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 120 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.
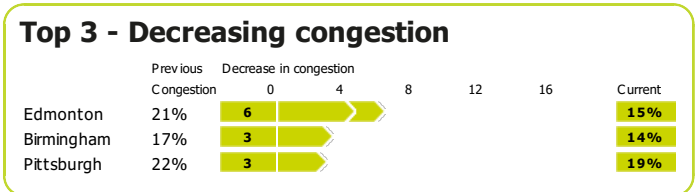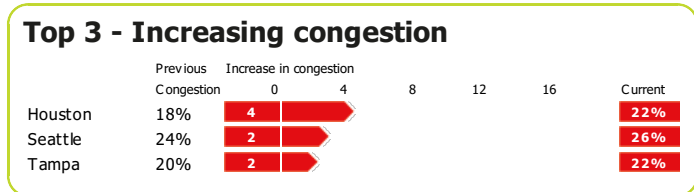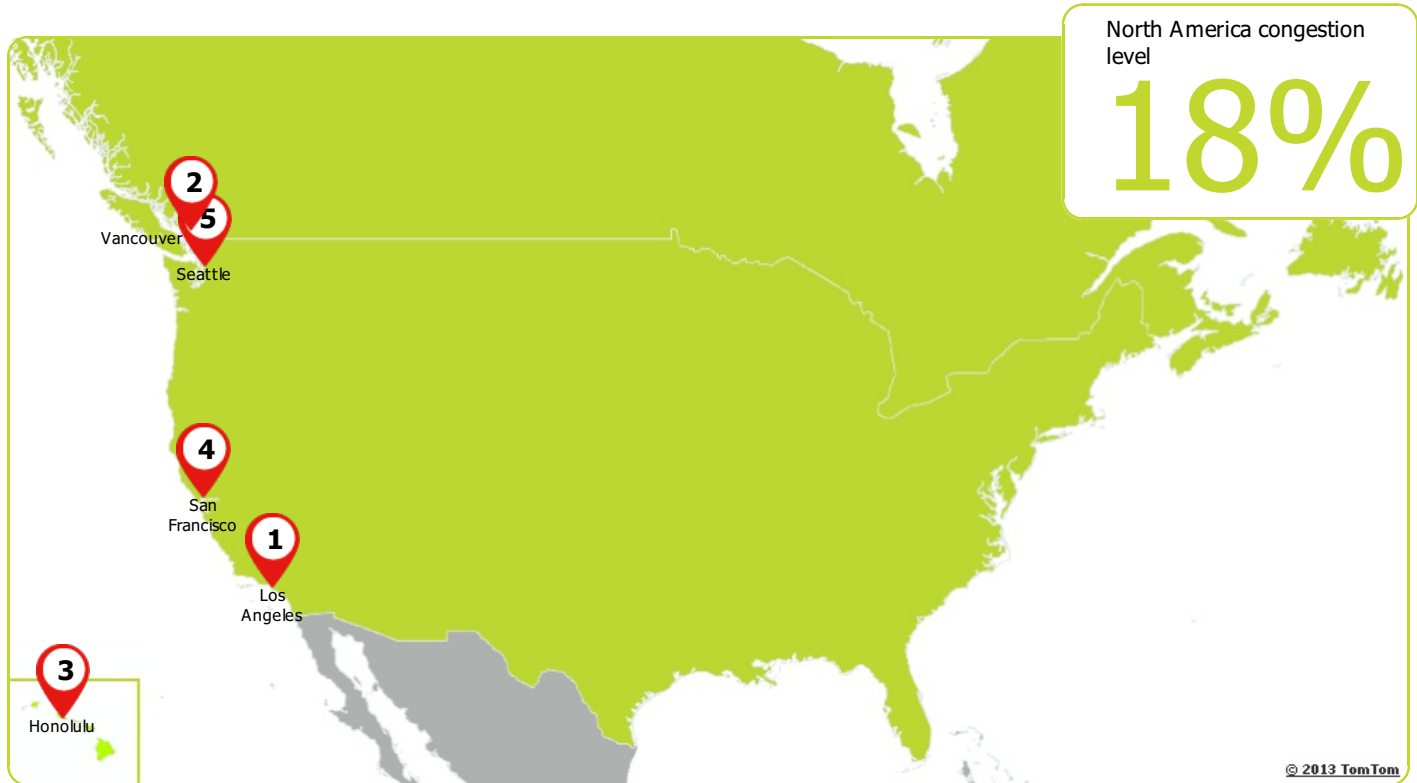
To download a copy of the report go to: www.tomtom.com/congestionindex.

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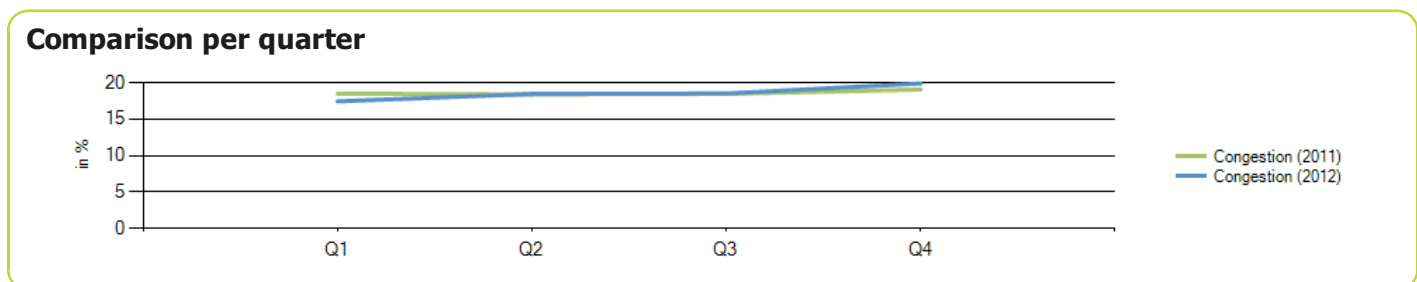
Note: words with a [*] are explained on the keywords page at the end of the report.

North America

North America congestion level

18%

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Top 3 - Increasing congestion

	Previous Congestion	Increase in congestion 0 4 8 12 16	Current
Houston	18%	4	22%
Seattle	24%	2	26%
Tampa	20%	2	22%

Top 3 - Decreasing congestion

	Previous Congestion	Decrease in congestion 0 4 8 12 16	Current
Edmonton	21%	6	15%
Birmingham	17%	3	14%
Pittsburgh	22%	3	19%

Top 10 cities

Rank	CI change	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	▲	Los Angeles	United States	33%	56%	77%	29%	39%
2	---	Vancouver	Canada	32%	52%	68%	19%	37%
3	▲	Honolulu	United States	30%	49%	68%	22%	38%
4	▲	San Francisco	United States	29%	51%	69%	24%	36%
5	▲	Seattle	United States	26%	45%	73%	21%	34%
6	▼	Toronto	Canada	25%	49%	62%	19%	31%
7	▲	San Jose	United States	25%	50%	69%	17%	38%
8	▼	Washington	United States	25%	44%	59%	18%	32%
9	▲	New Orleans	United States	25%	35%	57%	18%	28%
10	▼	Montreal	Canada	25%	48%	71%	22%	29%

Comparison per quarter

— Congestion (2011)
— Congestion (2012)

TomTom Congestion Index

North America

Rank	CI change	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	▲	Los Angeles	United States	33%	56%	77%	29%	39%
2	---	Vancouver	Canada	32%	52%	68%	19%	37%
3	▲	Honolulu	United States	30%	49%	68%	22%	38%
4	▲	San Francisco	United States	29%	51%	69%	24%	36%
5	▲	Seattle	United States	26%	45%	73%	21%	34%
6	▼	Toronto	Canada	25%	49%	62%	19%	31%
7	▲	San Jose	United States	25%	50%	69%	17%	38%
8	▼	Washington	United States	25%	44%	59%	18%	32%
9	▲	New Orleans	United States	25%	35%	57%	18%	28%
10	▼	Montreal	Canada	25%	48%	71%	22%	29%
11	▲	Miami	United States	23%	39%	49%	11%	33%
12	▲	Tampa	United States	22%	31%	54%	11%	28%
13	▼	Chicago	United States	22%	33%	52%	17%	28%
14	▼	New York	United States	22%	36%	50%	18%	29%
15	---	Portland	United States	22%	31%	60%	16%	27%
16	▲	Austin	United States	22%	39%	63%	17%	23%
17	▲	Houston	United States	22%	41%	64%	18%	28%
18	---	Ottawa	Canada	21%	48%	83%	17%	29%
19	---	Atlanta	United States	20%	40%	52%	12%	28%
20	▼	Pittsburgh	United States	20%	32%	44%	12%	29%
21	▲	San Diego	United States	20%	32%	48%	10%	35%
22	▲	Orlando	United States	20%	24%	43%	8%	29%
23	▲	Tucson	United States	20%	25%	37%	4%	26%
24	---	Denver	United States	20%	32%	47%	12%	26%
25	▼	Boston	United States	20%	37%	47%	14%	29%
26	▼	Calgary	Canada	19%	36%	52%	15%	22%
27	---	Las Vegas	United States	19%	18%	35%	7%	24%
28	▼	Philadelphia	United States	19%	32%	42%	12%	27%
29	---	Virginia Beach	United States	18%	22%	43%	12%	24%
30	▲	Nashville	United States	18%	37%	47%	12%	36%
31	▼	Sacramento	United States	17%	27%	44%	8%	25%
32	---	Dallas-Fort Worth	United States	16%	29%	43%	12%	23%
33	▲	Baltimore	United States	16%	28%	42%	10%	27%
34	▼	Edmonton	Canada	16%	22%	34%	5%	20%
35	▼	Minneapolis	United States	15%	29%	41%	11%	22%
36	---	San Antonio	United States	15%	28%	43%	9%	23%
37	▼	Providence	United States	15%	22%	35%	8%	25%
38	▲	Charlotte	United States	15%	22%	44%	7%	25%
39	▲	Riverside	United States	15%	27%	36%	10%	26%
40	---	Memphis	United States	15%	21%	29%	7%	21%
41	---	Salt Lake City	United States	15%	18%	37%	5%	25%
42	▲	Columbus	United States	14%	21%	39%	8%	25%
43	▼	Detroit	United States	14%	21%	35%	8%	20%
44	▲	Jacksonville	United States	14%	25%	34%	5%	26%
45	▼	Louisville	United States	14%	21%	35%	7%	26%
46	---	Cincinnati	United States	14%	24%	39%	8%	23%
47	▼	Birmingham	United States	14%	24%	33%	5%	32%
48	---	St. Louis	United States	14%	24%	30%	7%	24%
49	▼	Phoenix	United States	13%	26%	31%	7%	19%
50	▼	Buffalo	United States	13%	15%	29%	6%	26%
51	▼	Hartford	United States	13%	23%	38%	9%	19%
52	▼	Milwaukee	United States	13%	23%	33%	8%	19%
53	▲	Rochester	United States	13%	18%	26%	5%	17%
54	---	Raleigh	United States	12%	18%	33%	4%	22%
55	---	Cleveland	United States	11%	17%	23%	4%	21%
56	▼	Indianapolis	United States	10%	18%	27%	3%	21%
57	---	Richmond	United States	10%	13%	20%	4%	19%
58	▲	Oklahoma City	United States	10%	17%	29%	6%	23%
59	▼	Kansas City	United States	10%	17%	24%	5%	20%

Atlanta

Congestion level
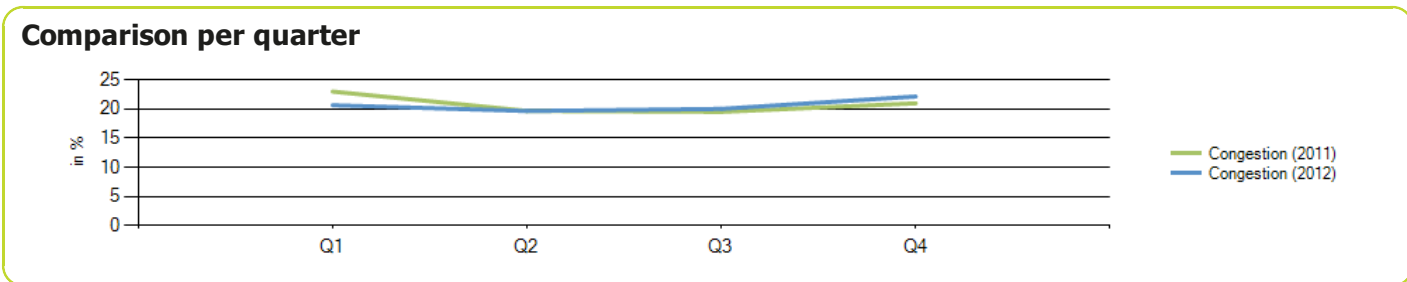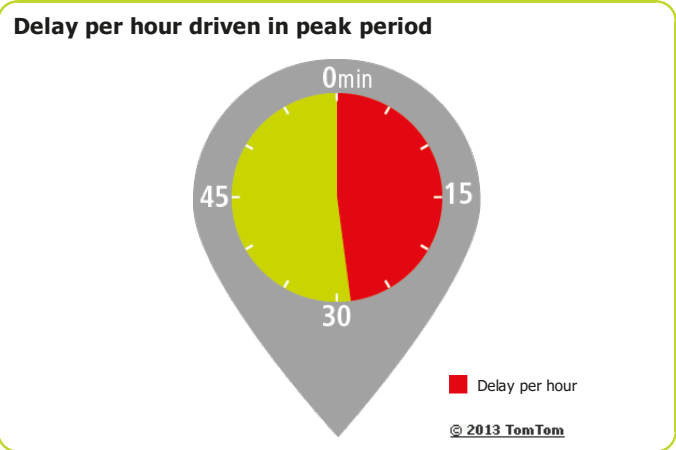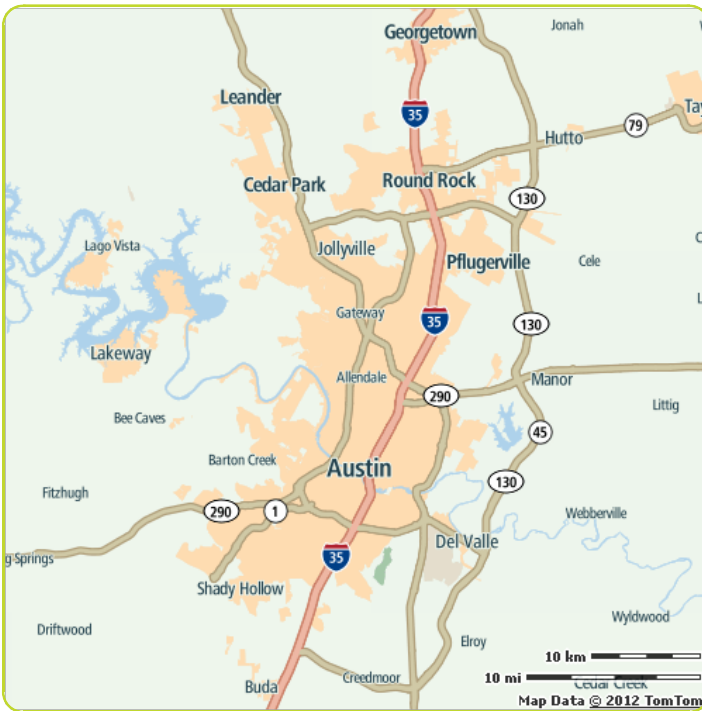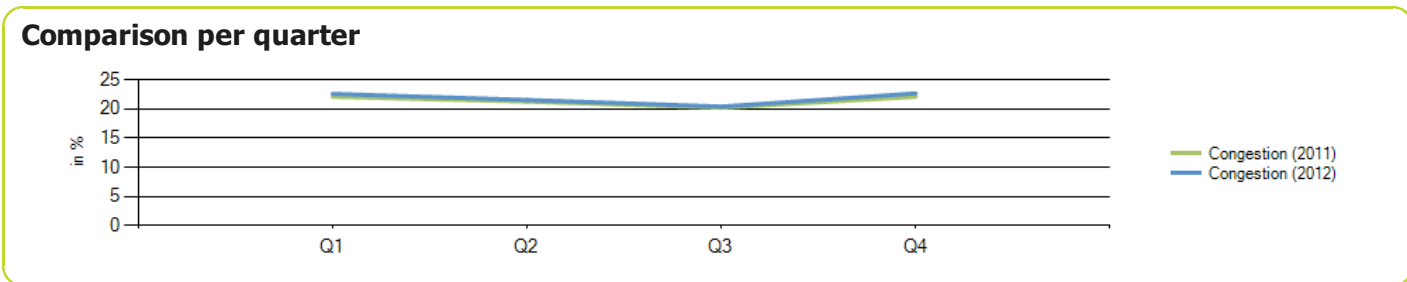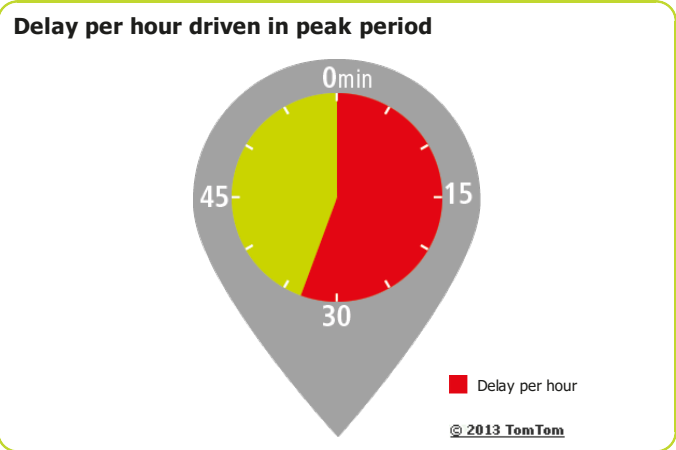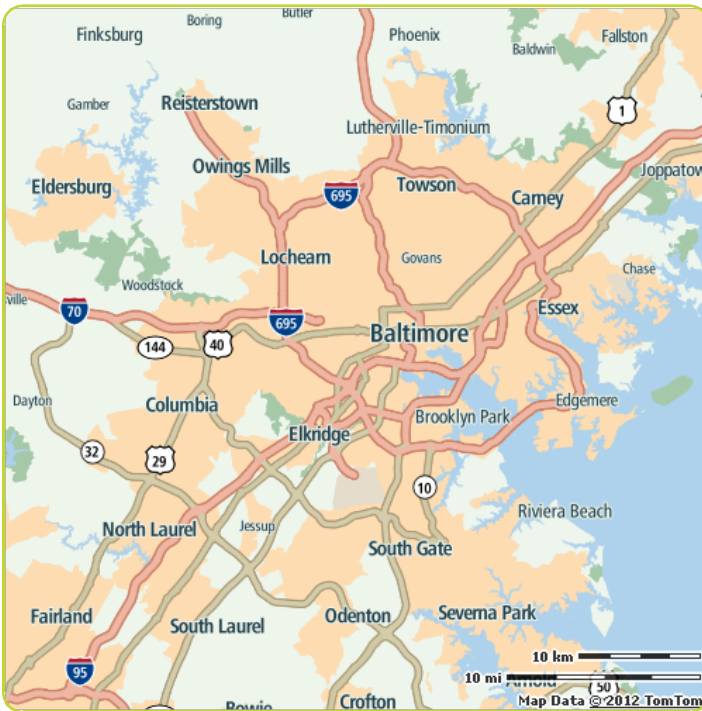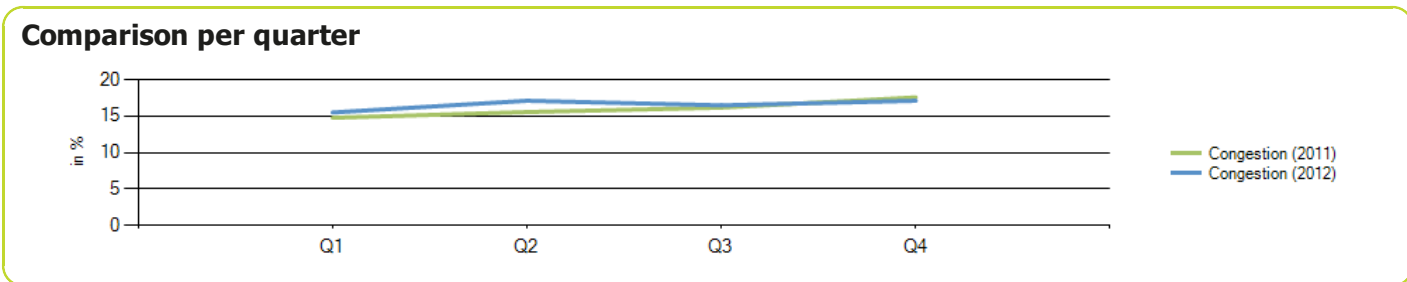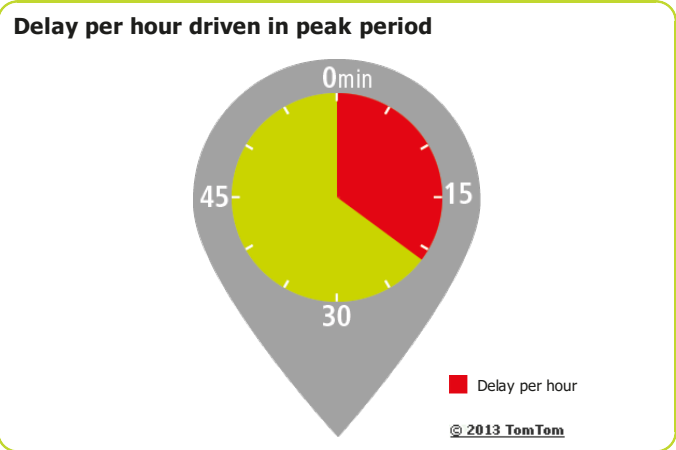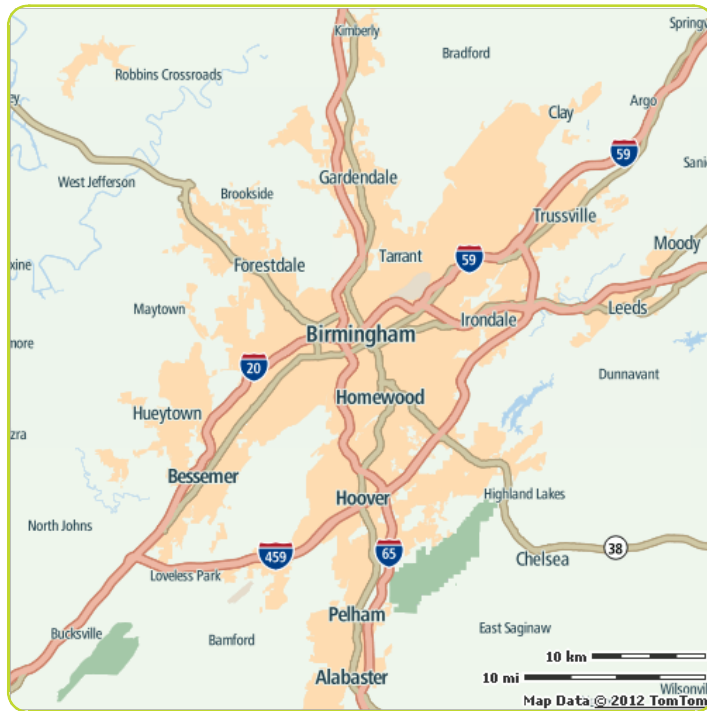
20%
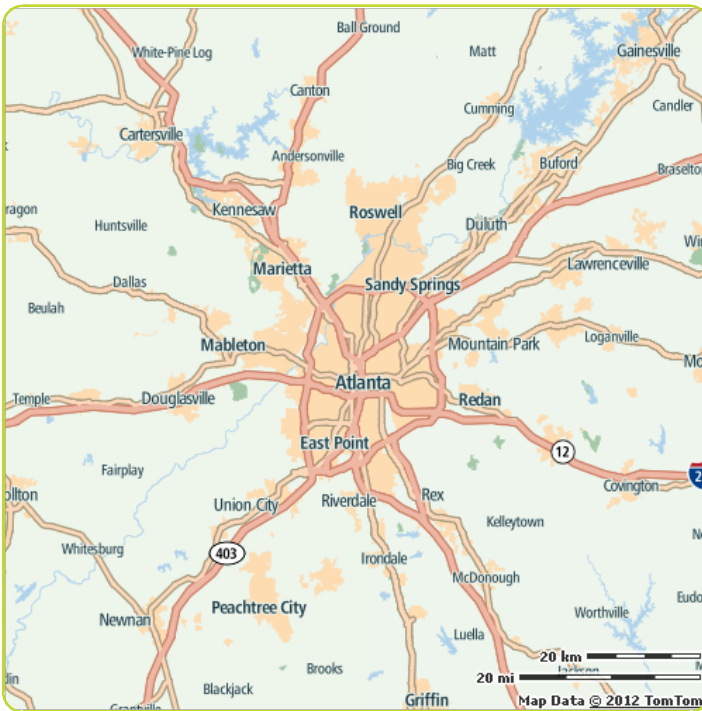
Ranking

Ranking of city compared to continent	19/59
Congestion level on highways	12%
Congestion level on non-highways	28%
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

Congestion (%)

Congestion (%)
Best week day
Worst week day

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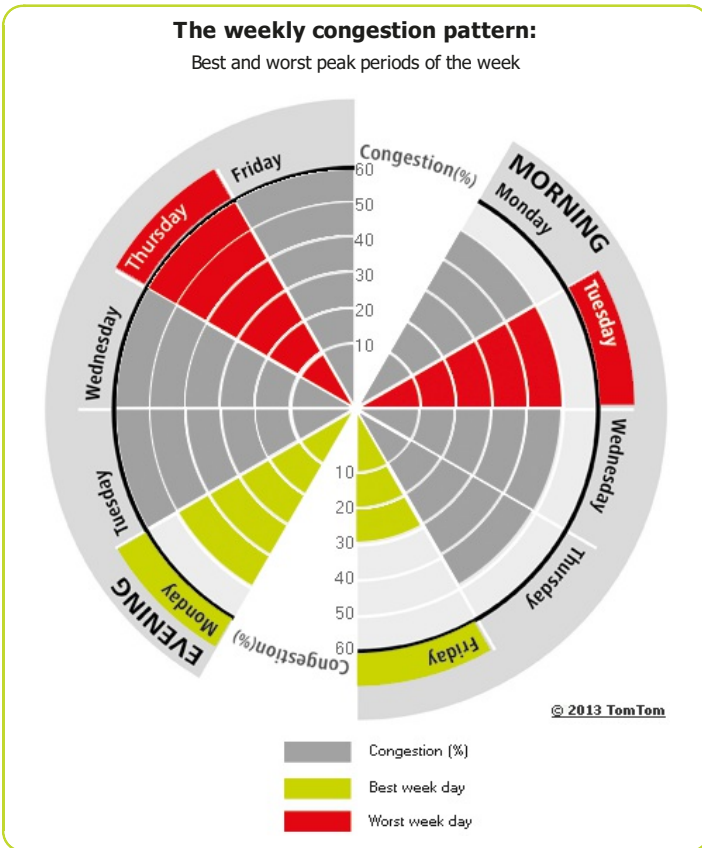
Most congested specific day	Mon 1 Oct 2012
Total network length	4 453 mi
Total network length highways	543 mi
Total network length non-highways	3 910 mi
Total vehicle miles	25 709 919 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Austin

Congestion level

22%

Ranking

Ranking	
Ranking of city compared to continent	16/59
Congestion level on highways	17%
Congestion level on non-highways	23%
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

Congestion (%)

Best week day

Worst week day

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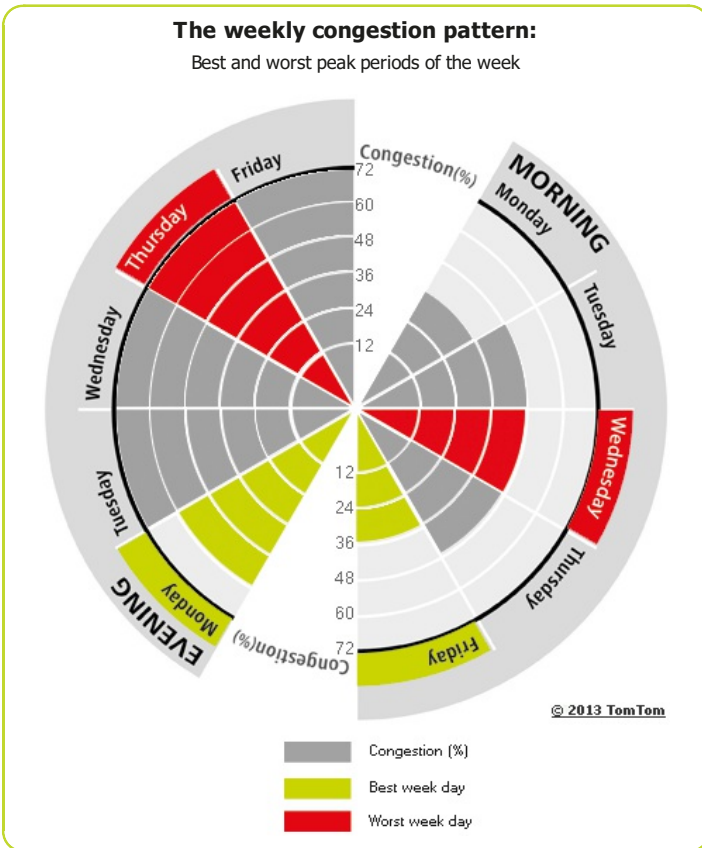
Most congested specific day	Fri 9 Mar 2012
Total network length	1 284 mi
Total network length highways	107 mi
Total network length non-highways	1 176 mi
Total vehicle miles	5 036 068 mi

Delay per hour driven in peak period

■ Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Baltimore

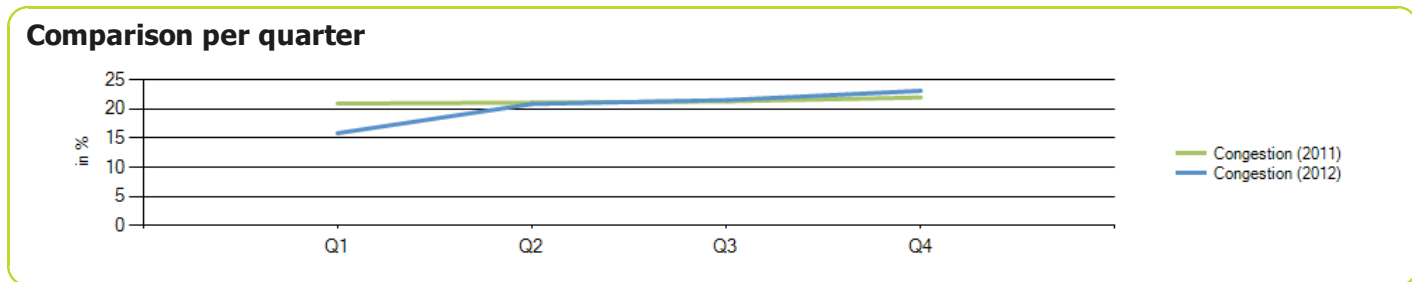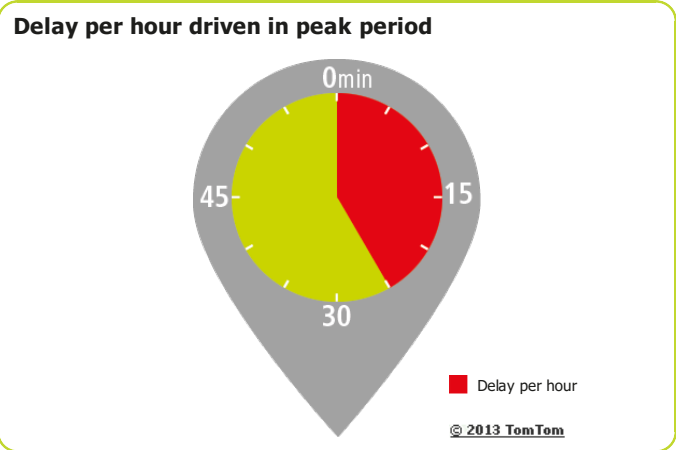### Congestion level

16%

Ranking

Ranking of city compared to continent	33/59
Congestion level on highways	10%
Congestion level on non-highways	27%
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

Congestion (%)

Best week day

Worst week day

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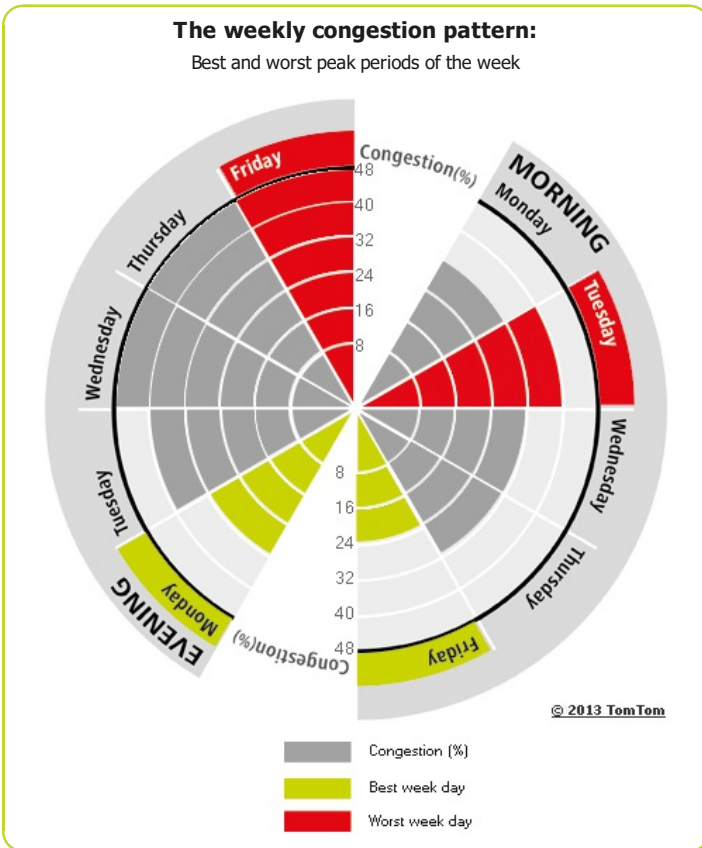
Most congested specific day	Tue 12 Jun 2012
Total network length	1 965 mi
Total network length highways	438 mi
Total network length non-highways	1 527 mi
Total vehicle miles	14 944 885 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Birmingham

Congestion level

14%
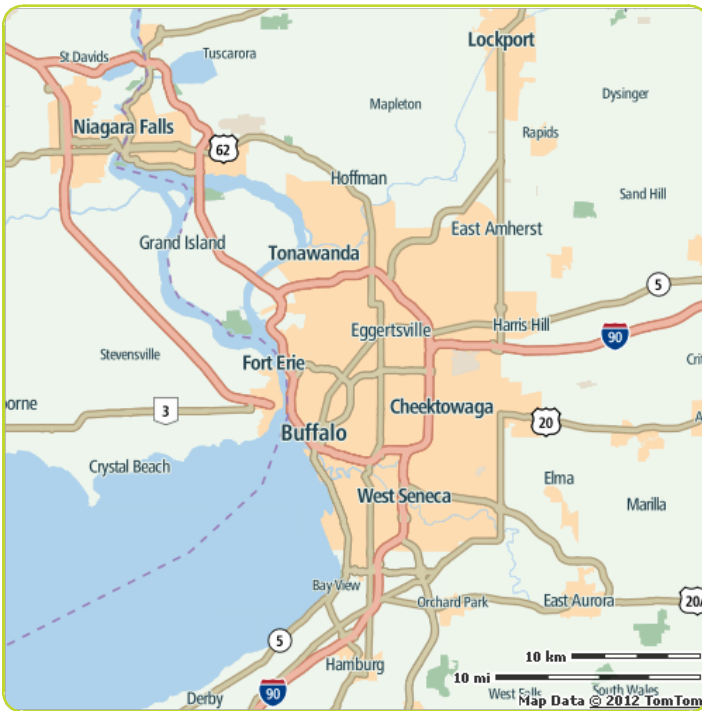
Ranking

Ranking of city compared to continent	47/59
Congestion level on highways	5%
Congestion level on non-highways	32%
Delay per hour driven in peak period	17 min
Delay per year with a 30 min commute	50 h
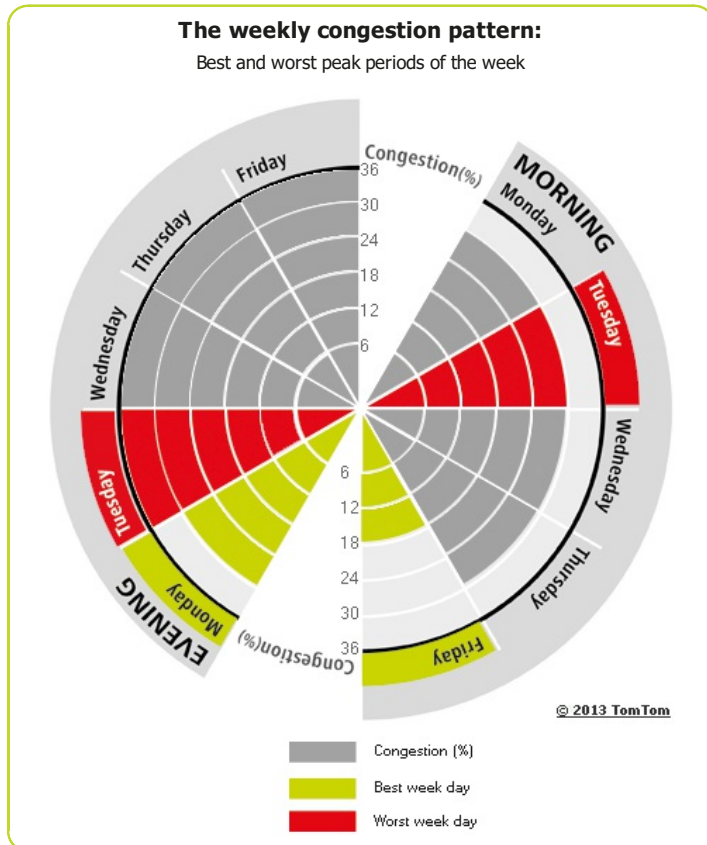
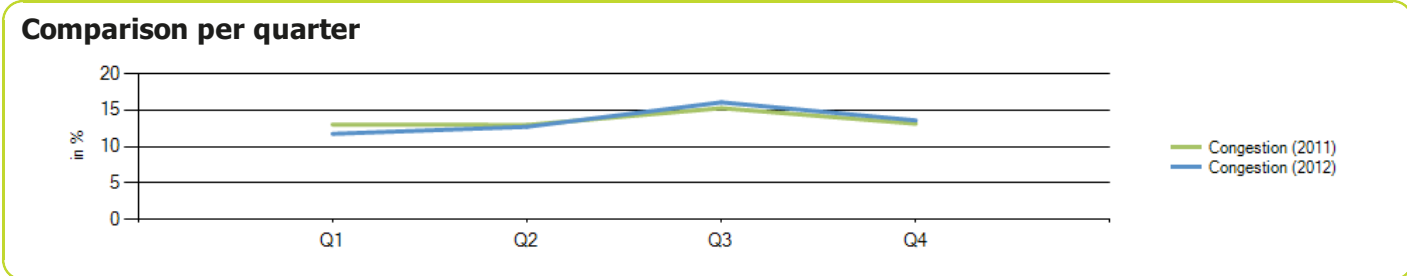|	
Most congested specific day	Fri 30 Mar 2012
Total network length	883 mi
Total network length highways	200 mi
Total network length non-highways	682 mi
Total vehicle miles	2 697 019 mi

The weekly congestion pattern:

Best and worst peak periods of the week

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Congestion (%)

Best week day

Worst week day

Delay per hour driven in peak period

Delay per hour

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Comparison per quarter

Congestion (2011)
Congestion (2012)
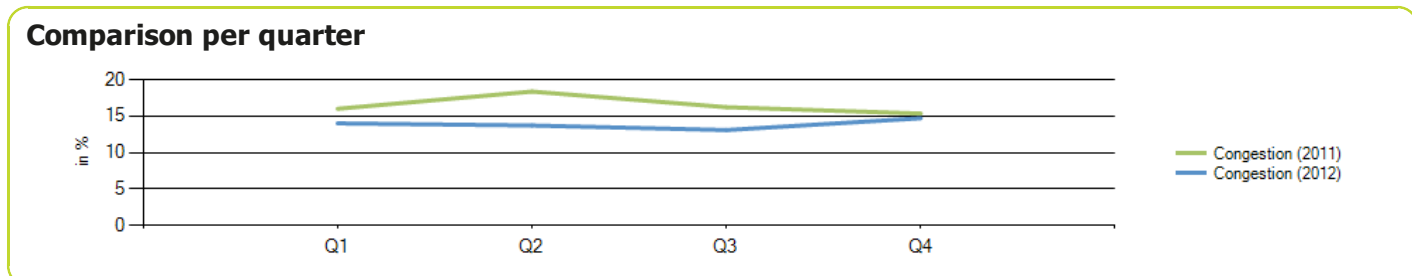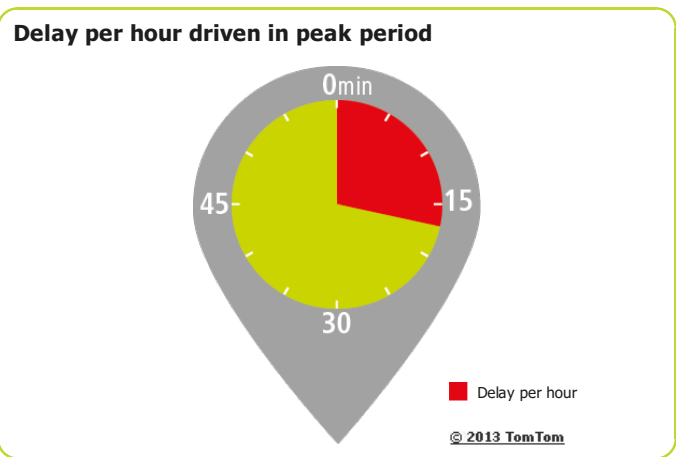
Boston

Congestion level
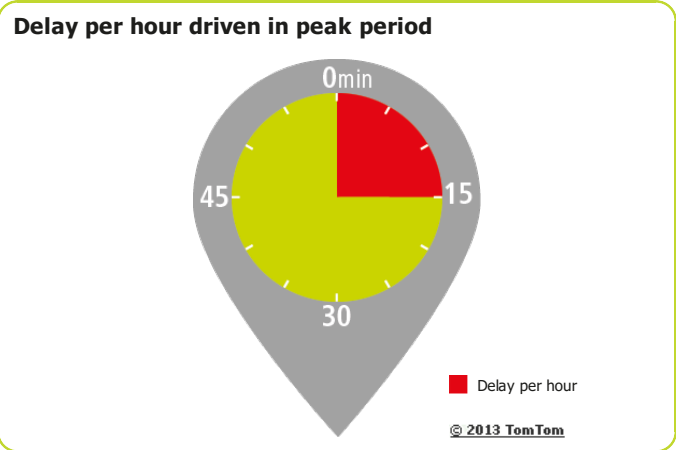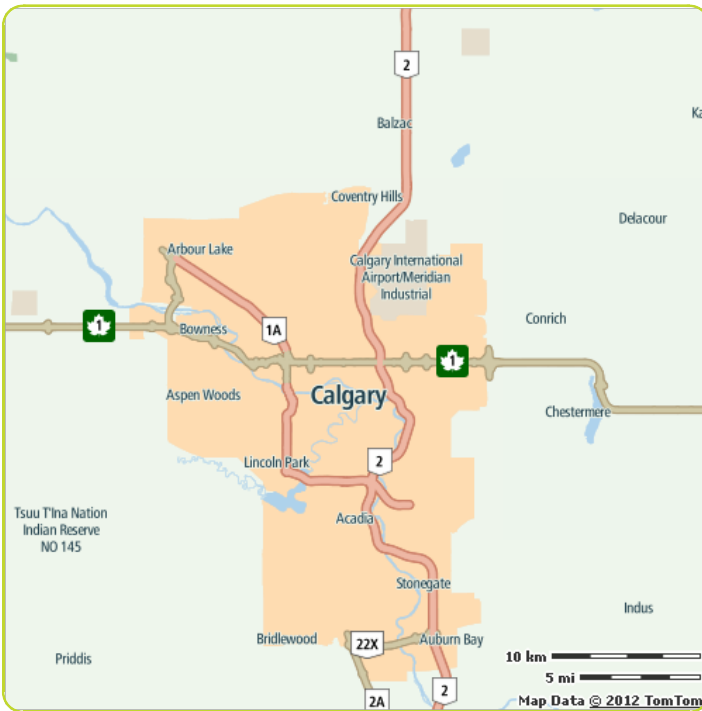
20%
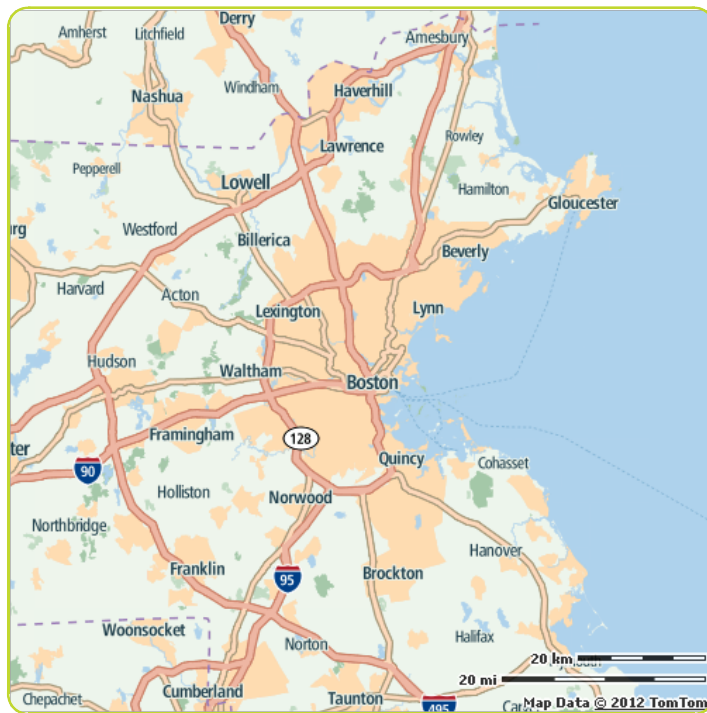
Ranking

