

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 kilometres 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.

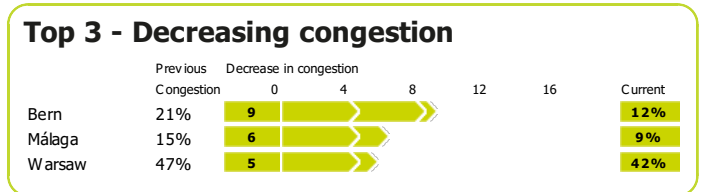
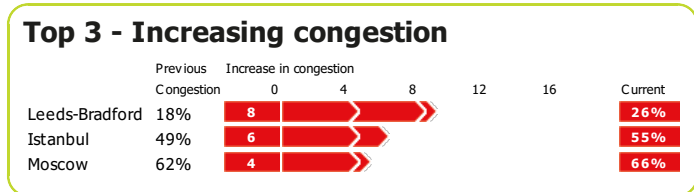
To download a copy of the report go to: www.tomtom.com/congestionindex.

If you would like to know more about TomTom's 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.

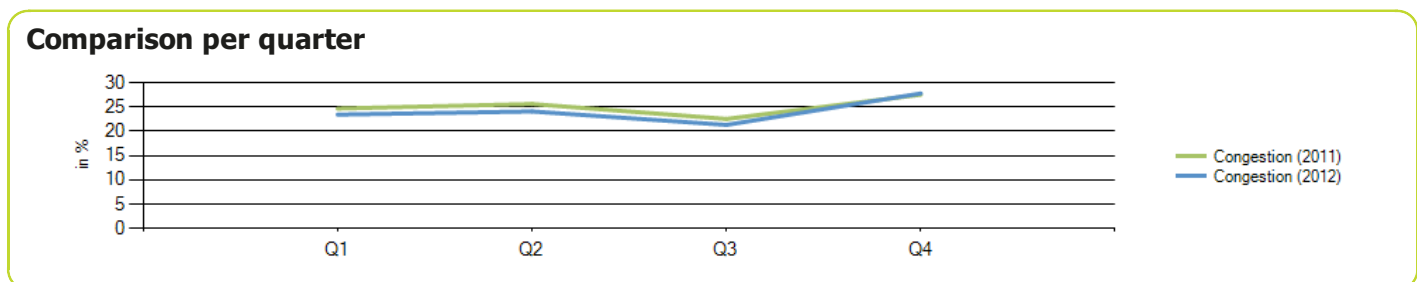
Note: words with a * are explained on the keywords page at the end of the report.

Europe



Top 10 cities

Rank	CI change	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	▲	Moscow	Russia	66%	106%	138%	62%	68%
2	▲	Istanbul	Turkey	55%	80%	125%	58%	51%
3	▼	Warsaw	Poland	42%	84%	88%	39%	46%
4	▲	Marseille	France	40%	77%	77%	24%	50%
5	▼	Palermo	Italy	39%	64%	64%	27%	49%
6	▲	Stuttgart	Germany	33%	59%	67%	32%	34%
7	---	Paris	France	33%	70%	65%	32%	34%
8	▼	Rome	Italy	33%	76%	63%	25%	37%
9	▼	Hamburg	Germany	32%	49%	55%	27%	36%
10	▼	Brussels	Belgium	32%	75%	81%	26%	37%



Europe

Rank	CI change	City	Country	Congestion	Morning peak	Evening peak	Highways	Non-Highways
1	▲	Moscow	Russia	66%	106%	138%	62%	68%
2	▲	Istanbul	Turkey	55%	80%	125%	58%	51%
3	▼	Warsaw	Poland	42%	84%	88%	39%	46%
4	▲	Marseille	France	40%	77%	77%	24%	50%
5	▼	Palermo	Italy	39%	64%	64%	27%	49%
6	▲	Stuttgart	Germany	33%	59%	67%	32%	34%
7	---	Paris	France	33%	70%	65%	32%	34%
8	▼	Rome	Italy	33%	76%	63%	25%	37%
9	▼	Hamburg	Germany	32%	49%	55%	27%	36%
10	▼	Brussels	Belgium	32%	75%	81%	26%	37%
11	▼	Dublin	Ireland	29%	62%	62%	22%	39%
12	▼	Stockholm	Sweden	28%	62%	70%	25%	32%
13	---	Berlin	Germany	28%	42%	50%	24%	32%
14	▼	London	United Kingdom	27%	56%	55%	14%	36%
15	---	Nice	France	27%	41%	54%	15%	34%
16	▼	Cologne	Germany	26%	49%	54%	24%	32%
17	---	Lyon	France	26%	58%	56%	21%	34%
18	▲	Leeds-Bradford	United Kingdom	26%	54%	59%	22%	31%
19	▼	Vienna	Austria	25%	43%	50%	17%	32%
20	▼	Milan	Italy	25%	70%	55%	20%	29%
21	▲	Toulouse	France	25%	76%	56%	20%	32%
22	▼	Naples	Italy	25%	40%	45%	13%	37%
23	▲	Luxembourg	Luxembourg	25%	52%	59%	16%	37%
24	▲	Nottingham	United Kingdom	24%	59%	52%	6%	32%
25	▼	Budapest	Hungary	24%	46%	45%	6%	33%
26	▼	Manchester	United Kingdom	24%	62%	59%	16%	33%
27	▲	Munich	Germany	24%	49%	42%	18%	33%
28	▼	Prague	Czech Republic	23%	52%	40%	18%	29%
29	▼	Oslo	Norway	23%	61%	75%	19%	30%
30	▼	Strasbourg	France	23%	41%	64%	18%	30%
31	▼	Frankfurt am Main	Germany	22%	48%	41%	17%	30%
32	▲	Birmingham	United Kingdom	22%	46%	45%	16%	31%
33	▼	Liverpool	United Kingdom	21%	38%	39%	4%	27%
34	▲	Lille	France	21%	53%	48%	16%	27%
35	▼	Newcastle-Sunderland	United Kingdom	21%	41%	43%	15%	26%
36	▼	Lisbon	Portugal	20%	45%	51%	10%	21%
37	▼	Nantes	France	20%	52%	49%	15%	27%
38	▼	Genoa	Italy	20%	37%	38%	11%	32%
39	▼	Turin	Italy	20%	44%	39%	10%	25%
40	▼	The Hague	Netherlands	20%	46%	45%	11%	27%
41	▼	Rotterdam	Netherlands	19%	38%	55%	13%	29%
42	▼	Barcelona	Spain	19%	46%	38%	15%	22%
43	▼	Göteborg	Sweden	19%	33%	52%	17%	21%
44	▼	Glasgow	United Kingdom	18%	38%	42%	10%	25%
45	▼	Ruhr region west	Germany	18%	32%	35%	14%	29%
46	▼	Helsinki	Finland	18%	35%	40%	13%	23%
47	▼	Porto	Portugal	18%	31%	39%	9%	25%
48	▼	Copenhagen	Denmark	17%	42%	34%	8%	26%
49	▼	Amsterdam	Netherlands	17%	35%	39%	10%	29%
50	---	Ruhr region east	Germany	16%	29%	30%	12%	25%
51	▼	Palma de Mallorca	Spain	16%	25%	22%	7%	20%
52	▼	Madrid	Spain	14%	39%	29%	8%	20%
53	▼	Bern	Switzerland	13%	24%	38%	1%	31%
54	▼	Seville	Spain	13%	24%	20%	9%	17%
55	▼	Murcia	Spain	12%	18%	15%	5%	22%
56	▼	Valencia	Spain	11%	18%	19%	5%	19%
57	▼	Malmö	Sweden	10%	14%	18%	6%	22%
58	▼	Málaga	Spain	10%	16%	12%	5%	12%
59	▼	Zaragoza	Spain	9%	13%	13%	0%	18%

Amsterdam

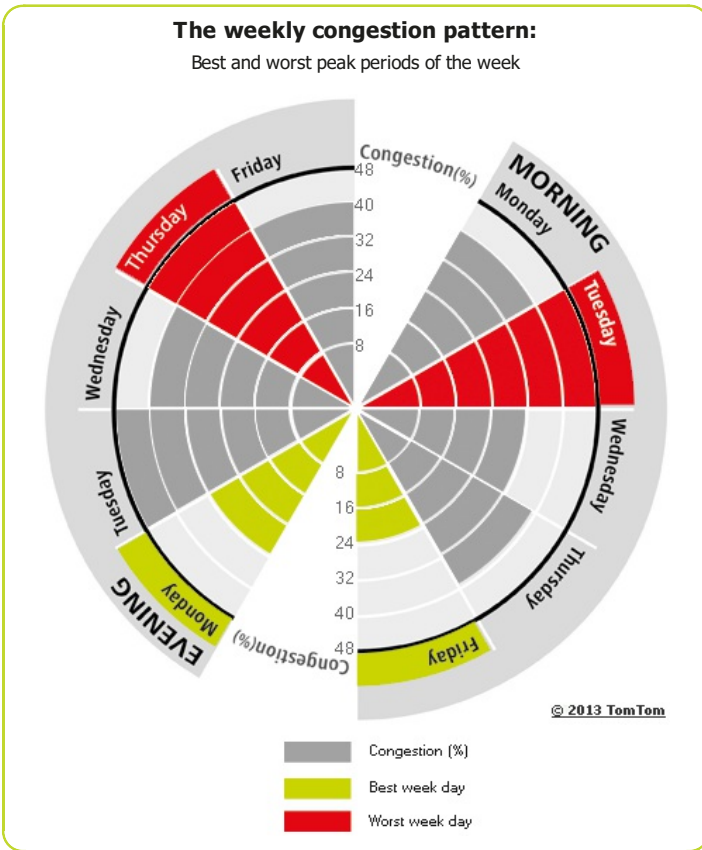


Congestion level

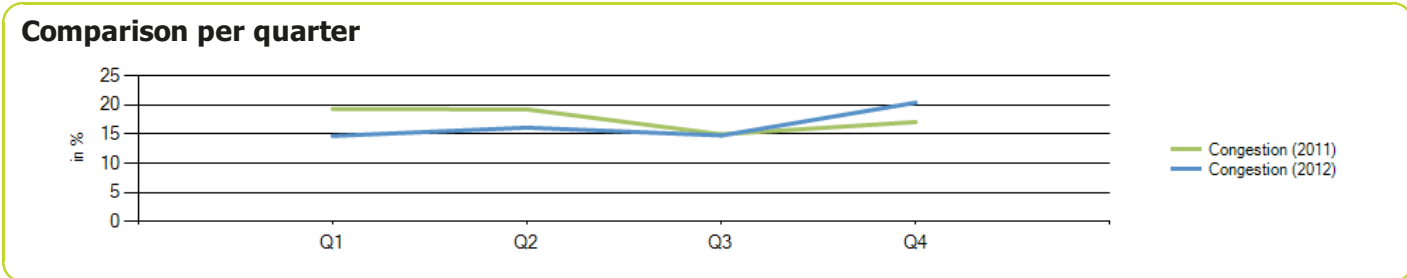
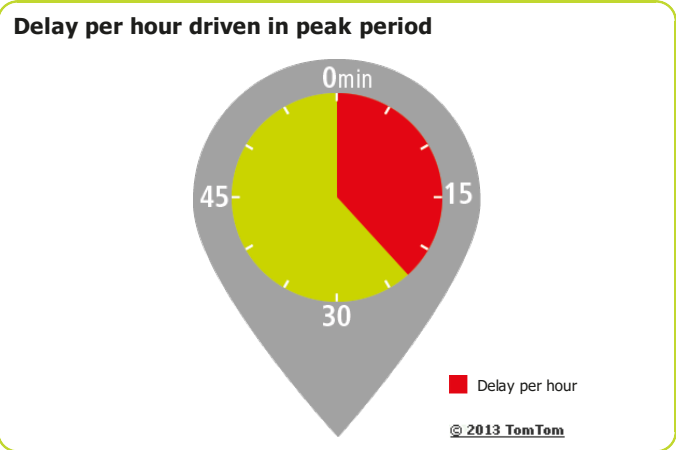
17%

Ranking

Ranking of city compared to continent	49/59
Congestion level on highways	10%
Congestion level on non-highways	29%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h



Most congested specific day	Fri 3 Feb 2012
Total network length	932 km
Total network length highways	207 km
Total network length non-highways	726 km
Total vehicle kilometres	64 289 903 km



Barcelona

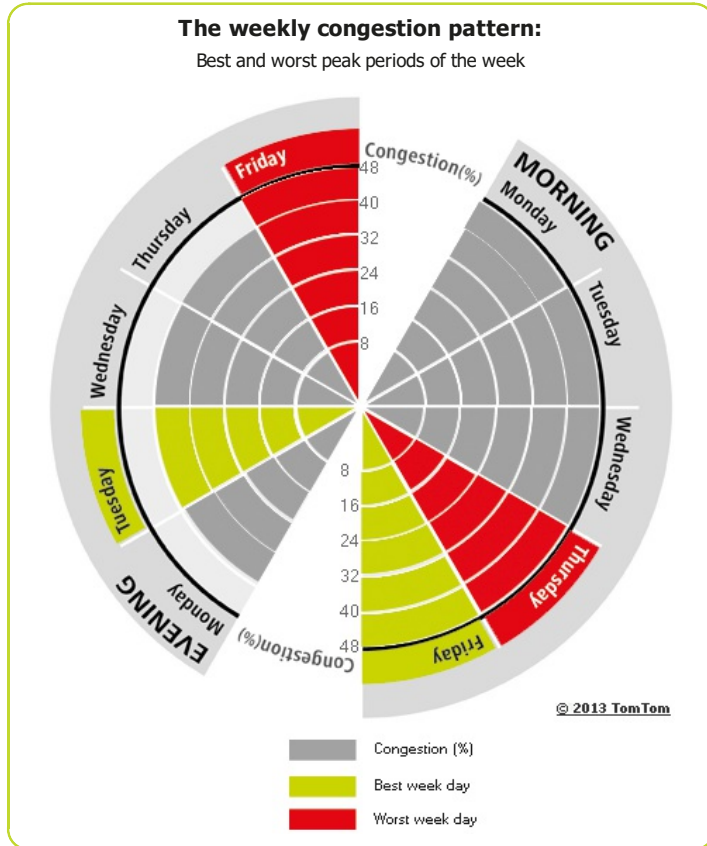


Congestion level

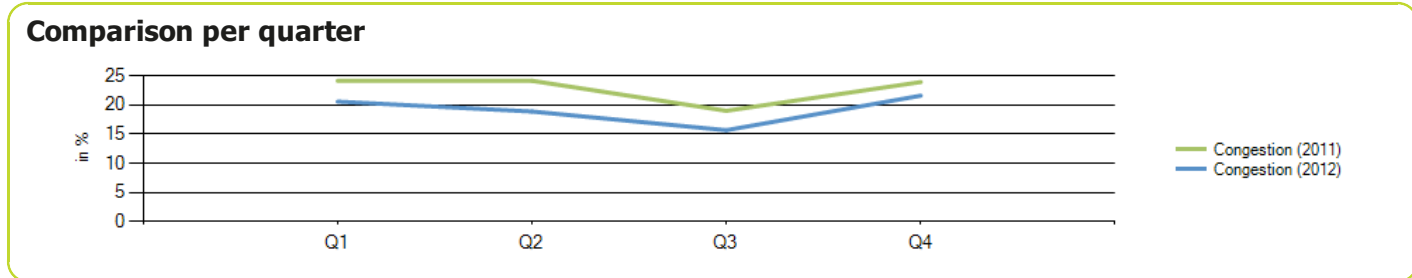
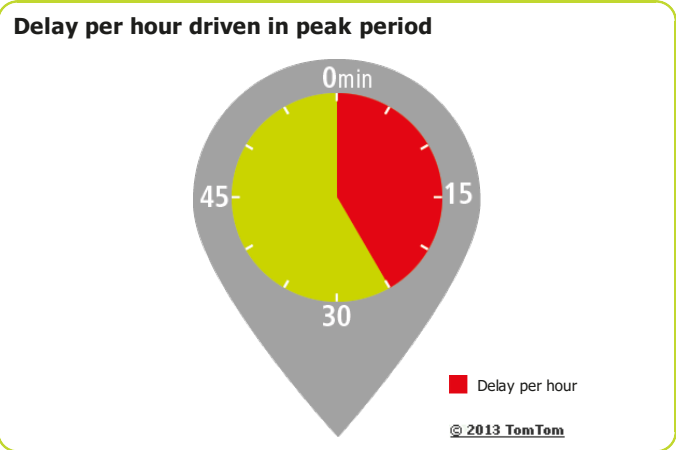
19%

