

TomTom European Congestion Index



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TomTom Congestion Index

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

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

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

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

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

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

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

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

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

About the TomTom Congestion Index

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

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

As well as assigning and ranking the overall congestion levels of over 80 cities* on different continents, the report evaluates the congestion levels* in cities at different times of the day and on different days of the week.

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

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

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

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

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

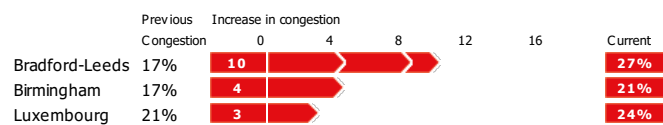
Europe

Europe congestion level

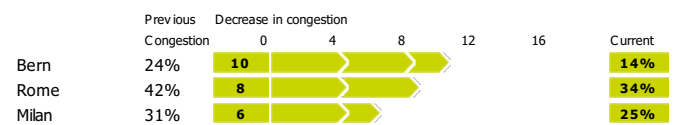
23%



Top 3 - Increasing congestion



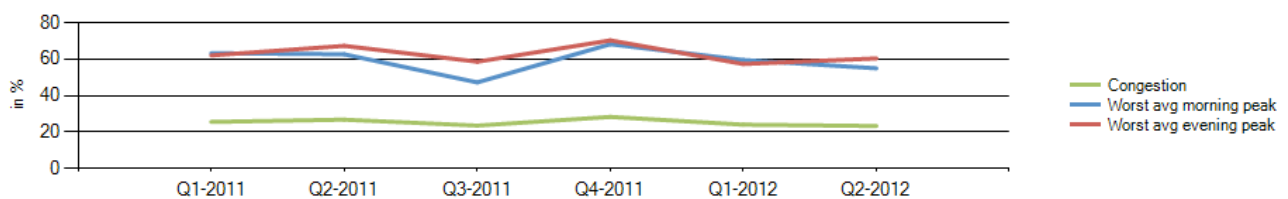
Top 3 - Decreasing congestion



Top 10 cities

Rank	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	Istanbul	Turkey	57%	84%	125%	61%	54%
2	Warsaw	Poland	45%	93%	91%	43%	49%
3	Marseille	France	42%	86%	80%	24%	54%
4	Palermo	Italy	40%	69%	65%	30%	50%
5	Rome	Italy	34%	81%	61%	27%	37%
6	Paris	France	34%	71%	65%	33%	34%
7	Stuttgart	Germany	33%	61%	70%	33%	34%
8	Brussels	Belgium	33%	78%	83%	27%	38%
9	Hamburg	Germany	32%	50%	56%	27%	36%
10	Stockholm	Sweden	30%	67%	78%	27%	34%

Comparison per quarter



Europe

Rank	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	Istanbul	Turkey	57%	84%	125%	61%	54%
2	Warsaw	Poland	45%	93%	91%	43%	49%
3	Marseille	France	42%	86%	80%	24%	54%
4	Palermo	Italy	40%	69%	65%	30%	50%
5	Rome	Italy	34%	81%	61%	27%	37%
6	Paris	France	34%	71%	65%	33%	34%
7	Stuttgart	Germany	33%	61%	70%	33%	34%
8	Brussels	Belgium	33%	78%	83%	27%	38%
9	Hamburg	Germany	32%	50%	56%	27%	36%
10	Stockholm	Sweden	30%	67%	78%	27%	34%
11	Nice	France	29%	44%	58%	17%	36%
12	Vienna	Austria	28%	51%	53%	20%	34%
13	Lyon	France	27%	64%	58%	22%	35%
14	Berlin	Germany	27%	43%	50%	23%	32%
15	Cologne	Germany	27%	48%	58%	25%	32%
16	Dublin	Ireland	27%	53%	58%	21%	37%
17	Bradford-Leeds	United Kingdom	27%	52%	56%	24%	29%
18	London	United Kingdom	26%	55%	53%	13%	35%
19	Toulouse	France	26%	82%	60%	21%	33%
20	Milan	Italy	26%	75%	53%	22%	29%
21	Prague	Czech Republic	26%	60%	43%	20%	31%
22	Budapest	Hungary	25%	52%	46%	6%	35%
23	Naples	Italy	25%	43%	46%	14%	38%
24	Luxembourg	Luxembourg	24%	53%	61%	15%	37%
25	Oslo	Norway	24%	64%	85%	20%	31%
26	Munich	Germany	24%	50%	43%	17%	33%
27	Nottingham	United Kingdom	24%	54%	52%	6%	31%
28	Strasbourg	France	23%	42%	70%	19%	30%
29	Manchester	United Kingdom	22%	52%	50%	14%	31%
30	Frankfurt am Main	Germany	21%	49%	41%	16%	31%
31	Genoa	Italy	21%	38%	39%	12%	32%
32	Lille	France	21%	51%	54%	16%	26%
33	Nantes	France	21%	53%	53%	16%	27%
34	Lisbon	Portugal	21%	51%	49%	11%	21%
35	Birmingham	United Kingdom	20%	41%	42%	15%	30%
36	Turin	Italy	20%	45%	38%	9%	25%
37	Göteborg	Sweden	20%	37%	58%	18%	21%
38	The Hague	Netherlands	20%	46%	44%	11%	27%
39	Newcastle-Sunderland	United Kingdom	20%	35%	42%	14%	24%
40	Liverpool	United Kingdom	20%	35%	36%	3%	25%
41	Rotterdam	Netherlands	19%	37%	58%	13%	28%
42	Barcelona	Spain	19%	48%	38%	15%	21%
43	Porto	Portugal	17%	31%	37%	8%	25%
44	Glasgow	United Kingdom	17%	33%	37%	8%	23%
45	Copenhagen	Denmark	17%	40%	36%	6%	26%
46	Amsterdam	Netherlands	16%	35%	39%	9%	30%
47	Ruhr region west	Germany	16%	28%	35%	12%	27%
48	Helsinki	Finland	15%	30%	38%	10%	21%
49	Ruhr region east	Germany	15%	25%	29%	11%	24%
50	Bern	Switzerland	15%	28%	38%	3%	32%
51	Madrid	Spain	14%	41%	30%	9%	20%
52	Palma de Mallorca	Spain	14%	26%	20%	6%	19%
53	Seville	Spain	13%	25%	22%	10%	17%
54	Murcia	Spain	13%	19%	15%	7%	22%
55	Valencia	Spain	11%	19%	17%	5%	19%
56	Malmö	Sweden	11%	15%	20%	7%	21%
57	Zaragoza	Spain	10%	15%	13%	1%	18%
58	Málaga	Spain	10%	16%	11%	6%	11%

Amsterdam



Congestion level

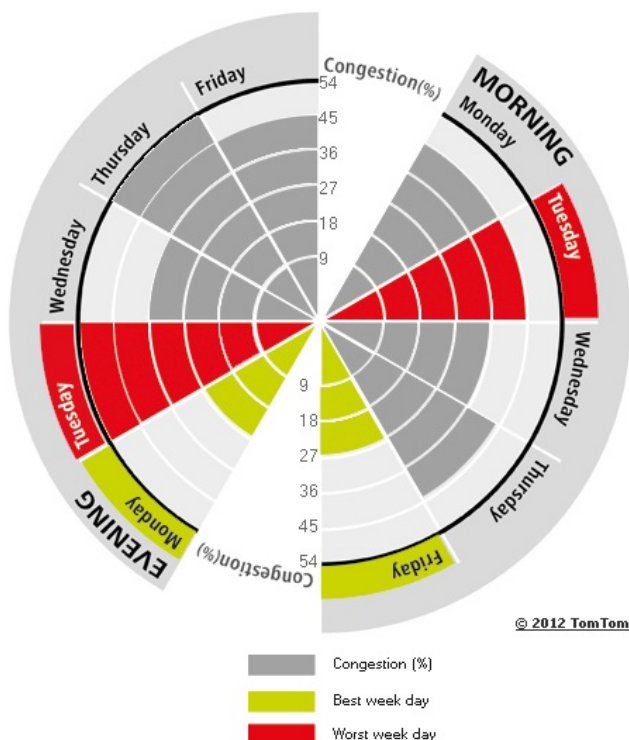
16%

Ranking

Ranking of city compared to continent	46/58
Congestion level on highways	9%
Congestion level on non-highways	30%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h

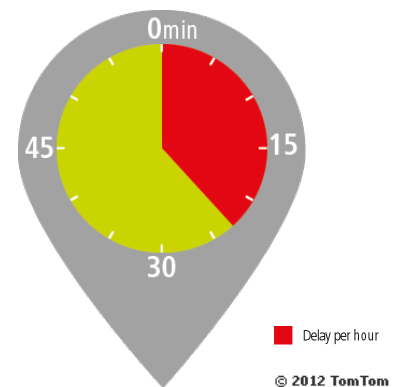
The weekly congestion pattern:

Best and worst peak periods of the week

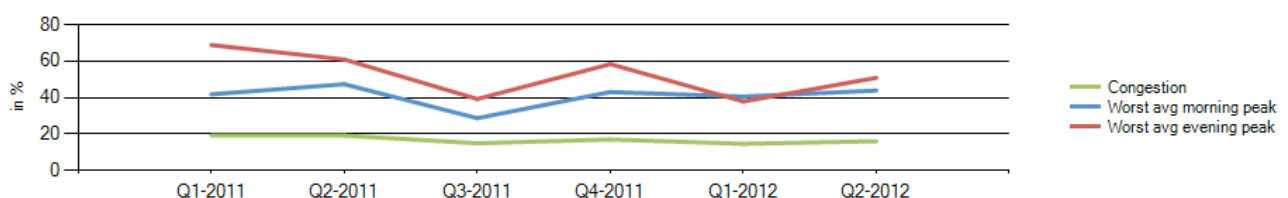


Most congested specific day	Thu 10 May 2012
Total network length	575 mi
Total network length highways	124 mi
Total network length non-highways	452 mi
Total vehicle miles	9 134 990 mi

Delay per hour driven in peak period



Comparison per quarter



Barcelona



Congestion level

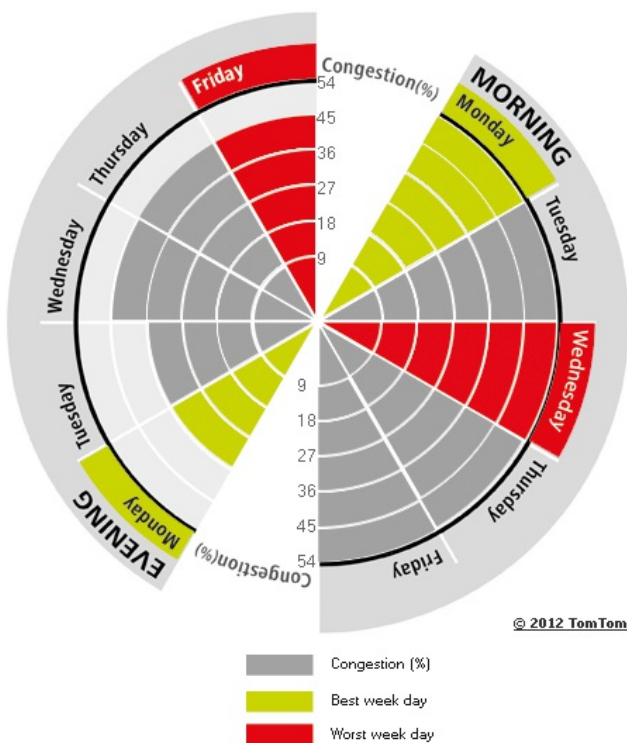
19%

Ranking

Ranking of city compared to continent	42/58
Congestion level on highways	15%
Congestion level on non-highways	21%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h

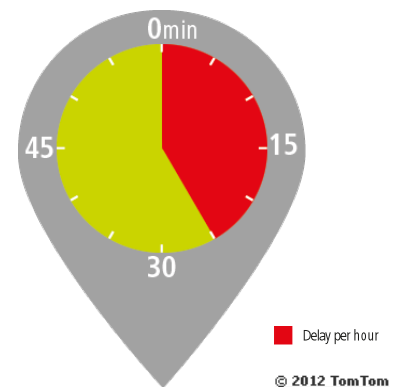
The weekly congestion pattern:

Best and worst peak periods of the week

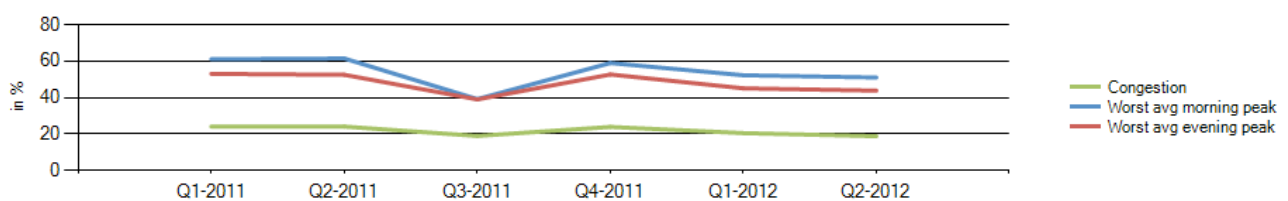


Most congested specific day	Fri 22 Jun 2012
Total network length	390 mi
Total network length highways	105 mi
Total network length non-highways	286 mi
Total vehicle miles	3 129 762 mi

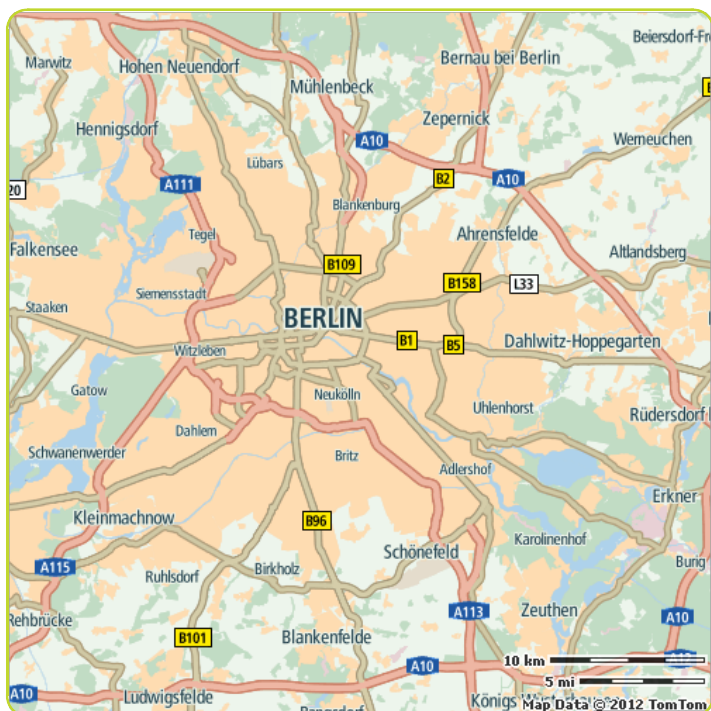
Delay per hour driven in peak period



Comparison per quarter



Berlin



Congestion level

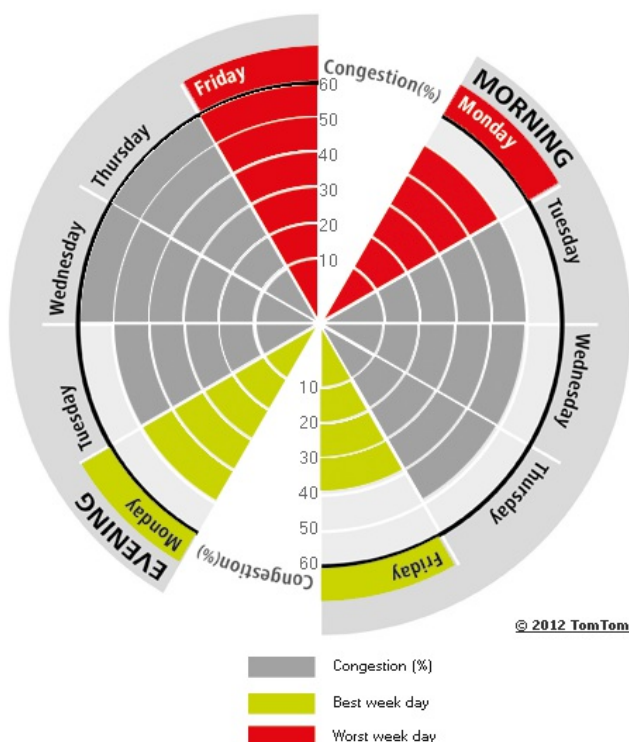
27%

Ranking

Ranking of city compared to continent	14/58
Congestion level on highways	23%
Congestion level on non-highways	32%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h

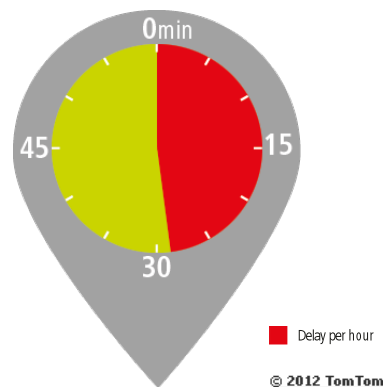
The weekly congestion pattern:

Best and worst peak periods of the week

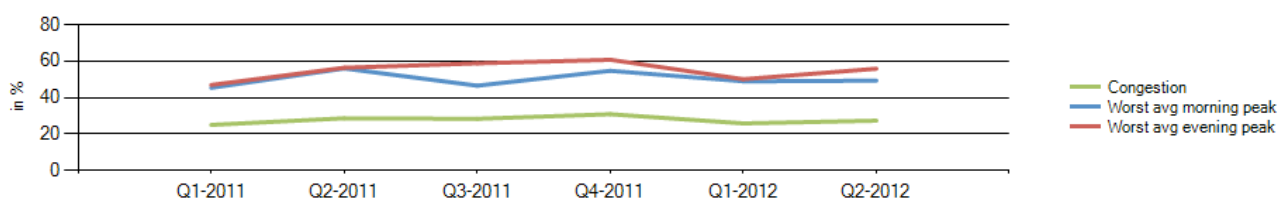


Most congested specific day	Fri 8 Jun 2012
Total network length	1 790 mi
Total network length highways	424 mi
Total network length non-highways	1 366 mi
Total vehicle miles	5 677 133 mi

Delay per hour driven in peak period



Comparison per quarter



Bern



Congestion level

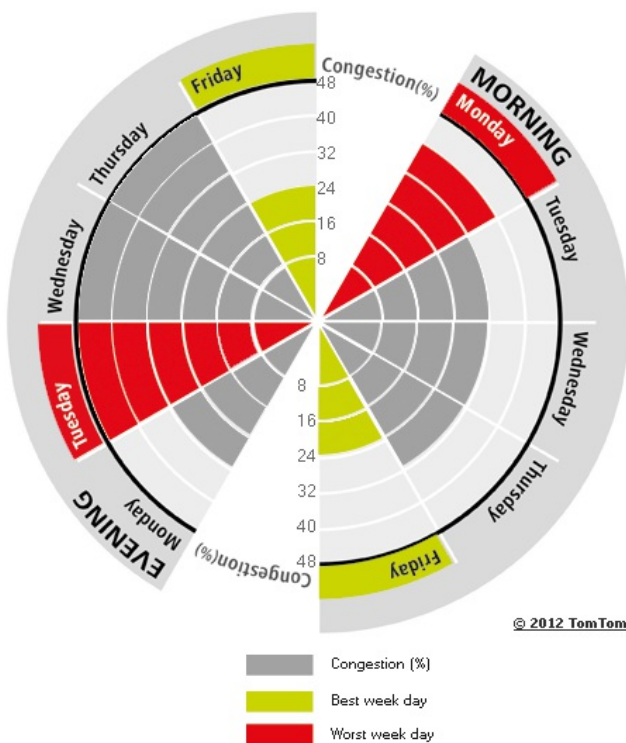
15%

Ranking

Ranking of city compared to continent	50/58
Congestion level on highways	3%
Congestion level on non-highways	32%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h

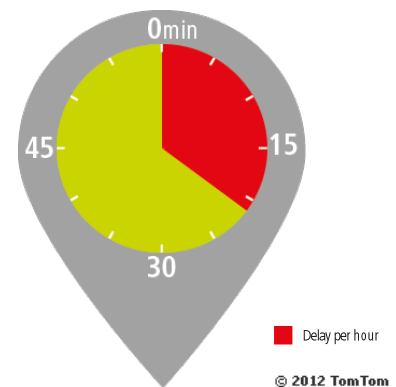
The weekly congestion pattern:

Best and worst peak periods of the week

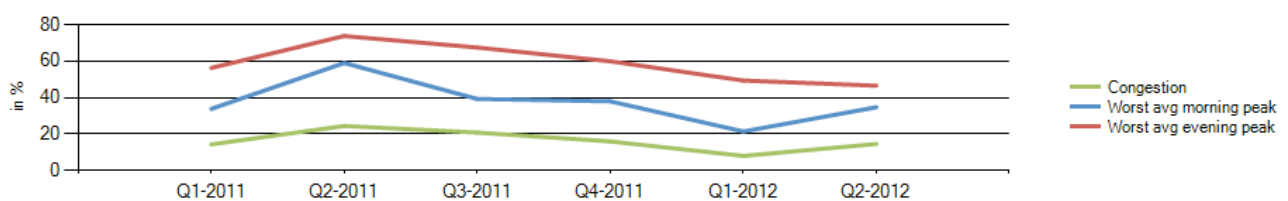


Most congested specific day	Thu 3 May 2012
Total network length	126 mi
Total network length highways	21 mi
Total network length non-highways	104 mi
Total vehicle miles	405 914 mi

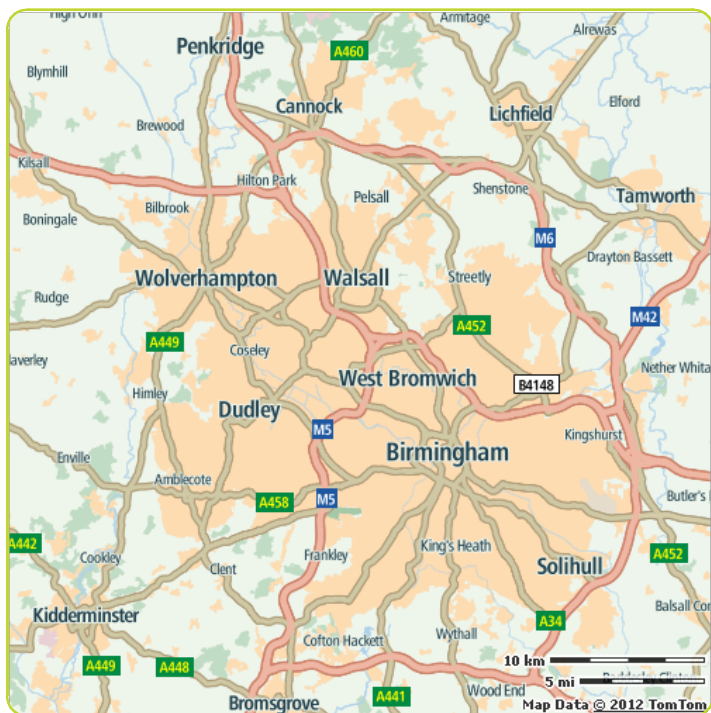
Delay per hour driven in peak period



Comparison per quarter



Birmingham



Congestion level

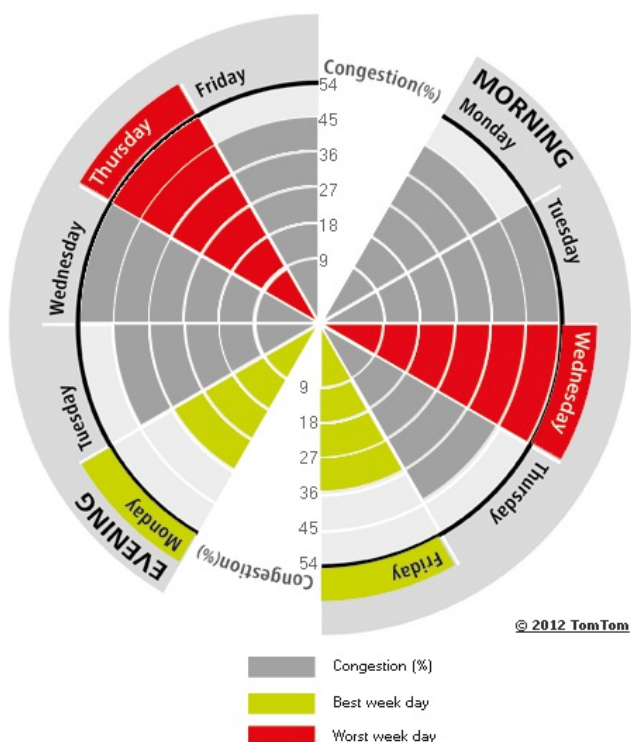
20%

Ranking

Ranking of city compared to continent	35/58
Congestion level on highways	15%
Congestion level on non-highways	30%
Delay per hour driven in peak period	24 min
Delay per year with a 30 min commute	65 h

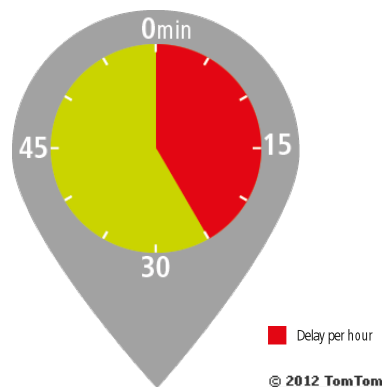
The weekly congestion pattern:

Best and worst peak periods of the week

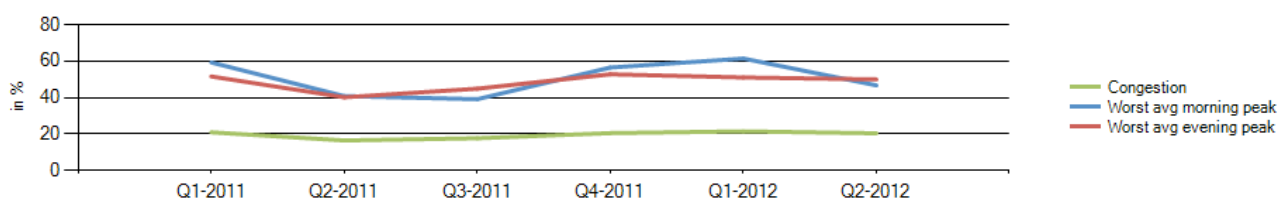


Most congested specific day	Mon 14 May 2012
Total network length	1 644 mi
Total network length highways	254 mi
Total network length non-highways	1 390 mi
Total vehicle miles	13 920 379 mi

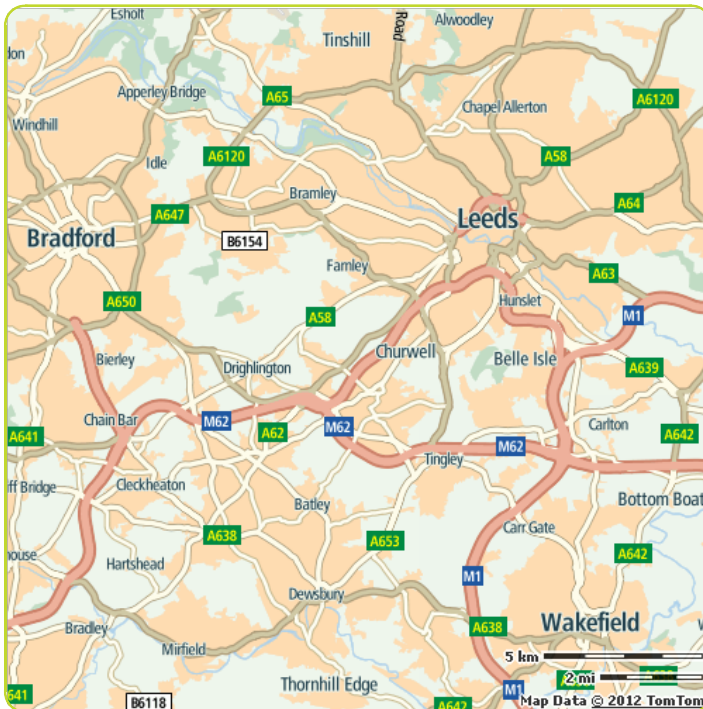
Delay per hour driven in peak period



Comparison per quarter



Bradford-Leeds



Congestion level

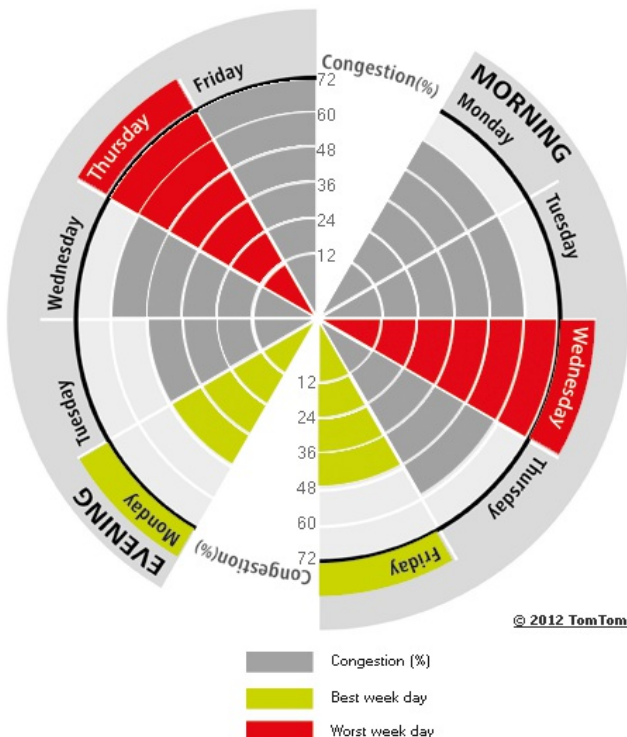
27%

Ranking

Ranking of city compared to continent	17/58
Congestion level on highways	24%
Congestion level on non-highways	29%
Delay per hour driven in peak period	32 min
Delay per year with a 30 min commute	80 h

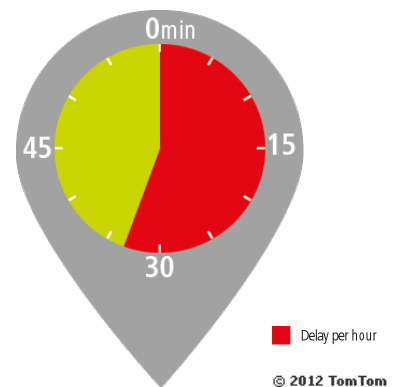
The weekly congestion pattern:

Best and worst peak periods of the week

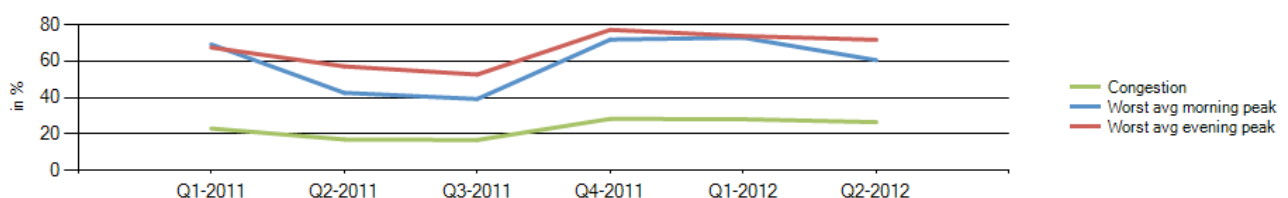


Most congested specific day	Fri 22 Jun 2012
Total network length	760 mi
Total network length highways	98 mi
Total network length non-highways	662 mi
Total vehicle miles	4 577 480 mi