Ranking of city compared to continent	25/59
Congestion level on highways	14%
Congestion level on non-highways	29%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
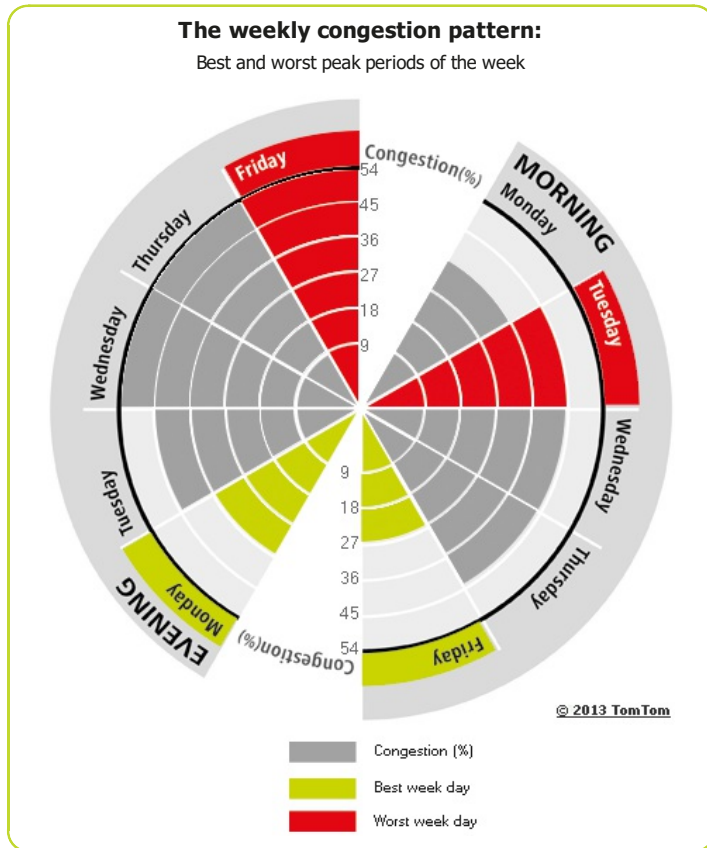
Most congested specific day	Fri 28 Sep 2012
Total network length	5 666 mi
Total network length highways	871 mi
Total network length non-highways	4 795 mi
Total vehicle miles	31 023 297 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom Congestion Index

Buffalo

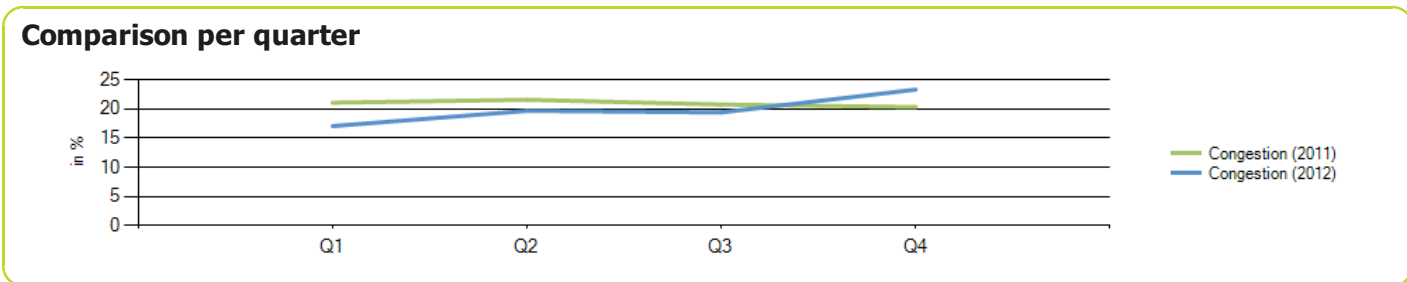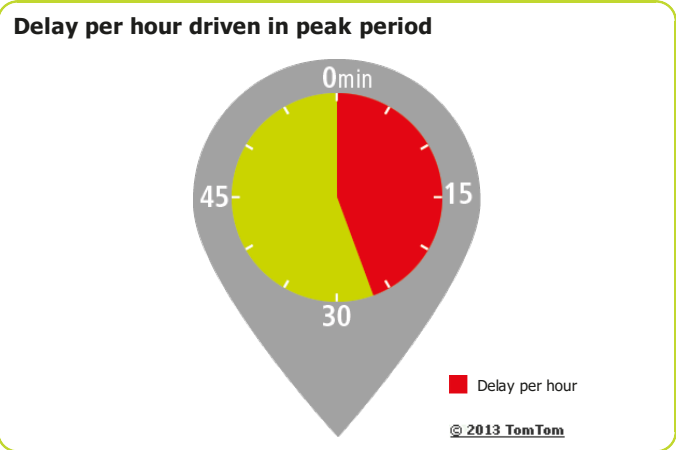**Congestion level**

13%

Ranking

Ranking of city compared to continent	50/59
Congestion level on highways	6%
Congestion level on non-highways	26%
Delay per hour driven in peak period	14 min
Delay per year with a 30 min commute	43 h
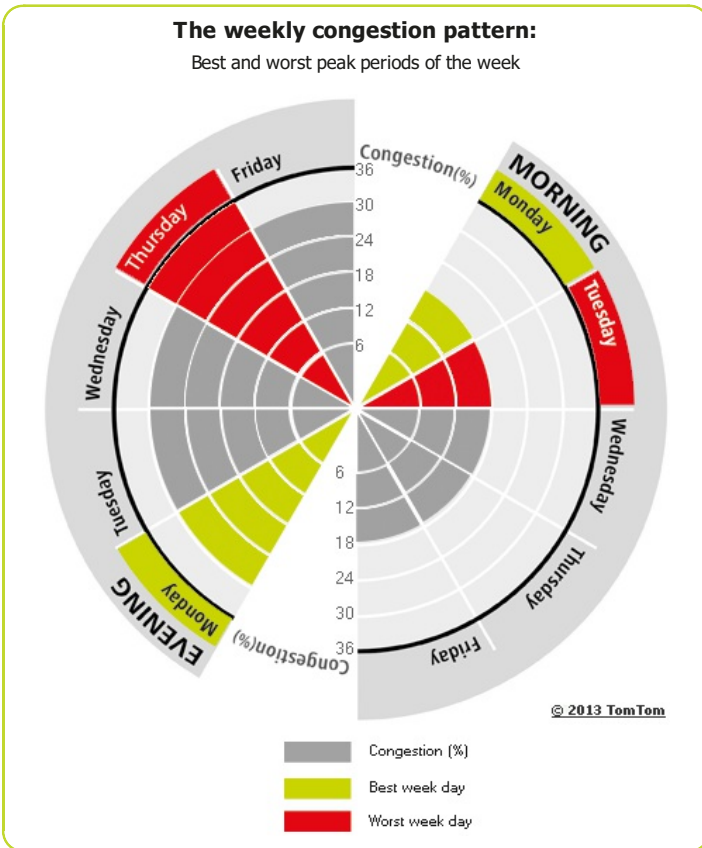
Most congested specific day	Fri 13 Jan 2012
Total network length	513 mi
Total network length highways	152 mi
Total network length non-highways	360 mi
Total vehicle miles	2 718 478 mi

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

Delay per hour driven in peak period

Delay per hour

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Comparison per quarter

Congestion (2011)
Congestion (2012)

Calgary

Congestion level

19%

Ranking

Ranking of city compared to continent	26/59
Congestion level on highways	15%
Congestion level on non-highways	22%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
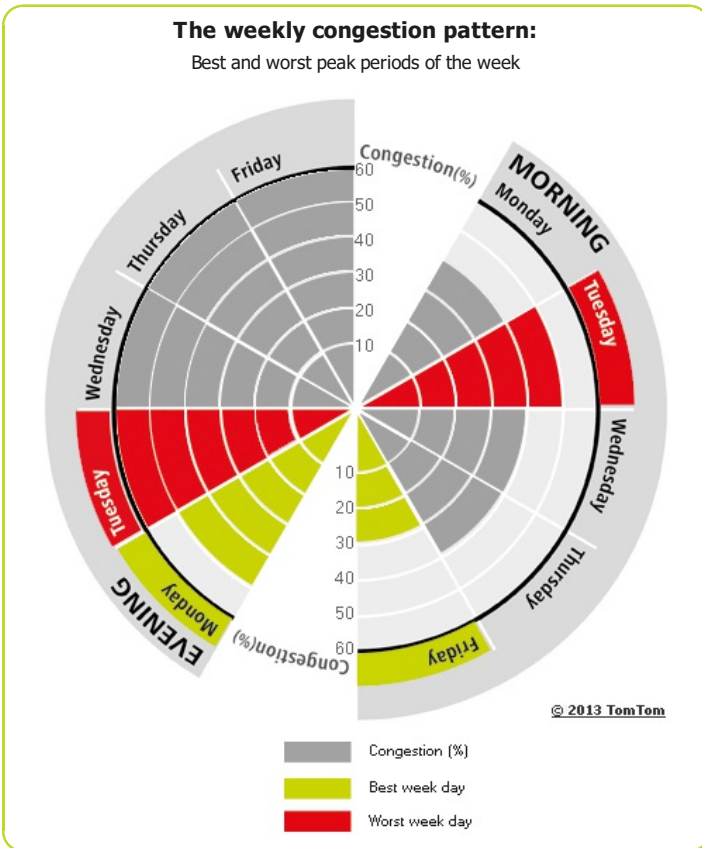
Most congested specific day	Tue 23 Oct 2012
Total network length	944 mi
Total network length highways	139 mi
Total network length non-highways	805 mi
Total vehicle miles	3 668 482 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Charlotte

Congestion level

15%

Ranking
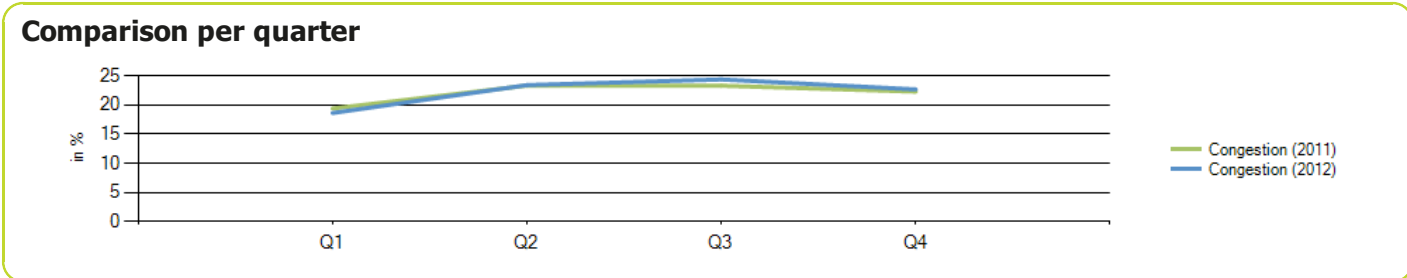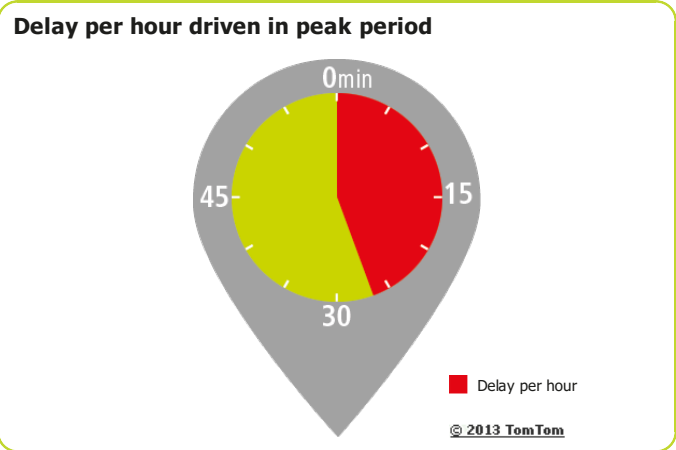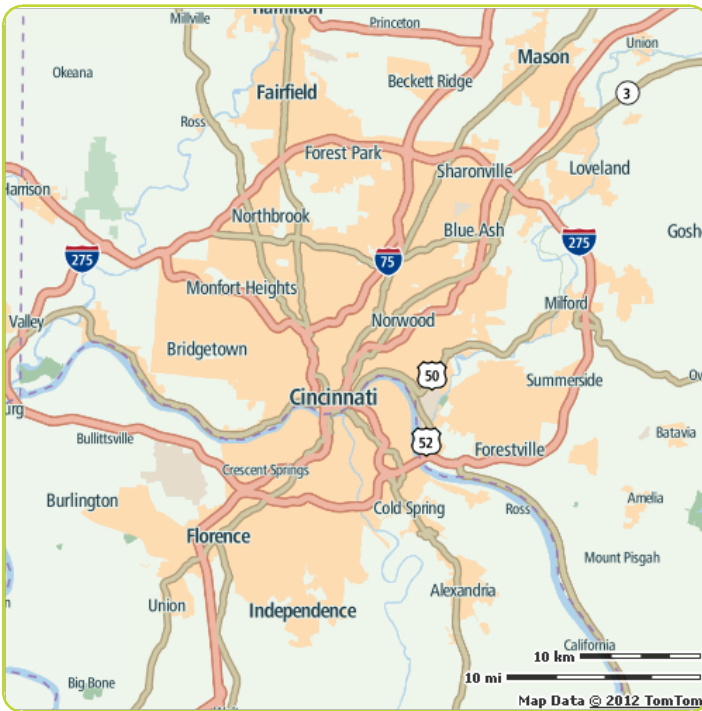
Ranking	
Ranking of city compared to continent	38/59
Congestion level on highways	7%
Congestion level on non-highways	25%
Delay per hour driven in peak period	21 min
Delay per year with a 30 min commute	59 h
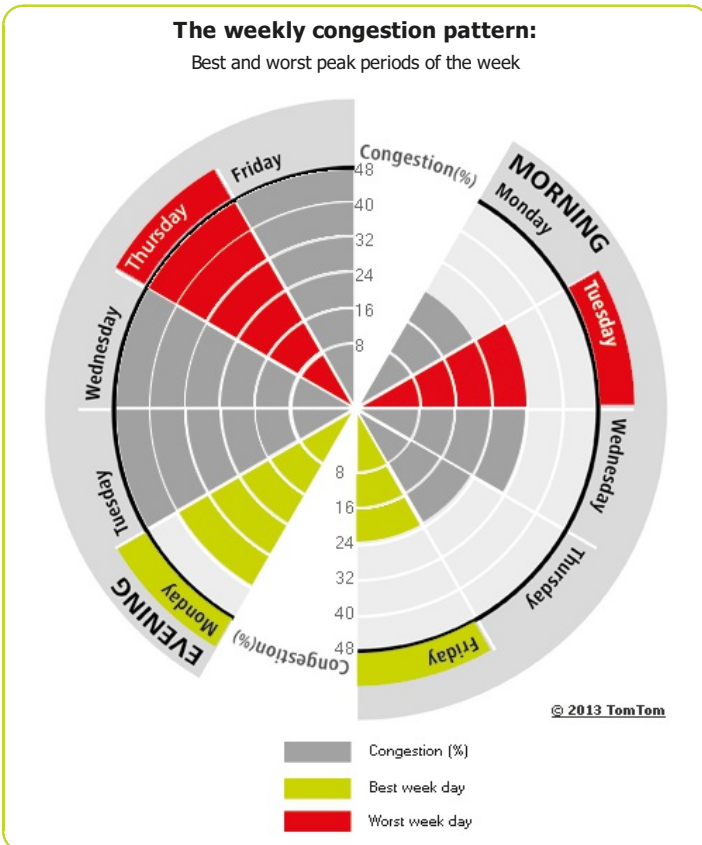
Most congested specific day	Thu 20 Dec 2012
Total network length	1 318 mi
Total network length highways	245 mi
Total network length non-highways	1 073 mi
Total vehicle miles	7 091 883 mi

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Congestion (%)

- Congestion (%)
- Best week day
- Worst week day

© 2013 TomTom

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

in %

Q1 Q2 Q3 Q4

- Congestion (2011)
- Congestion (2012)
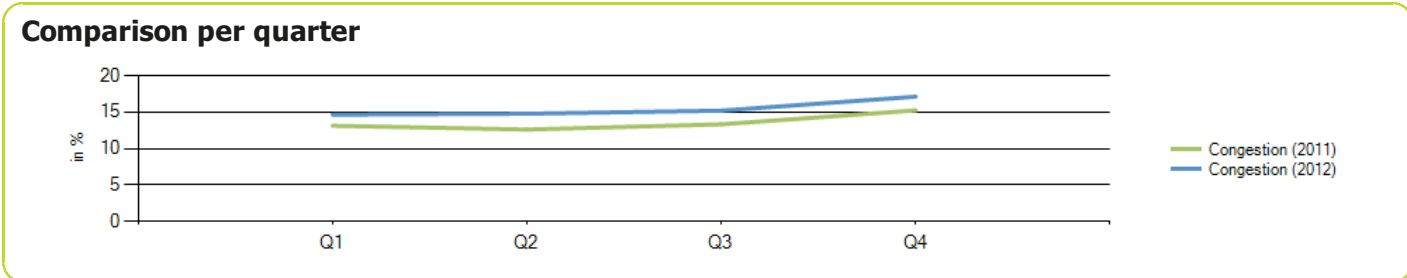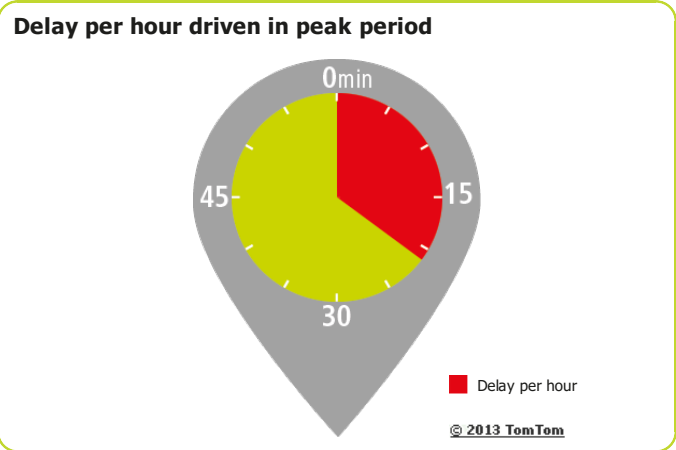
Chicago

Congestion level

22%
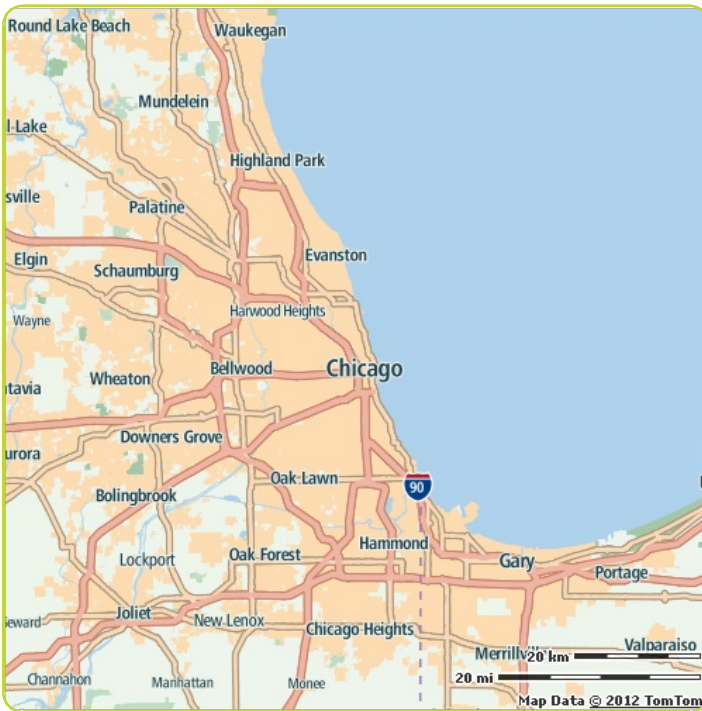
Ranking

Ranking of city compared to continent	13/59
Congestion level on highways	17%
Congestion level on non-highways	28%
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

Congestion (%)

Best week day

Worst week day

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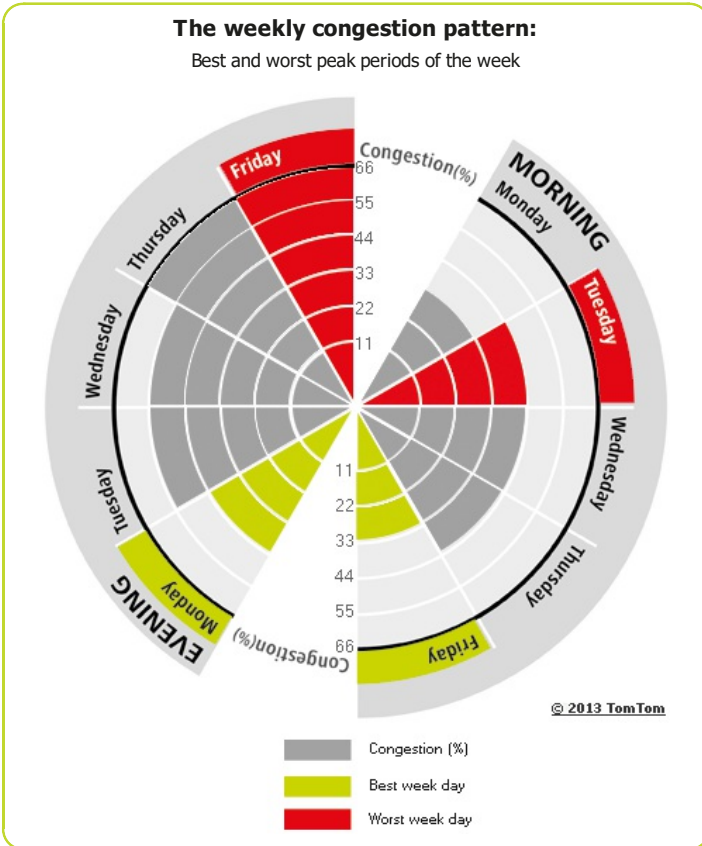
Most congested specific day	Fri 20 Jan 2012
Total network length	4 678 mi
Total network length highways	627 mi
Total network length non-highways	4 051 mi
Total vehicle miles	22 971 004 mi

Delay per hour driven in peak period

Delay per hour

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Comparison per quarter

Congestion (2011)

Congestion (2012)

TomTom

Cincinnati

Congestion level
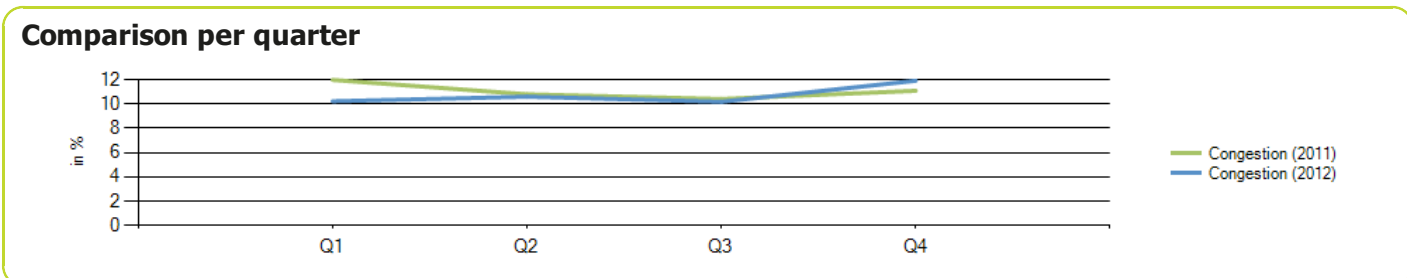
14%
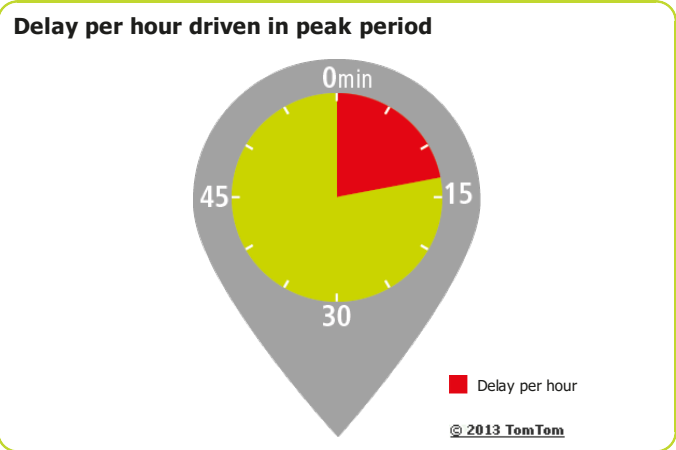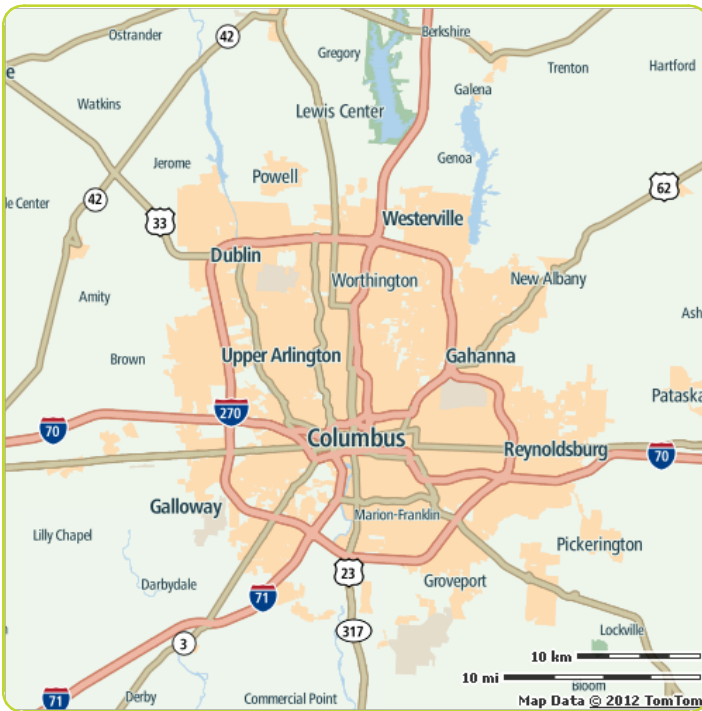
Ranking

Ranking of city compared to continent	46/59
Congestion level on highways	8%
Congestion level on non-highways	23%
Delay per hour driven in peak period	19 min
Delay per year with a 30 min commute	55 h

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day

© 2013 TomTom
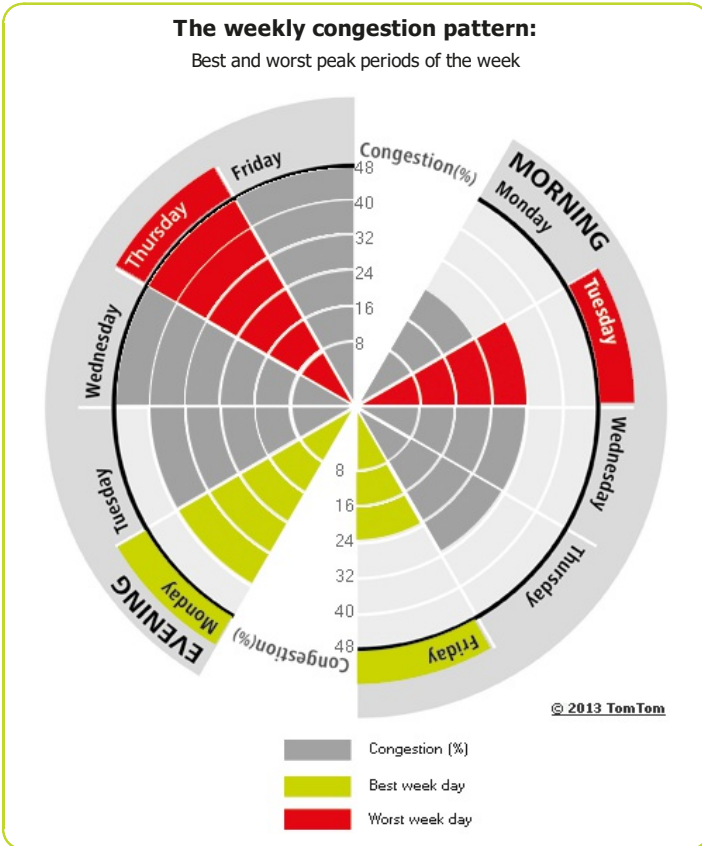
Most congested specific day	Mon 2 Jan 2012
Total network length	2 016 mi
Total network length highways	319 mi
Total network length non-highways	1 698 mi
Total vehicle miles	6 892 788 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter
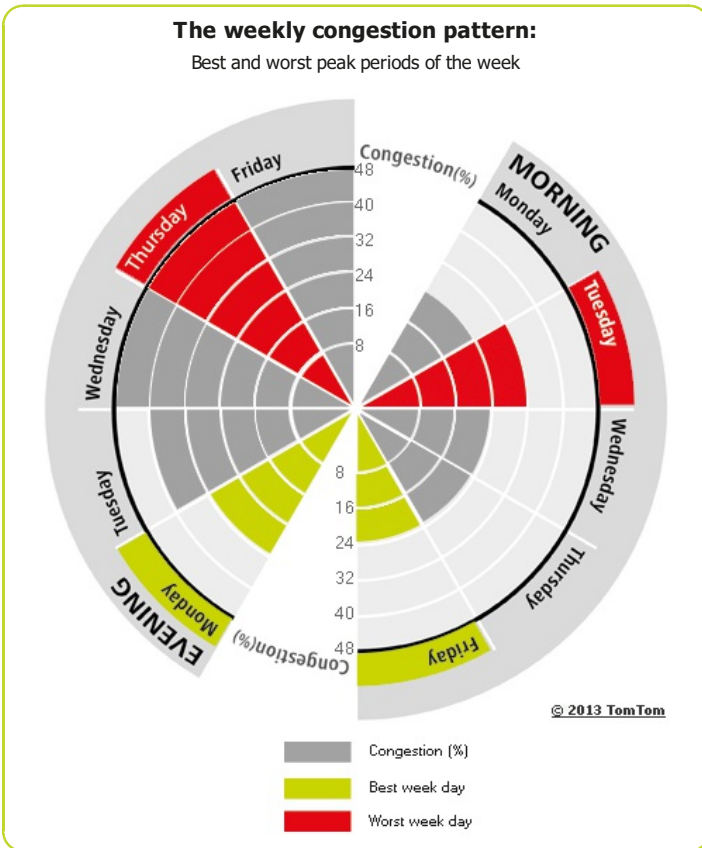

Congestion (2011)
Congestion (2012)
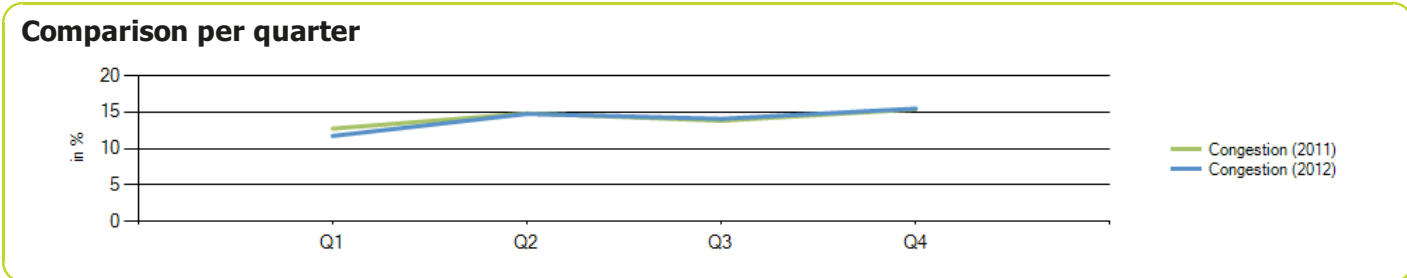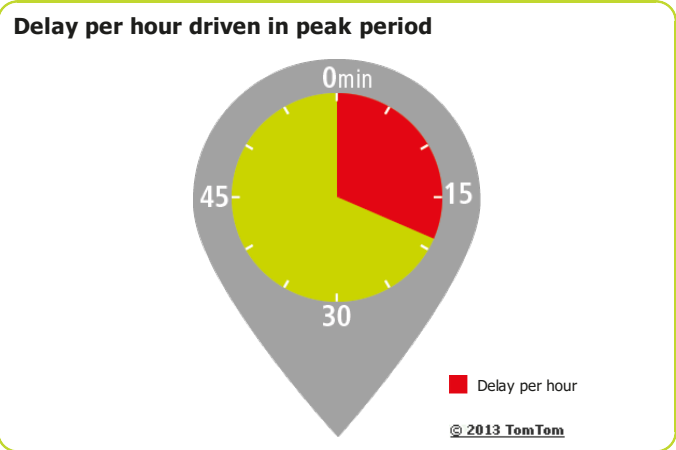
Cleveland

Congestion level

11%

Ranking

Ranking of city compared to continent	55/59
Congestion level on highways	4%
Congestion level on non-highways	21%
Delay per hour driven in peak period	12 min
Delay per year with a 30 min commute	38 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day
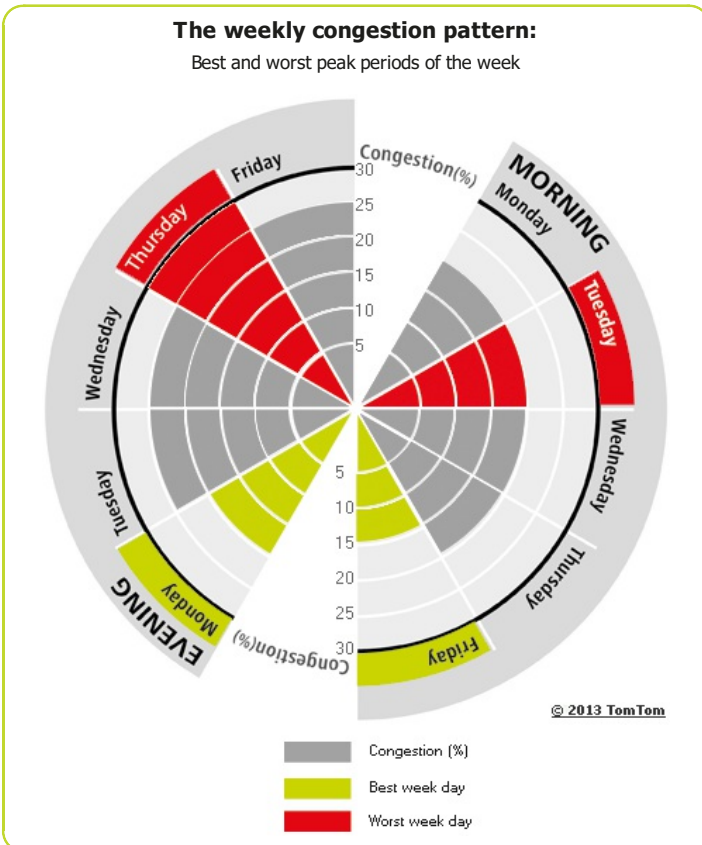
Most congested specific day	Fri 13 Jan 2012
Total network length	2 817 mi
Total network length highways	503 mi
Total network length non-highways	2 313 mi
Total vehicle miles	10 547 972 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Columbus

Map Data © 2012 TomTom

Congestion level

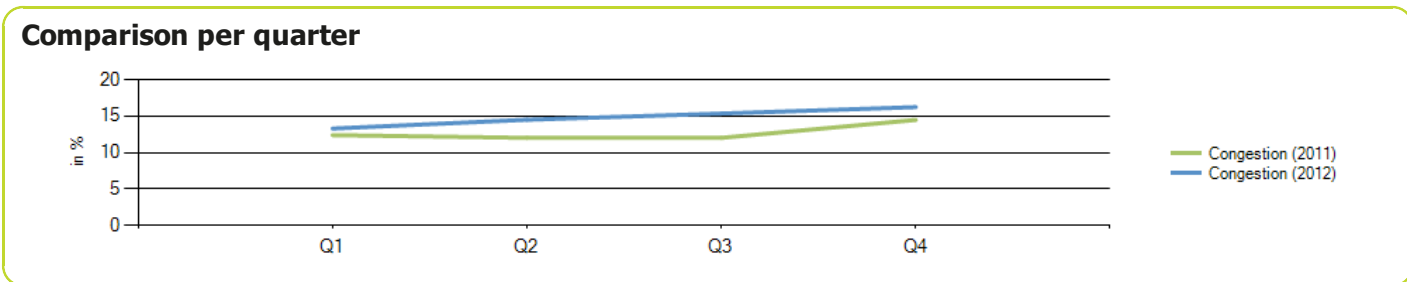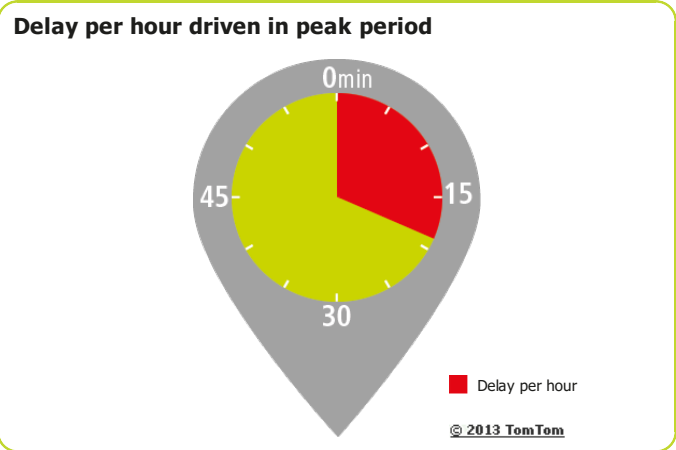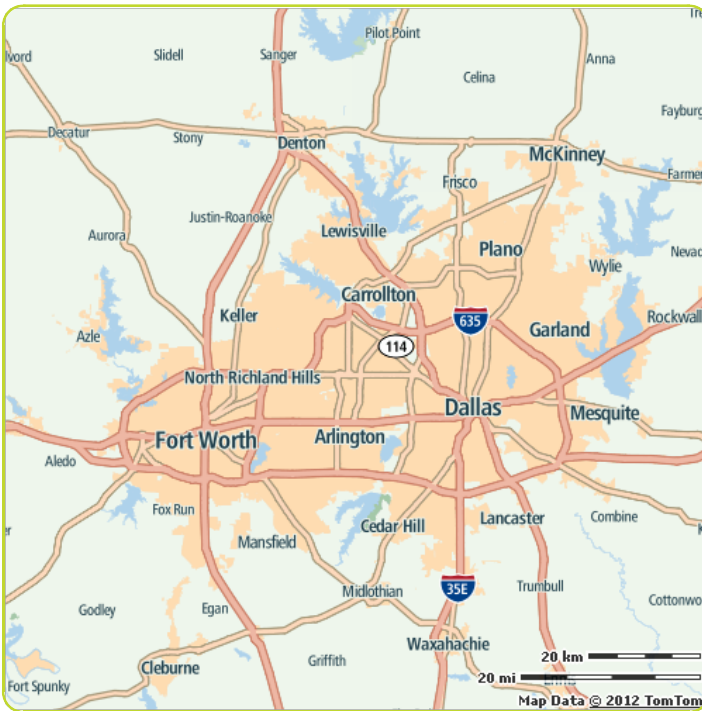# 14%

Ranking

Ranking of city compared to continent	42/59
Congestion level on highways	8%
Congestion level on non-highways	25%
Delay per hour driven in peak period	19 min
Delay per year with a 30 min commute	55 h

The weekly congestion pattern:
Best and worst peak periods of the week

© 2013 TomTom

Congestion (%)

Best week day

Worst week day

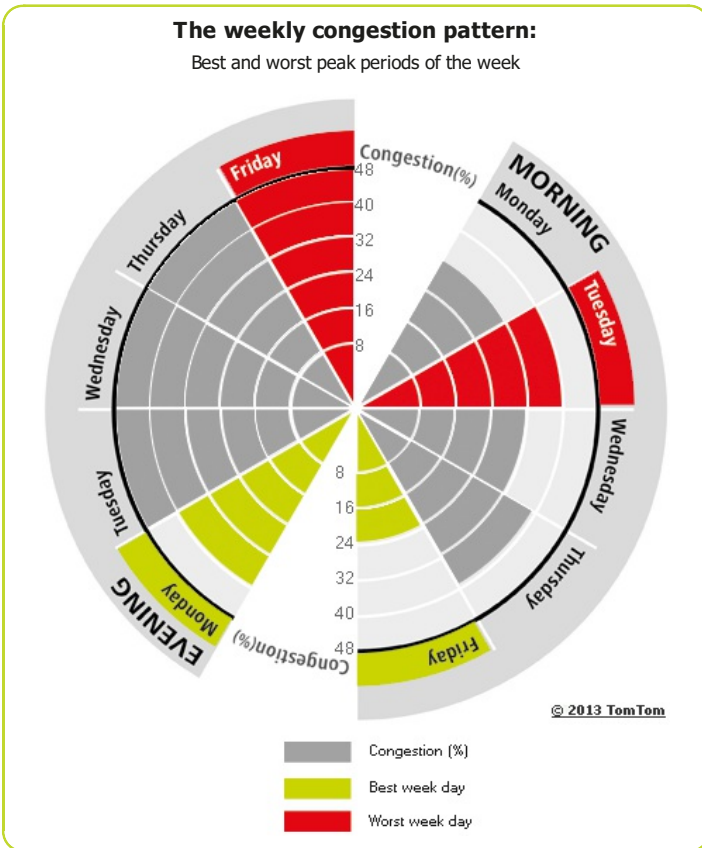|	
Most congested specific day	Wed 26 Dec 2012
Total network length	1 612 mi
Total network length highways	302 mi
Total network length non-highways	1 310 mi
Total vehicle miles	7 027 400 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom Congestion Index