Ranking

Ranking of city compared to continent	42/59
Congestion level on highways	15%
Congestion level on non-highways	22%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h



Most congested specific day	Wed 31 Oct 2012
Total network length	631 km
Total network length highways	169 km
Total network length non-highways	462 km
Total vehicle kilometres	23 354 867 km



Berlin

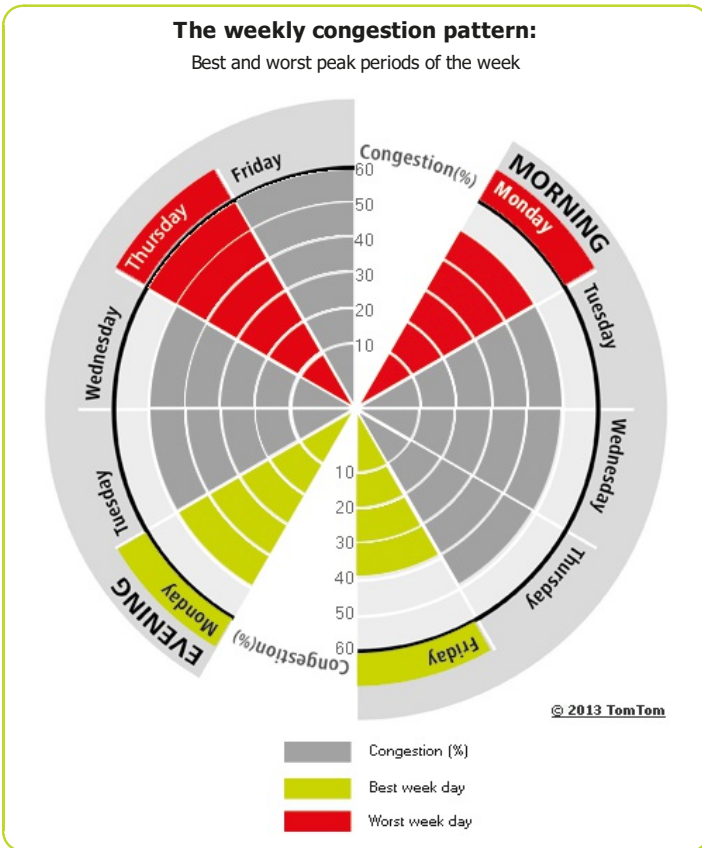


Congestion level

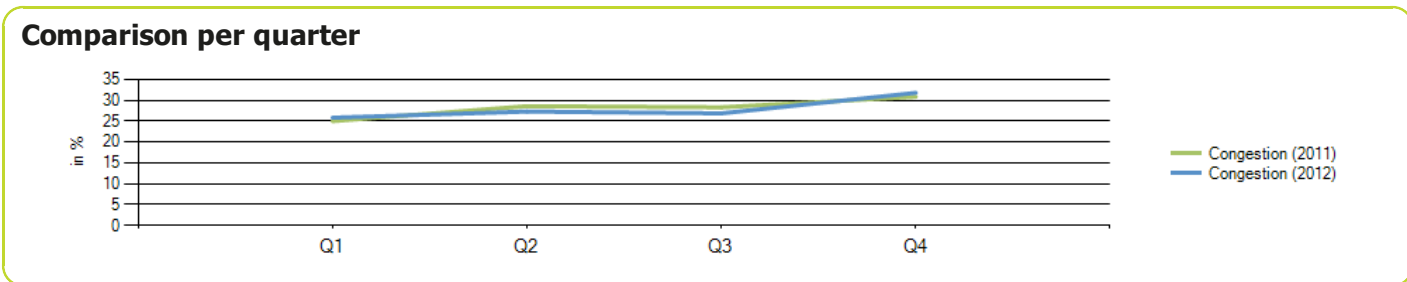
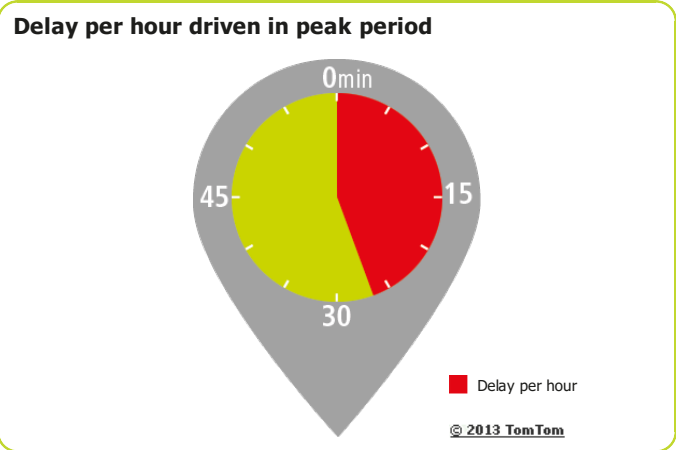
28%

Ranking

Ranking of city compared to continent	13/59
Congestion level on highways	24%
Congestion level on non-highways	32%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h



Most congested specific day	Thu 6 Dec 2012
Total network length	2 875 km
Total network length highways	688 km
Total network length non-highways	2 186 km
Total vehicle kilometres	42 606 365 km



Bern

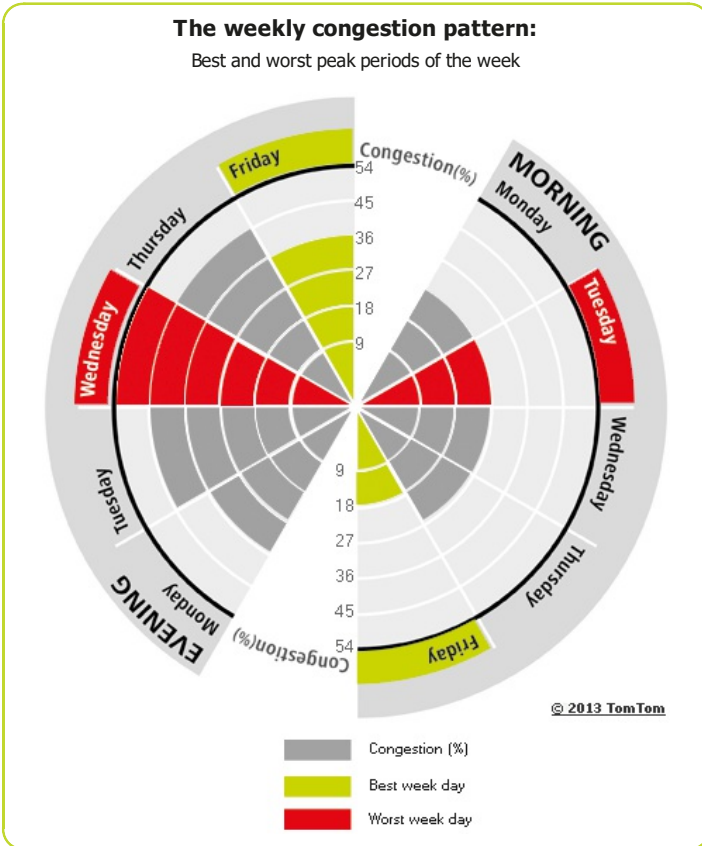


Congestion level

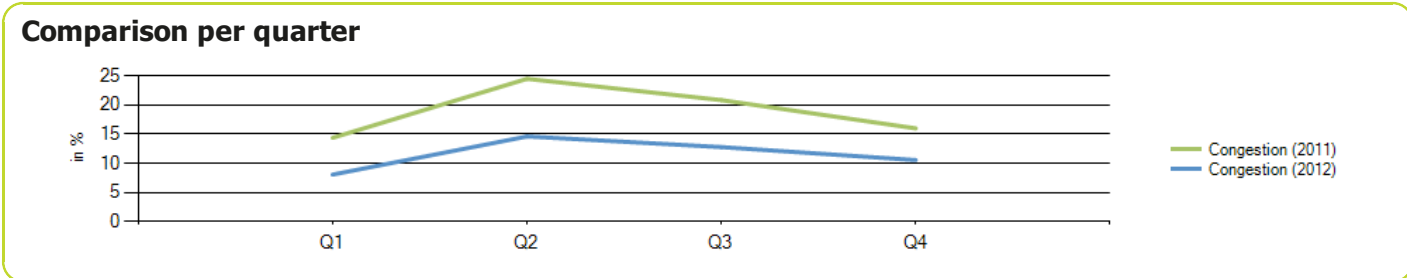
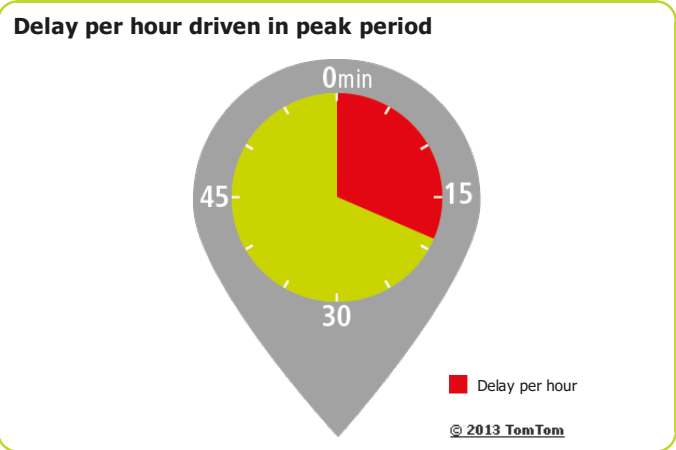
13%

Ranking

Ranking of city compared to continent	53/59
Congestion level on highways	1%
Congestion level on non-highways	31%
Delay per hour driven in peak period	18 min
Delay per year with a 30 min commute	53 h



Most congested specific day	Mon 3 Dec 2012
Total network length	204 km
Total network length highways	34 km
Total network length non-highways	169 km
Total vehicle kilometres	3 037 351 km



Birmingham

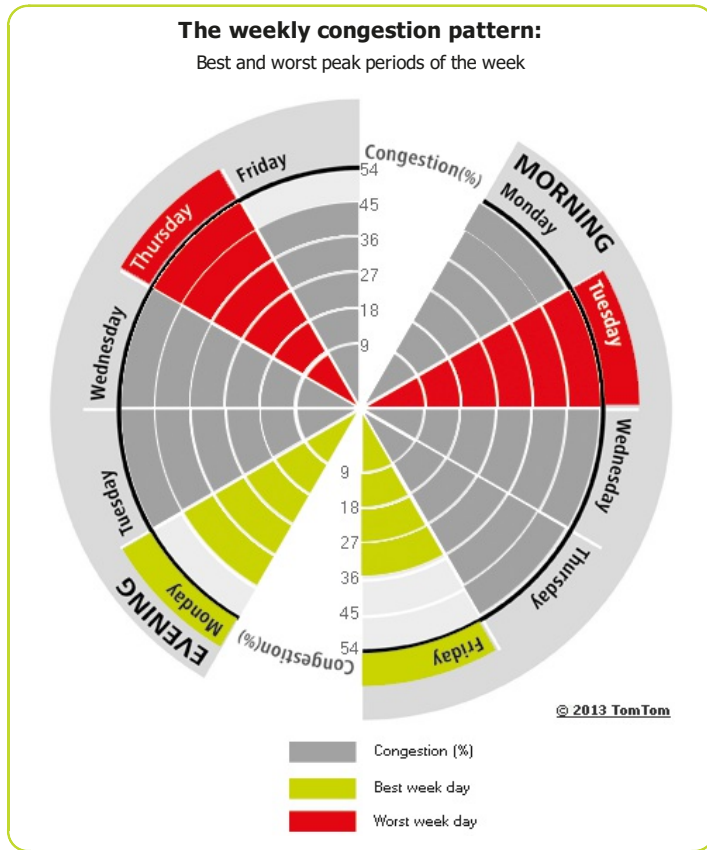


Congestion level

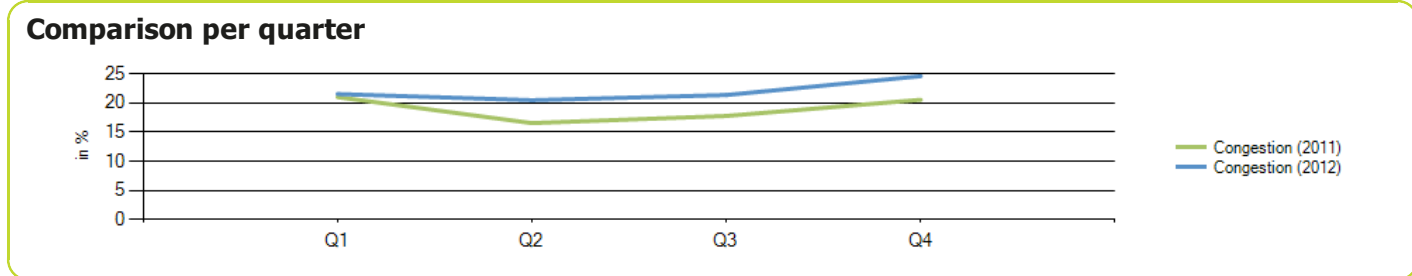
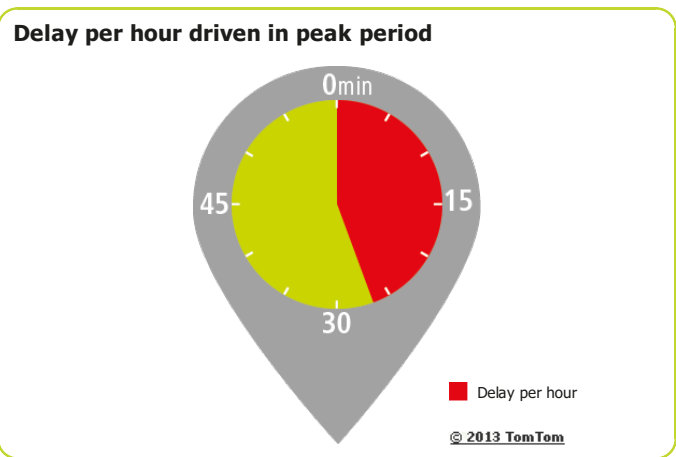
22%

