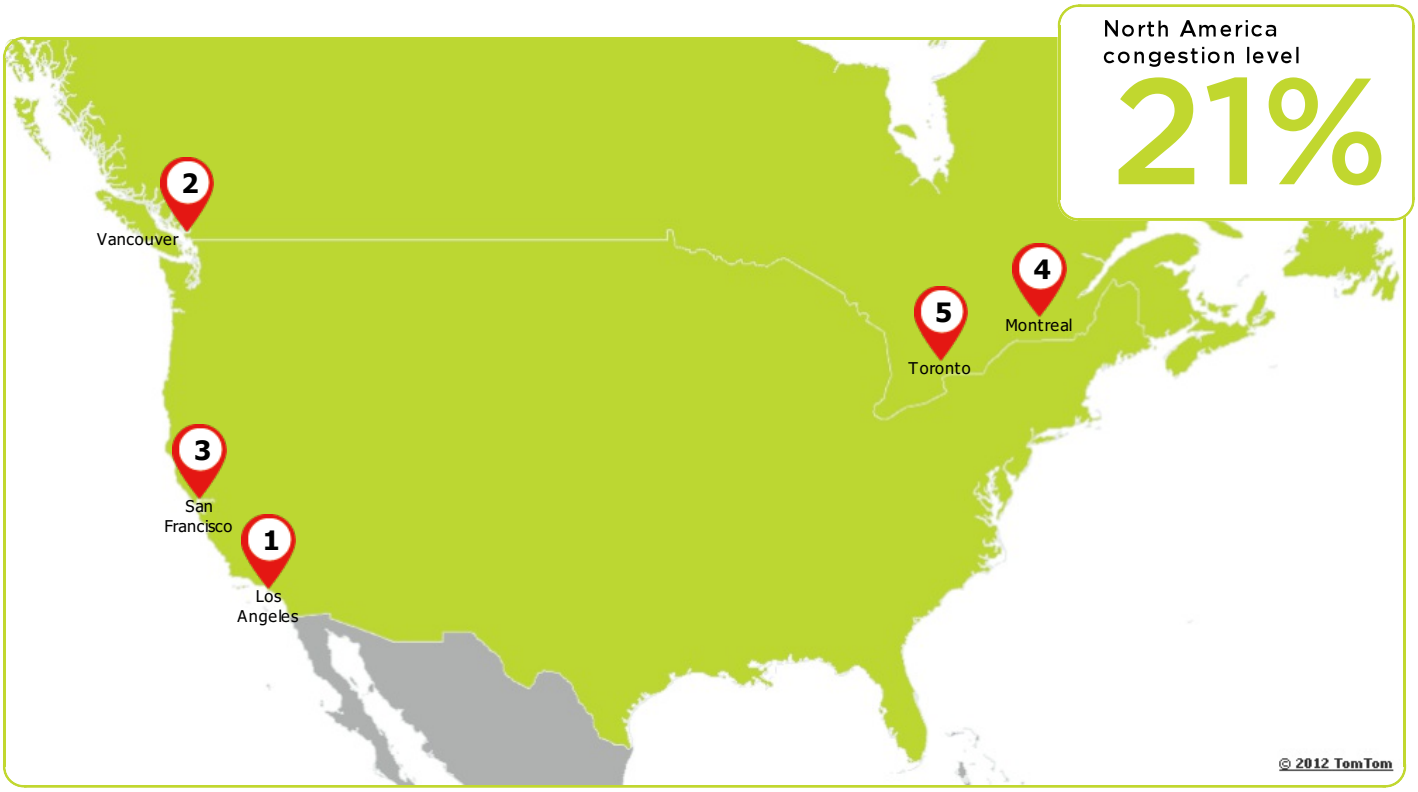
To download a copy of the report go to: www.tomtom.com/congestionindex.

If you would like to know more about TomTom's trafflc solutions, please contact your local TomTom office or sales@tomtom.com.

For questions or comments about this report, please contact us at congestionindex@tomtom.com.

Note: words with a * are explained in the glossary at the end of the report.

North America



Top 3 - Increasing congestion

	Previous Congestion	Increase in congestion (0 4 8 12 16)	Current
Houston	18%	3	21%
San Francisco	26%	3	29%
Minneapolis	15%	2	17%

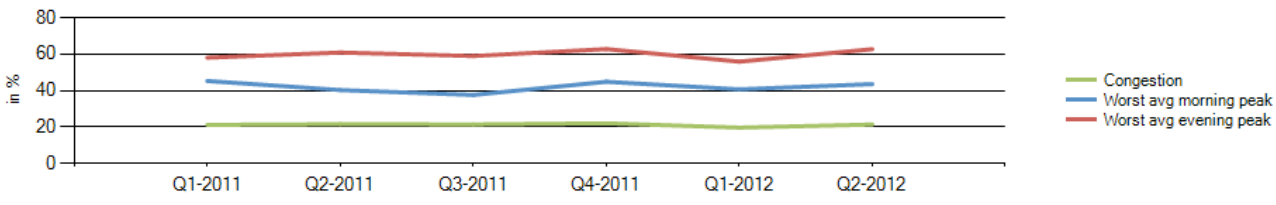
Top 3 - Decreasing congestion

	Previous Congestion	Decrease in congestion (0 4 8 12 16)	Current
Edmonton	21%	7	14%
Ottawa	25%	3	22%
Washington	28%	2	26%

Top 10 cities

Rank	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	Los Angeles	United States	34%	55%	74%	30%	39%
2	Vancouver	Canada	33%	54%	69%	20%	37%
3	San Francisco	United States	29%	49%	68%	25%	37%
4	Montreal	Canada	28%	57%	76%	26%	31%
5	Toronto	Canada	27%	53%	70%	22%	33%
6	Washington	United States	26%	44%	62%	20%	33%
7	Seattle	United States	26%	44%	70%	19%	35%
8	New York	United States	25%	40%	54%	21%	31%
9	Chicago	United States	23%	35%	54%	18%	30%
10	Miami	United States	22%	39%	47%	11%	32%

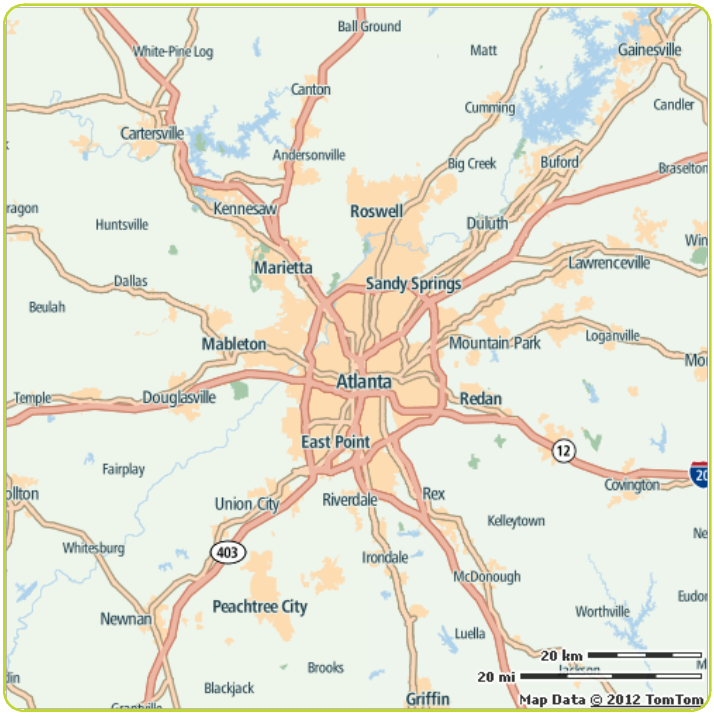
Comparison per quarter



North America

Rank	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	Los Angeles	United States	34%	55%	74%	30%	39%
2	Vancouver	Canada	33%	54%	69%	20%	37%
3	San Francisco	United States	29%	49%	68%	25%	37%
4	Montreal	Canada	28%	57%	76%	26%	31%
5	Toronto	Canada	27%	53%	70%	22%	33%
6	Washington	United States	26%	44%	62%	20%	33%
7	Seattle	United States	26%	44%	70%	19%	35%
8	New York	United States	25%	40%	54%	21%	31%
9	Chicago	United States	23%	35%	54%	18%	30%
10	Miami	United States	22%	39%	47%	11%	32%
11	Tampa	United States	22%	33%	51%	11%	27%
12	Ottawa	Canada	22%	53%	93%	18%	30%
13	Houston	United States	21%	43%	63%	17%	28%
14	Boston	United States	21%	41%	49%	15%	30%
15	Philadelphia	United States	20%	35%	44%	13%	29%
16	Calgary	Canada	20%	32%	57%	14%	23%
17	Atlanta	United States	20%	38%	51%	12%	28%
18	San Diego	United States	19%	30%	43%	9%	36%
19	Baltimore	United States	17%	28%	46%	12%	28%
20	Dallas-Fort Worth	United States	17%	29%	44%	12%	24%
21	Minneapolis	United States	16%	29%	47%	12%	23%
22	Riverside	United States	15%	27%	36%	10%	27%
23	Detroit	United States	15%	21%	38%	9%	20%
24	St. Louis	United States	14%	24%	32%	8%	25%
25	Edmonton	Canada	14%	19%	32%	2%	19%
26	Phoenix	United States	12%	22%	28%	5%	18%

Atlanta



Congestion level

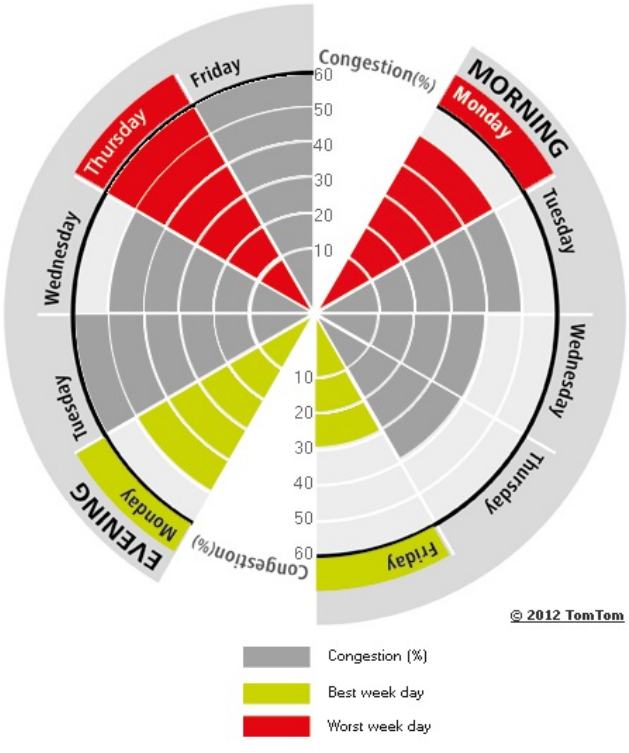
20%

Ranking

Ranking of city compared to continent	17/26
Congestion level on highways	12%
Congestion level on non-highways	28%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h

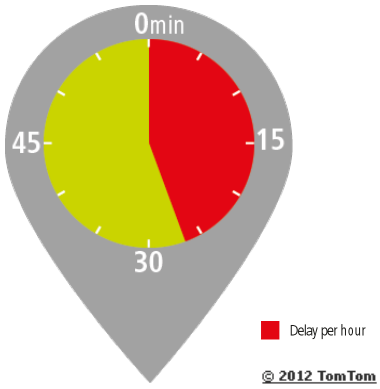
The weekly congestion pattern:

Best and worst peak periods of the week

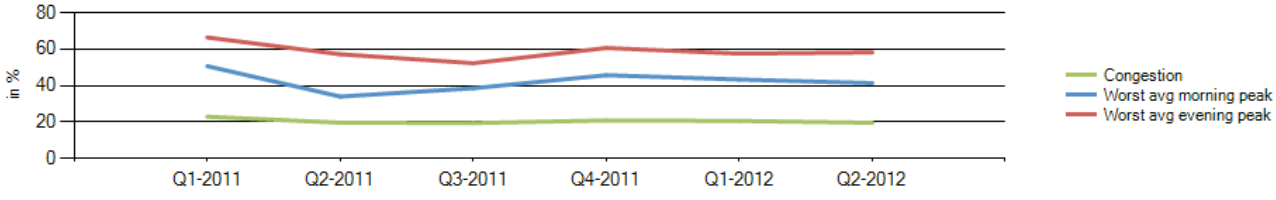


Most congested specific day	Thu 12 Apr 2012
Total network length	4 453 mi
Total network length highways	543 mi
Total network length non-highways	3 910 mi
Total vehicle miles	4 726 695 mi

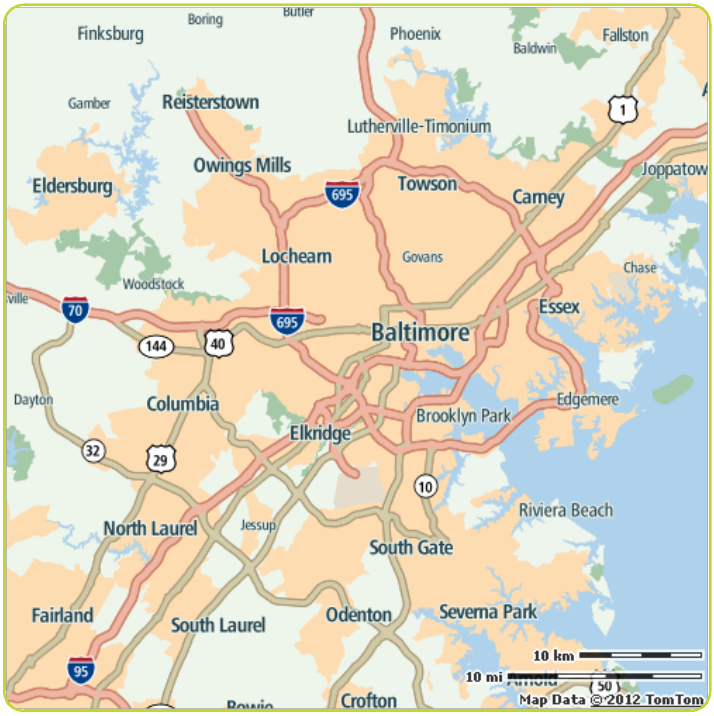
Delay per hour driven in peak period



Comparison per quarter



Baltimore



Congestion level

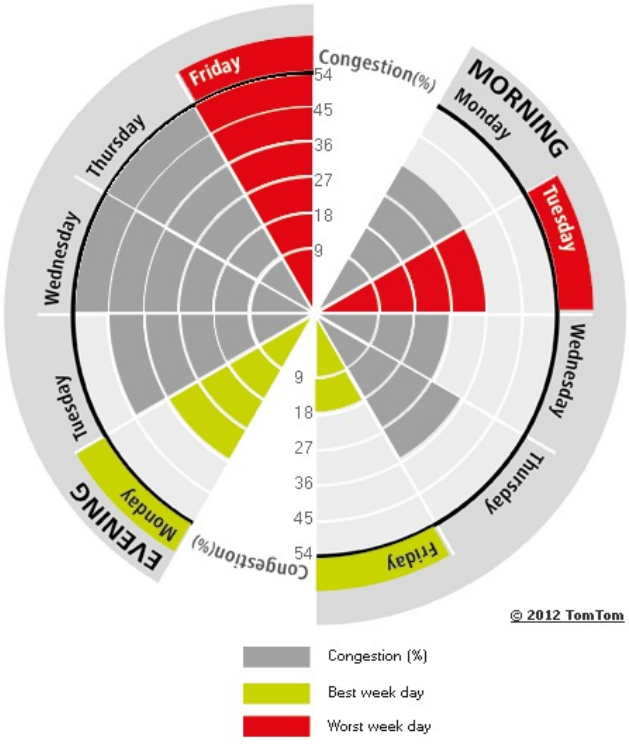
17%

Ranking

Ranking of city compared to continent	19/26
Congestion level on highways	12%
Congestion level on non-highways	28%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h