Dallas-Fort Worth

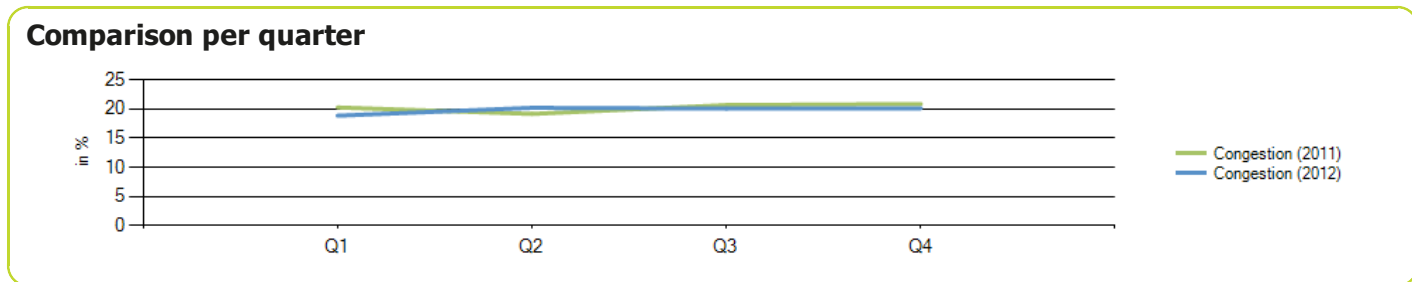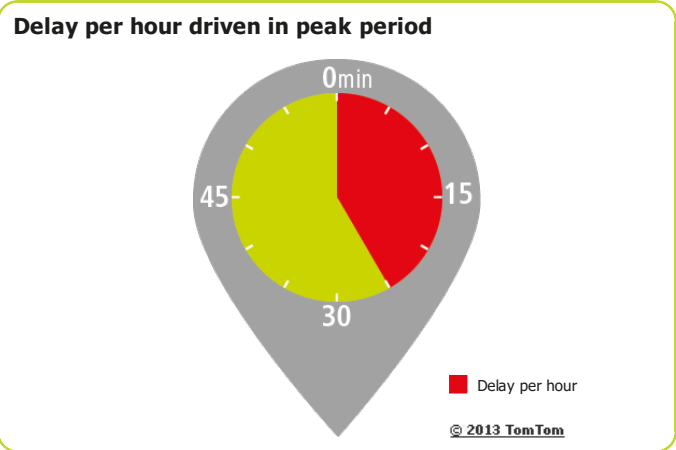### Congestion level

16%

Ranking

Ranking of city compared to continent	32/59
Congestion level on highways	12%
Congestion level on non-highways	23%
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

Congestion (%)
Best week day
Worst week day

Most congested specific day	Wed 6 Jun 2012
Total network length	8 019 mi
Total network length highways	1 634 mi
Total network length non-highways	6 385 mi
Total vehicle miles	27 071 679 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
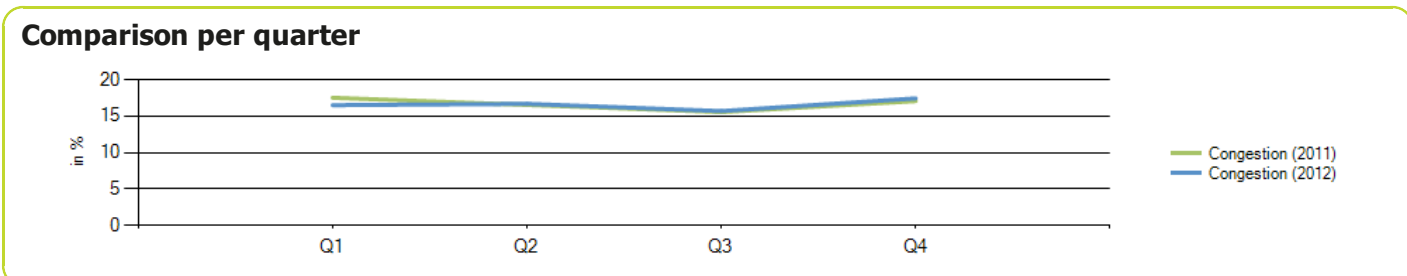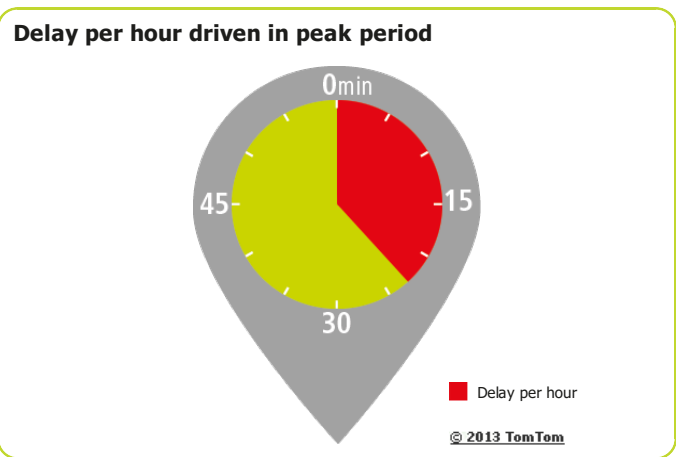
Denver

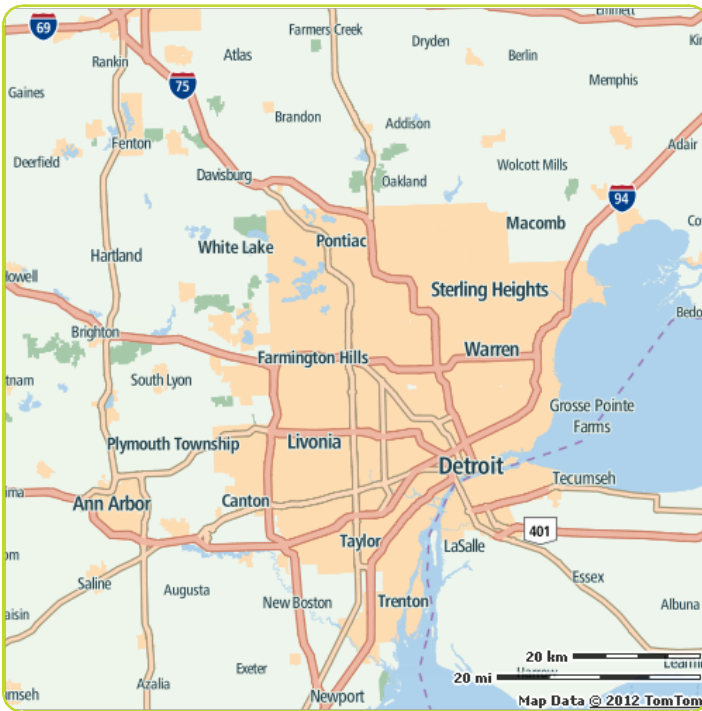## Congestion level

20%

Ranking

Ranking of city compared to continent	24/59
Congestion level on highways	12%
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

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day
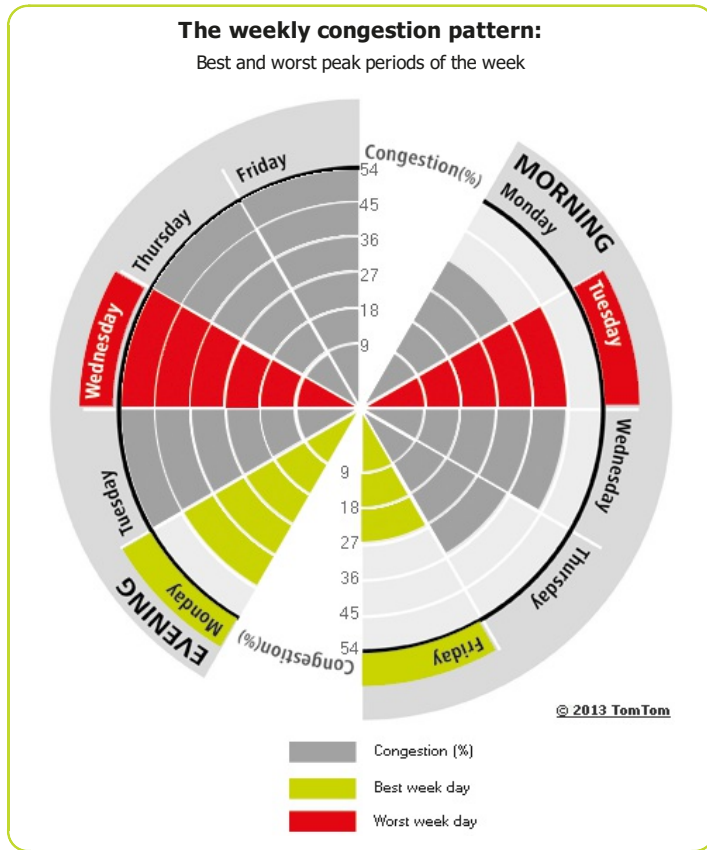
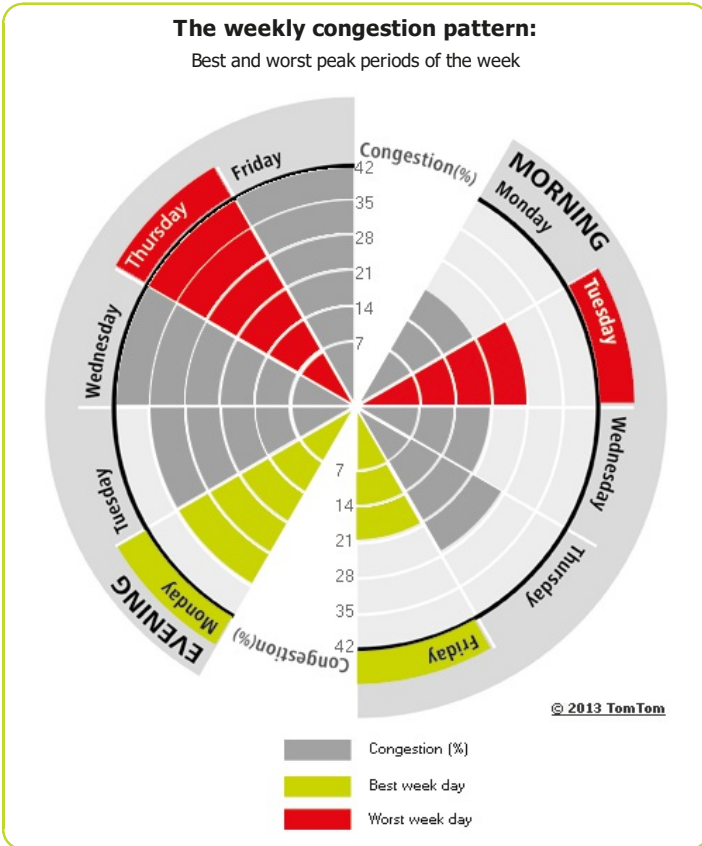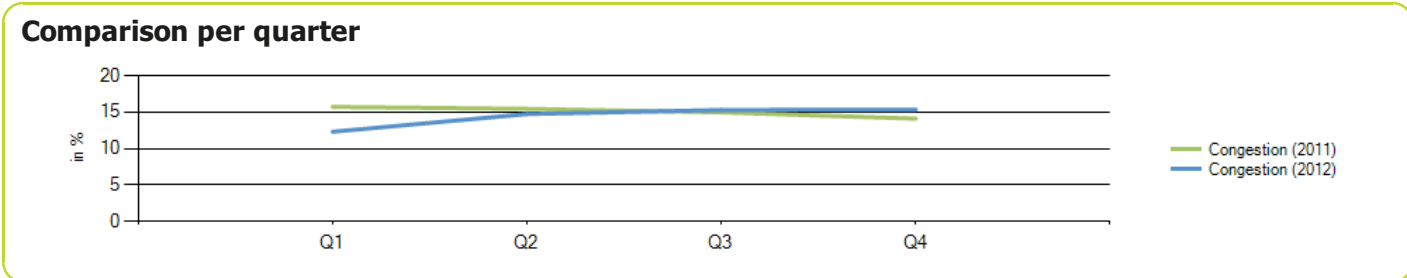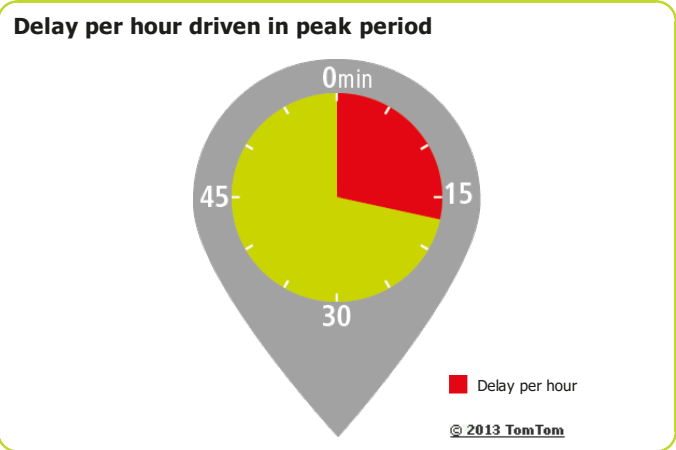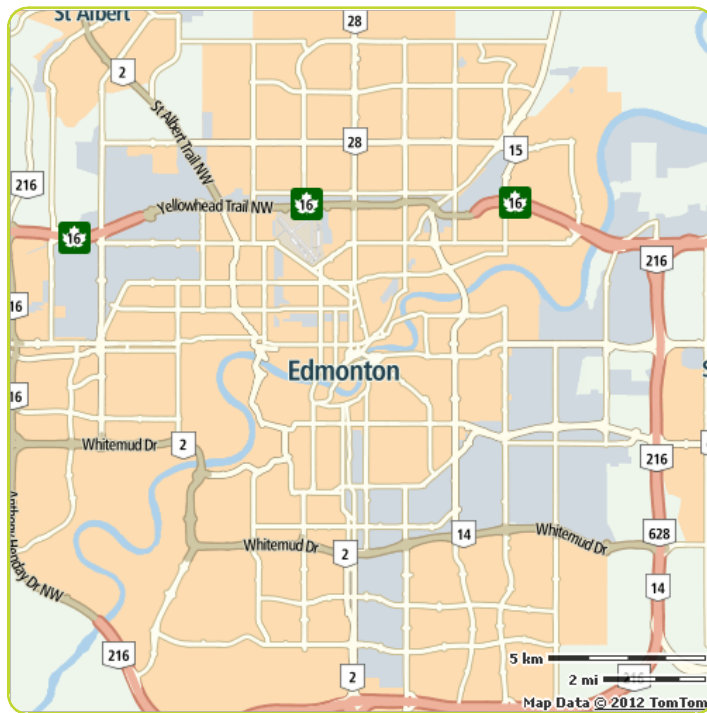|	
Most congested specific day	Wed 11 Jan 2012
Total network length	2 677 mi
Total network length highways	440 mi
Total network length non-highways	2 237 mi
Total vehicle miles	7 657 807 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Detroit

Congestion level

14%

Ranking

Ranking of city compared to continent	43/59
Congestion level on highways	8%
Congestion level on non-highways	20%
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

Congestion (%)
Best week day
Worst week day

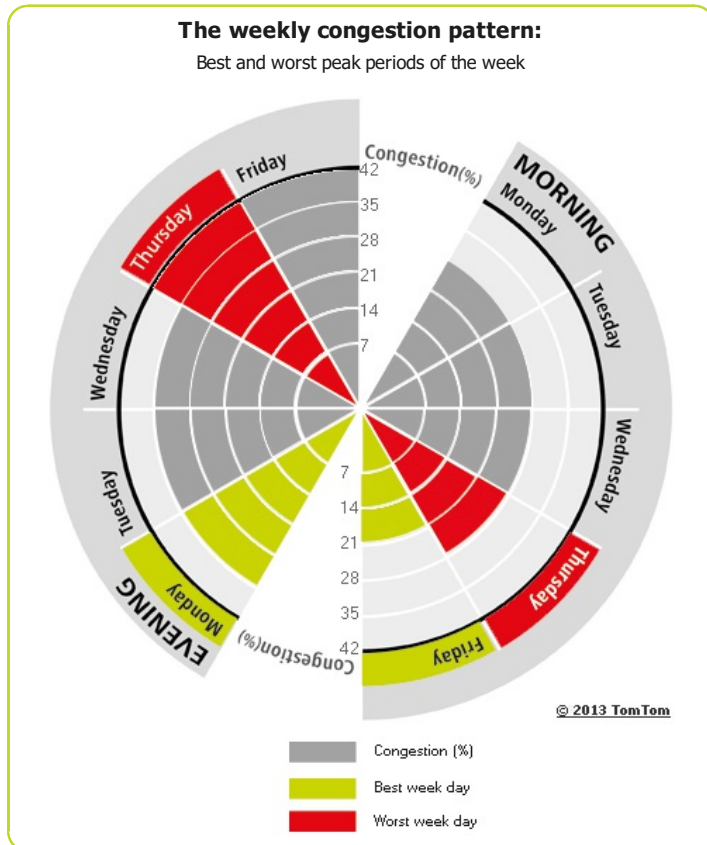| Most congested specific day	Wed 26 Dec 2012
Total network length	4 892 mi
Total network length highways	514 mi
Total network length non-highways	4 379 mi
Total vehicle miles	12 794 207 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Edmonton

Map Data © 2012 TomTom

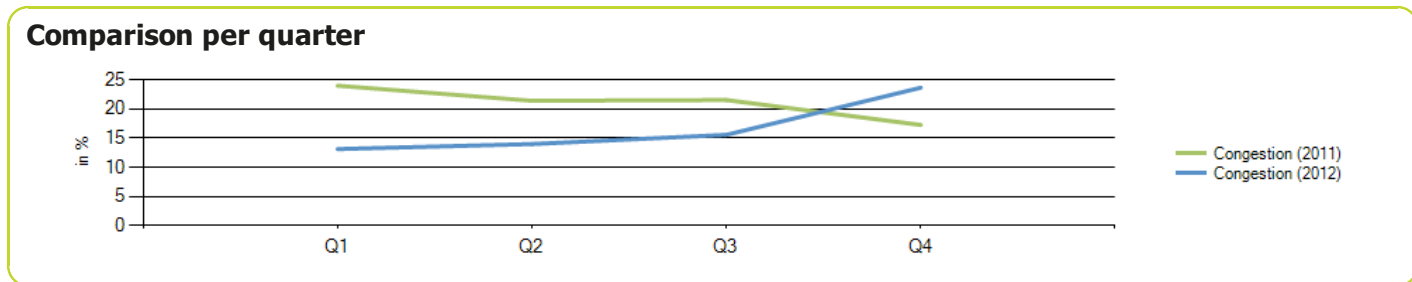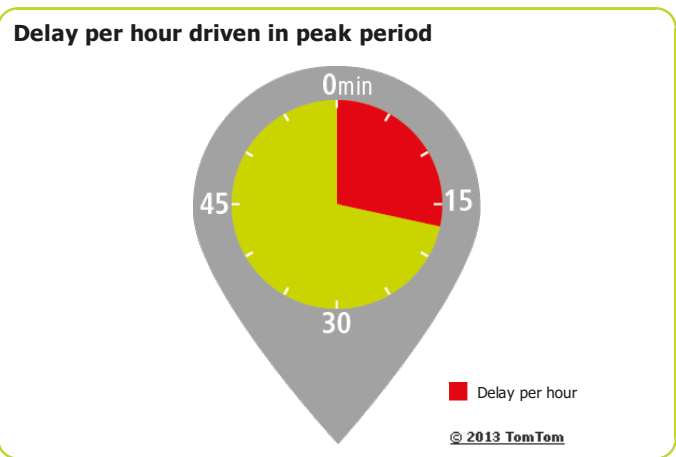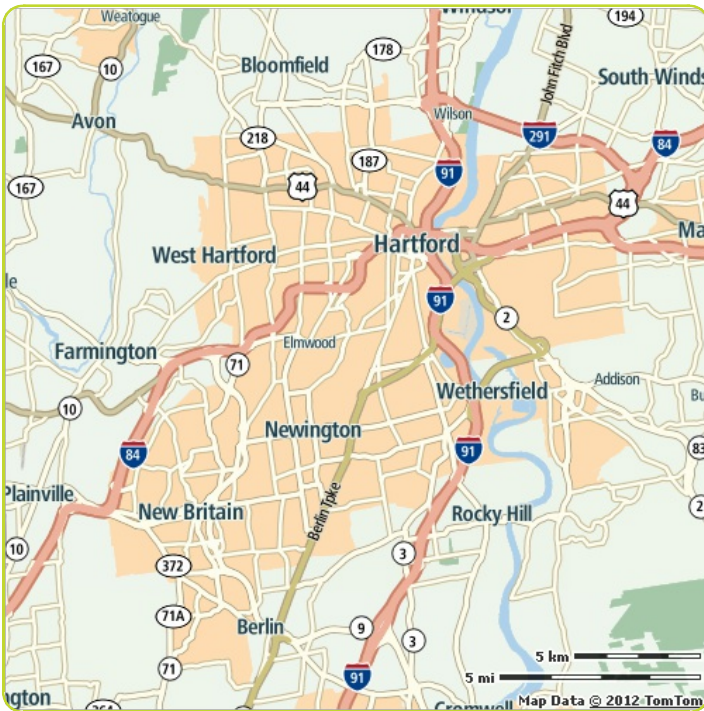### Congestion level

16%

Ranking

Ranking of city compared to continent	34/59
Congestion level on highways	5%
Congestion level on non-highways	20%
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

© 2013 TomTom

Congestion (%)
Best week day
Worst week day

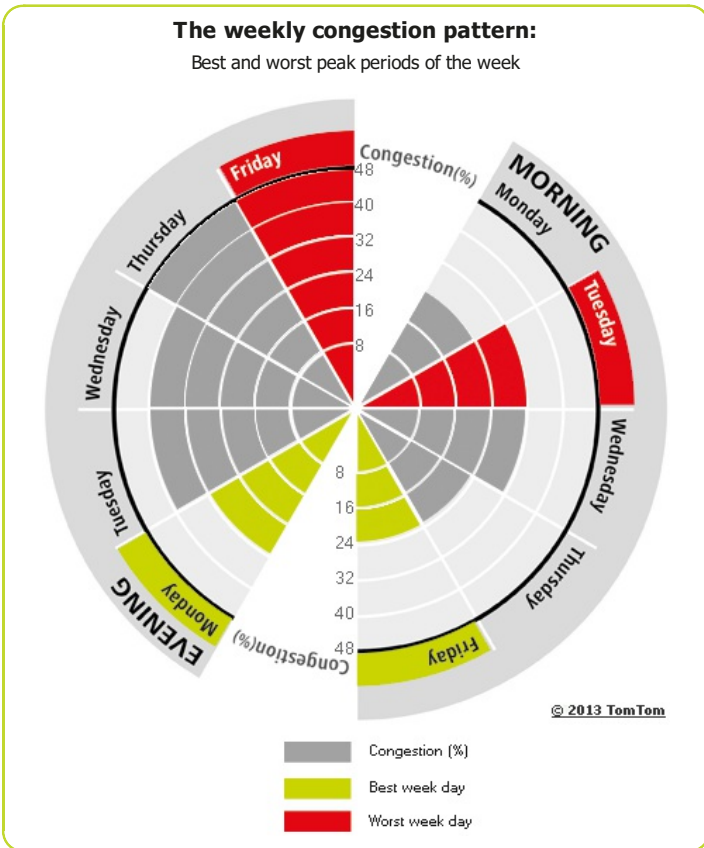|	
Most congested specific day	Wed 7 Nov 2012
Total network length	881 mi
Total network length highways	142 mi
Total network length non-highways	739 mi
Total vehicle miles	2 313 201 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Hartford

Congestion level
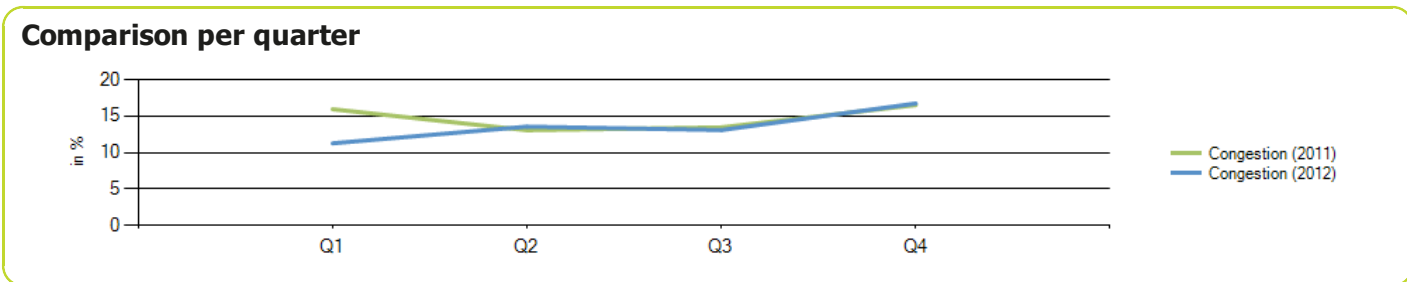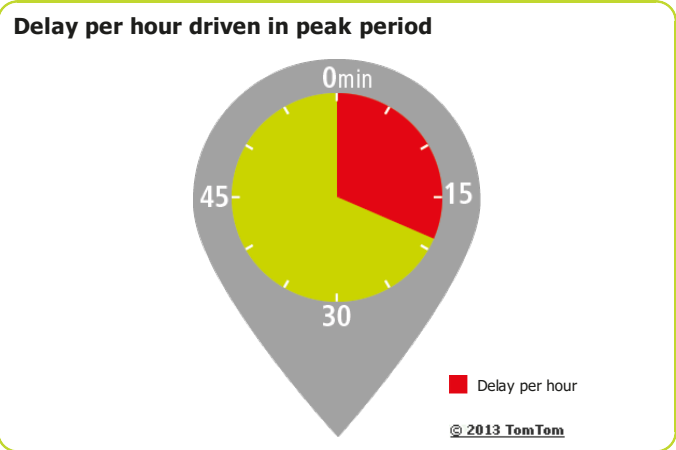
13%

Ranking

Ranking	
Ranking of city compared to continent	51/59
Congestion level on highways	9%
Congestion level on non-highways	19%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

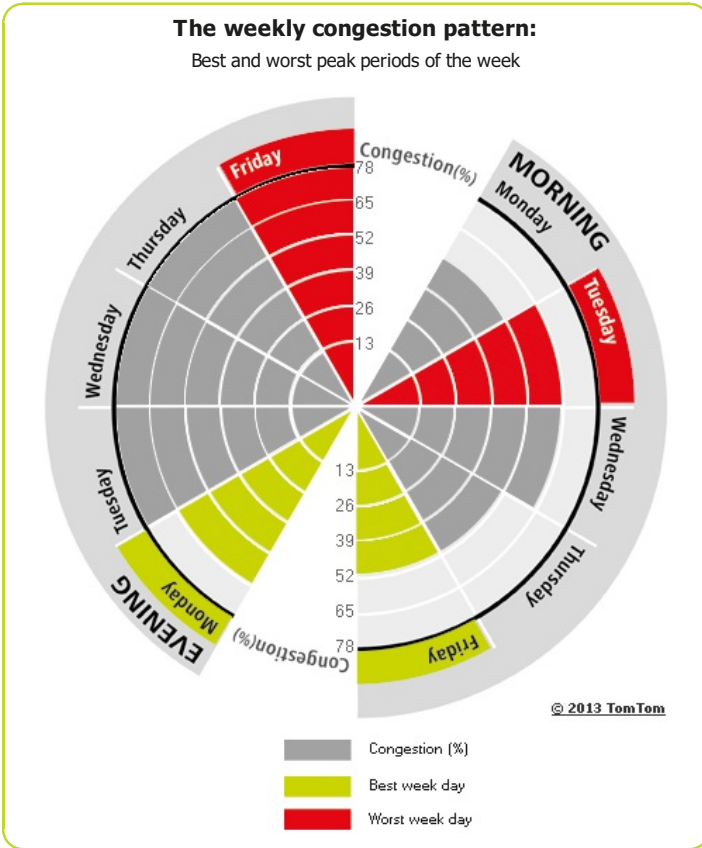|	
Most congested specific day	Wed 7 Nov 2012
Total network length	1 023 mi
Total network length highways	171 mi
Total network length non-highways	853 mi
Total vehicle miles	4 313 713 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Honolulu

Congestion level

30%
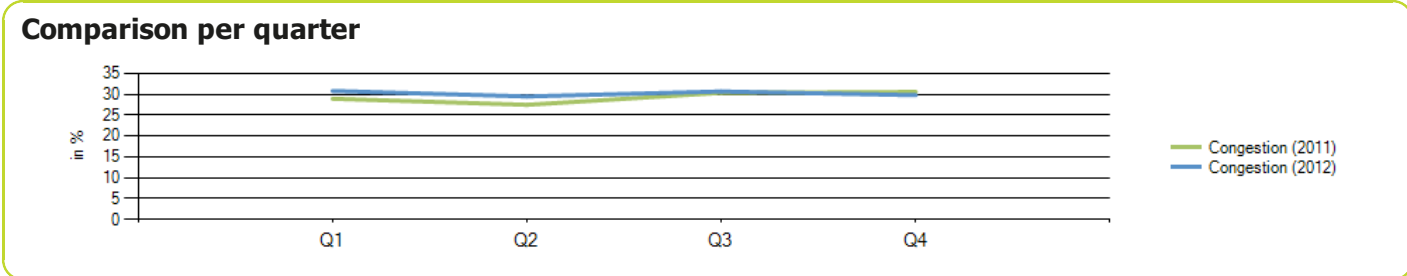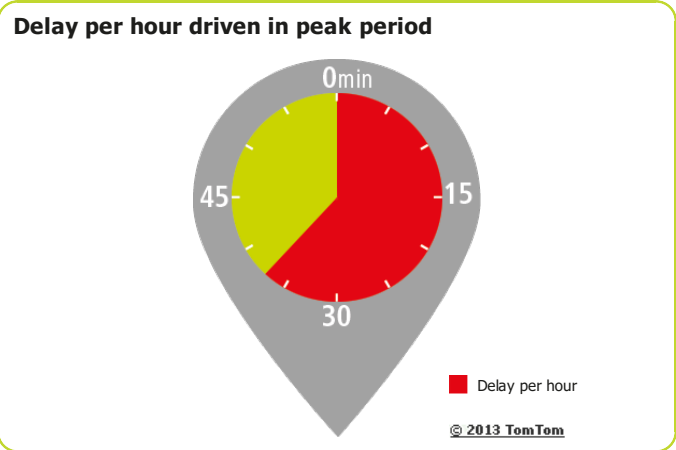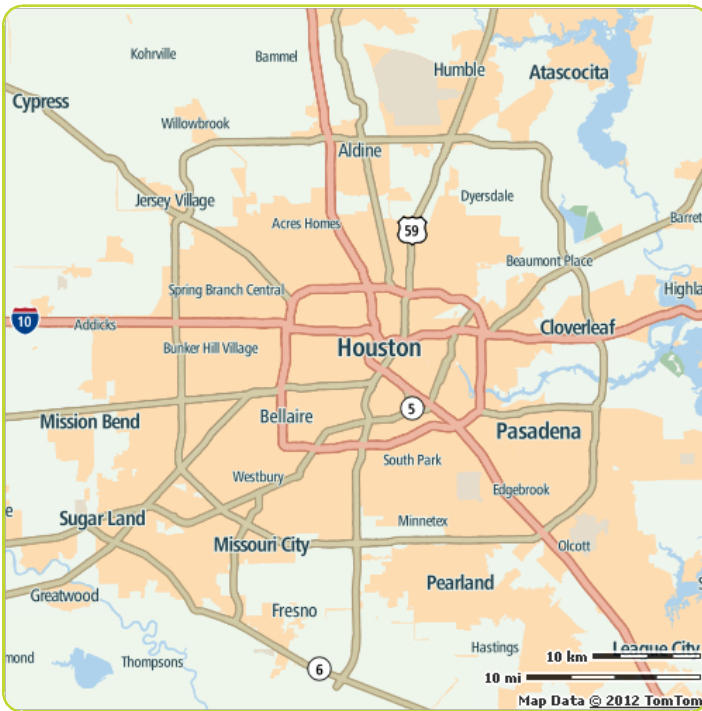
Ranking

Ranking of city compared to continent	3/59
Congestion level on highways	22%
Congestion level on non-highways	38%
Delay per hour driven in peak period	36 min
Delay per year with a 30 min commute	86 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day

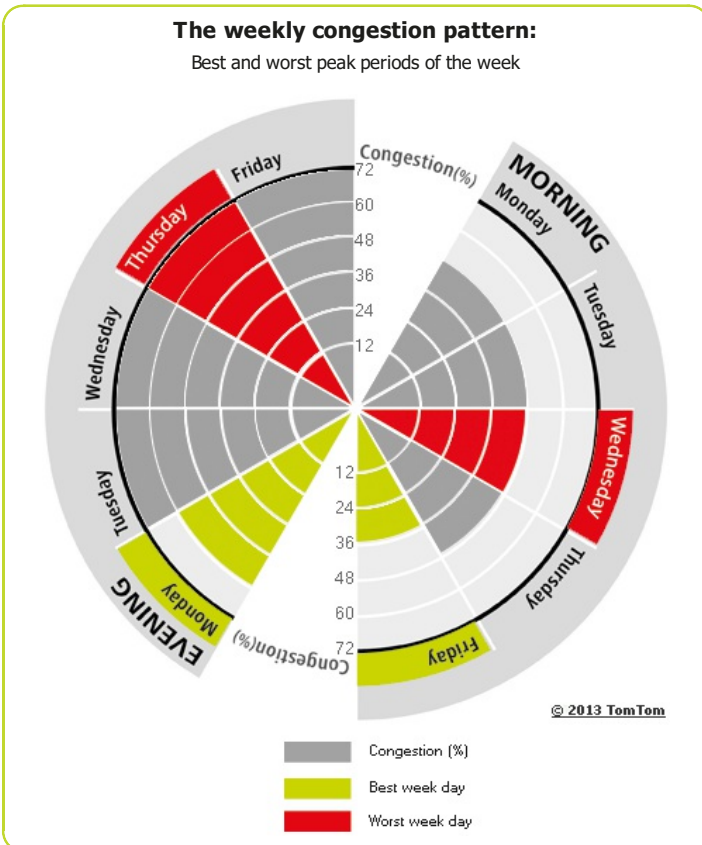|	
Most congested specific day	Mon 17 Dec 2012
Total network length	560 mi
Total network length highways	167 mi
Total network length non-highways	393 mi
Total vehicle miles	816 370 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom

Houston

Congestion level
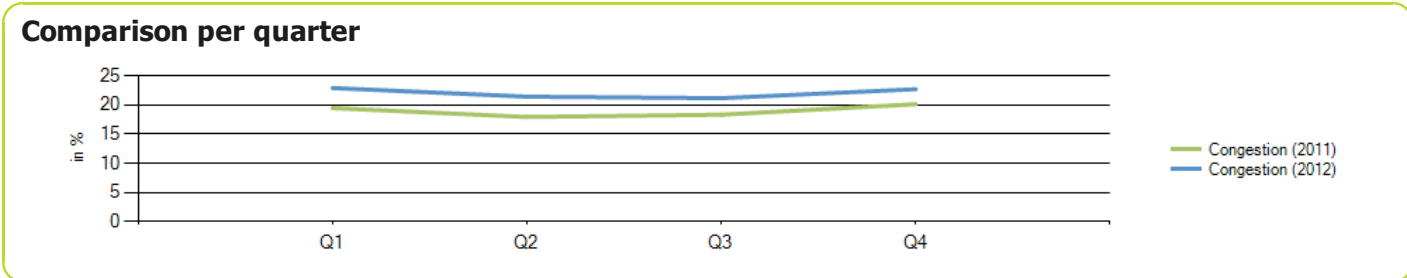
22%

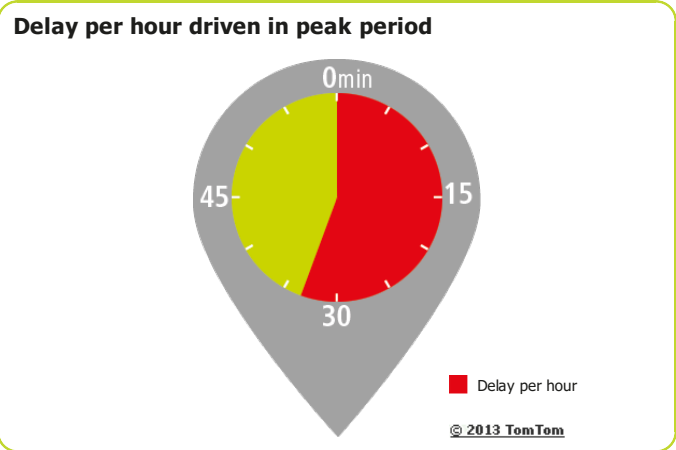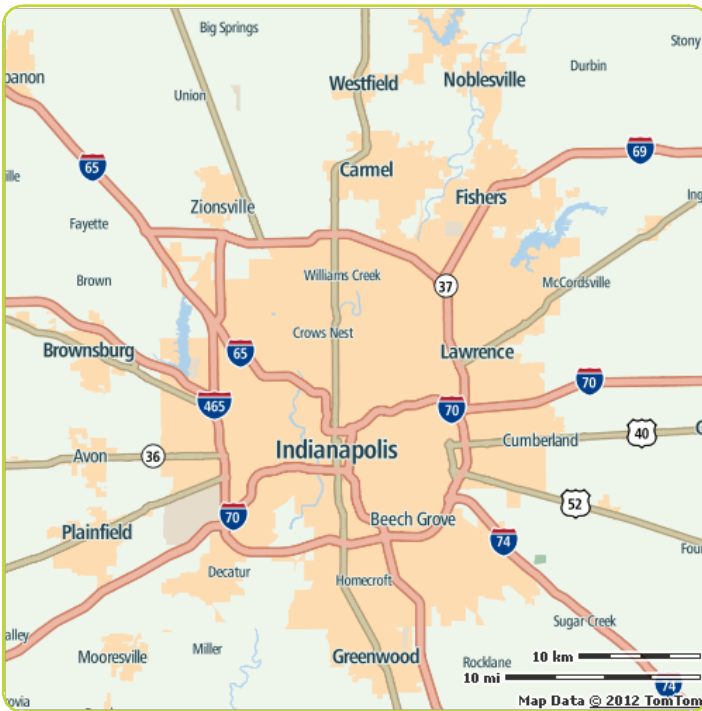### Ranking

Ranking	
Ranking of city compared to continent	17/59
Congestion level on highways	18%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

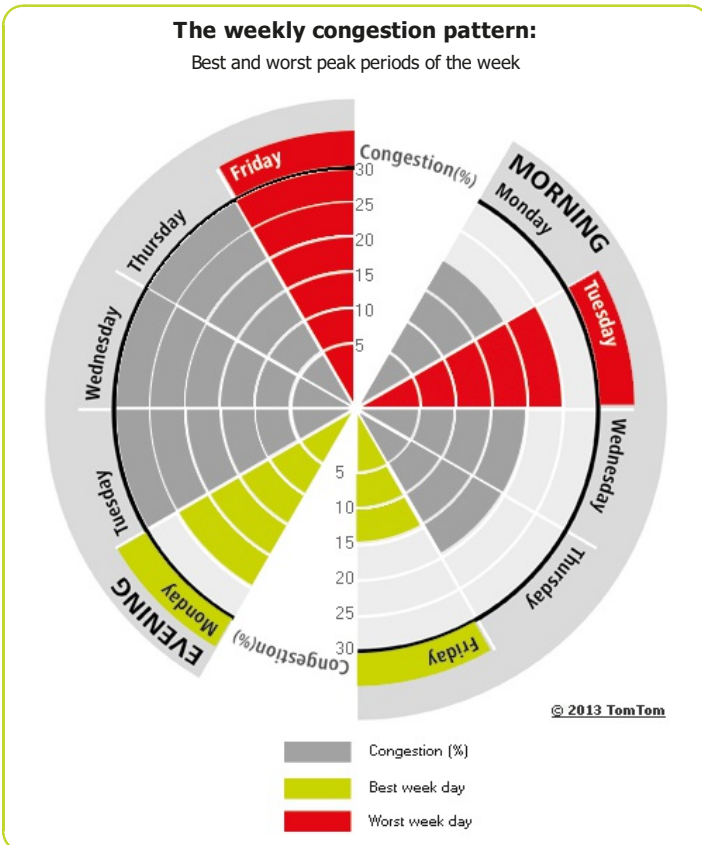|	
Most congested specific day	Fri 9 Mar 2012
Total network length	3 667 mi
Total network length highways	751 mi
Total network length non-highways	2 915 mi
Total vehicle miles	14 014 765 mi

Delay per hour driven in peak period

■ Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom Congestion Index

Indianapolis

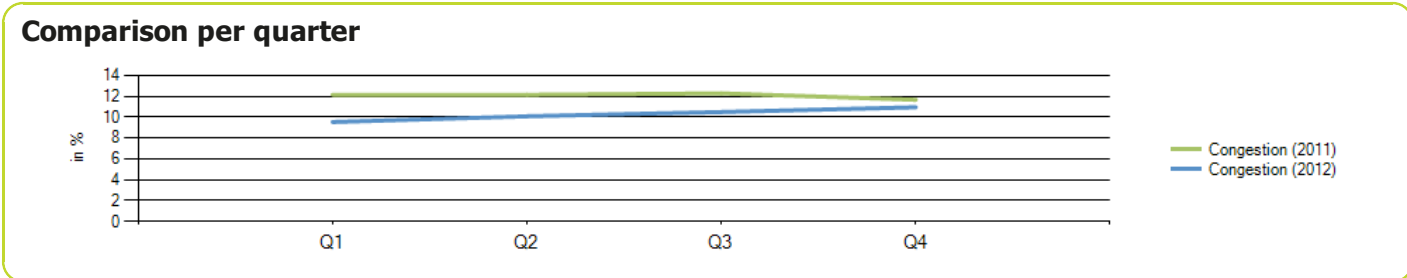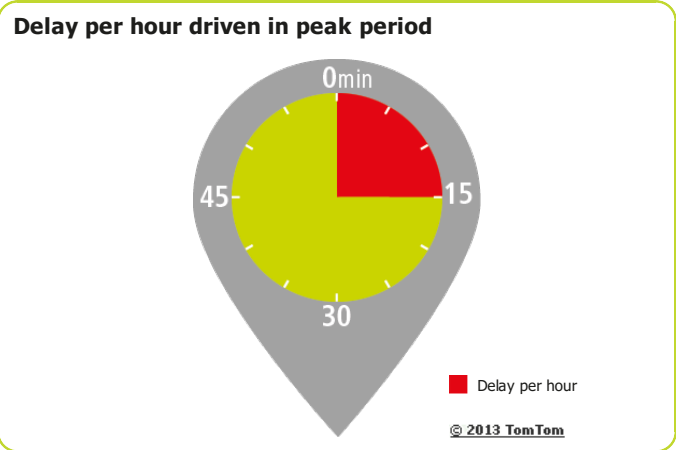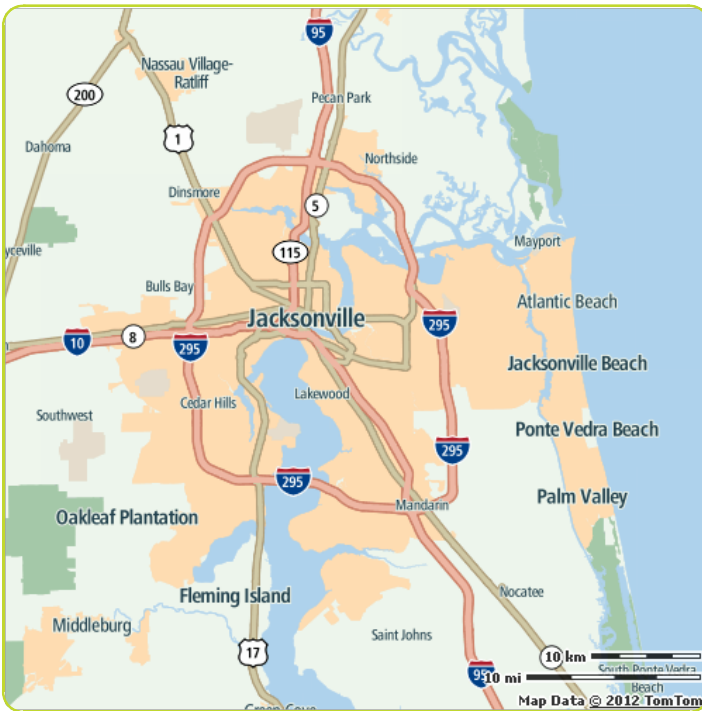### Congestion level

10%

Ranking

Ranking of city compared to continent	56/59
Congestion level on highways	3%
Congestion level on non-highways	21%
Delay per hour driven in peak period	14 min
Delay per year with a 30 min commute	43 h