Ranking

Ranking of city compared to continent	32/59
Congestion level on highways	16%
Congestion level on non-highways	31%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h



Most congested specific day	Fri 6 Jul 2012
Total network length	2 644 km
Total network length highways	410 km
Total network length non-highways	2 234 km
Total vehicle kilometres	109 372 771 km



Brussels

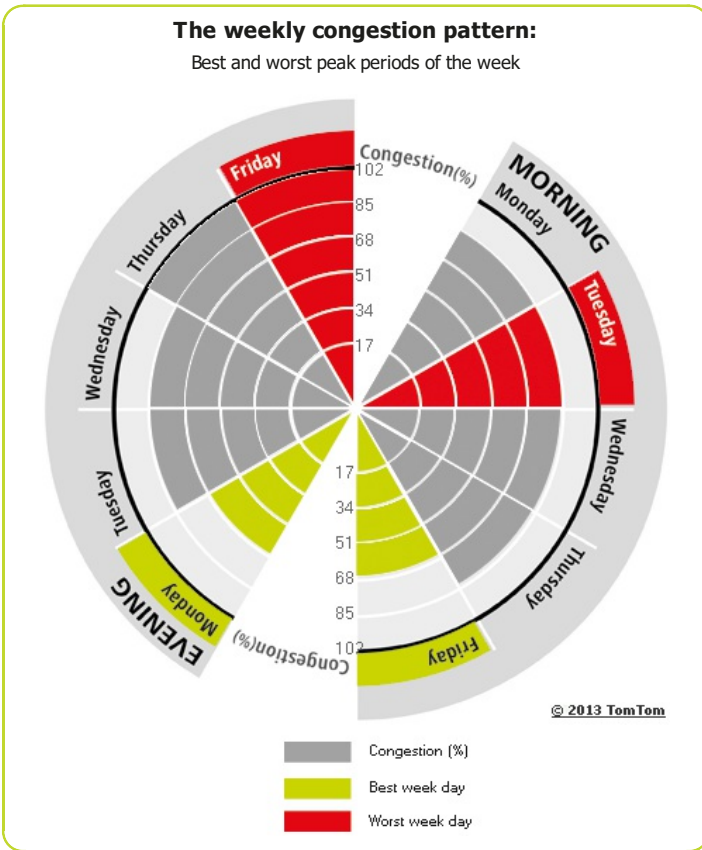


Congestion level

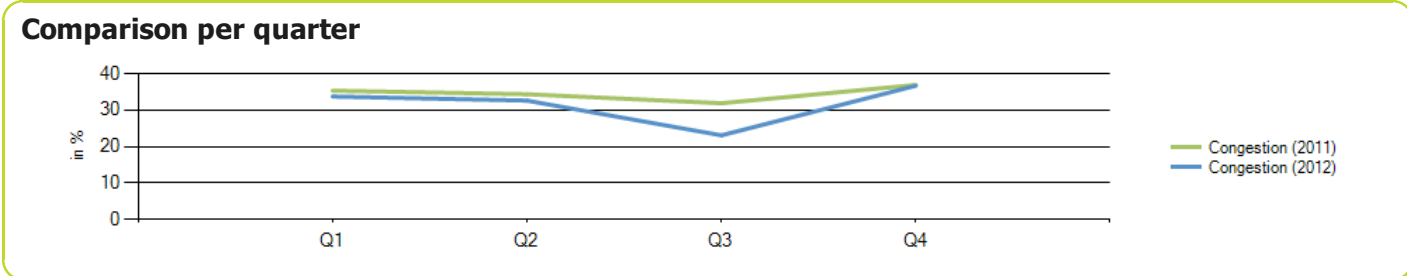
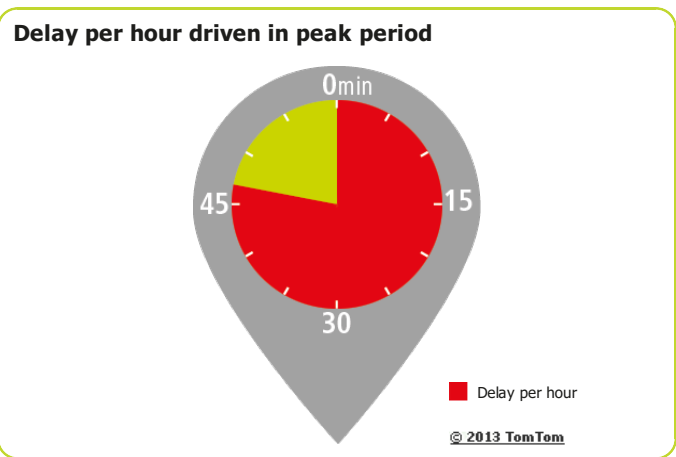
32%

Ranking

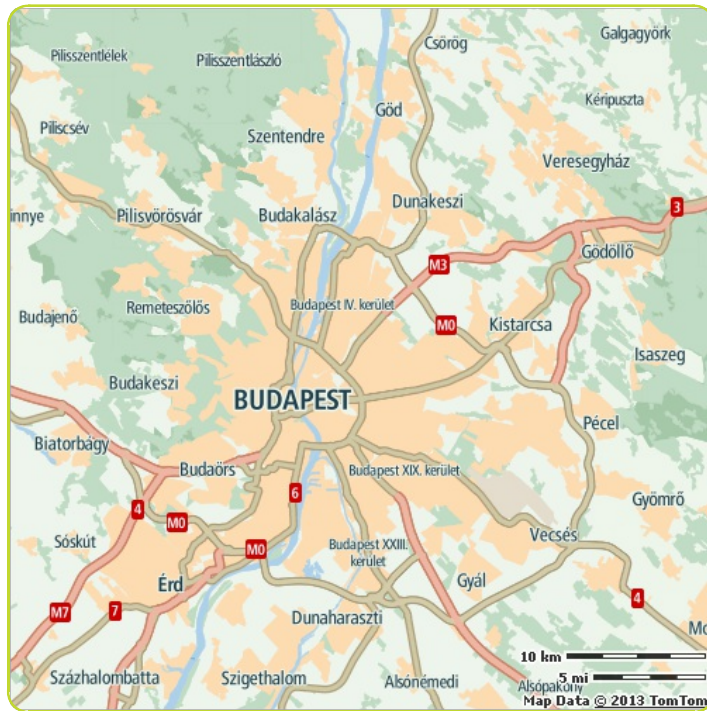
Ranking of city compared to continent	10/59
Congestion level on highways	26%
Congestion level on non-highways	37%
Delay per hour driven in peak period	47 min
Delay per year with a 30 min commute	101 h



Most congested specific day	Fri 3 Feb 2012
Total network length	1 300 km
Total network length highways	196 km
Total network length non-highways	1 104 km
Total vehicle kilometres	36 963 995 km



Budapest

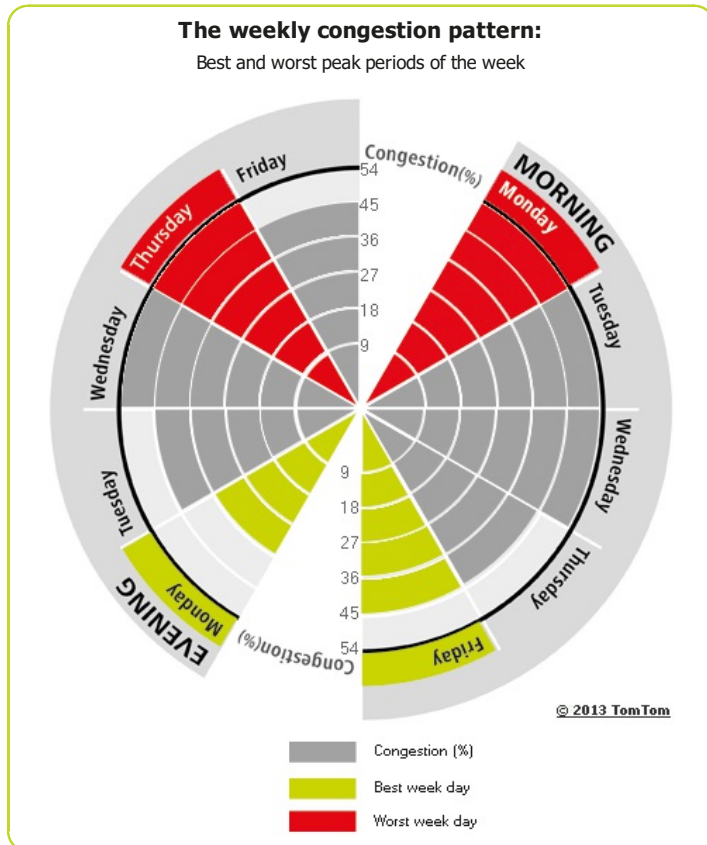


Congestion level

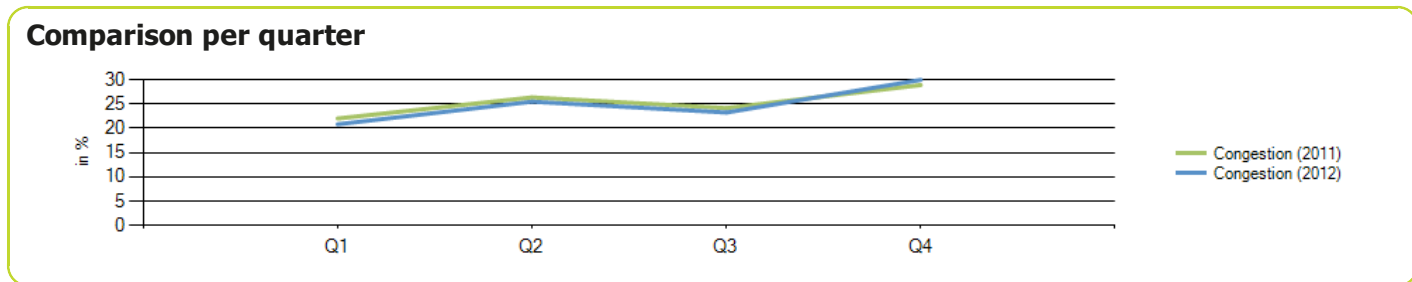
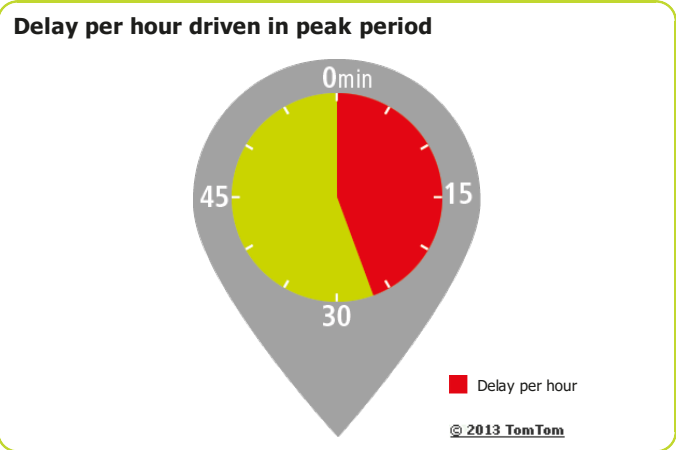
24%

Ranking

Ranking of city compared to continent	25/59
Congestion level on highways	6%
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



Most congested specific day	Thu 6 Dec 2012
Total network length	2 112 km
Total network length highways	354 km
Total network length non-highways	1 758 km
Total vehicle kilometres	4 339 938 km



Cologne

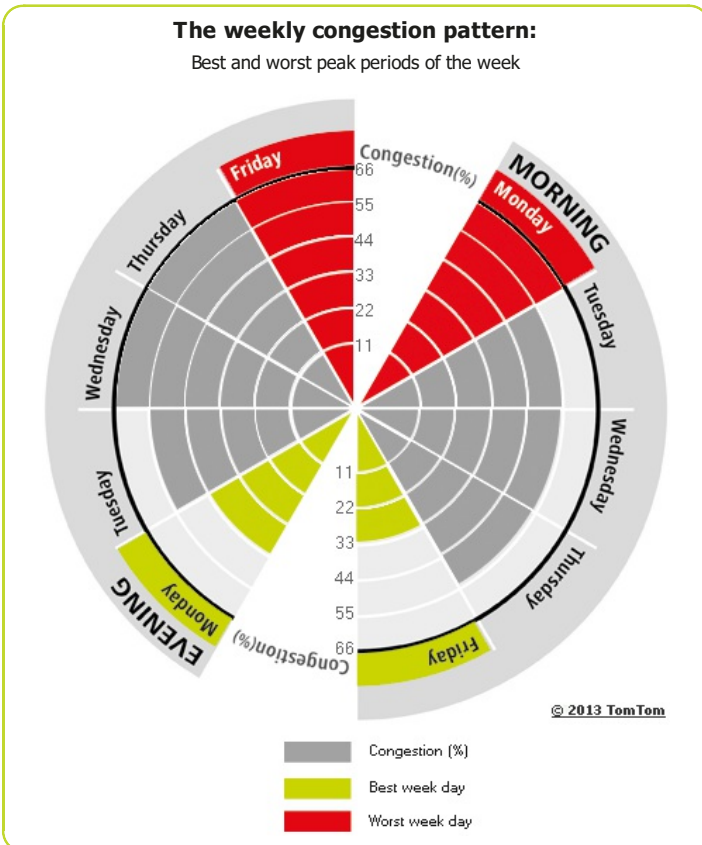


Congestion level

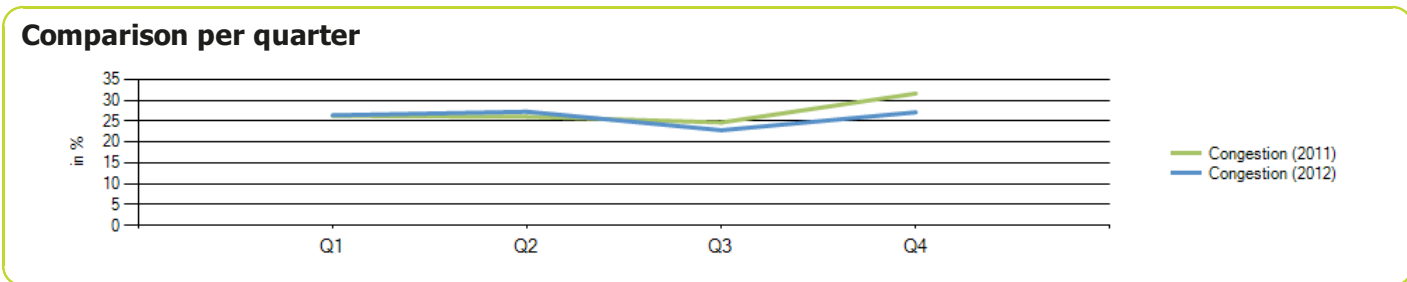
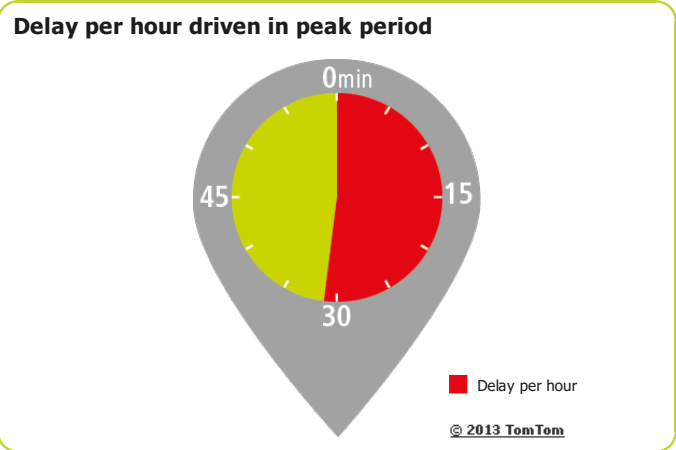
26%