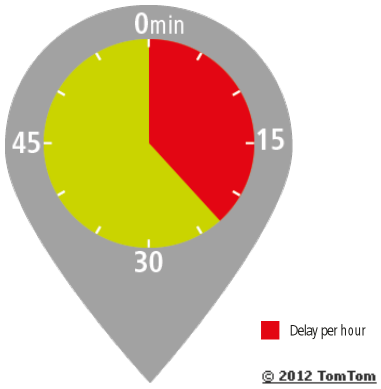
The weekly congestion pattern:

Best and worst peak periods of the week

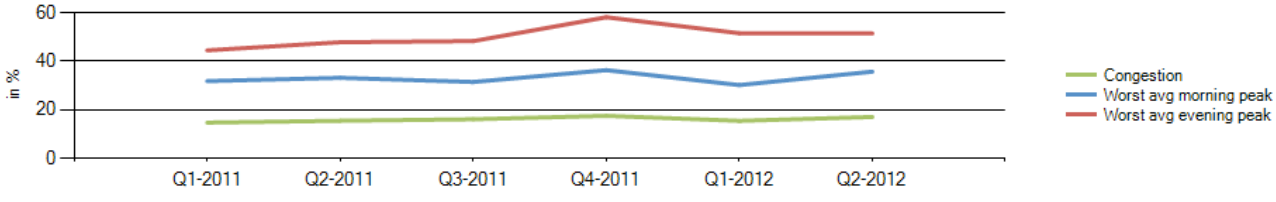


Most congested specific day	Tue 12 Jun 2012
Total network length	1 964 mi
Total network length highways	437 mi
Total network length non-highways	1 527 mi
Total vehicle miles	2 837 128 mi

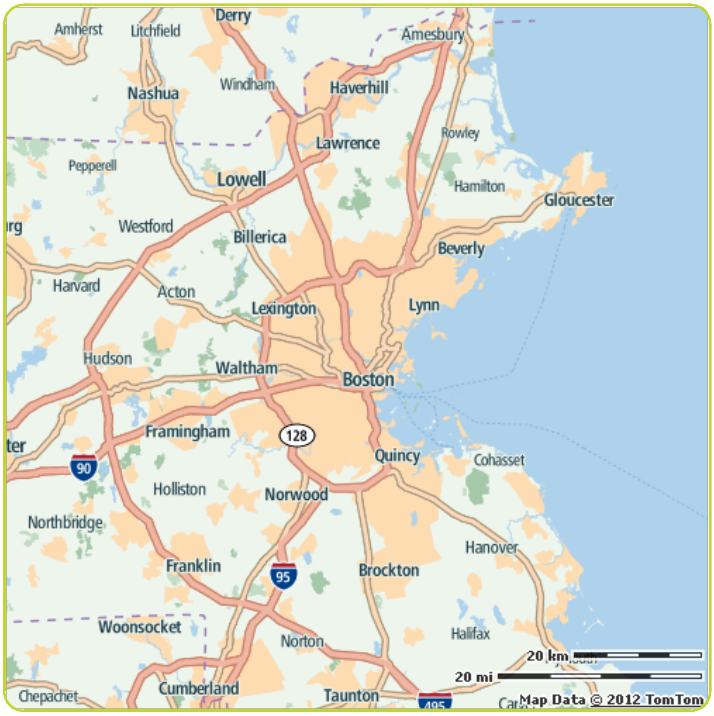
Delay per hour driven in peak period



Comparison per quarter



Boston



Congestion level

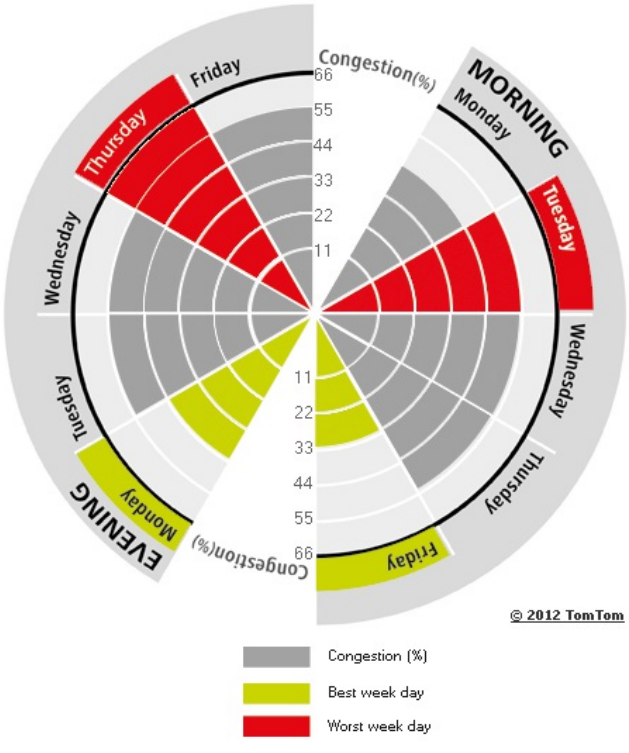
21%

Ranking

Ranking of city compared to continent	14/26
Congestion level on highways	15%
Congestion level on non-highways	30%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h

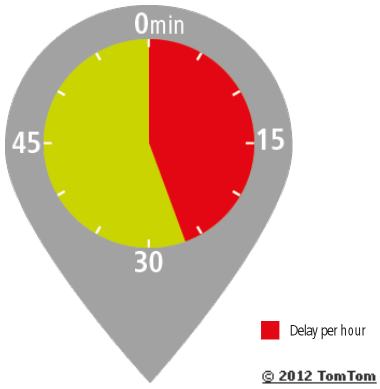
The weekly congestion pattern:

Best and worst peak periods of the week

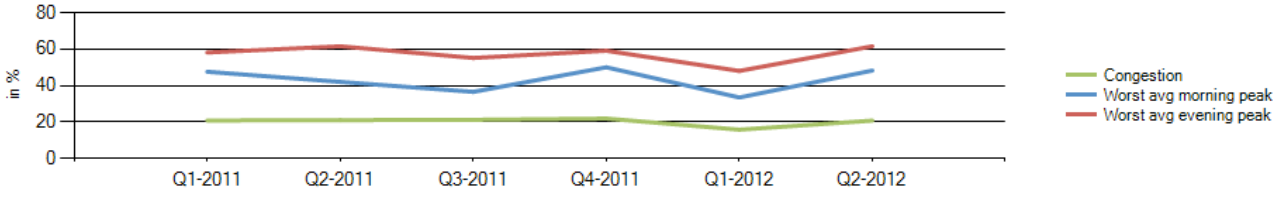


Most congested specific day	Wed 13 Jun 2012
Total network length	5 667 mi
Total network length highways	837 mi
Total network length non-highways	4 830 mi
Total vehicle miles	5 482 940 mi

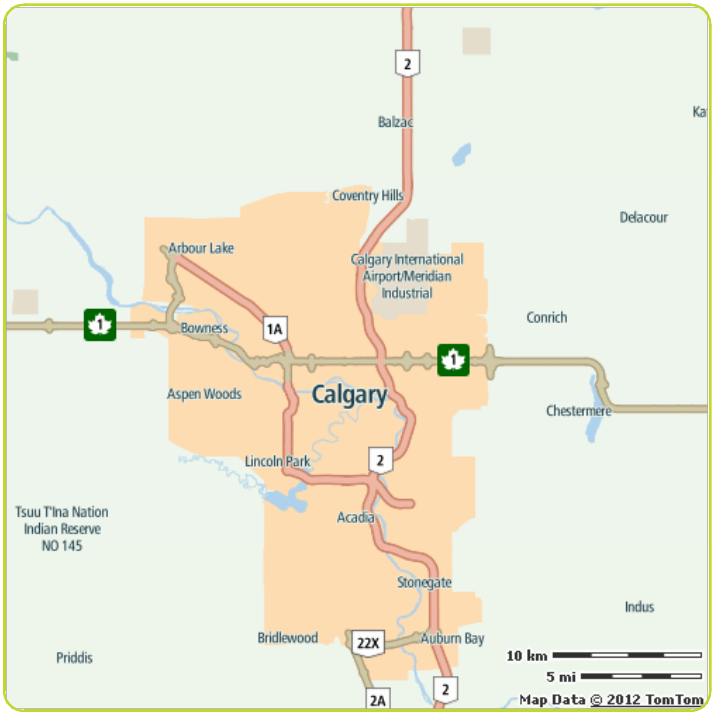
Delay per hour driven in peak period



Comparison per quarter



Calgary



Congestion level

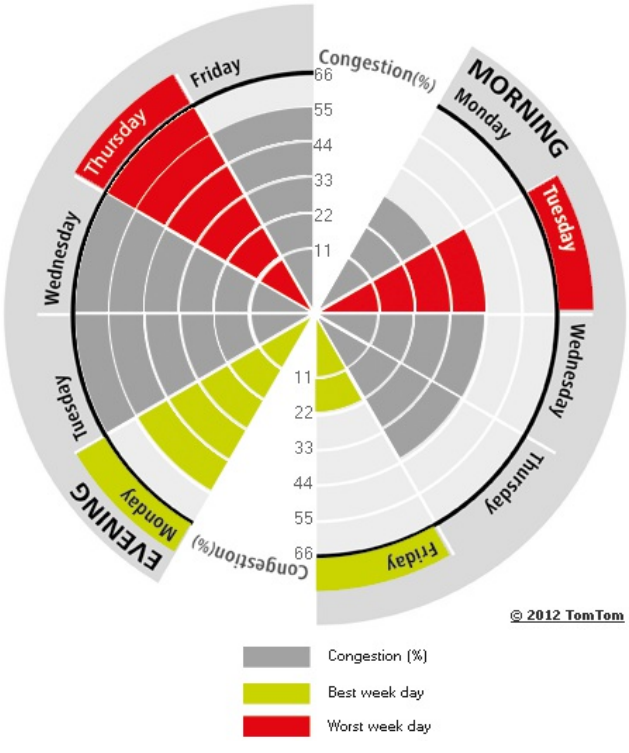
20%

Ranking

Ranking of city compared to continent	16/26
Congestion level on highways	14%
Congestion level on non-highways	23%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h

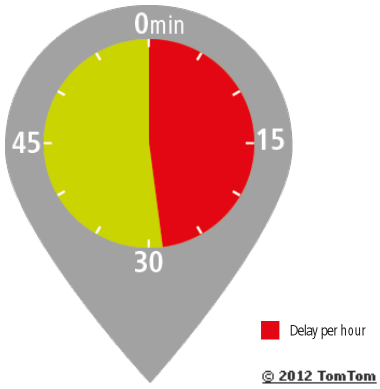
The weekly congestion pattern:

Best and worst peak periods of the week

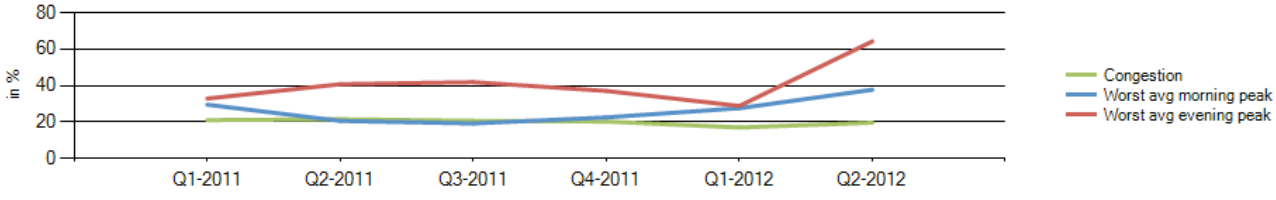


Most congested specific day	Thu 12 Apr 2012
Total network length	943 mi
Total network length highways	140 mi
Total network length non-highways	803 mi
Total vehicle miles	661 948 mi

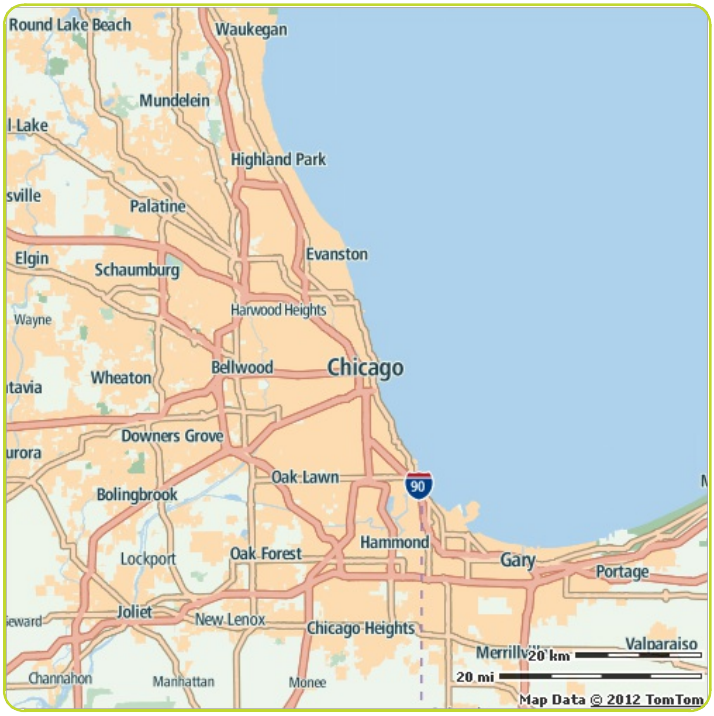
Delay per hour driven in peak period



Comparison per quarter



Chicago



Congestion level

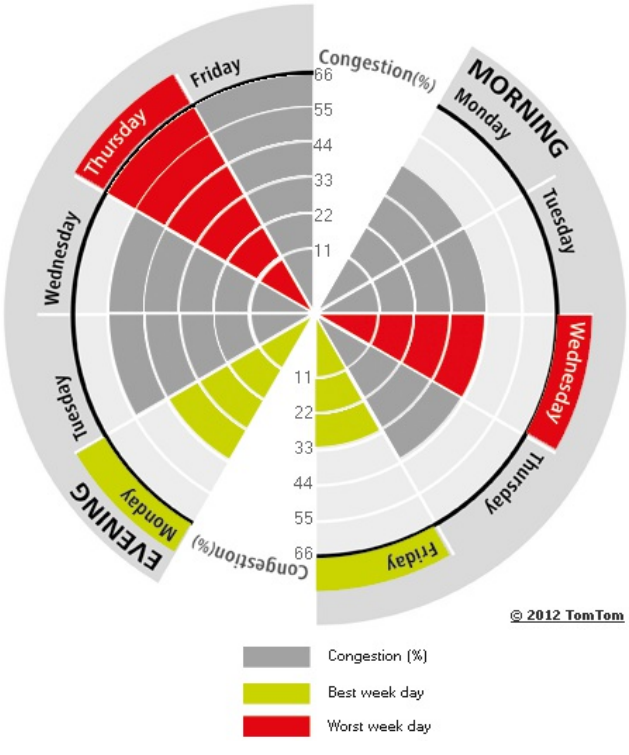
23%

Ranking

Ranking of city compared to continent	9/26
Congestion level on highways	18%
Congestion level on non-highways	30%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h