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day

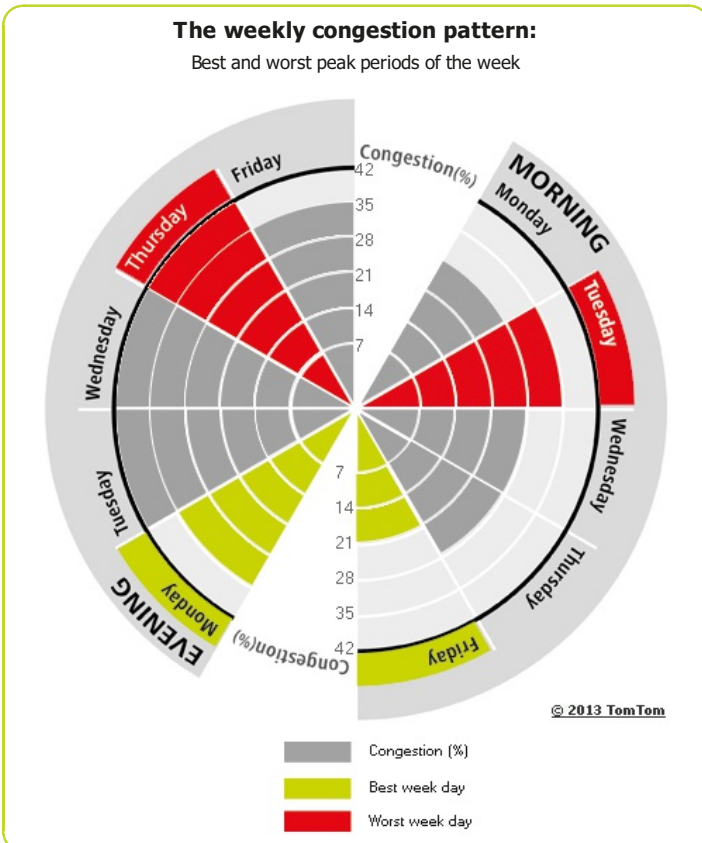|	
Most congested specific day	Wed 26 Dec 2012
Total network length	1 786 mi
Total network length highways	269 mi
Total network length non-highways	1 517 mi
Total vehicle miles	6 988 697 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Jacksonville

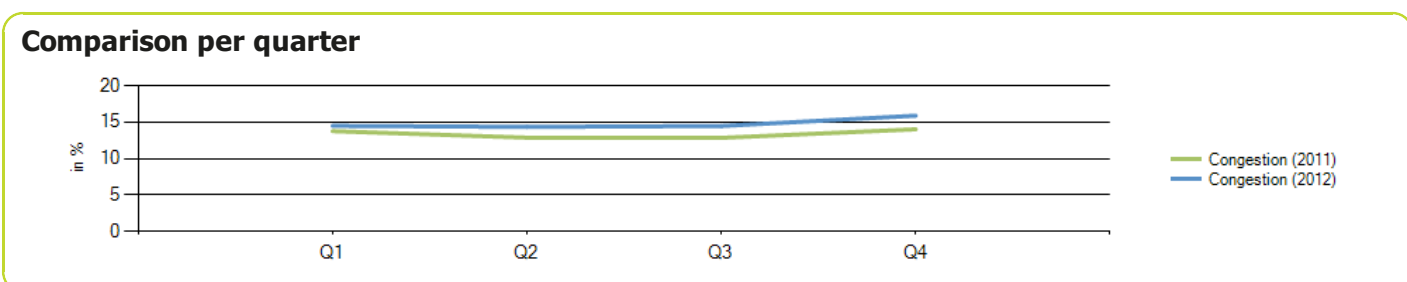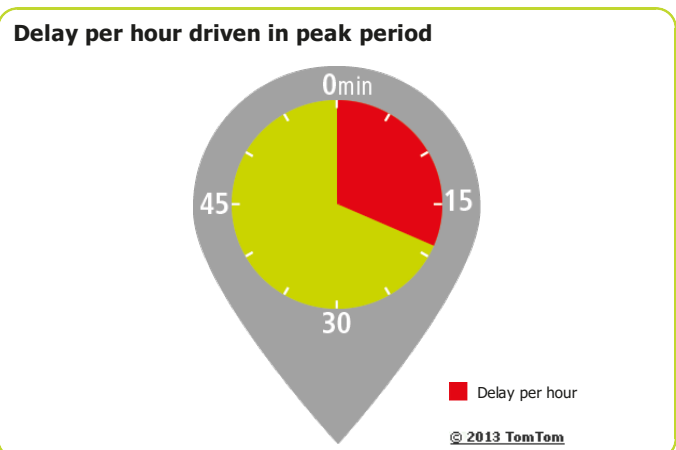## Congestion level

14%

Ranking

Ranking of city compared to continent	44/59
Congestion level on highways	5%
Congestion level on non-highways	26%
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

Congestion (%)

Best week day

Worst week day

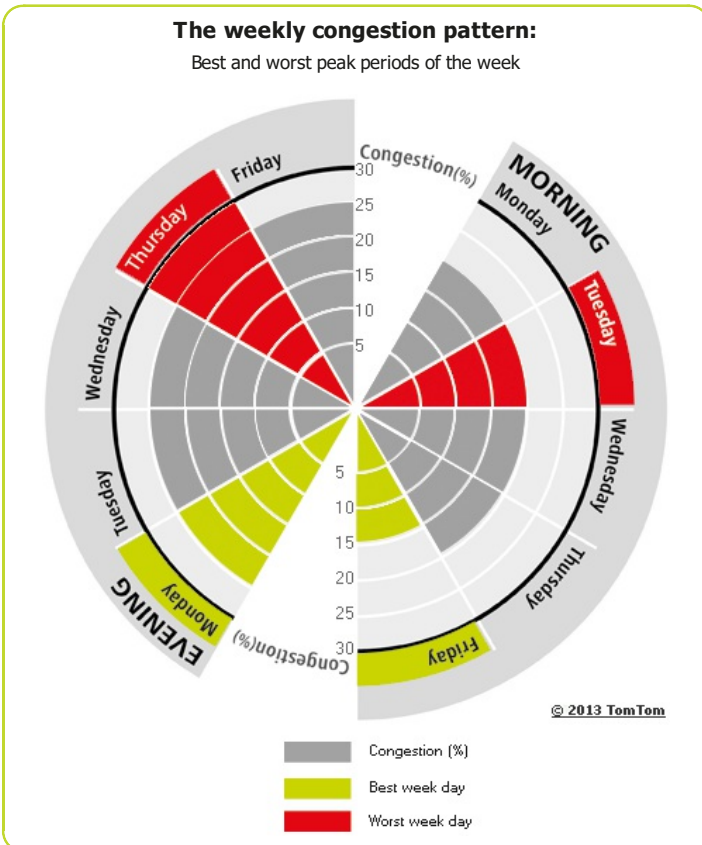|	
Most congested specific day	Mon 10 Dec 2012
Total network length	1 494 mi
Total network length highways	260 mi
Total network length non-highways	1 234 mi
Total vehicle miles	5 632 807 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Kansas City

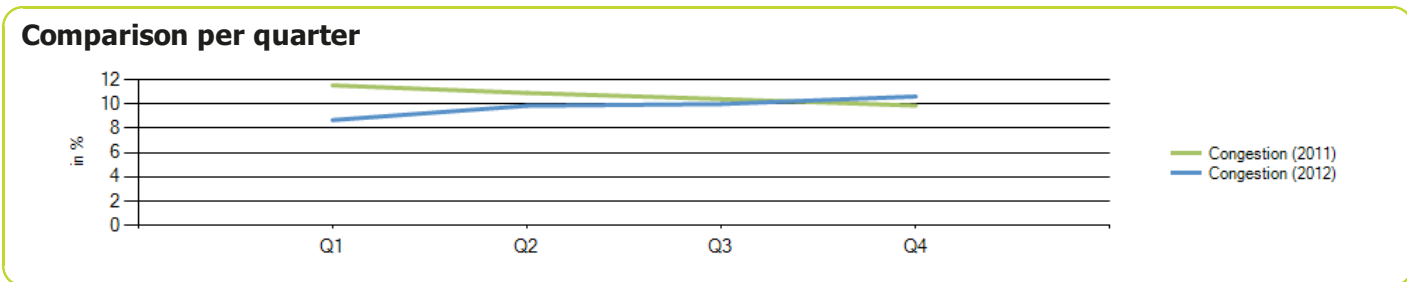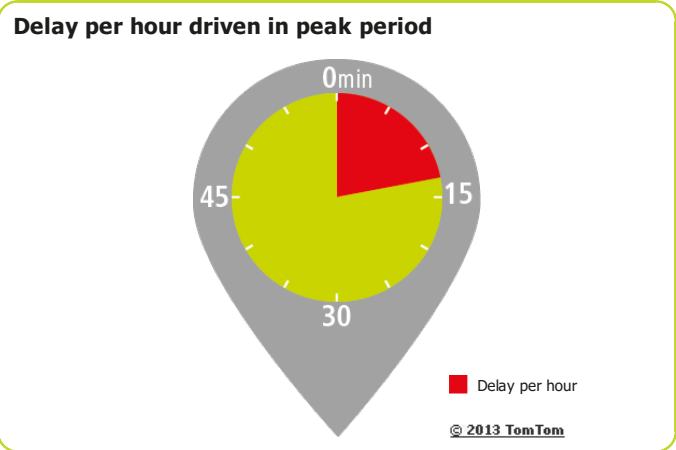## Congestion level

10%

Ranking

Ranking of city compared to continent	59/59
Congestion level on highways	5%
Congestion level on non-highways	20%
Delay per hour driven in peak period	12 min
Delay per year with a 30 min commute	38 h

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

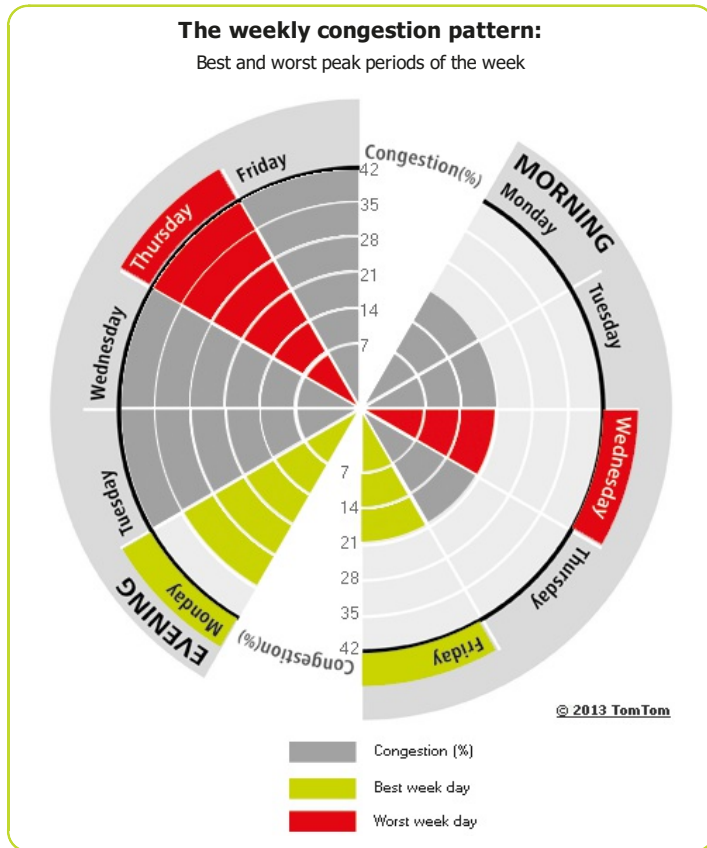|	
Most congested specific day	Thu 20 Dec 2012
Total network length	2 508 mi
Total network length highways	579 mi
Total network length non-highways	1 929 mi
Total vehicle miles	5 097 764 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Las Vegas

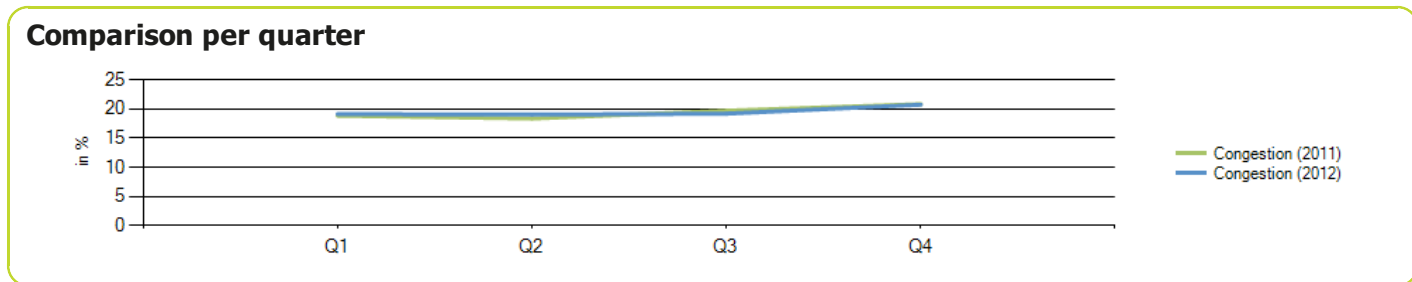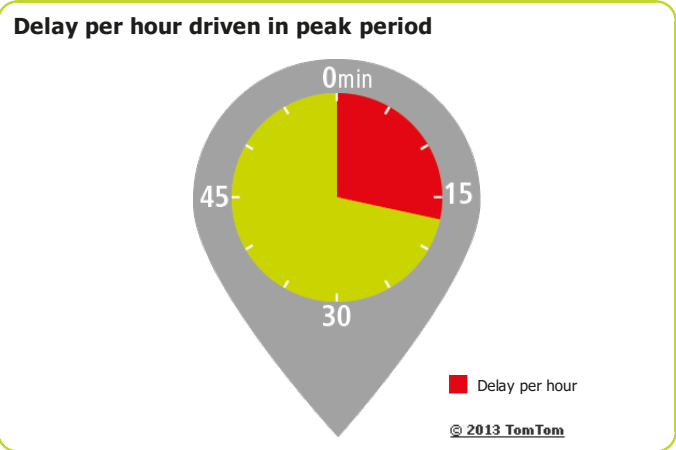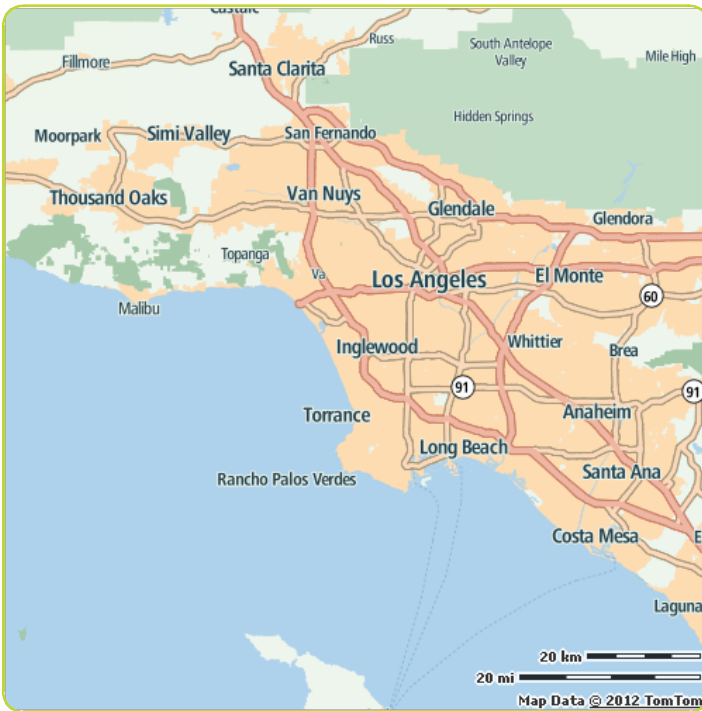## Congestion level

19%

Ranking

Ranking of city compared to continent	27/59
Congestion level on highways	7%
Congestion level on non-highways	24%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

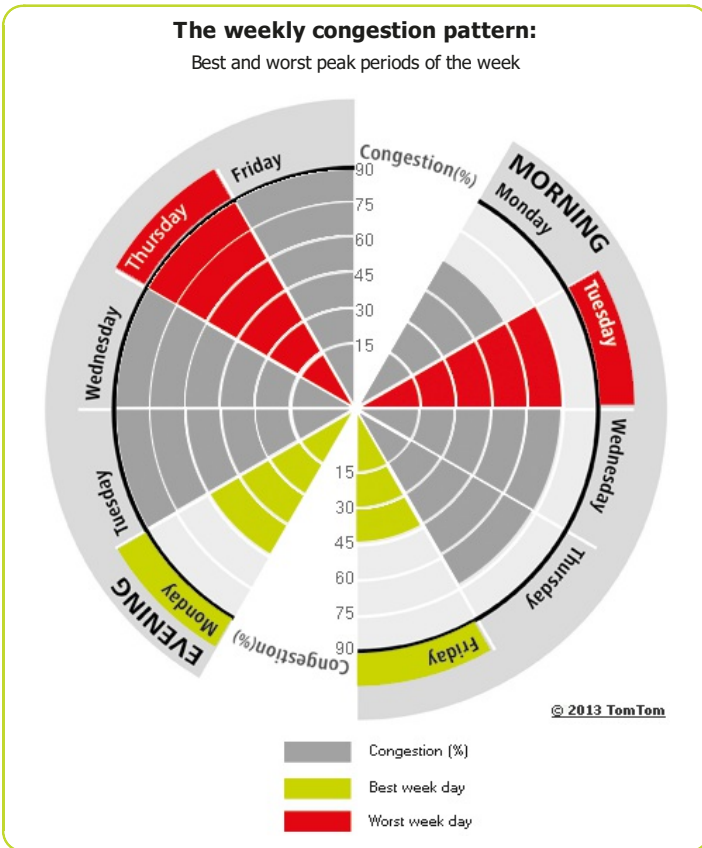|	
Most congested specific day	Tue 11 Sep 2012
Total network length	1 391 mi
Total network length highways	137 mi
Total network length non-highways	1 255 mi
Total vehicle miles	3 882 334 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Los Angeles

Congestion level

33%

Ranking

Ranking of city compared to continent	1/59
Congestion level on highways	29%
Congestion level on non-highways	39%
Delay per hour driven in peak period	39 min
Delay per year with a 30 min commute	90 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

Most congested specific day	Fri 21 Sep 2012
Total network length	6 511 mi
Total network length highways	1 197 mi
Total network length non-highways	5 314 mi
Total vehicle miles	25 560 781 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
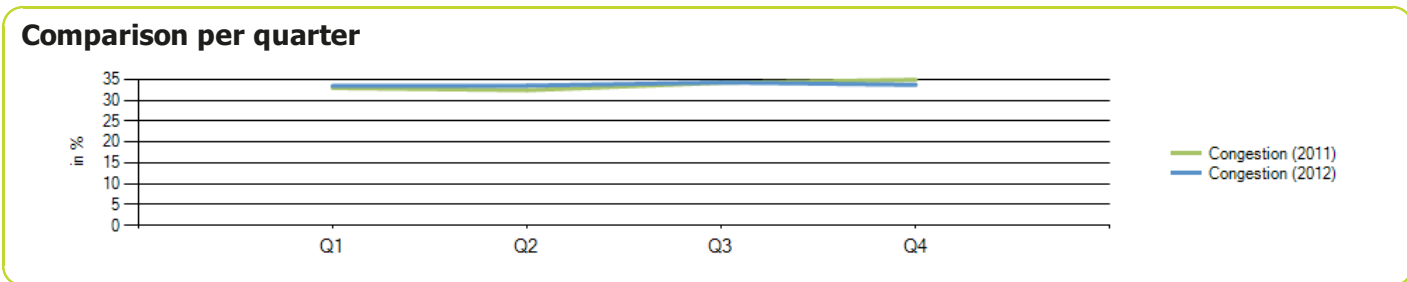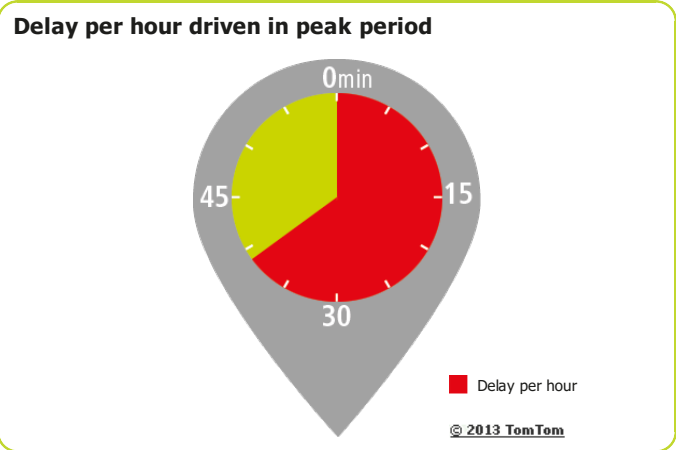
Louisville

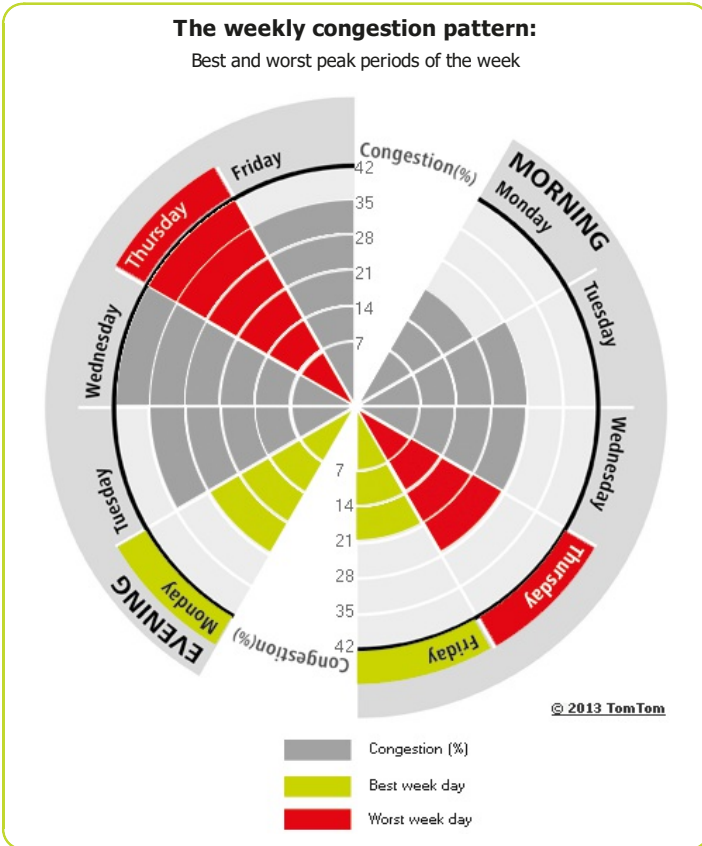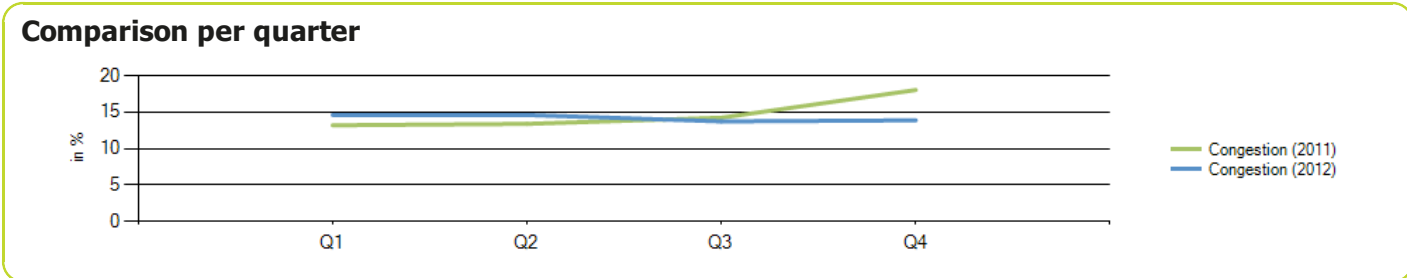### Congestion level

14%

Ranking

Ranking of city compared to continent	45/59
Congestion level on highways	7%
Congestion level on non-highways	26%
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

© 2013 TomTom

Congestion (%)

Best week day

Worst week day

Most congested specific day	Fri 22 Jun 2012
Total network length	1 287 mi
Total network length highways	262 mi
Total network length non-highways	1 025 mi
Total vehicle miles	4 471 741 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Memphis
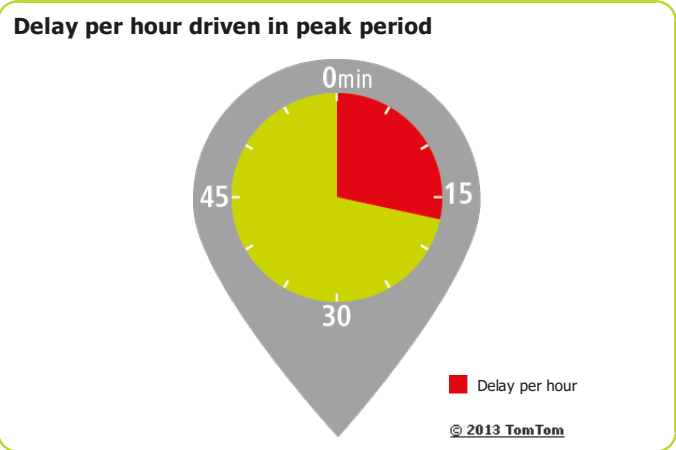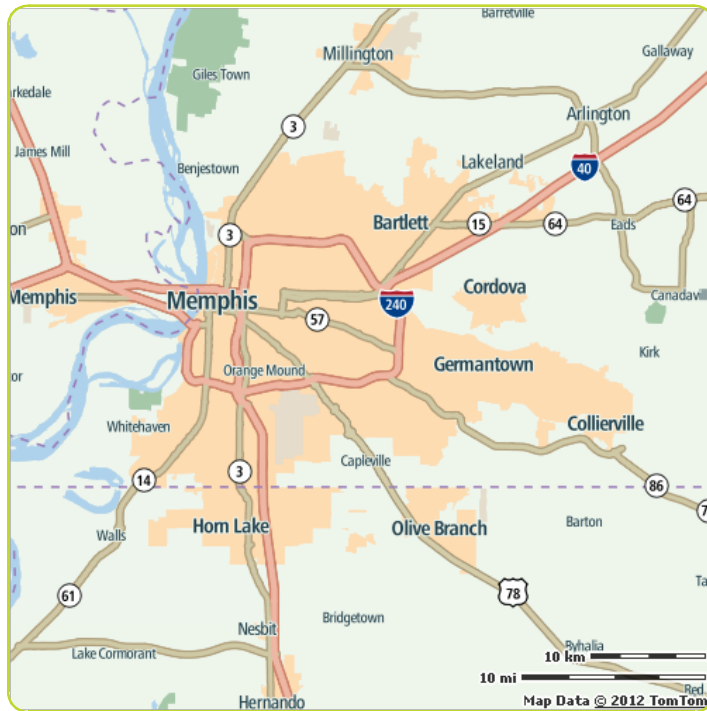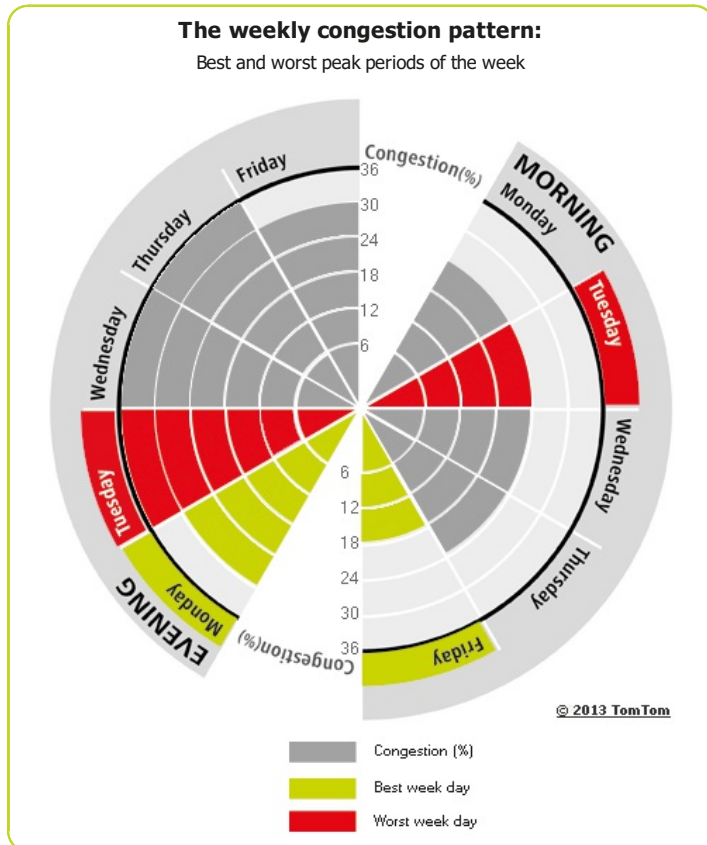
Congestion level
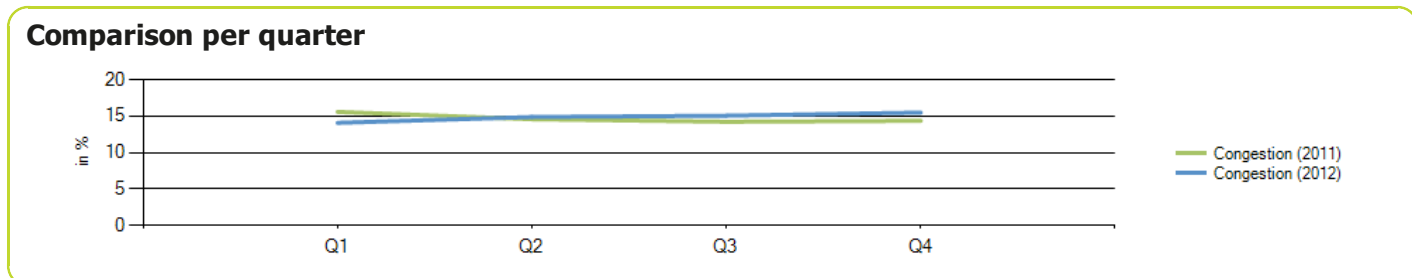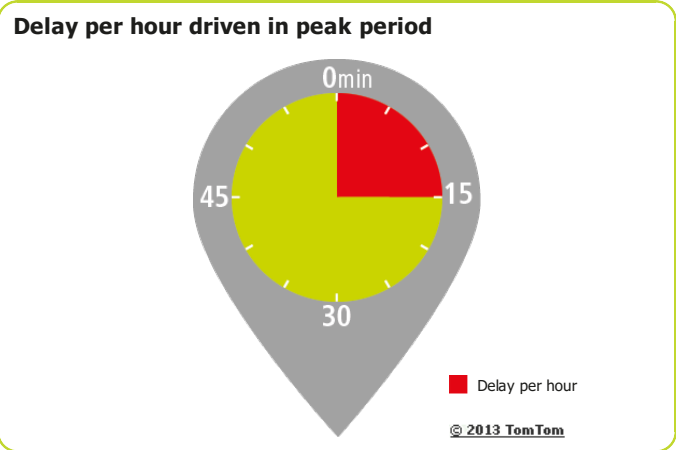
15%

Ranking

Ranking of city compared to continent	40/59
Congestion level on highways	7%
Congestion level on non-highways	21%
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

Congestion (%)
Best week day
Worst week day

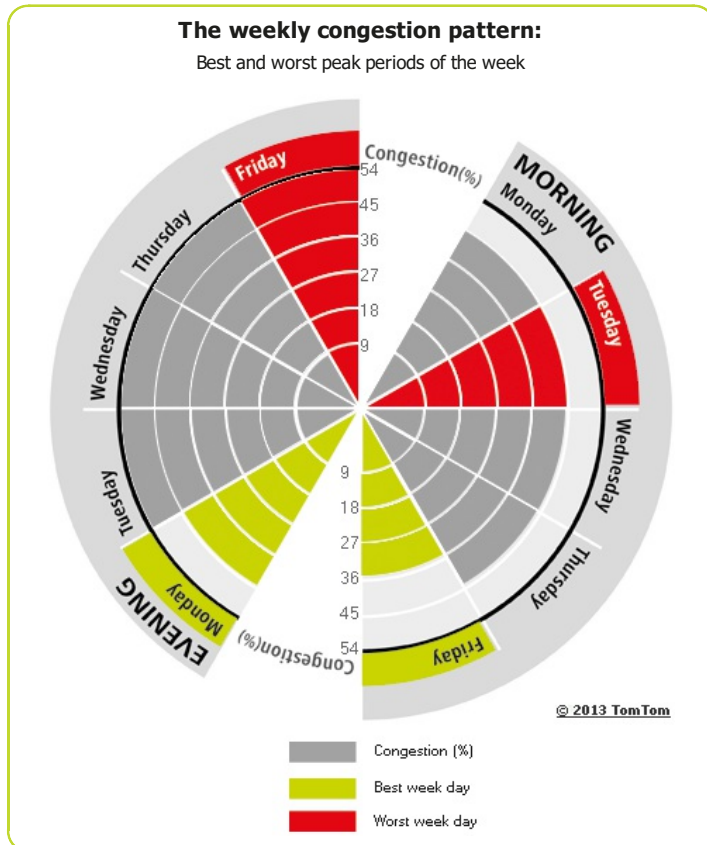|	
Most congested specific day	Tue 4 Dec 2012
Total network length	1 693 mi
Total network length highways	158 mi
Total network length non-highways	1 535 mi
Total vehicle miles	3 063 894 mi

Delay per hour driven in peak period

■ Delay per hour

Comparison per quarter

— Congestion (2011)
— Congestion (2012)

Miami

Congestion level

23%

Ranking

Ranking of city compared to continent	11/59
Congestion level on highways	11%
Congestion level on non-highways	33%
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

Congestion (%)

Best week day

Worst week day

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Most congested specific day	Fri 10 Feb 2012
Total network length	4 220 mi
Total network length highways	571 mi
Total network length non-highways	3 649 mi
Total vehicle miles	18 784 138 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
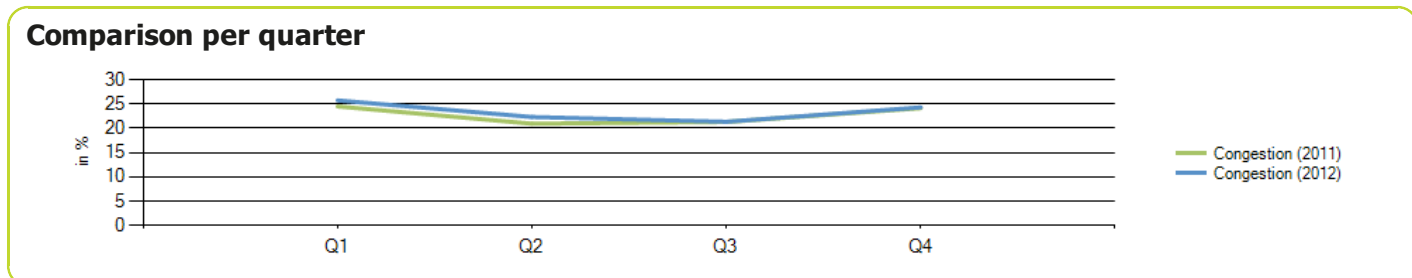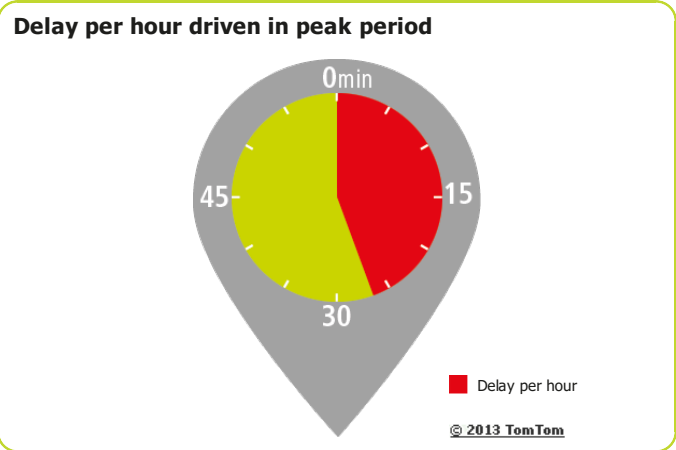
Milwaukee

Congestion level

13%
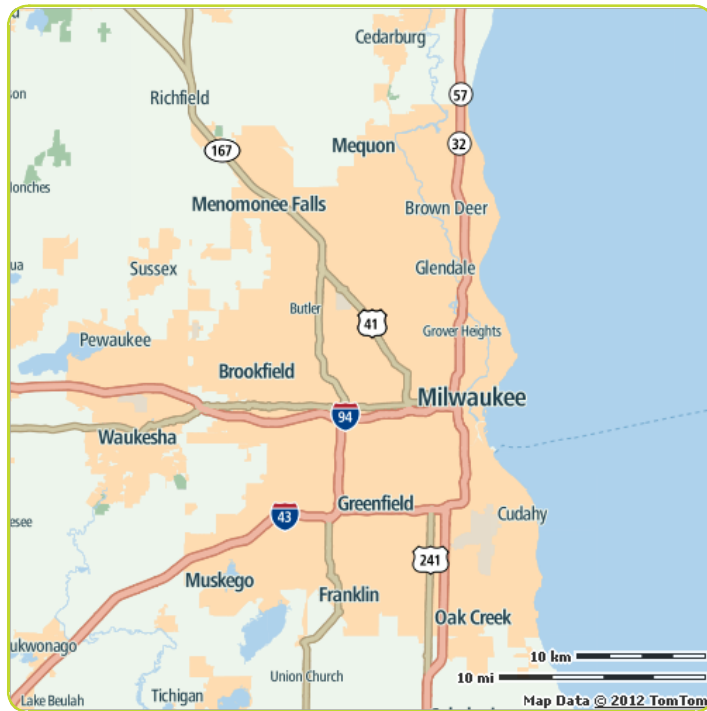
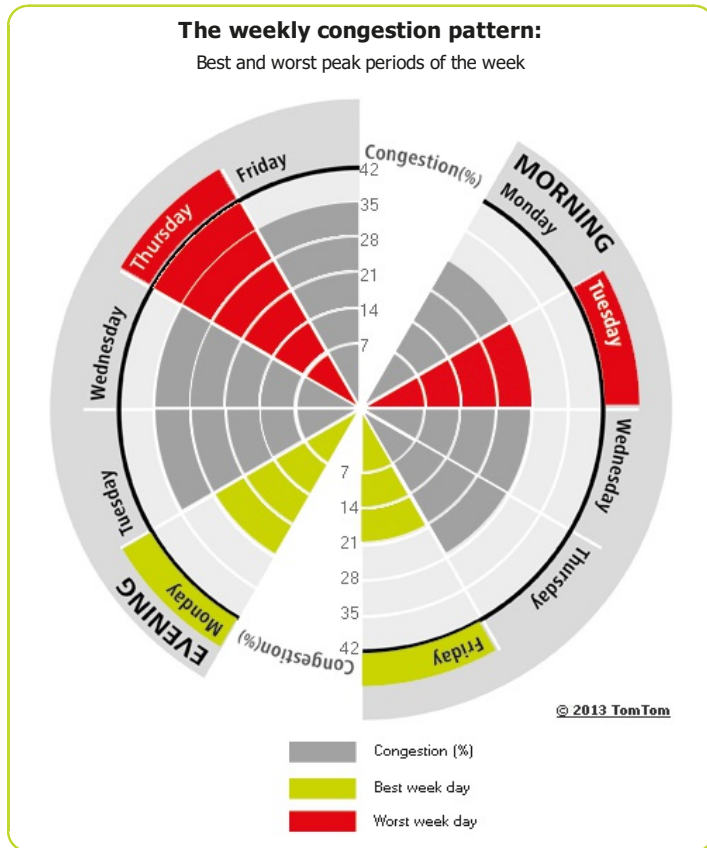### Ranking

Ranking of city compared to continent	52/59
Congestion level on highways	8%
Congestion level on non-highways	19%
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

Congestion (%)
Best week day
Worst week day

Most congested specific day	Fri 20 Jan 2012
Total network length	1 965 mi
Total network length highways	177 mi
Total network length non-highways	1 787 mi
Total vehicle miles	3 897 176 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
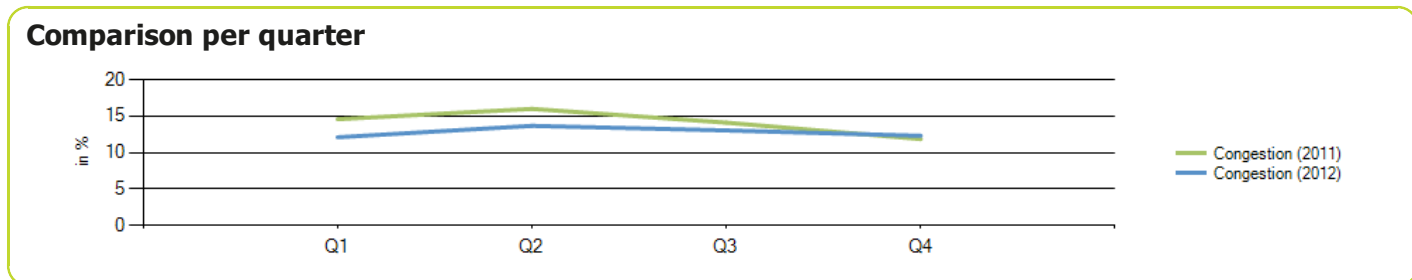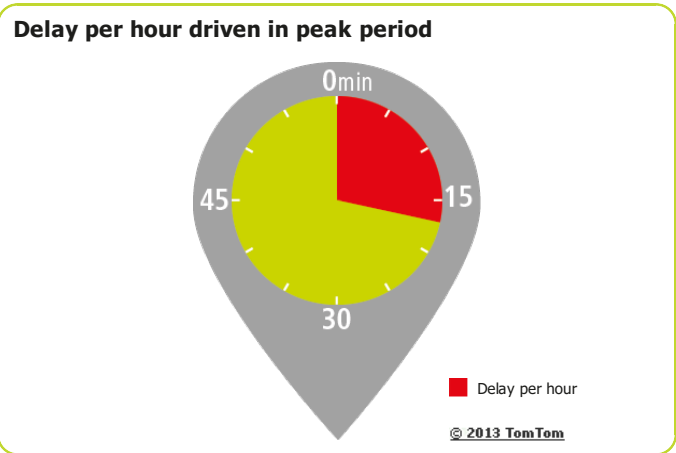
Minneapolis