Ranking

Ranking of city compared to continent	16/59
Congestion level on highways	24%
Congestion level on non-highways	32%
Delay per hour driven in peak period	30 min
Delay per year with a 30 min commute	76 h



Most congested specific day	Wed 31 Oct 2012
Total network length	1 944 km
Total network length highways	563 km
Total network length non-highways	1 382 km
Total vehicle kilometres	40 682 175 km



Copenhagen

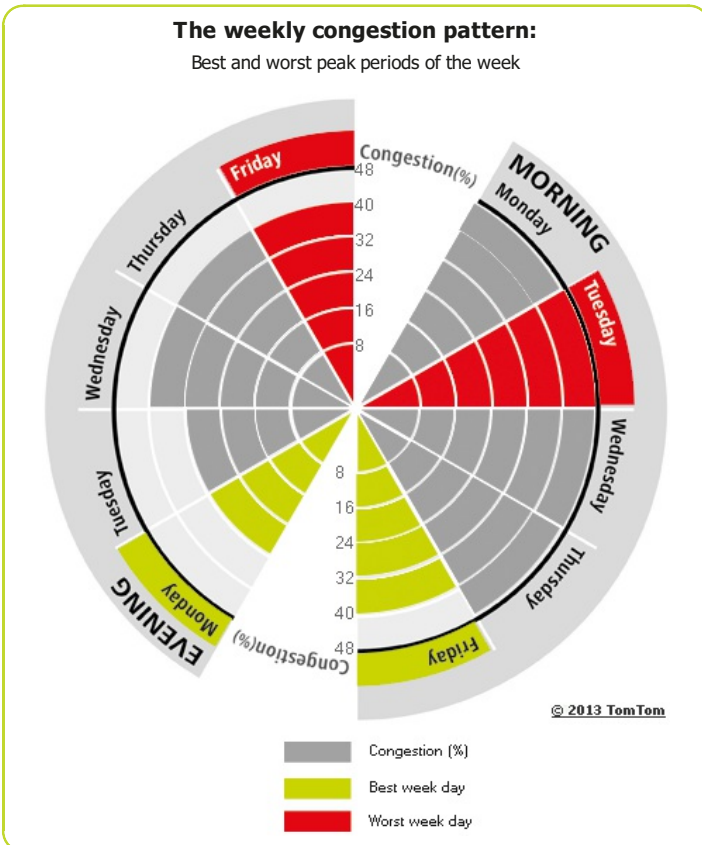


Congestion level

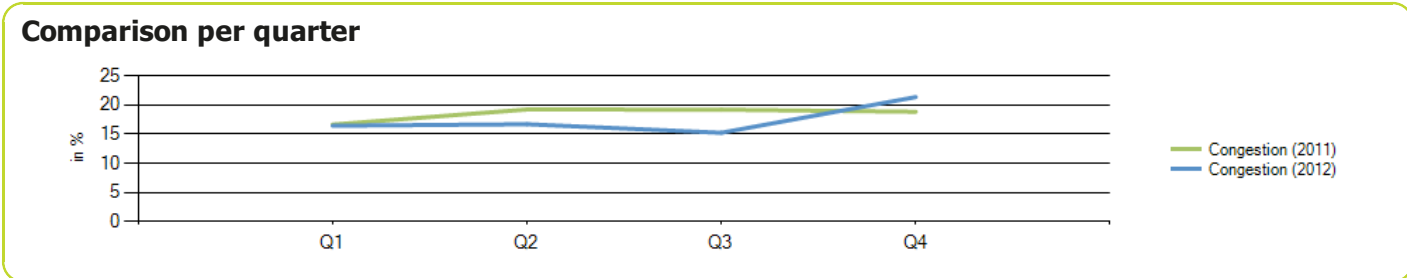
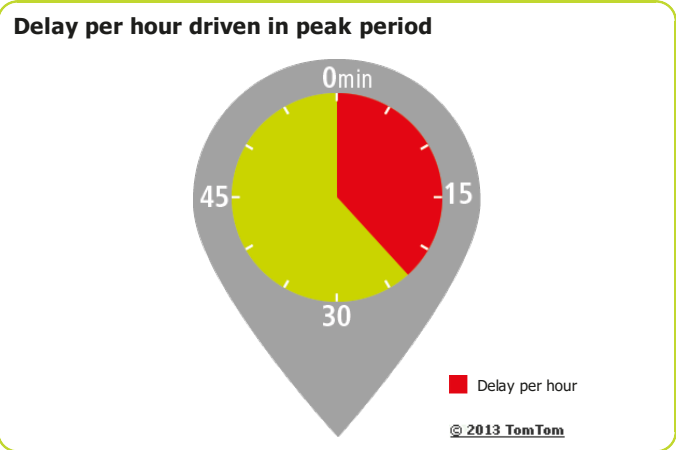
17%

Ranking

Ranking of city compared to continent	48/59
Congestion level on highways	8%
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



Most congested specific day	Mon 10 Dec 2012
Total network length	1 308 km
Total network length highways	258 km
Total network length non-highways	1 050 km
Total vehicle kilometres	21 641 048 km



Dublin

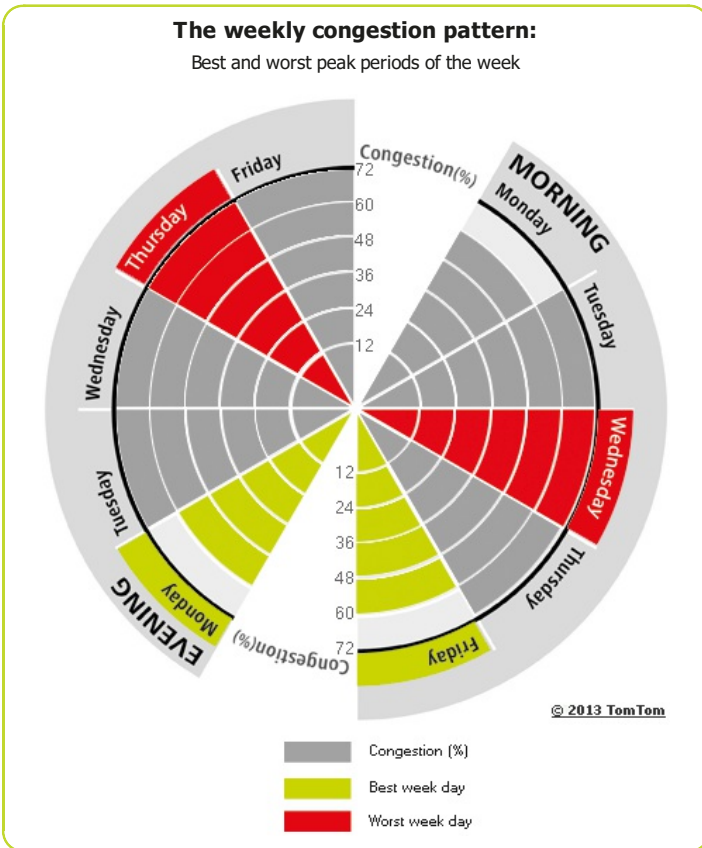


Congestion level

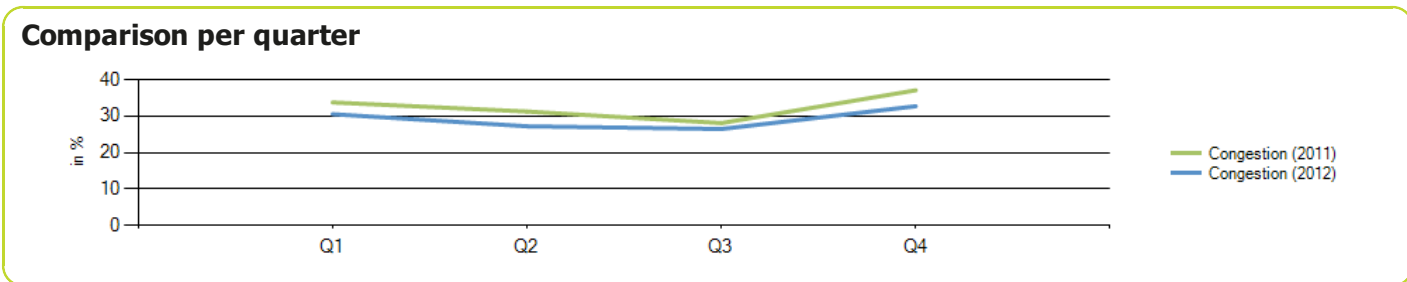
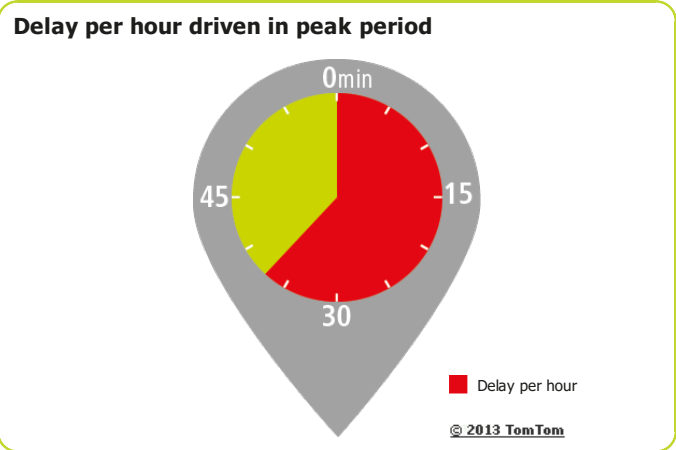
29%

Ranking

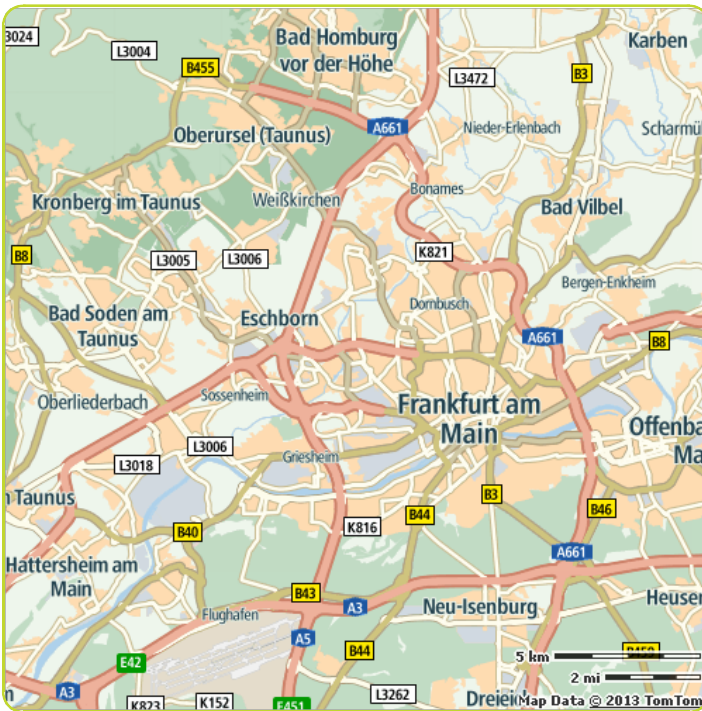
Ranking of city compared to continent	11/59
Congestion level on highways	22%
Congestion level on non-highways	39%
Delay per hour driven in peak period	37 min
Delay per year with a 30 min commute	87 h



Most congested specific day	Thu 6 Dec 2012
Total network length	643 km
Total network length highways	217 km
Total network length non-highways	426 km
Total vehicle kilometres	4 368 977 km



Frankfurt am Main

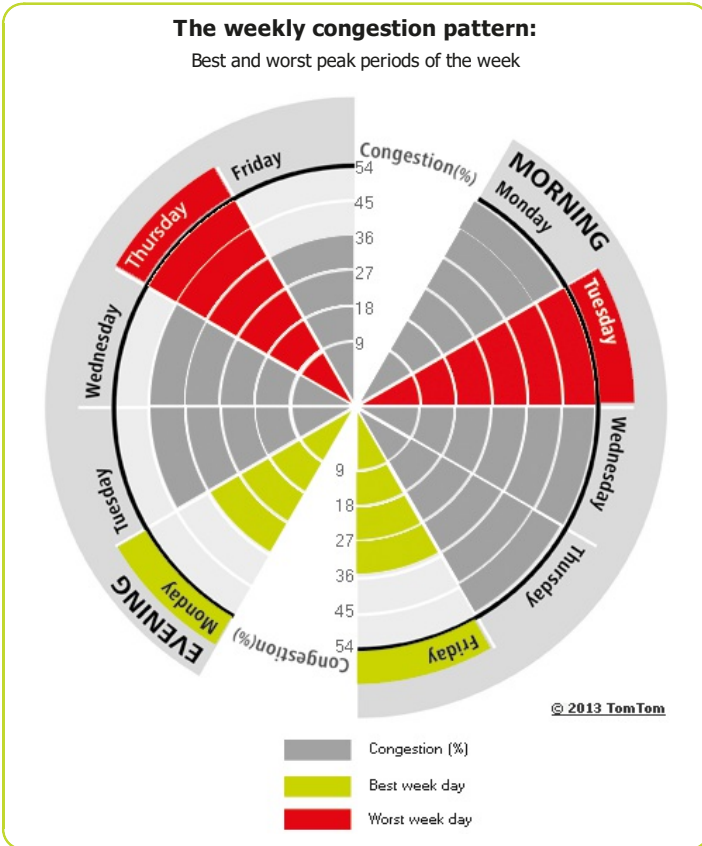


Congestion level

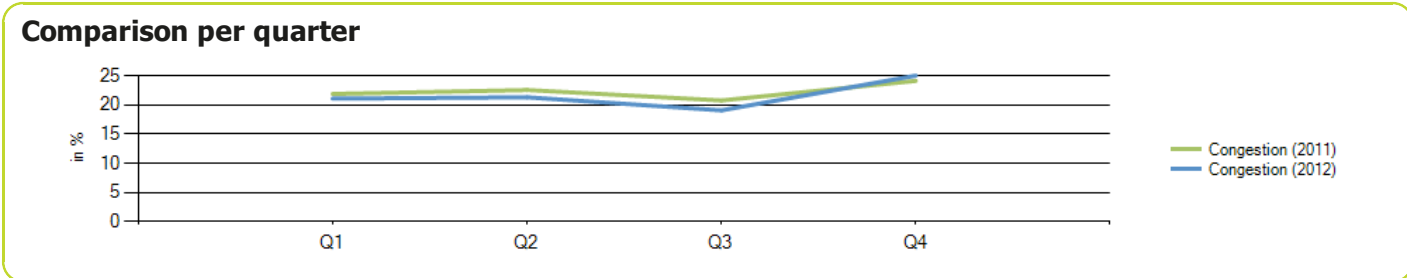
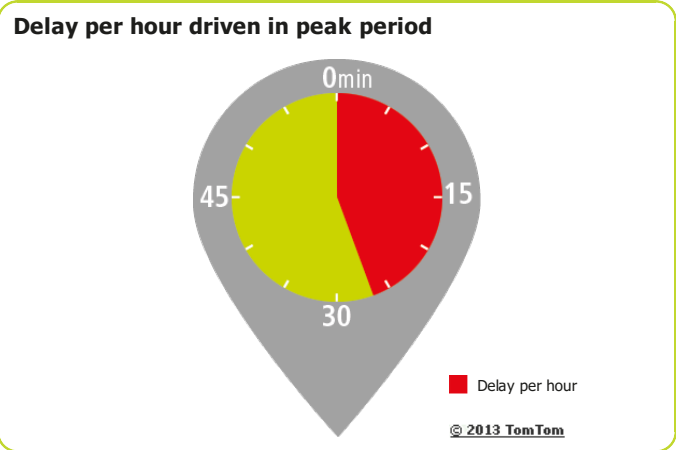
22%