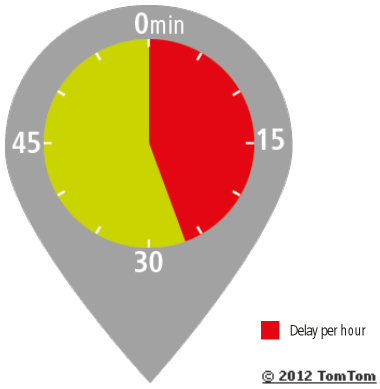
The weekly congestion pattern:

Best and worst peak periods of the week

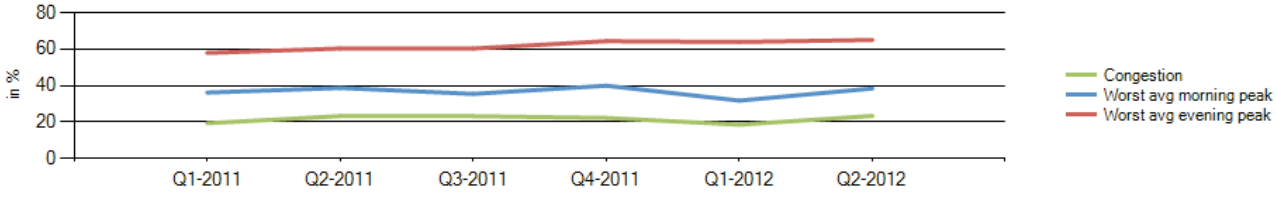


Most congested specific day	Thu 31 May 2012
Total network length	4 679 mi
Total network length highways	627 mi
Total network length non-highways	4 052 mi
Total vehicle miles	4 272 888 mi

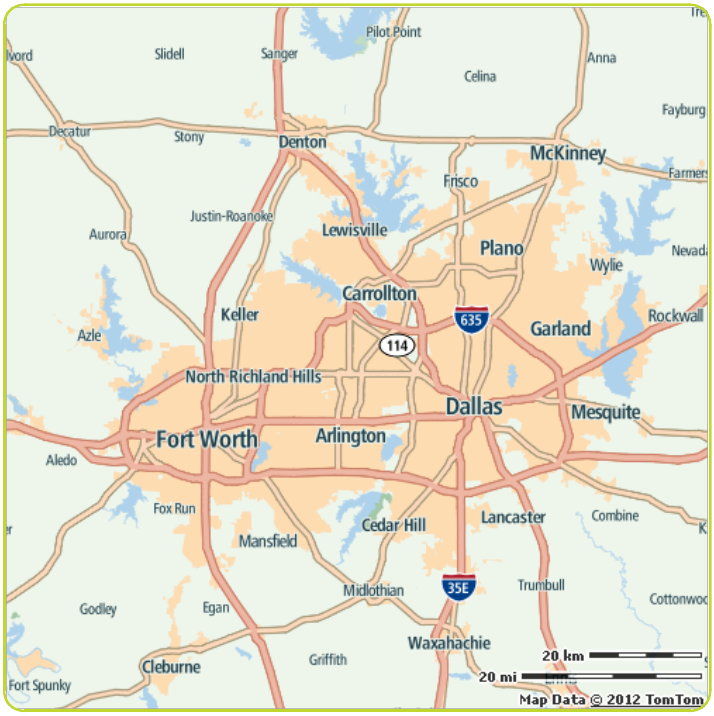
Delay per hour driven in peak period



Comparison per quarter



Dallas-Fort Worth



Congestion level

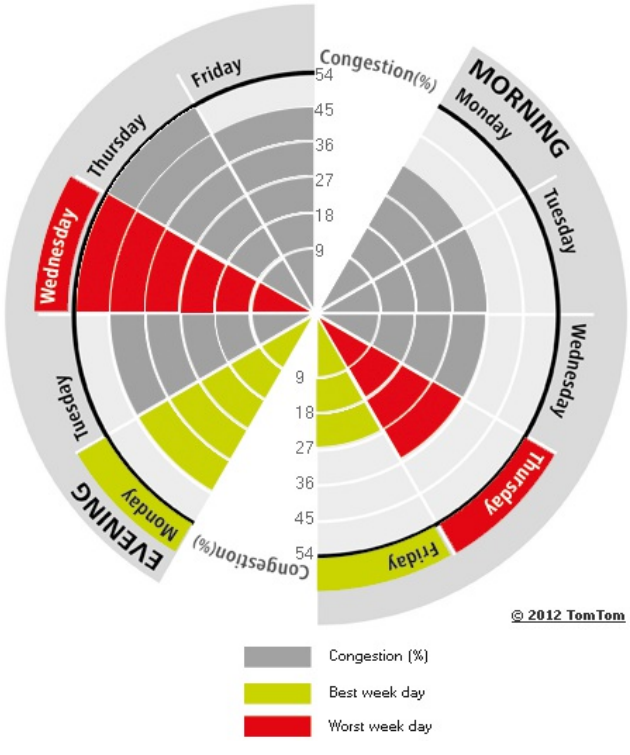
17%

Ranking

Ranking of city compared to continent	20/26
Congestion level on highways	12%
Congestion level on non-highways	24%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h

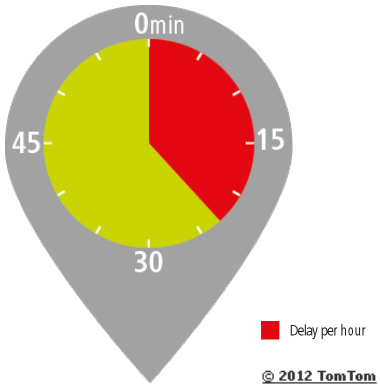
The weekly congestion pattern:

Best and worst peak periods of the week

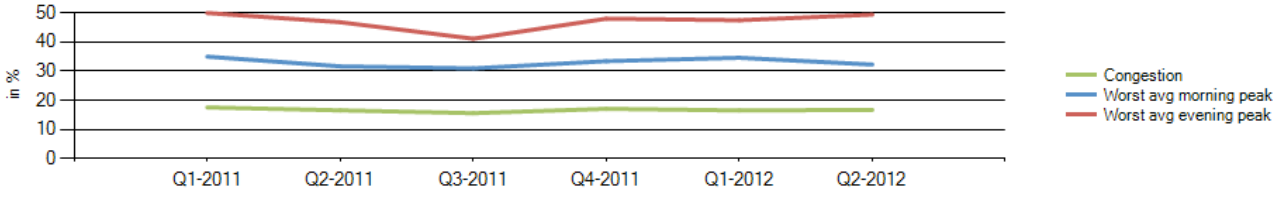


Most congested specific day	Wed 6 Jun 2012
Total network length	7 906 mi
Total network length highways	1 569 mi
Total network length non-highways	6 337 mi
Total vehicle miles	5 137 905 mi

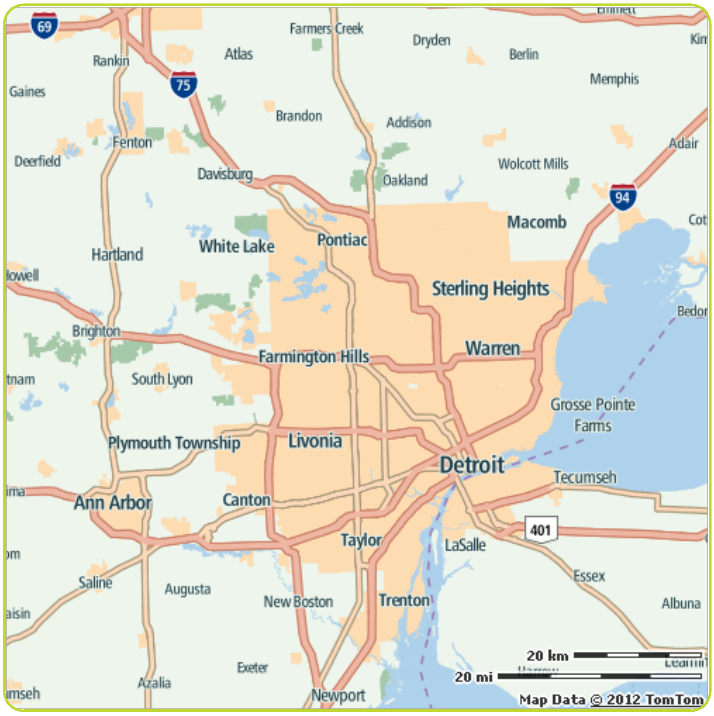
Delay per hour driven in peak period



Comparison per quarter



Detroit



Congestion level

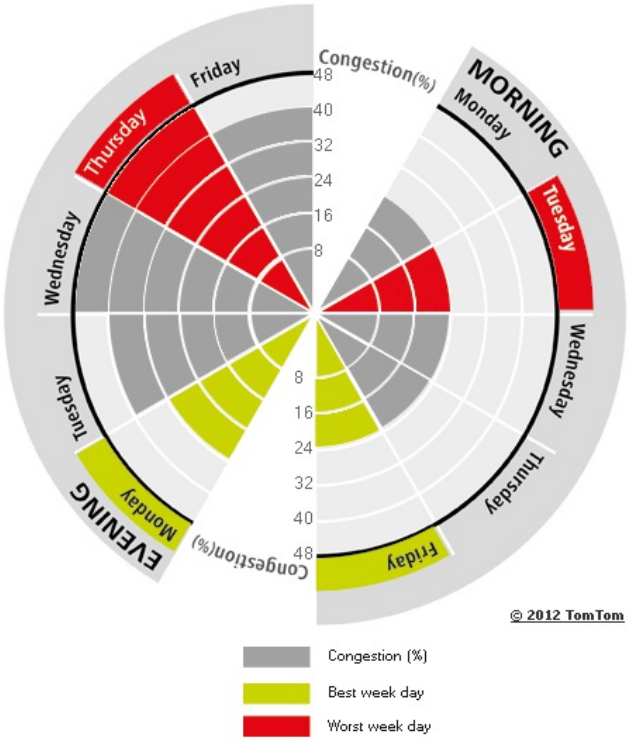
15%

Ranking

Ranking of city compared to continent	23/26
Congestion level on highways	9%
Congestion level on non-highways	20%
Delay per hour driven in peak period	18 min
Delay per year with a 30 min commute	53 h

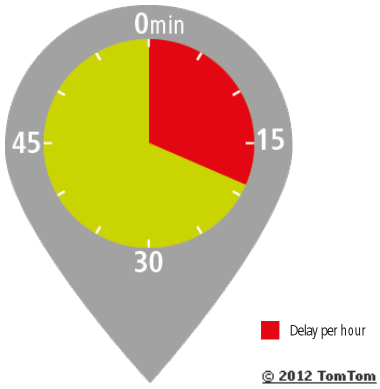
The weekly congestion pattern:

Best and worst peak periods of the week

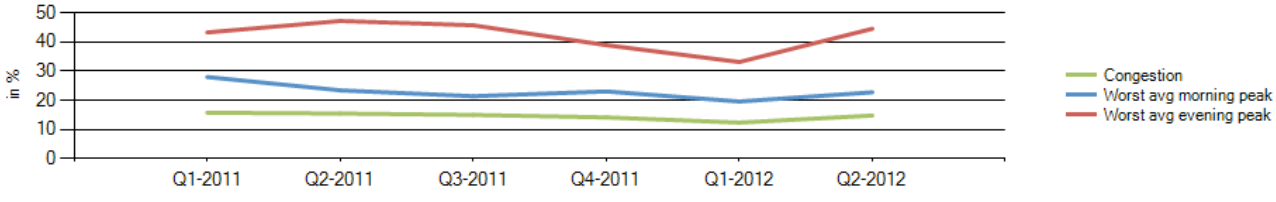


Most congested specific day	Fri 1 Jun 2012
Total network length	4 878 mi
Total network length highways	518 mi
Total network length non-highways	4 360 mi
Total vehicle miles	2 283 623 mi

Delay per hour driven in peak period



Comparison per quarter



Edmonton

Congestion level

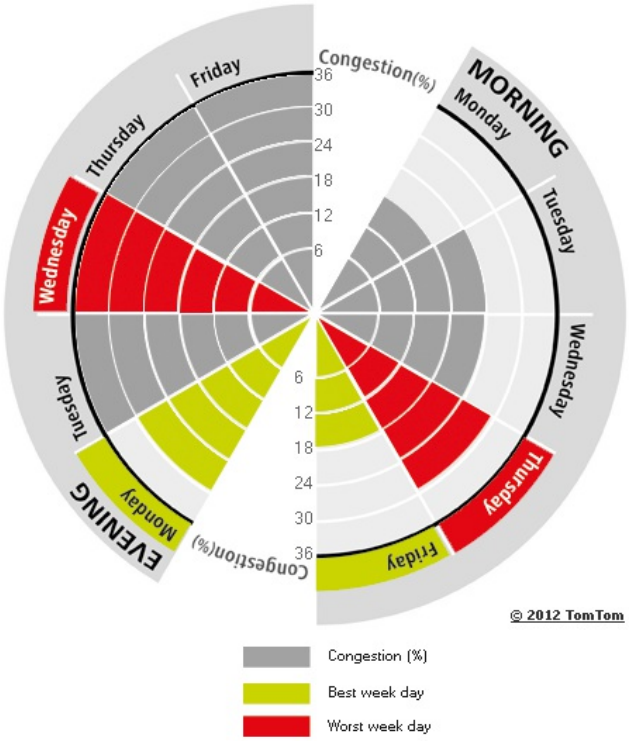
14%

Ranking

Ranking of city compared to continent	25/26
Congestion level on highways	2%
Congestion level on non-highways	19%
Delay per hour driven in peak period	16 min
Delay per year with a 30 min commute	48 h