Delay per hour driven in peak period



Comparison per quarter



Brussels



Congestion level

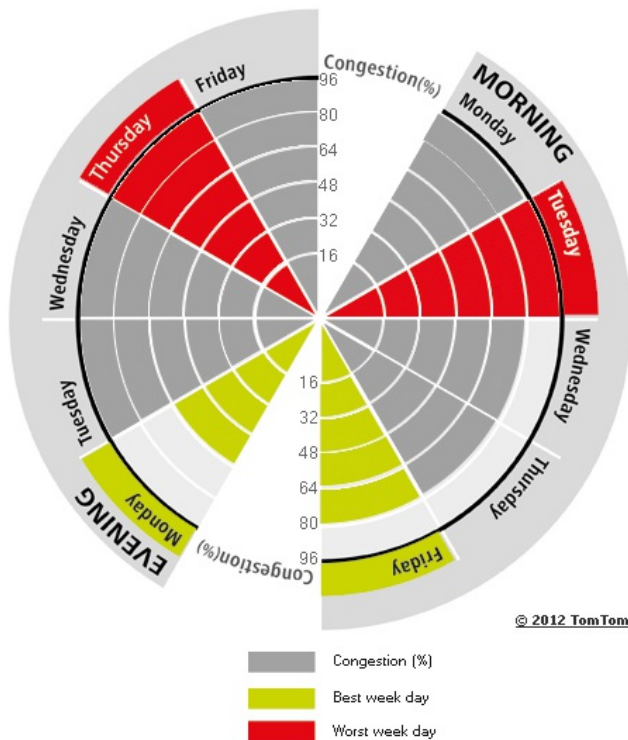
33%

Ranking

Ranking of city compared to continent	8/58
Congestion level on highways	27%
Congestion level on non-highways	38%
Delay per hour driven in peak period	48 min
Delay per year with a 30 min commute	102 h

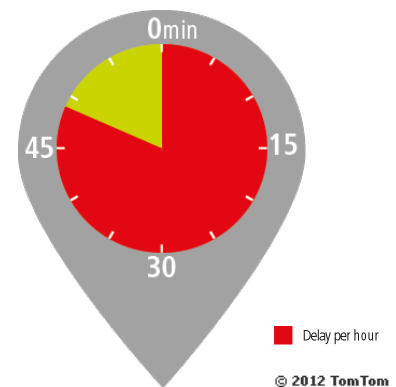
The weekly congestion pattern:

Best and worst peak periods of the week

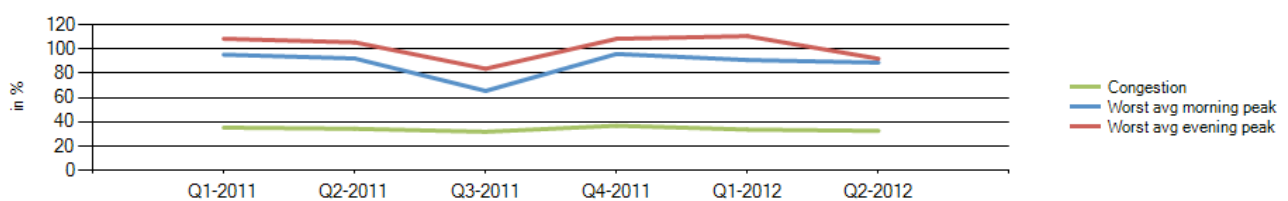


Most congested specific day	Wed 2 May 2012
Total network length	808 mi
Total network length highways	122 mi
Total network length non-highways	687 mi
Total vehicle miles	5 037 995 mi

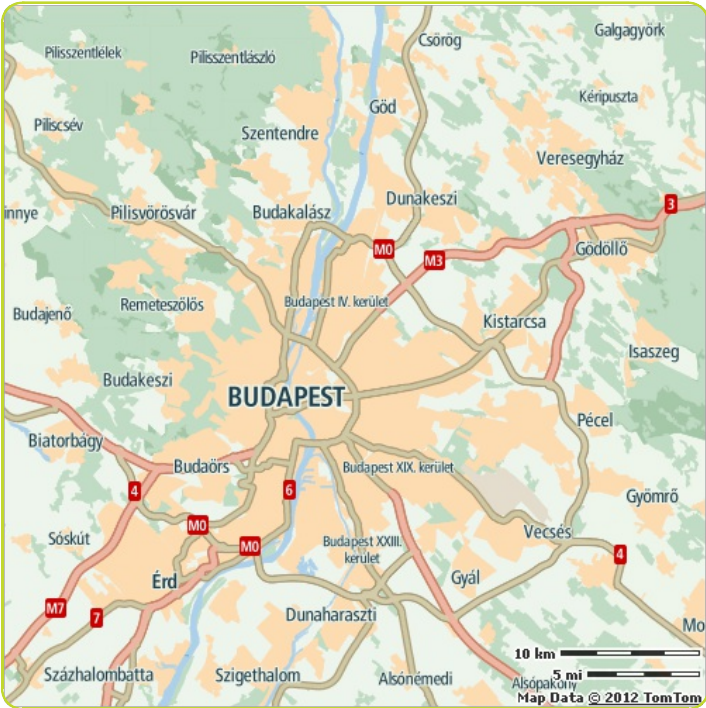
Delay per hour driven in peak period



Comparison per quarter



Budapest



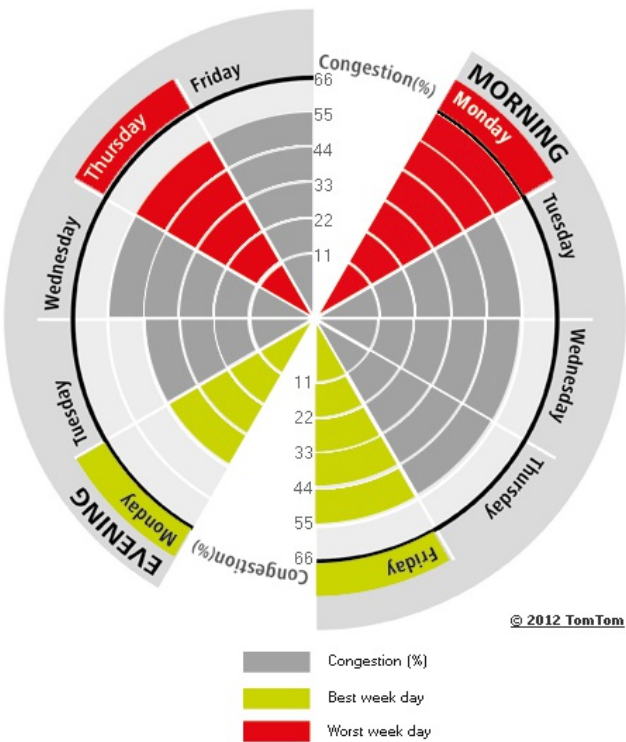
Congestion level

25%

Ranking

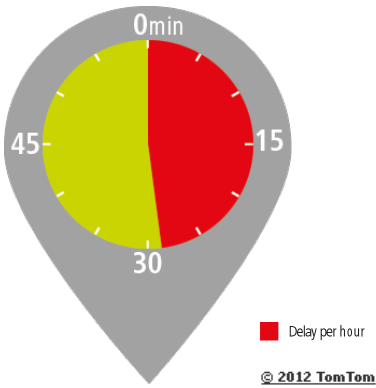
Ranking of city compared to continent	22/58
Congestion level on highways	6%
Congestion level on non-highways	35%
Delay per hour driven in peak period	29 min
Delay per year with a 30 min commute	74 h

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

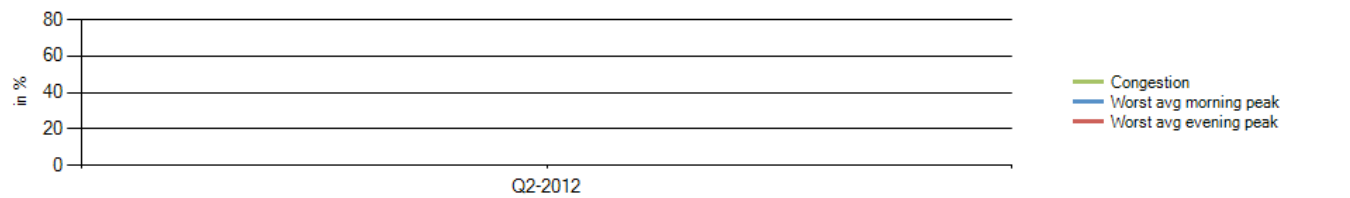


Most congested specific day	Mon 7 May 2012
Total network length	1 313 mi
Total network length highways	221 mi
Total network length non-highways	1 092 mi
Total vehicle miles	518 567 mi

Delay per hour driven in peak period



Comparison per quarter



Cologne



Congestion level

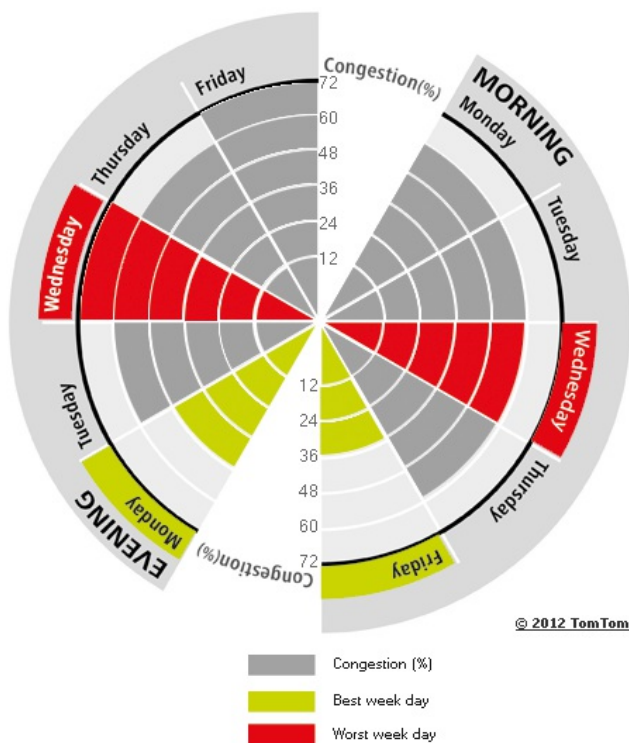
27%

Ranking

Ranking of city compared to continent	15/58
Congestion level on highways	25%
Congestion level on non-highways	32%
Delay per hour driven in peak period	32 min
Delay per year with a 30 min commute	80 h

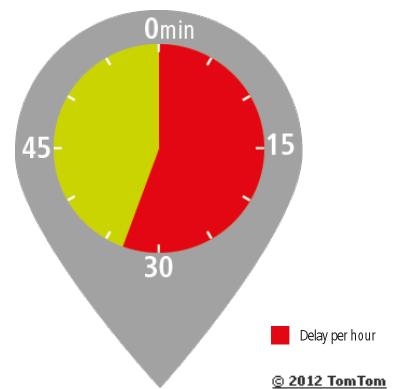
The weekly congestion pattern:

Best and worst peak periods of the week

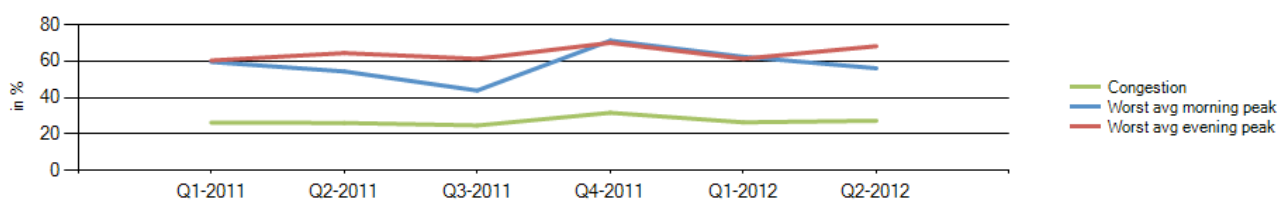


Most congested specific day	Tue 24 Apr 2012
Total network length	1 209 mi
Total network length highways	349 mi
Total network length non-highways	860 mi
Total vehicle miles	5 295 724 mi

Delay per hour driven in peak period



Comparison per quarter



Copenhagen



Congestion level

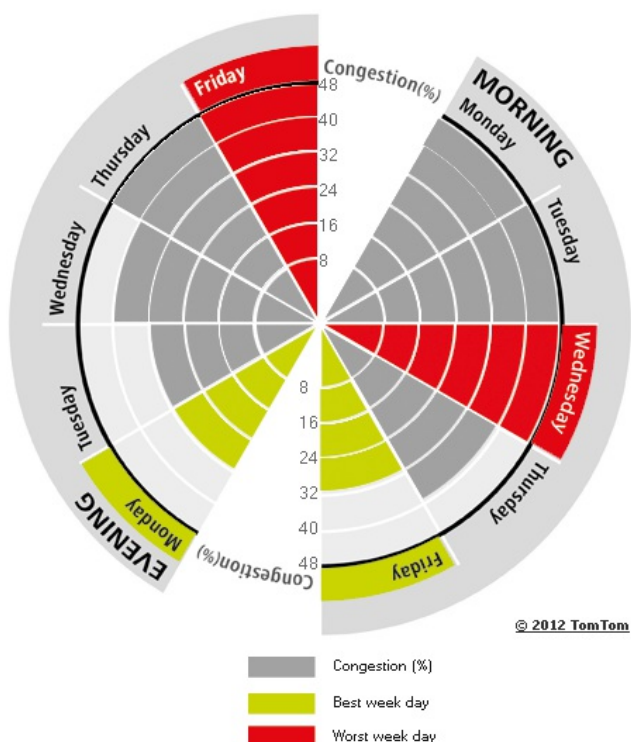
17%

Ranking

Ranking of city compared to continent	45/58
Congestion level on highways	6%
Congestion level on non-highways	26%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h

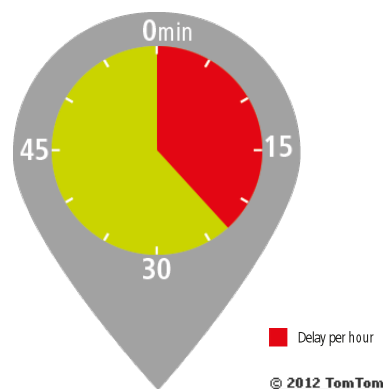
The weekly congestion pattern:

Best and worst peak periods of the week

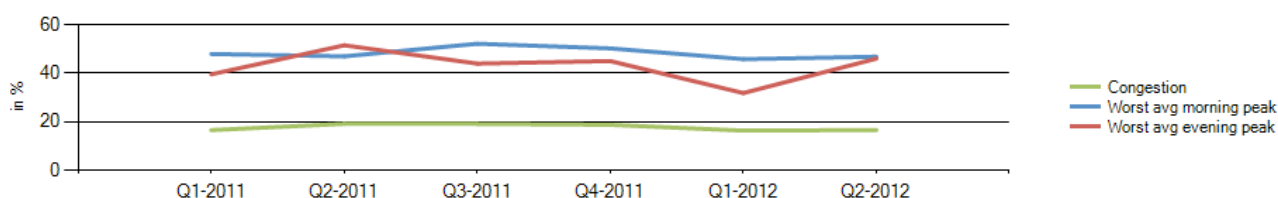


Most congested specific day	Fri 22 Jun 2012
Total network length	813 mi
Total network length highways	157 mi
Total network length non-highways	656 mi
Total vehicle miles	2 725 832 mi

Delay per hour driven in peak period



Comparison per quarter



Dublin



Congestion level

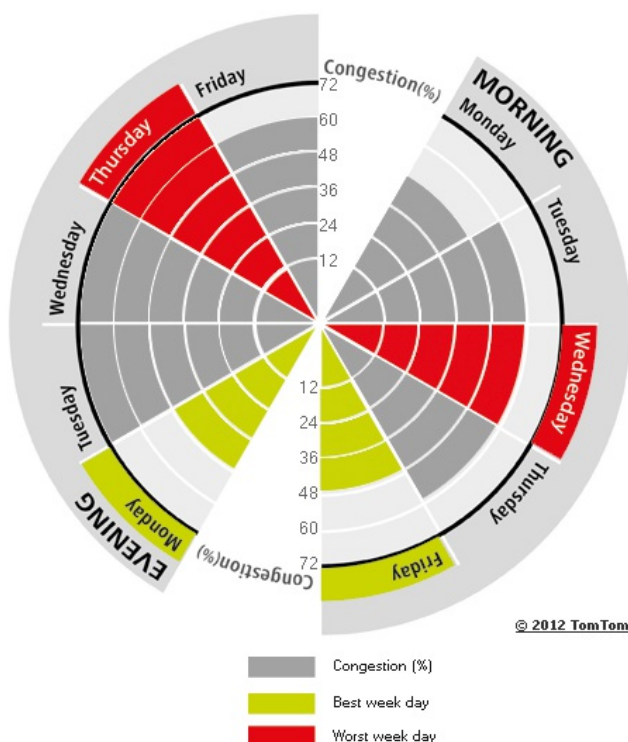
27%

Ranking

Ranking of city compared to continent	16/58
Congestion level on highways	21%
Congestion level on non-highways	37%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h

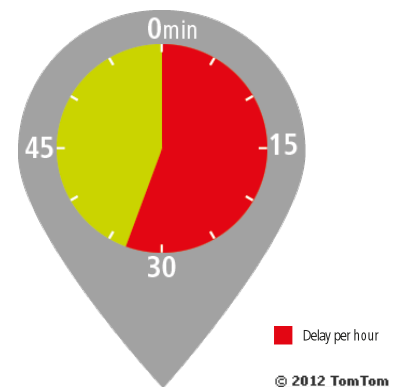
The weekly congestion pattern:

Best and worst peak periods of the week

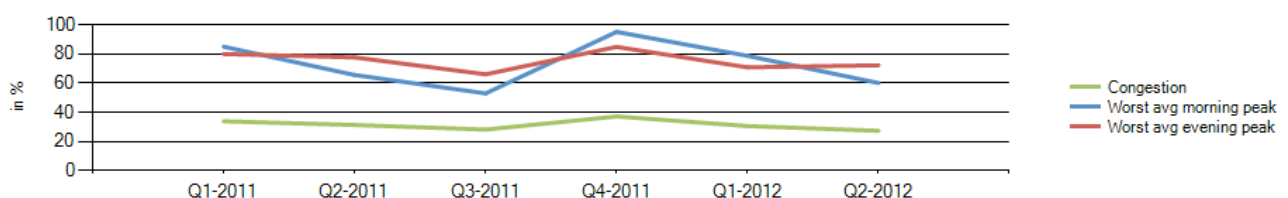


Most congested specific day	Thu 31 May 2012
Total network length	399 mi
Total network length highways	134 mi
Total network length non-highways	264 mi
Total vehicle miles	553 030 mi

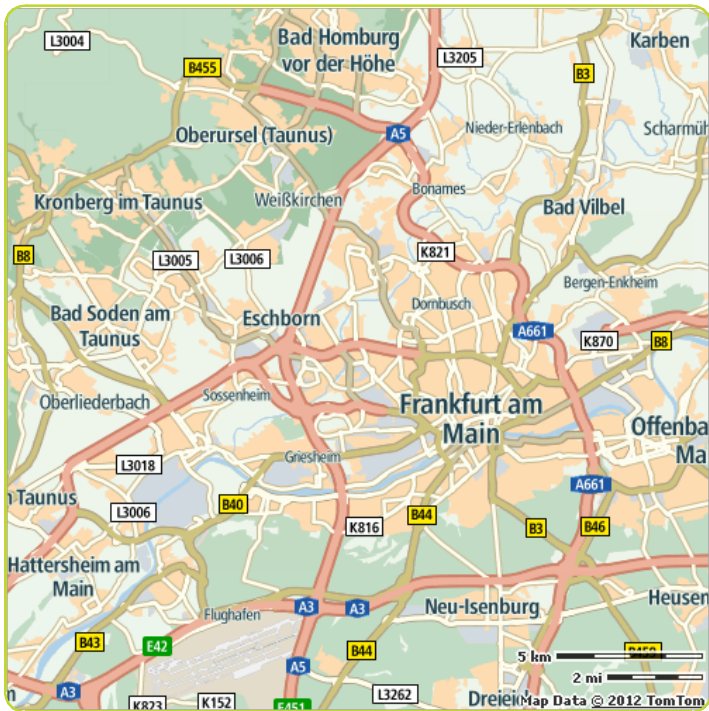
Delay per hour driven in peak period



Comparison per quarter



Frankfurt am Main



Congestion level

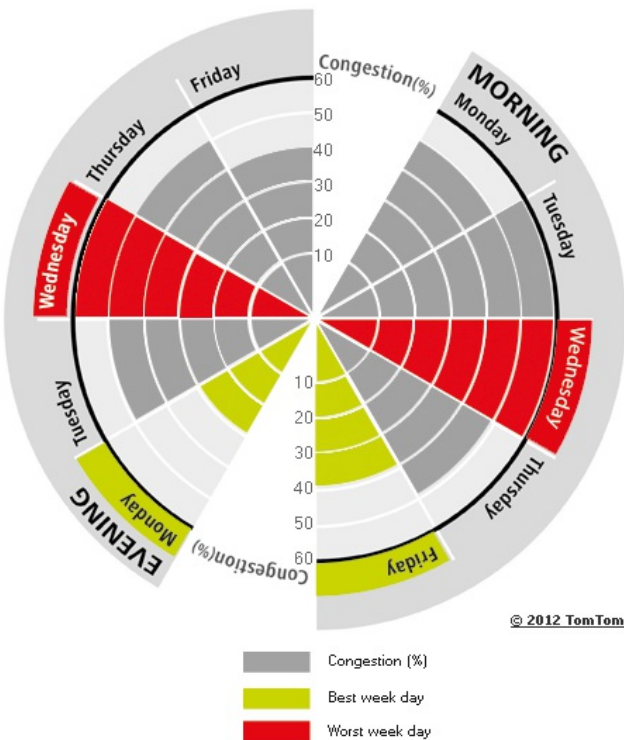
21%

Ranking

Ranking of city compared to continent	30/58
Congestion level on highways	16%
Congestion level on non-highways	31%
Delay per hour driven in peak period	26 min
Delay per year with a 30 min commute	69 h

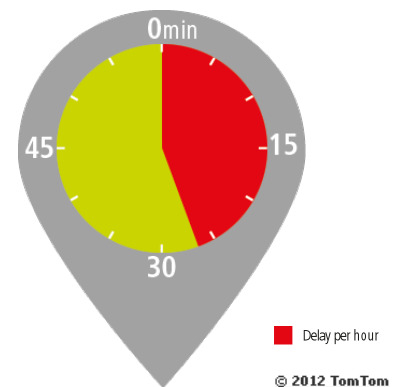
The weekly congestion pattern:

Best and worst peak periods of the week

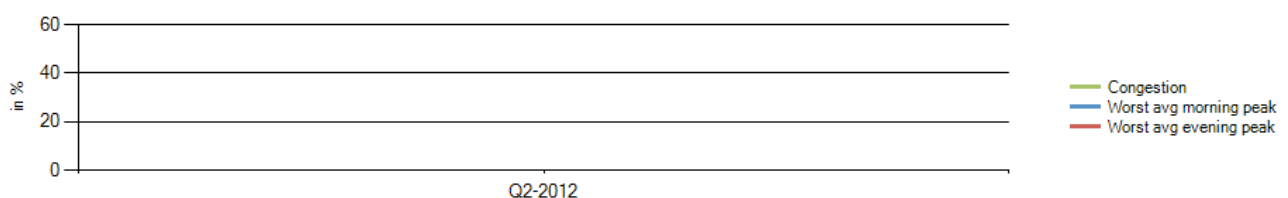


Most congested specific day	Wed 20 Jun 2012
Total network length	358 mi
Total network length highways	103 mi
Total network length non-highways	255 mi
Total vehicle miles	1 290 050 mi

Delay per hour driven in peak period



Comparison per quarter



Genoa



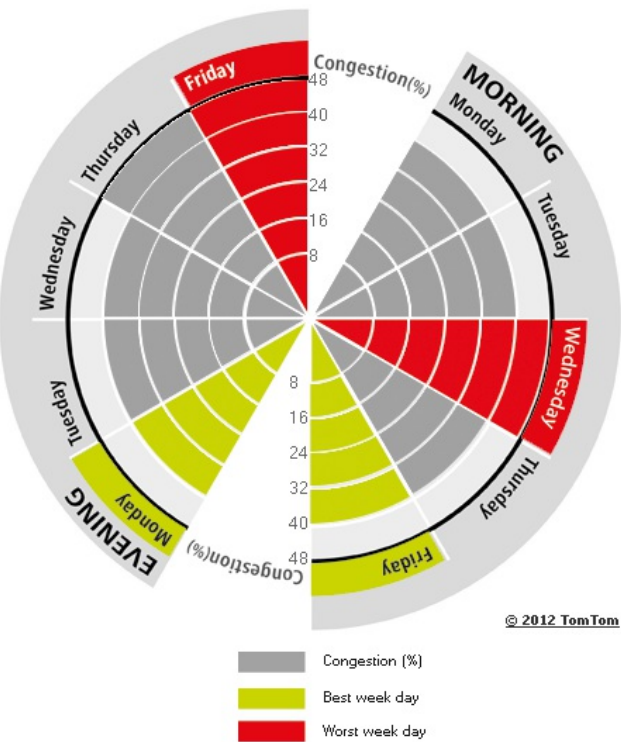
Congestion level

21%

Ranking

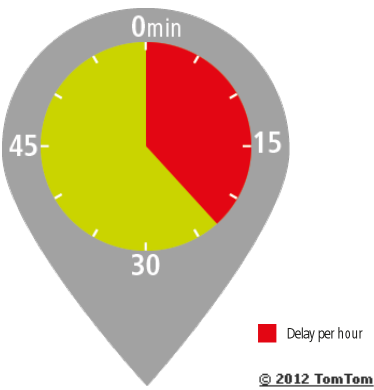
Ranking of city compared to continent	31/58
Congestion level on highways	12%
Congestion level on non-highways	32%
Delay per hour driven in peak period	23 min
Delay per year with a 30 min commute	63 h

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



Most congested specific day	Mon 30 Apr 2012
Total network length	207 mi
Total network length highways	40 mi
Total network length non-highways	167 mi
Total vehicle miles	461 243 mi

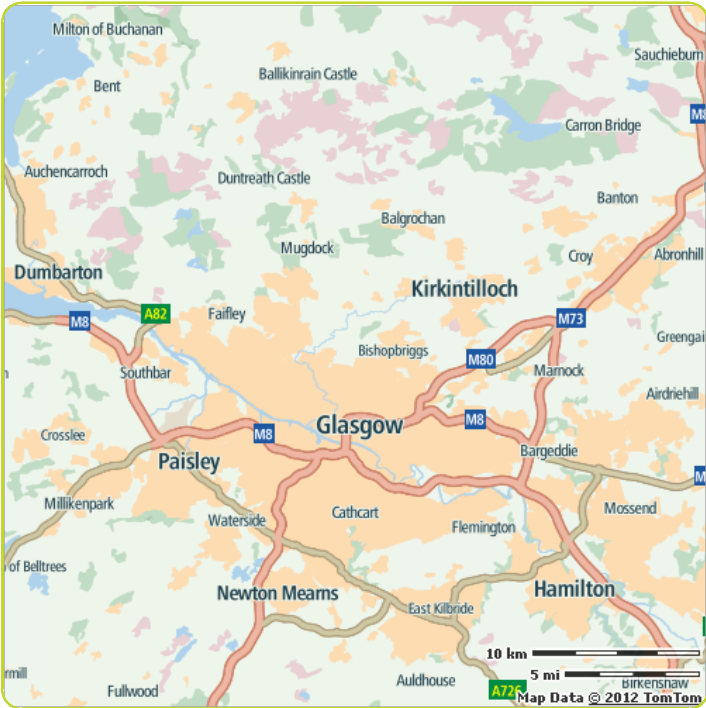
Delay per hour driven in peak period



Comparison per quarter



Glasgow



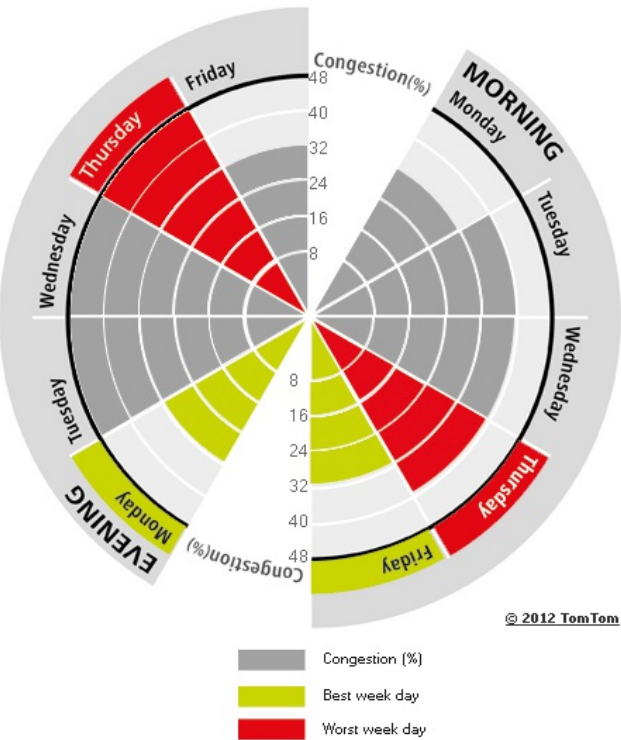
Congestion level

17%

Ranking

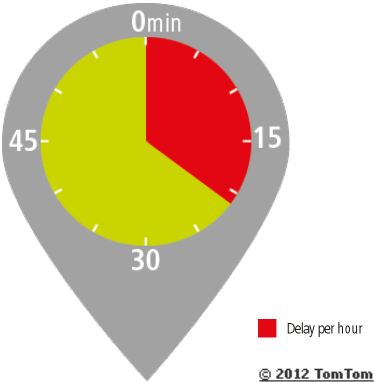
Ranking of city compared to continent	44/58
Congestion level on highways	8%
Congestion level on non-highways	23%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h

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

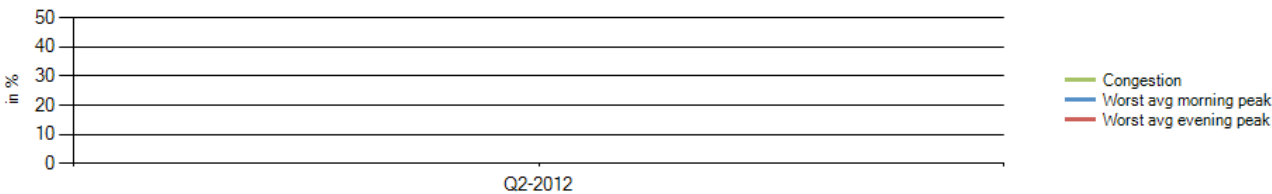


Most congested specific day	Tue 24 Apr 2012
Total network length	645 mi
Total network length highways	96 mi
Total network length non-highways	549 mi
Total vehicle miles	1 771 018 mi