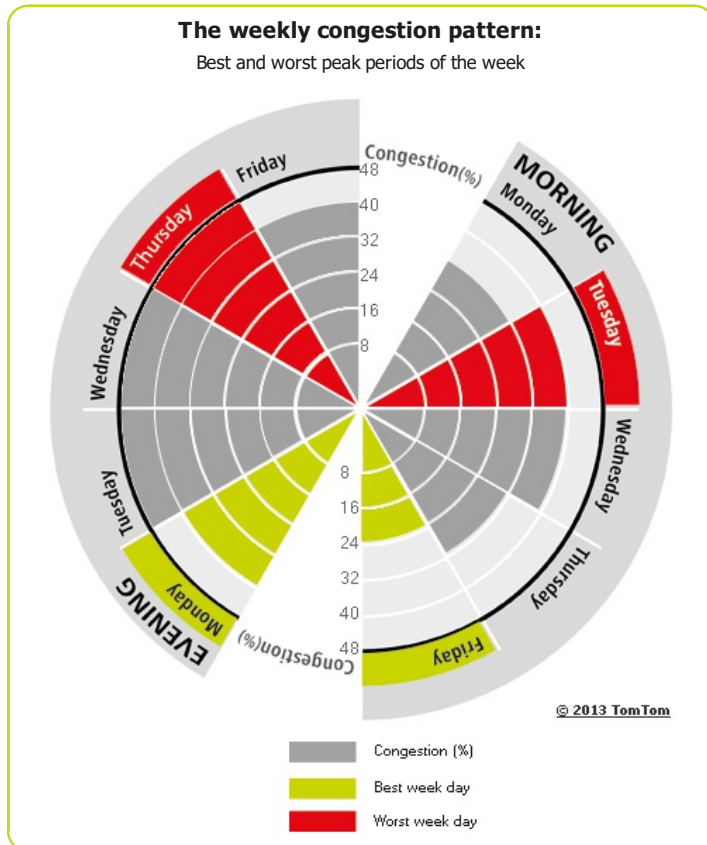## Congestion level

15%
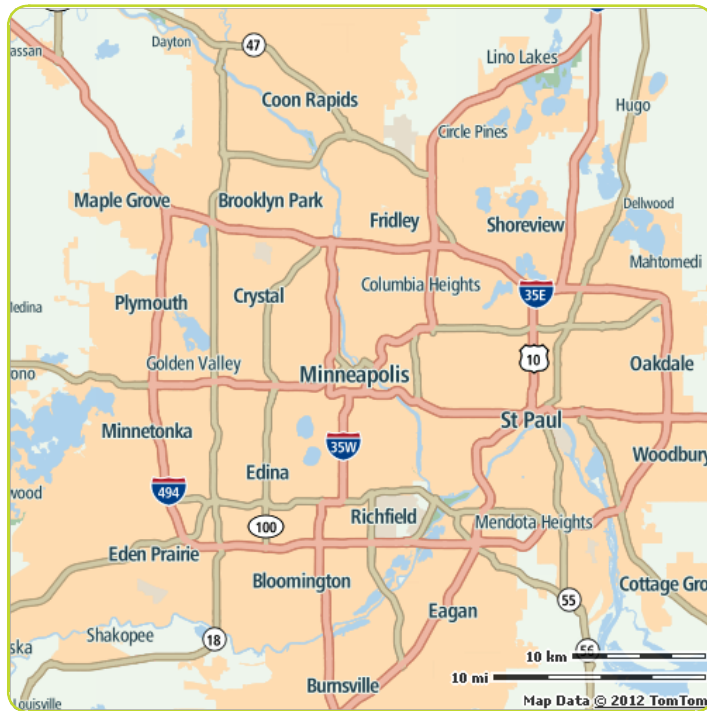
Ranking

Ranking of city compared to continent	35/59
Congestion level on highways	11%
Congestion level on non-highways	22%
Delay per hour driven in peak period	21 min
Delay per year with a 30 min commute	59 h

Most congested specific day	Tue 11 Dec 2012
Total network length	3 454 mi
Total network length highways	684 mi
Total network length non-highways	2 771 mi
Total vehicle miles	10 801 062 mi

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
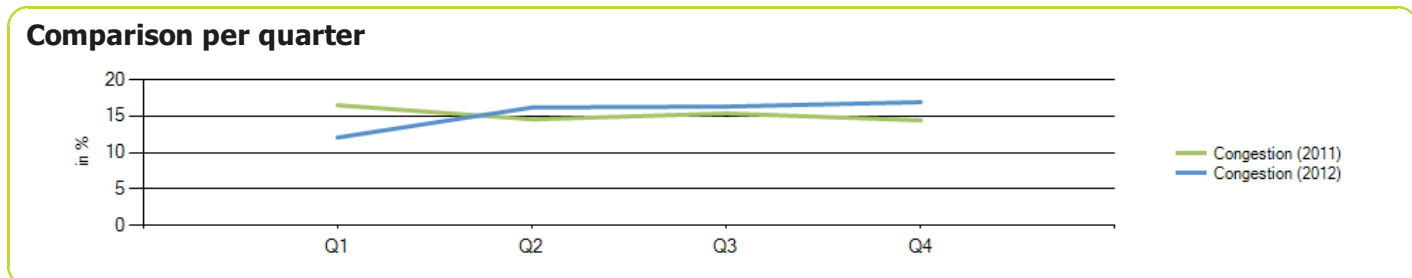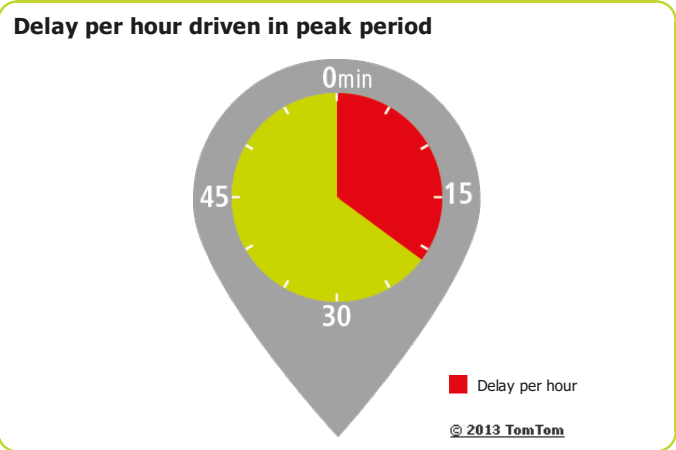
Montreal

Congestion level

25%

Ranking

Ranking of city compared to continent	10/59
Congestion level on highways	22%
Congestion level on non-highways	29%
Delay per hour driven in peak period	36 min
Delay per year with a 30 min commute	86 h
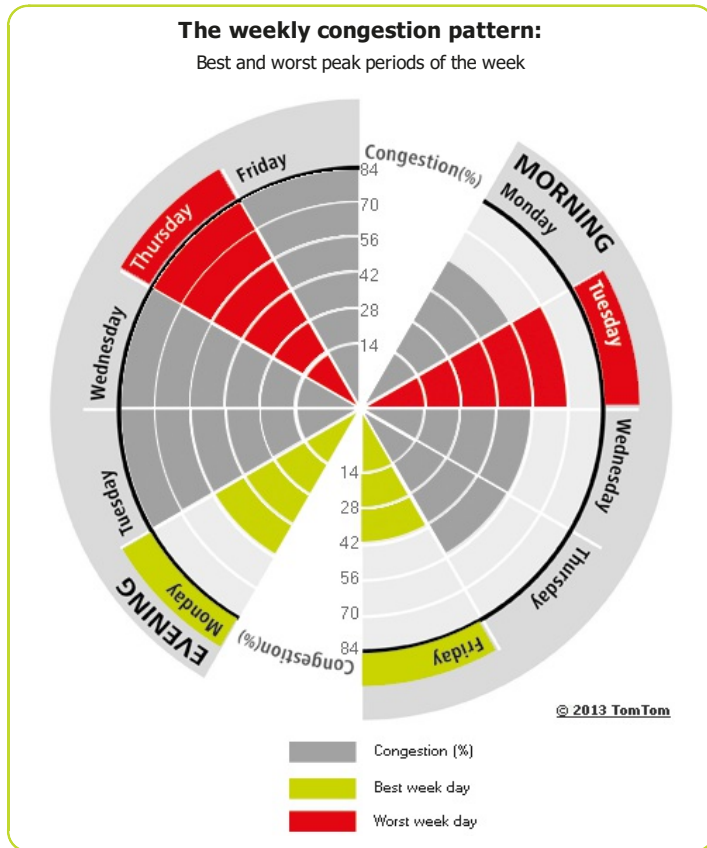
Most congested specific day	Thu 27 Dec 2012
Total network length	1 289 mi
Total network length highways	500 mi
Total network length non-highways	789 mi
Total vehicle miles	14 441 663 mi

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Nashville

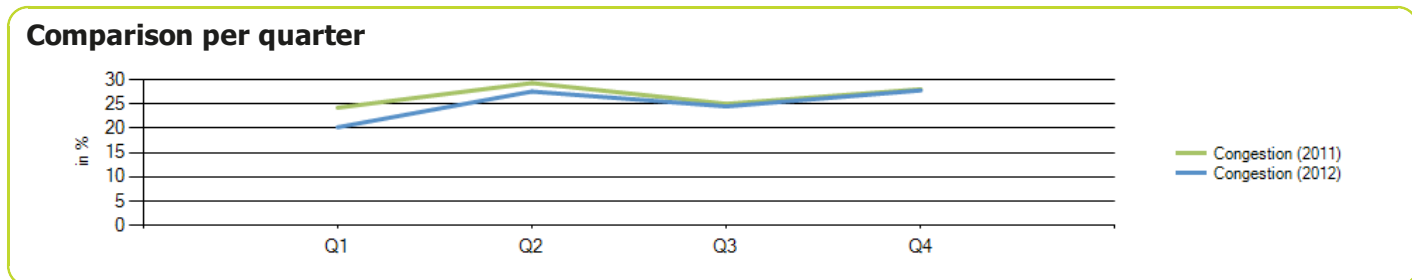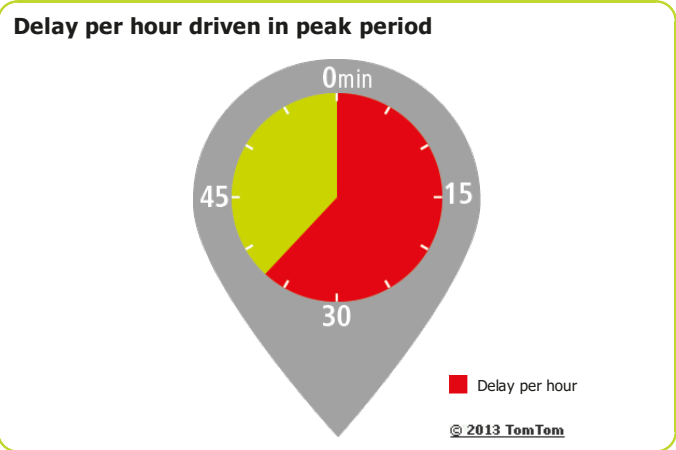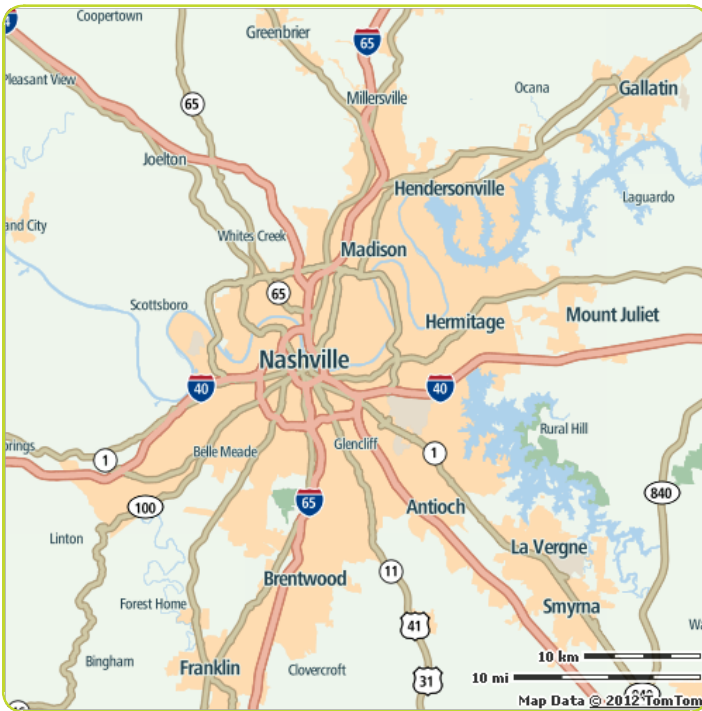## Congestion level

18%

Ranking

Ranking of city compared to continent	30/59
Congestion level on highways	12%
Congestion level on non-highways	36%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
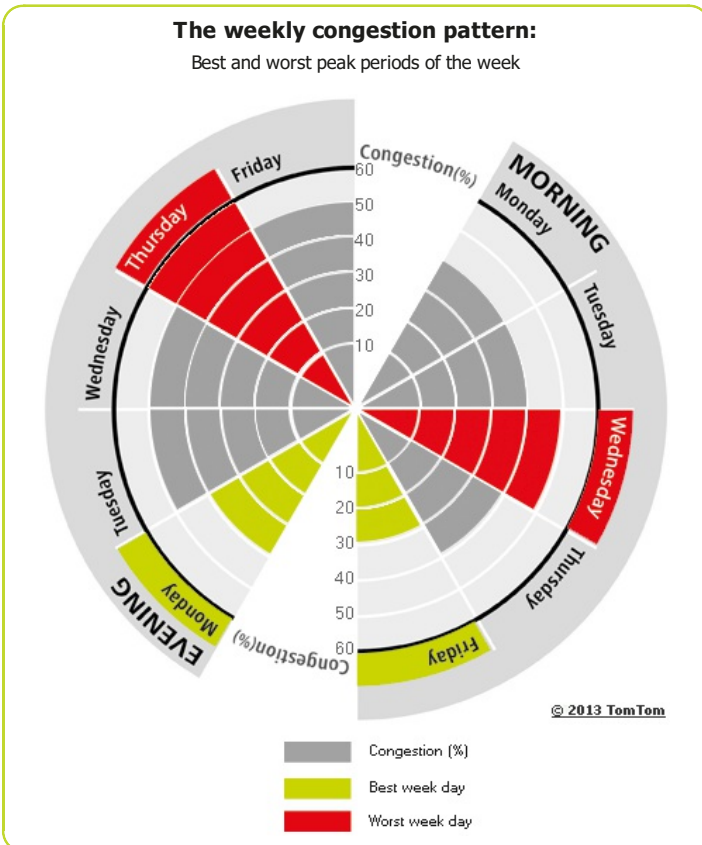
Most congested specific day	Thu 8 Mar 2012
Total network length	673 mi
Total network length highways	231 mi
Total network length non-highways	442 mi
Total vehicle miles	4 780 139 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

New Orleans

Congestion level

25%

Ranking

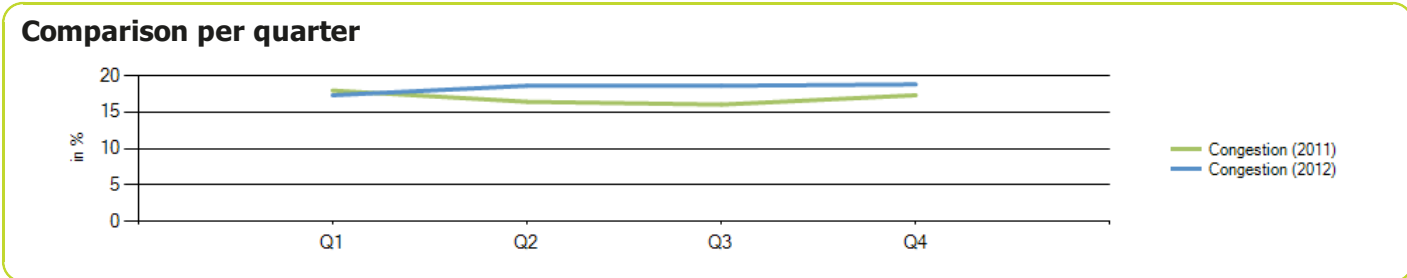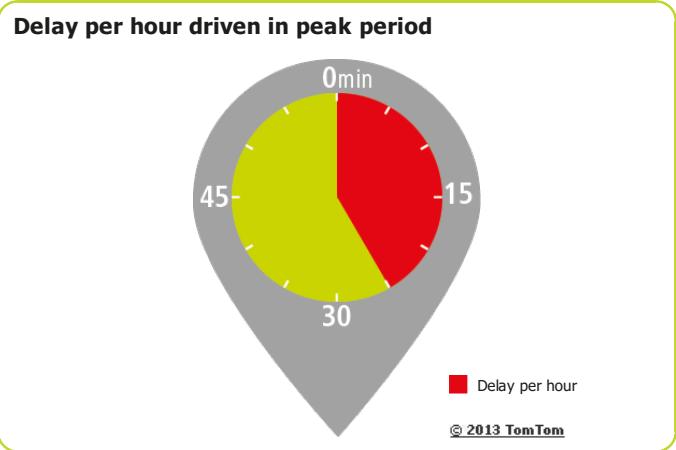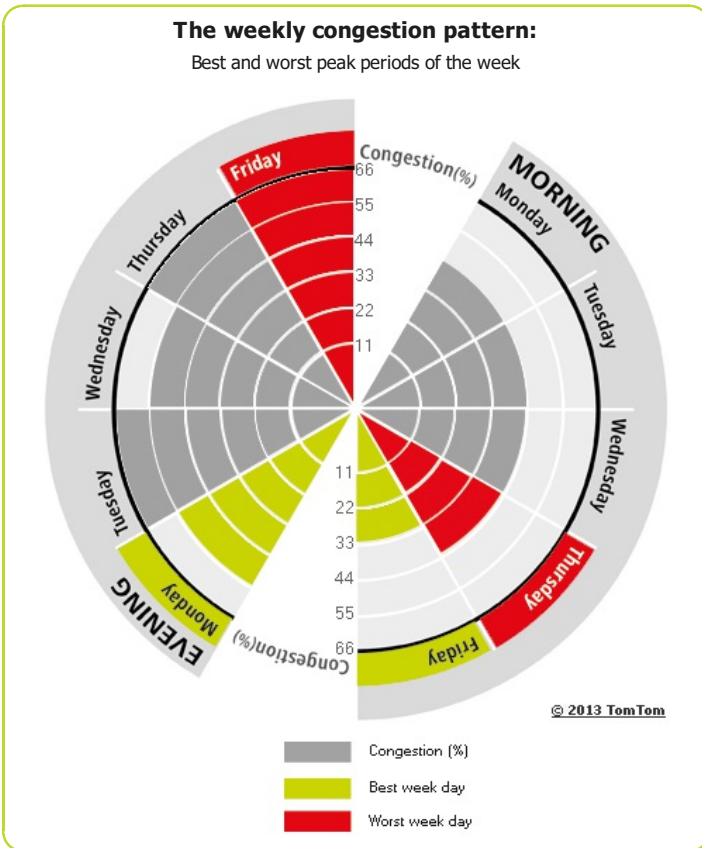|	
Ranking of city compared to continent	9/59
Congestion level on highways	18%
Congestion level on non-highways	28%
Delay per hour driven in peak period	29 min
Delay per year with a 30 min commute	74 h

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom

Most congested specific day	Sun 19 Feb 2012
Total network length	1 005 mi
Total network length highways	65 mi
Total network length non-highways	940 mi
Total vehicle miles	1 951 441 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

New York

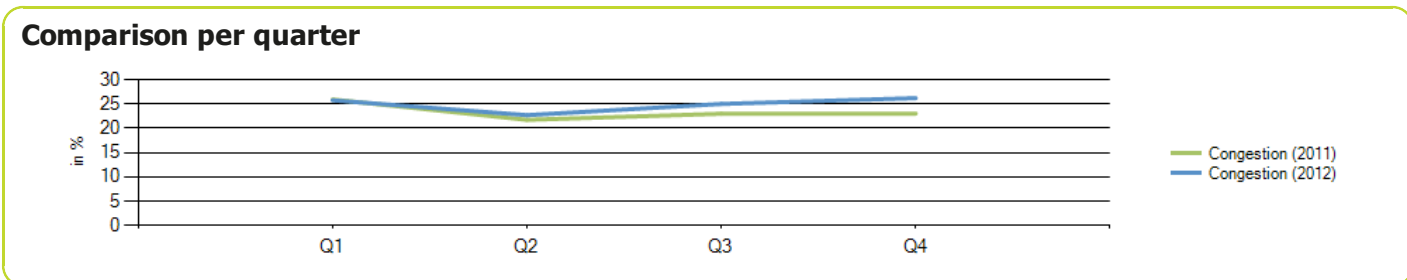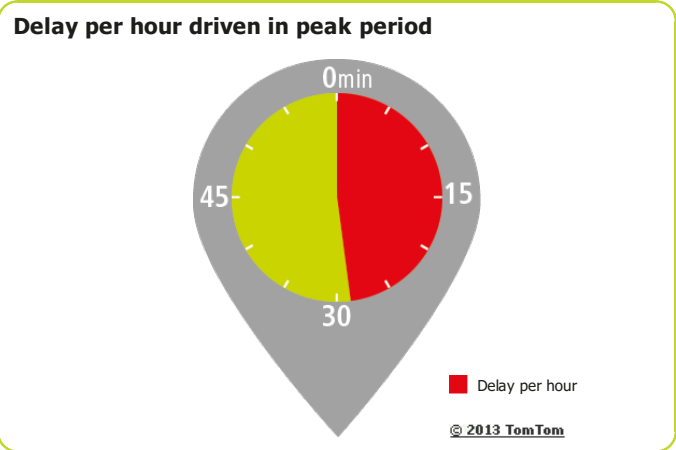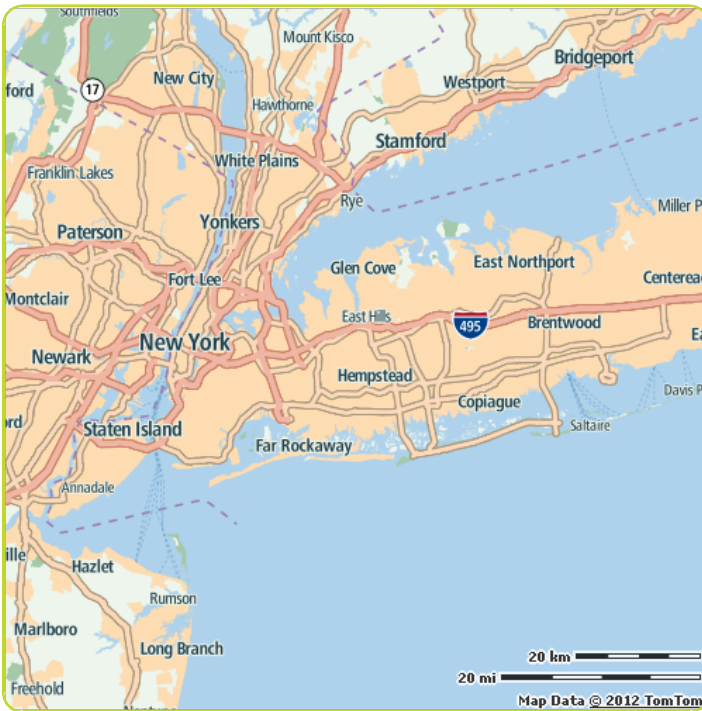## Congestion level

22%

Ranking

Ranking of city compared to continent	14/59
Congestion level on highways	18%
Congestion level on non-highways	29%
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

- Congestion (%)
- Best week day
- Worst week day

© 2013 TomTom
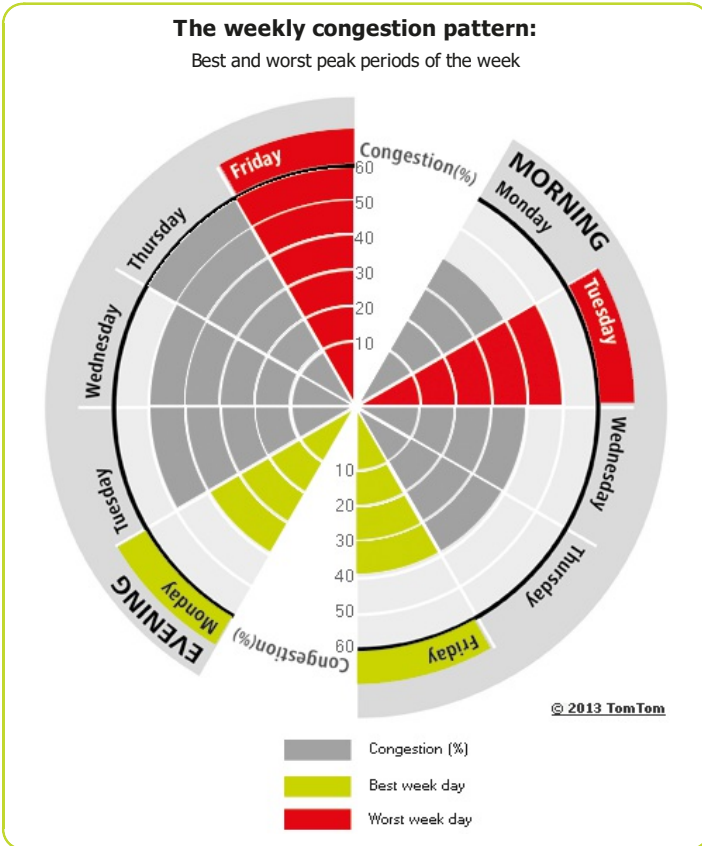
Most congested specific day	Wed 7 Nov 2012
Total network length	9 424 mi
Total network length highways	2 131 mi
Total network length non-highways	7 294 mi
Total vehicle miles	58 899 501 mi

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

- Congestion (2011)
- Congestion (2012)

Oklahoma City

Congestion level

10%

Ranking

Ranking of city compared to continent	58/59
Congestion level on highways	6%
Congestion level on non-highways	23%
Delay per hour driven in peak period	14 min
Delay per year with a 30 min commute	43 h

The weekly congestion pattern:

Best and worst peak periods of the week

- Congestion (%)
- Best week day
- Worst week day

© 2013 TomTom
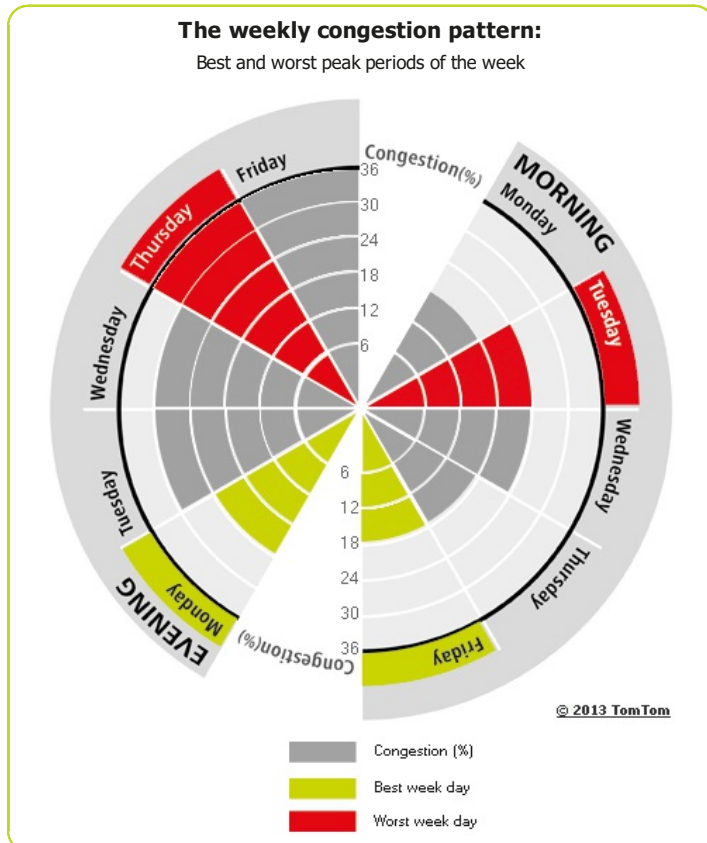
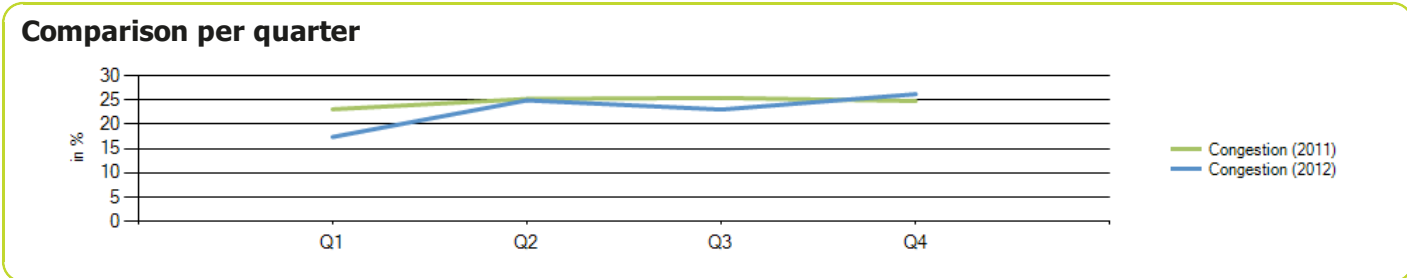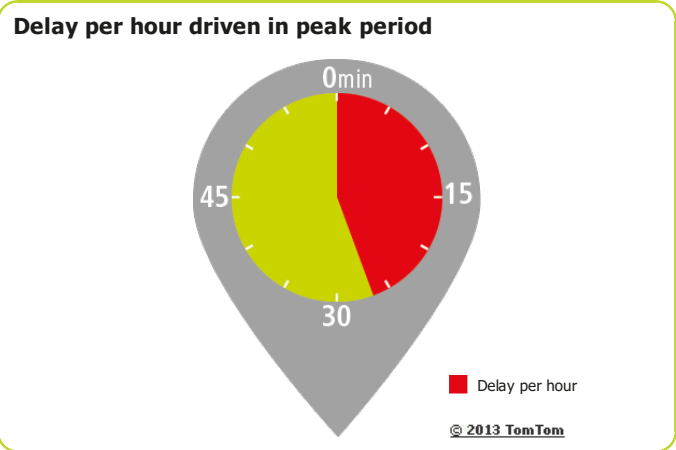|	
Most congested specific day	Tue 25 Dec 2012
Total network length	804 mi
Total network length highways	332 mi
Total network length non-highways	472 mi
Total vehicle miles	2 746 670 mi

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

- Congestion (2011)
- Congestion (2012)

Orlando

Congestion level
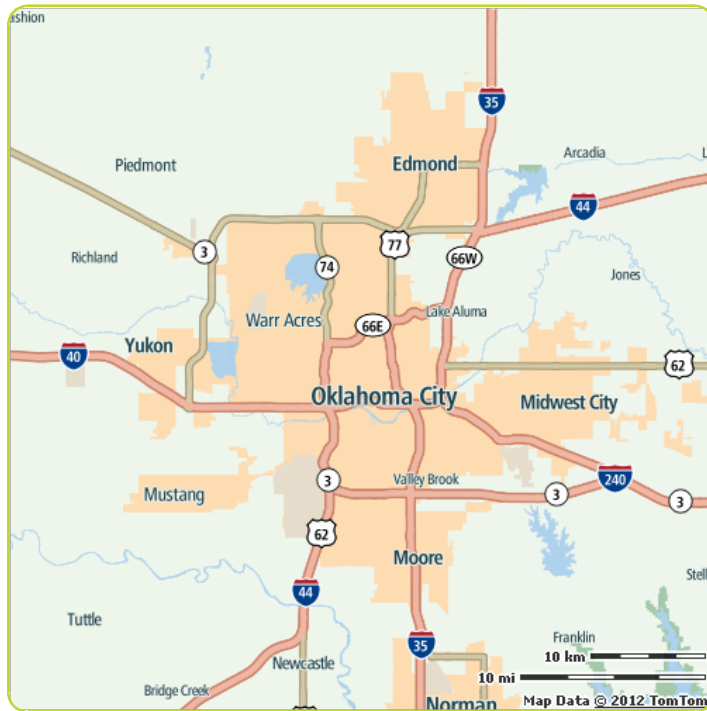
20%

Ranking

Ranking of city compared to continent	22/59
Congestion level on highways	8%
Congestion level on non-highways	29%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day
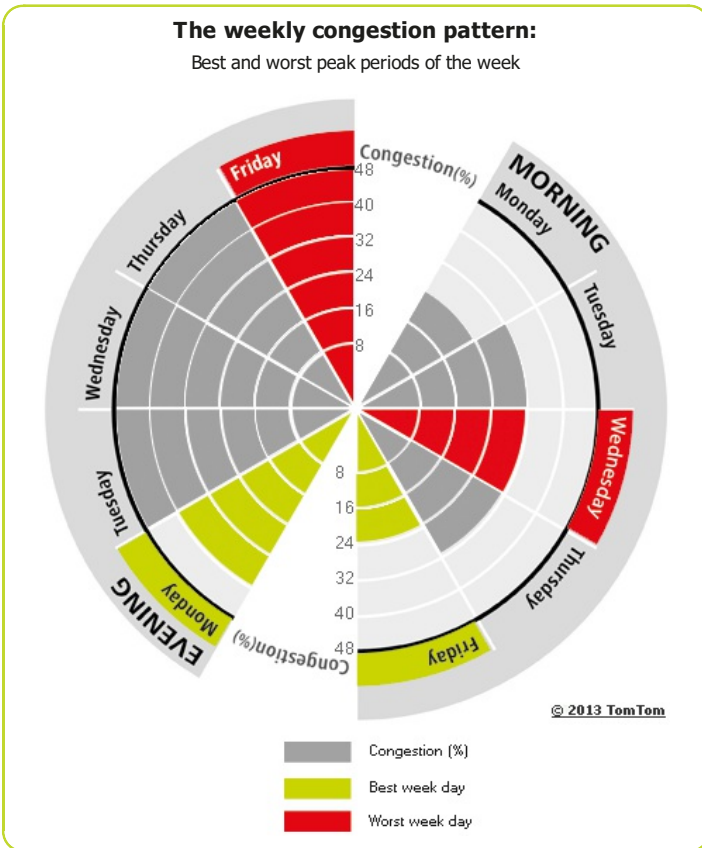
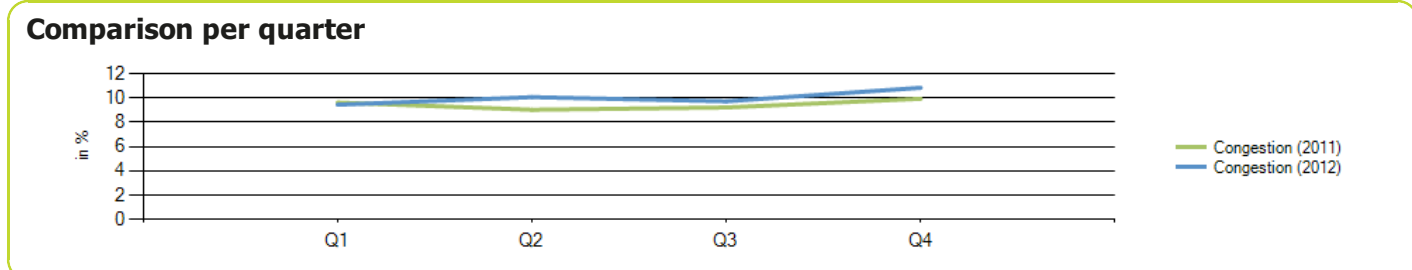|	
Most congested specific day	Wed 26 Dec 2012
Total network length	1 996 mi
Total network length highways	286 mi
Total network length non-highways	1 709 mi
Total vehicle miles	12 410 473 mi

Delay per hour driven in peak period

Delay per hour
© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Ottawa

Map Data © 2012 TomTom

Congestion level

21%
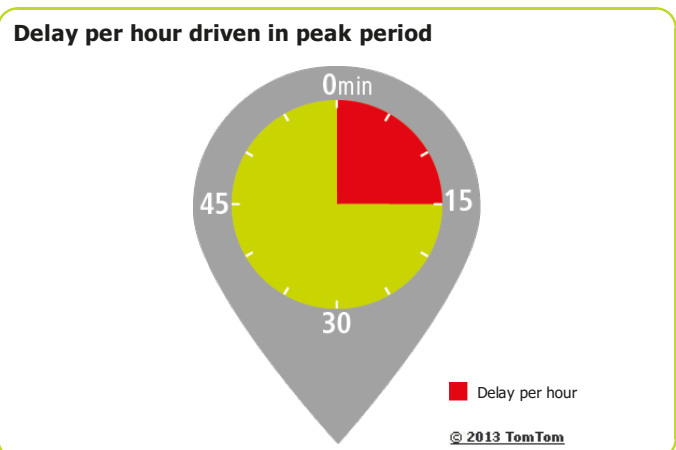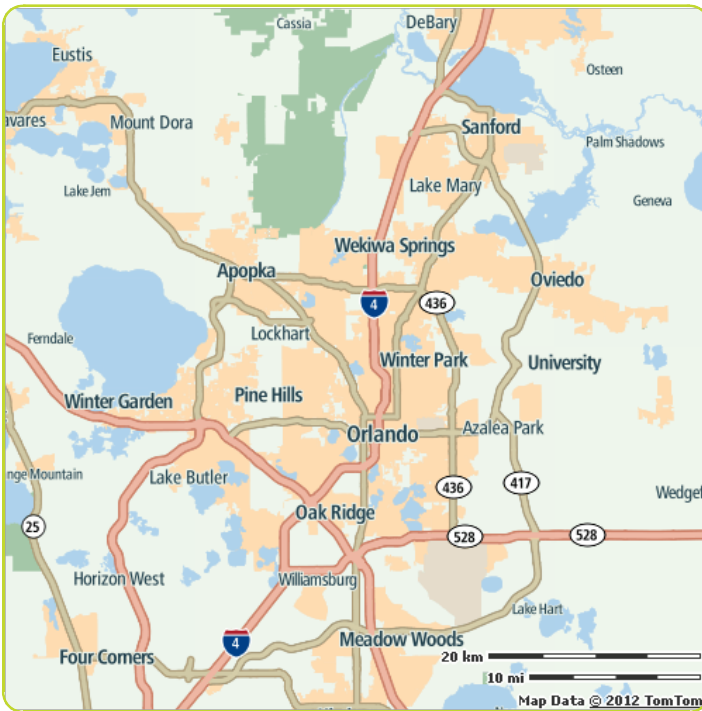
Ranking

Ranking of city compared to continent	18/59
Congestion level on highways	17%
Congestion level on non-highways	29%
Delay per hour driven in peak period	40 min
Delay per year with a 30 min commute	92 h
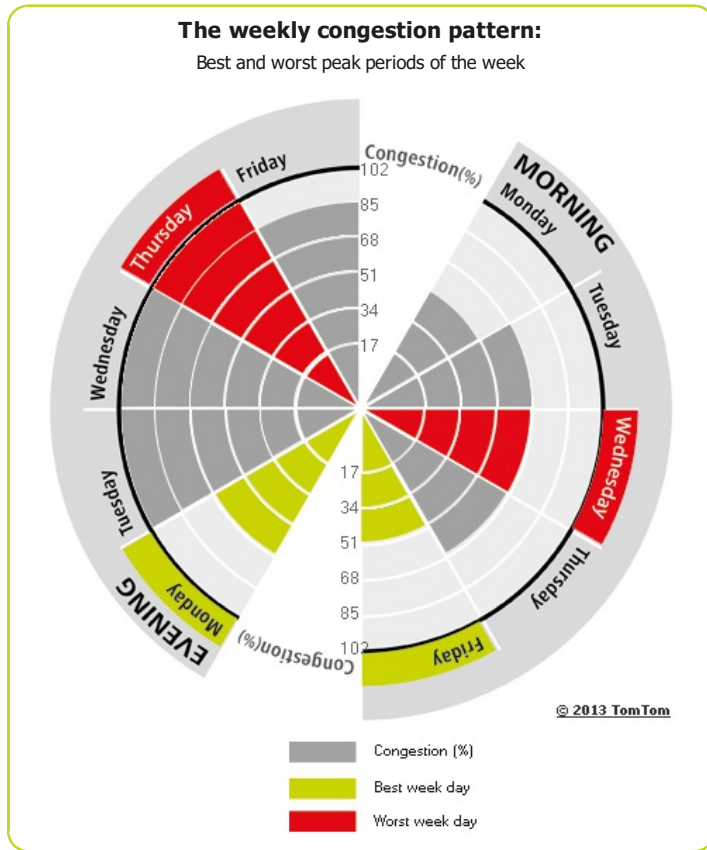
Most congested specific day	Thu 12 Jan 2012
Total network length	234 mi
Total network length highways	82 mi
Total network length non-highways	152 mi
Total vehicle miles	1 900 481 mi

The weekly congestion pattern:
Best and worst peak periods of the week

© 2013 TomTom

- Congestion (%)
- Best week day
- Worst week day

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

- Congestion (2011)
- Congestion (2012)

Philadelphia

Congestion level

19%
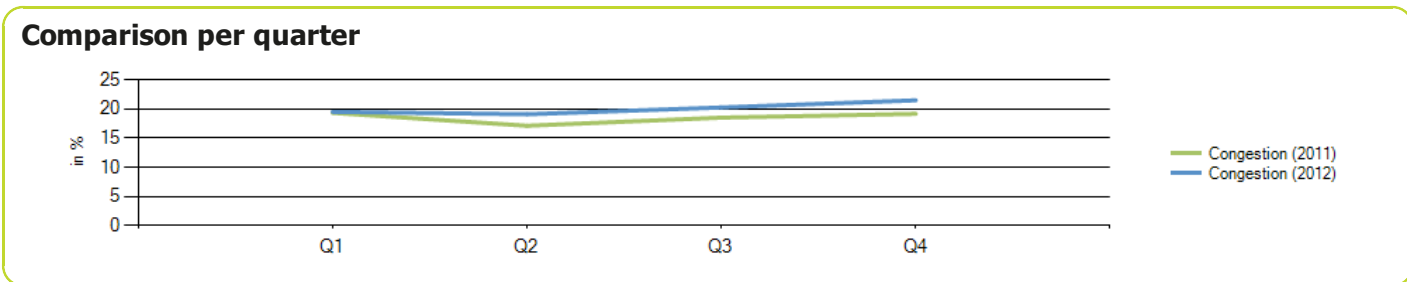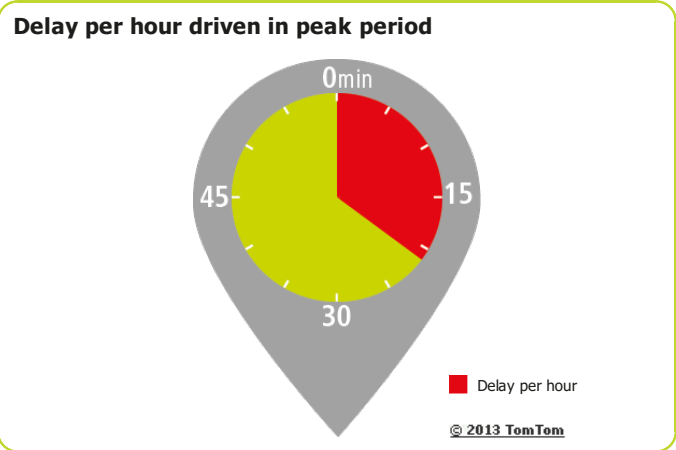
Ranking

Ranking of city compared to continent	28/59
Congestion level on highways	12%
Congestion level on non-highways	27%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
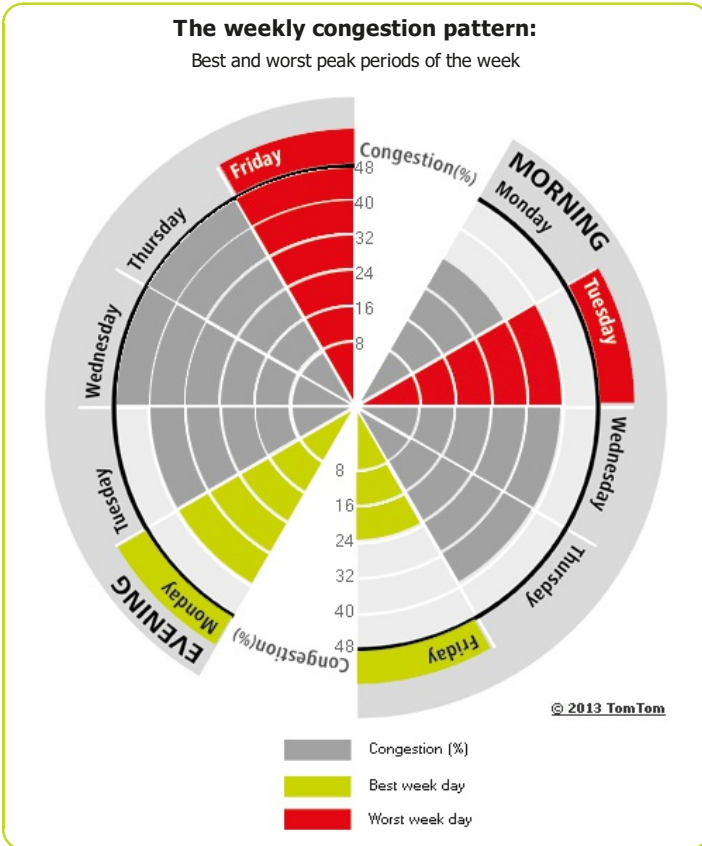
Most congested specific day	Fri 16 Nov 2012
Total network length	3 134 mi
Total network length highways	493 mi
Total network length non-highways	2 641 mi
Total vehicle miles	21 021 608 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Phoenix