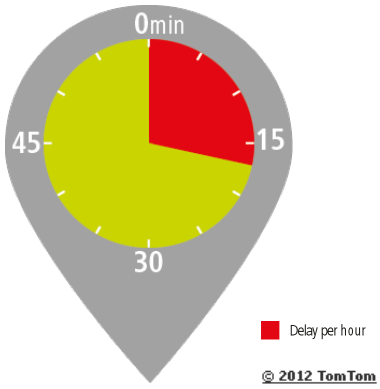
The weekly congestion pattern:

Best and worst peak periods of the week

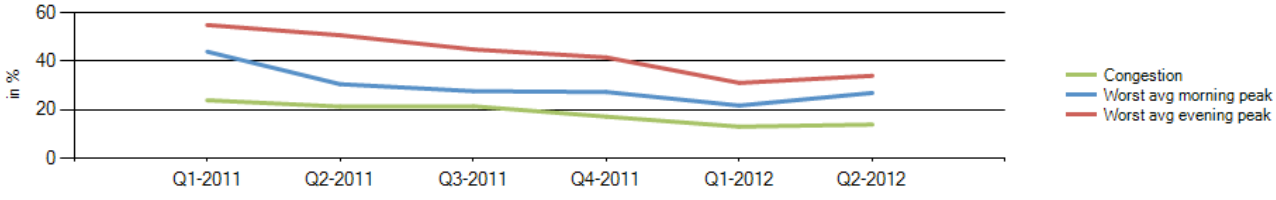


Most congested specific day	Thu 5 Apr 2012
Total network length	880 mi
Total network length highways	142 mi
Total network length non-highways	738 mi
Total vehicle miles	428 958 mi

Delay per hour driven in peak period



Comparison per quarter



Houston

Congestion level

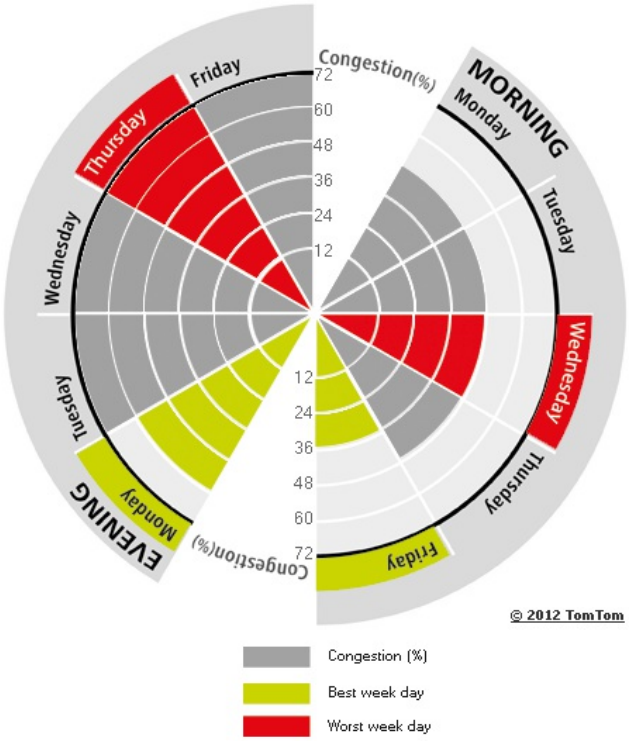
21%

Ranking

Ranking of city compared to continent	13/26
Congestion level on highways	17%
Congestion level on non-highways	28%
Delay per hour driven in peak period	32 min
Delay per year with a 30 min commute	80 h

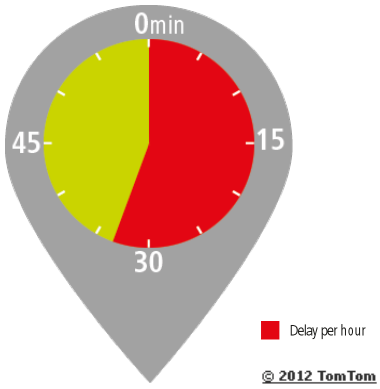
The weekly congestion pattern:

Best and worst peak periods of the week

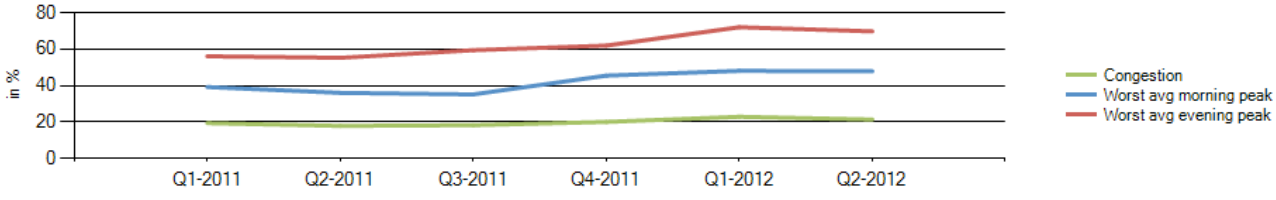


Most congested specific day	Fri 20 Apr 2012
Total network length	3 634 mi
Total network length highways	757 mi
Total network length non-highways	2 878 mi
Total vehicle miles	2 552 751 mi

Delay per hour driven in peak period



Comparison per quarter



Los Angeles

Congestion level

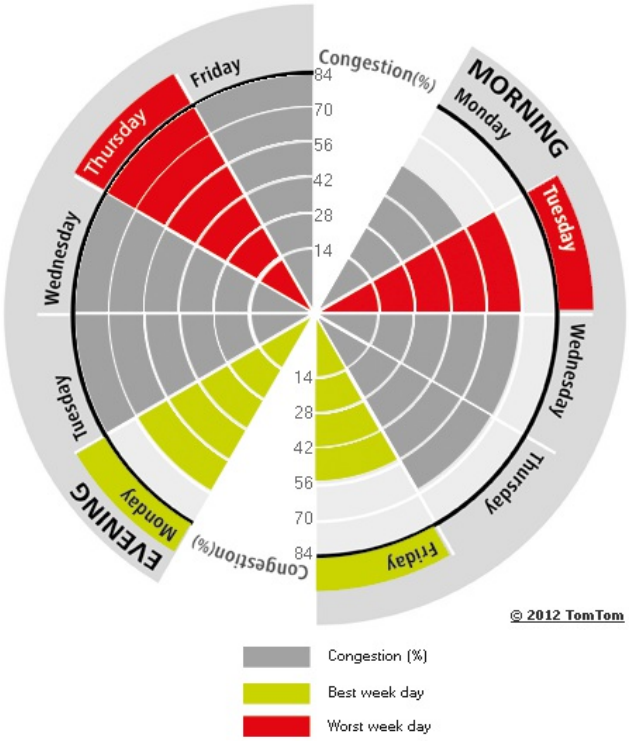
34%

Ranking

Ranking of city compared to continent	1/26
Congestion level on highways	30%
Congestion level on non-highways	39%
Delay per hour driven in peak period	38 min
Delay per year with a 30 min commute	89 h

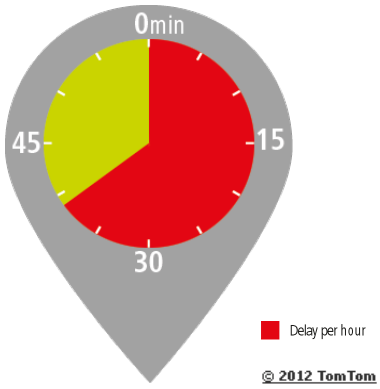
The weekly congestion pattern:

Best and worst peak periods of the week

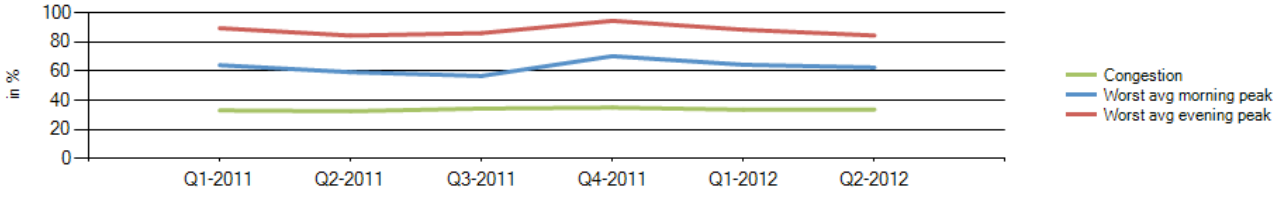


Most congested specific day	Fri 15 Jun 2012
Total network length	6 513 mi
Total network length highways	1 199 mi
Total network length non-highways	5 314 mi
Total vehicle miles	4 561 153 mi

Delay per hour driven in peak period



Comparison per quarter



Miami

Congestion level

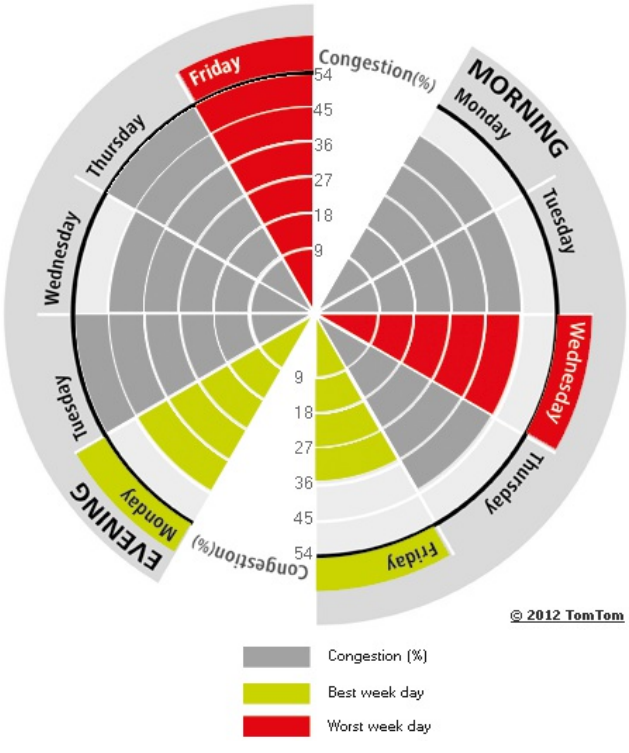
22%

Ranking

Ranking of city compared to continent	10/26
Congestion level on highways	11%
Congestion level on non-highways	32%
Delay per hour driven in peak period	26 min
Delay per year with a 30 min commute	69 h

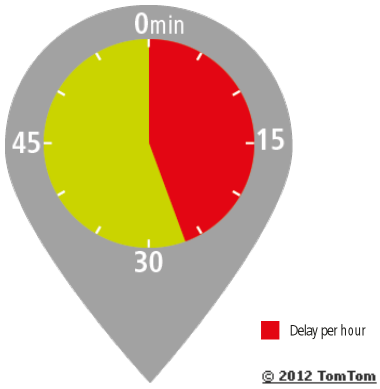
The weekly congestion pattern:

Best and worst peak periods of the week

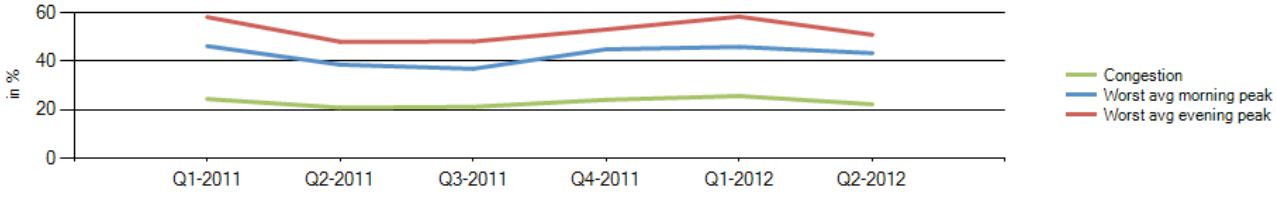


Most congested specific day	Fri 22 Jun 2012
Total network length	4 220 mi
Total network length highways	569 mi
Total network length non-highways	3 651 mi
Total vehicle miles	3 179 875 mi

Delay per hour driven in peak period



Comparison per quarter



Minneapolis

Congestion level

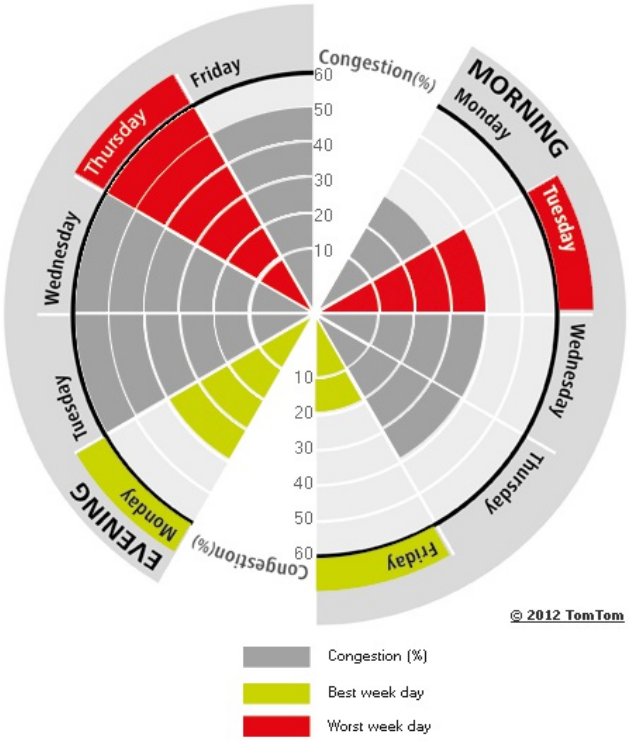
16%

Ranking

Ranking of city compared to continent	21/26
Congestion level on highways	12%
Congestion level on non-highways	23%
Delay per hour driven in peak period	23 min
Delay per year with a 30 min commute	63 h

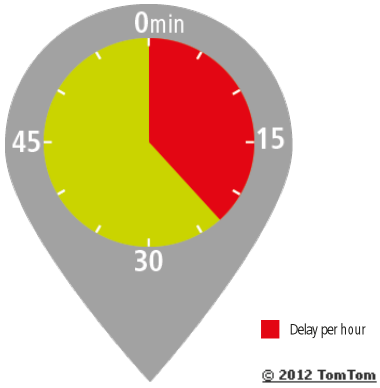
The weekly congestion pattern:

Best and worst peak periods of the week

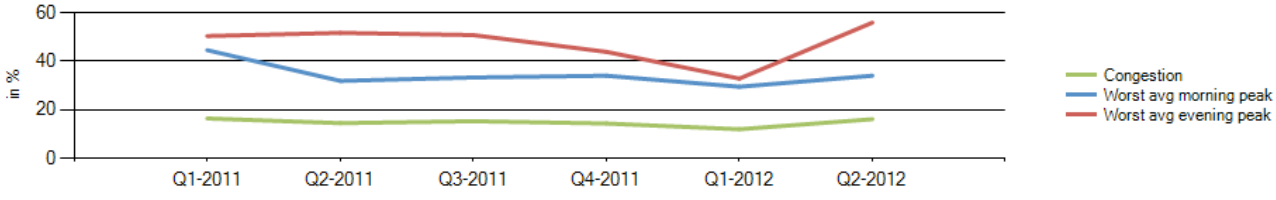


Most congested specific day	Thu 24 May 2012
Total network length	3 452 mi
Total network length highways	685 mi
Total network length non-highways	2 767 mi
Total vehicle miles	1 977 849 mi

Delay per hour driven in peak period



Comparison per quarter



Montreal

Congestion level

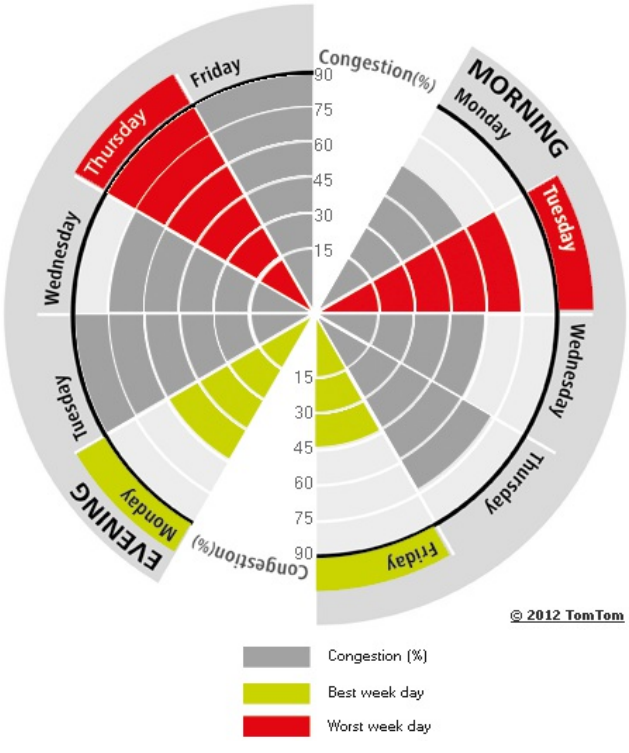
28%

Ranking

Ranking of city compared to continent	4/26
Congestion level on highways	26%
Congestion level on non-highways	31%
Delay per hour driven in peak period	40 min
Delay per year with a 30 min commute	92 h

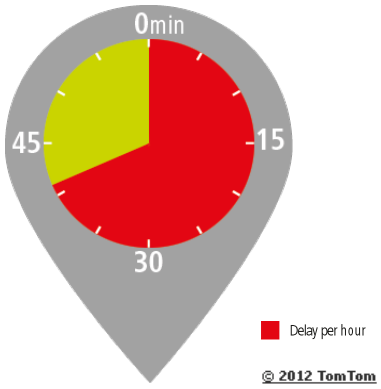
The weekly congestion pattern:

Best and worst peak periods of the week

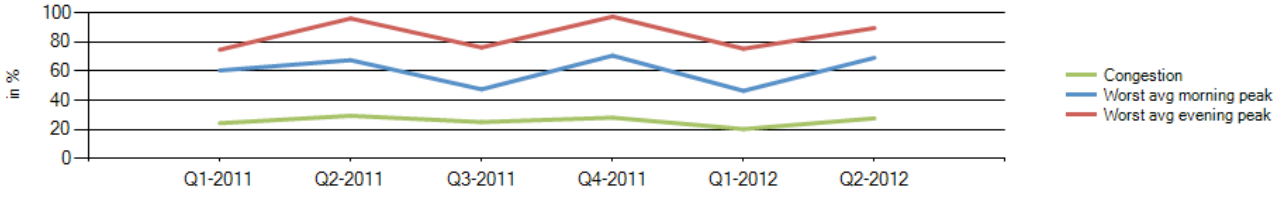


Most congested specific day	Tue 12 Jun 2012
Total network length	1 290 mi
Total network length highways	501 mi
Total network length non-highways	789 mi
Total vehicle miles	2 649 993 mi

Delay per hour driven in peak period



Comparison per quarter



New York

Congestion level

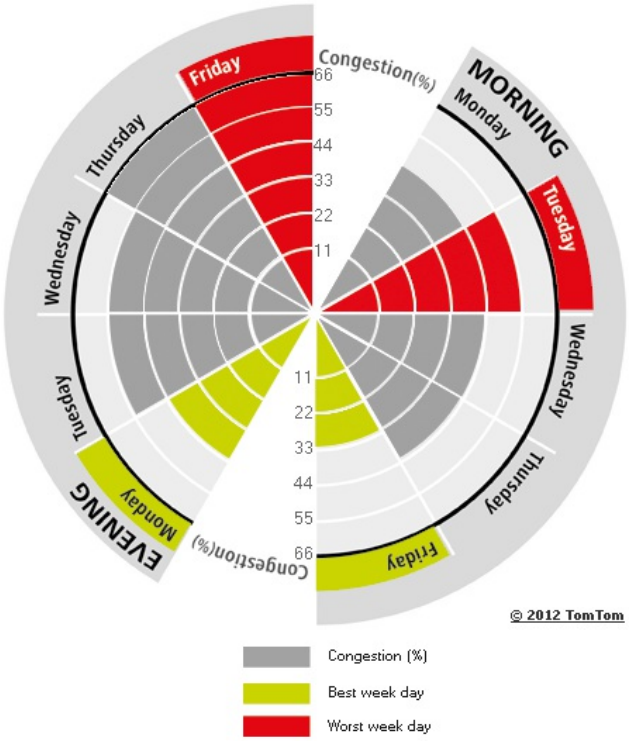
25%

Ranking

Ranking of city compared to continent	8/26
Congestion level on highways	21%
Congestion level on non-highways	31%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h

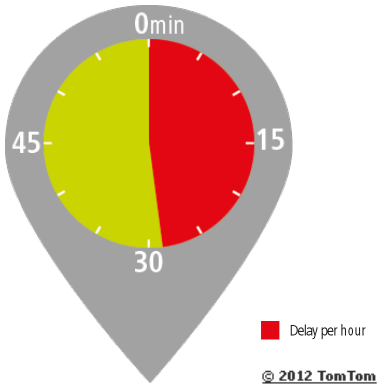
The weekly congestion pattern:

Best and worst peak periods of the week

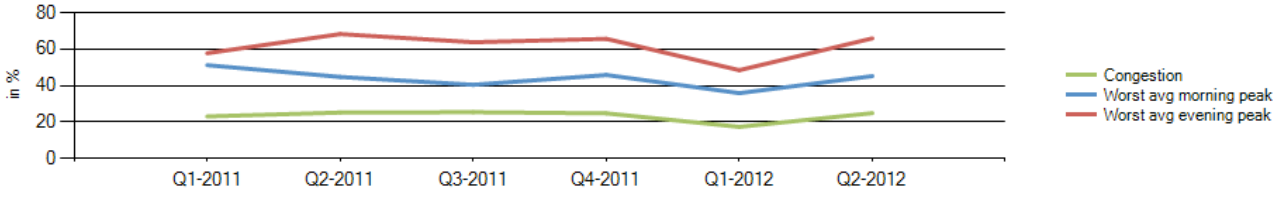


Most congested specific day	Fri 22 Jun 2012
Total network length	9 420 mi
Total network length highways	2 130 mi
Total network length non-highways	7 290 mi
Total vehicle miles	11 180 478 mi

Delay per hour driven in peak period



Comparison per quarter



Ottawa

Congestion level

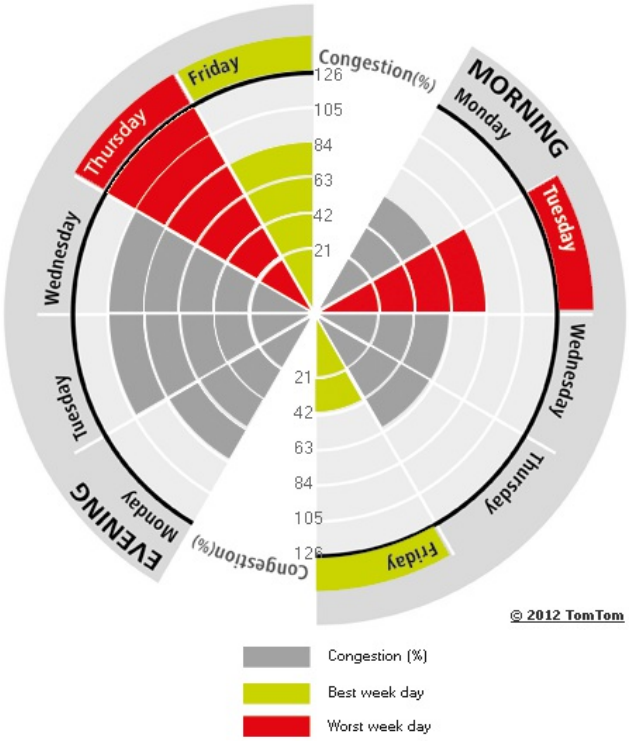
22%

Ranking

Ranking of city compared to continent	12/26
Congestion level on highways	18%
Congestion level on non-highways	30%
Delay per hour driven in peak period	44 min
Delay per year with a 30 min commute	97 h

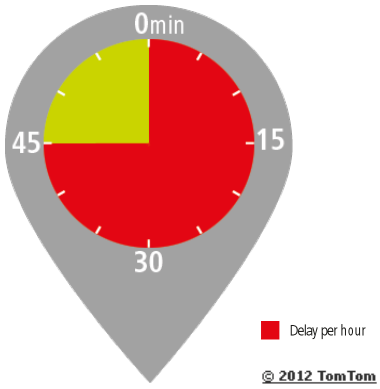
The weekly congestion pattern:

Best and worst peak periods of the week

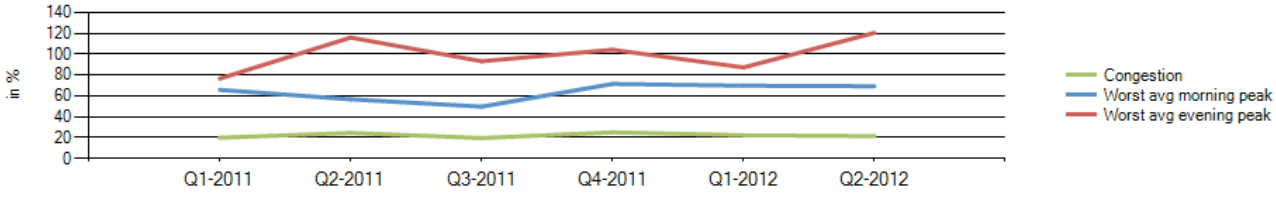


Most congested specific day	Tue 29 May 2012
Total network length	235 mi
Total network length highways	82 mi
Total network length non-highways	152 mi
Total vehicle miles	344 031 mi

Delay per hour driven in peak period



Comparison per quarter



Philadelphia

Congestion level

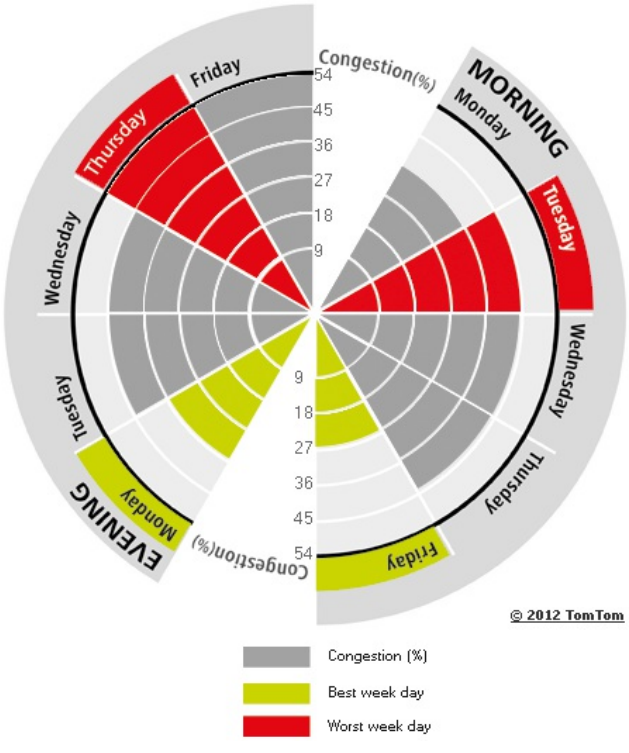
20%

Ranking

Ranking of city compared to continent	15/26
Congestion level on highways	13%
Congestion level on non-highways	29%
Delay per hour driven in peak period	24 min
Delay per year with a 30 min commute	65 h

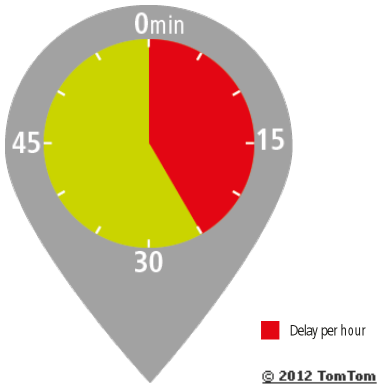
The weekly congestion pattern:

Best and worst peak periods of the week

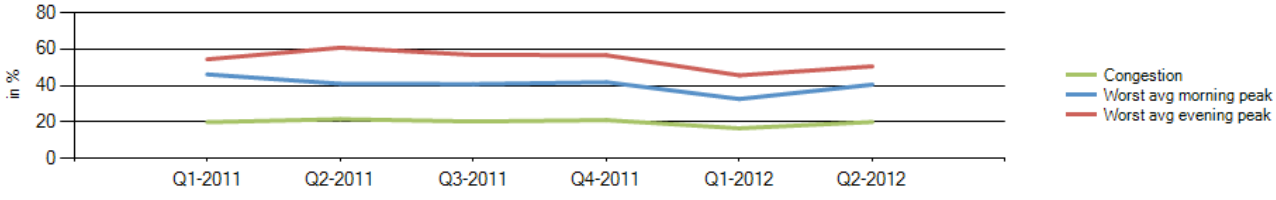


Most congested specific day	Fri 11 May 2012
Total network length	3 131 mi
Total network length highways	493 mi
Total network length non-highways	2 638 mi
Total vehicle miles	3 917 847 mi