Delay per hour driven in peak period



Comparison per quarter



Gothenburg

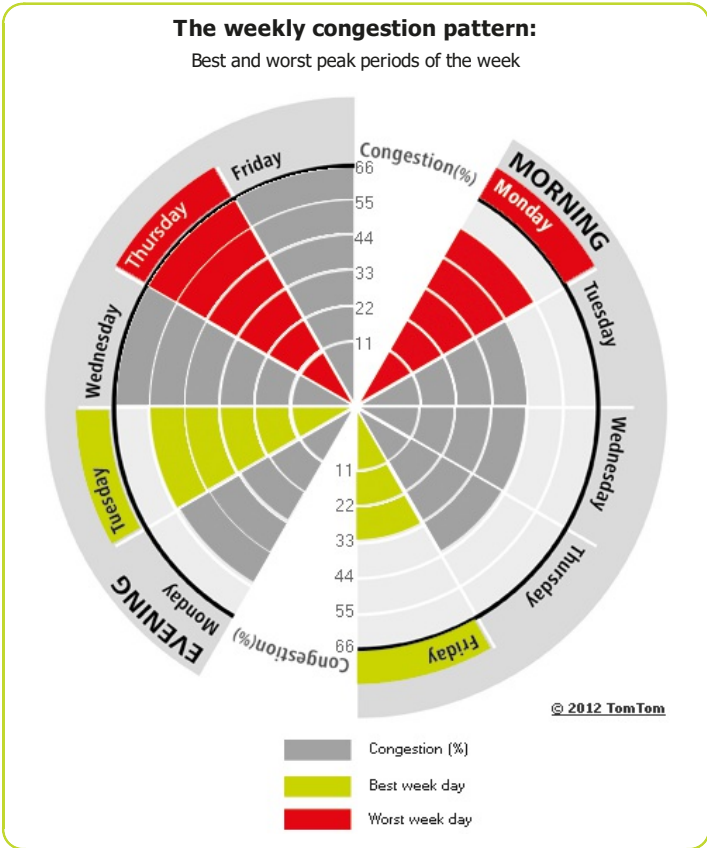


Congestion level

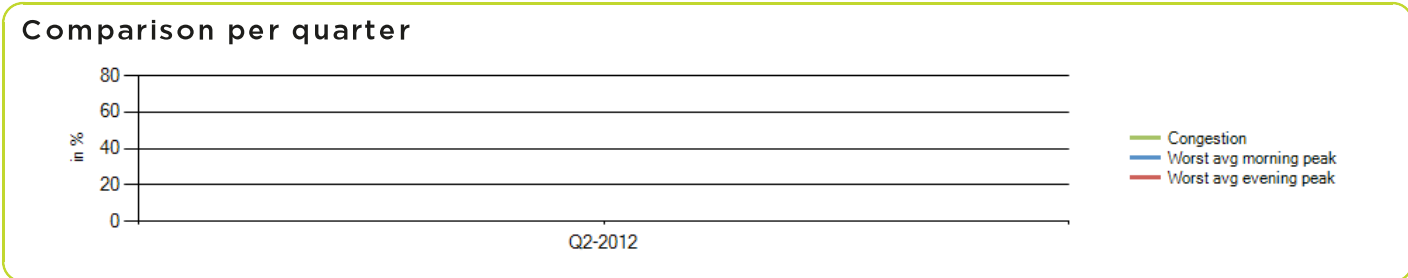
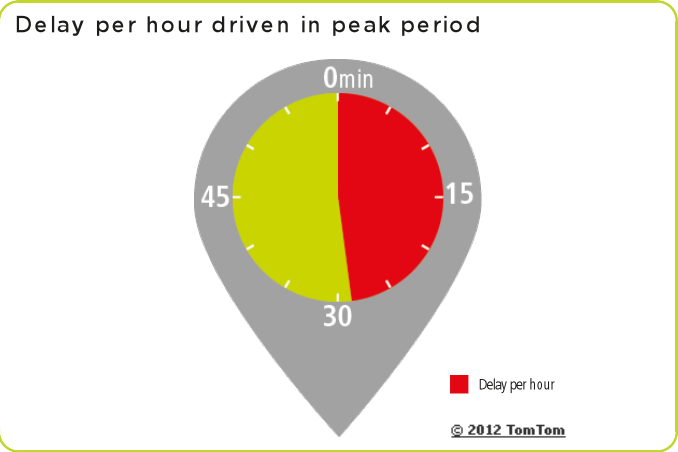
20%

Ranking

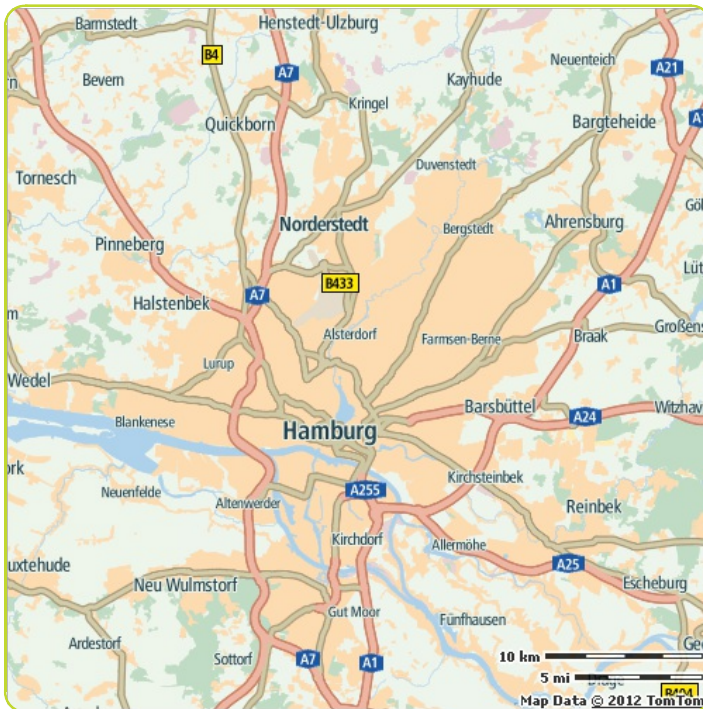
Ranking of city compared to continent	37/58
Congestion level on highways	18%
Congestion level on non-highways	21%
Delay per hour driven in peak period	29 min
Delay per year with a 30 min commute	74 h



Most congested specific day	Wed 16 May 2012
Total network length	512 mi
Total network length highways	66 mi
Total network length non-highways	446 mi
Total vehicle miles	490 214 mi



Hamburg



Congestion level

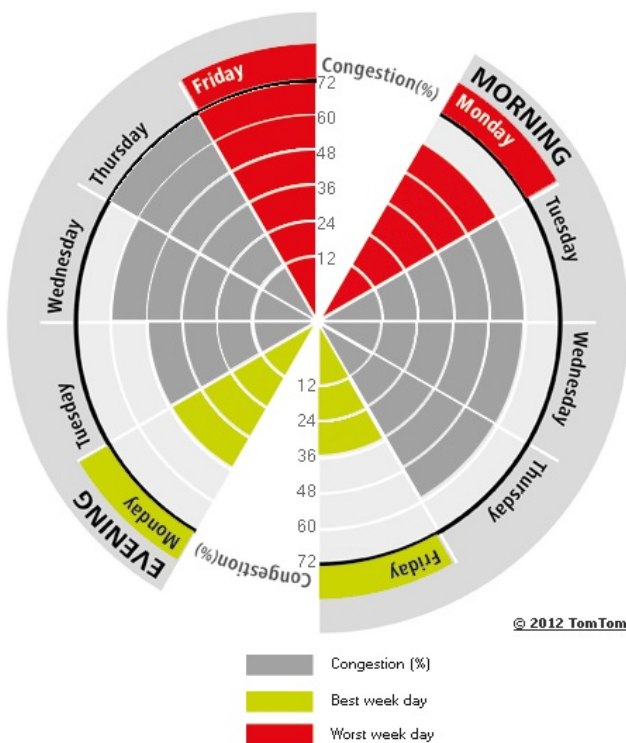
32%

Ranking

Ranking of city compared to continent	9/58
Congestion level on highways	27%
Congestion level on non-highways	36%
Delay per hour driven in peak period	32 min
Delay per year with a 30 min commute	80 h

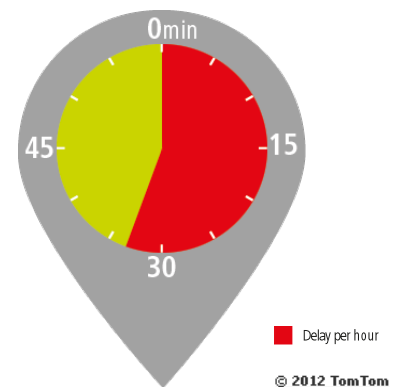
The weekly congestion pattern:

Best and worst peak periods of the week

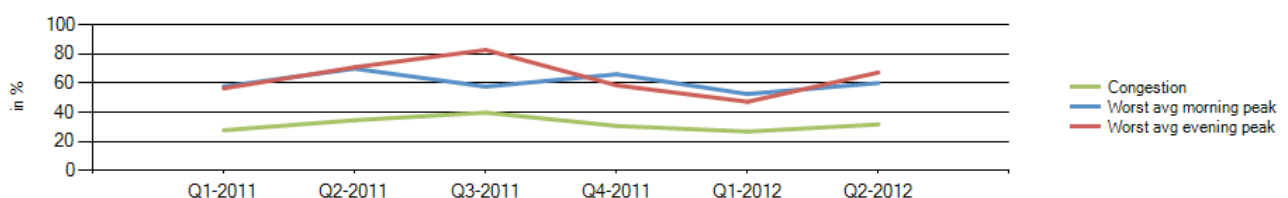


Most congested specific day	Fri 25 May 2012
Total network length	1 338 mi
Total network length highways	266 mi
Total network length non-highways	1 072 mi
Total vehicle miles	4 678 594 mi

Delay per hour driven in peak period



Comparison per quarter



Helsinki



Congestion level

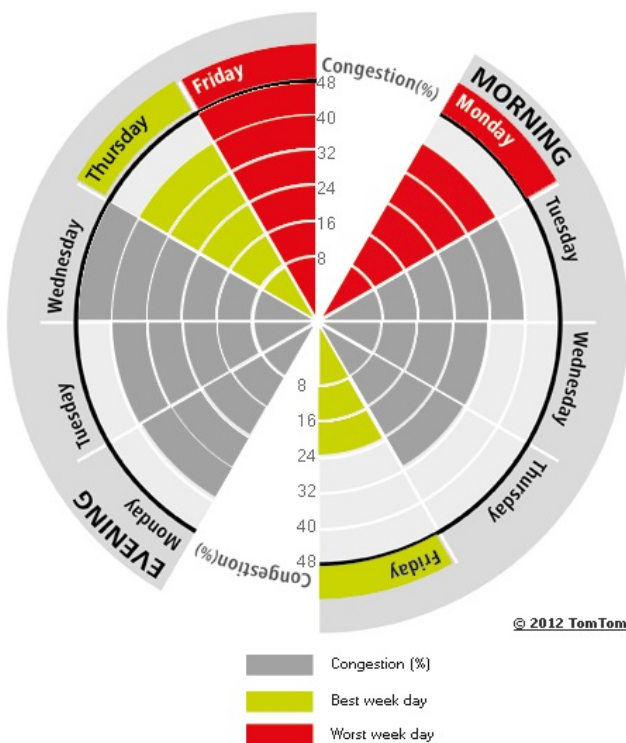
15%

Ranking

Ranking of city compared to continent	48/58
Congestion level on highways	10%
Congestion level on non-highways	21%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h

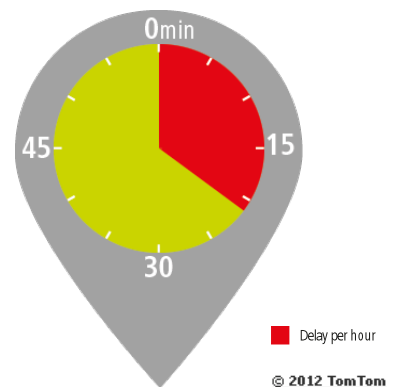
The weekly congestion pattern:

Best and worst peak periods of the week

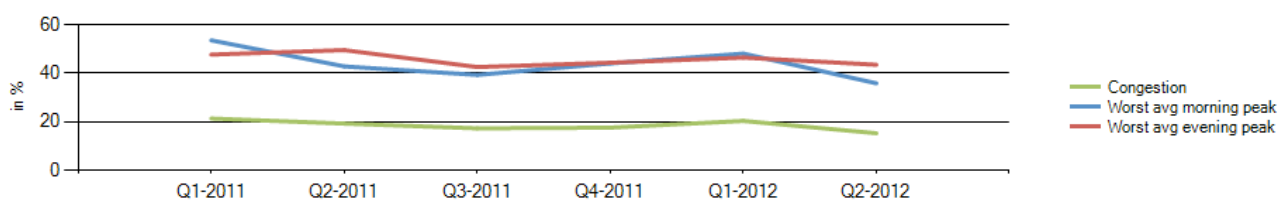


Most congested specific day	Wed 16 May 2012
Total network length	684 mi
Total network length highways	192 mi
Total network length non-highways	492 mi
Total vehicle miles	2 471 174 mi

Delay per hour driven in peak period



Comparison per quarter



Istanbul



Congestion level

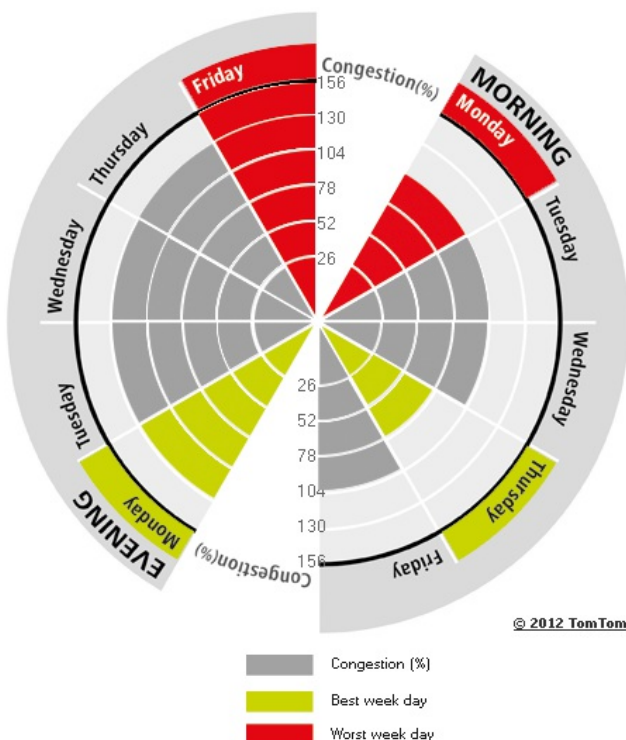
57%

Ranking

Ranking of city compared to continent	1/58
Congestion level on highways	61%
Congestion level on non-highways	54%
Delay per hour driven in peak period	64 min
Delay per year with a 30 min commute	118 h

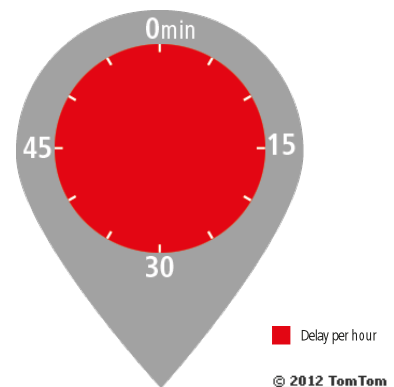
The weekly congestion pattern:

Best and worst peak periods of the week



Most congested specific day	Mon 18 Jun 2012
Total network length	1 252 mi
Total network length highways	250 mi
Total network length non-highways	1 002 mi
Total vehicle miles	557 840 mi

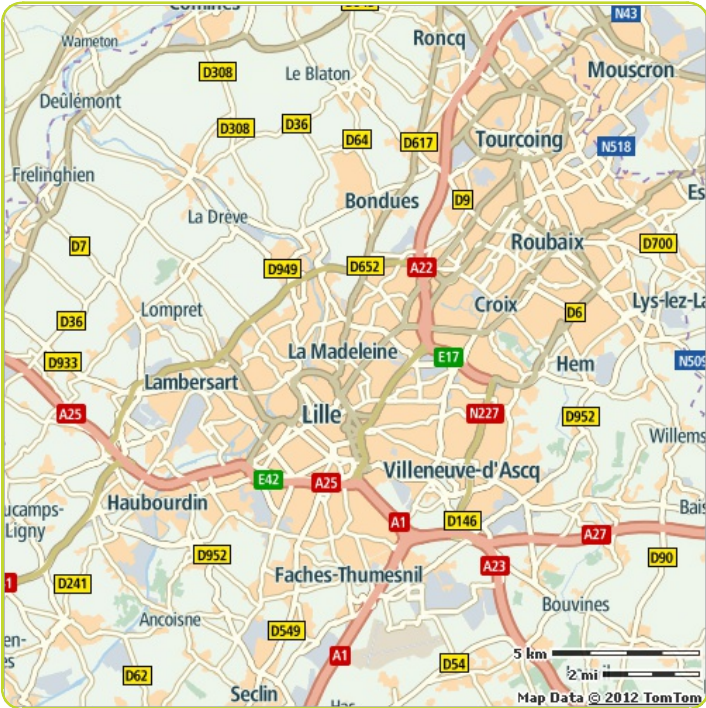
Delay per hour driven in peak period



Comparison per quarter



Lille



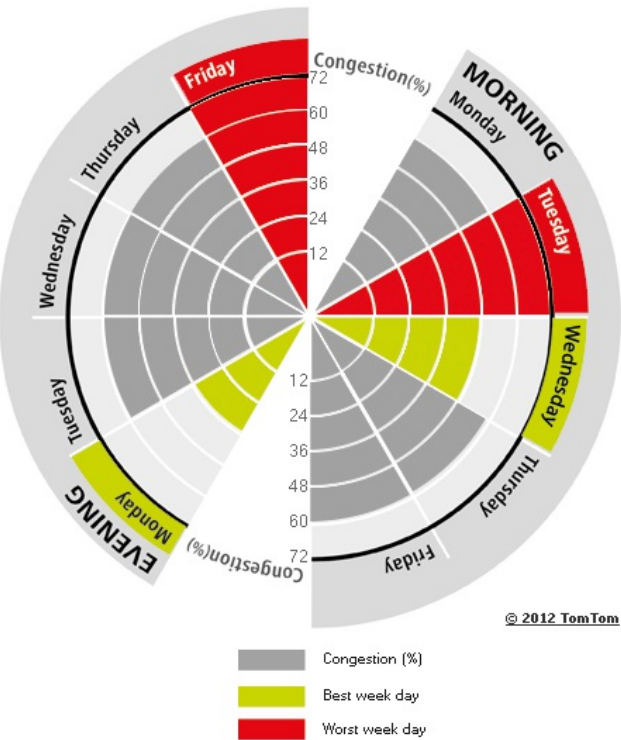
Congestion level

21%

Ranking

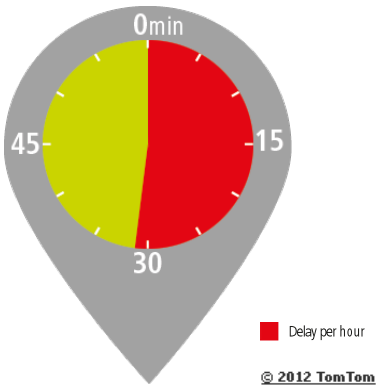
Ranking of city compared to continent	32/58
Congestion level on highways	16%
Congestion level on non-highways	26%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h

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

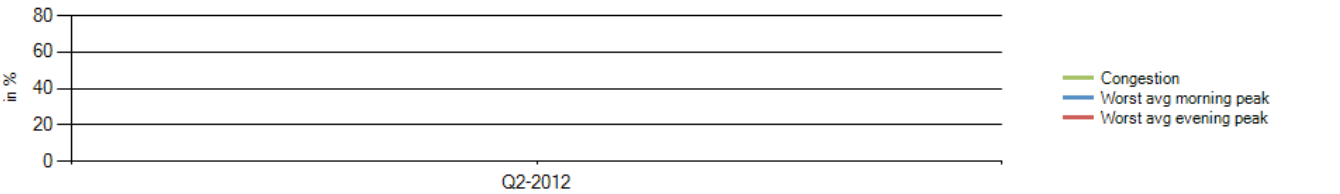


Most congested specific day	Fri 29 Jun 2012
Total network length	825 mi
Total network length highways	101 mi
Total network length non-highways	724 mi
Total vehicle miles	3 494 242 mi

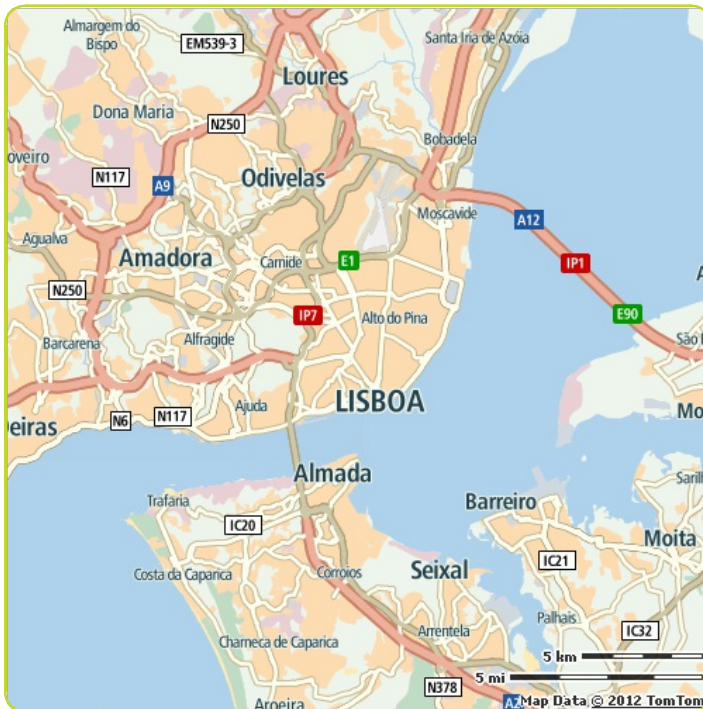
Delay per hour driven in peak period



Comparison per quarter



Lisbon



Congestion level

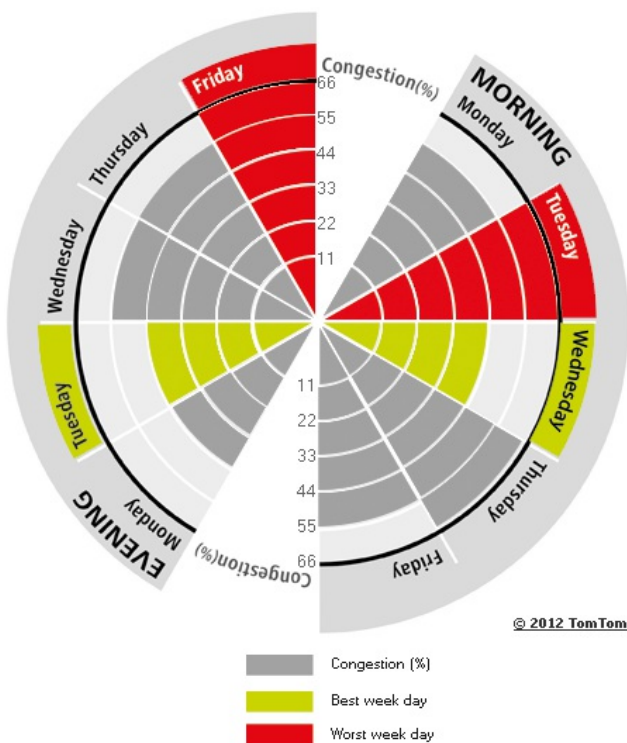
21%

Ranking

Ranking of city compared to continent	34/58
Congestion level on highways	11%
Congestion level on non-highways	21%
Delay per hour driven in peak period	29 min
Delay per year with a 30 min commute	74 h

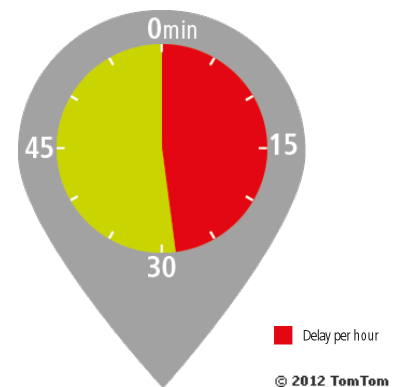
The weekly congestion pattern:

Best and worst peak periods of the week

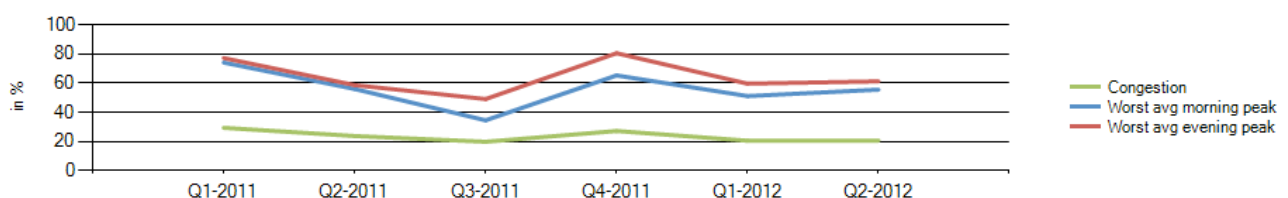


Most congested specific day	Mon 7 May 2012
Total network length	329 mi
Total network length highways	16 mi
Total network length non-highways	313 mi
Total vehicle miles	1 010 576 mi

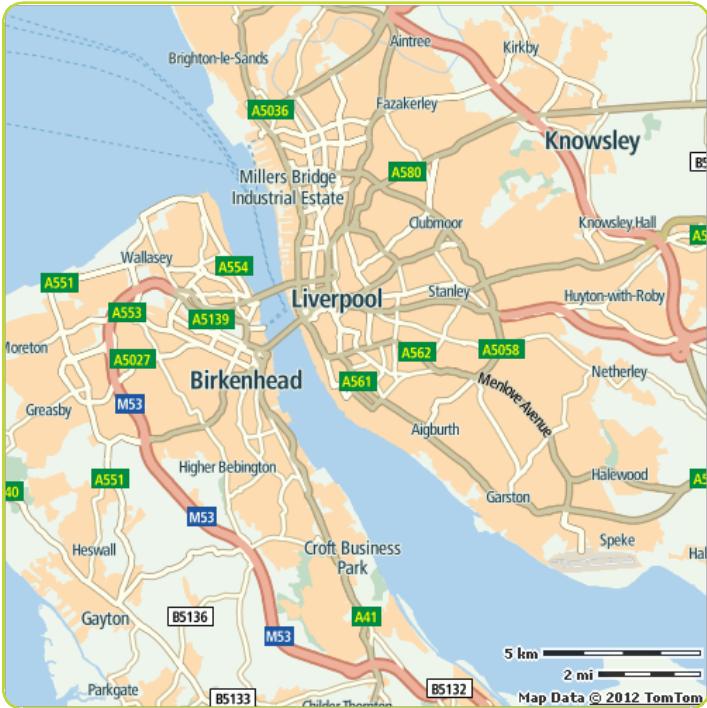
Delay per hour driven in peak period



Comparison per quarter



Liverpool



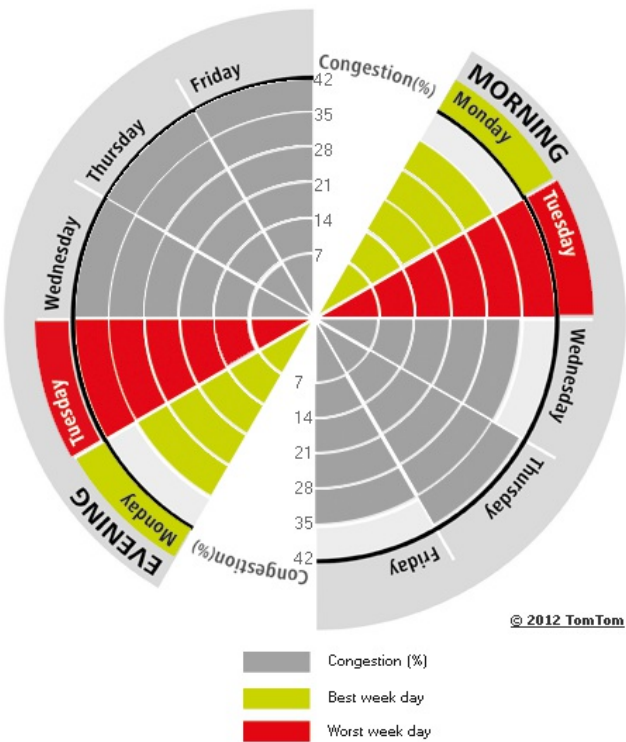
Congestion level

20%

Ranking

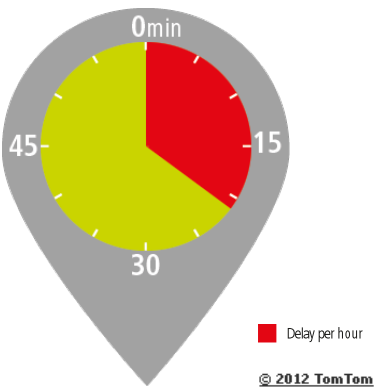
Ranking of city compared to continent	40/58
Congestion level on highways	3%
Congestion level on non-highways	25%
Delay per hour driven in peak period	21 min
Delay per year with a 30 min commute	59 h

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



Most congested specific day	Thu 21 Jun 2012
Total network length	637 mi
Total network length highways	68 mi
Total network length non-highways	570 mi
Total vehicle miles	1 734 651 mi