Congestion level
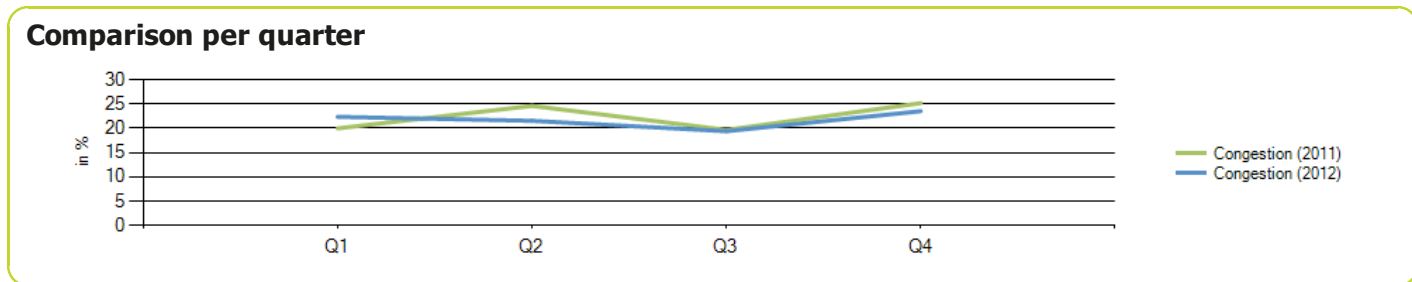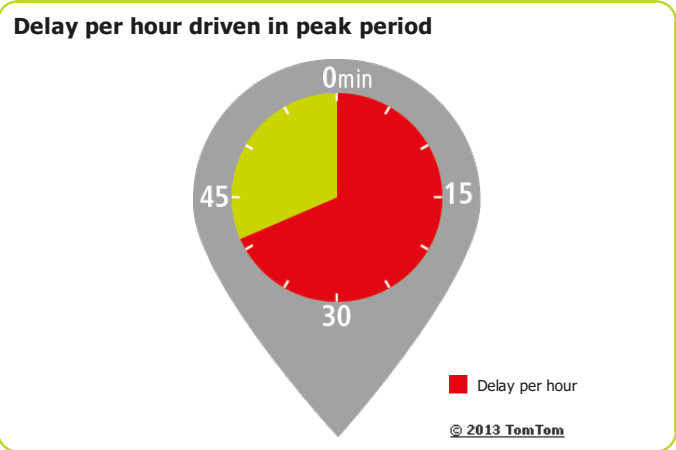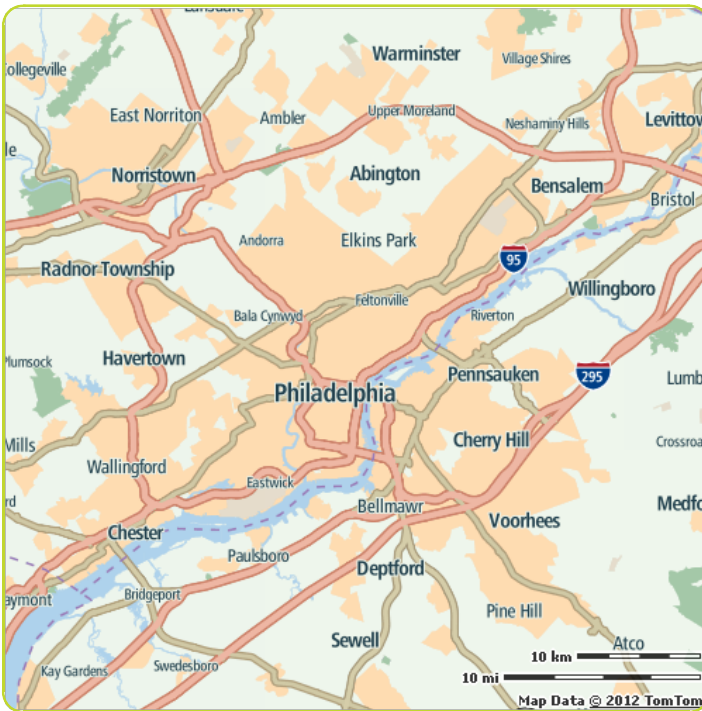
13%

Ranking

Ranking of city compared to continent	49/59
Congestion level on highways	7%
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

Congestion (%)

Best week day

Worst week day
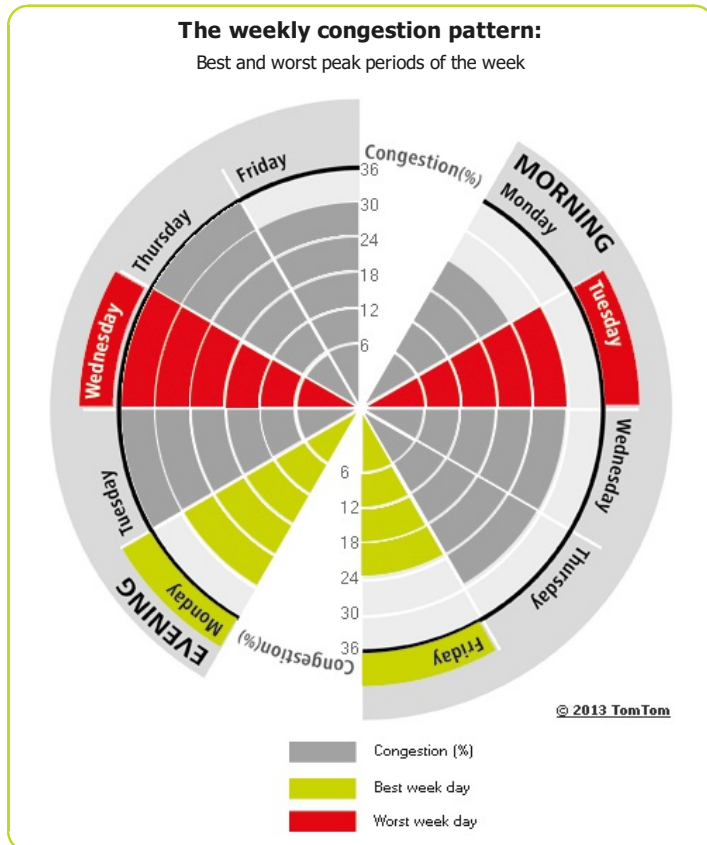
Most congested specific day	Thu 15 Nov 2012
Total network length	4 003 mi
Total network length highways	485 mi
Total network length non-highways	3 518 mi
Total vehicle miles	11 538 188 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
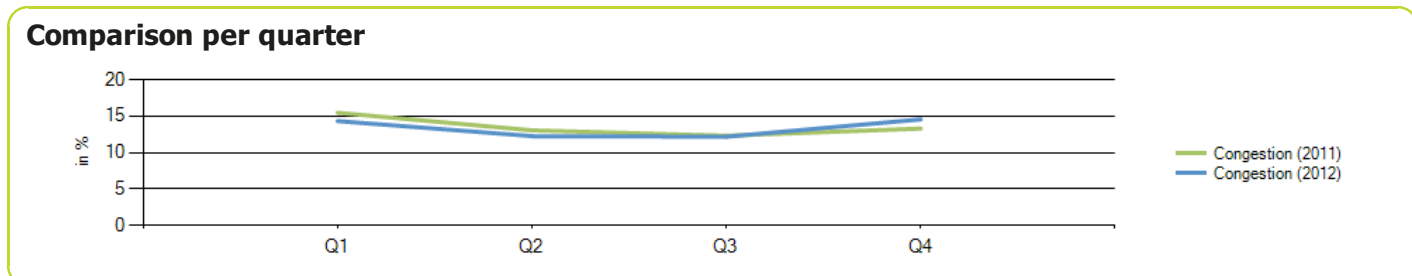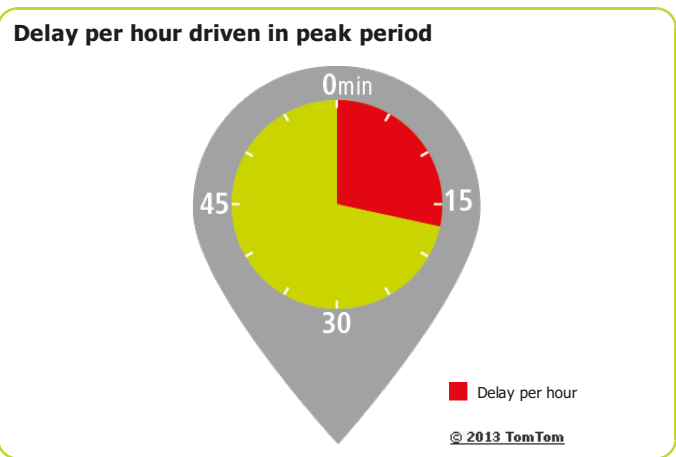
Pittsburgh

Congestion level
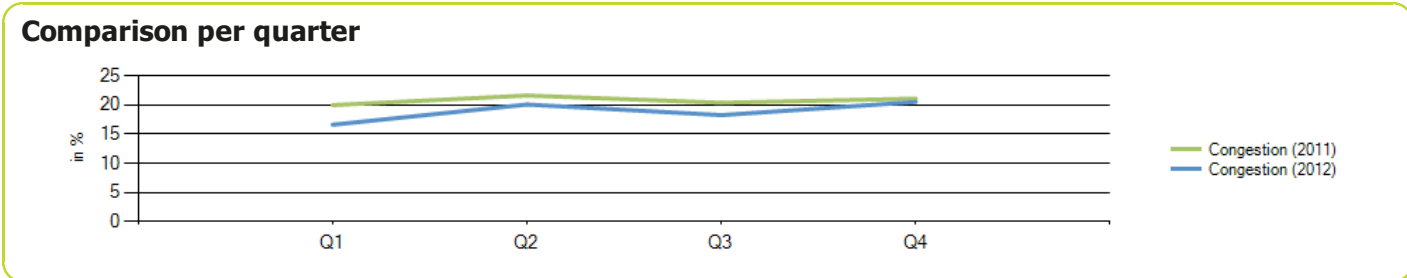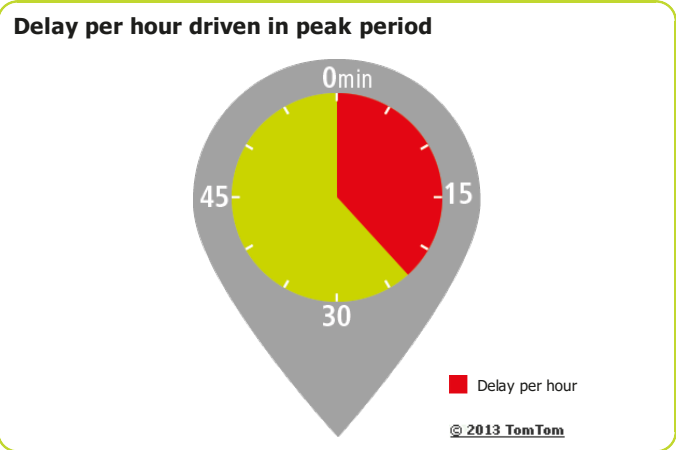
20%
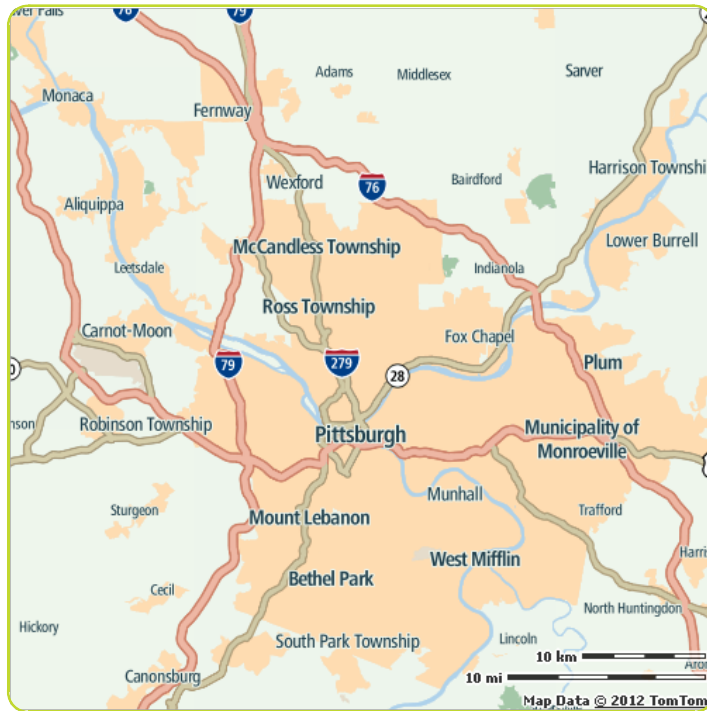
Ranking

Ranking of city compared to continent	20/59
Congestion level on highways	12%
Congestion level on non-highways	29%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
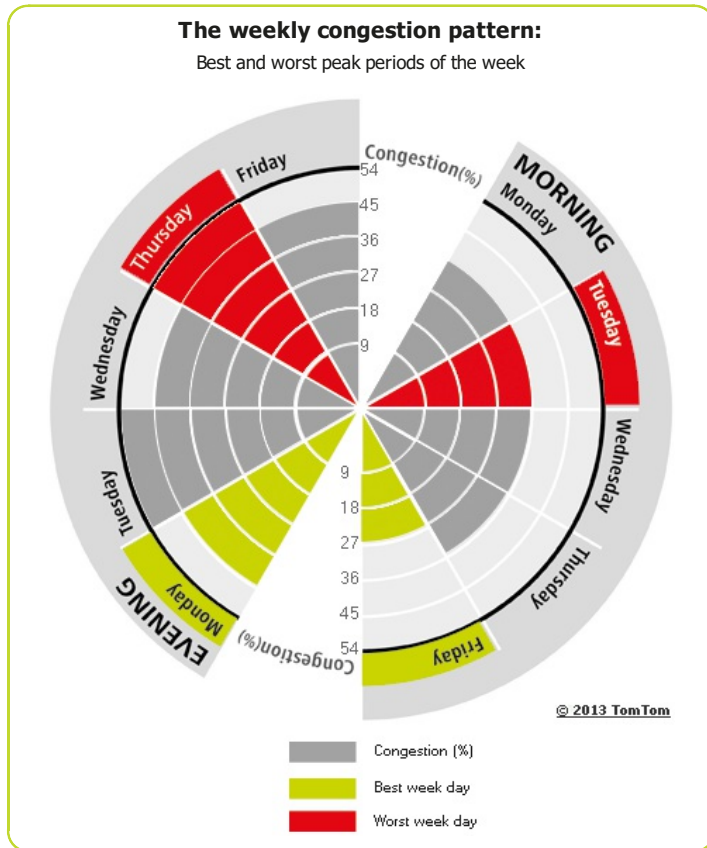
Most congested specific day	Tue 3 Jan 2012
Total network length	1 738 mi
Total network length highways	288 mi
Total network length non-highways	1 450 mi
Total vehicle miles	6 095 306 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom

Portland

Congestion level

22%

Ranking

Ranking of city compared to continent	15/59
Congestion level on highways	16%
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

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day
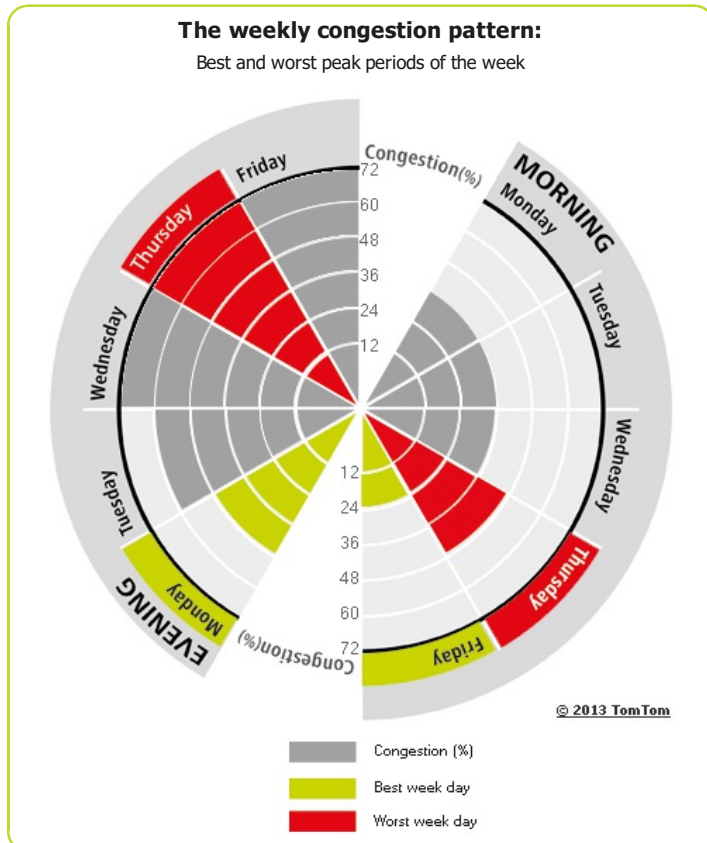
Most congested specific day	Fri 12 Oct 2012
Total network length	2 128 mi
Total network length highways	238 mi
Total network length non-highways	1 890 mi
Total vehicle miles	5 372 176 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Providence

Congestion level

15%

Ranking
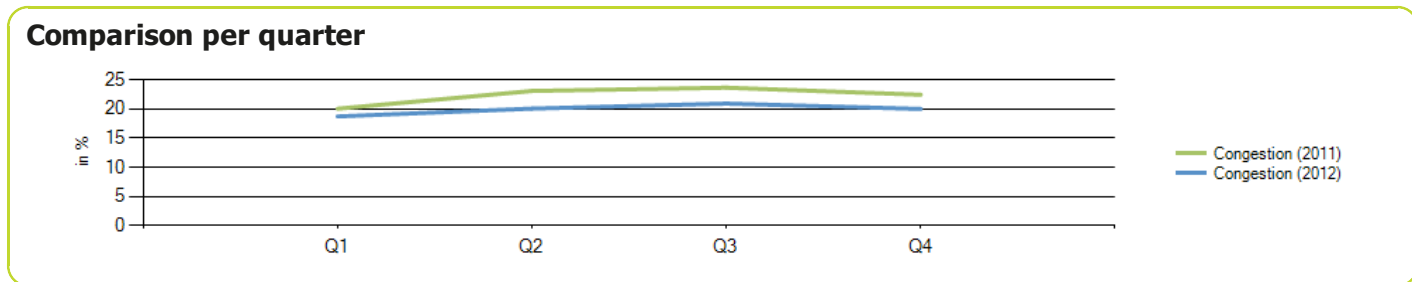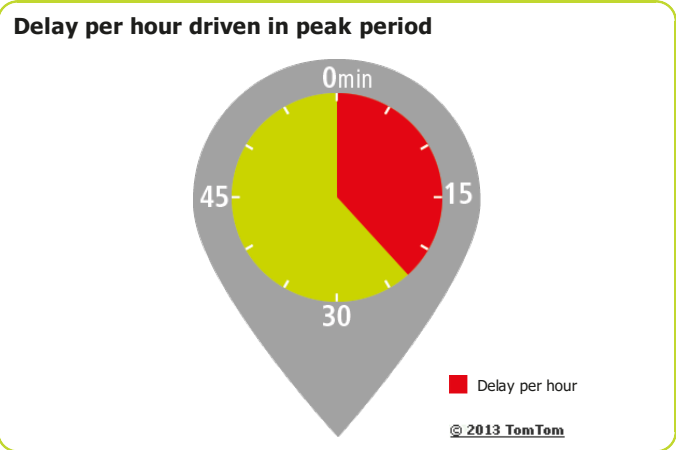
Ranking	
Ranking of city compared to continent	37/59
Congestion level on highways	8%
Congestion level on non-highways	25%
Delay per hour driven in peak period	17 min
Delay per year with a 30 min commute	50 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
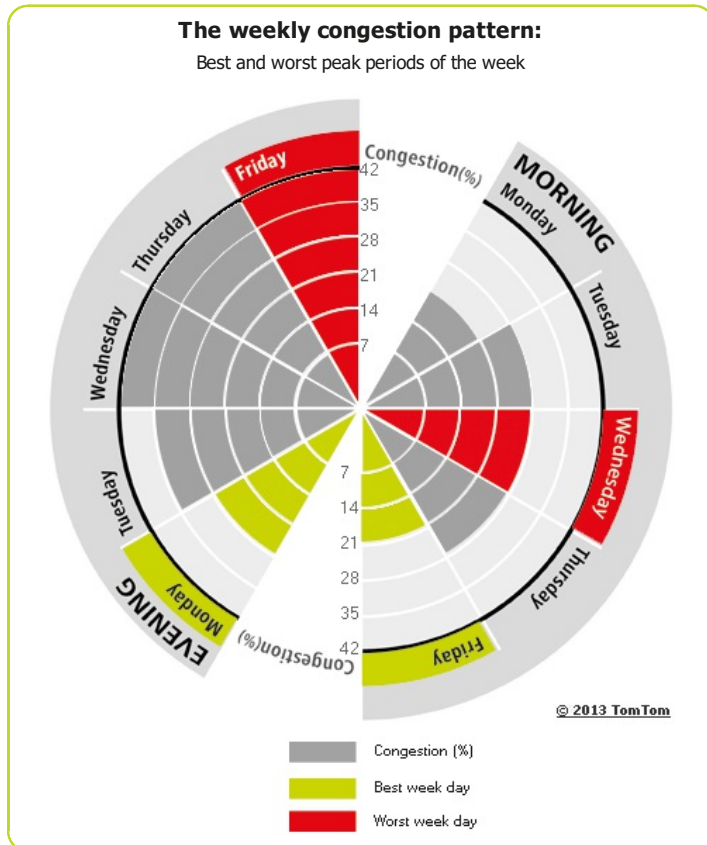
Most congested specific day	Sat 21 Jan 2012
Total network length	999 mi
Total network length highways	146 mi
Total network length non-highways	853 mi
Total vehicle miles	3 256 204 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Raleigh

Map Data © 2012 TomTom

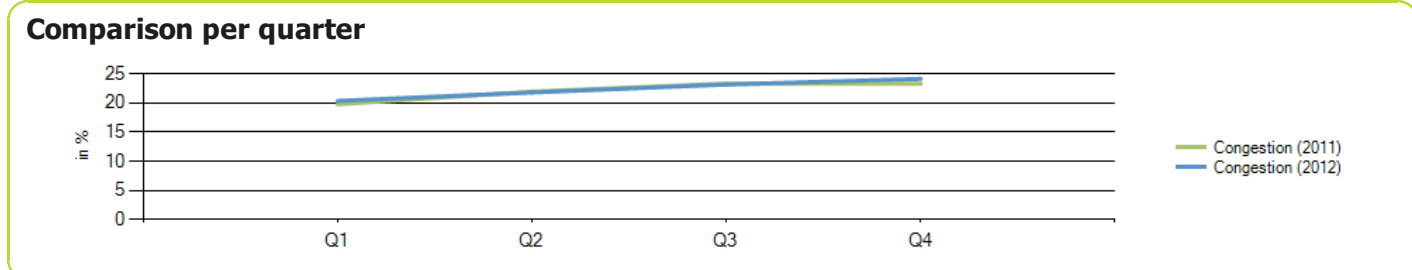## Congestion level
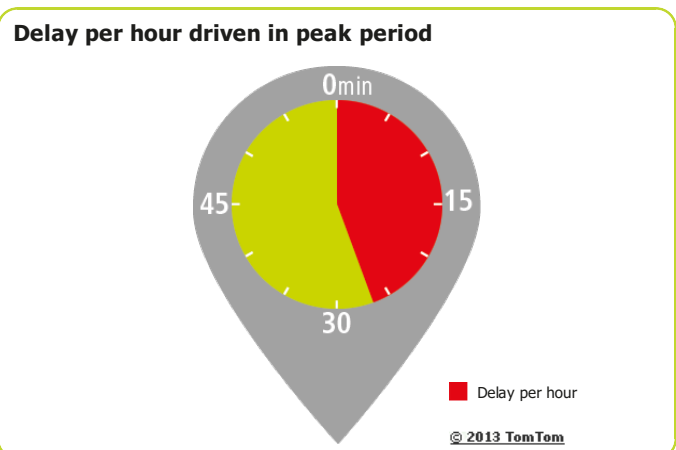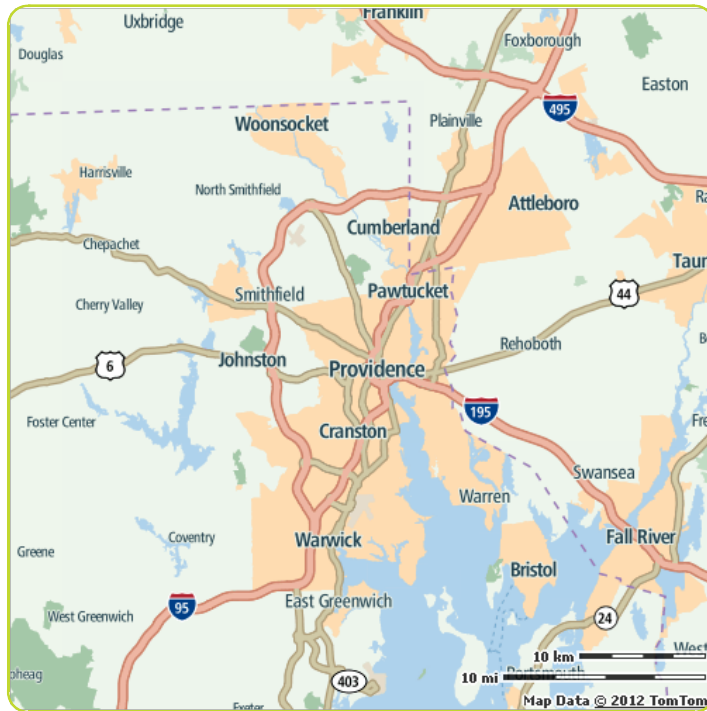
12%

Ranking

Ranking of city compared to continent	54/59
Congestion level on highways	4%
Congestion level on non-highways	22%
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

© 2013 TomTom

- Congestion (%)
- Best week day
- Worst week day
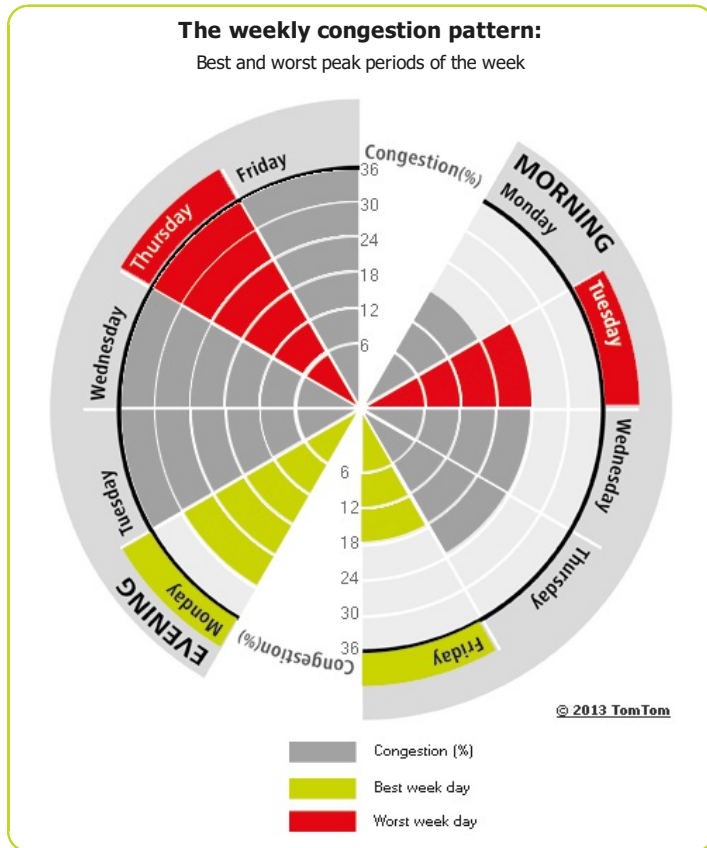
Most congested specific day	Wed 12 Dec 2012
Total network length	723 mi
Total network length highways	166 mi
Total network length non-highways	557 mi
Total vehicle miles	6 224 843 mi

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
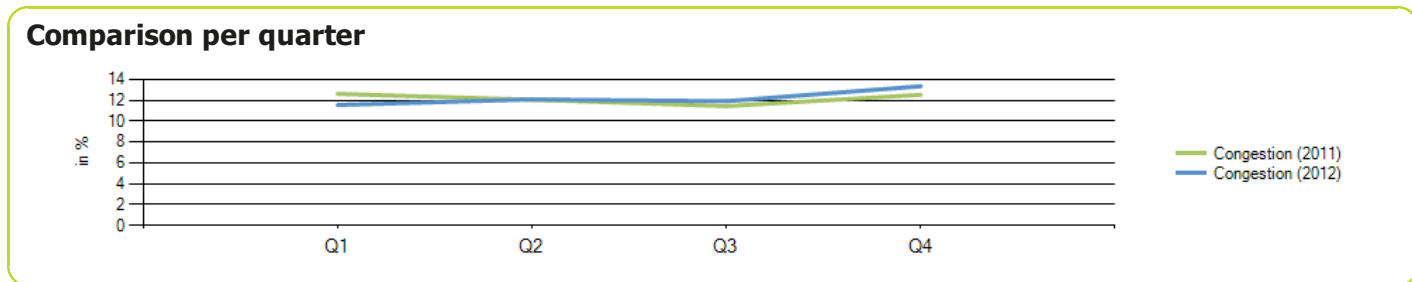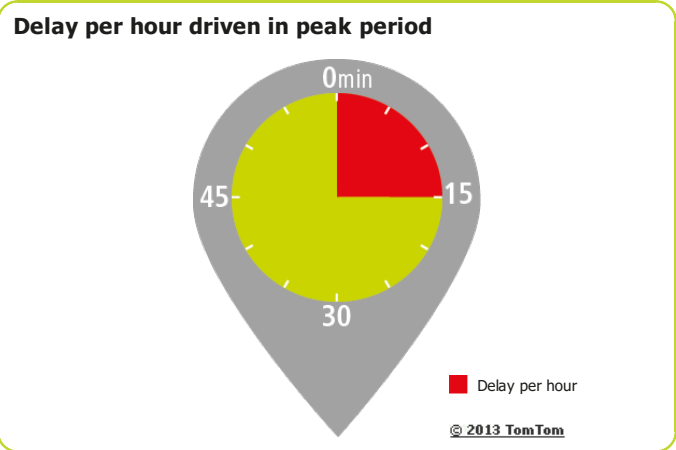
Richmond

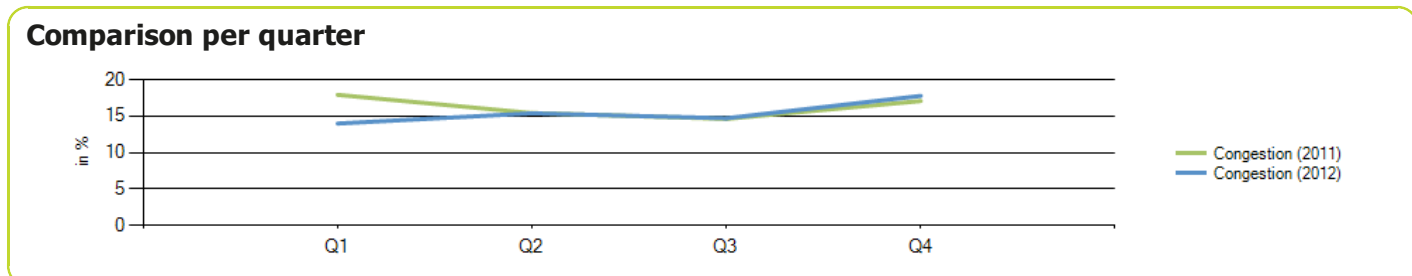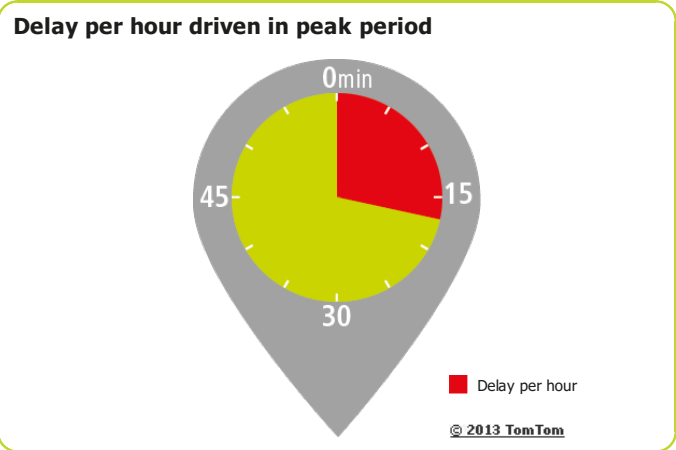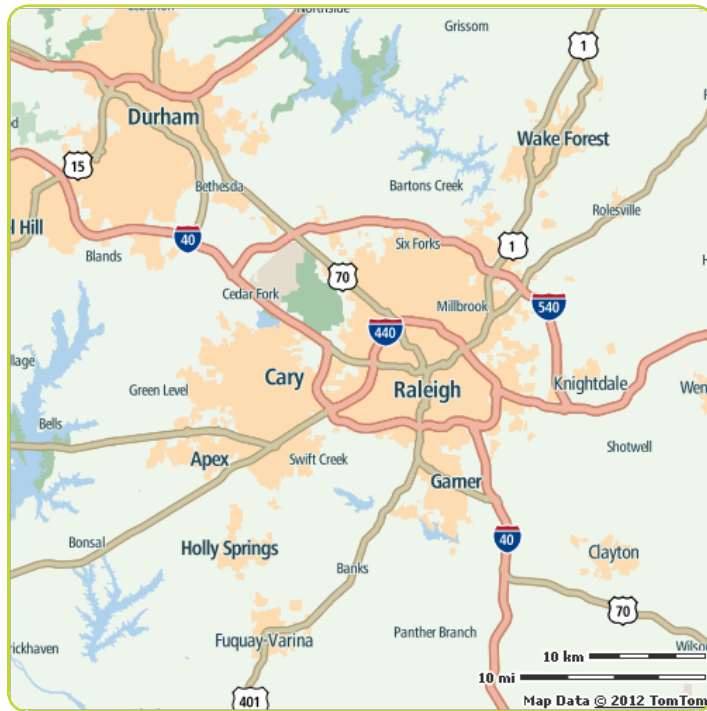### Congestion level

10%

Ranking

Ranking of city compared to continent	57/59
Congestion level on highways	4%
Congestion level on non-highways	19%
Delay per hour driven in peak period	9 min
Delay per year with a 30 min commute	30 h

The weekly congestion pattern:
Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day
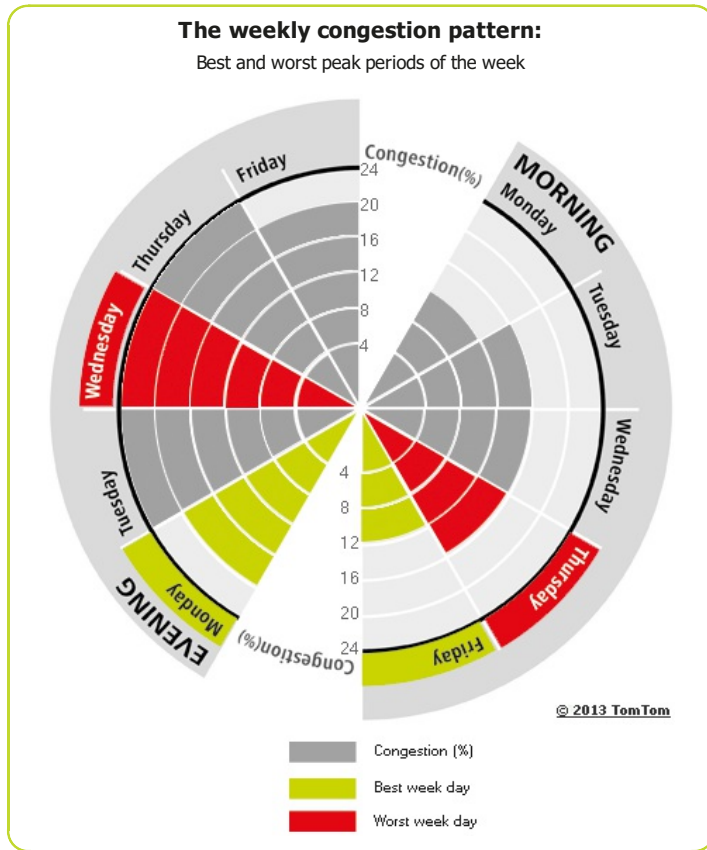
Most congested specific day	Sun 19 Aug 2012
Total network length	1 353 mi
Total network length highways	306 mi
Total network length non-highways	1 047 mi
Total vehicle miles	5 430 300 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
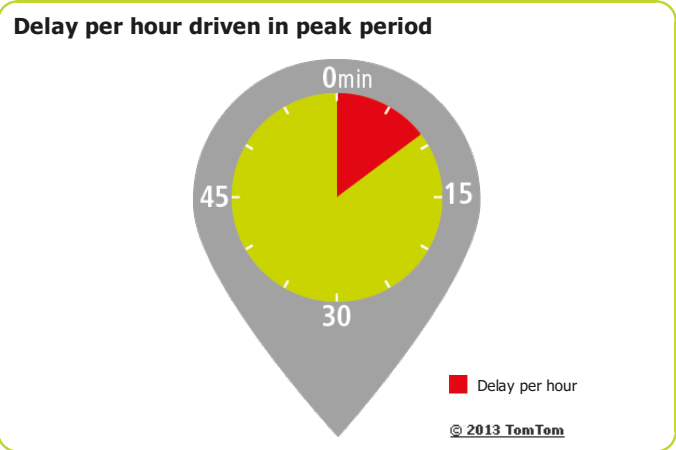
Riverside

Congestion level

15%

Ranking

Ranking of city compared to continent	39/59
Congestion level on highways	10%
Congestion level on non-highways	26%
Delay per hour driven in peak period	19 min
Delay per year with a 30 min commute	55 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)
Best week day
Worst week day
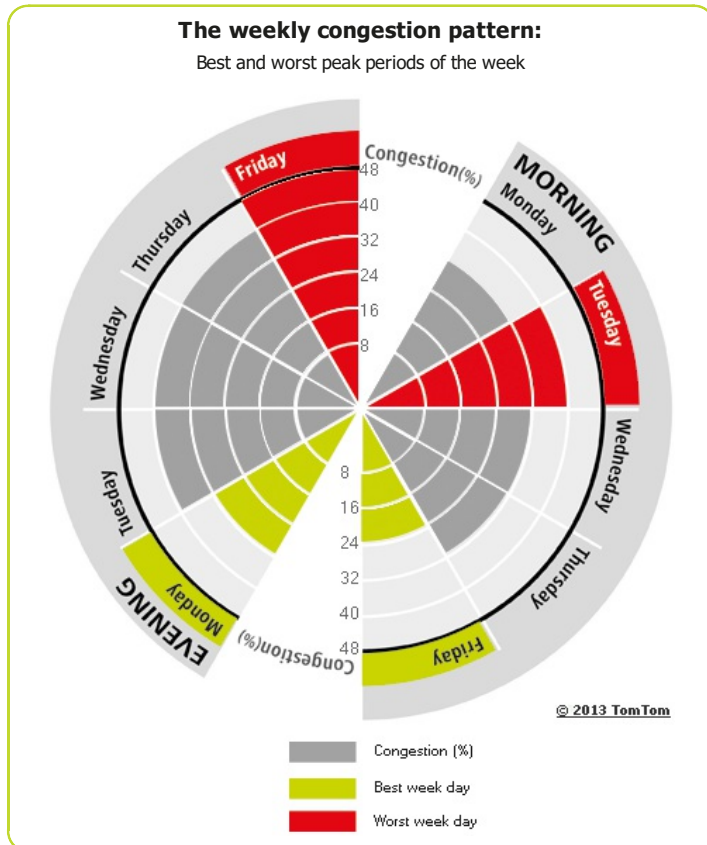
Most congested specific day	Fri 30 Nov 2012
Total network length	1 729 mi
Total network length highways	360 mi
Total network length non-highways	1 369 mi
Total vehicle miles	5 687 367 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
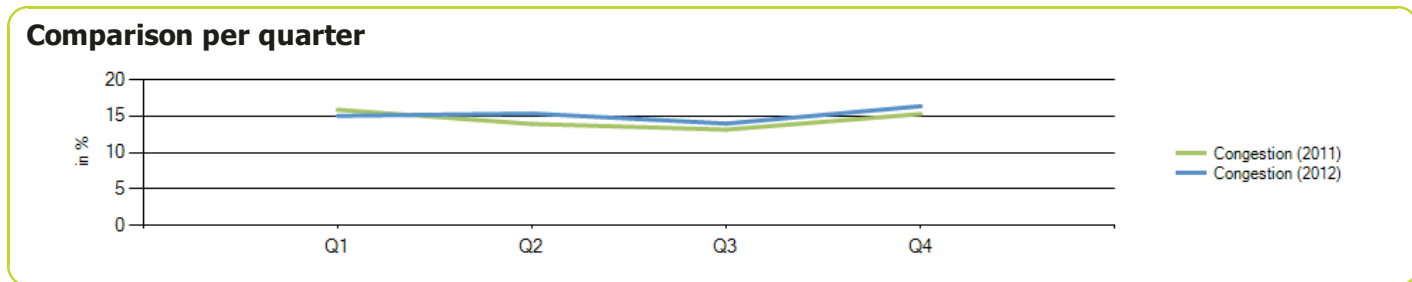
Rochester

Congestion level
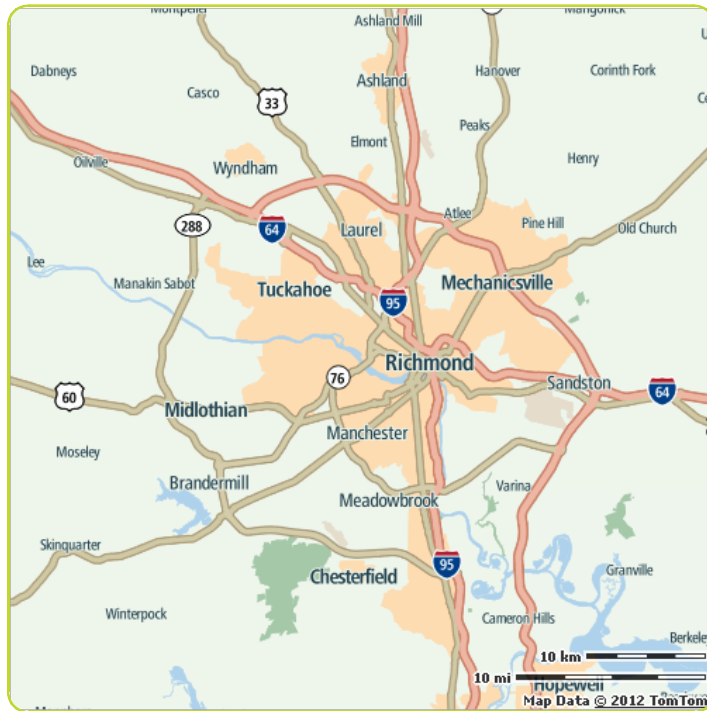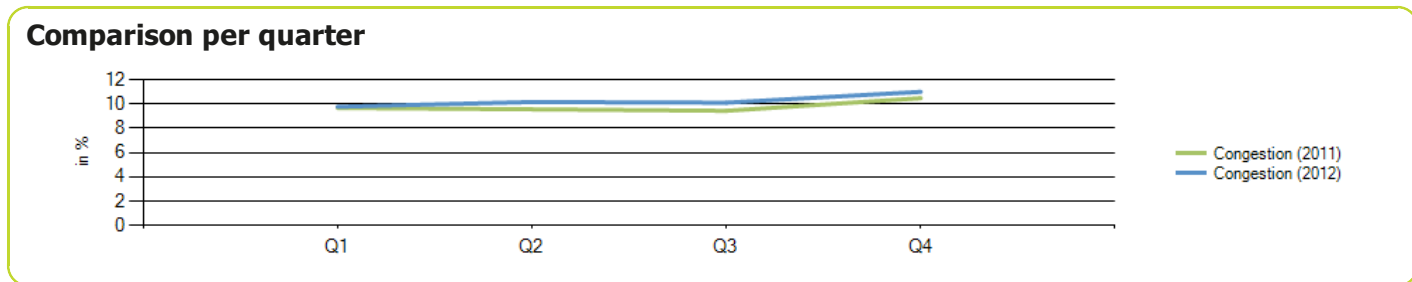
13%