Delay per hour driven in peak period



Comparison per quarter



Phoenix

Congestion level

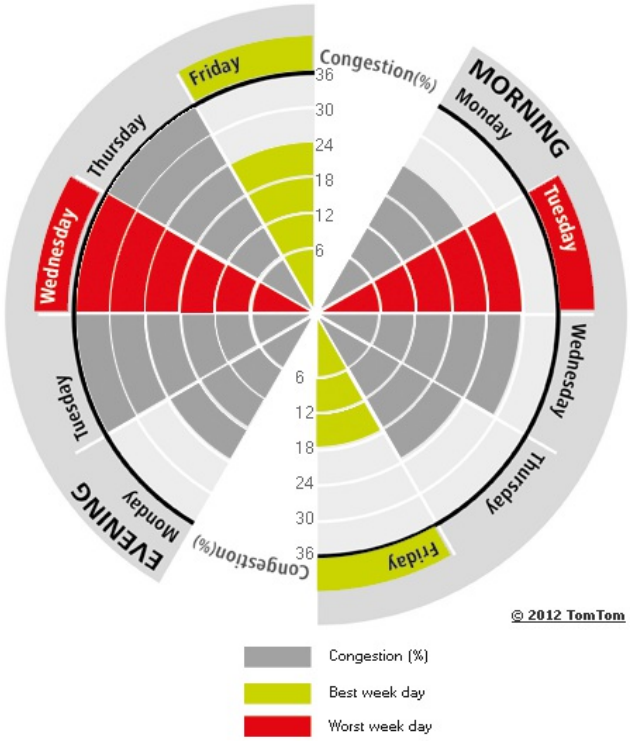
12%

Ranking

Ranking of city compared to continent	26/26
Congestion level on highways	5%
Congestion level on non-highways	18%
Delay per hour driven in peak period	15 min
Delay per year with a 30 min commute	46 h

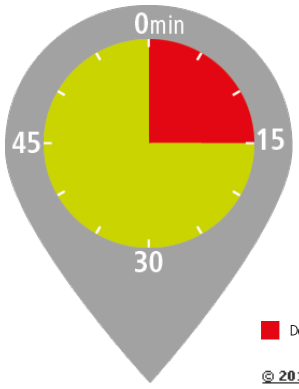
The weekly congestion pattern:

Best and worst peak periods of the week

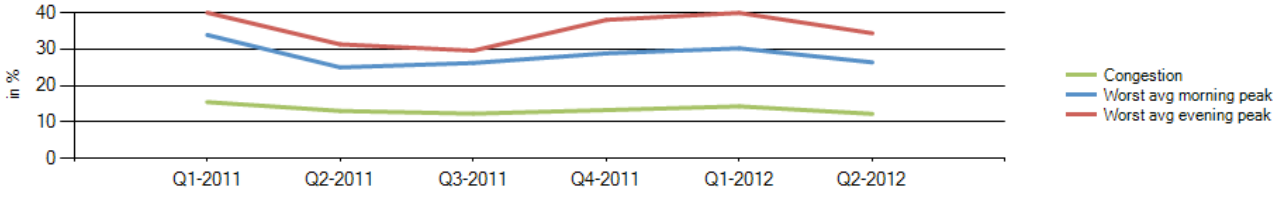


Most congested specific day	Wed 16 May 2012
Total network length	3 959 mi
Total network length highways	485 mi
Total network length non-highways	3 474 mi
Total vehicle miles	2 032 586 mi

Delay per hour driven in peak period



Comparison per quarter



Riverside

Congestion level

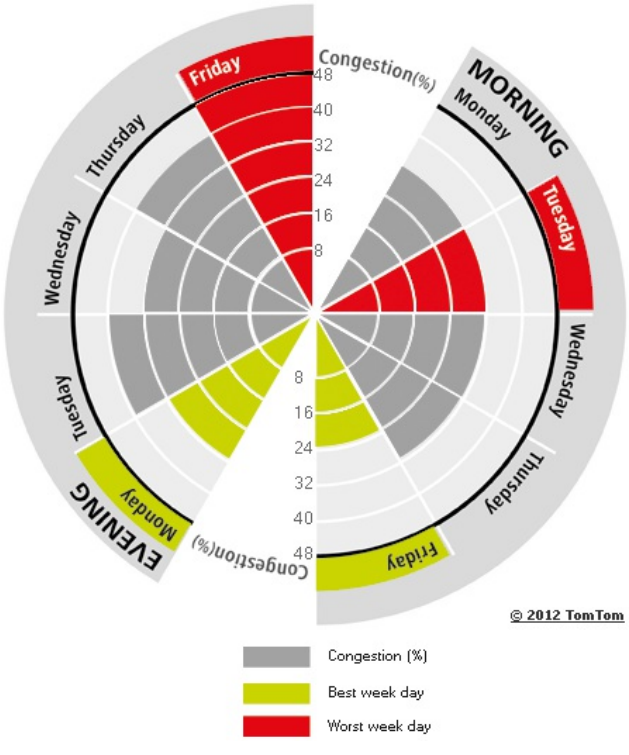
15%

Ranking

Ranking of city compared to continent	22/26
Congestion level on highways	10%
Congestion level on non-highways	27%
Delay per hour driven in peak period	18 min
Delay per year with a 30 min commute	53 h

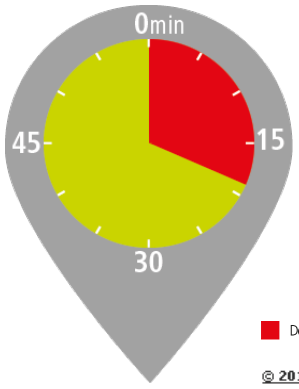
The weekly congestion pattern:

Best and worst peak periods of the week

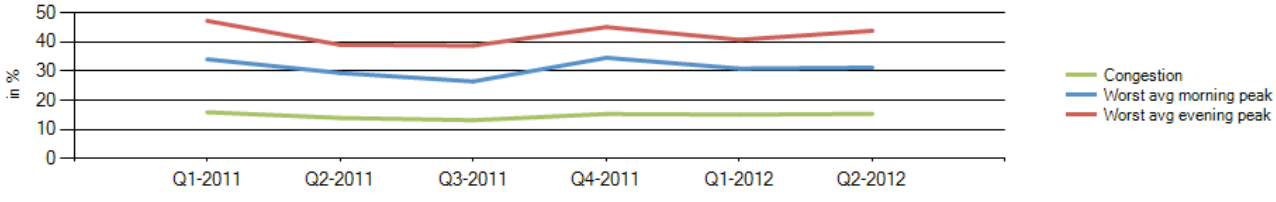


Most congested specific day	Fri 13 Apr 2012
Total network length	1 727 mi
Total network length highways	359 mi
Total network length non-highways	1 368 mi
Total vehicle miles	1 017 429 mi

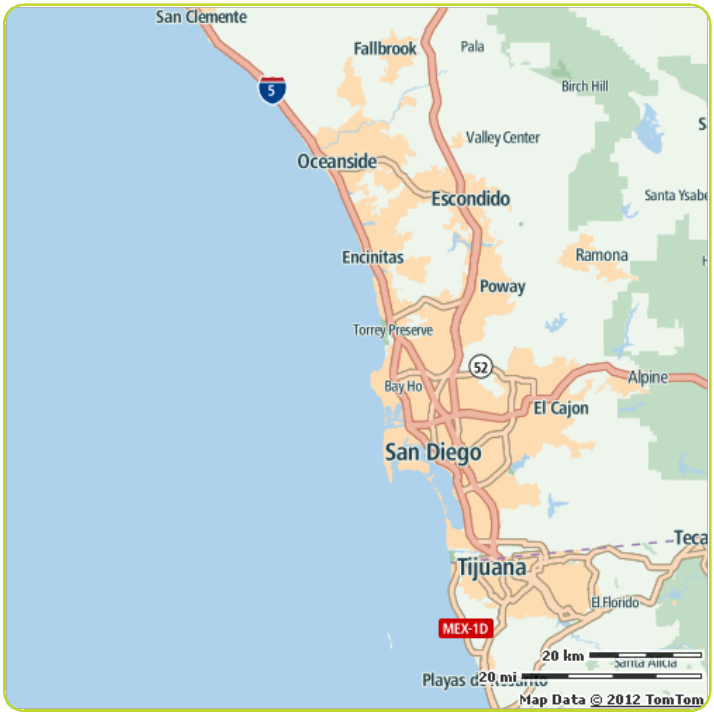
Delay per hour driven in peak period



Comparison per quarter



San Diego



Congestion level

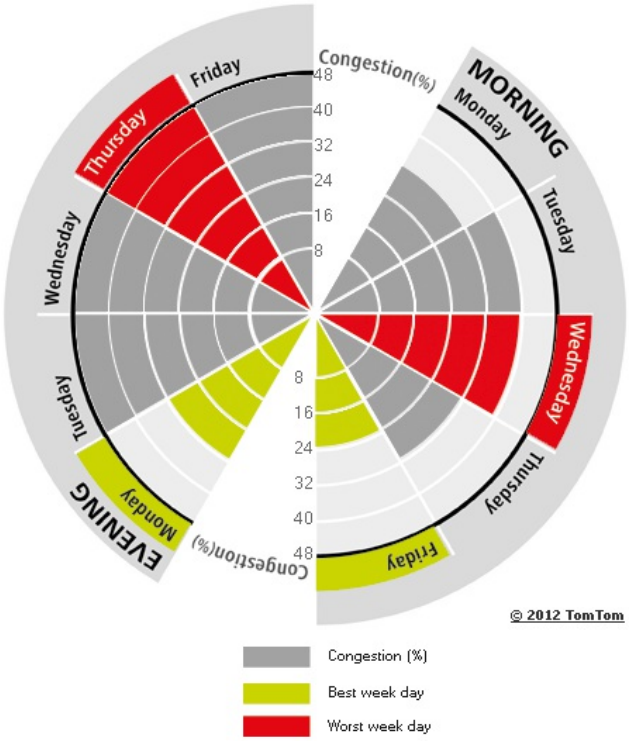
19%

Ranking

Ranking of city compared to continent	18/26
Congestion level on highways	9%
Congestion level on non-highways	36%
Delay per hour driven in peak period	21 min
Delay per year with a 30 min commute	59 h

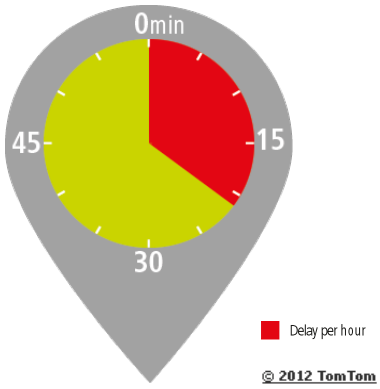
The weekly congestion pattern:

Best and worst peak periods of the week

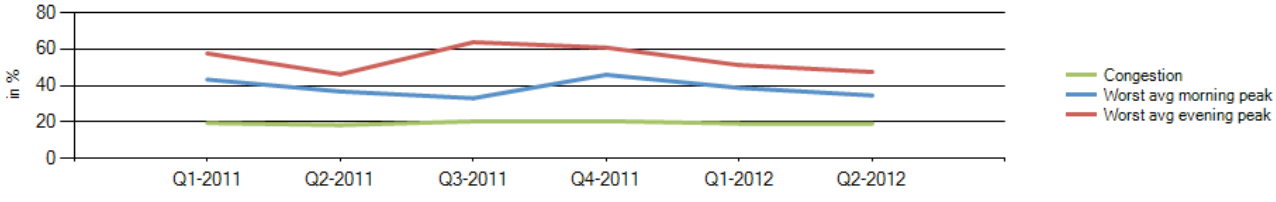


Most congested specific day	Fri 13 Apr 2012
Total network length	2 216 mi
Total network length highways	526 mi
Total network length non-highways	1 690 mi
Total vehicle miles	1 452 367 mi

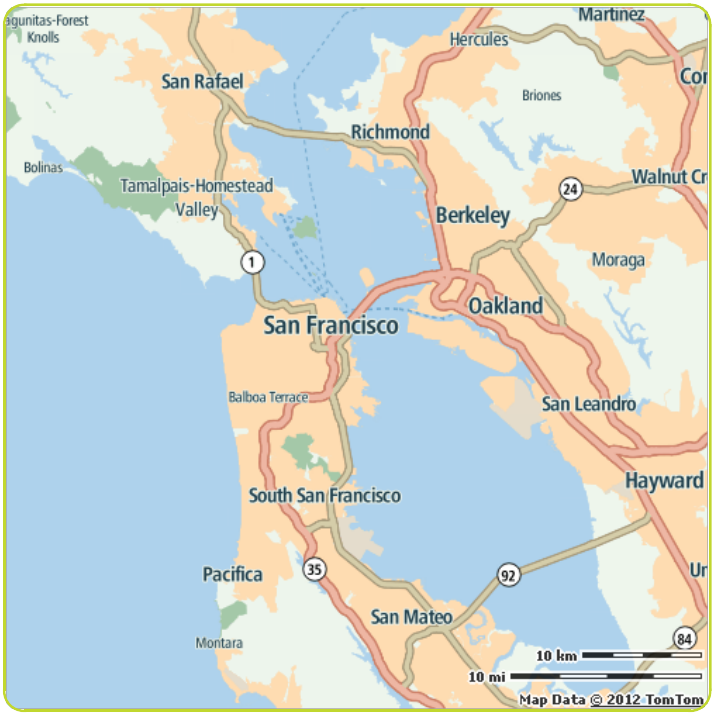
Delay per hour driven in peak period



Comparison per quarter



San Francisco



Congestion level

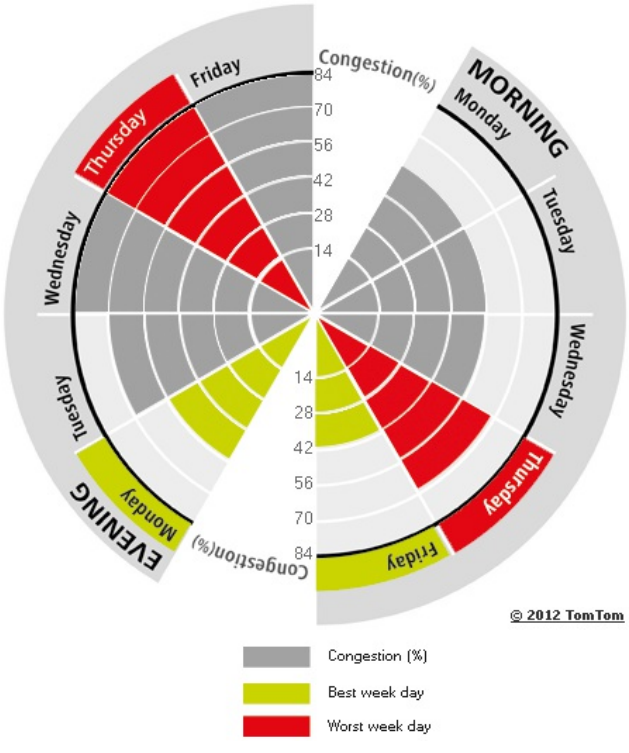
29%

Ranking

Ranking of city compared to continent	3/26
Congestion level on highways	25%
Congestion level on non-highways	37%
Delay per hour driven in peak period	34 min
Delay per year with a 30 min commute	83 h