Ranking

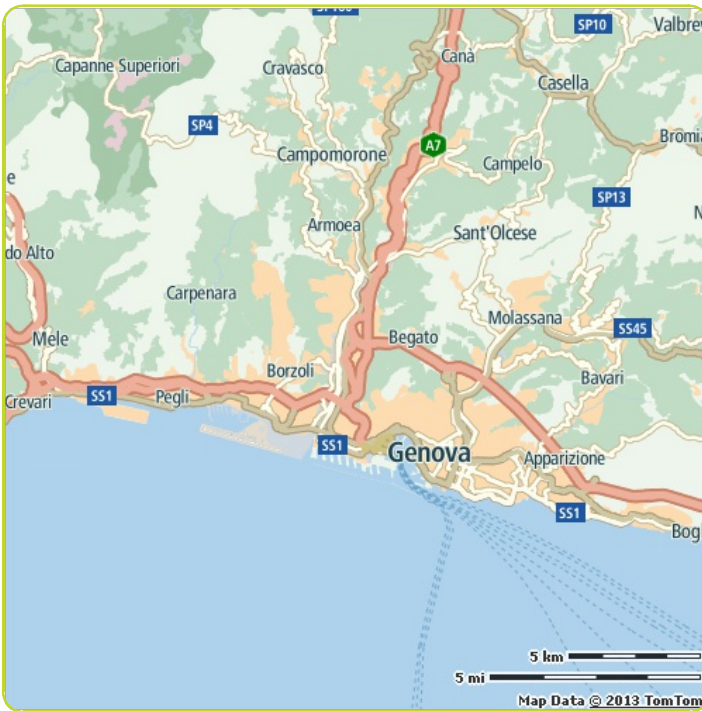
Ranking of city compared to continent	31/59
Congestion level on highways	17%
Congestion level on non-highways	30%
Delay per hour driven in peak period	26 min
Delay per year with a 30 min commute	69 h



Most congested specific day	Mon 3 Dec 2012
Total network length	576 km
Total network length highways	166 km
Total network length non-highways	411 km
Total vehicle kilometres	9 881 416 km



Genoa

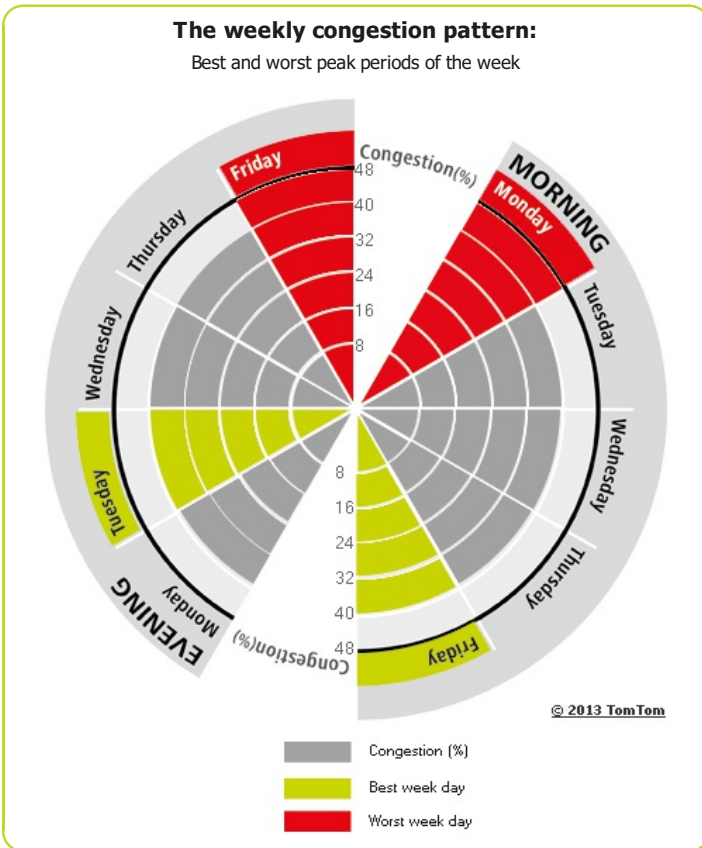


Congestion level

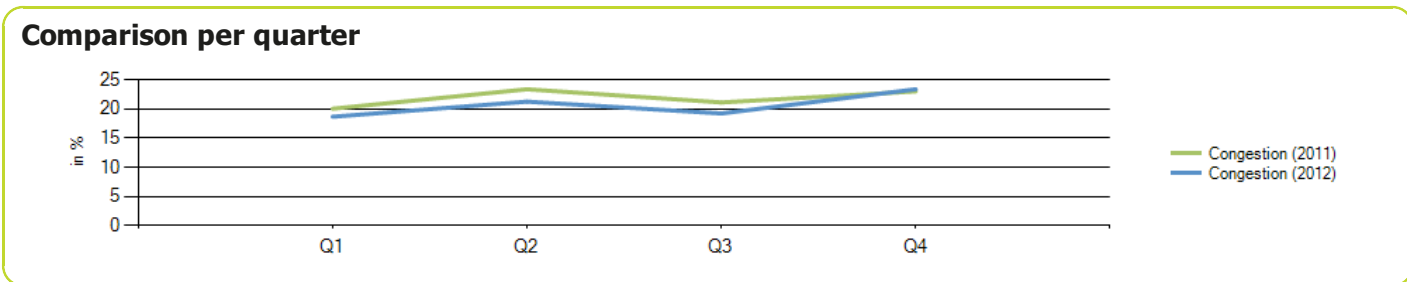
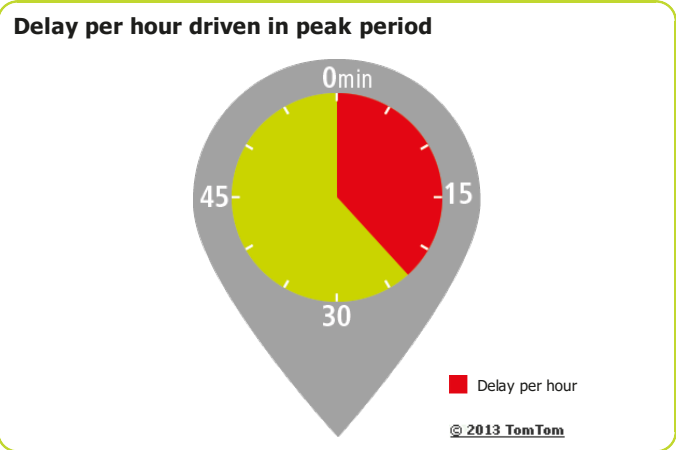
20%

Ranking

Ranking of city compared to continent	38/59
Congestion level on highways	11%
Congestion level on non-highways	32%
Delay per hour driven in peak period	22 min
Delay per year with a 30 min commute	61 h



Most congested specific day	Mon 30 Apr 2012
Total network length	333 km
Total network length highways	65 km
Total network length non-highways	268 km
Total vehicle kilometres	3 402 589 km



Glasgow

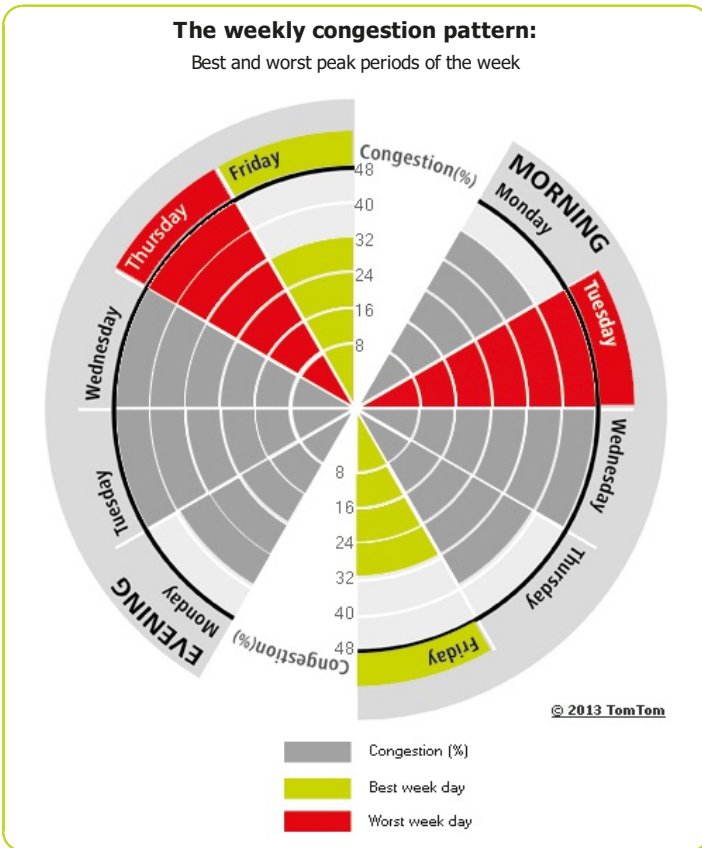


Congestion level

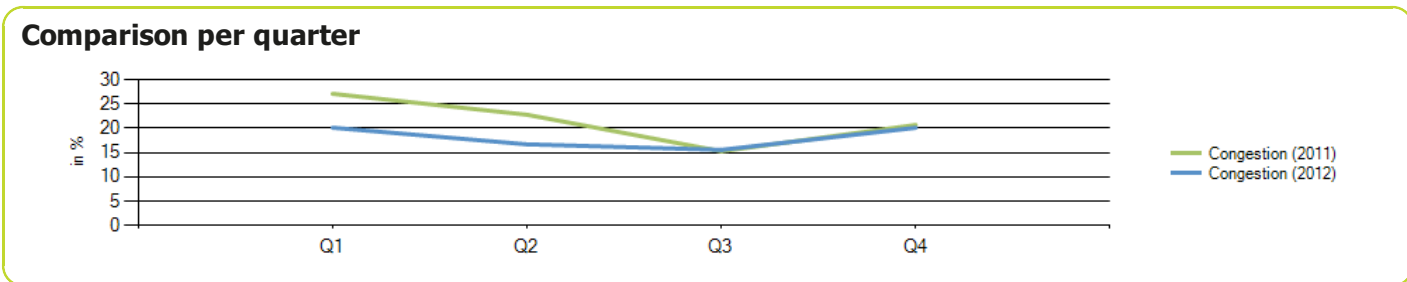
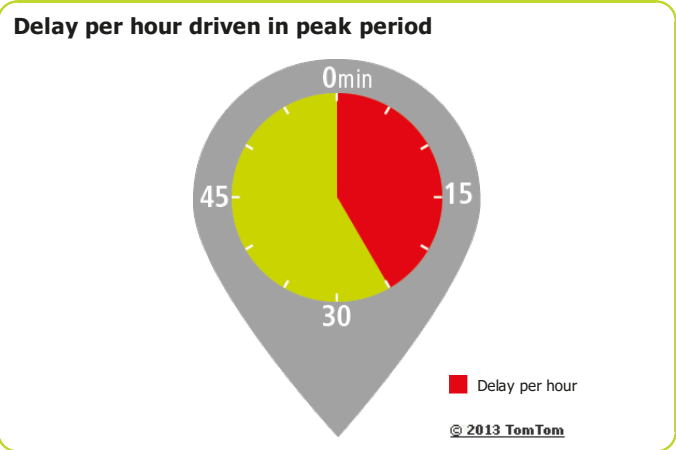
18%

Ranking

Ranking of city compared to continent	44/59
Congestion level on highways	10%
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



Most congested specific day	Thu 20 Dec 2012
Total network length	1 038 km
Total network length highways	154 km
Total network length non-highways	884 km
Total vehicle kilometres	13 722 578 km