Ranking

Ranking of city compared to continent	53/59
Congestion level on highways	5%
Congestion level on non-highways	17%
Delay per hour driven in peak period	13 min
Delay per year with a 30 min commute	40 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
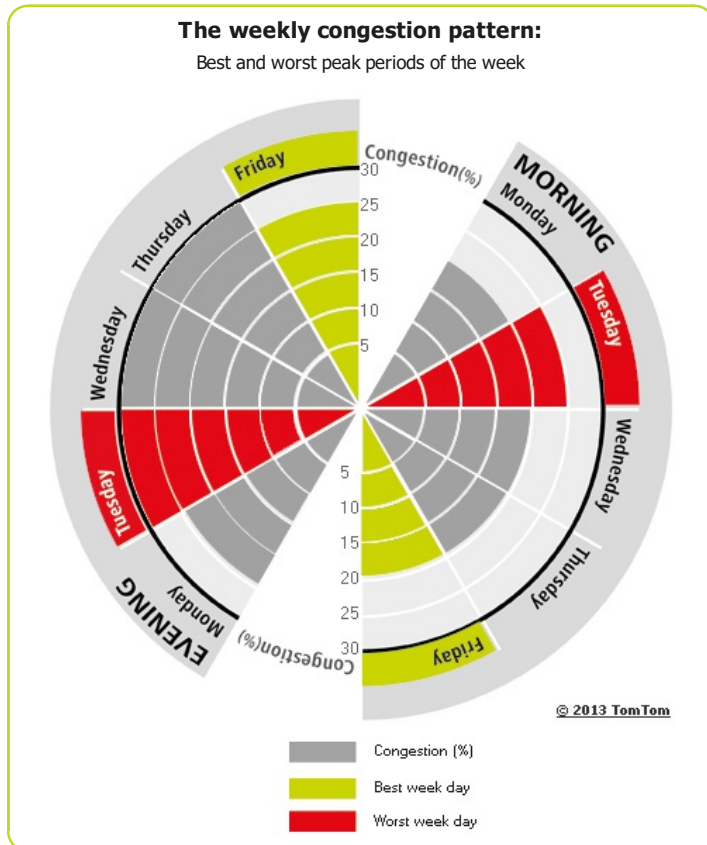
Most congested specific day	Fri 13 Jan 2012
Total network length	553 mi
Total network length highways	63 mi
Total network length non-highways	490 mi
Total vehicle miles	1 291 418 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Sacramento

Map Data © 2012 TomTom

Congestion level

17%

Ranking

Ranking of city compared to continent	31/59
Congestion level on highways	8%
Congestion level on non-highways	25%
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

© 2013 TomTom

- Congestion (%)
- Best week day
- Worst week day
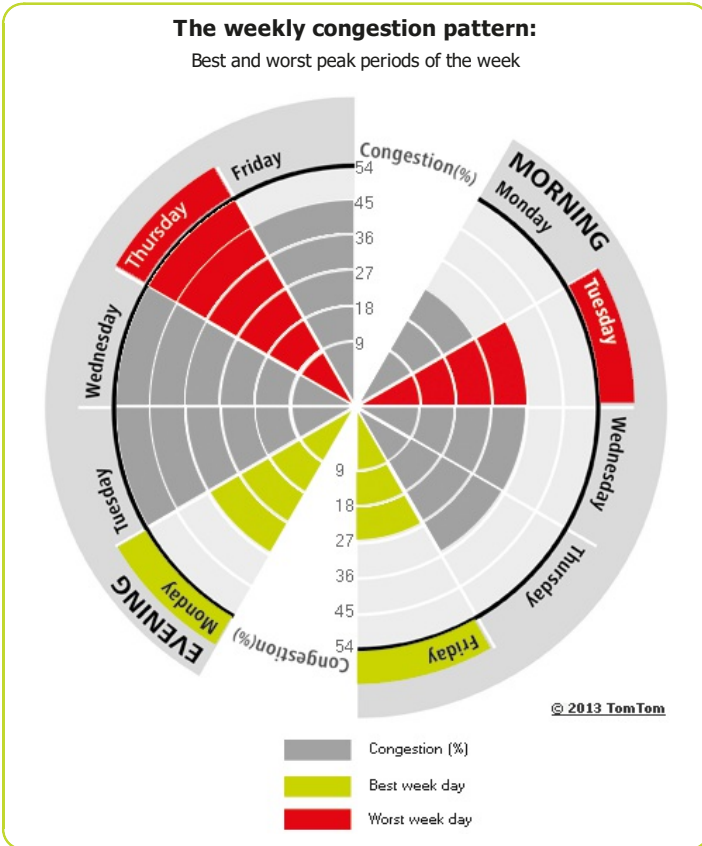
|	
Most congested specific day	Fri 20 Apr 2012
Total network length	1 579 mi
Total network length highways	168 mi
Total network length non-highways	1 411 mi
Total vehicle miles	4 321 787 mi

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

- Congestion (2011)
- Congestion (2012)

Salt Lake City

Congestion level
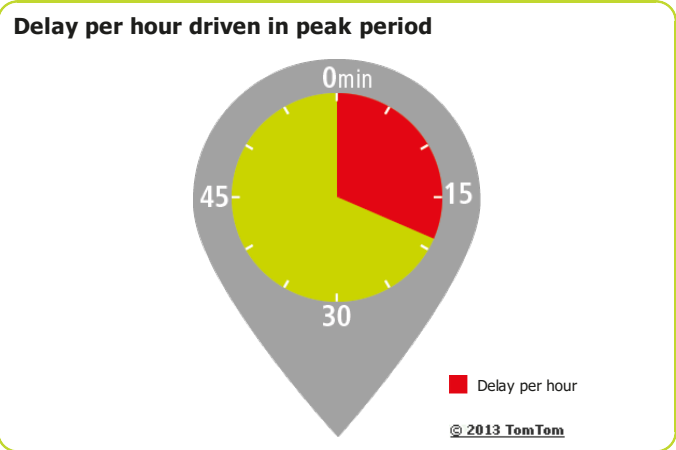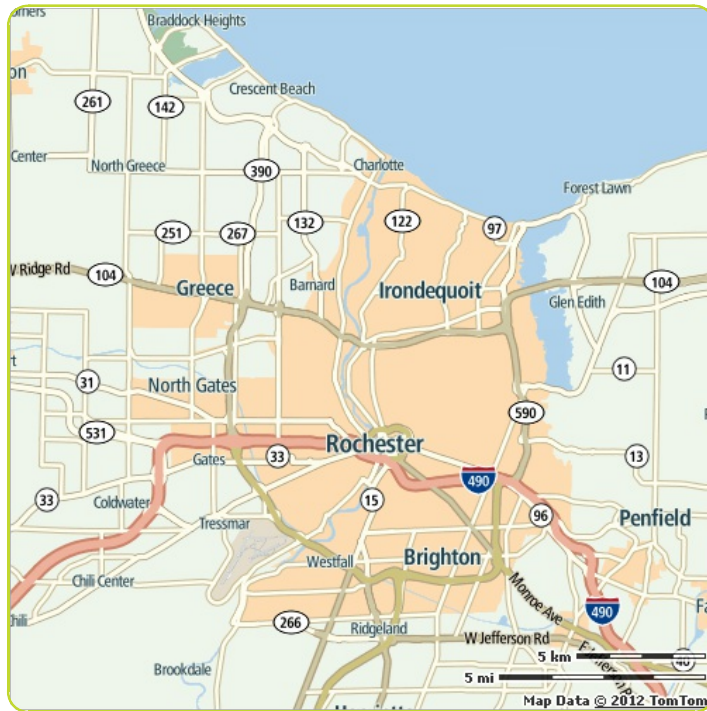
15%

Ranking

Ranking of city compared to continent	41/59
Congestion level on highways	5%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
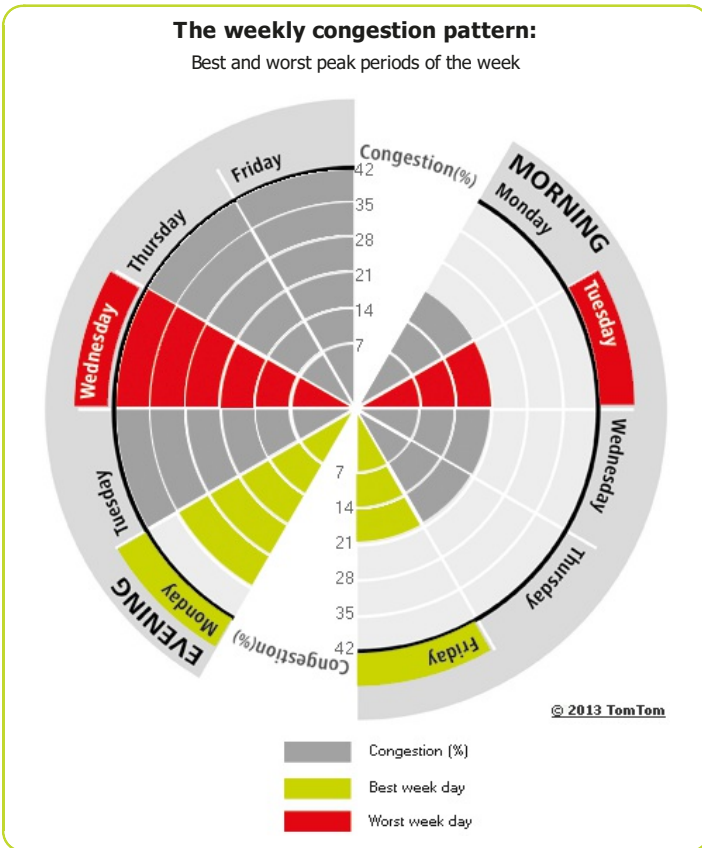
Most congested specific day	Mon 24 Dec 2012
Total network length	887 mi
Total network length highways	167 mi
Total network length non-highways	720 mi
Total vehicle miles	1 662 996 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

San Antonio

Map Data © 2012 TomTom

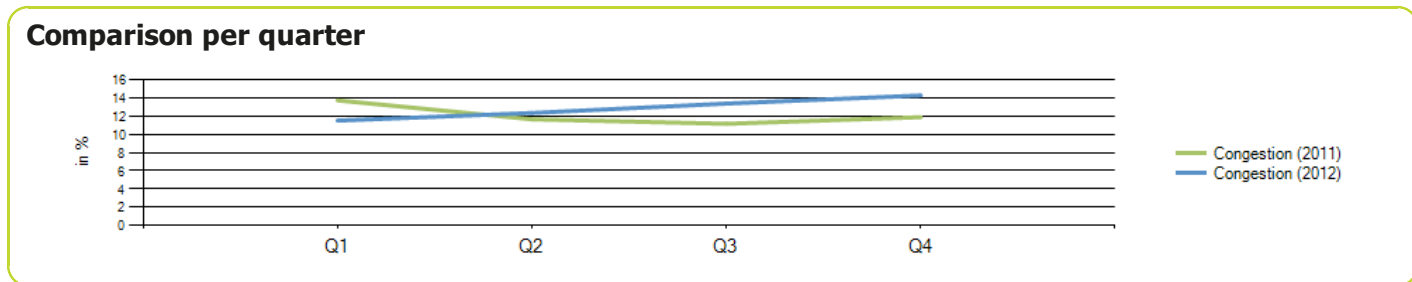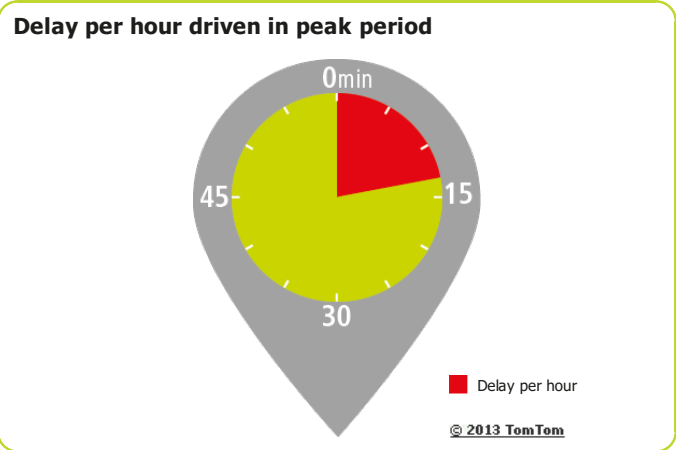## Congestion level
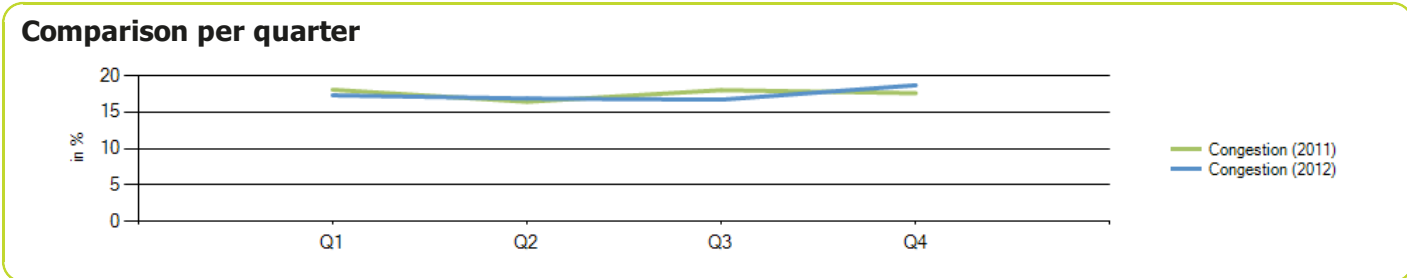
15%

Ranking

Ranking of city compared to continent	36/59
Congestion level on highways	9%
Congestion level on non-highways	23%
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

© 2013 TomTom

- Congestion (%)
- Best week day
- Worst week day
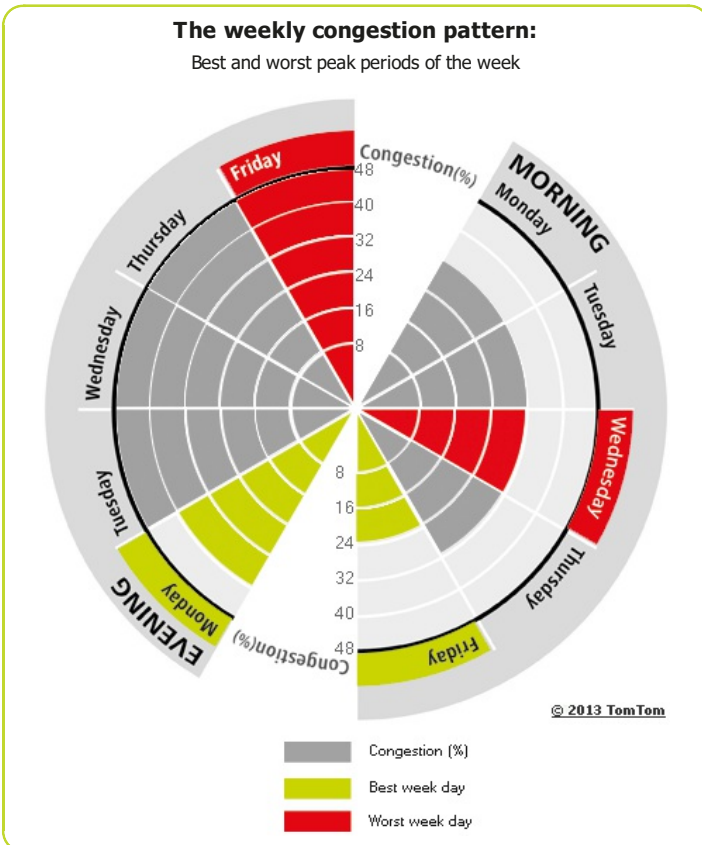
Most congested specific day	Fri 17 Feb 2012
Total network length	1 900 mi
Total network length highways	391 mi
Total network length non-highways	1 509 mi
Total vehicle miles	5 841 883 mi

Delay per hour driven in peak period

- Delay per hour

© 2013 TomTom

Comparison per quarter

- Congestion (2011)
- Congestion (2012)
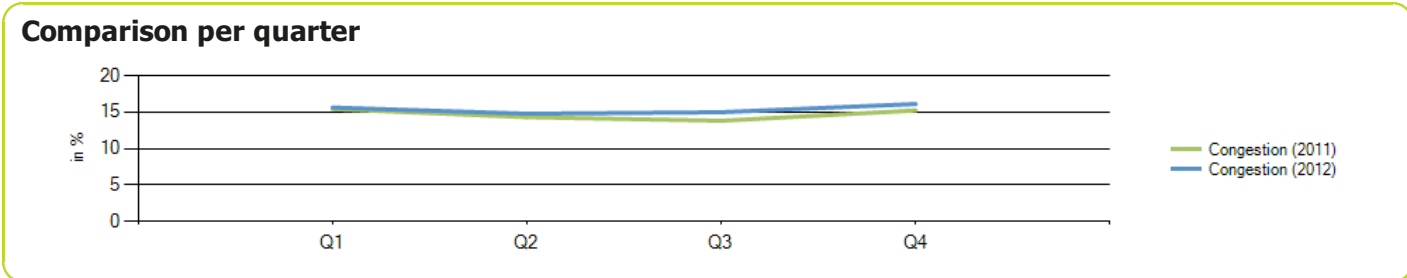
San Diego

Congestion level

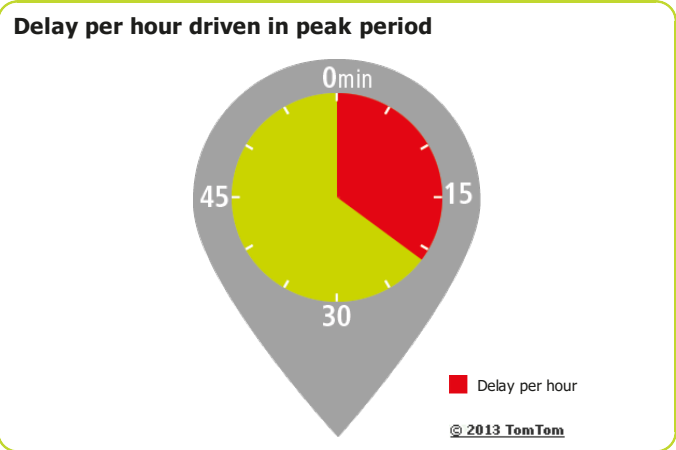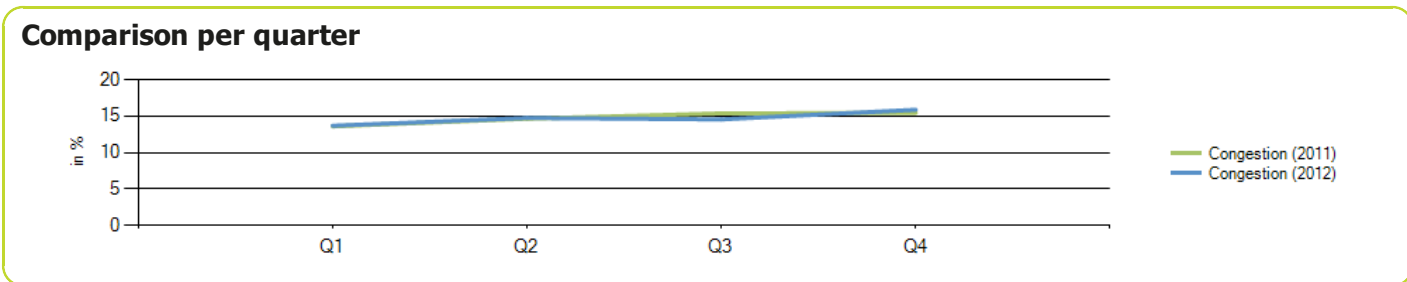# 20%

Ranking

Ranking of city compared to continent	21/59
Congestion level on highways	10%
Congestion level on non-highways	35%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
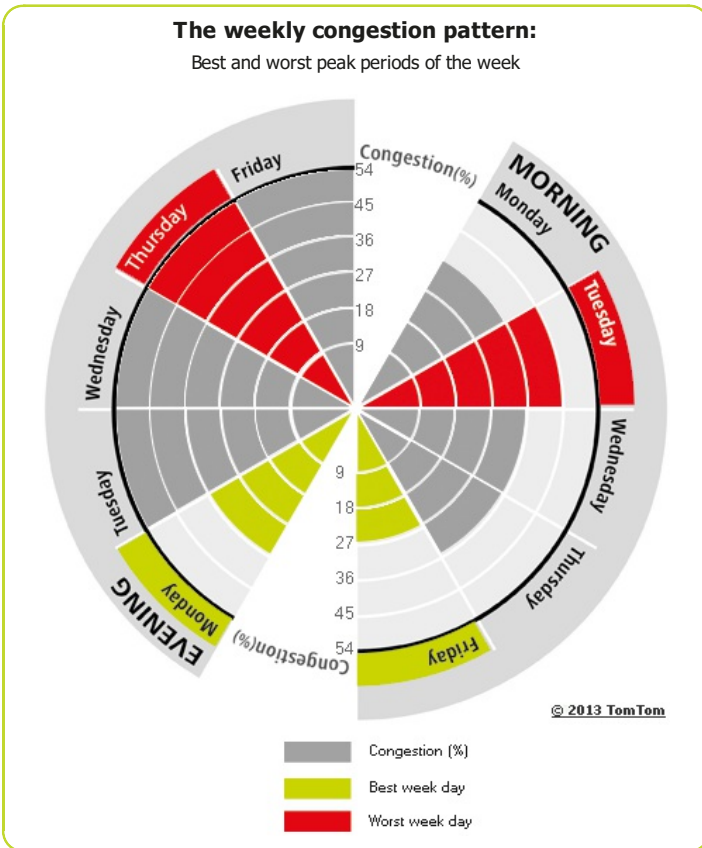
Most congested specific day	Fri 30 Nov 2012
Total network length	2 229 mi
Total network length highways	526 mi
Total network length non-highways	1 703 mi
Total vehicle miles	8 276 969 mi

Delay per hour driven in peak period

■ Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

San Francisco

Congestion level
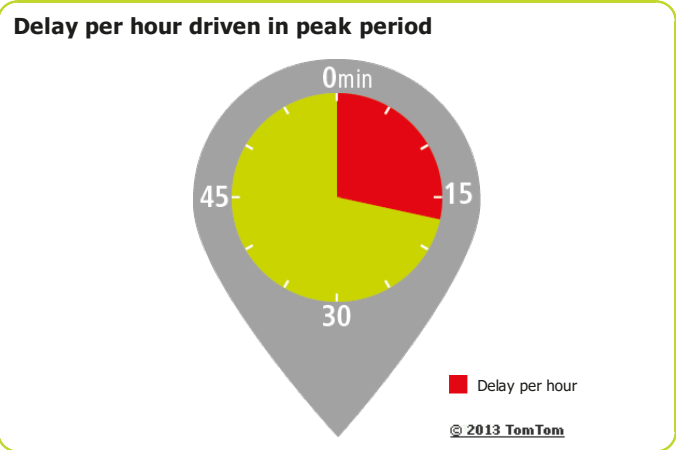
29%

Ranking

Ranking of city compared to continent	4/59
Congestion level on highways	24%
Congestion level on non-highways	36%
Delay per hour driven in peak period	35 min
Delay per year with a 30 min commute	84 h

The weekly congestion pattern:
Best and worst peak periods of the week

© 2013 TomTom

Congestion (%)

Best week day

Worst week day
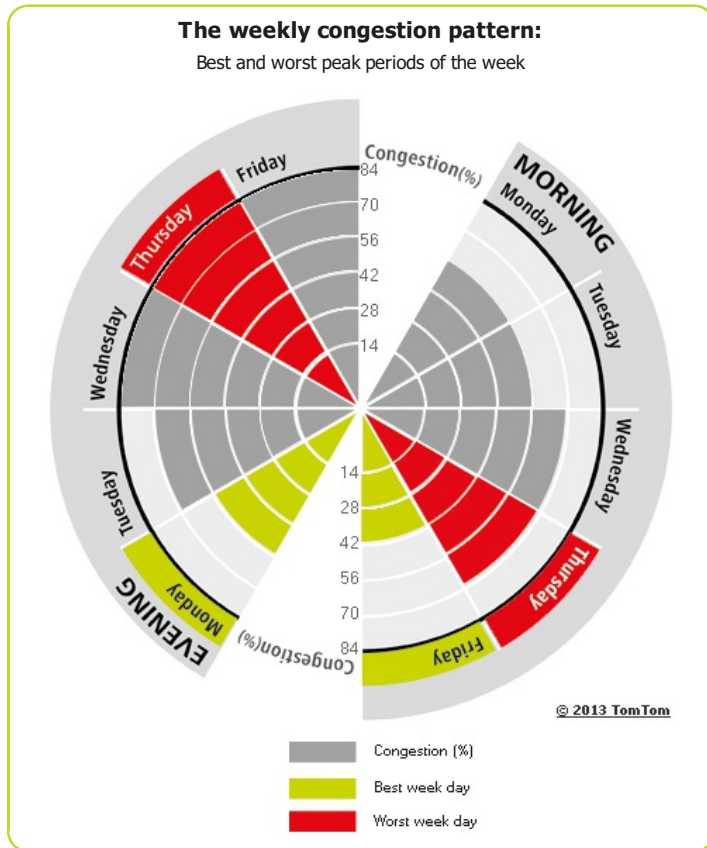
|	
Most congested specific day	Thu 14 Jun 2012
Total network length	1 139 mi
Total network length highways	255 mi
Total network length non-highways	884 mi
Total vehicle miles	5 342 172 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

San Jose

Congestion level

25%
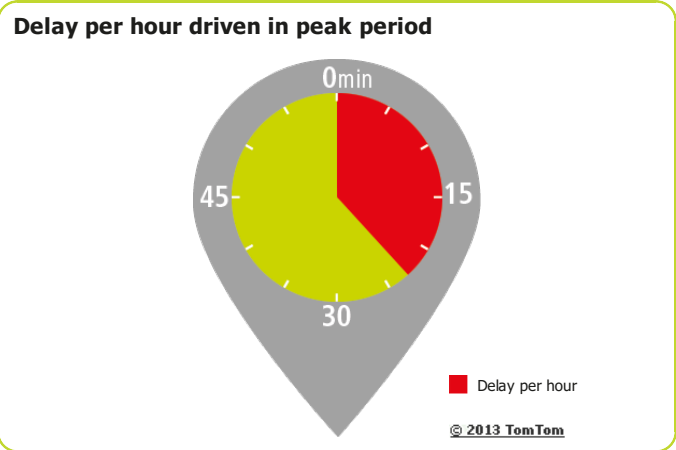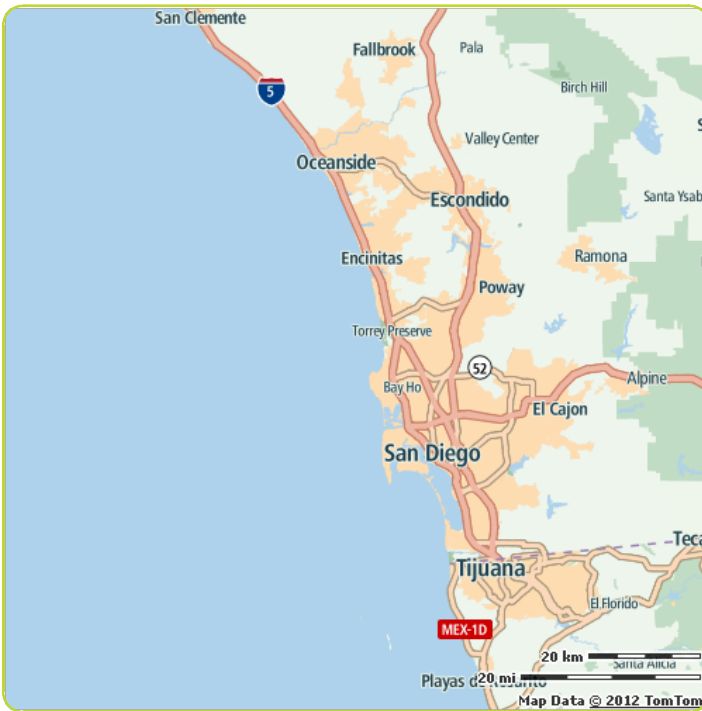
Ranking

Ranking of city compared to continent	7/59
Congestion level on highways	17%
Congestion level on non-highways	38%
Delay per hour driven in peak period	35 min
Delay per year with a 30 min commute	84 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
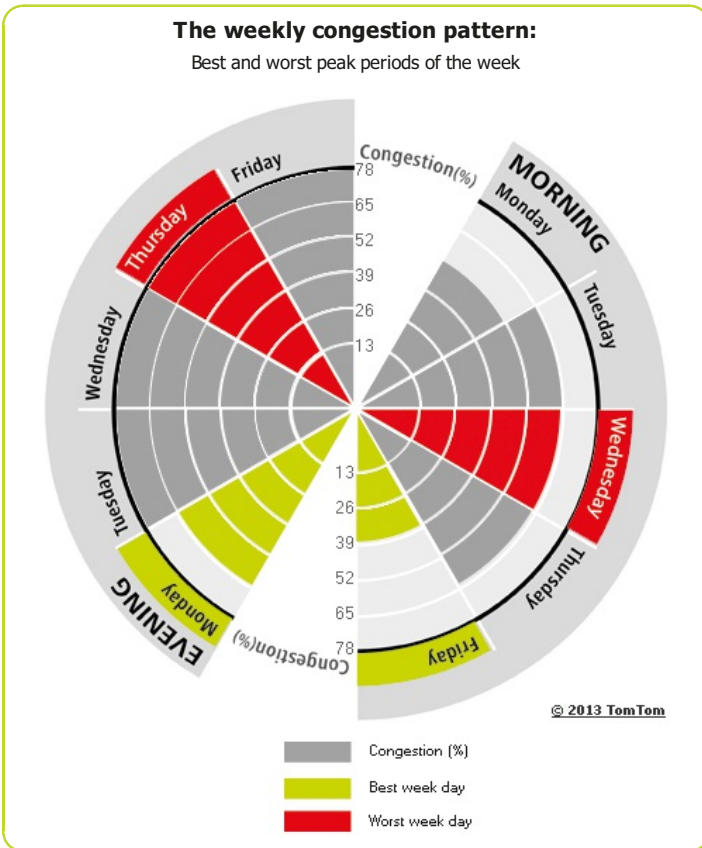
Most congested specific day	Fri 14 Dec 2012
Total network length	1 739 mi
Total network length highways	355 mi
Total network length non-highways	1 384 mi
Total vehicle miles	6 397 462 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom

Seattle

Map Data © 2012 TomTom

Congestion level

26%
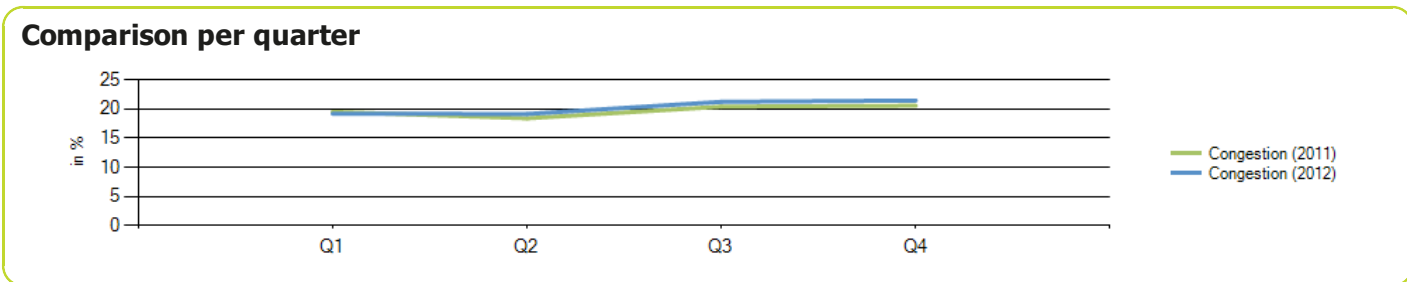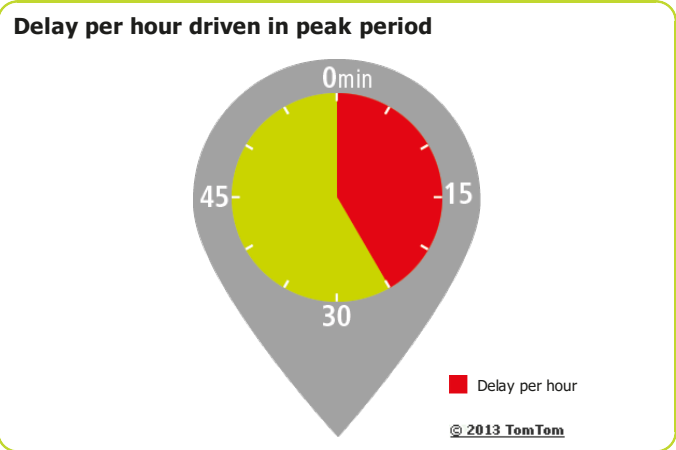
Ranking
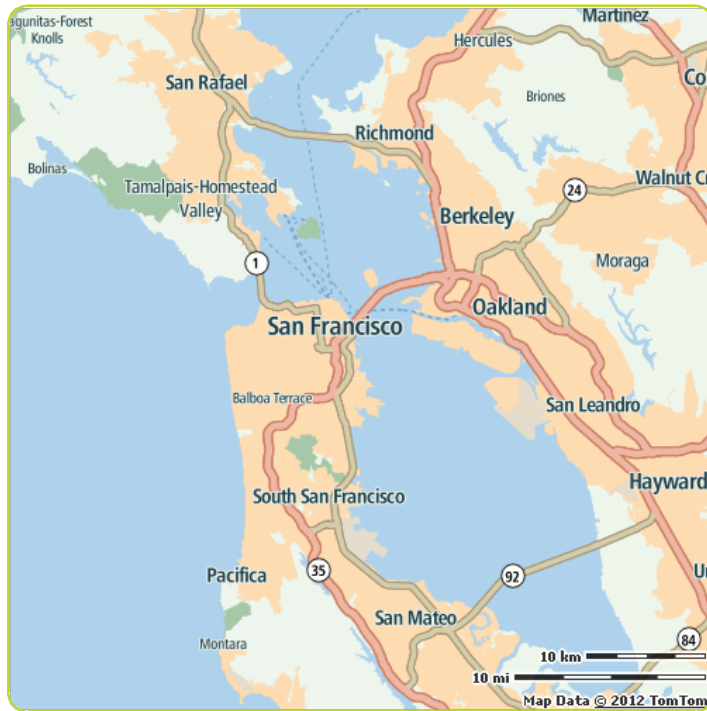
Ranking	
Ranking of city compared to continent	5/59
Congestion level on highways	21%
Congestion level on non-highways	34%
Delay per hour driven in peak period	35 min
Delay per year with a 30 min commute	84 h

The weekly congestion pattern:
Best and worst peak periods of the week

© 2013 TomTom

Congestion (%)
Best week day
Worst week day
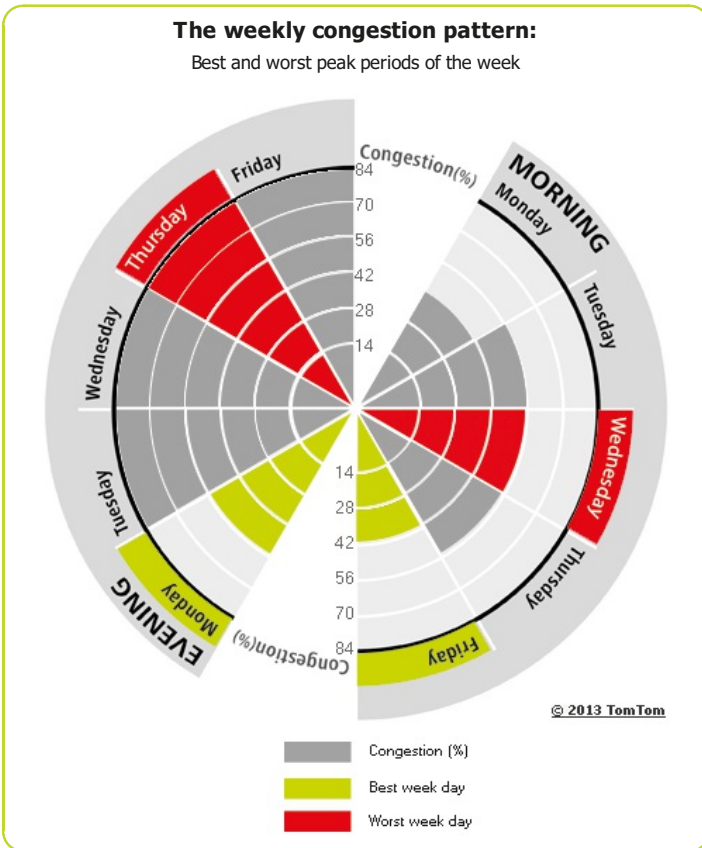
Most congested specific day	Thu 19 Jan 2012
Total network length	1 589 mi
Total network length highways	306 mi
Total network length non-highways	1 283 mi
Total vehicle miles	5 783 603 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

St. Louis

Congestion level
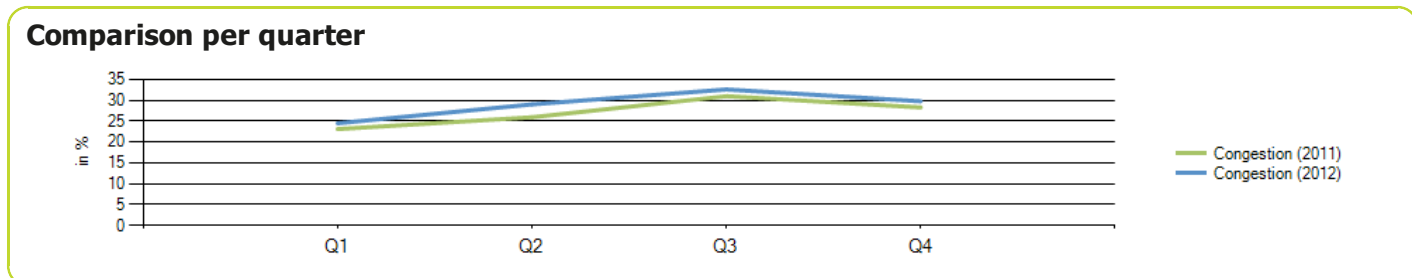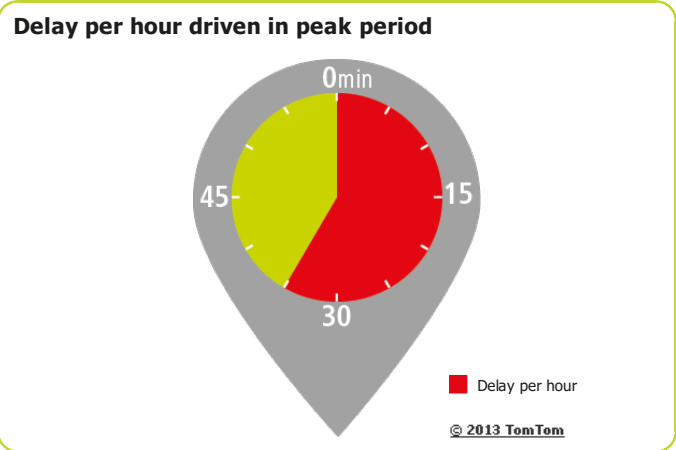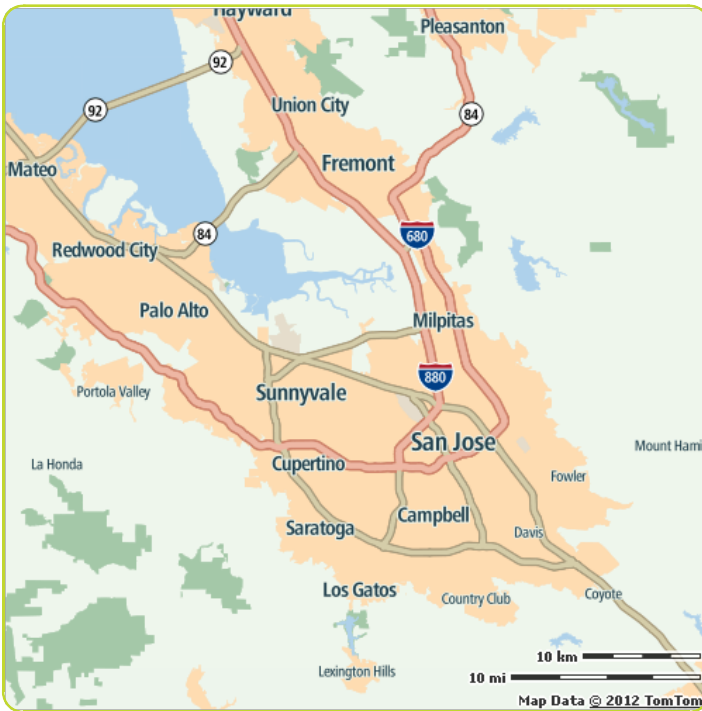
14%

Ranking

Ranking of city compared to continent	48/59
Congestion level on highways	7%
Congestion level on non-highways	24%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
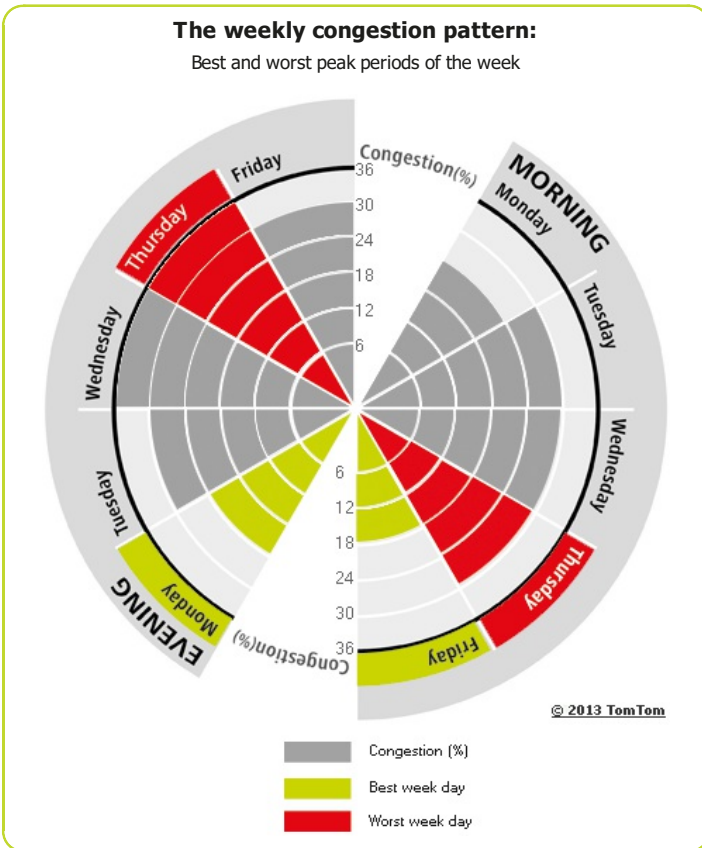
Most congested specific day	Thu 12 Jan 2012
Total network length	2 206 mi
Total network length highways	378 mi
Total network length non-highways	1 827 mi
Total vehicle miles	6 903 873 mi

Delay per hour driven in peak period

■ Delay per hour

© 2013 TomTom

Comparison per quarter

— Congestion (2011)
— Congestion (2012)

TomTom

Tampa

Congestion level
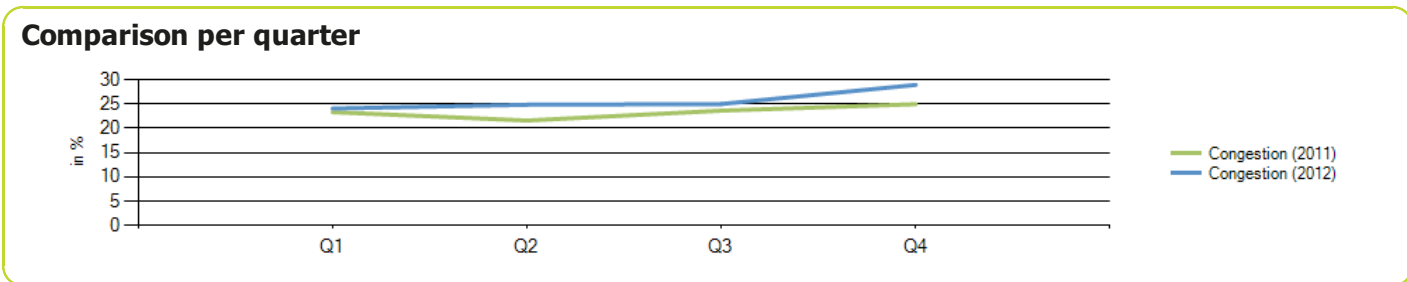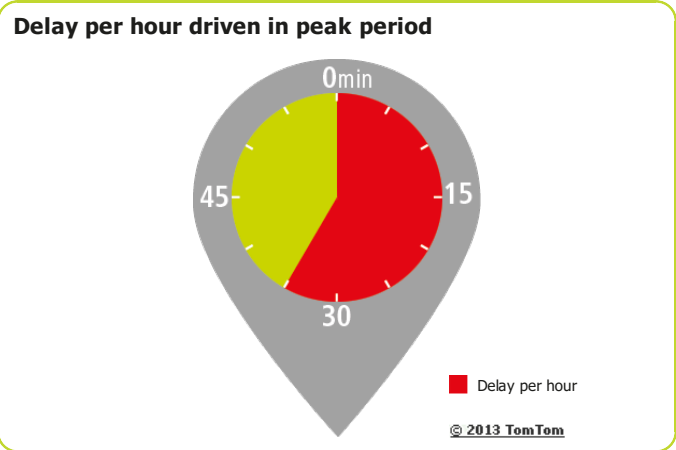
22%