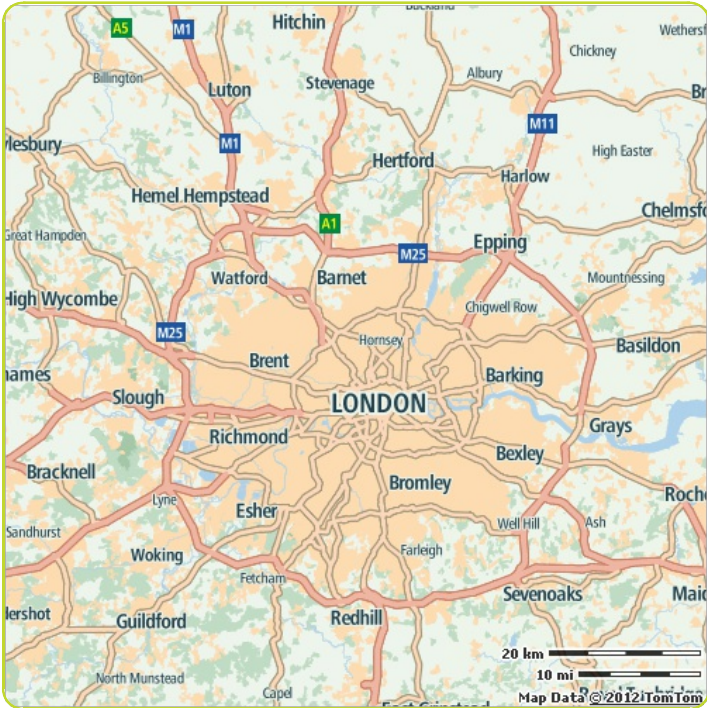
Delay per hour driven in peak period



Comparison per quarter



London



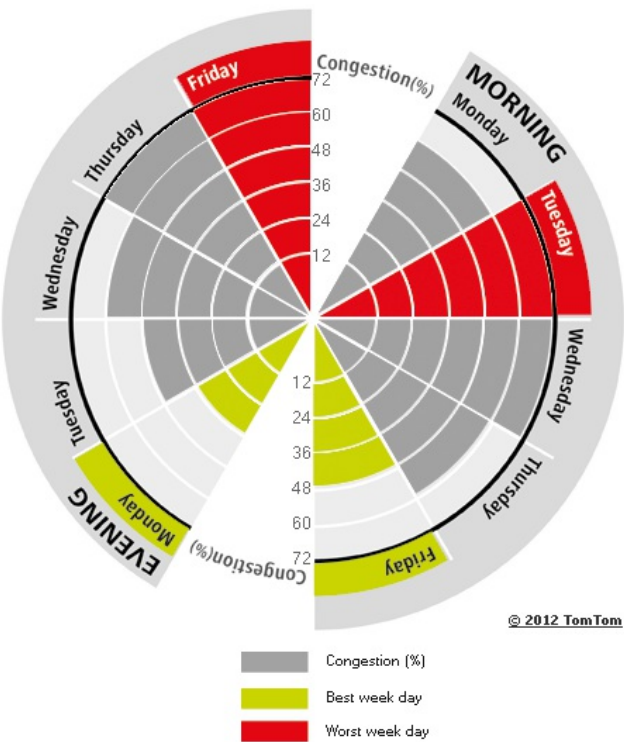
Congestion level

26%

Ranking

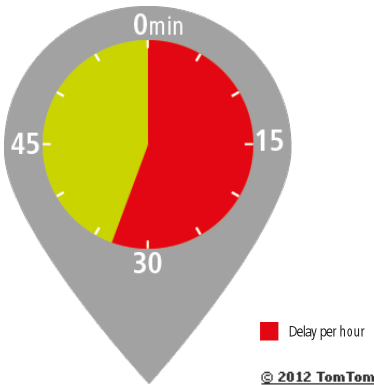
Ranking of city compared to continent	18/58
Congestion level on highways	13%
Congestion level on non-highways	35%
Delay per hour driven in peak period	32 min
Delay per year with a 30 min commute	80 h

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

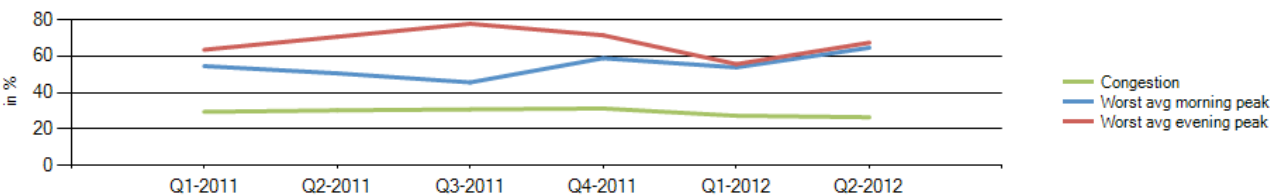


Most congested specific day	Fri 25 May 2012
Total network length	4 547 mi
Total network length highways	436 mi
Total network length non-highways	4 112 mi
Total vehicle miles	48 755 174 mi

Delay per hour driven in peak period



Comparison per quarter



Luxembourg



Congestion level

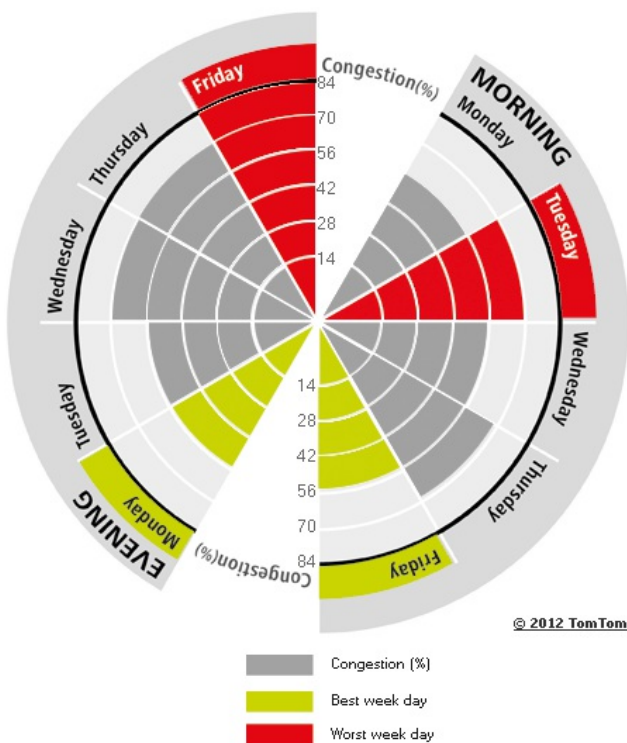
24%

Ranking

Ranking of city compared to continent	24/58
Congestion level on highways	15%
Congestion level on non-highways	37%
Delay per hour driven in peak period	34 min
Delay per year with a 30 min commute	83 h

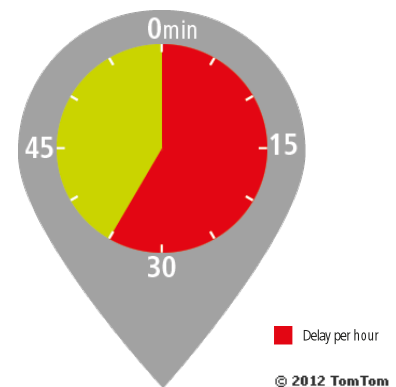
The weekly congestion pattern:

Best and worst peak periods of the week

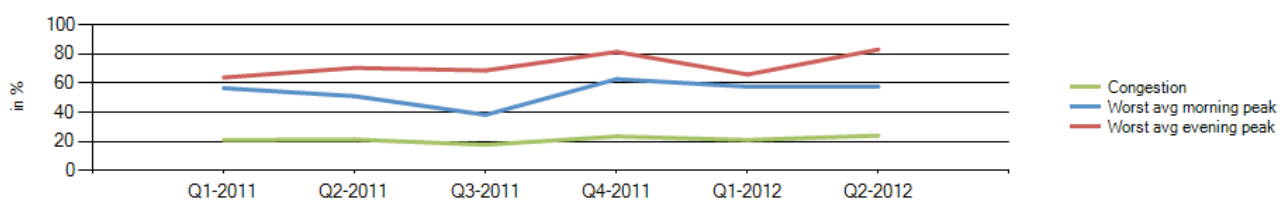


Most congested specific day	Tue 24 Apr 2012
Total network length	201 mi
Total network length highways	43 mi
Total network length non-highways	157 mi
Total vehicle miles	544 768 mi

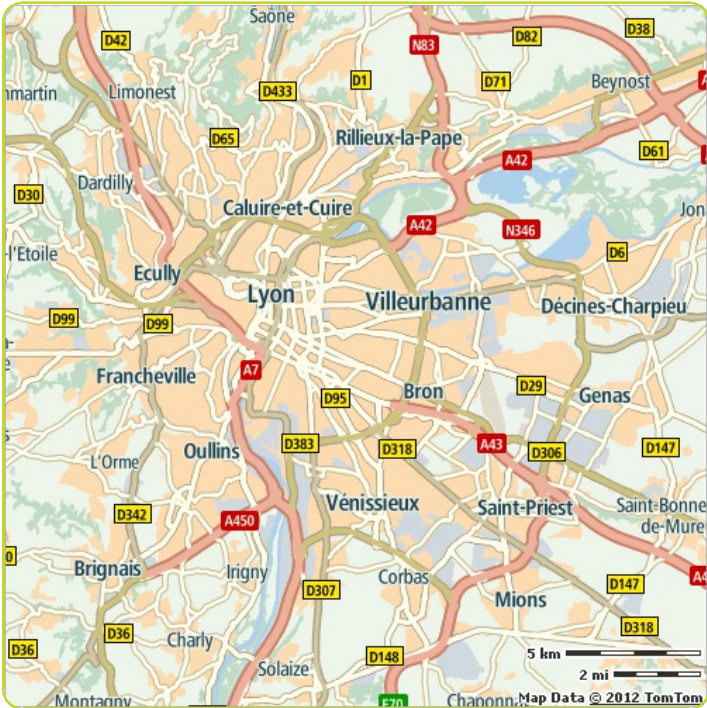
Delay per hour driven in peak period



Comparison per quarter



Lyon



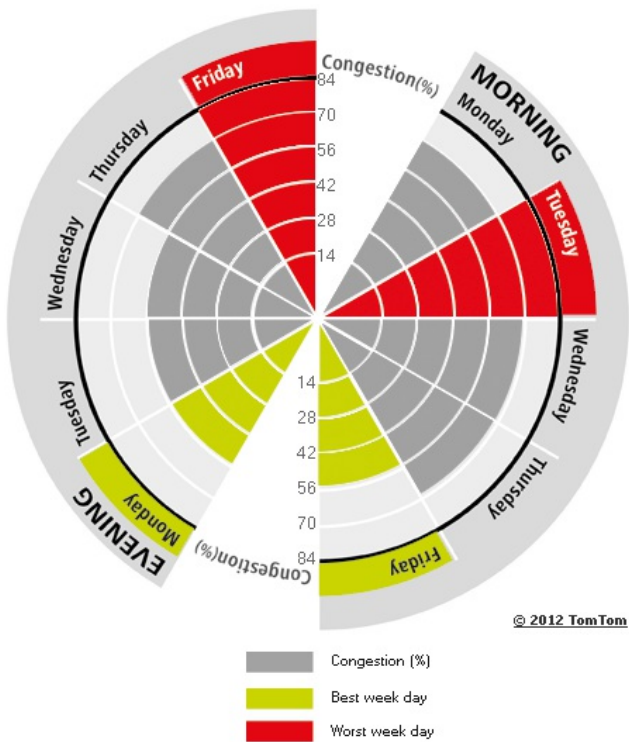
Congestion level

27%

Ranking

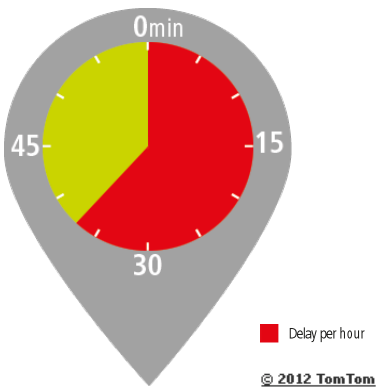
Ranking of city compared to continent	13/58
Congestion level on highways	22%
Congestion level on non-highways	35%
Delay per hour driven in peak period	36 min
Delay per year with a 30 min commute	86 h

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



Most congested specific day	Fri 29 Jun 2012
Total network length	1 094 mi
Total network length highways	219 mi
Total network length non-highways	876 mi
Total vehicle miles	5 242 793 mi

Delay per hour driven in peak period



Comparison per quarter



Málaga

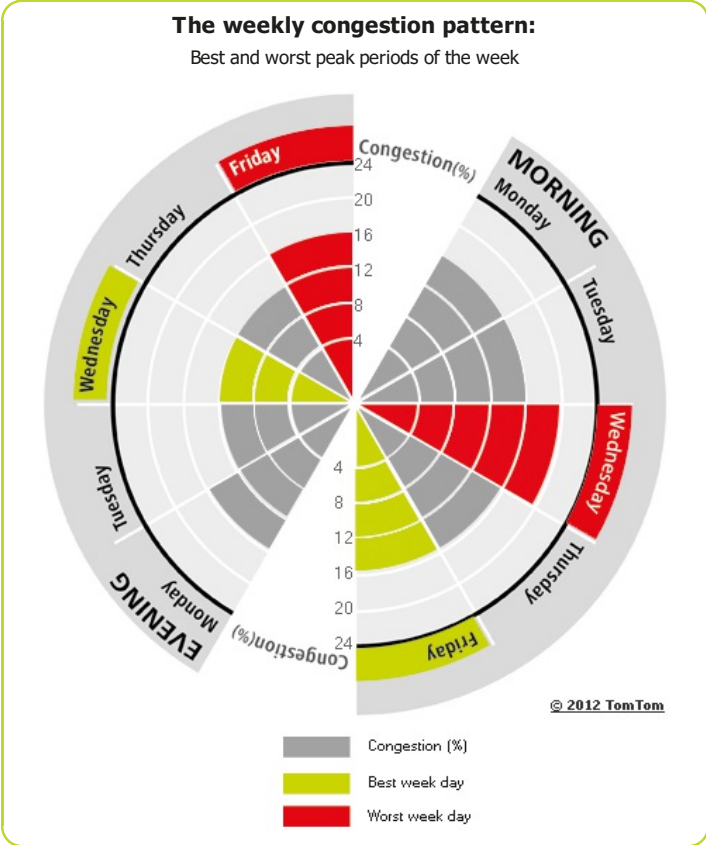


Congestion level

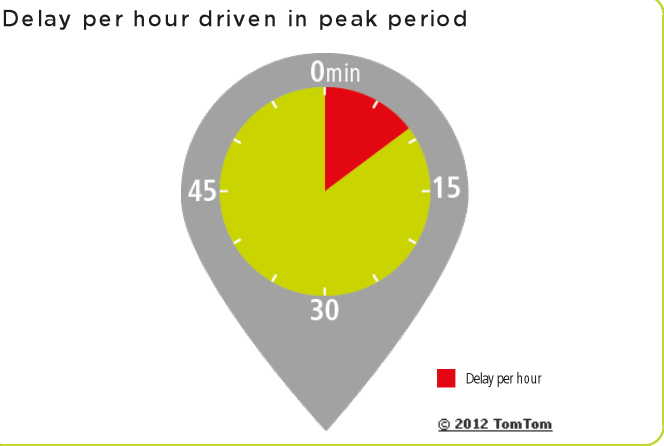
10%

Ranking

Ranking of city compared to continent	58/58
Congestion level on highways	6%
Congestion level on non-highways	11%
Delay per hour driven in peak period	8 min
Delay per year with a 30 min commute	27 h



Most congested specific day	Fri 13 Apr 2012
Total network length	155 mi
Total network length highways	35 mi
Total network length non-highways	120 mi
Total vehicle miles	414 159 mi



Madrid



Congestion level

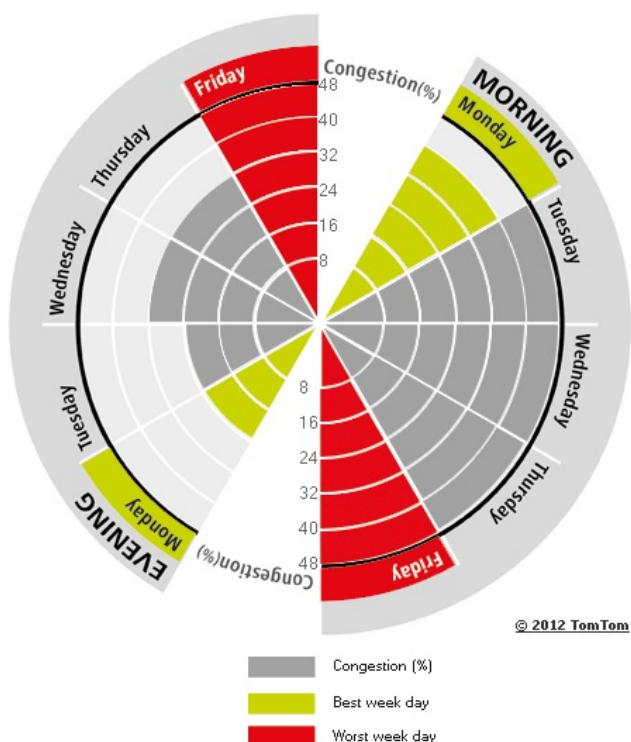
14%

Ranking

Ranking of city compared to continent	51/58
Congestion level on highways	9%
Congestion level on non-highways	20%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h

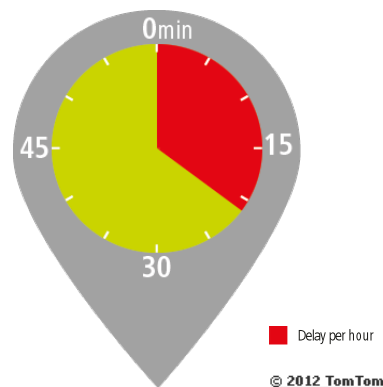
The weekly congestion pattern:

Best and worst peak periods of the week

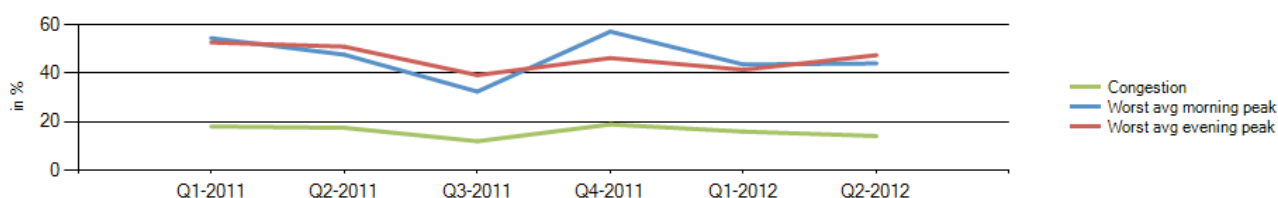


Most congested specific day	Fri 25 May 2012
Total network length	2 192 mi
Total network length highways	756 mi
Total network length non-highways	1 435 mi
Total vehicle miles	12 629 804 mi

Delay per hour driven in peak period



Comparison per quarter



Malmö



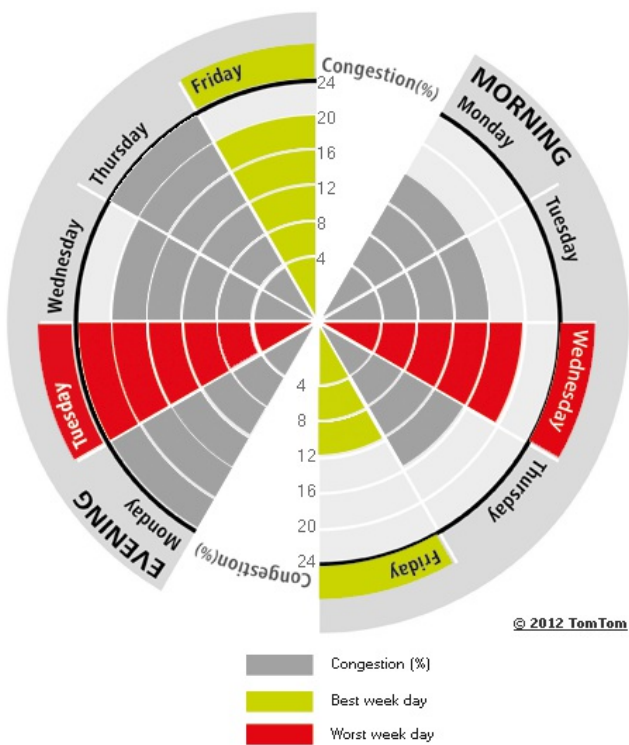
Congestion level

11%

Ranking

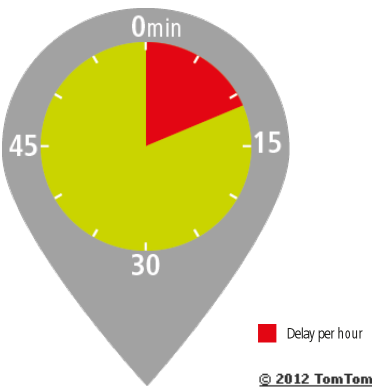
Ranking of city compared to continent	56/58
Congestion level on highways	7%
Congestion level on non-highways	21%
Delay per hour driven in peak period	10 min
Delay per year with a 30 min commute	32 h

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



Most congested specific day	Wed 20 Jun 2012
Total network length	254 mi
Total network length highways	99 mi
Total network length non-highways	154 mi
Total vehicle miles	341 123 mi

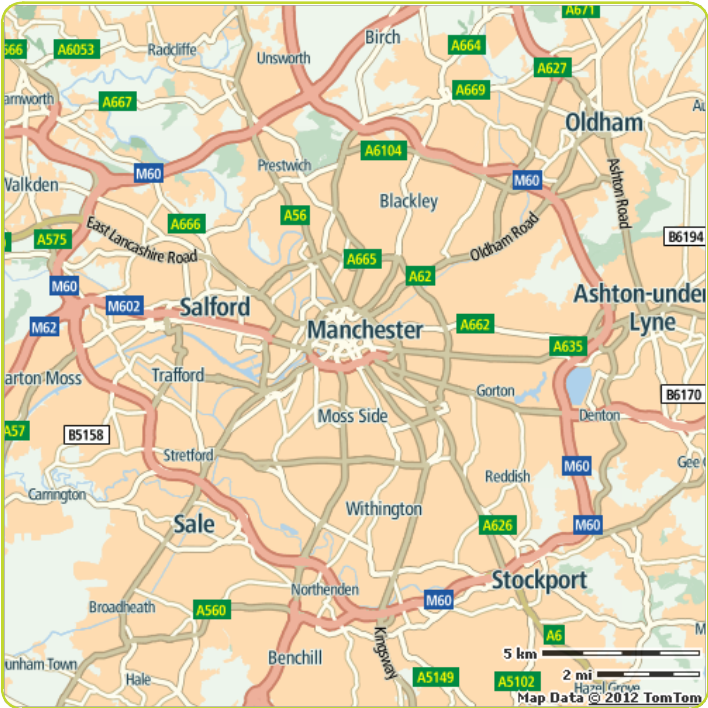
Delay per hour driven in peak period



Comparison per quarter



Manchester

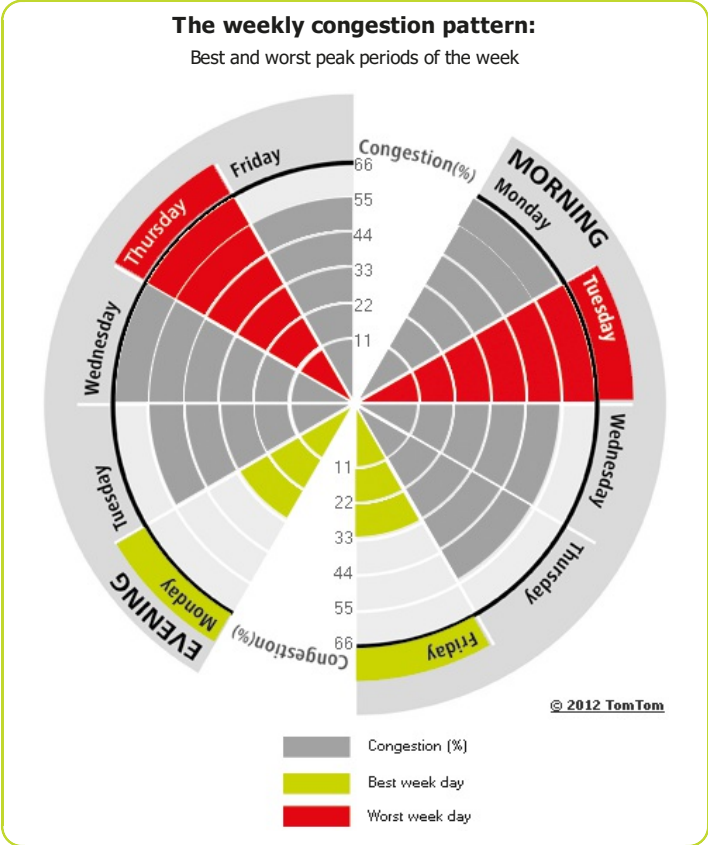


Congestion level

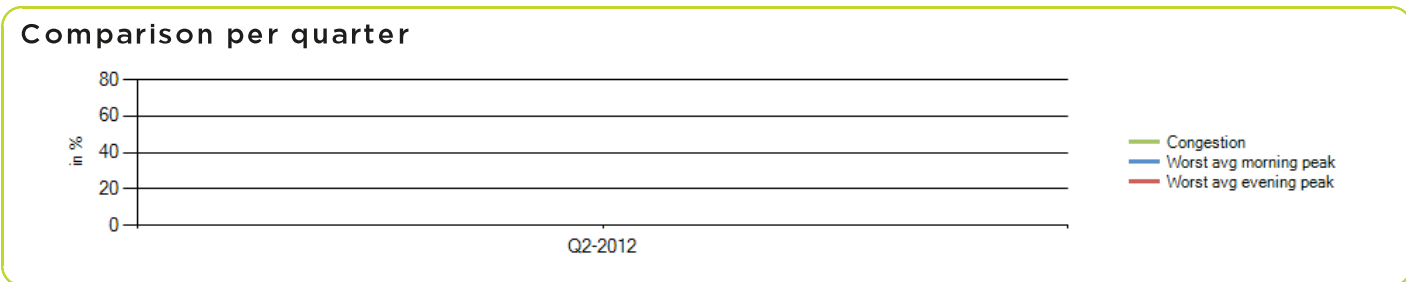
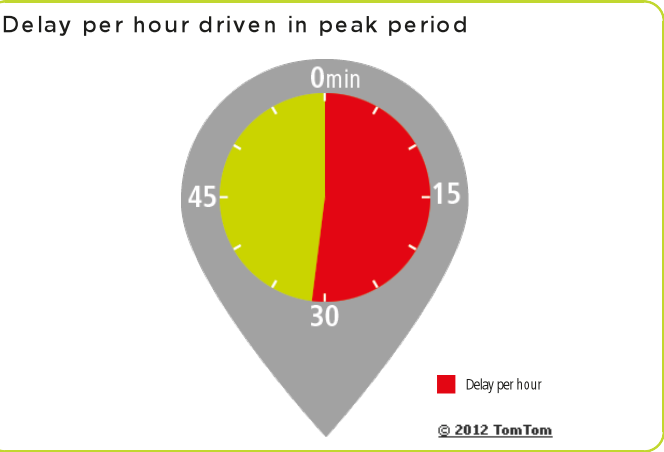
22%

Ranking

Ranking of city compared to continent	29/58
Congestion level on highways	14%
Congestion level on non-highways	31%
Delay per hour driven in peak period	30 min
Delay per year with a 30 min commute	76 h



Most congested specific day	Fri 22 Jun 2012
Total network length	977 mi
Total network length highways	153 mi
Total network length non-highways	825 mi
Total vehicle miles	5 667 191 mi



Marseille



Congestion level

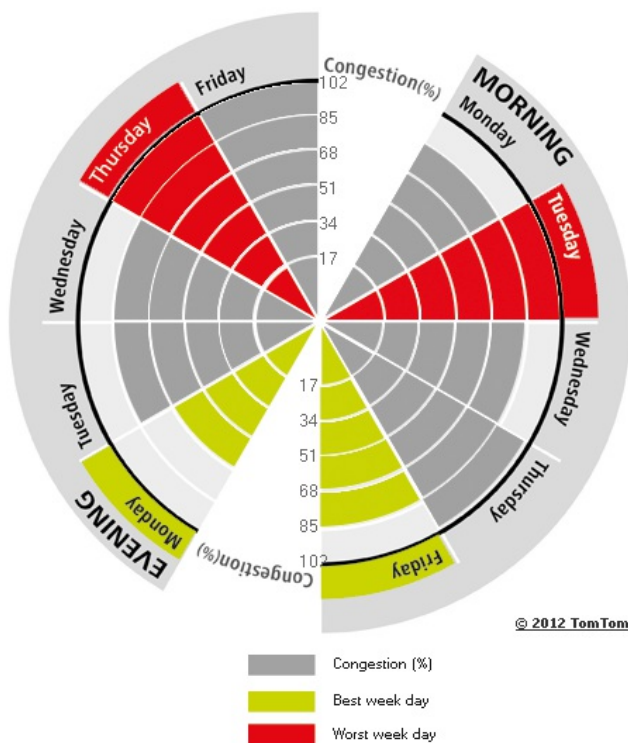
42%

Ranking

Ranking of city compared to continent	3/58
Congestion level on highways	24%
Congestion level on non-highways	54%
Delay per hour driven in peak period	49 min
Delay per year with a 30 min commute	103 h

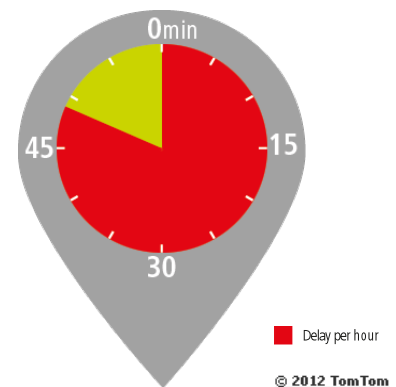
The weekly congestion pattern:

Best and worst peak periods of the week

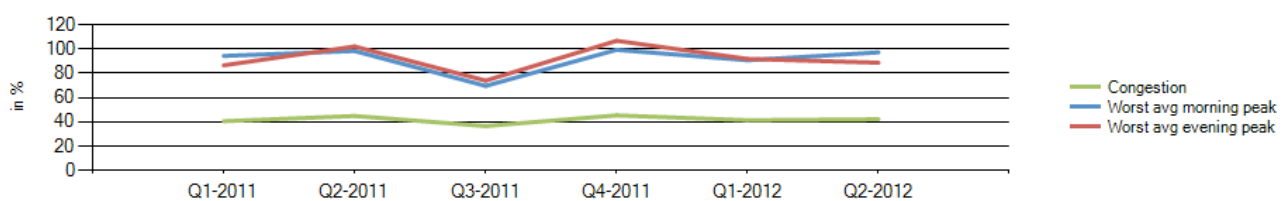


Most congested specific day	Tue 10 Apr 2012
Total network length	305 mi
Total network length highways	48 mi
Total network length non-highways	257 mi
Total vehicle miles	689 020 mi