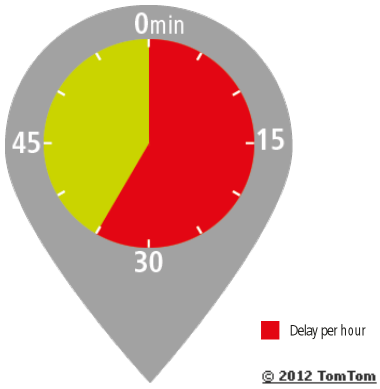
The weekly congestion pattern:

Best and worst peak periods of the week

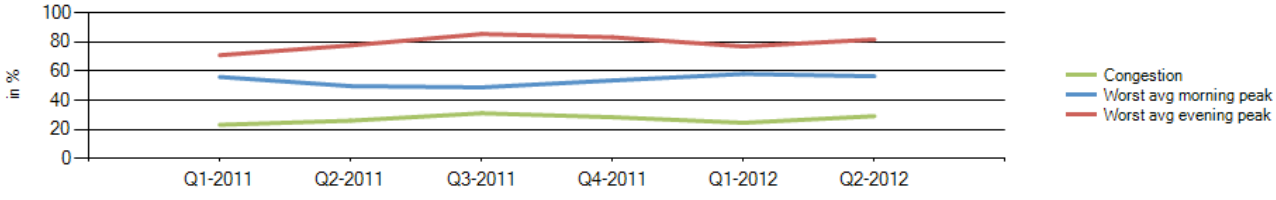


Most congested specific day	Thu 14 Jun 2012
Total network length	1 135 mi
Total network length highways	255 mi
Total network length non-highways	880 mi
Total vehicle miles	982 643 mi

Delay per hour driven in peak period



Comparison per quarter



Seattle

Congestion level

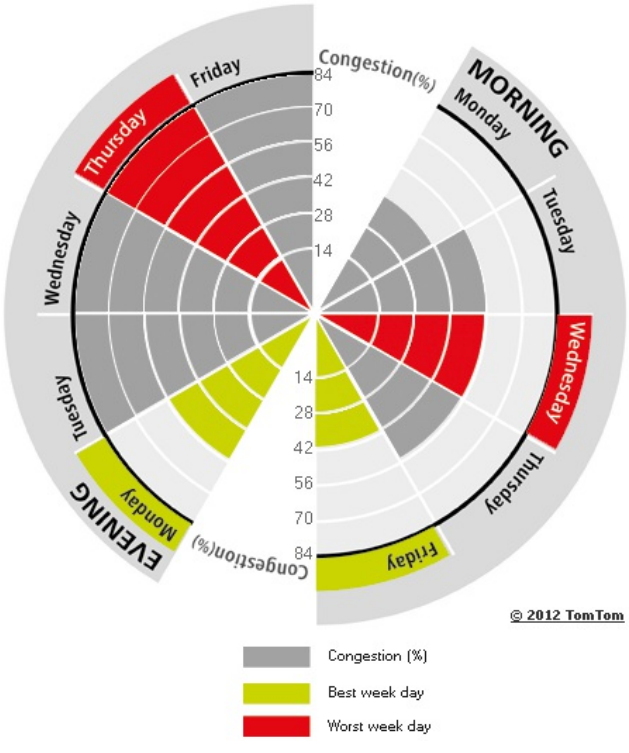
26%

Ranking

Ranking of city compared to continent	7/26
Congestion level on highways	19%
Congestion level on non-highways	35%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h

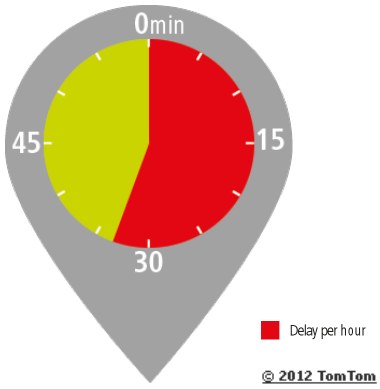
The weekly congestion pattern:

Best and worst peak periods of the week

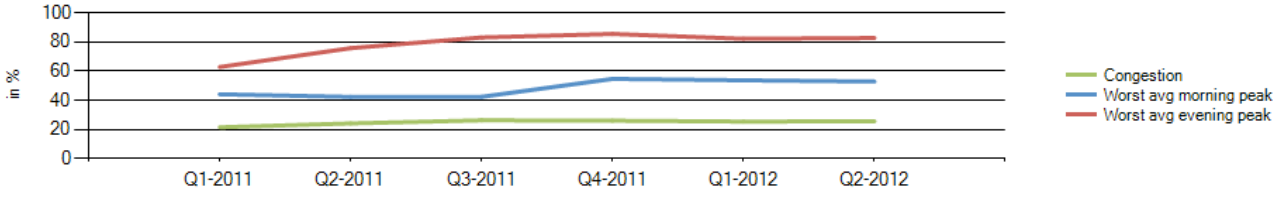


Most congested specific day	Thu 3 May 2012
Total network length	1 589 mi
Total network length highways	306 mi
Total network length non-highways	1 284 mi
Total vehicle miles	1 013 226 mi

Delay per hour driven in peak period



Comparison per quarter



St. Louis

Congestion level

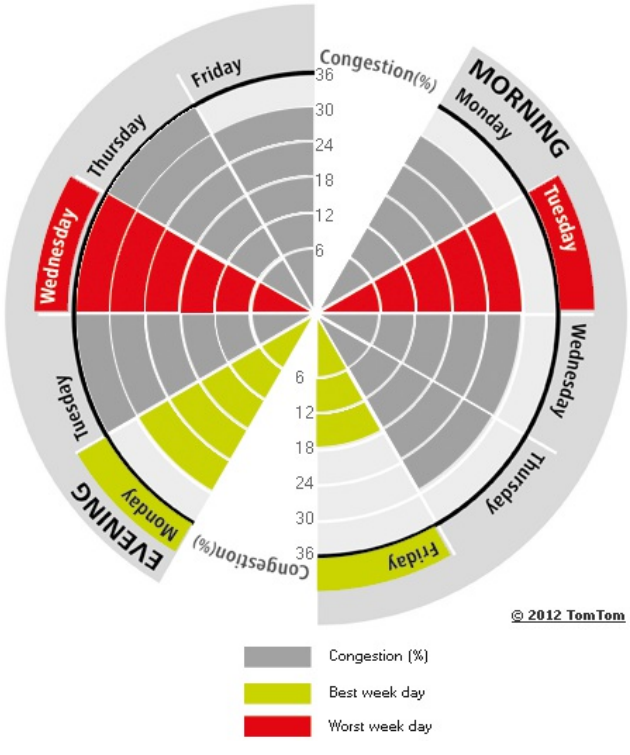
14%

Ranking

Ranking of city compared to continent	24/26
Congestion level on highways	8%
Congestion level on non-highways	25%
Delay per hour driven in peak period	17 min
Delay per year with a 30 min commute	50 h

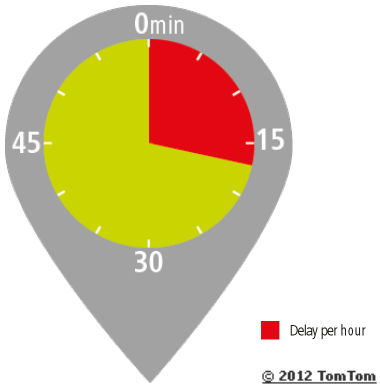
The weekly congestion pattern:

Best and worst peak periods of the week

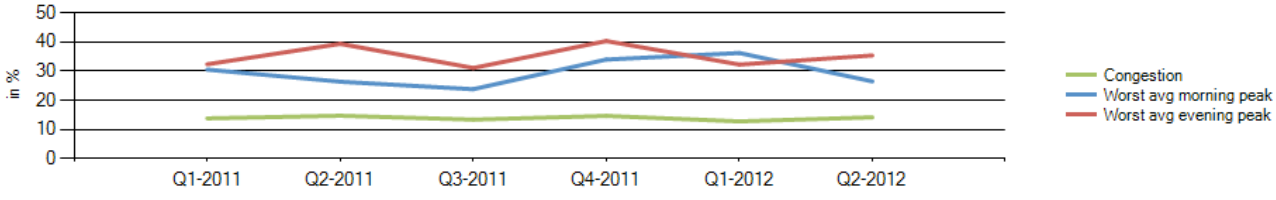


Most congested specific day	Fri 13 Apr 2012
Total network length	2 197 mi
Total network length highways	378 mi
Total network length non-highways	1 818 mi
Total vehicle miles	1 301 927 mi

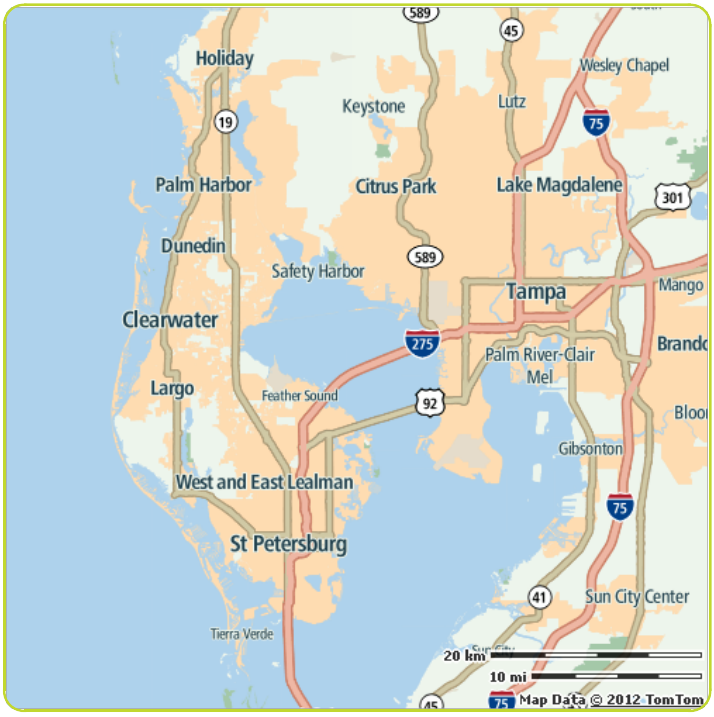
Delay per hour driven in peak period



Comparison per quarter



Tampa



Congestion level

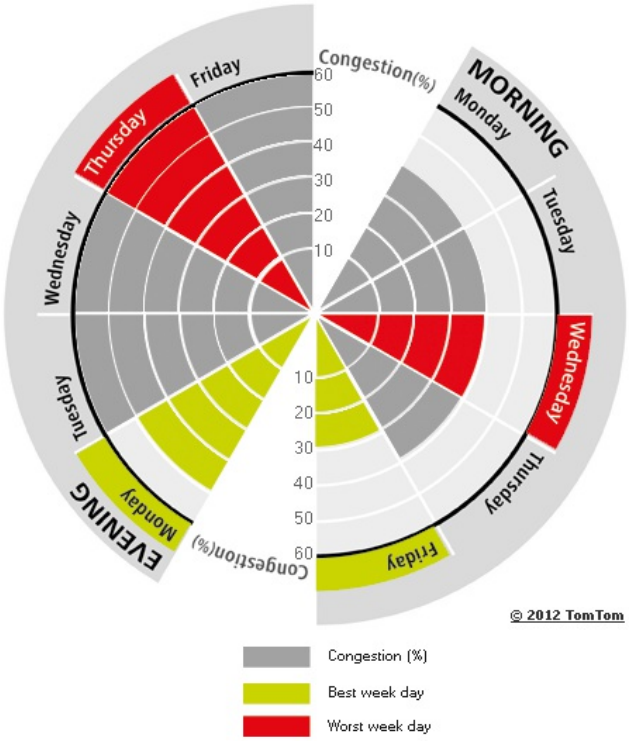
22%

Ranking

Ranking of city compared to continent	11/26
Congestion level on highways	11%
Congestion level on non-highways	27%
Delay per hour driven in peak period	26 min
Delay per year with a 30 min commute	69 h

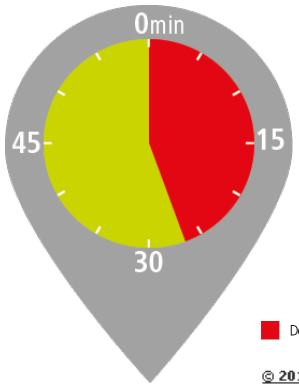
The weekly congestion pattern:

Best and worst peak periods of the week

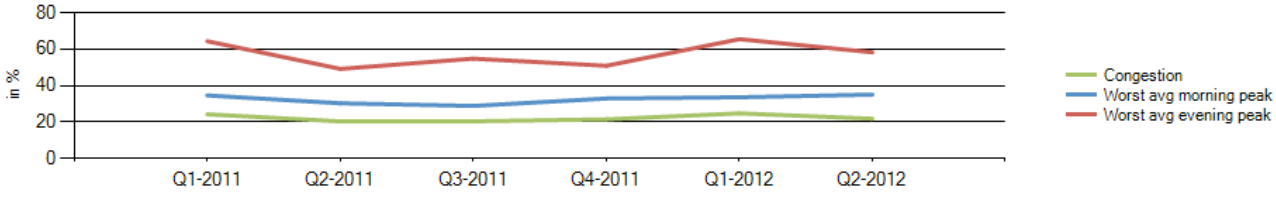


Most congested specific day	Fri 8 Jun 2012
Total network length	1 942 mi
Total network length highways	203 mi
Total network length non-highways	1 739 mi
Total vehicle miles	1 834 731 mi