Gothenburg

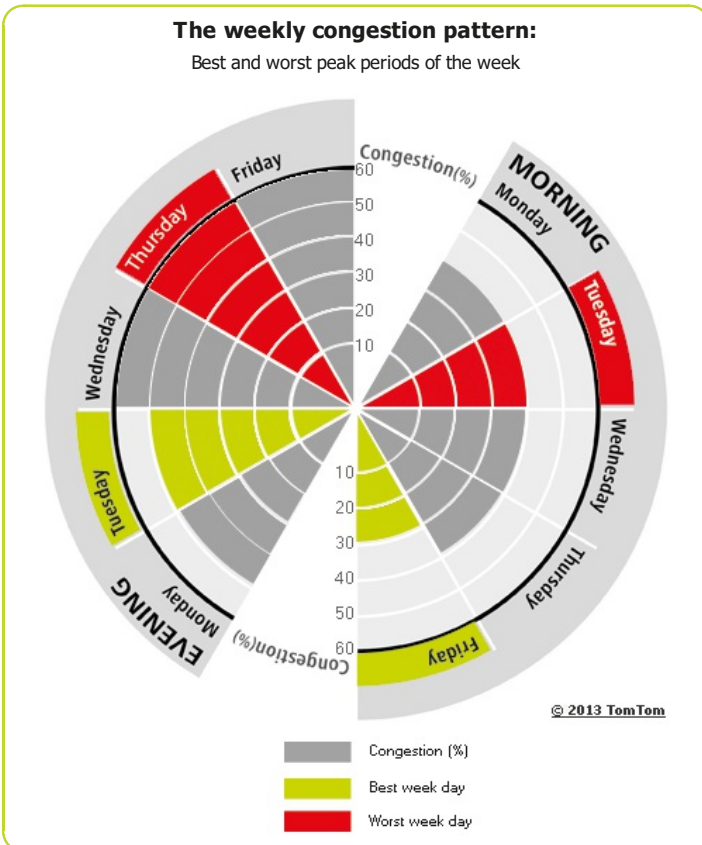


Congestion level

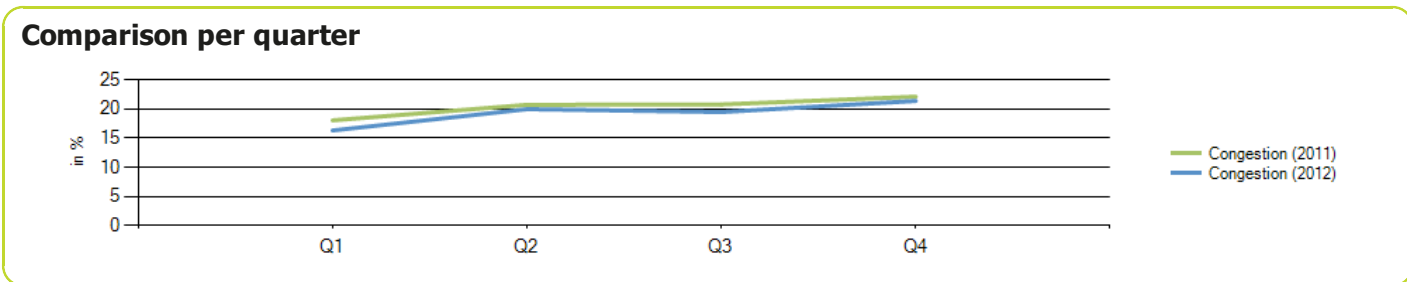
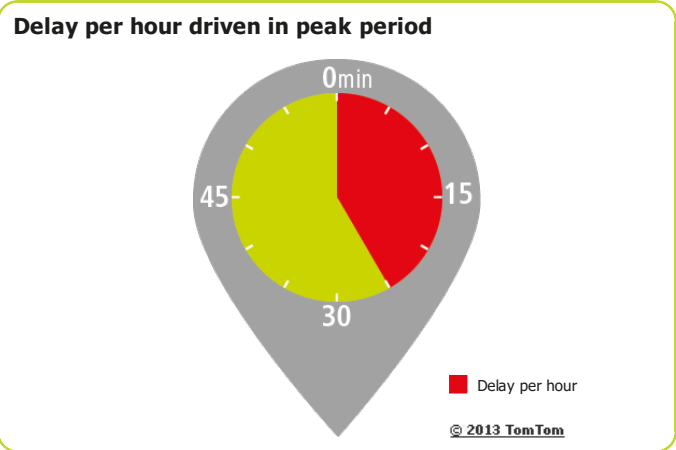
19%

Ranking

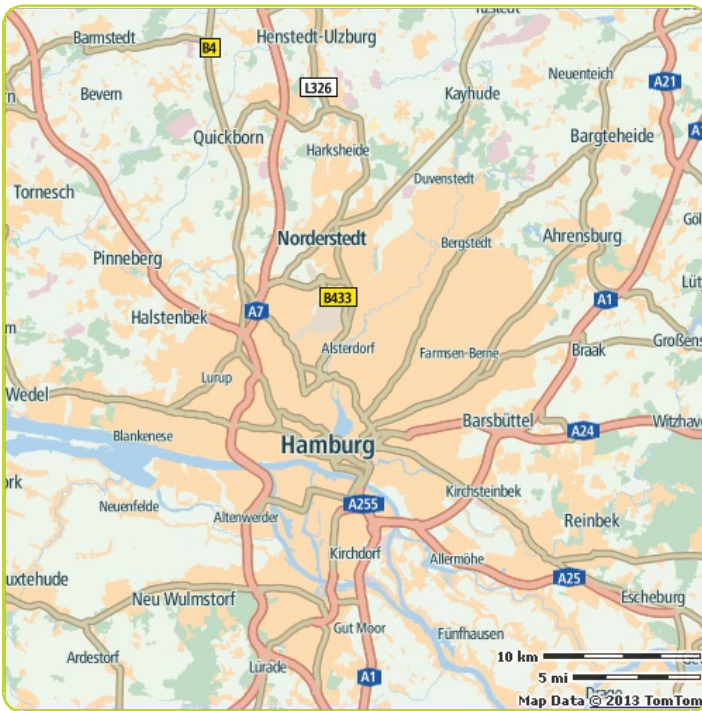
Ranking of city compared to continent	43/59
Congestion level on highways	17%
Congestion level on non-highways	21%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h



Most congested specific day	Tue 4 Dec 2012
Total network length	819 km
Total network length highways	107 km
Total network length non-highways	712 km
Total vehicle kilometres	3 928 307 km



Hamburg

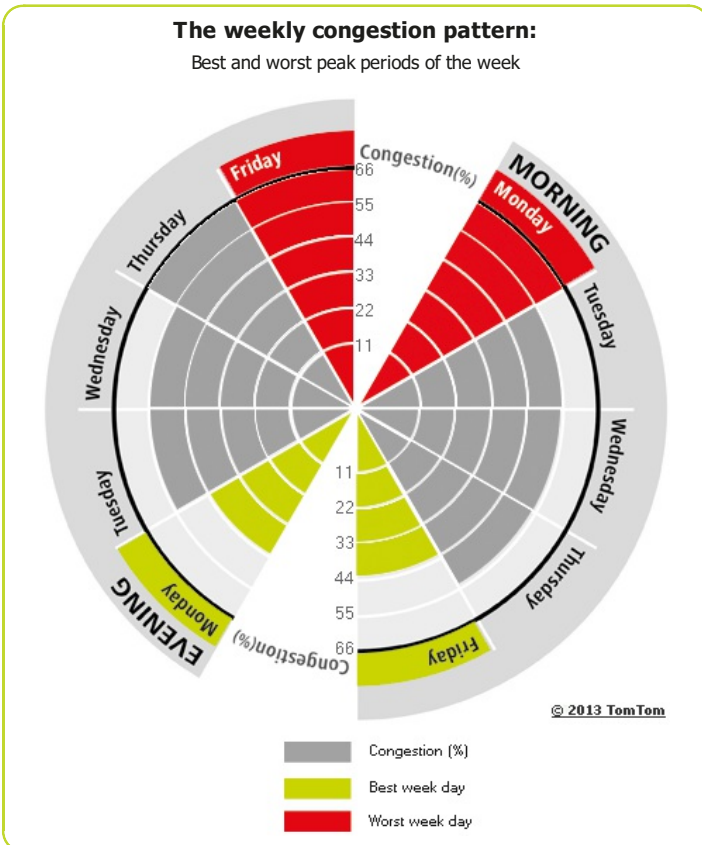


Congestion level

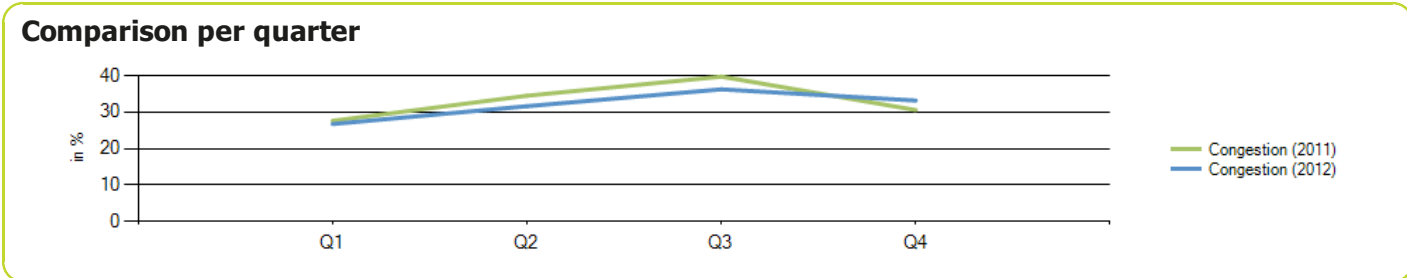
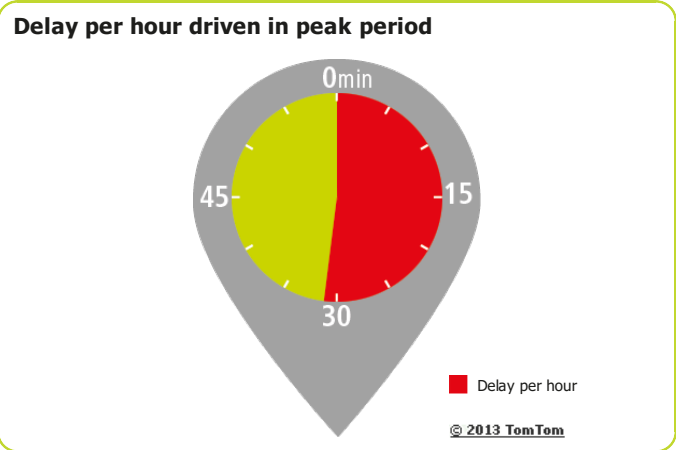
32%

Ranking

Ranking of city compared to continent	9/59
Congestion level on highways	27%
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



Most congested specific day	Thu 4 Oct 2012
Total network length	2 155 km
Total network length highways	428 km
Total network length non-highways	1 727 km
Total vehicle kilometres	35 221 255 km



Helsinki

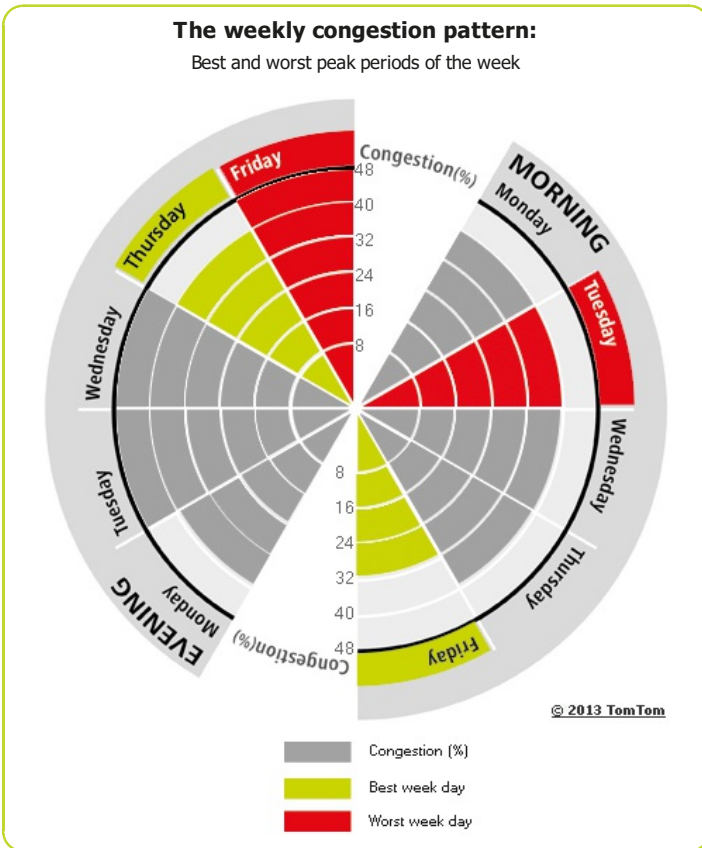


Congestion level

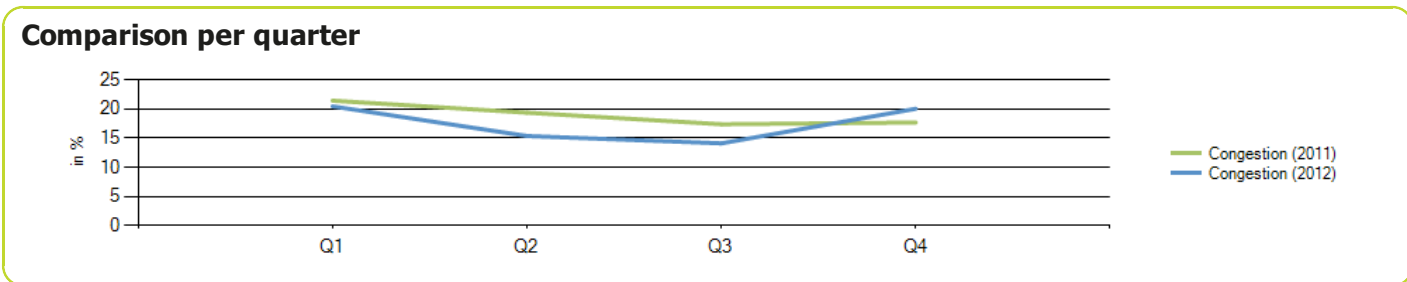
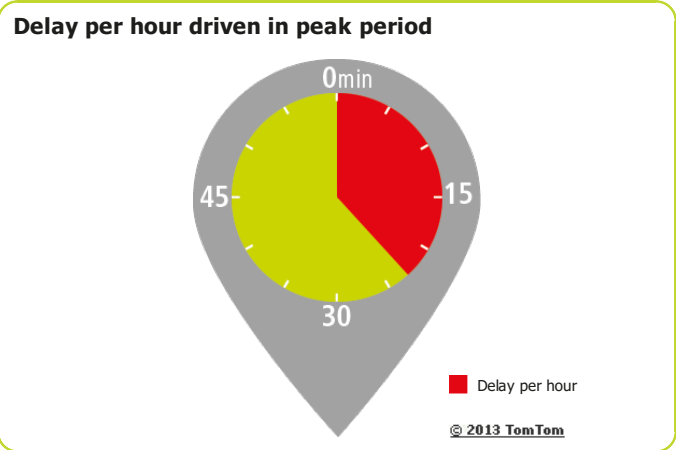
18%

Ranking

Ranking of city compared to continent	46/59
Congestion level on highways	13%
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



Most congested specific day	Fri 3 Feb 2012
Total network length	1 101 km
Total network length highways	310 km
Total network length non-highways	791 km
Total vehicle kilometres	19 619 269 km