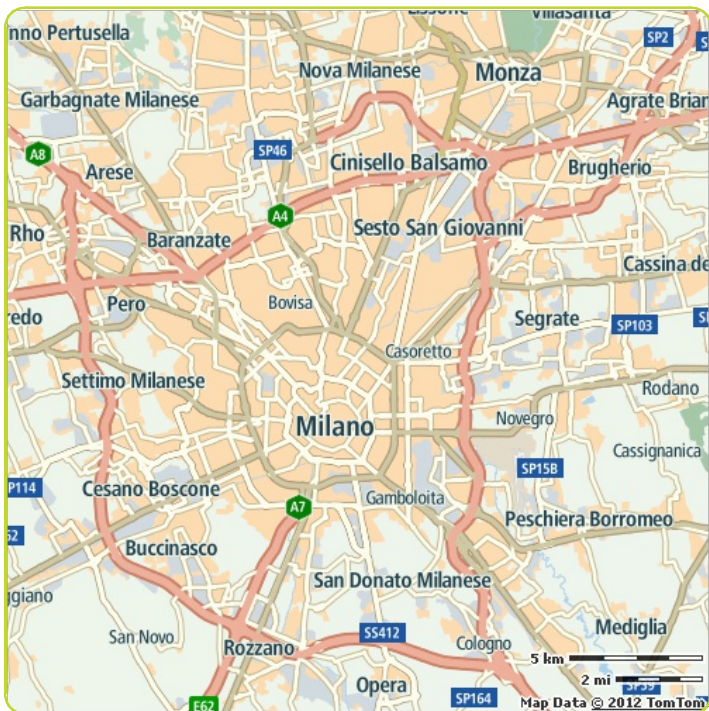
Delay per hour driven in peak period



Comparison per quarter



Milan



Congestion level

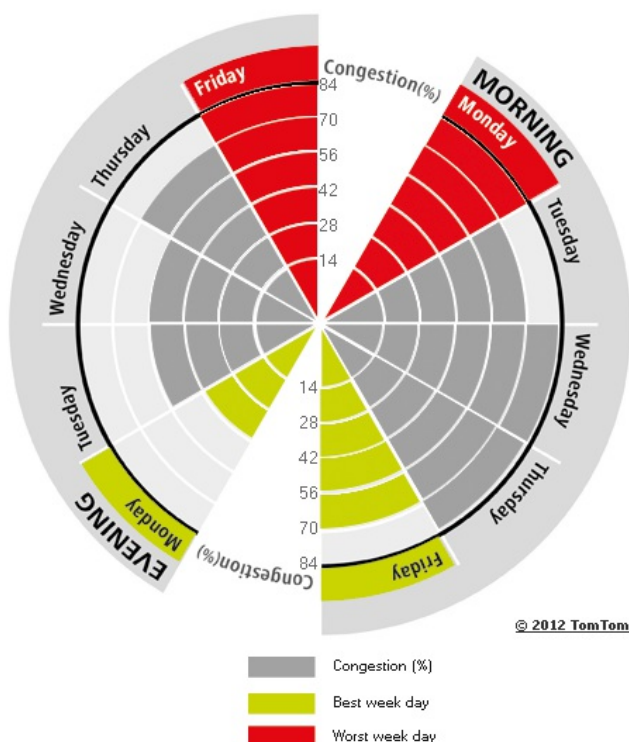
26%

Ranking

Ranking of city compared to continent	20/58
Congestion level on highways	22%
Congestion level on non-highways	29%
Delay per hour driven in peak period	38 min
Delay per year with a 30 min commute	89 h

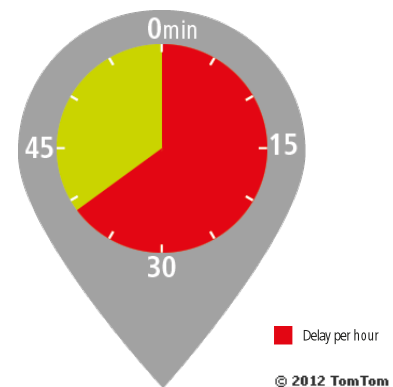
The weekly congestion pattern:

Best and worst peak periods of the week

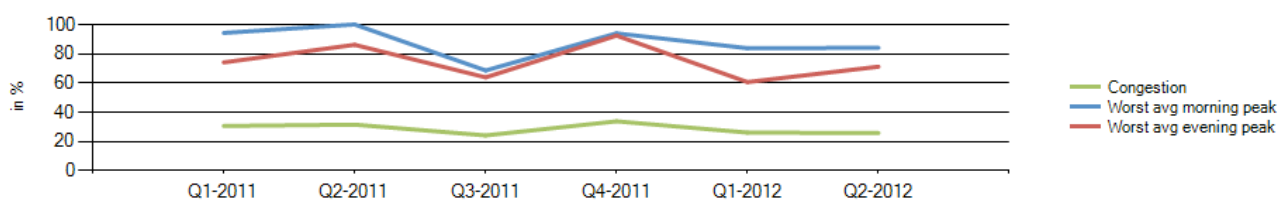


Most congested specific day	Thu 5 Apr 2012
Total network length	1 464 mi
Total network length highways	165 mi
Total network length non-highways	1 300 mi
Total vehicle miles	7 183 960 mi

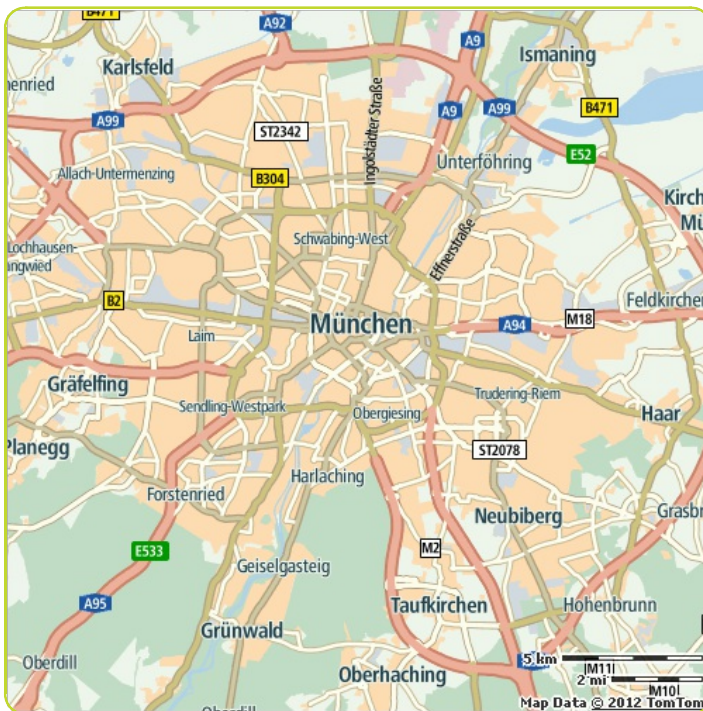
Delay per hour driven in peak period



Comparison per quarter



Munich



Congestion level

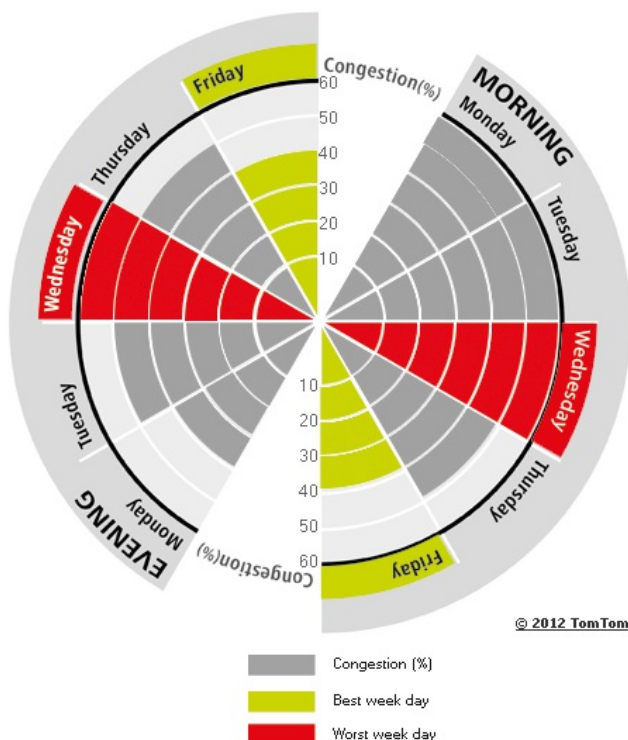
24%

Ranking

Ranking of city compared to continent	26/58
Congestion level on highways	17%
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

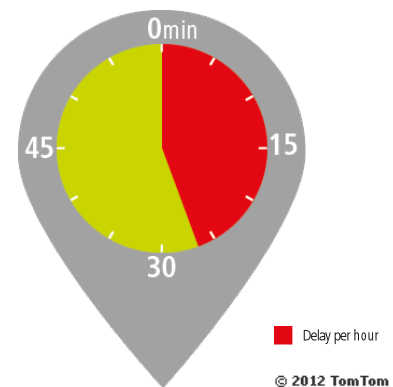
The weekly congestion pattern:

Best and worst peak periods of the week

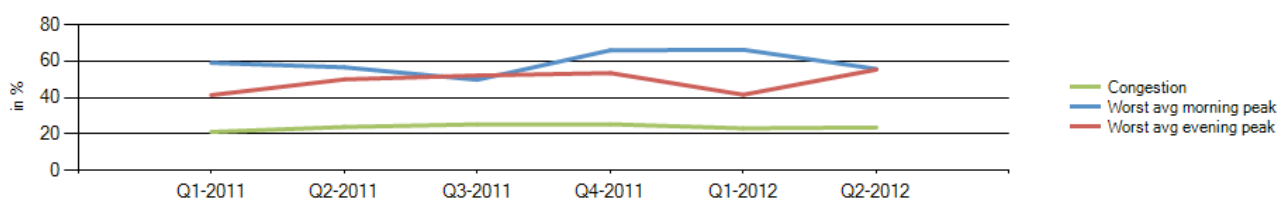


Most congested specific day	Wed 16 May 2012
Total network length	1 164 mi
Total network length highways	329 mi
Total network length non-highways	835 mi
Total vehicle miles	3 945 957 mi

Delay per hour driven in peak period



Comparison per quarter



Murcia

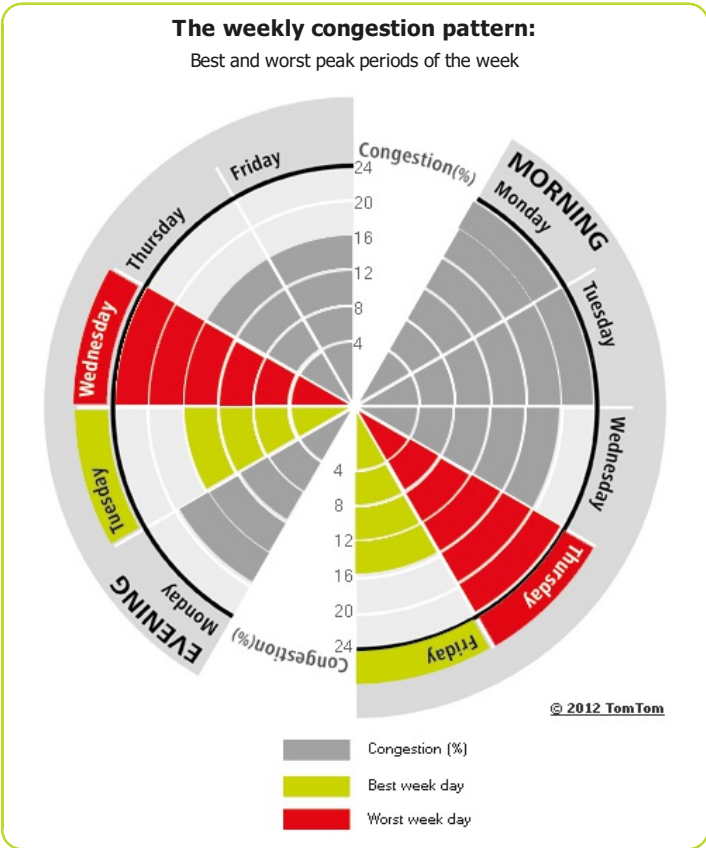


Congestion level

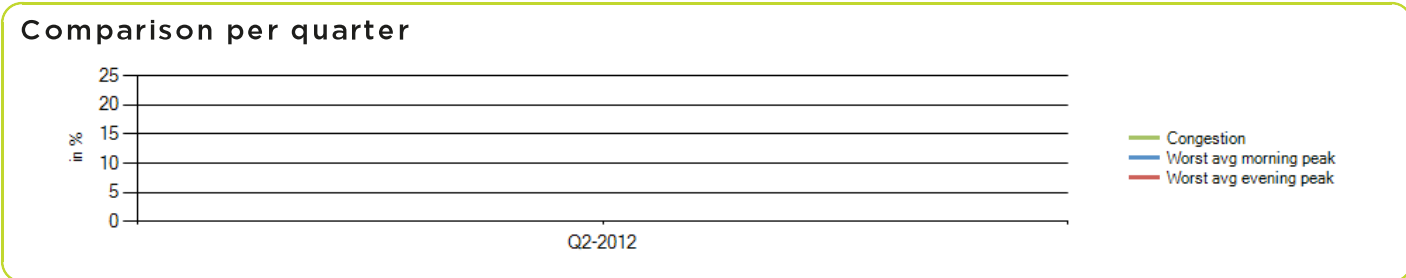
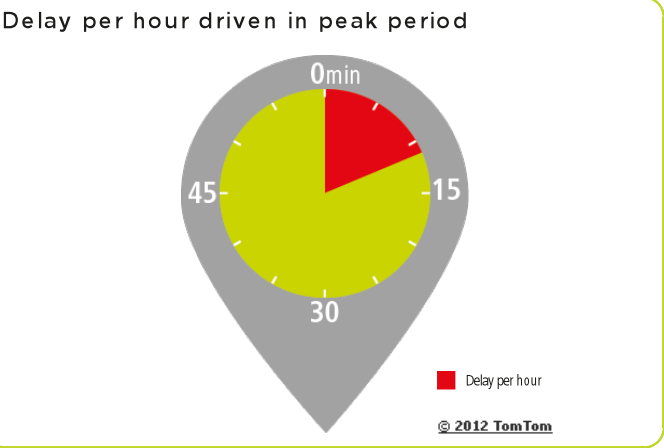
13%

Ranking

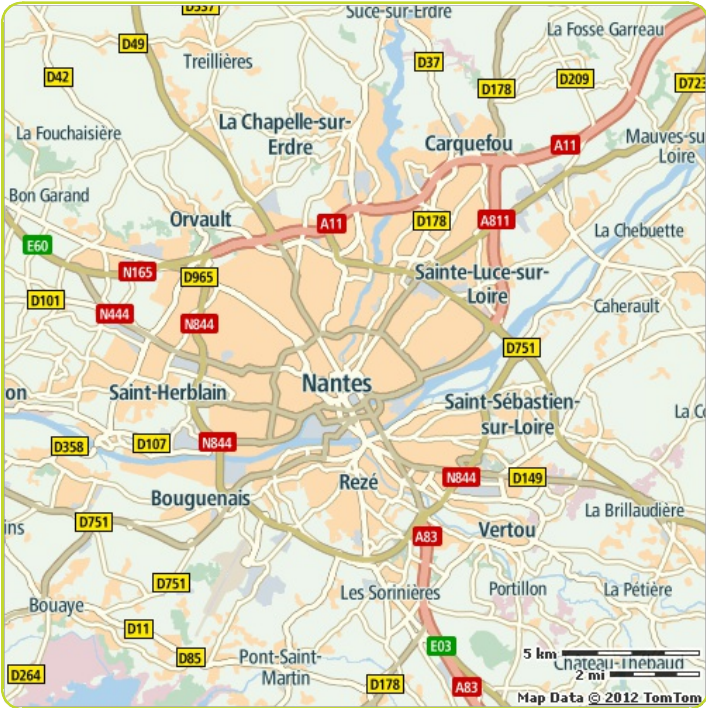
Ranking of city compared to continent	54/58
Congestion level on highways	7%
Congestion level on non-highways	22%
Delay per hour driven in peak period	10 min
Delay per year with a 30 min commute	32 h



Most congested specific day	Wed 2 May 2012
Total network length	201 mi
Total network length highways	22 mi
Total network length non-highways	180 mi
Total vehicle miles	208 673 mi



Nantes

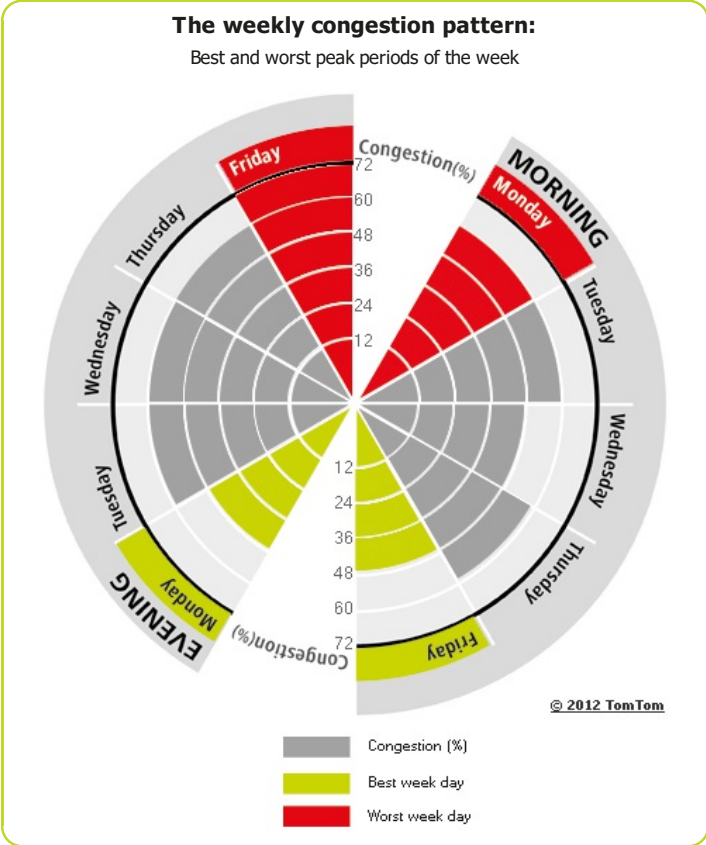


Congestion level

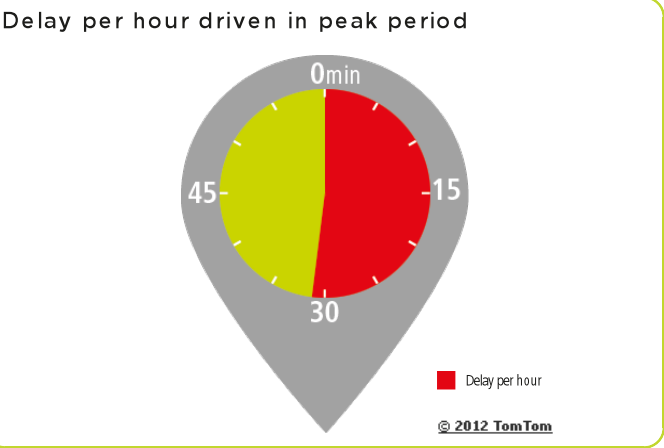
21%

Ranking

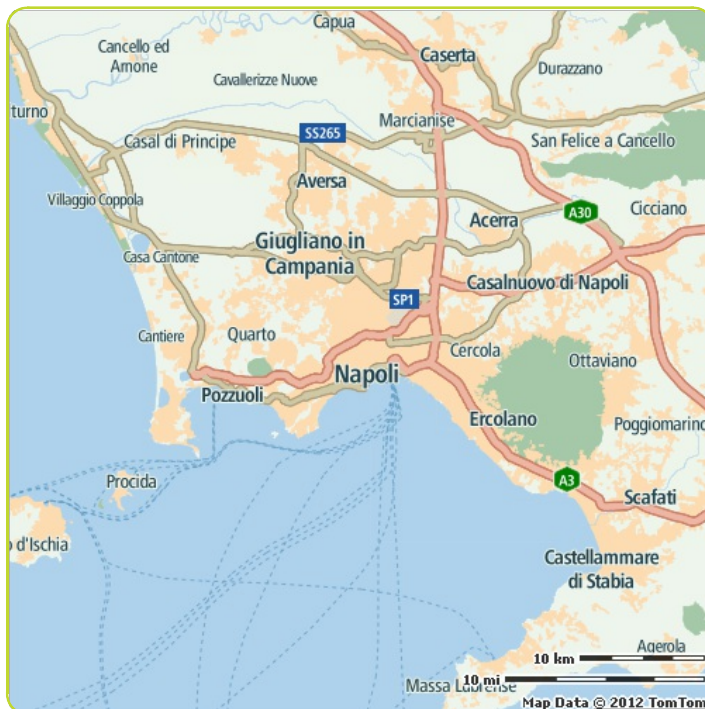
Ranking of city compared to continent	33/58
Congestion level on highways	16%
Congestion level on non-highways	27%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h



Most congested specific day	Wed 16 May 2012
Total network length	688 mi
Total network length highways	119 mi
Total network length non-highways	569 mi
Total vehicle miles	2 334 487 mi



Naples



Congestion level

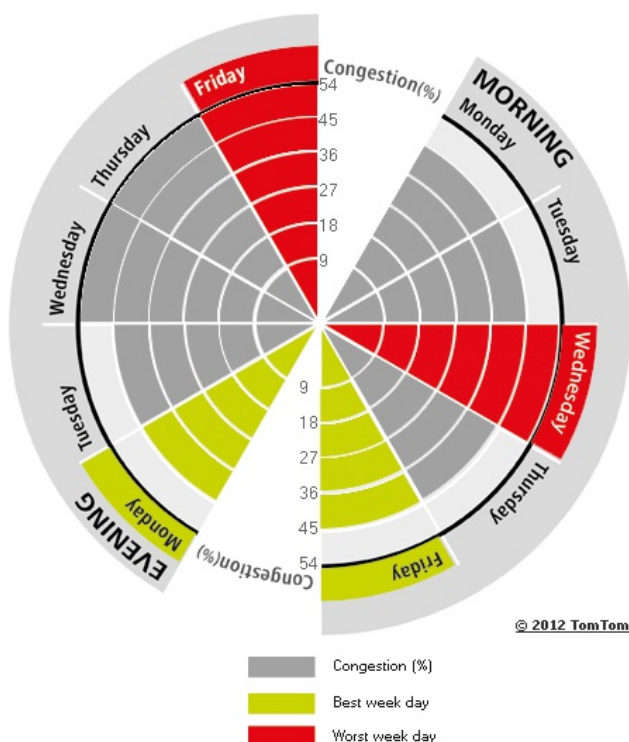
25%

Ranking

Ranking of city compared to continent	23/58
Congestion level on highways	14%
Congestion level on non-highways	38%
Delay per hour driven in peak period	26 min
Delay per year with a 30 min commute	69 h

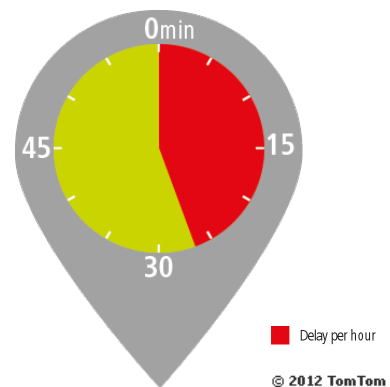
The weekly congestion pattern:

Best and worst peak periods of the week

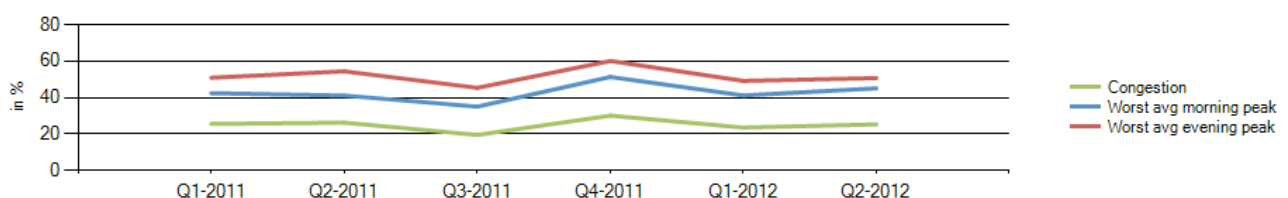


Most congested specific day	Wed 13 Jun 2012
Total network length	1 031 mi
Total network length highways	156 mi
Total network length non-highways	876 mi
Total vehicle miles	1 409 782 mi

Delay per hour driven in peak period



Comparison per quarter



Newcastle-Sunderland



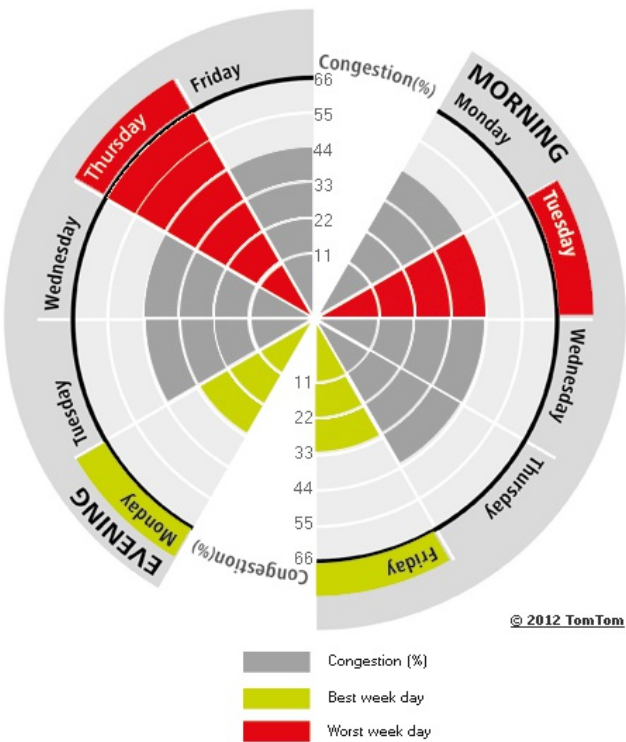
Congestion level

20%

Ranking

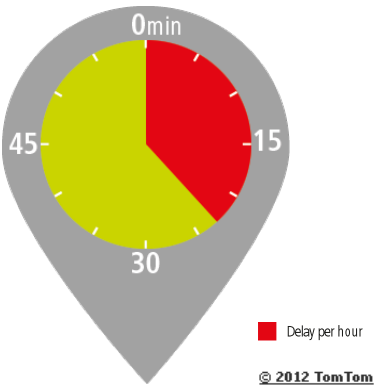
Ranking of city compared to continent	39/58
Congestion level on highways	14%
Congestion level on non-highways	24%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h

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

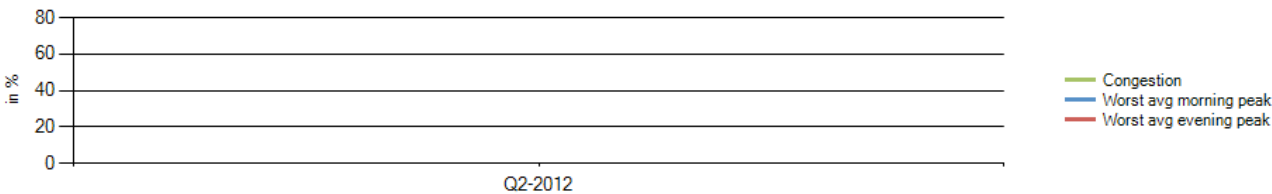


Most congested specific day	Thu 28 Jun 2012
Total network length	825 mi
Total network length highways	109 mi
Total network length non-highways	715 mi
Total vehicle miles	2 097 060 mi

Delay per hour driven in peak period



Comparison per quarter



Nice



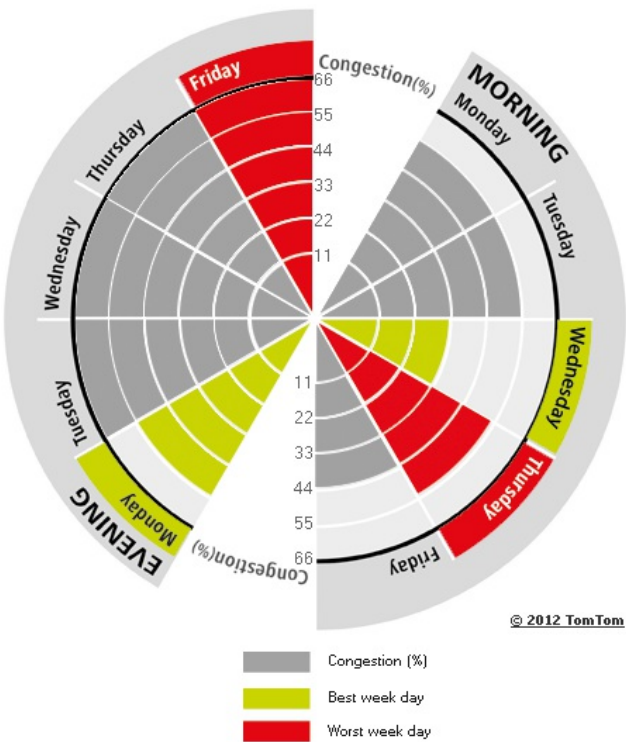
Congestion level

29%

Ranking

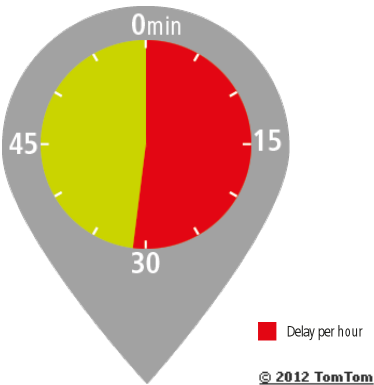
Ranking of city compared to continent	11/58
Congestion level on highways	17%
Congestion level on non-highways	36%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h

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



Most congested specific day	Wed 9 May 2012
Total network length	190 mi
Total network length highways	27 mi
Total network length non-highways	162 mi
Total vehicle miles	305 233 mi

Delay per hour driven in peak period



Comparison per quarter



Nottingham



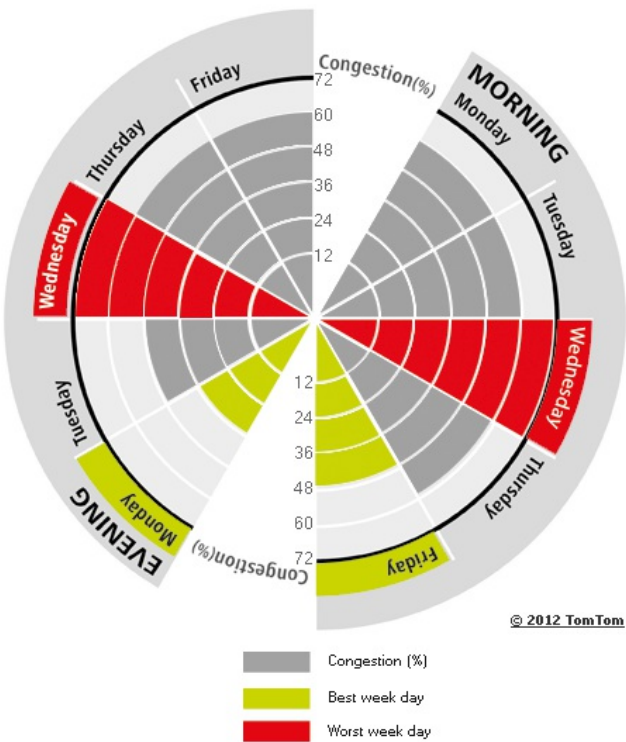
Congestion level

24%

Ranking

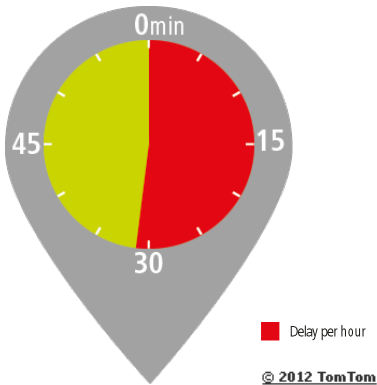
Ranking of city compared to continent	27/58
Congestion level on highways	6%
Congestion level on non-highways	31%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h