Ranking

Ranking of city compared to continent	12/59
Congestion level on highways	11%
Congestion level on non-highways	28%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
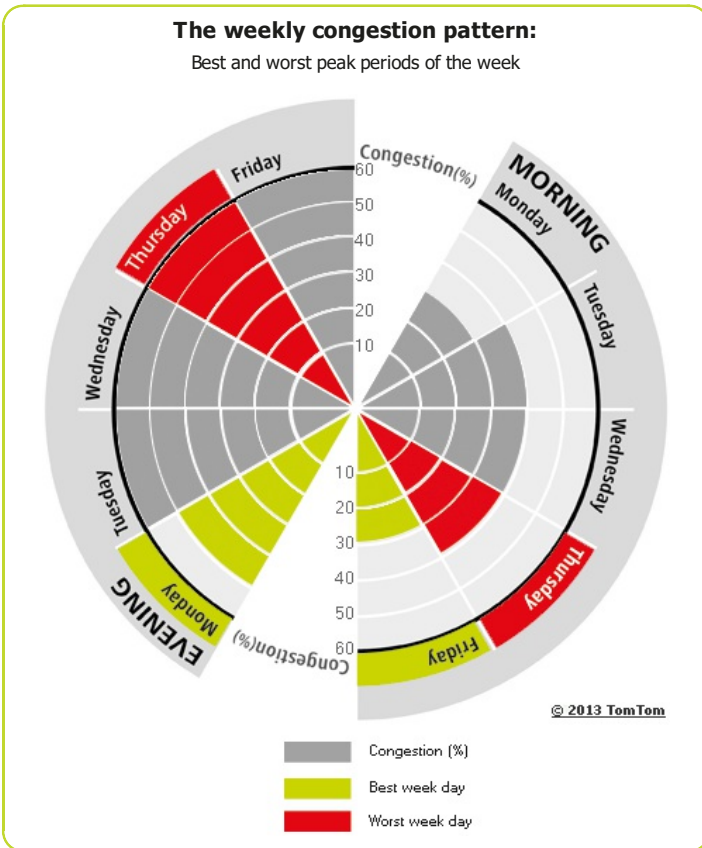
Most congested specific day	Fri 17 Feb 2012
Total network length	1 942 mi
Total network length highways	203 mi
Total network length non-highways	1 739 mi
Total vehicle miles	10 576 551 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

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Toronto

Congestion level
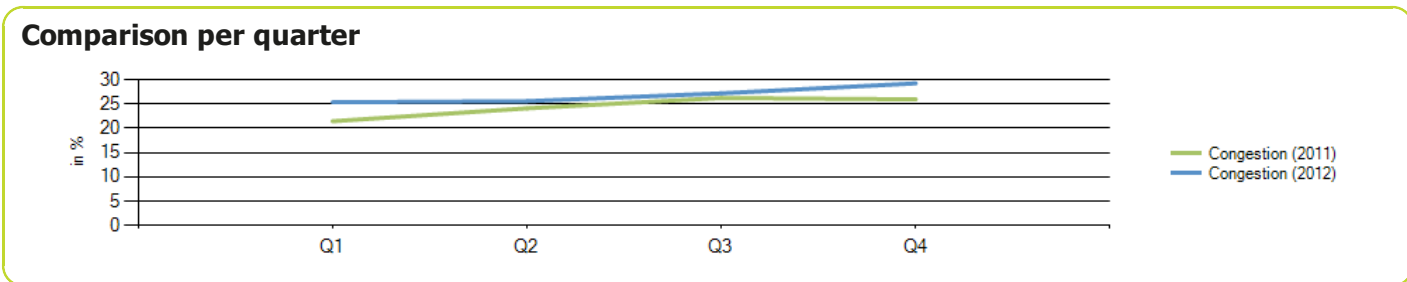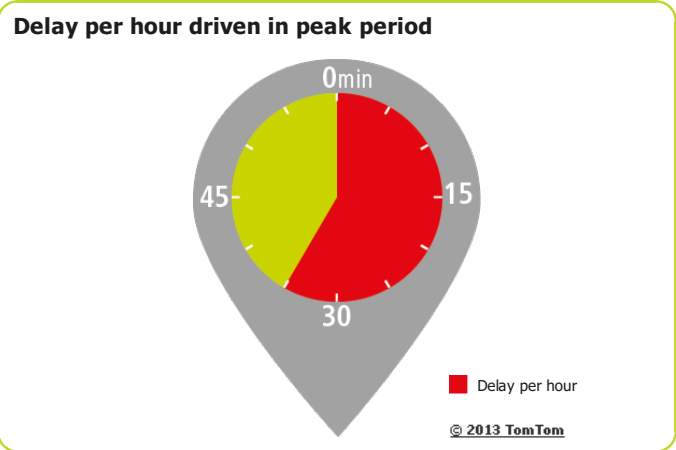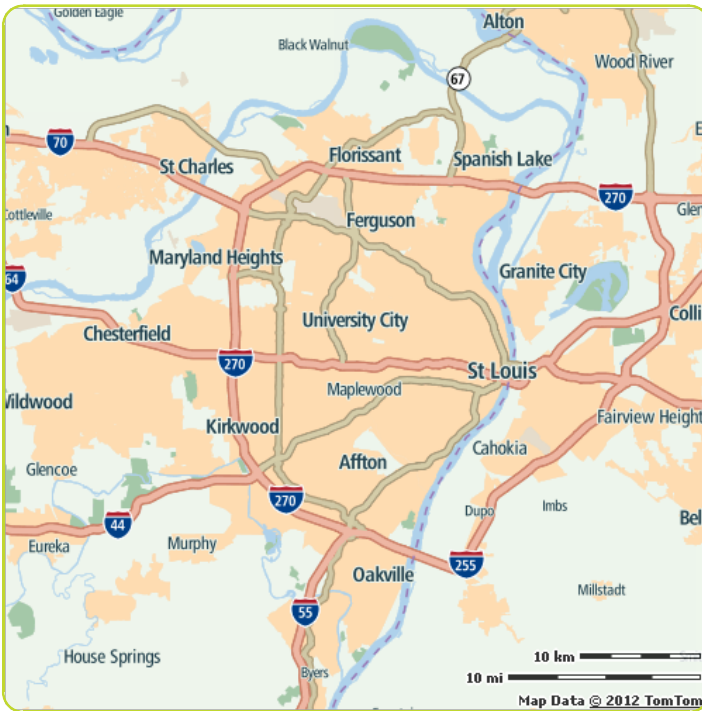
25%

Ranking

Ranking of city compared to continent	6/59
Congestion level on highways	19%
Congestion level on non-highways	31%
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

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
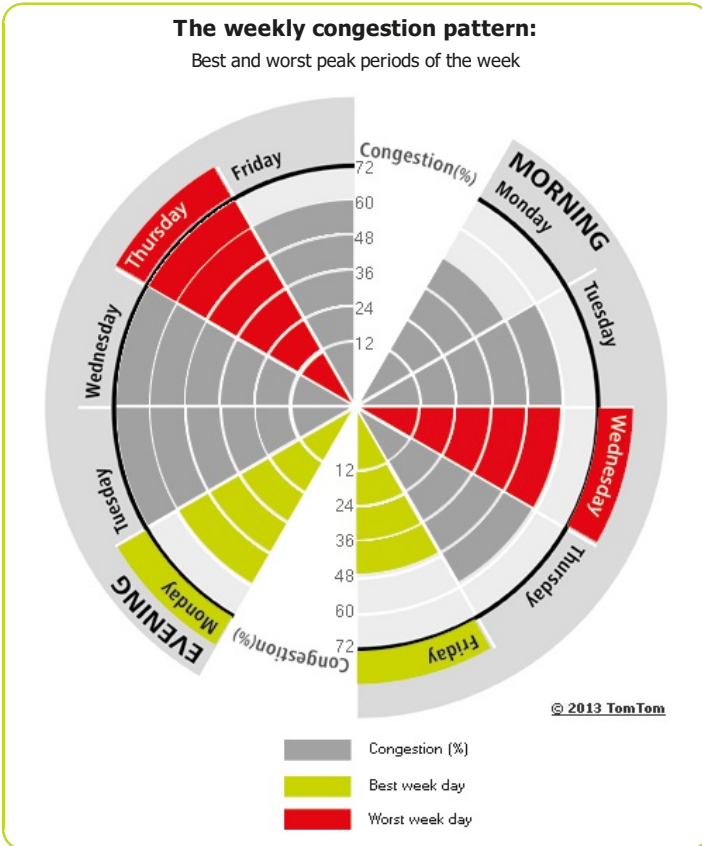
Most congested specific day	Fri 1 Jun 2012
Total network length	3 198 mi
Total network length highways	581 mi
Total network length non-highways	2 617 mi
Total vehicle miles	31 161 504 mi

Delay per hour driven in peak period

■ Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)
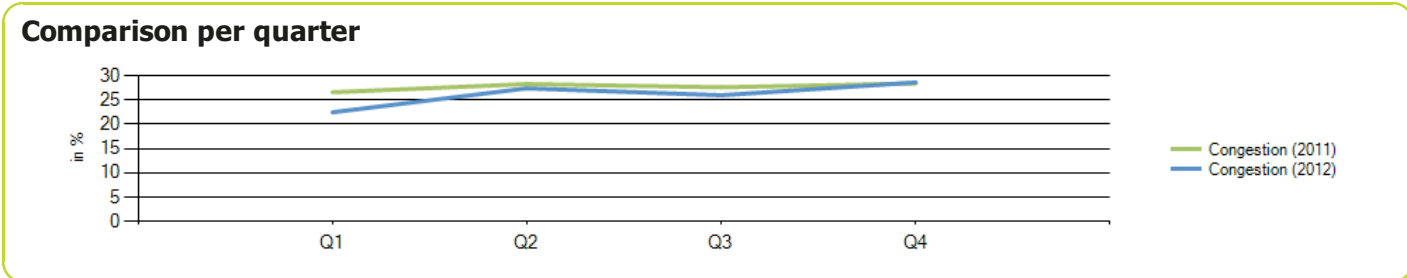
Tucson

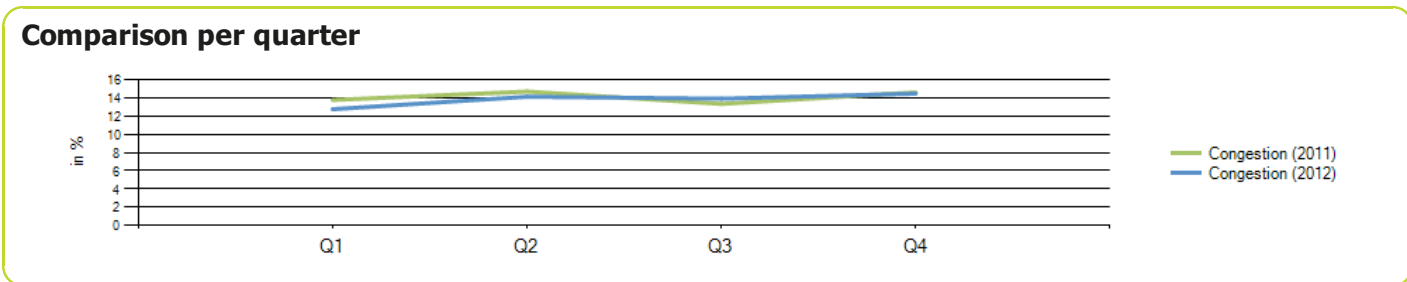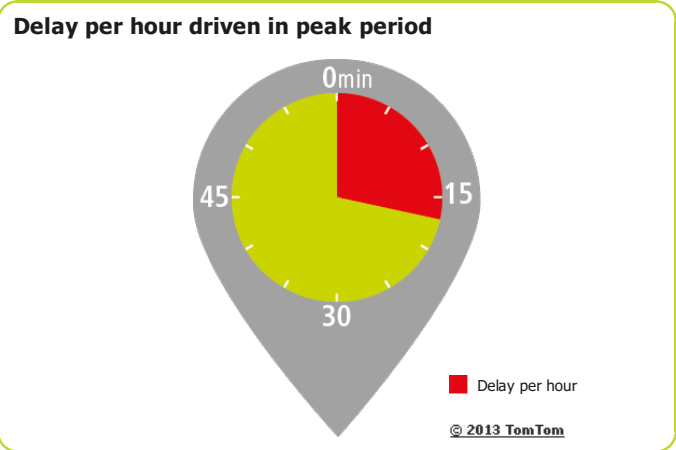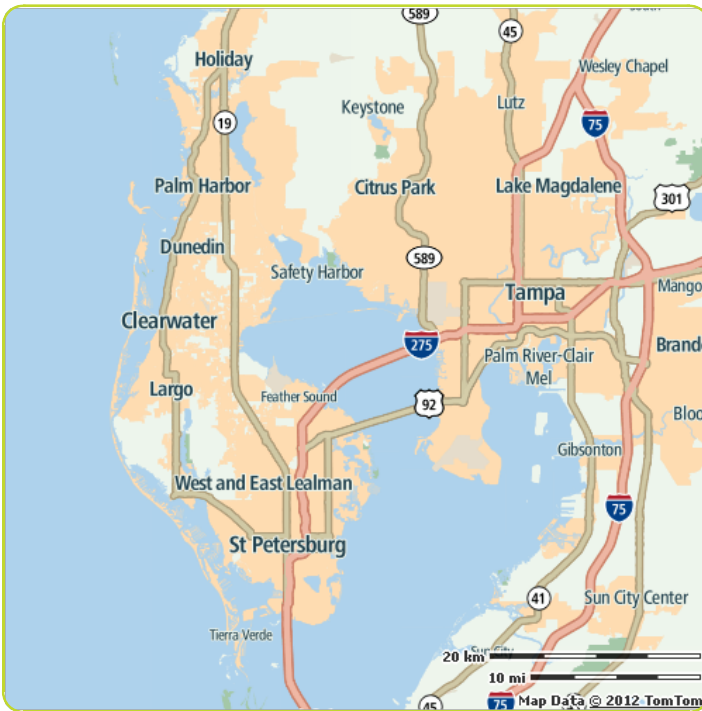## Congestion level

20%

Ranking

Ranking of city compared to continent	23/59
Congestion level on highways	4%
Congestion level on non-highways	26%
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
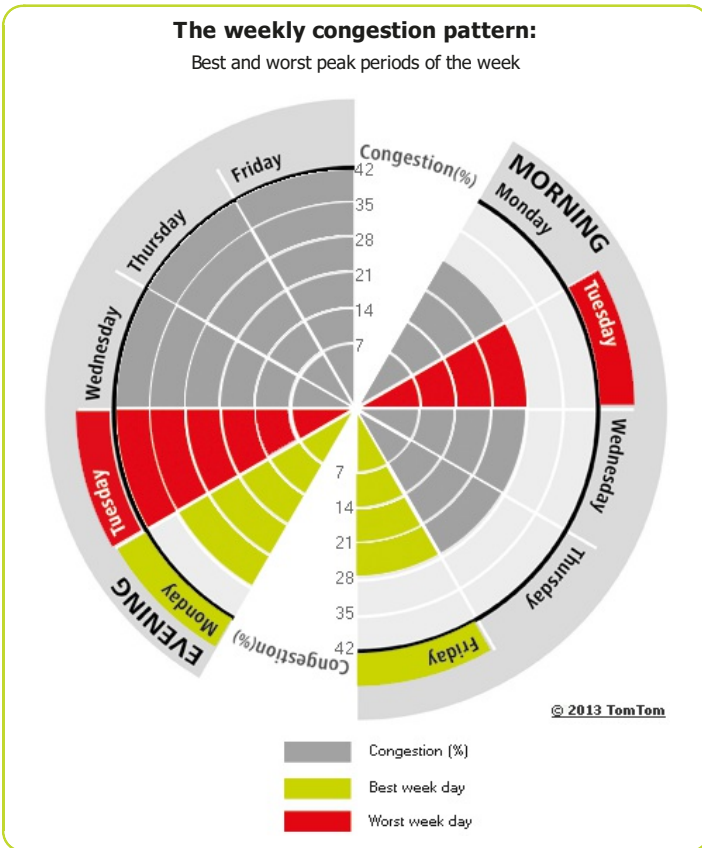
Most congested specific day	Fri 21 Dec 2012
Total network length	628 mi
Total network length highways	70 mi
Total network length non-highways	558 mi
Total vehicle miles	1 546 709 mi

Delay per hour driven in peak period

Comparison per quarter

Vancouver

Map Data © 2012 TomTom
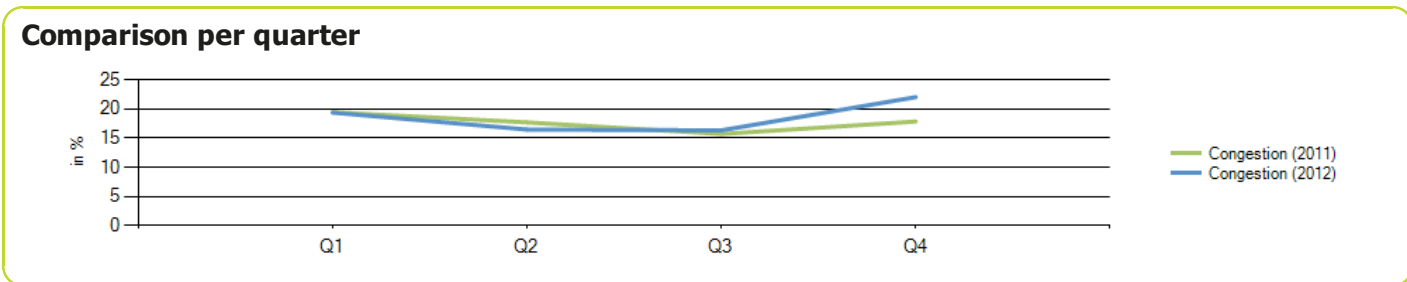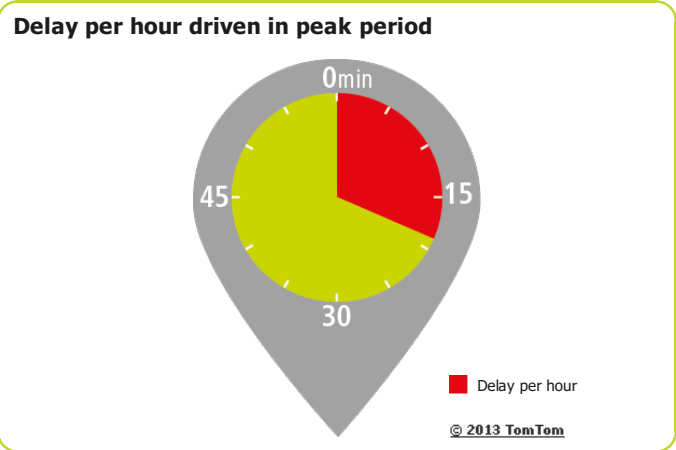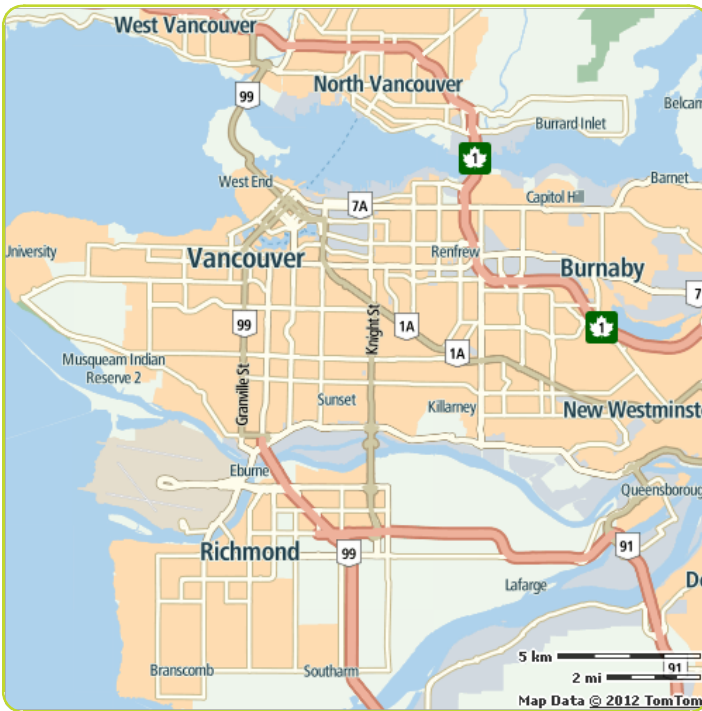
Congestion level

32%

Ranking

Ranking of city compared to continent	2/59
Congestion level on highways	19%
Congestion level on non-highways	37%
Delay per hour driven in peak period	35 min
Delay per year with a 30 min commute	84 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

© 2013 TomTom
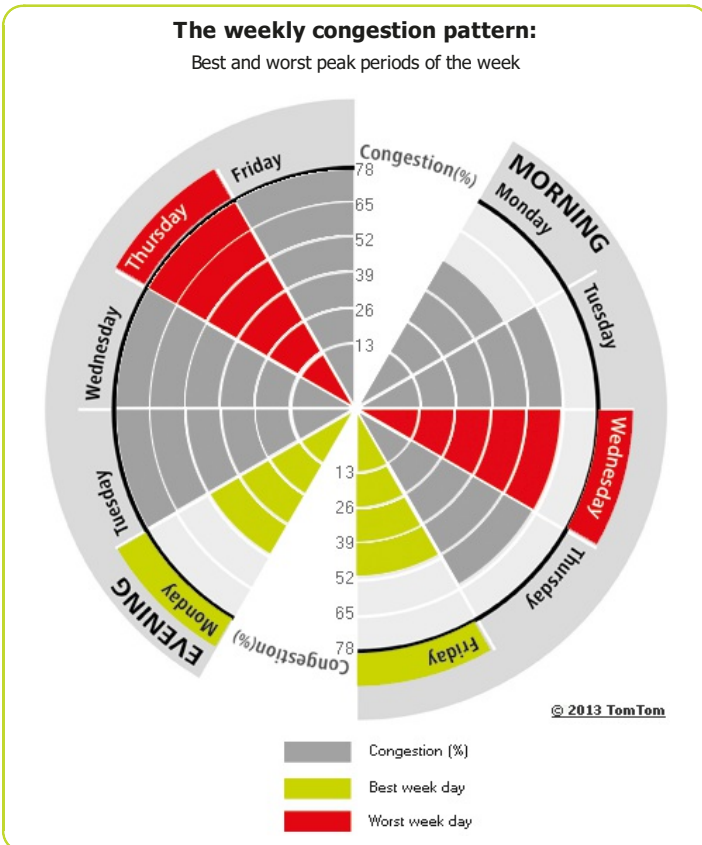
Most congested specific day	Wed 19 Dec 2012
Total network length	785 mi
Total network length highways	75 mi
Total network length non-highways	710 mi
Total vehicle miles	3 844 160 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

TomTom

Virginia Beach

Map Data © 2012 TomTom

Congestion level
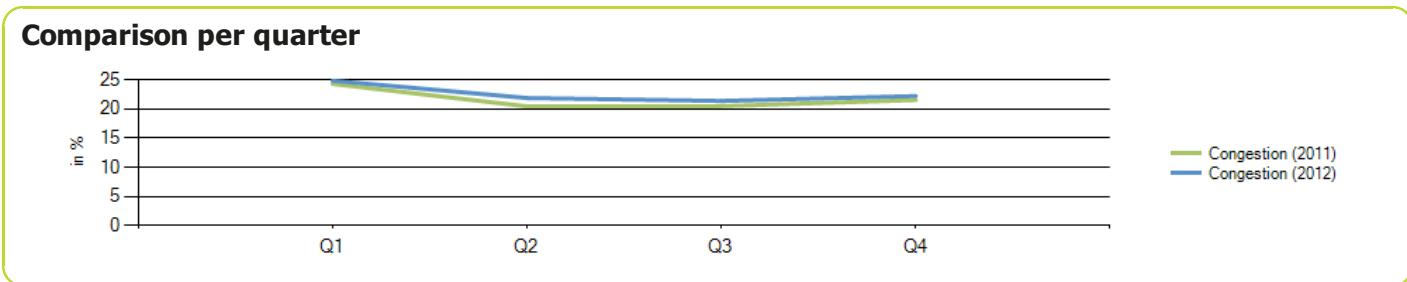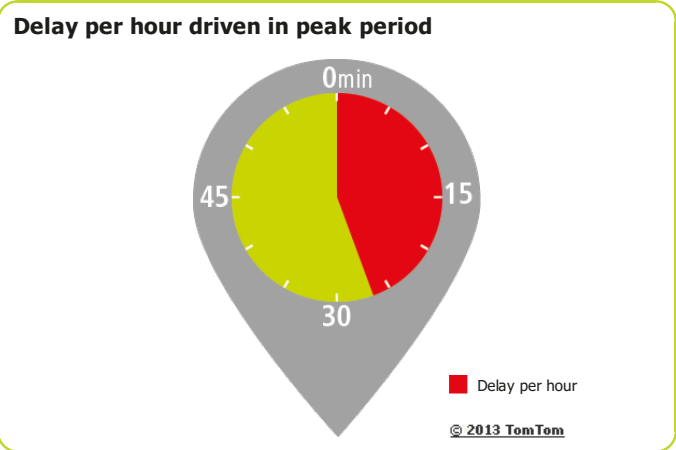
18%
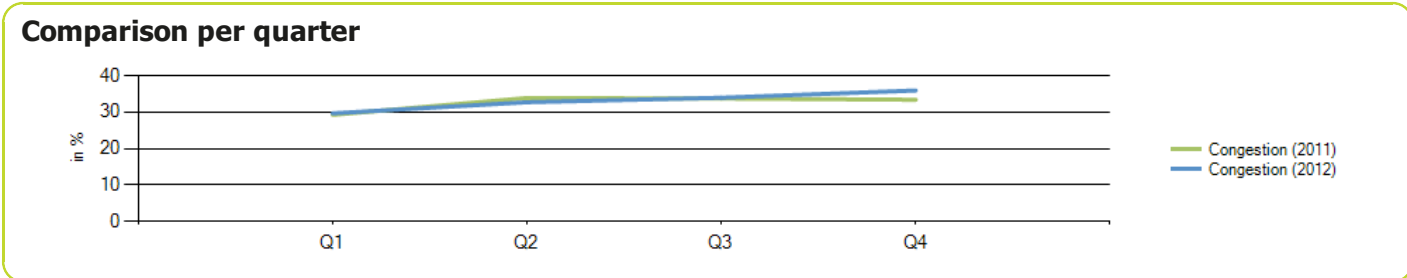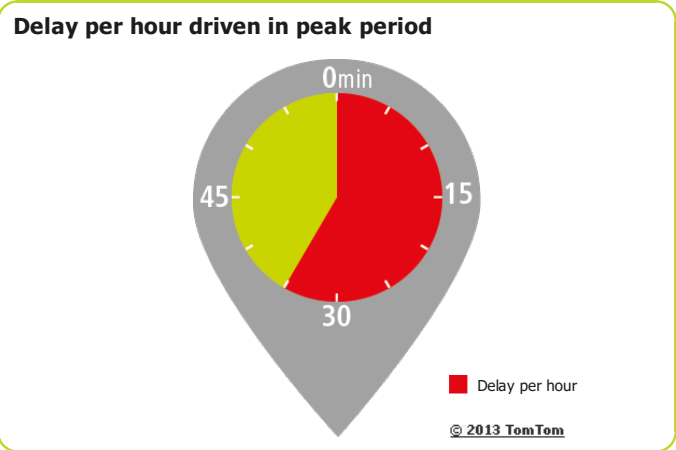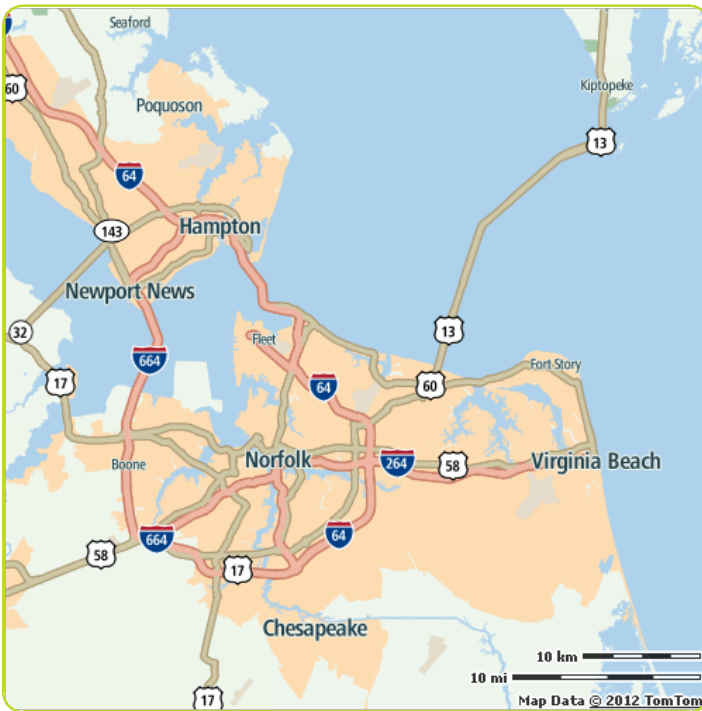
Ranking

Ranking of city compared to continent	29/59
Congestion level on highways	12%
Congestion level on non-highways	24%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h

The weekly congestion pattern:

Best and worst peak periods of the week

Congestion (%)

Best week day

Worst week day

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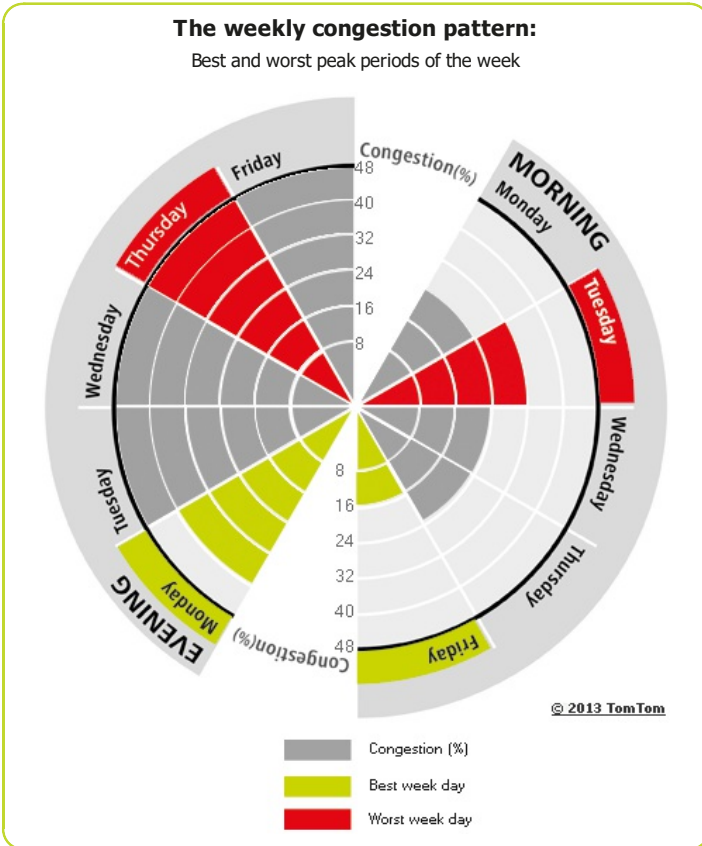
Most congested specific day	Sat 15 Sep 2012
Total network length	1 500 mi
Total network length highways	227 mi
Total network length non-highways	1 273 mi
Total vehicle miles	6 294 664 mi

Delay per hour driven in peak period

Delay per hour

© 2013 TomTom

Comparison per quarter

Congestion (2011)
Congestion (2012)

Washington

Map Data © 2012 TomTom

Congestion level

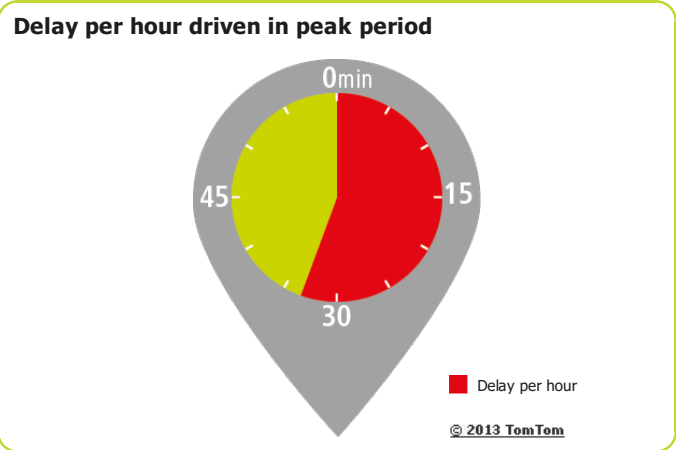# 25%
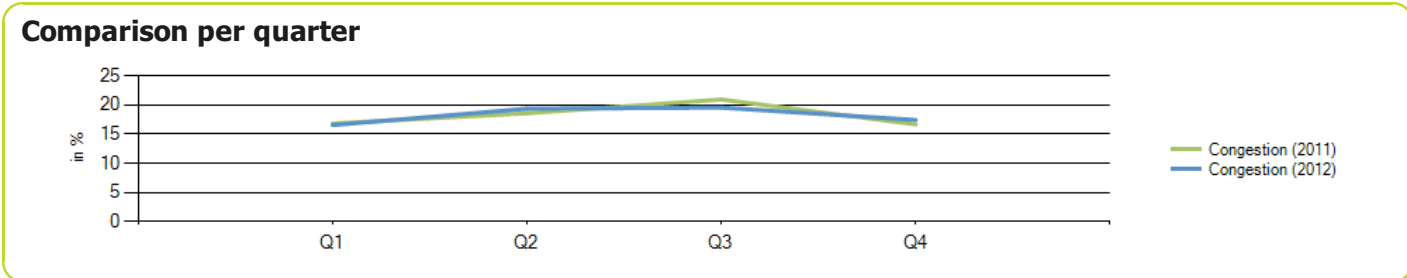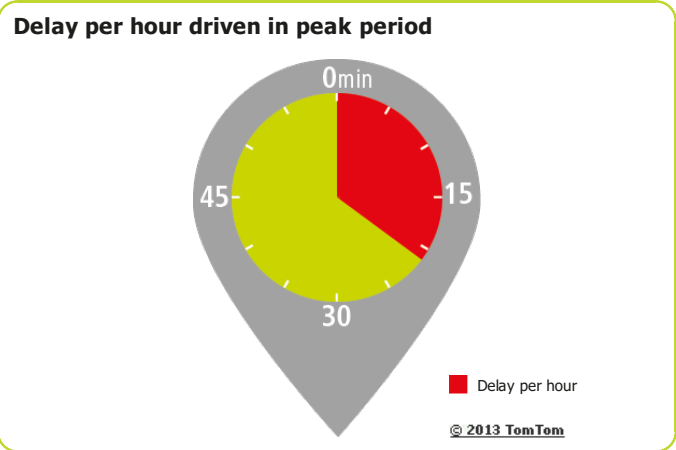
Ranking

Ranking of city compared to continent	8/59
Congestion level on highways	18%
Congestion level on non-highways	32%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h
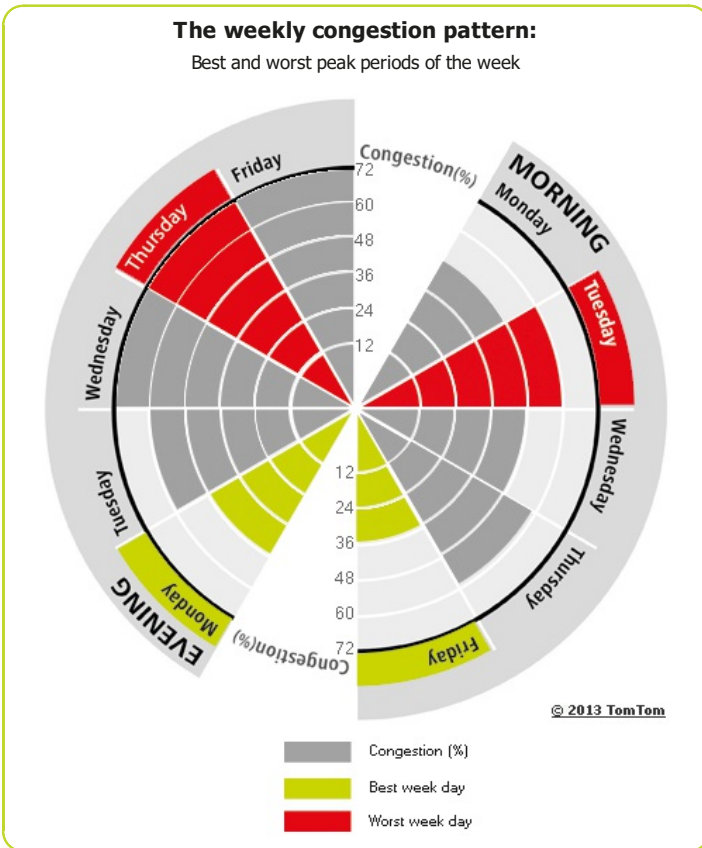
|	
Most congested specific day	Fri 1 Jun 2012
Total network length	3 429 mi
Total network length highways	636 mi
Total network length non-highways	2 794 mi
Total vehicle miles	30 051 142 mi

The weekly congestion pattern:

Best and worst peak periods of the week

© 2013 TomTom

- Congestion (%)
- Best week day
- Worst week day

Delay per hour driven in peak period

- Delay per hour

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Comparison per quarter

- Congestion (2011)
- Congestion (2012)
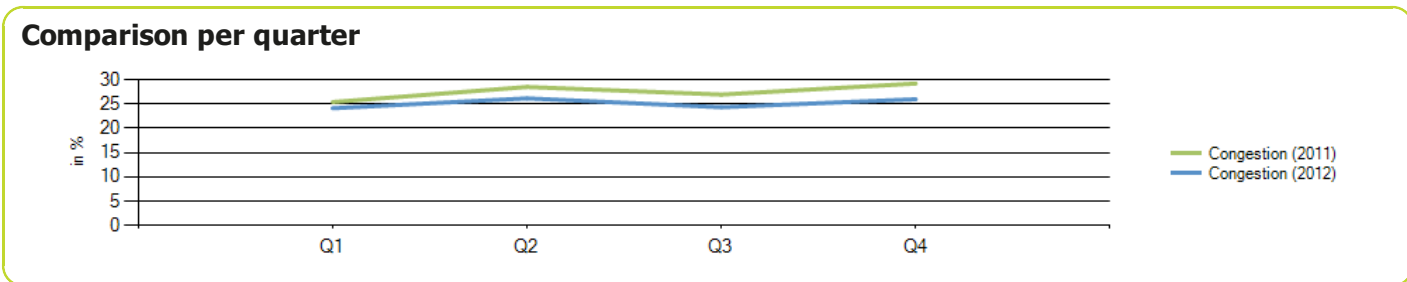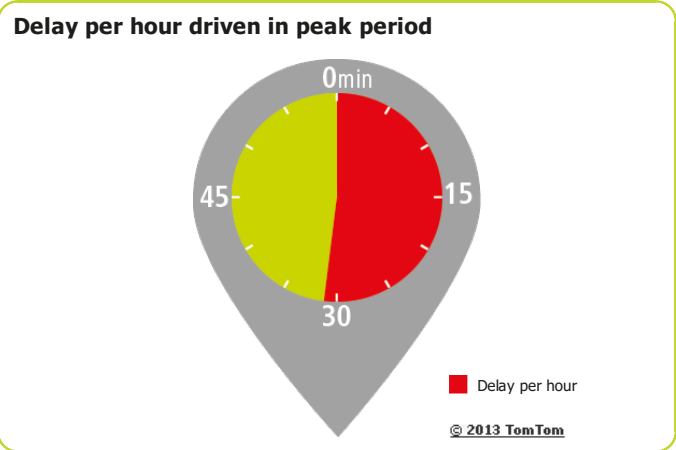
Evaluated cities

North America

Rank	City	Country	Congestion Level (%)				
			24/7	Morning peak	Evening peak	Weekdays	Weekend
1	Los Angeles	United States	33	56	77	38	20
2	Vancouver	Canada	32	52	68	37	20
3	Honolulu	United States	30	49	68	34	21
4	San Francisco	United States	29	51	69	30	25
5	Seattle	United States	26	45	73	31	15
6	Toronto	Canada	25	49	62	30	13
7	San Jose	United States	25	50	69	30	13
8	Washington	United States	25	44	59	29	15
9	New Orleans	United States	25	35	57	28	16
10	Montreal	Canada	25	48	71	30	11
11	Miami	United States	23	39	49	26	13
12	Tampa	United States	22	31	54	25	15
13	Chicago	United States	22	33	52	26	14
14	New York	United States	22	36	50	25	15
15	Portland	United States	22	31	60	26	12
16	Austin	United States	22	39	63	25	13
17	Houston	United States	22	41	64	25	11
18	Ottawa	Canada	21	48	83	27	8
19	Atlanta	United States	20	40	52	23	11
20	Pittsburgh	United States	20	32	44	23	12
21	San Diego	United States	20	32	48	22	13
22	Orlando	United States	20	24	43	22	14
23	Tucson	United States	20	25	37	22	13
24	Denver	United States	20	32	47	22	11
25	Boston	United States	20	37	47	23	10
26	Calgary	Canada	19	36	52	23	11
27	Las Vegas	United States	19	18	35	20	15
28	Philadelphia	United States	19	32	42	22	11
29	Virginia Beach	United States	18	22	43	20	13
30	Nashville	United States	18	37	47	20	12
31	Sacramento	United States	17	27	44	20	11
32	Dallas-Fort Worth	United States	16	29	43	19	10
33	Baltimore	United States	16	28	42	19	8
34	Edmonton	Canada	16	22	34	18	11
35	Minneapolis	United States	15	29	41	18	8
36	San Antonio	United States	15	28	43	17	9
37	Providence	United States	15	22	35	17	9
38	Charlotte	United States	15	22	44	17	9
39	Riverside	United States	15	27	36	17	8
40	Memphis	United States	15	21	29	16	9
41	Salt Lake City	United States	15	18	37	16	9
42	Columbus	United States	14	21	39	17	8
43	Detroit	United States	14	21	35	16	9
44	Jacksonville	United States	14	25	34	16	9
45	Louisville	United States	14	21	35	16	9
46	Cincinnati	United States	14	24	39	16	6
47	Birmingham	United States	14	24	33	16	7
48	St. Louis	United States	14	24	30	15	8
49	Phoenix	United States	13	26	31	15	8
50	Buffalo	United States	13	15	29	15	11
51	Hartford	United States	13	23	38	16	6
52	Milwaukee	United States	13	23	33	15	6
53	Rochester	United States	13	18	26	14	8
54	Raleigh	United States	12	18	33	14	8
55	Cleveland	United States	11	17	23	12	6
56	Indianapolis	United States	10	18	27	12	5
57	Richmond	United States	10	13	20	11	8
58	Oklahoma City	United States	10	17	29	11	5
59	Kansas City	United States	10	17	24	11	6

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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. 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 most congested cities.
Top 3 - increasing congestion	Top 3 cities with largest increase in the Congestion Level compared to the previous year.
Top 3 - decreasing congestion	Top 3 cities with largest decrease in the Congestion Level compared to the previous year.
Top 10 cities / evaluated cities	Ranking of cities according to 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.
• 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). 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.