Istanbul

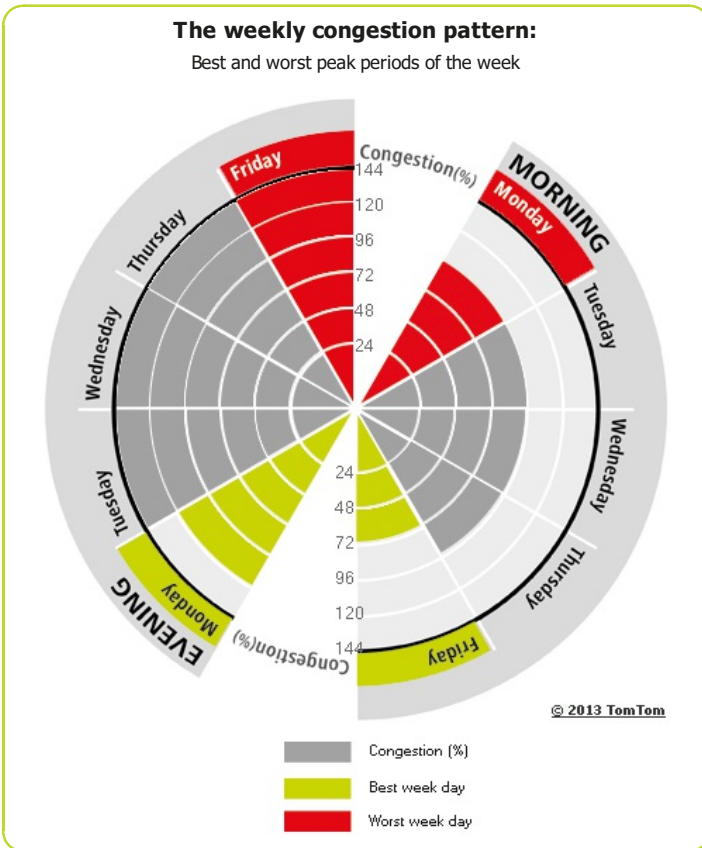


Congestion level

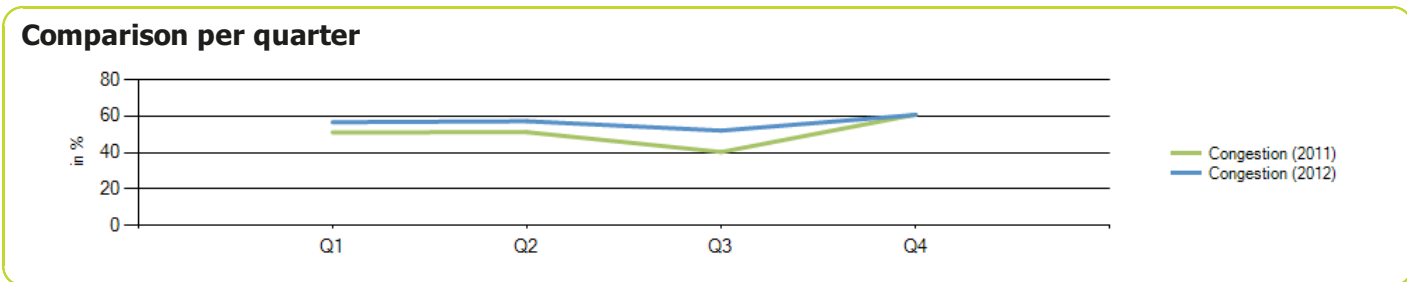
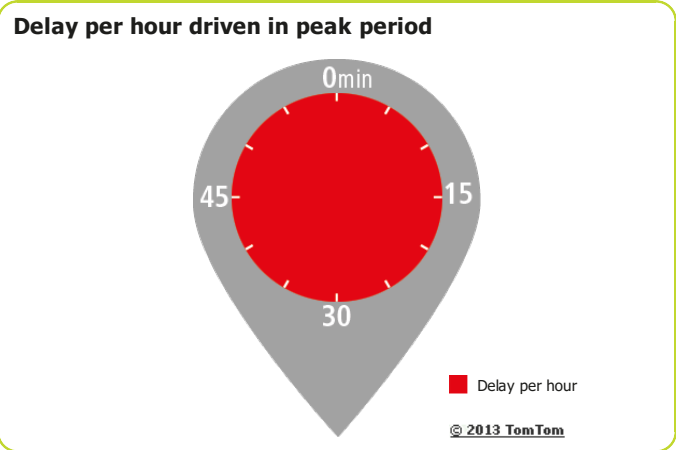
55%

Ranking

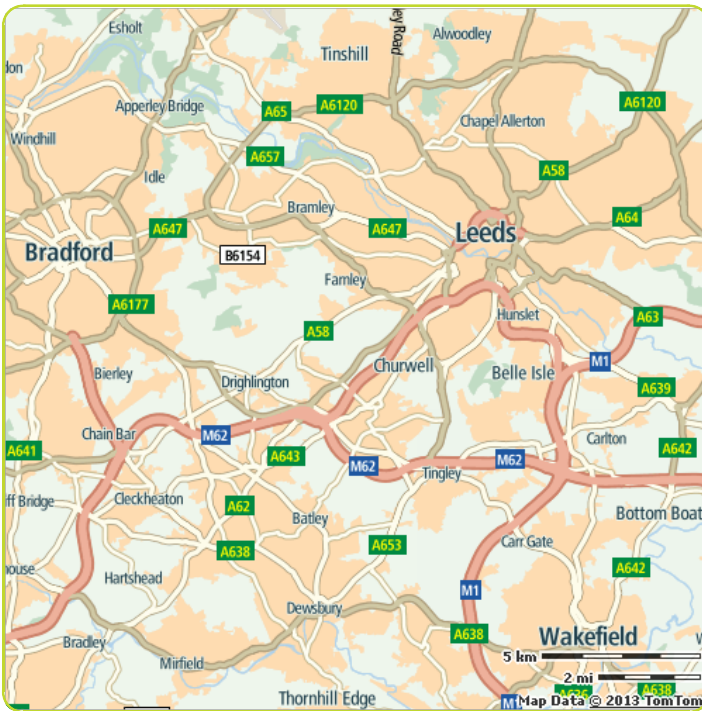
Ranking of city compared to continent	2/59
Congestion level on highways	58%
Congestion level on non-highways	51%
Delay per hour driven in peak period	64 min
Delay per year with a 30 min commute	118 h



Most congested specific day	Thu 20 Dec 2012
Total network length	2 018 km
Total network length highways	401 km
Total network length non-highways	1 617 km
Total vehicle kilometres	5 089 539 km



Leeds-Bradford

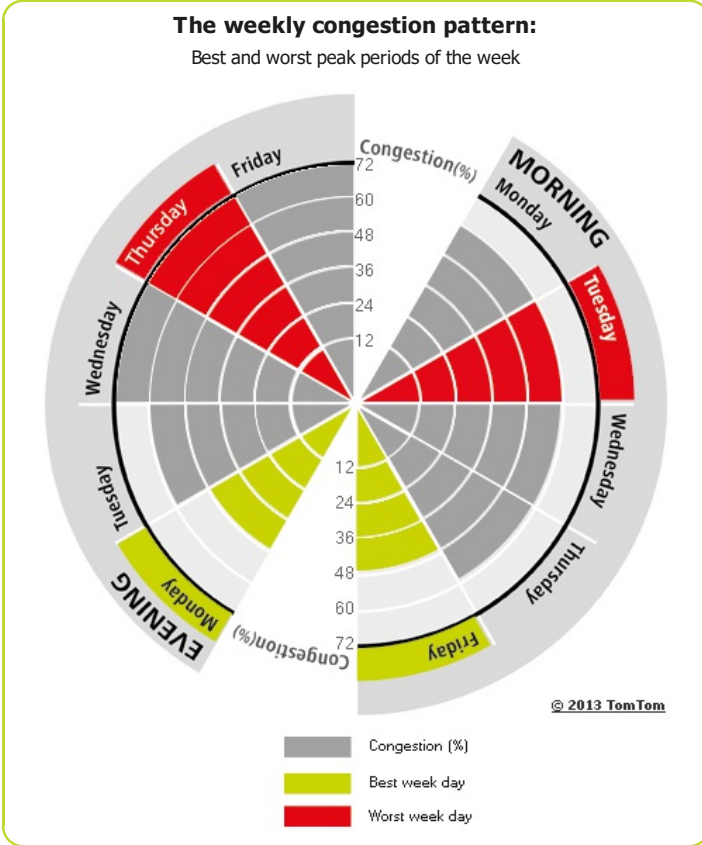


Congestion level

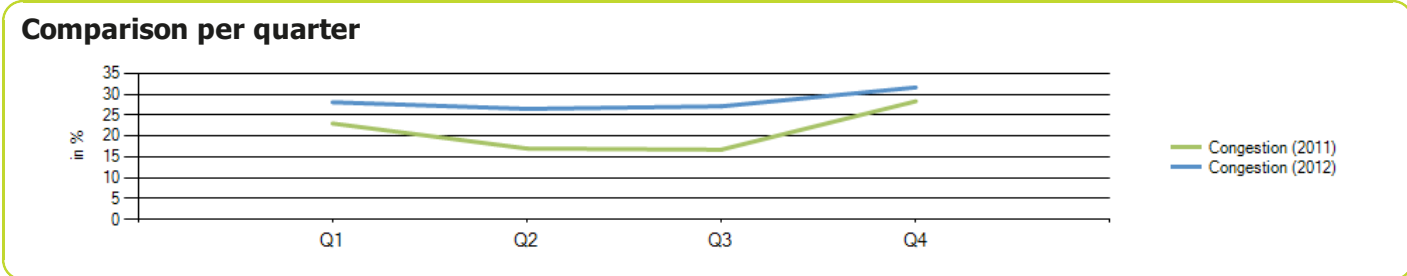
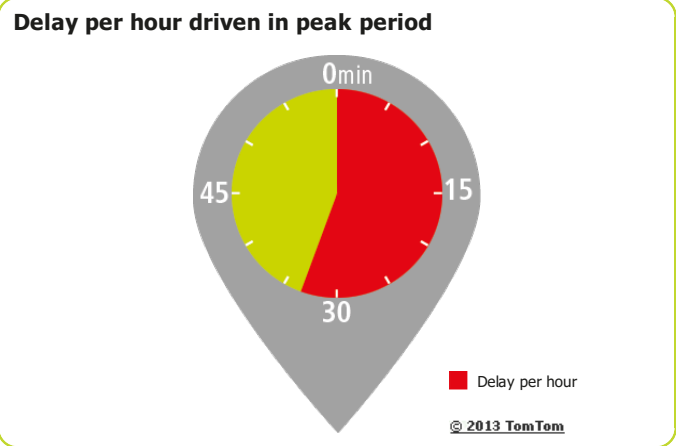
26%

Ranking

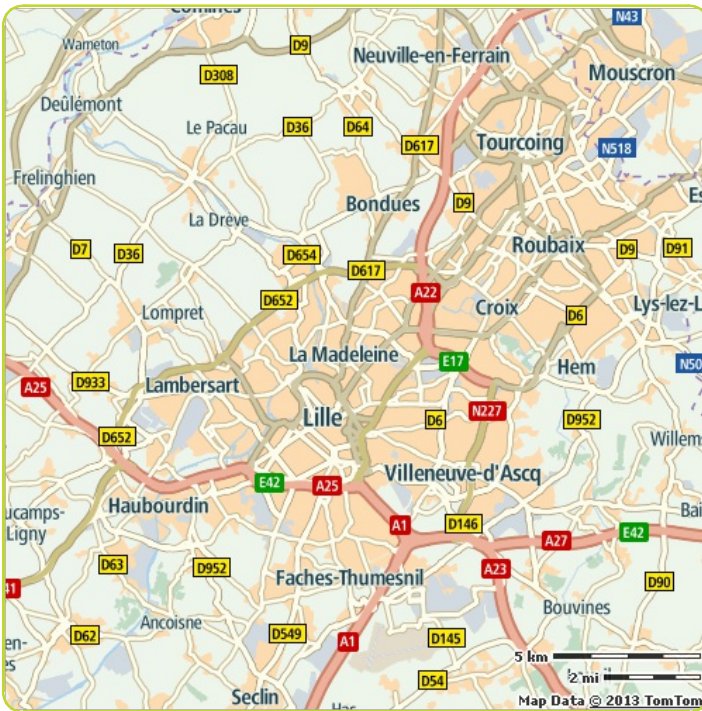
Ranking of city compared to continent	18/59
Congestion level on highways	22%
Congestion level on non-highways	31%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h



Most congested specific day	Wed 21 Nov 2012
Total network length	1 223 km
Total network length highways	158 km
Total network length non-highways	1 065 km
Total vehicle kilometres	36 585 552 km



Lille

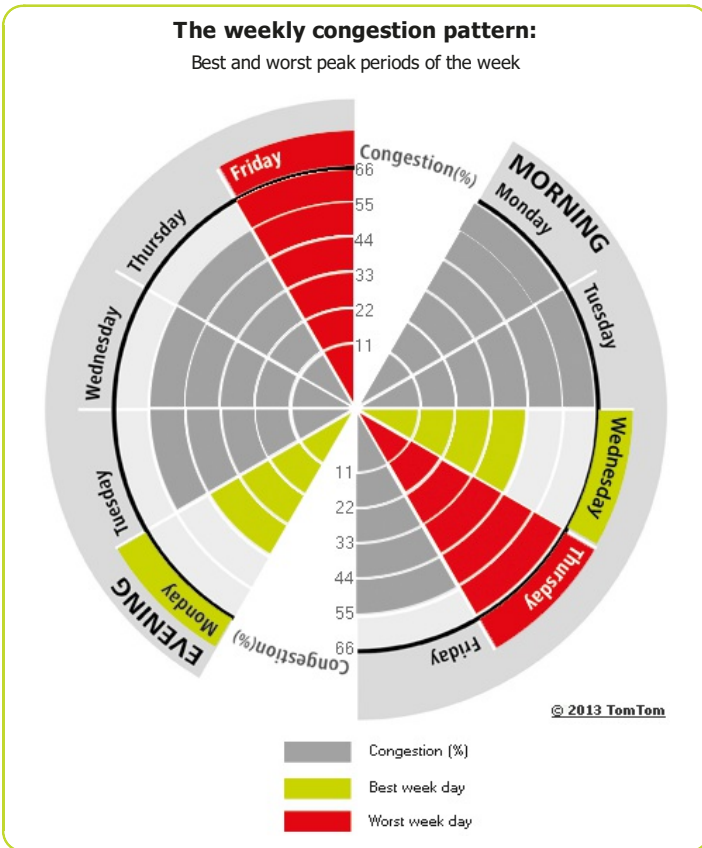


Congestion level

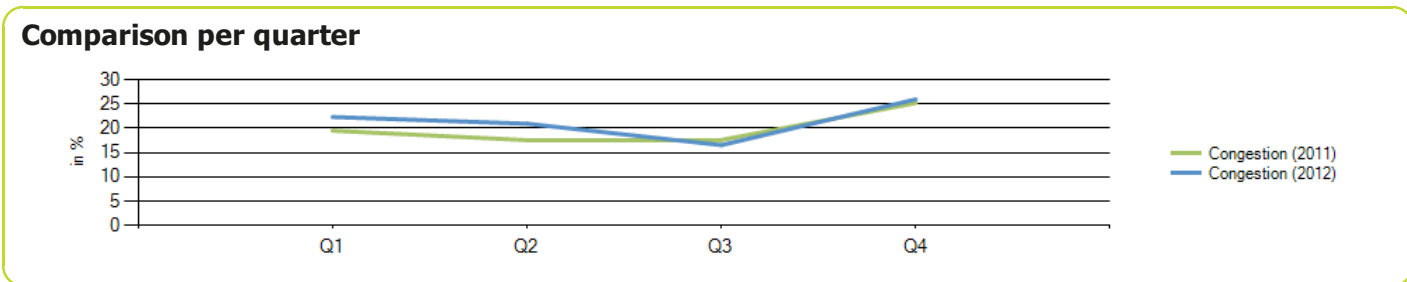
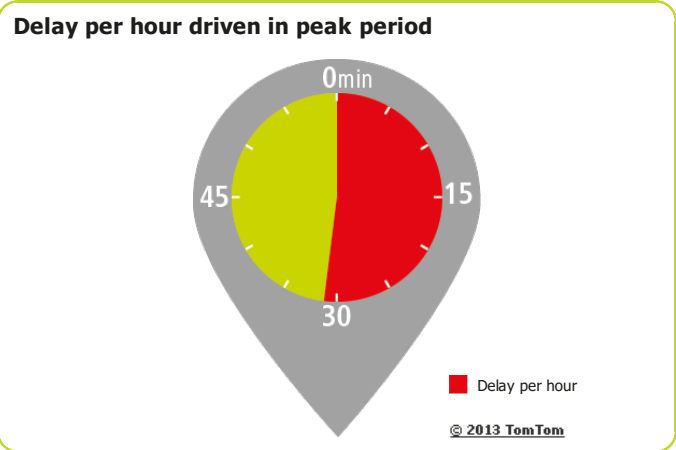
21%