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

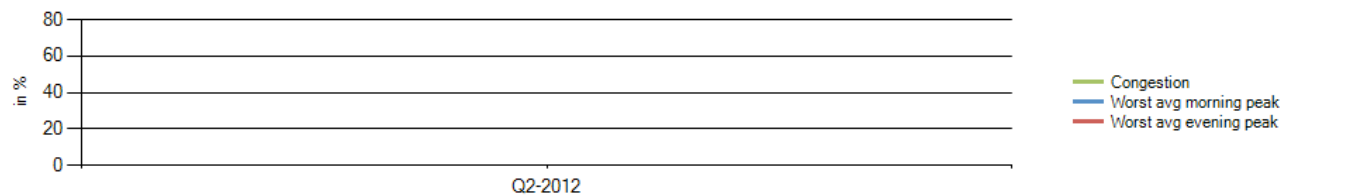


Most congested specific day	Wed 11 Apr 2012
Total network length	263 mi
Total network length highways	12 mi
Total network length non-highways	251 mi
Total vehicle miles	1 841 258 mi

Delay per hour driven in peak period



Comparison per quarter



Oslo



Congestion level

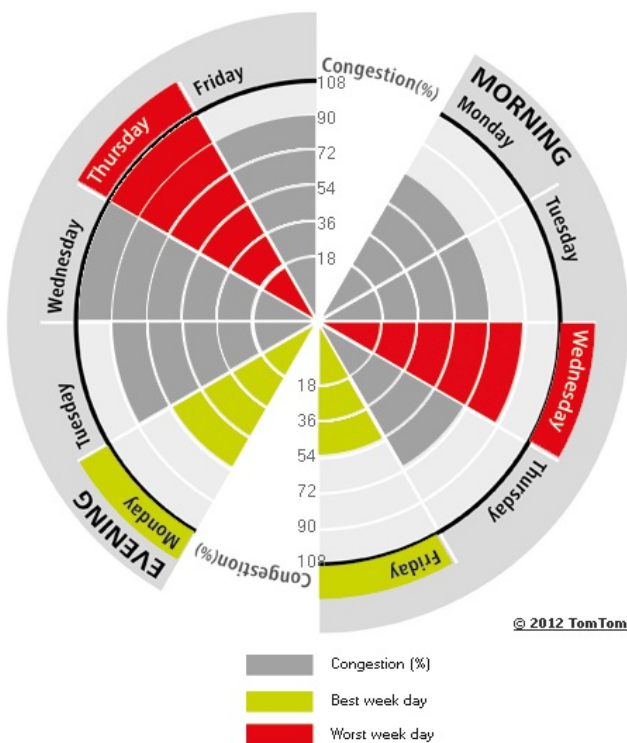
24%

Ranking

Ranking of city compared to continent	25/58
Congestion level on highways	20%
Congestion level on non-highways	31%
Delay per hour driven in peak period	45 min
Delay per year with a 30 min commute	98 h

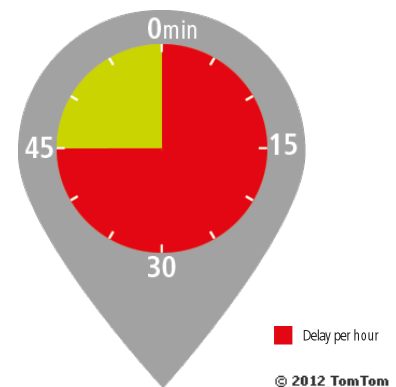
The weekly congestion pattern:

Best and worst peak periods of the week

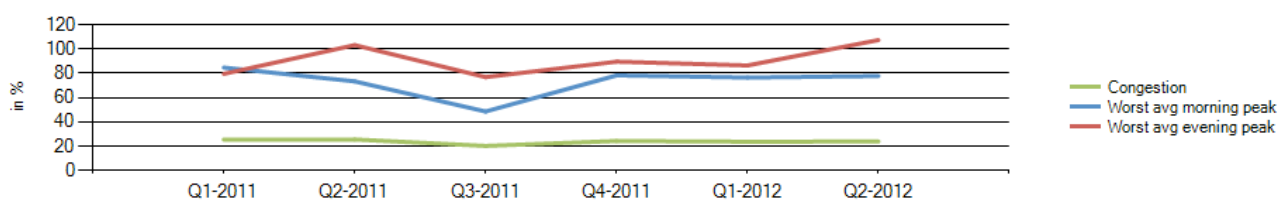


Most congested specific day	Fri 25 May 2012
Total network length	332 mi
Total network length highways	78 mi
Total network length non-highways	254 mi
Total vehicle miles	717 900 mi

Delay per hour driven in peak period



Comparison per quarter



Palermo



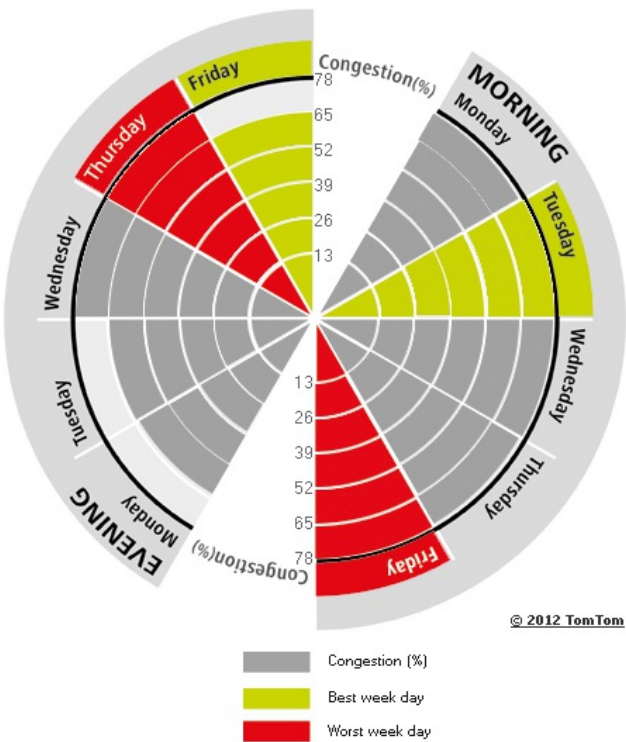
Congestion level

40%

Ranking

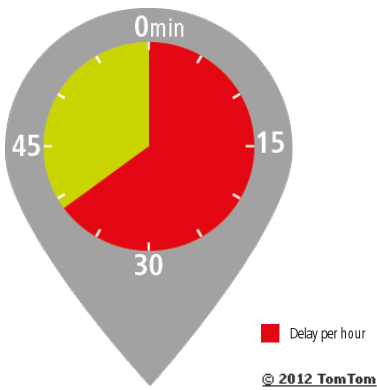
Ranking of city compared to continent	4/58
Congestion level on highways	30%
Congestion level on non-highways	50%
Delay per hour driven in peak period	39 min
Delay per year with a 30 min commute	90 h

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



Most congested specific day	Fri 4 May 2012
Total network length	203 mi
Total network length highways	31 mi
Total network length non-highways	171 mi
Total vehicle miles	213 181 mi

Delay per hour driven in peak period



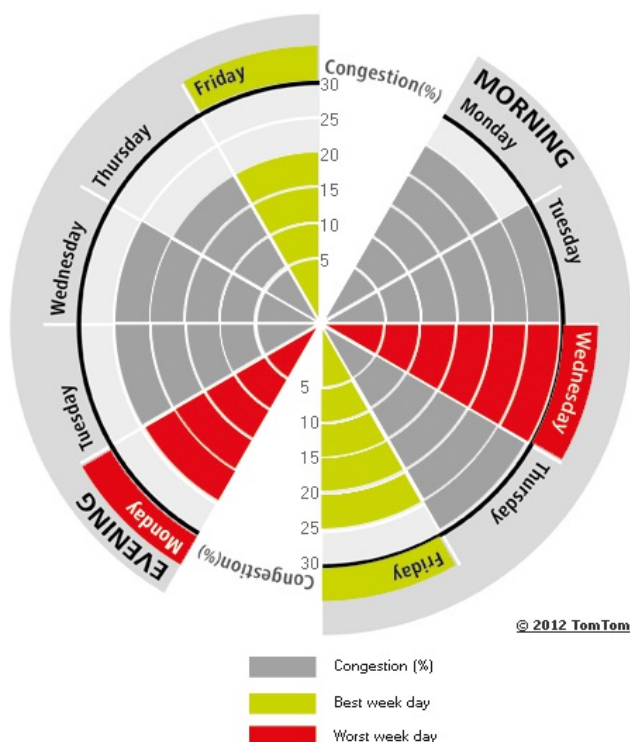
Comparison per quarter



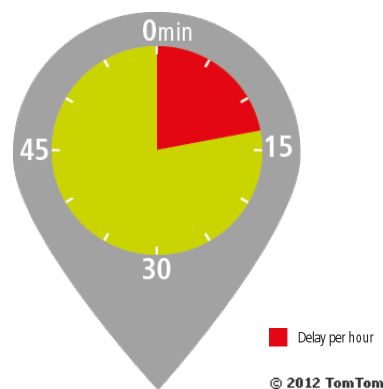


14%

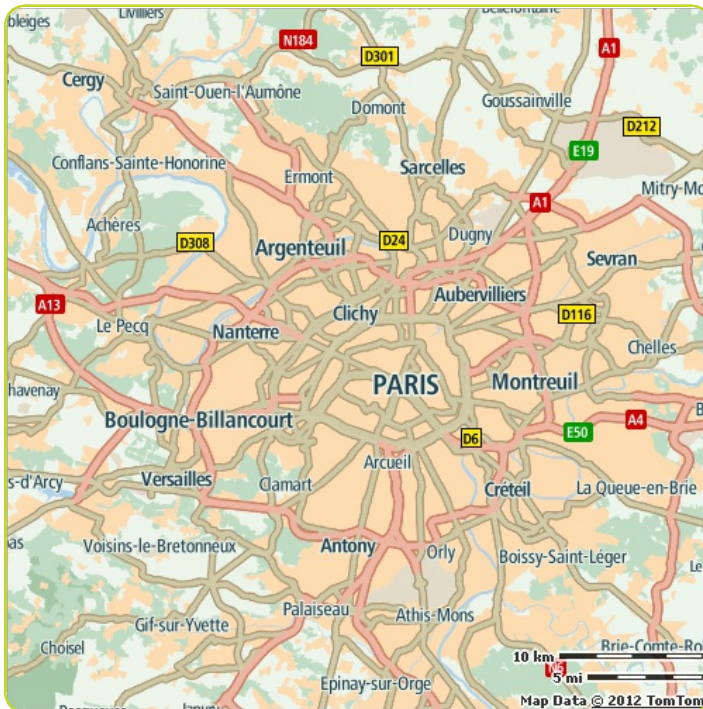
Ranking of city compared to continent	52/58
Congestion level on highways	6%
Congestion level on non-highways	19%
Delay per hour driven in peak period	13 min
Delay per year with a 30 min commute	40 h



Most congested specific day	Tue 10 Apr 2012
Total network length	181 mi
Total network length highways	27 mi
Total network length non-highways	153 mi
Total vehicle miles	248 238 mi



Paris



Congestion level

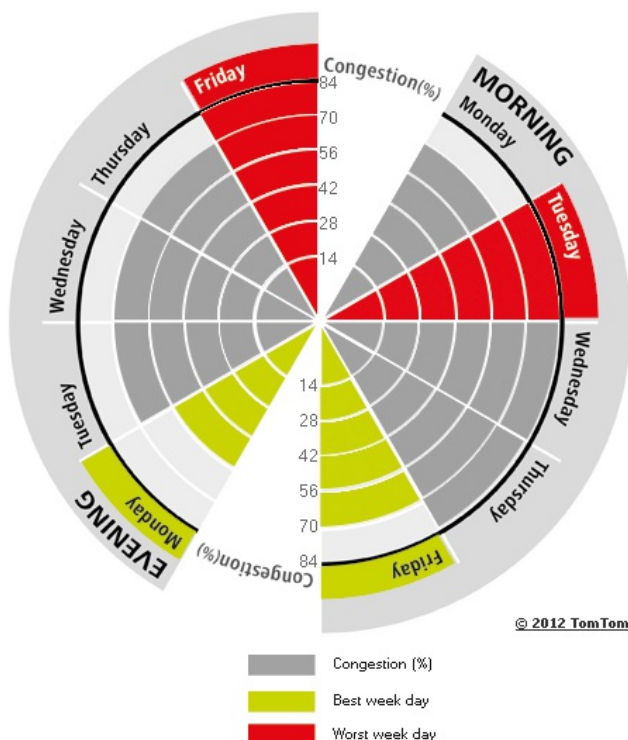
34%

Ranking

Ranking of city compared to continent	6/58
Congestion level on highways	33%
Congestion level on non-highways	34%
Delay per hour driven in peak period	40 min
Delay per year with a 30 min commute	92 h

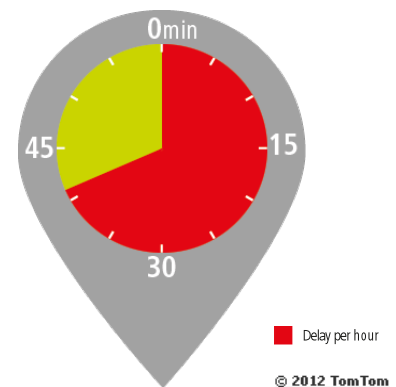
The weekly congestion pattern:

Best and worst peak periods of the week

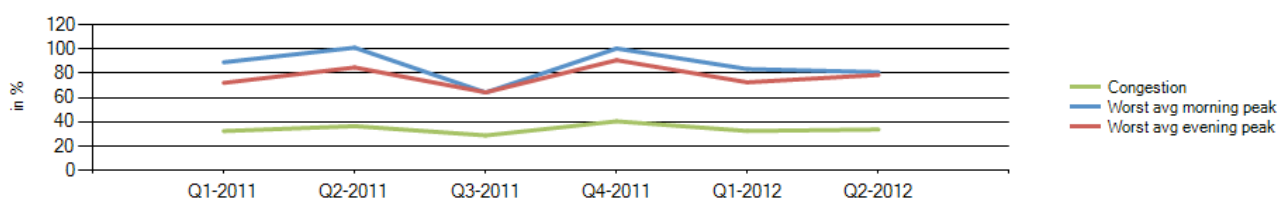


Most congested specific day	Fri 15 Jun 2012
Total network length	4 868 mi
Total network length highways	891 mi
Total network length non-highways	3 977 mi
Total vehicle miles	42 749 102 mi

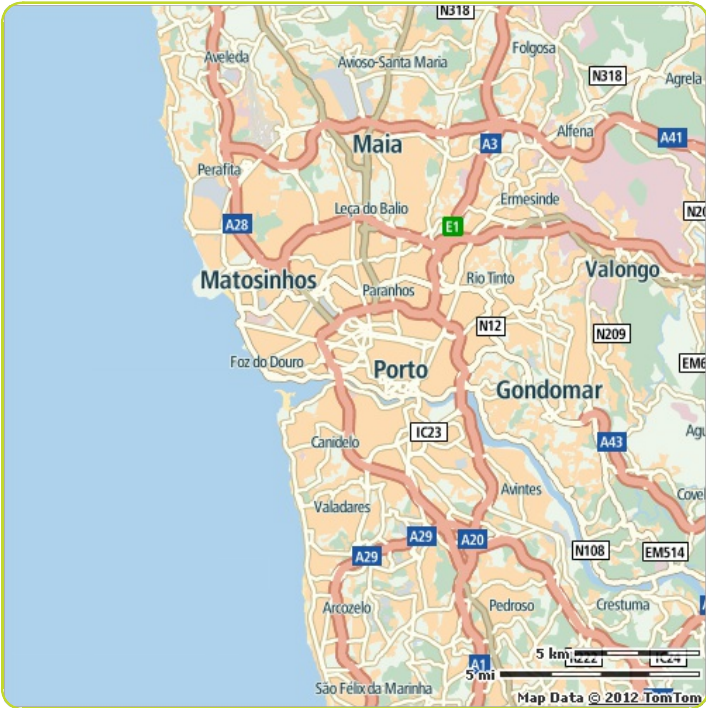
Delay per hour driven in peak period



Comparison per quarter



Porto

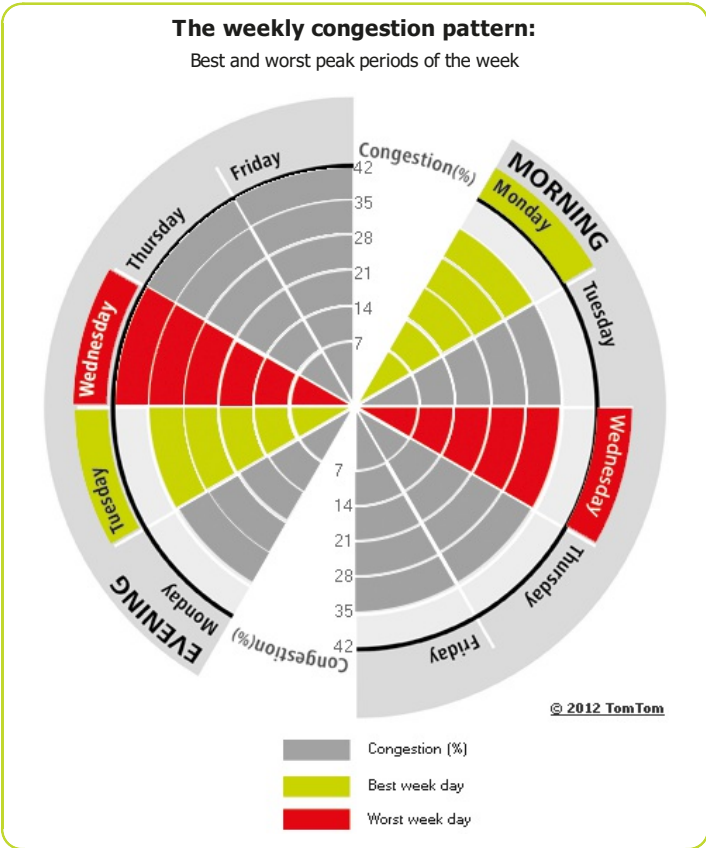


Congestion level

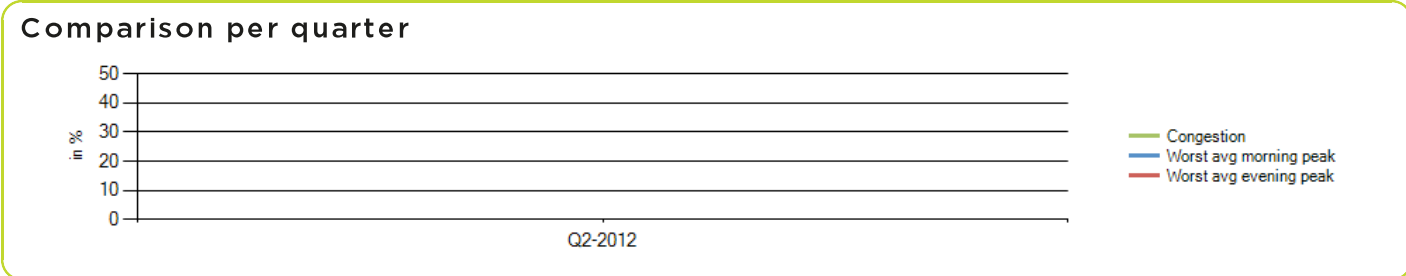
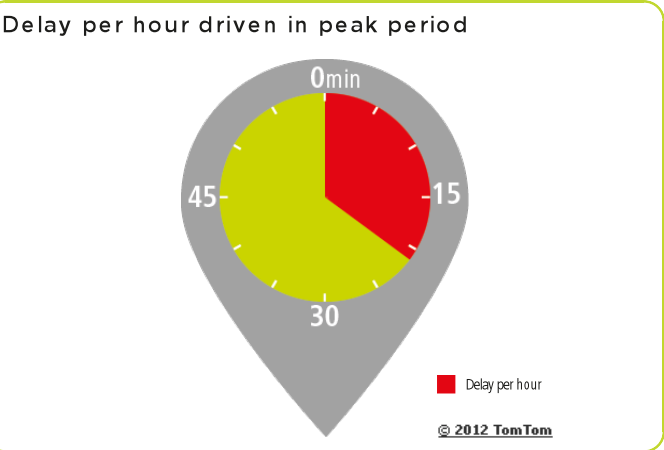
17%

Ranking

Ranking of city compared to continent	43/58
Congestion level on highways	8%
Congestion level on non-highways	25%
Delay per hour driven in peak period	20 min
Delay per year with a 30 min commute	57 h



Most congested specific day	Wed 2 May 2012
Total network length	599 mi
Total network length highways	103 mi
Total network length non-highways	496 mi
Total vehicle miles	1 003 096 mi



Prague



Congestion level

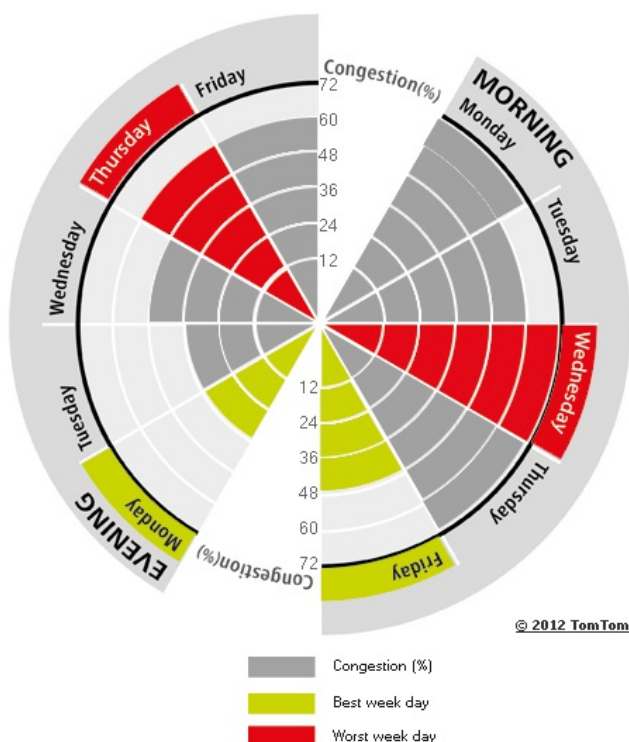
26%

Ranking

Ranking of city compared to continent	21/58
Congestion level on highways	20%
Congestion level on non-highways	31%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h

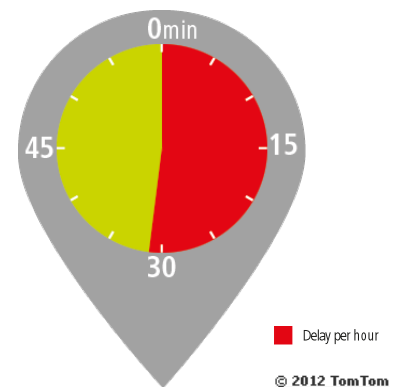
The weekly congestion pattern:

Best and worst peak periods of the week

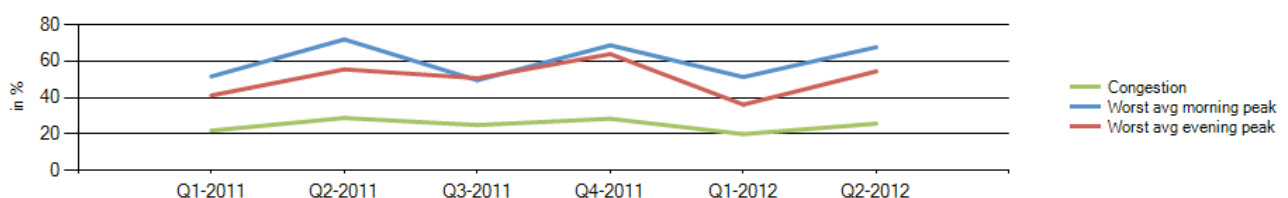


Most congested specific day	Thu 12 Apr 2012
Total network length	652 mi
Total network length highways	145 mi
Total network length non-highways	506 mi
Total vehicle miles	1 771 110 mi

Delay per hour driven in peak period



Comparison per quarter



Rome



Congestion level

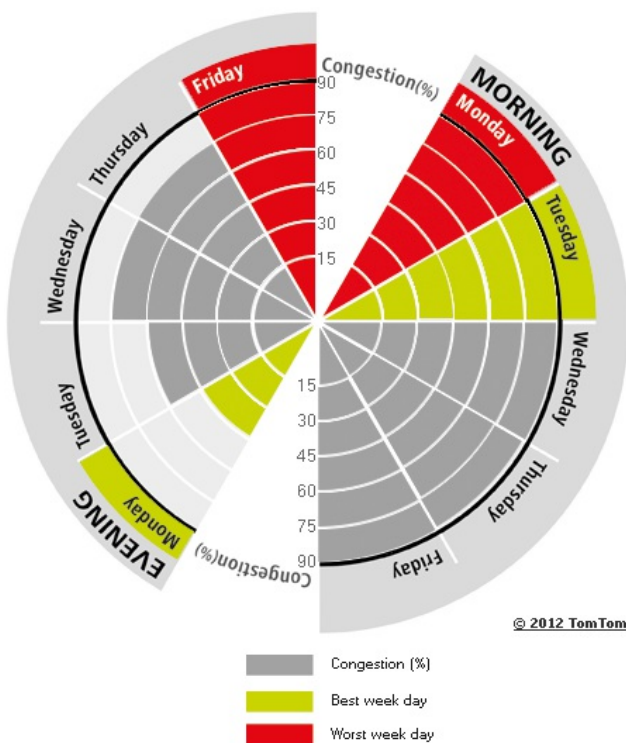
34%

Ranking

Ranking of city compared to continent	5/58
Congestion level on highways	27%
Congestion level on non-highways	37%
Delay per hour driven in peak period	42 min
Delay per year with a 30 min commute	94 h

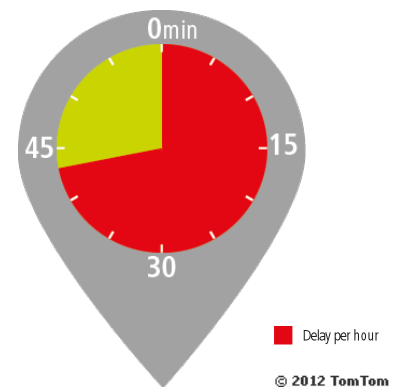
The weekly congestion pattern:

Best and worst peak periods of the week

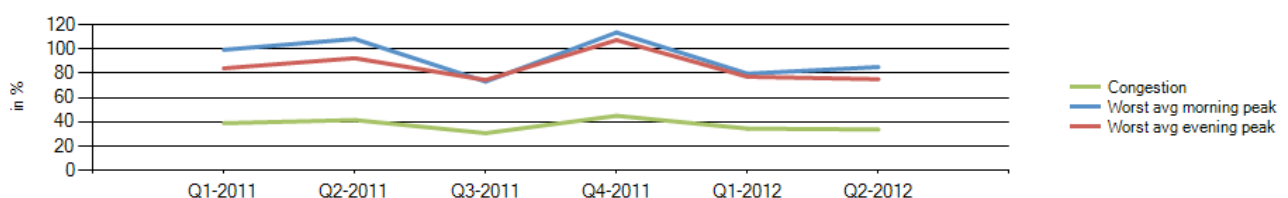


Most congested specific day	Wed 16 May 2012
Total network length	801 mi
Total network length highways	135 mi
Total network length non-highways	666 mi
Total vehicle miles	4 150 240 mi

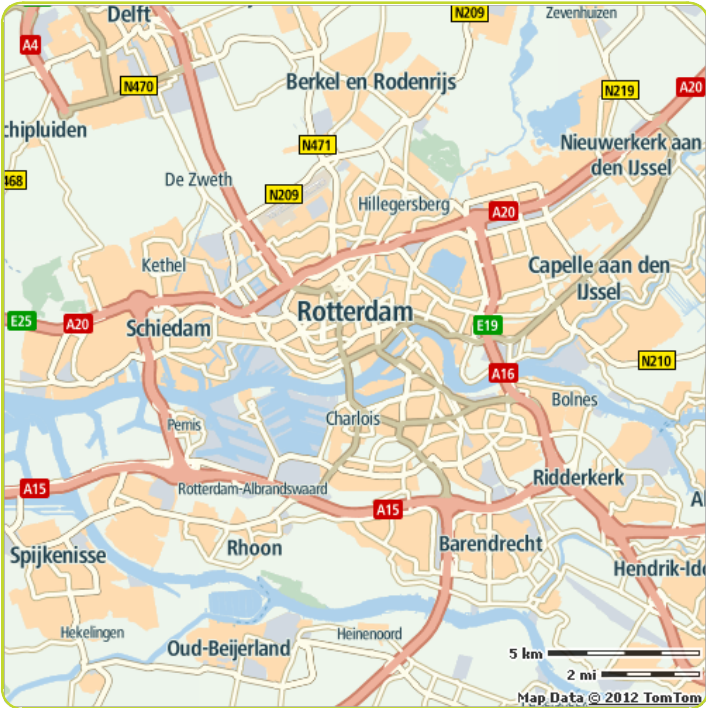
Delay per hour driven in peak period



Comparison per quarter



Rotterdam



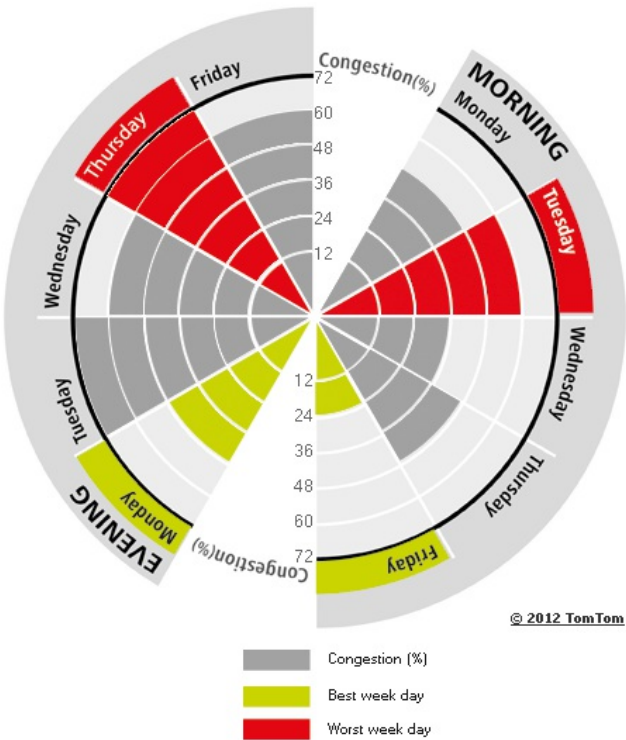
Congestion level

19%

Ranking

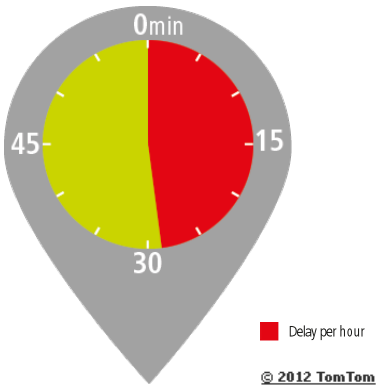
Ranking of city compared to continent	41/58
Congestion level on highways	13%
Congestion level on non-highways	28%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h