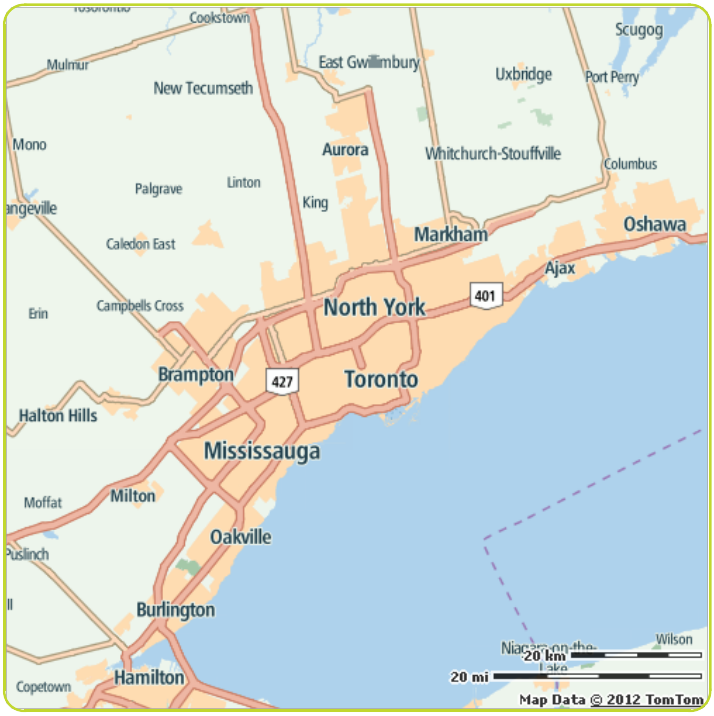
Delay per hour driven in peak period



Comparison per quarter



Toronto



Congestion level

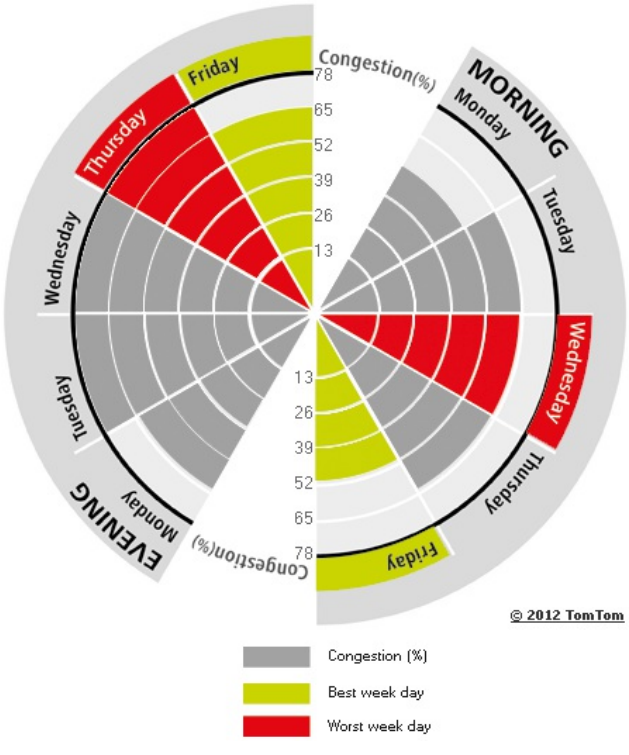
27%

Ranking

Ranking of city compared to continent	5/26
Congestion level on highways	22%
Congestion level on non-highways	33%
Delay per hour driven in peak period	37 min
Delay per year with a 30 min commute	87 h

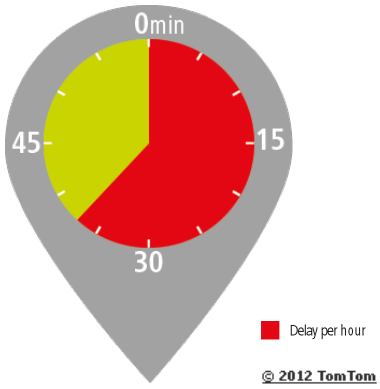
The weekly congestion pattern:

Best and worst peak periods of the week

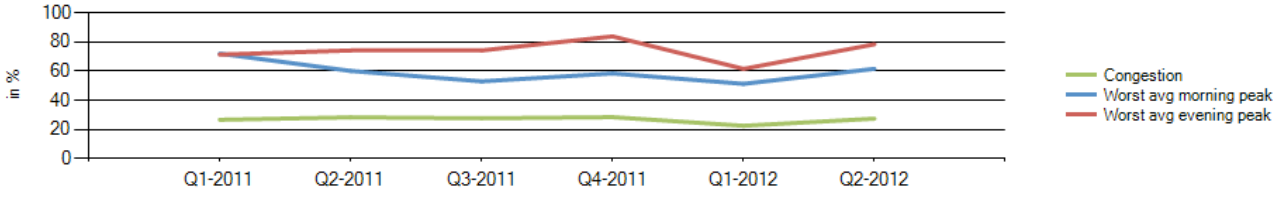


Most congested specific day	Fri 1 Jun 2012
Total network length	3 194 mi
Total network length highways	581 mi
Total network length non-highways	2 613 mi
Total vehicle miles	5 484 161 mi

Delay per hour driven in peak period



Comparison per quarter



Vancouver

Congestion level

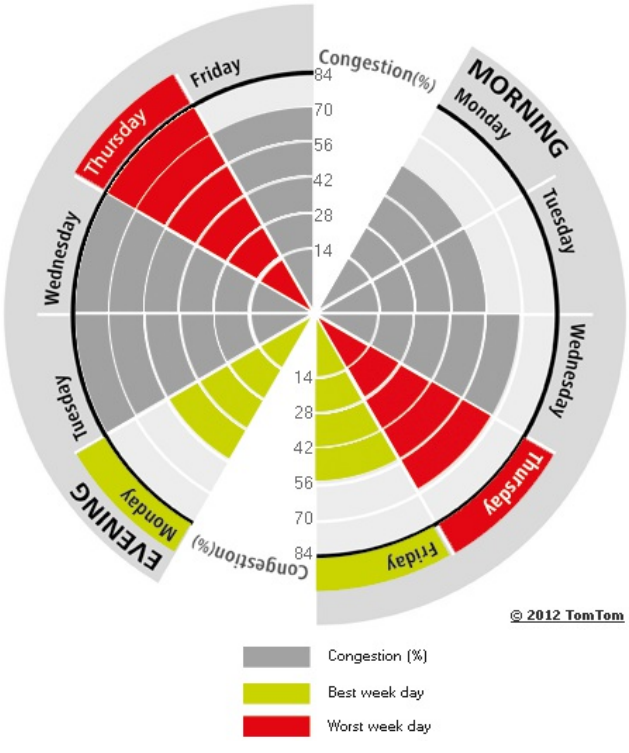
33%

Ranking

Ranking of city compared to continent	2/26
Congestion level on highways	20%
Congestion level on non-highways	37%
Delay per hour driven in peak period	37 min
Delay per year with a 30 min commute	87 h

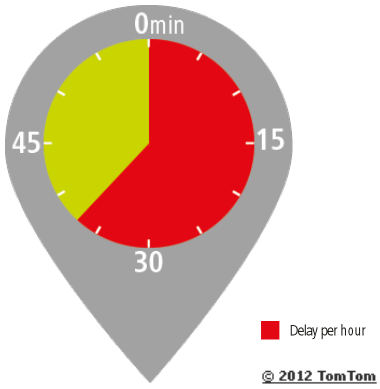
The weekly congestion pattern:

Best and worst peak periods of the week

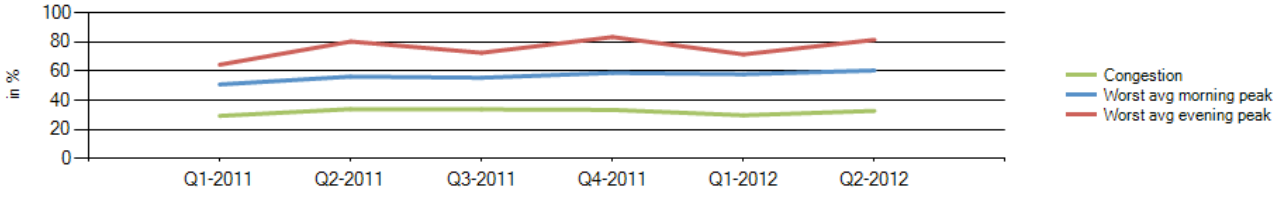


Most congested specific day	Fri 22 Jun 2012
Total network length	784 mi
Total network length highways	75 mi
Total network length non-highways	708 mi
Total vehicle miles	684 472 mi

Delay per hour driven in peak period



Comparison per quarter



Washington

Congestion level

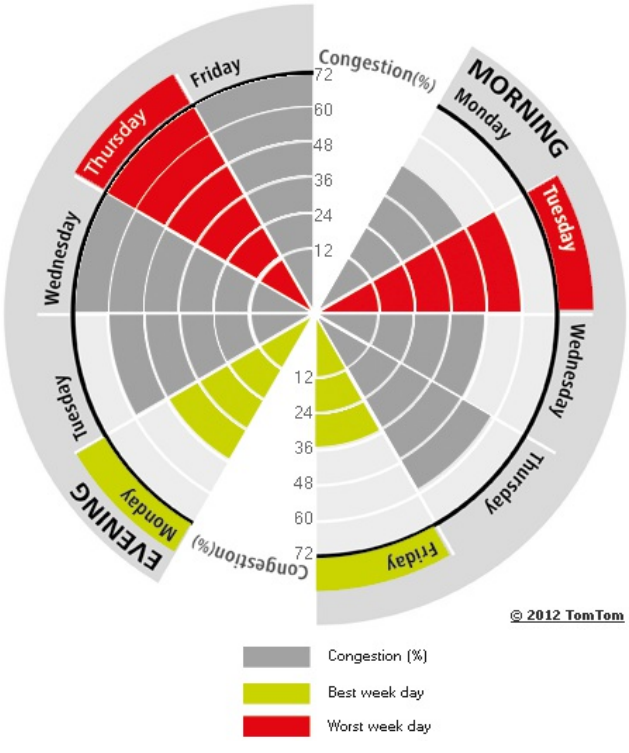
26%

Ranking

Ranking of city compared to continent	6/26
Congestion level on highways	20%
Congestion level on non-highways	33%
Delay per hour driven in peak period	32 min
Delay per year with a 30 min commute	80 h

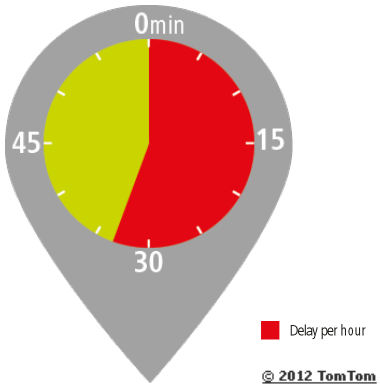
The weekly congestion pattern:

Best and worst peak periods of the week

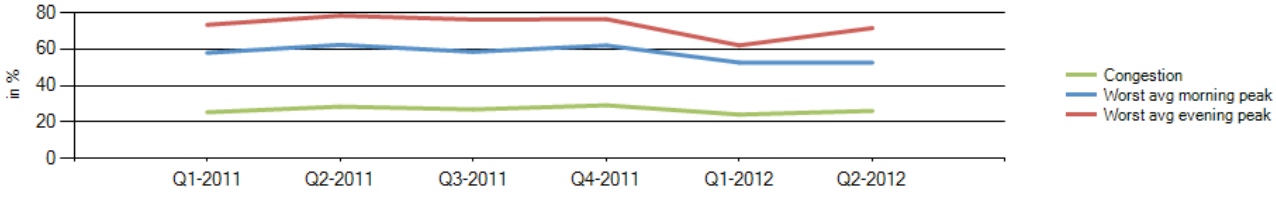


Most congested specific day	Fri 1 Jun 2012
Total network length	3 387 mi
Total network length highways	600 mi
Total network length non-highways	2 787 mi
Total vehicle miles	5 647 091 mi

Delay per hour driven in peak period



Comparison per quarter



Evaluated cities

North America

Rank	City	Country	Congestion Level (%)				
			24/7	Morning peak	Evening peak	Weekdays	Weekend
1	Los Angeles	United States	34	55	74	38	21
2	Vancouver	Canada	33	54	69	37	21
3	San Francisco	United States	29	49	68	30	26
4	Montreal	Canada	28	57	76	34	13
5	Toronto	Canada	27	53	70	33	14
6	Washington	United States	26	44	62	30	16
7	Seattle	United States	26	44	70	30	16
8	New York	United States	25	40	54	28	18
9	Chicago	United States	23	35	54	27	13
10	Miami	United States	22	39	47	25	13
11	Tampa	United States	22	33	51	24	14
12	Ottawa	Canada	22	53	93	28	7
13	Houston	United States	21	43	63	25	10
14	Boston	United States	21	41	49	25	10
15	Philadelphia	United States	20	35	44	23	12
16	Calgary	Canada	20	32	57	23	11
17	Atlanta	United States	20	38	51	23	11
18	San Diego	United States	19	30	43	21	13
19	Baltimore	United States	17	28	46	20	9
20	Dallas-Fort Worth	United States	17	29	44	19	9
21	Minneapolis	United States	16	29	47	19	8
22	Riverside	United States	15	27	36	18	9
23	Detroit	United States	15	21	38	17	9
24	St. Louis	United States	14	24	32	16	8
25	Edmonton	Canada	14	19	32	16	9
26	Phoenix	United States	12	22	28	14	6

Keywords

Keywords	Definition
Average Free Flow Speed	Measured average road speed during a free flow situation (usually at night).
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. A maximum of 20 urban areas per country is evaluated. 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 = international roads/slip roads, FRC2 = major roads, FRC3 = secondary roads, FRC4 = connecting 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.
Free Flow Speed	See Average Free Flow Speed.
Highways	See FRC.
Most congested day	See most congested specific day.
Most congested specific day	The day with the highest Congestion Level.
Non-highways	See FRC
Peak hours	See Peak period.
Peak period	Based on real traffic measurements, the busiest one-hour-long period in the morning and in the evening period were determined for every evaluated city.
Road network	In this report all speed measurements on roads classified as FRC0 through FRC4 within the urban areas contribute to the statistics.
Time delay per year for commuters	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 FRC2, FRC3 and FRC4 only.
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 six trillion anonymous speed measurements. Theses 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

Pages for continents

Section	Description
Congestion Level	Average Congestion Level across all cities evaluated on the continent.
Map of the continent	Image of the continent showing the 5 most congested cities.
Top 3/Top 5 - increasing congestion	Top 3/Top 5 cities with largest increase in the Congestion Level compared to the previous year.
Top 3/Top 5 - decreasing congestion	Top 3/Top 5 cities with largest decrease in the Congestion Level compared to the previous year.
Top 10 cities	Ranking of cities according to Congestion Levels.
• Rank	Rank according to Congestion Levels.
• 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 Levels over the last year.
• Congestion	Average Congestion Level for all the cities evaluated.
• Worst average morning peak	Highest Congestion Level during the 5 morning peak periods (work days) in all cities evaluated.
• Worst average evening peak	Highest Congestion Level during the 5 evening peak periods (work days) in all cities evaluated.

Pages for cities

Section	Description
Congestion Level	Average Congestion Level across all roads in the city.
Ranking of city compared to continent	Rank of the city according to Congestion Level compared to other evaluated cities on the continent.
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	Average delay in minutes for a one hour journey driven in the peak periods.
Delay per year with a 30 minute commute	The total accumulated delay over one year for a 30 minute commute driven in the peak periods on work days.
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).
Worst average evening peak	Highest Congestion Level during the 5 evening peak periods (work days).