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

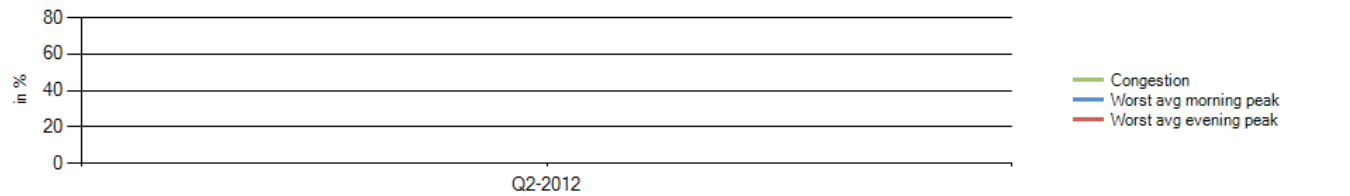


Most congested specific day	Fri 1 Jun 2012
Total network length	764 mi
Total network length highways	117 mi
Total network length non-highways	647 mi
Total vehicle miles	8 732 106 mi

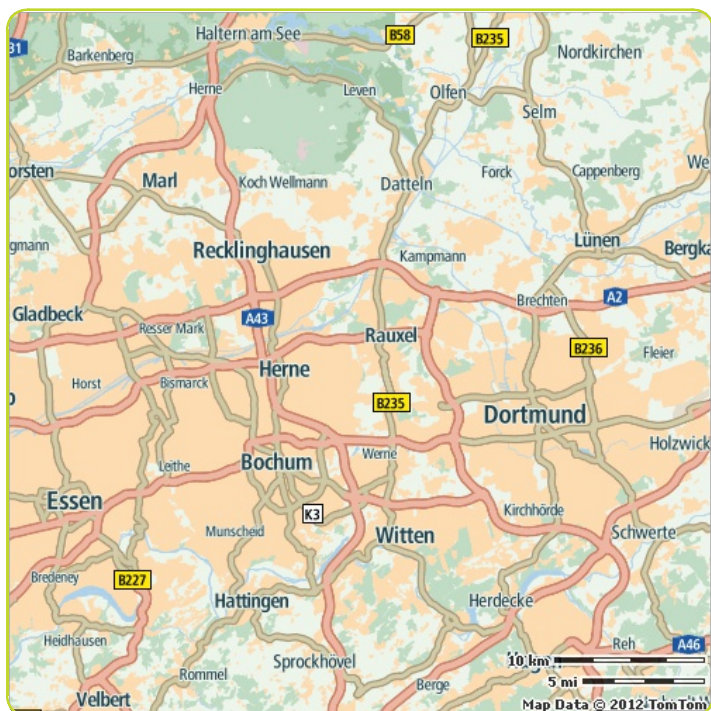
Delay per hour driven in peak period



Comparison per quarter



Ruhr region east



Congestion level

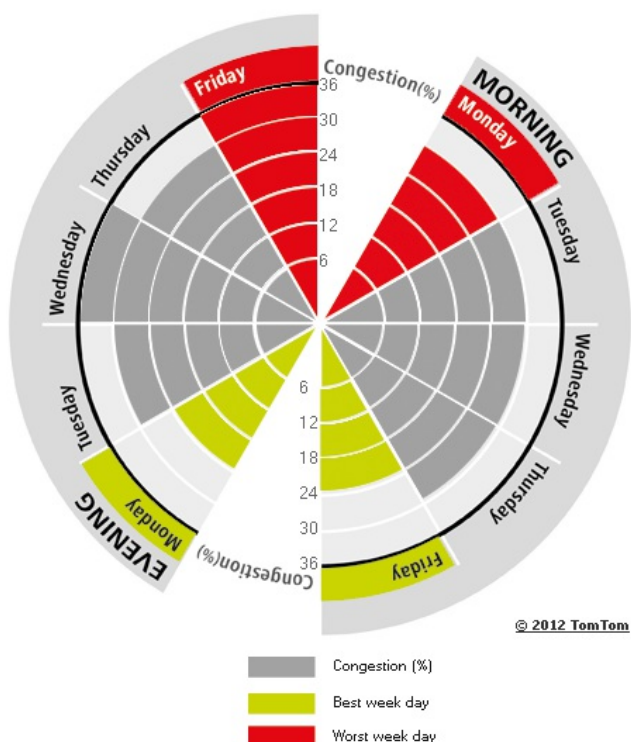
15%

Ranking

Ranking of city compared to continent	49/58
Congestion level on highways	11%
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

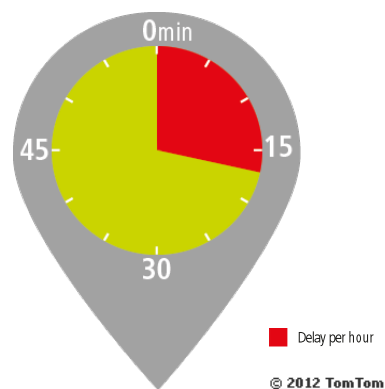
The weekly congestion pattern:

Best and worst peak periods of the week

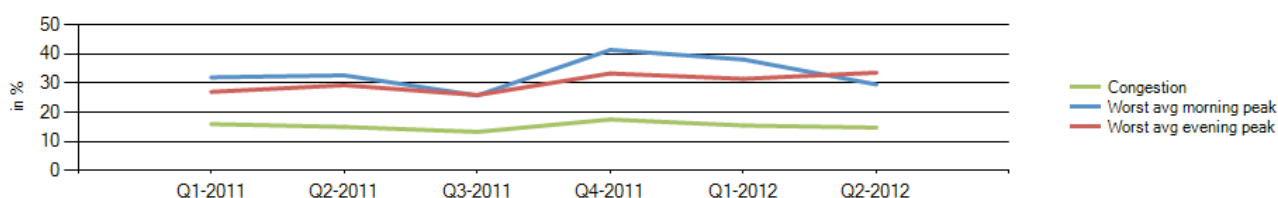


Most congested specific day	Wed 16 May 2012
Total network length	1 878 mi
Total network length highways	388 mi
Total network length non-highways	1 491 mi
Total vehicle miles	4 955 624 mi

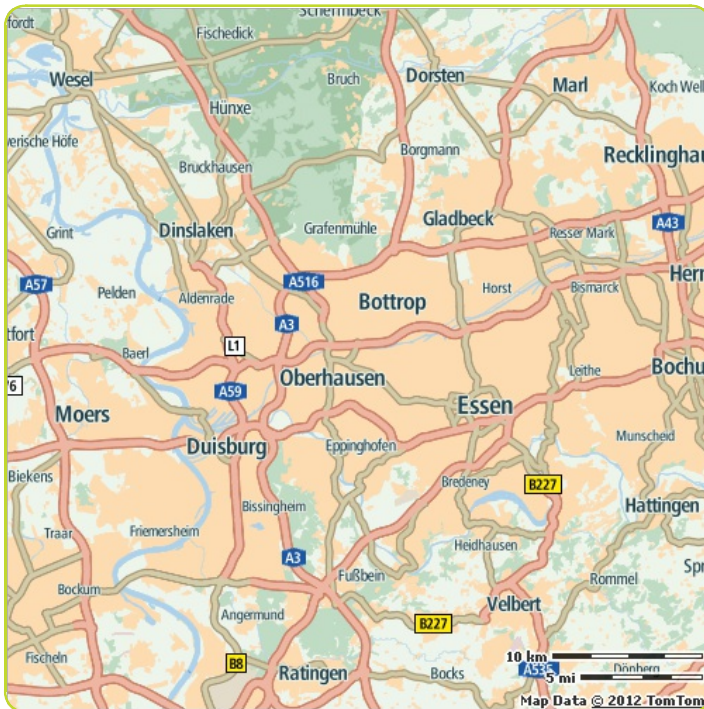
Delay per hour driven in peak period



Comparison per quarter



Ruhr region west



Congestion level

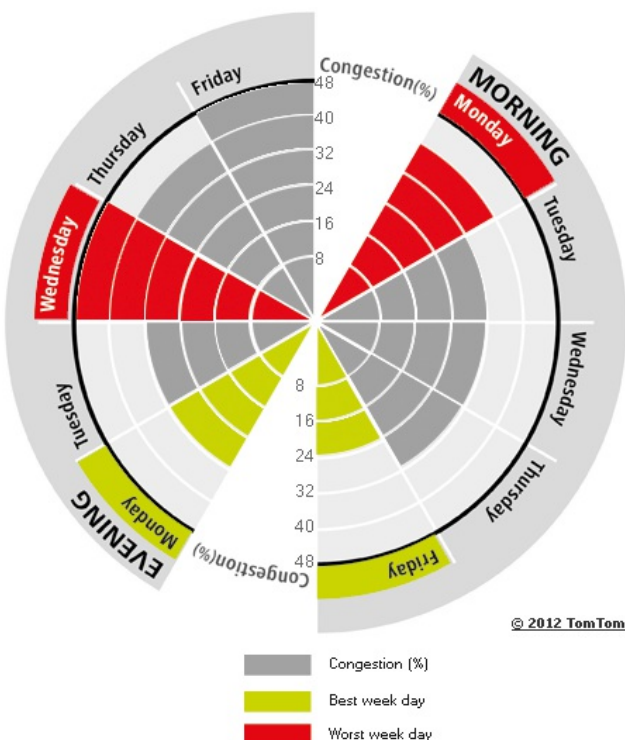
16%

Ranking

Ranking of city compared to continent	47/58
Congestion level on highways	12%
Congestion level on non-highways	27%
Delay per hour driven in peak period	19 min
Delay per year with a 30 min commute	55 h

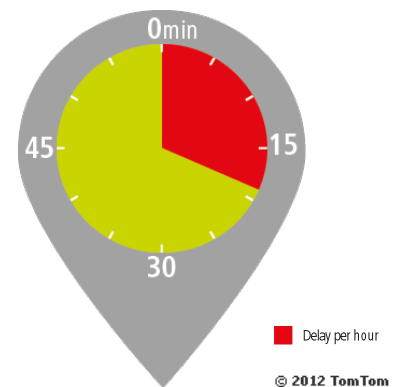
The weekly congestion pattern:

Best and worst peak periods of the week

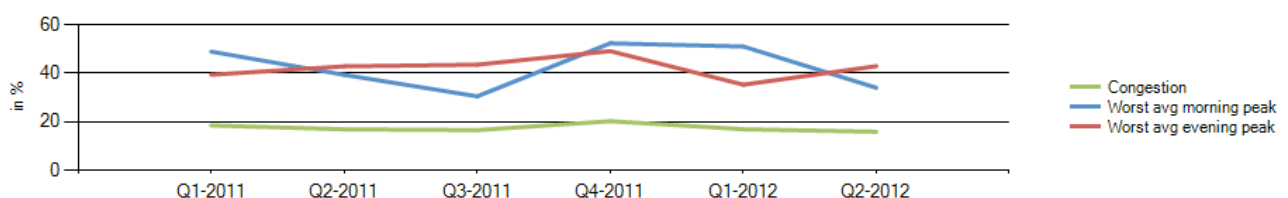


Most congested specific day	Sat 30 Jun 2012
Total network length	1 862 mi
Total network length highways	425 mi
Total network length non-highways	1 437 mi
Total vehicle miles	6 822 447 mi

Delay per hour driven in peak period



Comparison per quarter



Seville



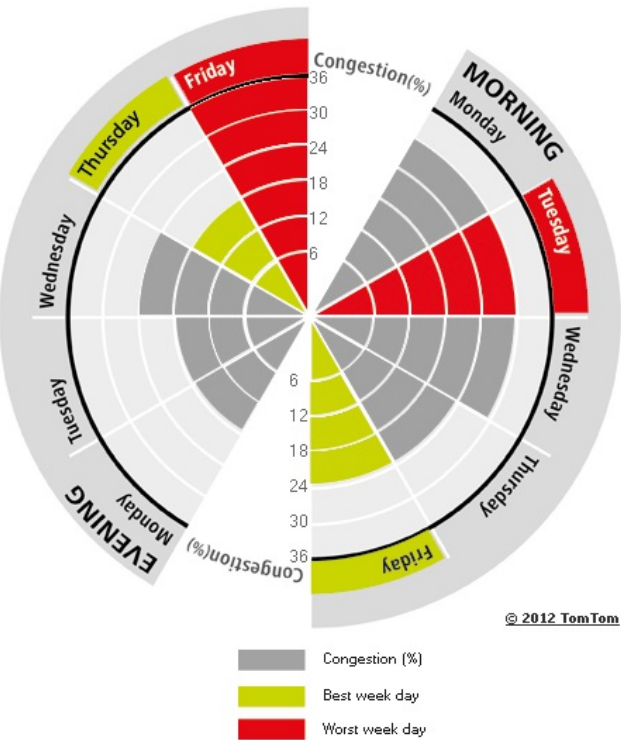
Congestion level

13%

Ranking

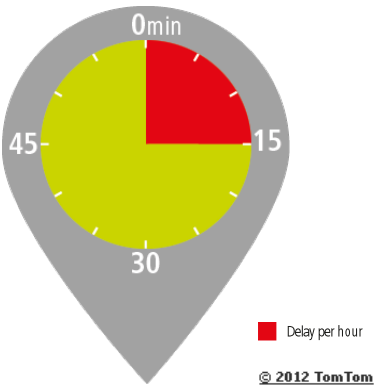
Ranking of city compared to continent	53/58
Congestion level on highways	10%
Congestion level on non-highways	17%
Delay per hour driven in peak period	14 min
Delay per year with a 30 min commute	43 h

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

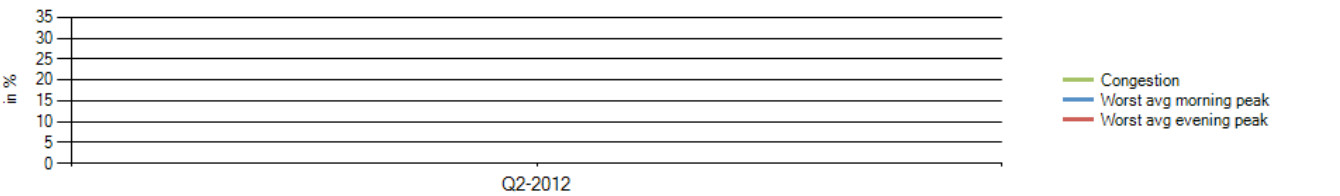


Most congested specific day	Fri 29 Jun 2012
Total network length	323 mi
Total network length highways	70 mi
Total network length non-highways	253 mi
Total vehicle miles	840 709 mi

Delay per hour driven in peak period



Comparison per quarter



Stockholm



Congestion level

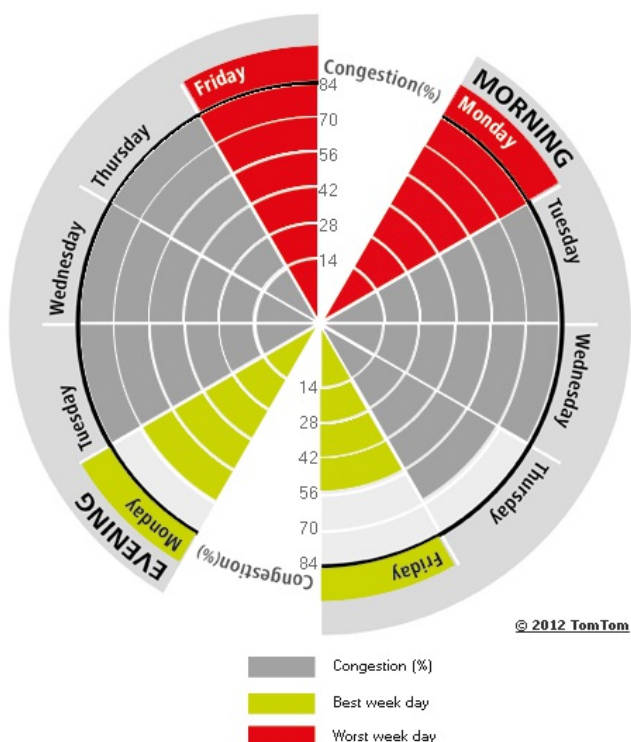
30%

Ranking

Ranking of city compared to continent	10/58
Congestion level on highways	27%
Congestion level on non-highways	34%
Delay per hour driven in peak period	43 min
Delay per year with a 30 min commute	96 h

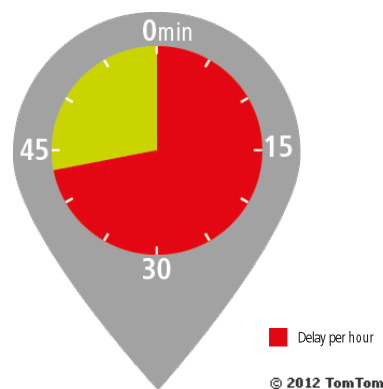
The weekly congestion pattern:

Best and worst peak periods of the week

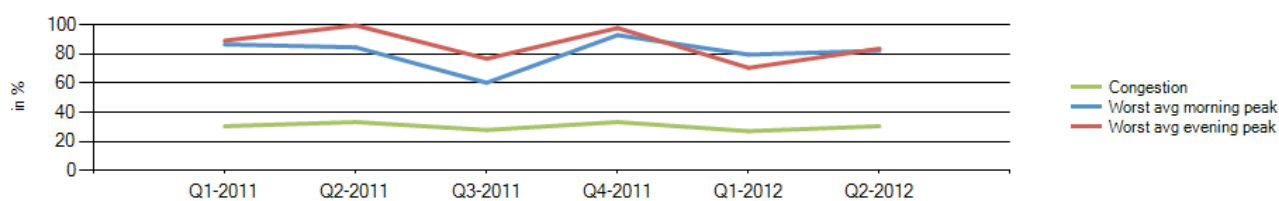


Most congested specific day	Fri 1 Jun 2012
Total network length	692 mi
Total network length highways	141 mi
Total network length non-highways	551 mi
Total vehicle miles	970 745 mi

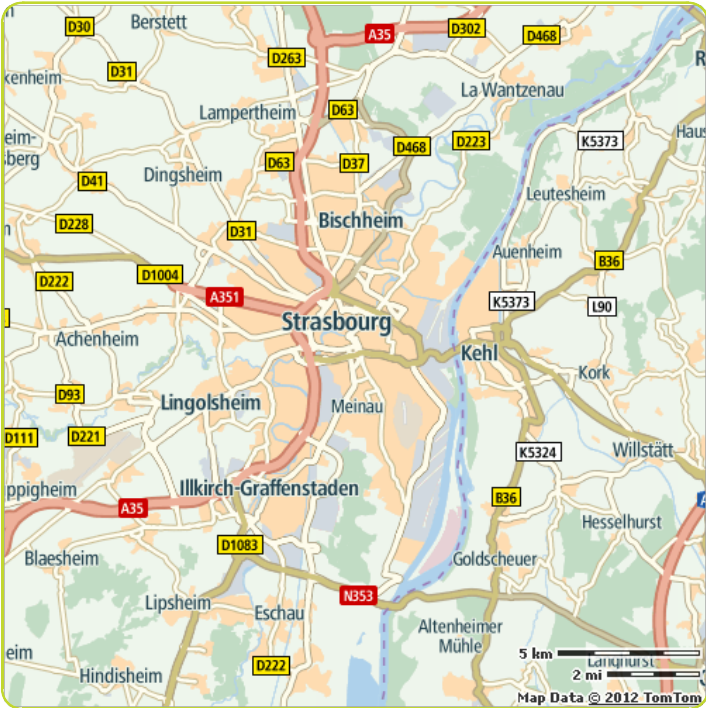
Delay per hour driven in peak period



Comparison per quarter



Strasbourg

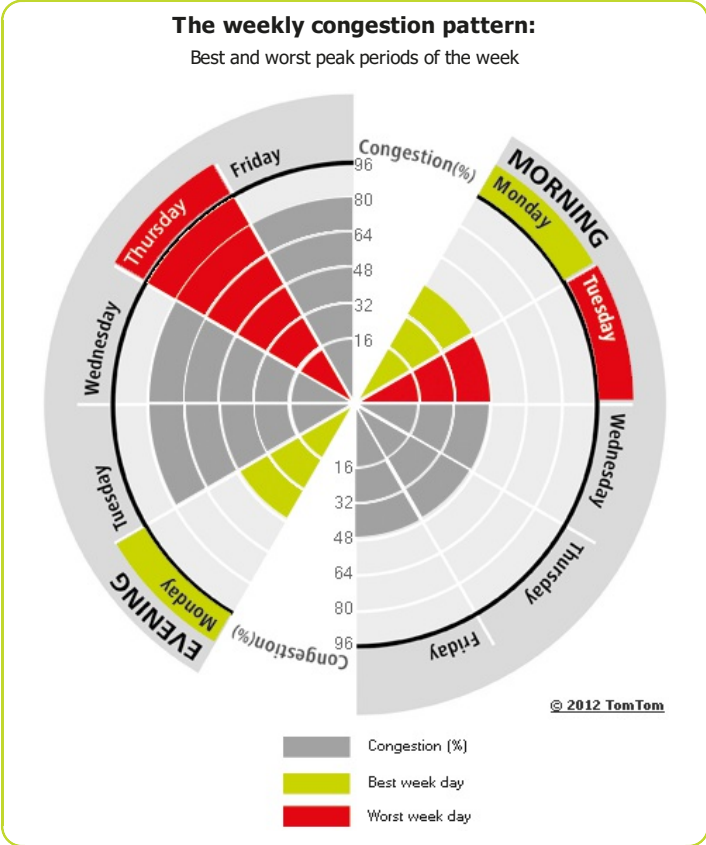


Congestion level

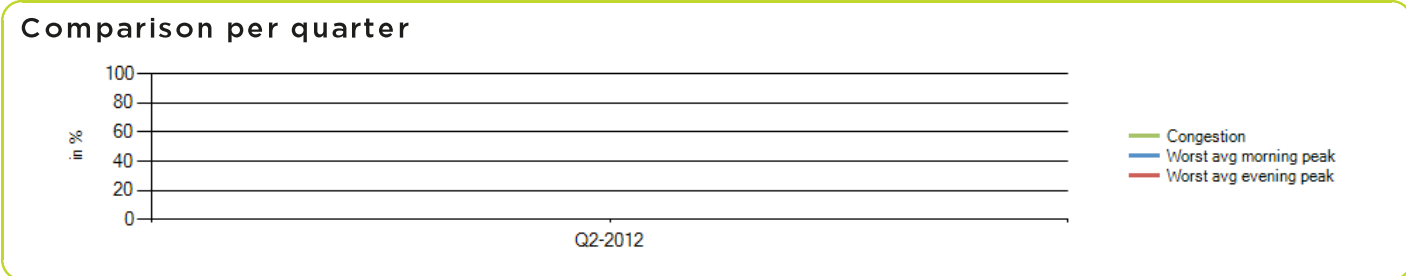
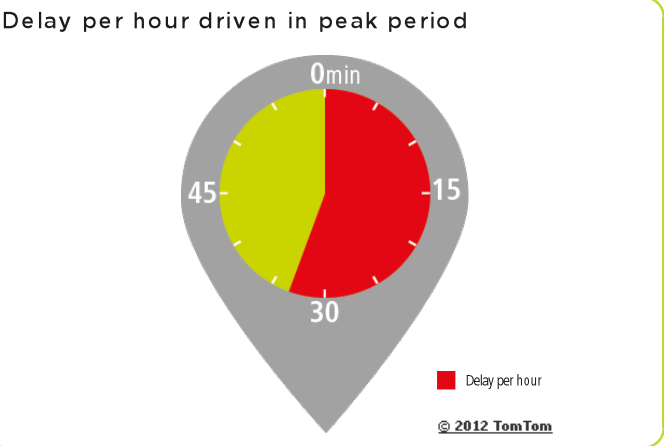
23%

Ranking

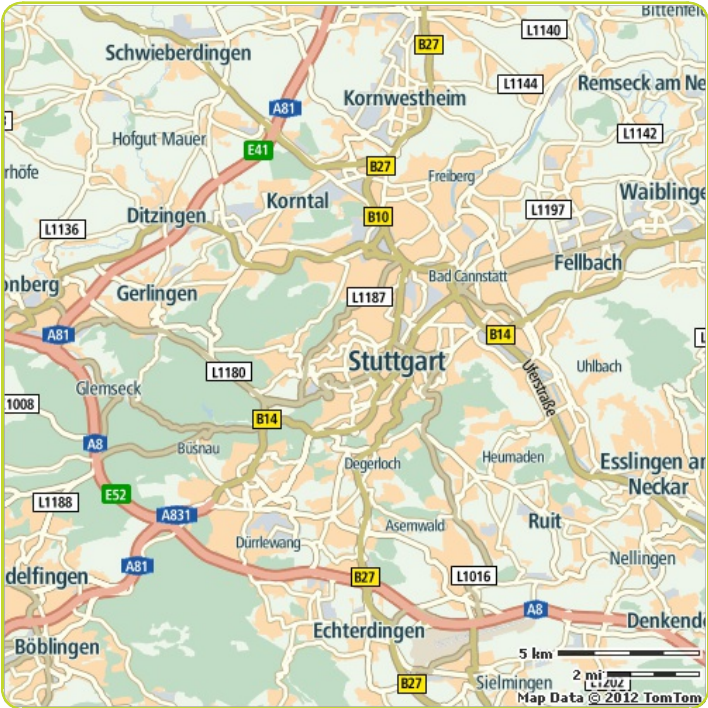
Ranking of city compared to continent	28/58
Congestion level on highways	19%
Congestion level on non-highways	30%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h



Most congested specific day	Thu 5 Apr 2012
Total network length	321 mi
Total network length highways	73 mi
Total network length non-highways	249 mi
Total vehicle miles	998 406 mi



Stuttgart

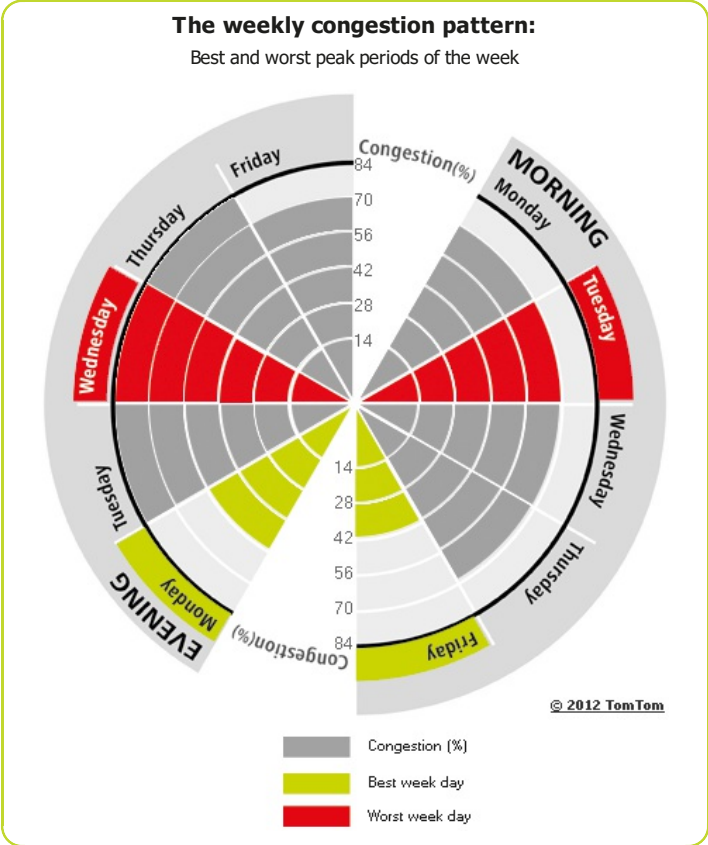


Congestion level

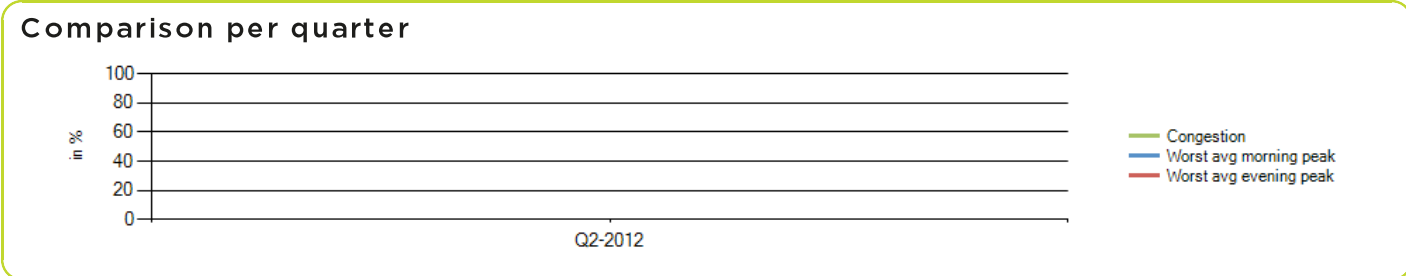
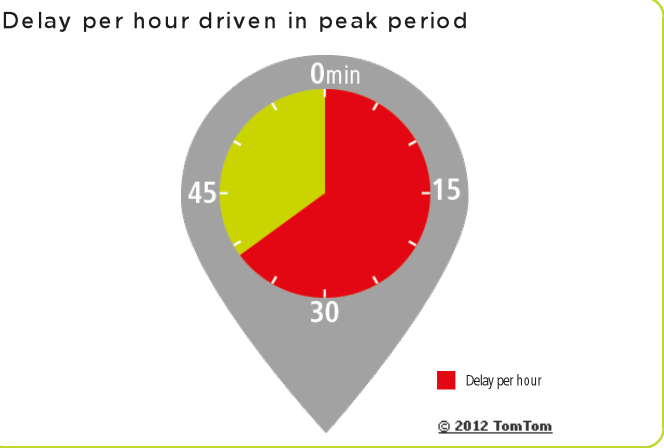
33%

Ranking

Ranking of city compared to continent	7/58
Congestion level on highways	33%
Congestion level on non-highways	34%
Delay per hour driven in peak period	39 min
Delay per year with a 30 min commute	90 h



Most congested specific day	Wed 16 May 2012
Total network length	472 mi
Total network length highways	94 mi
Total network length non-highways	379 mi
Total vehicle miles	1 086 359 mi



The Hague



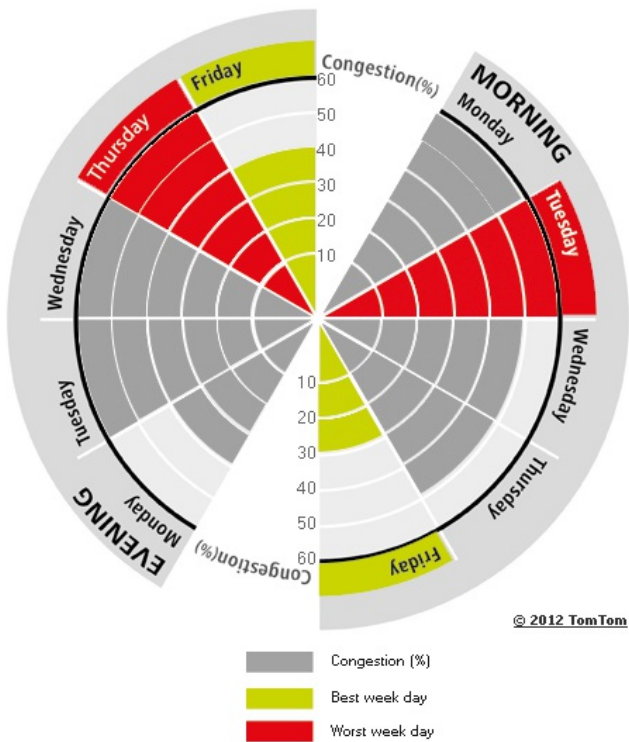
Congestion level

20%

Ranking

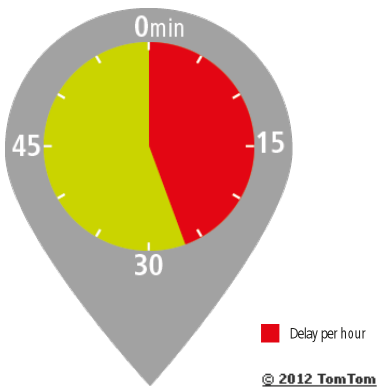
Ranking of city compared to continent	38/58
Congestion level on highways	11%
Congestion level on non-highways	27%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h

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

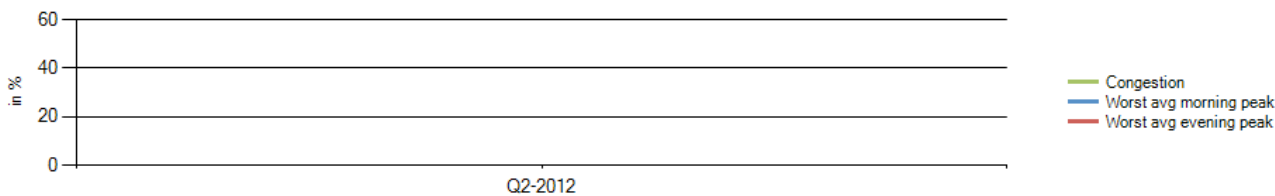


Most congested specific day	Mon 21 May 2012
Total network length	290 mi
Total network length highways	43 mi
Total network length non-highways	246 mi
Total vehicle miles	3 551 623 mi

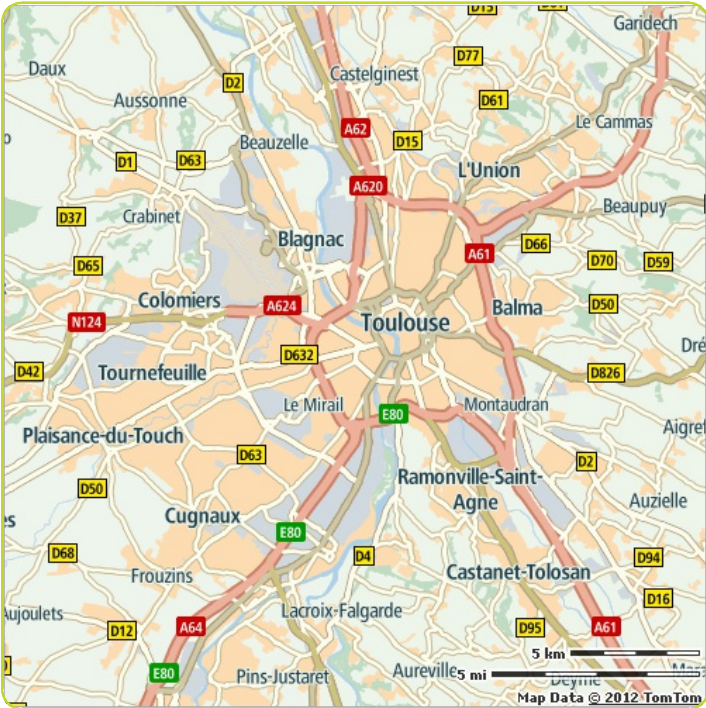
Delay per hour driven in peak period



Comparison per quarter



Toulouse



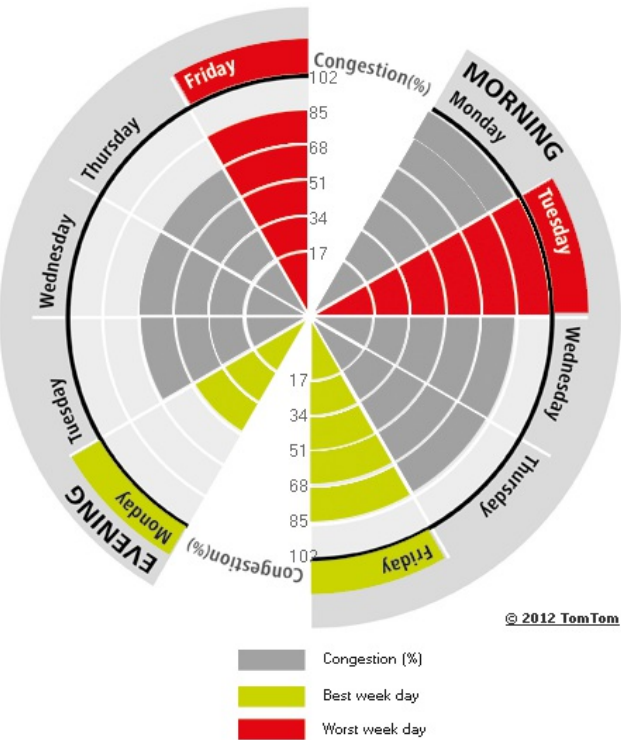
Congestion level

26%

Ranking

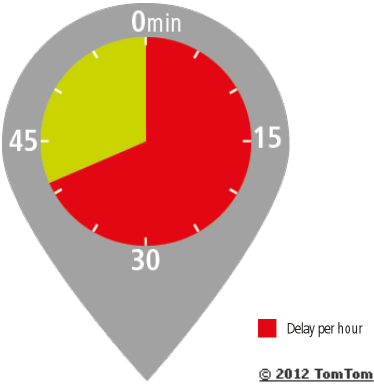
Ranking of city compared to continent	19/58
Congestion level on highways	21%
Congestion level on non-highways	33%
Delay per hour driven in peak period	41 min
Delay per year with a 30 min commute	93 h

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



Most congested specific day	Mon 21 May 2012
Total network length	736 mi
Total network length highways	121 mi
Total network length non-highways	615 mi
Total vehicle miles	2 683 923 mi

Delay per hour driven in peak period



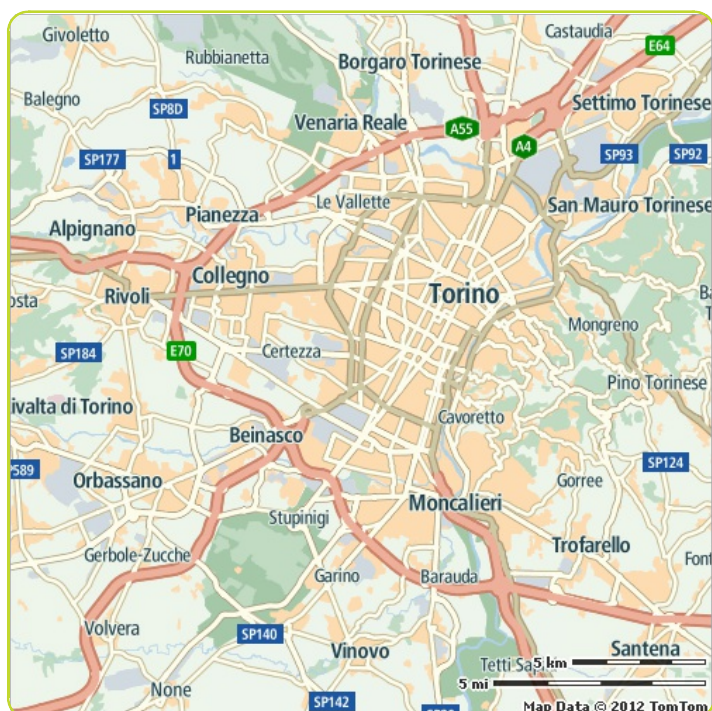
Comparison per quarter



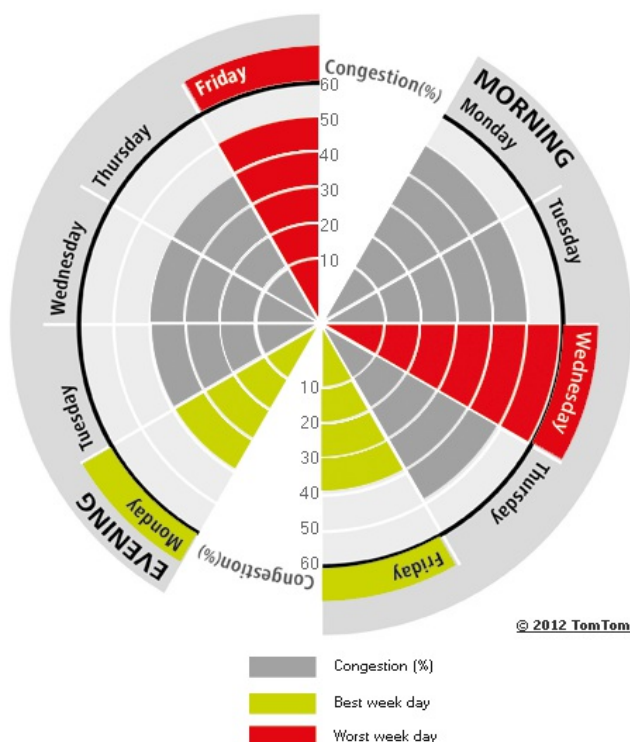
Congestion level



Ranking of city compared to continent	36/58
Congestion level on highways	9%
Congestion level on non-highways	25%
Delay per hour driven in peak period	24 min
Delay per year with a 30 min commute	65 h



Best and worst peak periods of the week



Most congested specific day	Wed 2 May 2012
Total network length	894 mi
Total network length highways	89 mi
Total network length non-highways	806 mi
Total vehicle miles	2 044 379 mi

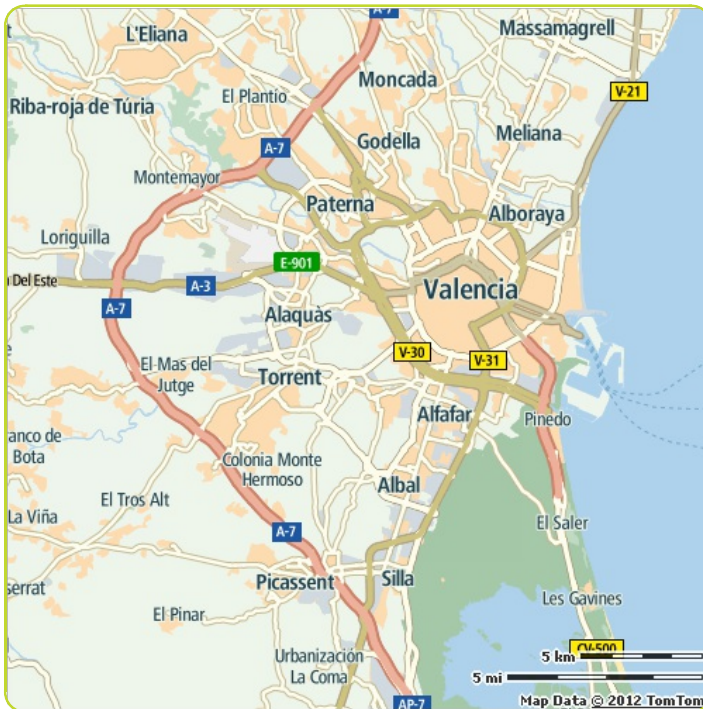
Delay per hour

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The chart displays three data series over six quarters. The 'Worst avg morning peak' (blue line) and 'Worst avg evening peak' (red line) series are clustered at the top, with the morning peak generally higher. The 'Congestion' series (green line) is significantly lower, fluctuating between 18% and 24%. All series show a slight downward trend towards the end of the period.

Quarter	Congestion (%)	Worst avg morning peak (%)	Worst avg evening peak (%)
Q1-2011	23	58	48
Q2-2011	23	62	52
Q3-2011	19	48	44
Q4-2011	24	62	56
Q1-2012	22	54	48
Q2-2012	20	56	45

Valencia



Congestion level

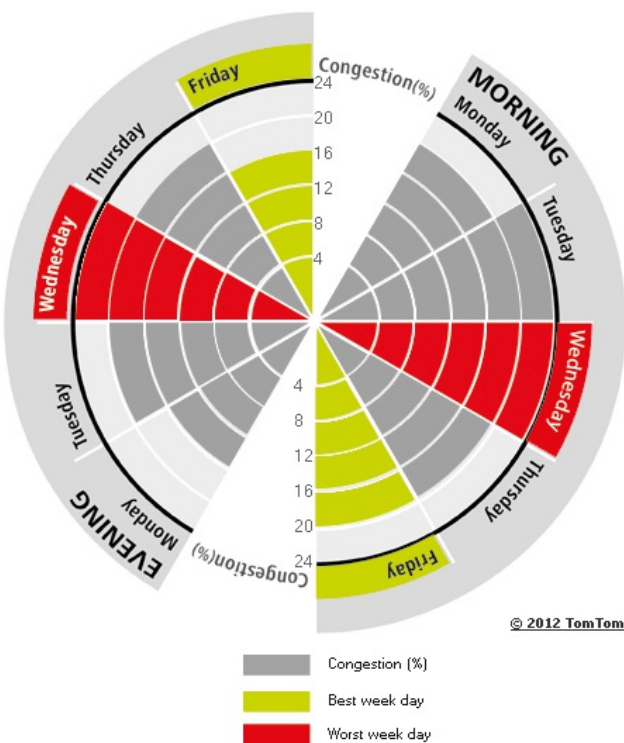
11%

Ranking

Ranking of city compared to continent	55/58
Congestion level on highways	5%
Congestion level on non-highways	19%
Delay per hour driven in peak period	10 min
Delay per year with a 30 min commute	32 h

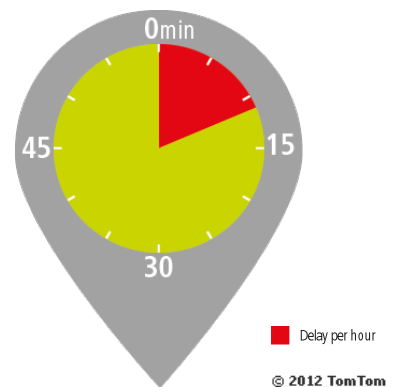
The weekly congestion pattern:

Best and worst peak periods of the week

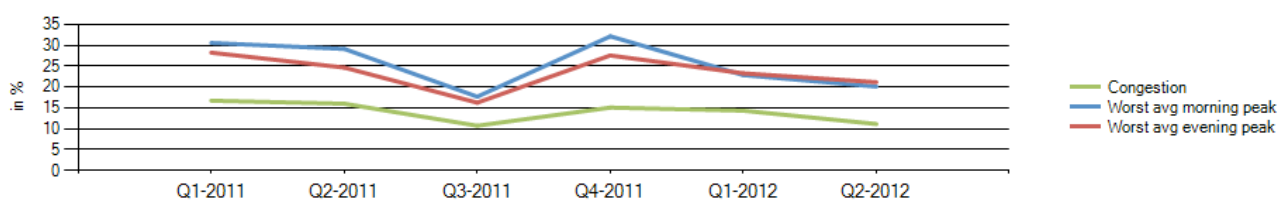


Most congested specific day	Wed 4 Apr 2012
Total network length	516 mi
Total network length highways	146 mi
Total network length non-highways	370 mi
Total vehicle miles	1 143 819 mi

Delay per hour driven in peak period



Comparison per quarter



Vienna



Congestion level

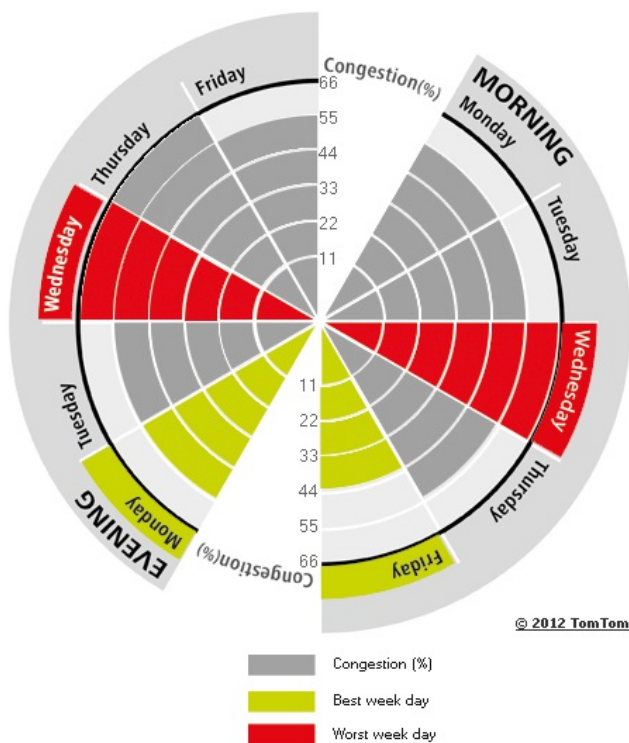
28%

Ranking

Ranking of city compared to continent	12/58
Congestion level on highways	20%
Congestion level on non-highways	34%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h

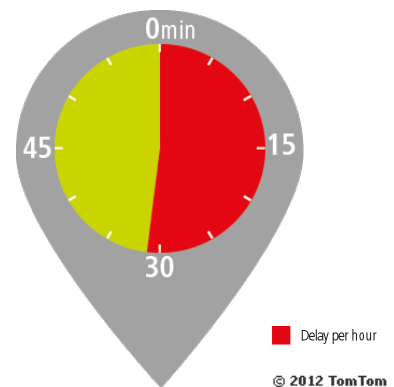
The weekly congestion pattern:

Best and worst peak periods of the week

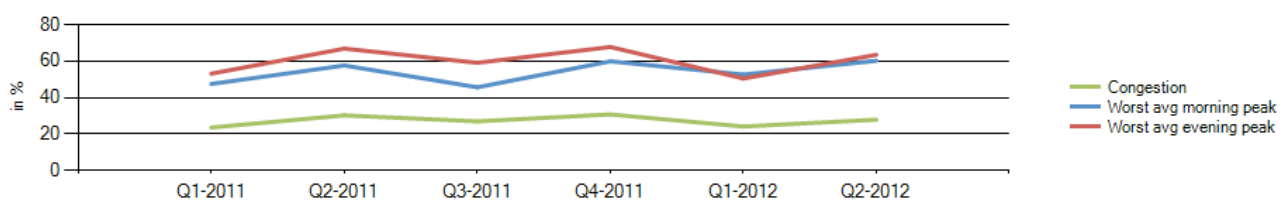


Most congested specific day	Wed 16 May 2012
Total network length	815 mi
Total network length highways	142 mi
Total network length non-highways	674 mi
Total vehicle miles	2 909 301 mi

Delay per hour driven in peak period



Comparison per quarter



Warsaw



Congestion level

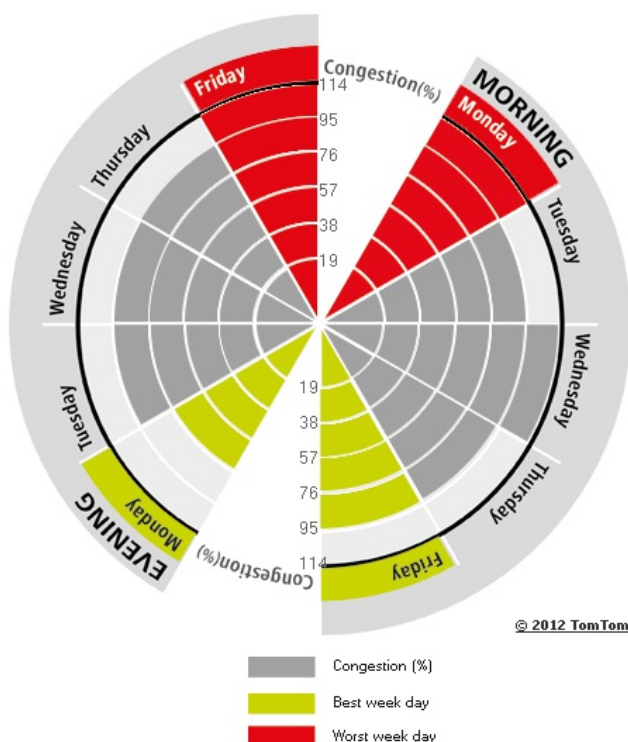
45%

Ranking

Ranking of city compared to continent	2/58
Congestion level on highways	43%
Congestion level on non-highways	49%
Delay per hour driven in peak period	55 min
Delay per year with a 30 min commute	110 h

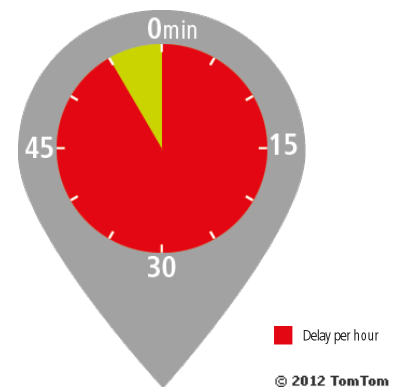
The weekly congestion pattern:

Best and worst peak periods of the week

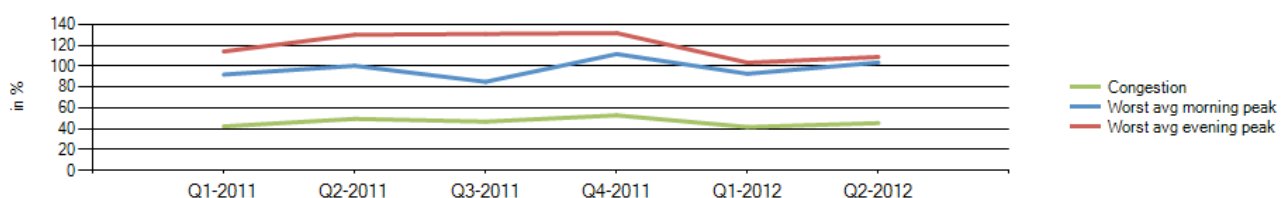


Most congested specific day	Fri 1 Jun 2012
Total network length	623 mi
Total network length highways	224 mi
Total network length non-highways	399 mi
Total vehicle miles	805 378 mi

Delay per hour driven in peak period



Comparison per quarter



Zaragoza



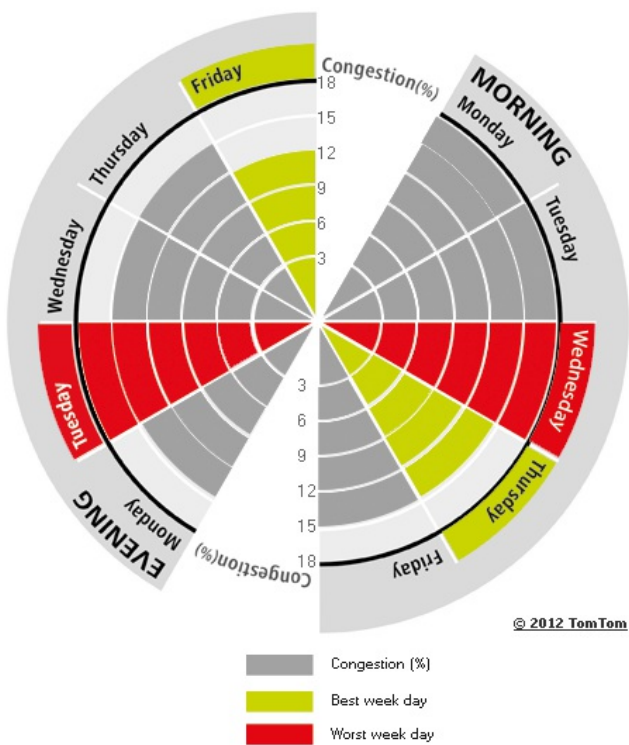
Congestion level

10%

Ranking

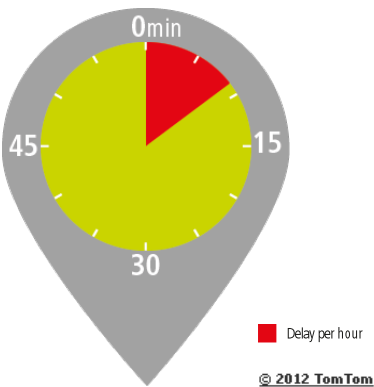
Ranking of city compared to continent	57/58
Congestion level on highways	1%
Congestion level on non-highways	18%
Delay per hour driven in peak period	8 min
Delay per year with a 30 min commute	27 h

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



Most congested specific day	Wed 6 Jun 2012
Total network length	245 mi
Total network length highways	75 mi
Total network length non-highways	170 mi
Total vehicle miles	627 765 mi

Delay per hour driven in peak period



Comparison per quarter



Evaluated cities

Europe

Rank	City	Country	24/7	Morning peak	Congestion Level (%)		
					Evening peak	Weekdays	Weekend
1	Istanbul	Turkey	57	84	125	62	47
2	Warsaw	Poland	45	93	91	54	22
3	Marseille	France	42	86	80	48	23
4	Palermo	Italy	40	69	65	46	28
5	Rome	Italy	34	81	61	41	16
6	Paris	France	34	71	65	39	20
7	Stuttgart	Germany	33	61	70	39	13
8	Brussels	Belgium	33	78	83	40	12
9	Hamburg	Germany	32	50	56	35	21
10	Stockholm	Sweden	30	67	78	36	14
11	Nice	France	29	44	58	32	19
12	Vienna	Austria	28	51	53	33	13
13	Lyon	France	27	64	58	31	17
14	Berlin	Germany	27	43	50	31	14
15	Cologne	Germany	27	48	58	33	10
16	Dublin	Ireland	27	53	58	32	15
17	Bradford-Leeds	United Kingdom	27	52	56	30	15
18	London	United Kingdom	26	55	53	30	15
19	Toulouse	France	26	82	60	31	10
20	Milan	Italy	26	75	53	32	9
21	Prague	Czech Republic	26	60	43	31	9
22	Budapest	Hungary	25	52	46	30	11
23	Naples	Italy	25	43	46	29	16
24	Luxembourg	Luxembourg	24	53	61	29	9
25	Oslo	Norway	24	64	85	29	7
26	Munich	Germany	24	50	43	27	11
27	Nottingham	United Kingdom	24	54	52	27	11
28	Strasbourg	France	23	42	70	28	8
29	Manchester	United Kingdom	22	52	50	25	10
30	Frankfurt am Main	Germany	21	49	41	25	9
31	Genoa	Italy	21	38	39	24	14
32	Lille	France	21	51	54	25	8
33	Nantes	France	21	53	53	25	8
34	Lisbon	Portugal	21	51	49	25	8
35	Birmingham	United Kingdom	20	41	42	24	8
36	Turin	Italy	20	45	38	24	10
37	Göteborg	Sweden	20	37	58	23	9
38	The Hague	Netherlands	20	46	44	23	11
39	Newcastle-Sunderland	United Kingdom	20	35	42	22	12
40	Liverpool	United Kingdom	20	35	36	22	12
41	Rotterdam	Netherlands	19	37	58	23	8
42	Barcelona	Spain	19	48	38	23	7
43	Porto	Portugal	17	31	37	20	10
44	Glasgow	United Kingdom	17	33	37	19	11
45	Copenhagen	Denmark	17	40	36	20	6
46	Amsterdam	Netherlands	16	35	39	19	7
47	Ruhr region west	Germany	16	28	35	19	6
48	Helsinki	Finland	15	30	38	18	6
49	Ruhr region east	Germany	15	25	29	17	6
50	Bern	Switzerland	15	28	38	18	5
51	Madrid	Spain	14	41	30	17	4
52	Palma de Mallorca	Spain	14	26	20	17	7
53	Seville	Spain	13	25	22	16	6
54	Murcia	Spain	13	19	15	15	7
55	Valencia	Spain	11	19	17	13	5
56	Malmö	Sweden	11	15	20	12	7
57	Zaragoza	Spain	10	15	13	11	4
58	Málaga	Spain	10	16	11	11	6

Keywords

Keywords	Definition
Average Free Flow Speed	Measured average road speed during a free flow situation (usually at night).
Average observed speeds	Average observed speeds within specific time periods.
Cities	TomTom evaluated capital cities as well as cities with a population of over 800 000. A maximum of 20 urban areas per country is evaluated. Next to the cities that meet these criteria, additional key cities are chosen and added in some countries.
City	See Cities.
Congestion level	See TomTom Congestion Level.
Delay per hour driven in peak period	Delay in minutes per hour driven during morning and evening peak times compared to free flow situations. For example, 22 minutes delay per hour at peak times indicates that a one hour journey driven at free flow times will take an additional 22 minutes at peak times.
Delay per year for commuters	See Time delay per year for commuters.
FRC	Functional Road Class, an industry standard that defines different road categories. FRC0 = highways, FRC1 = international roads/slip roads, FRC2 = major roads, FRC3 = secondary roads, FRC4 = connecting roads.
Free flow	See Free flow situation.
Free flow condition	See Free flow situation.
Free flow situation	A journey made without any delay caused by traffic congestion. This most typically occurs during the night.
Free Flow Speed	See Average Free Flow Speed.
Highways	See FRC.
Most congested day	See most congested specific day.
Most congested specific day	The day with the highest Congestion Level.
Non-highways	See FRC
Peak hours	See Peak period.
Peak period	Based on real traffic measurements, the busiest one-hour-long period in the morning and in the evening period were determined for every evaluated city.
Road network	In this report all speed measurements on roads classified as FRC0 through FRC4 within the urban areas contribute to the statistics.
Time delay per year for commuters	Delay per year with a 30 minute commute. Based on 230 work days per year and two peak periods per day.
TomTom Congestion Level	Increase in overall travel times when compared to a free flow situation. For example, a Congestion Level of 12% corresponds to 12% longer travel times compared to a free flow situation.
Total network length	Total length of the evaluated network in miles.
Total network length highways	Total length of the evaluated network in miles for FRC0 and FRC1 only.
Total network length non-highways	Total length of the evaluated network in miles for FRC2, FRC3 and FRC4 only.
Total vehicle miles	Total distance covered by all TomTom user measurements, used for this specific report.
Travel time	TomTom's historic traffic database contains over six trillion anonymous speed measurements. These speed measurements are used to calculate the travel times on individual road segments and entire networks.
Urban area	Geographical area that takes population size and network layout into account. Speed measurements within the defined urban area contribute to the statistics.
Urban network	The road network in an urban area.

Explanation of tables and figures

Pages for continents

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

Pages for cities

Section	Description
Congestion Level	Average Congestion Level across all roads in the city.
Ranking of city compared to continent	Rank of the city according to Congestion Level compared to other evaluated cities on the continent.
Congestion Level on highways	Congestion Level for highways only.
Congestion Level on non-highways	Congestion Level for non-highways only.
Delay per hour driven in peak period	Average delay in minutes for a one hour journey driven in the peak periods.
Delay per year with a 30 minute commute	The total accumulated delay over one year for a 30 minute commute driven in the peak periods on work days.
The weekly congestion pattern	Average Congestion Levels for the 10 peak periods in a week (morning and evening peak hours on 5 working days).
Comparison per quarter	Change in Congestion Level over the past quarters.
Congestion	Average Congestion Level across the city.
Worst average morning peak	Highest Congestion Level during the 5 morning peak periods (work days).
Worst average evening peak	Highest Congestion Level during the 5 evening peak periods (work days).