Ranking

Ranking of city compared to continent	34/59
Congestion level on highways	16%
Congestion level on non-highways	27%
Delay per hour driven in peak period	30 min
Delay per year with a 30 min commute	76 h



Most congested specific day	Fri 3 Feb 2012
Total network length	1 326 km
Total network length highways	162 km
Total network length non-highways	1 164 km
Total vehicle kilometres	24 667 941 km



Lisbon

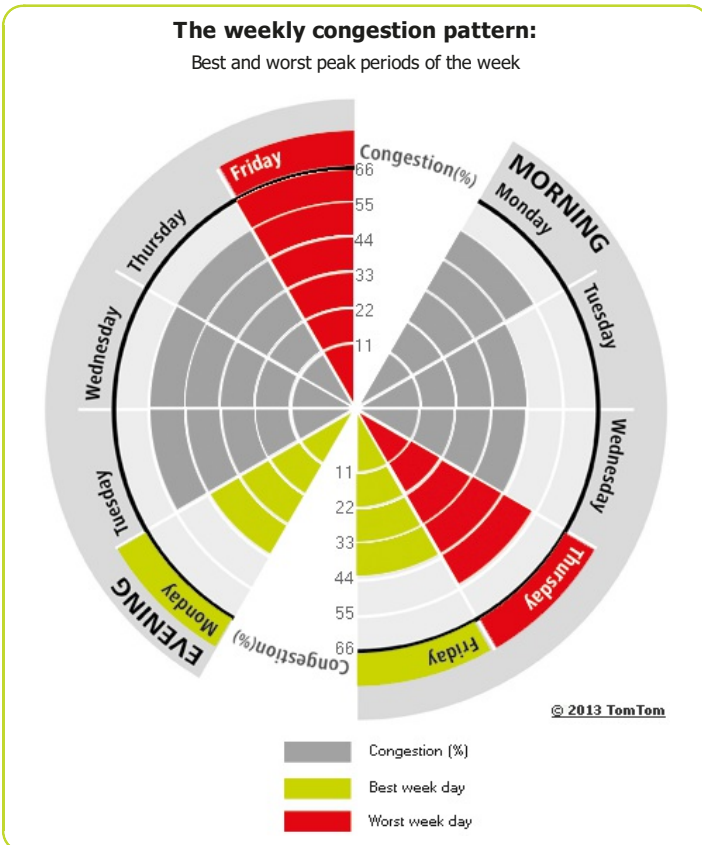


Congestion level

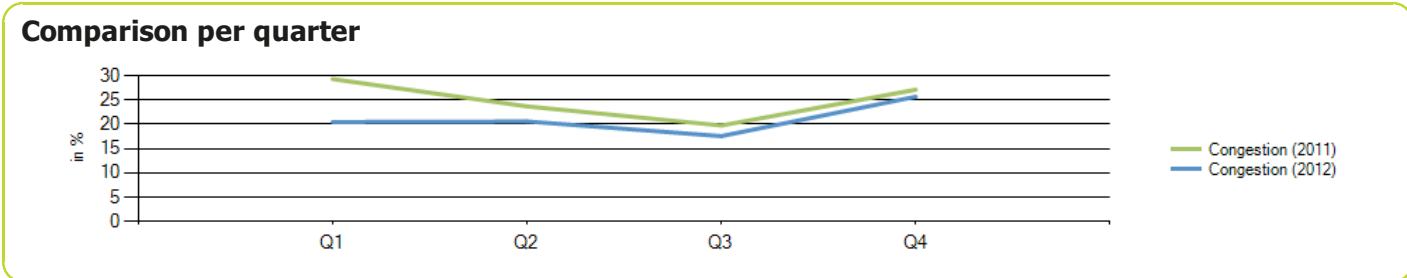
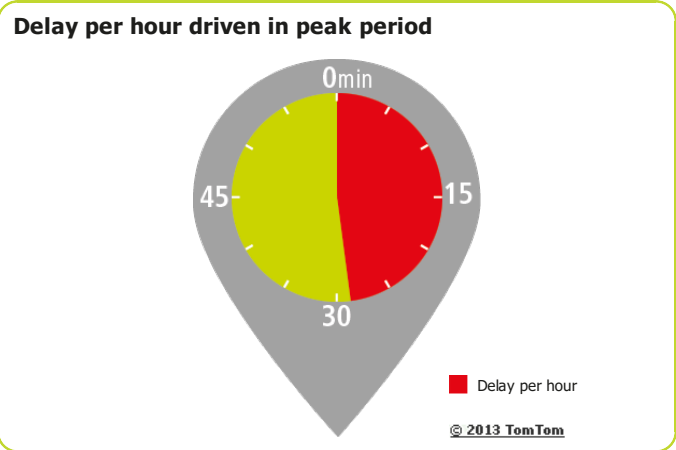
20%

Ranking

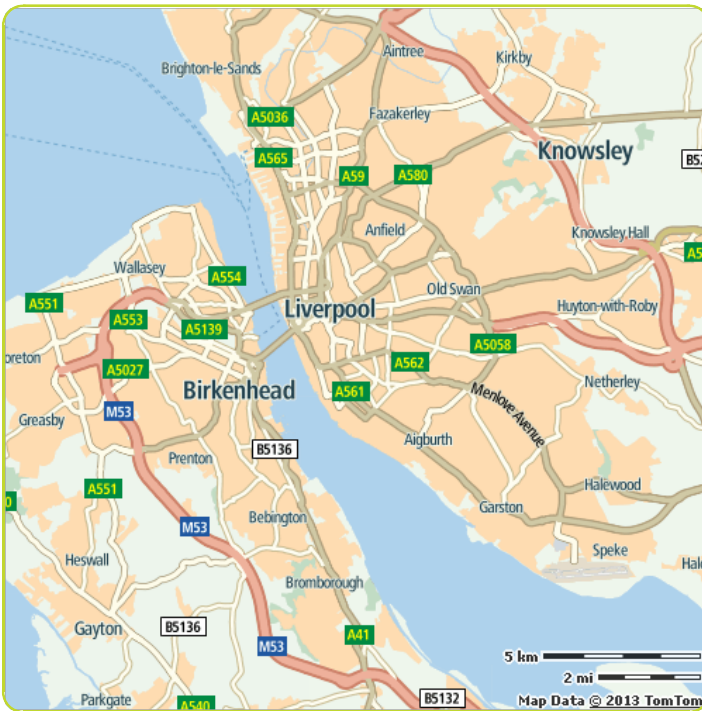
Ranking of city compared to continent	36/59
Congestion level on highways	10%
Congestion level on non-highways	21%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h



Most congested specific day	Fri 14 Dec 2012
Total network length	530 km
Total network length highways	25 km
Total network length non-highways	506 km
Total vehicle kilometres	8 267 179 km



Liverpool

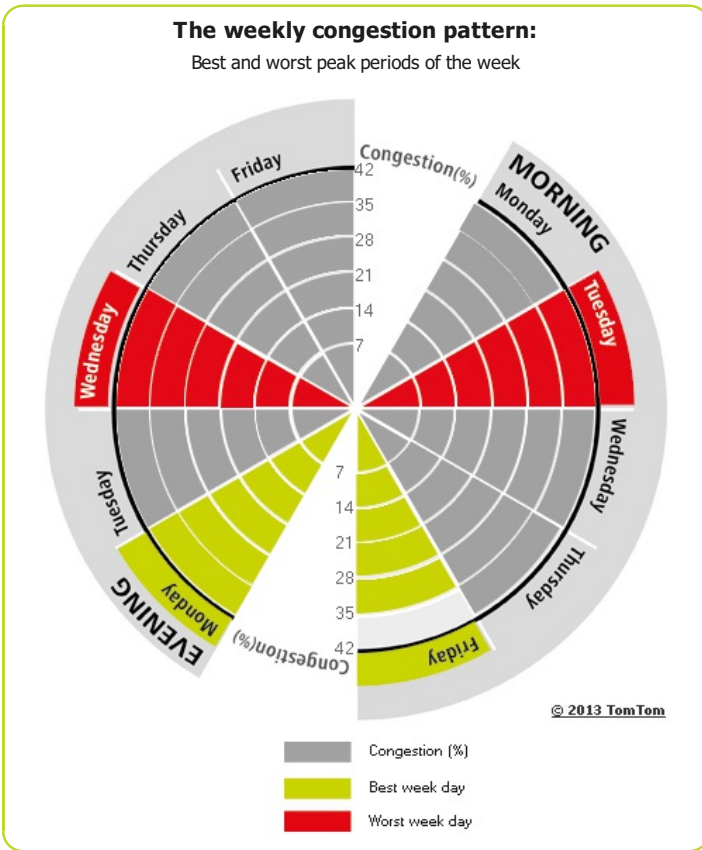


Congestion level

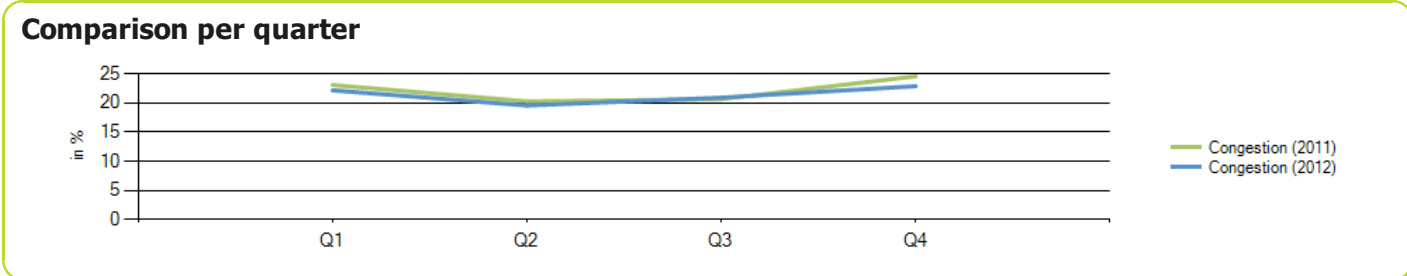
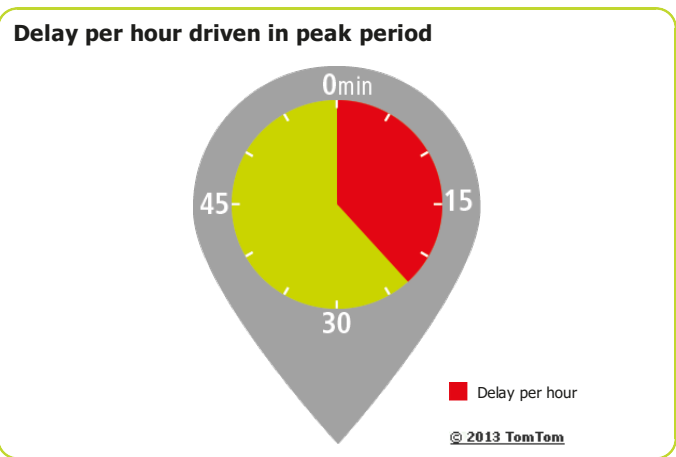
21%

Ranking

Ranking of city compared to continent	33/59
Congestion level on highways	4%
Congestion level on non-highways	27%
Delay per hour driven in peak period	23 min
Delay per year with a 30 min commute	63 h



Most congested specific day	Wed 25 Jan 2012
Total network length	1 025 km
Total network length highways	109 km
Total network length non-highways	916 km
Total vehicle kilometres	13 854 583 km



London

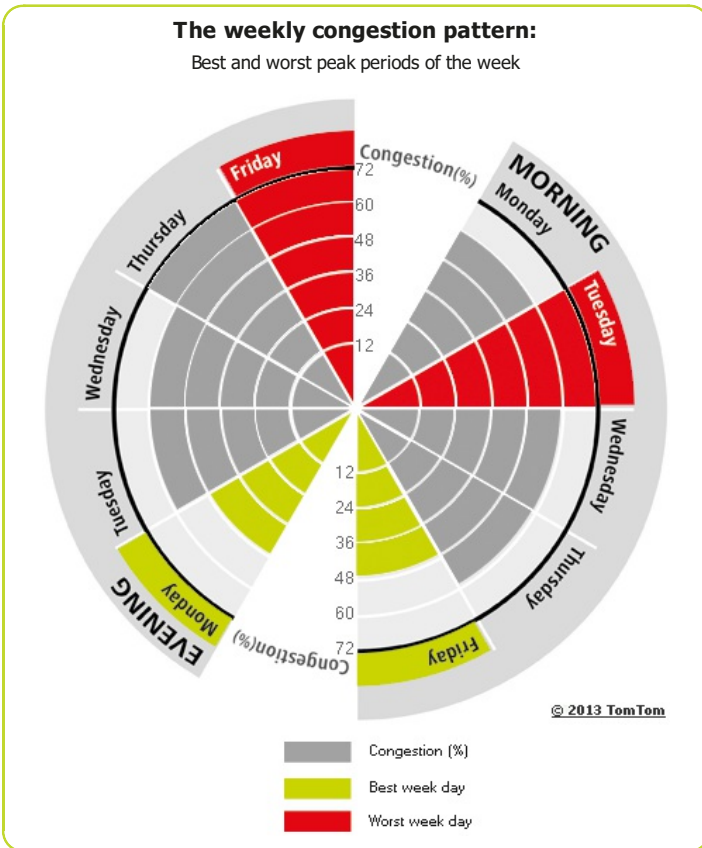


Congestion level

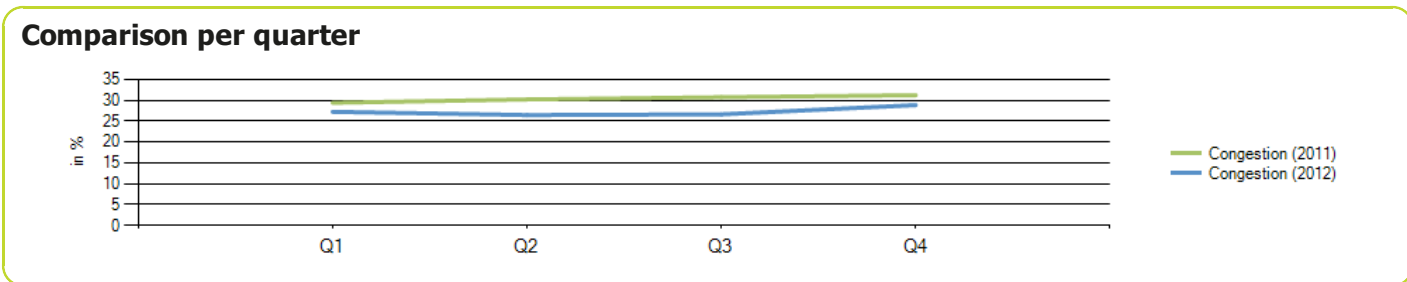
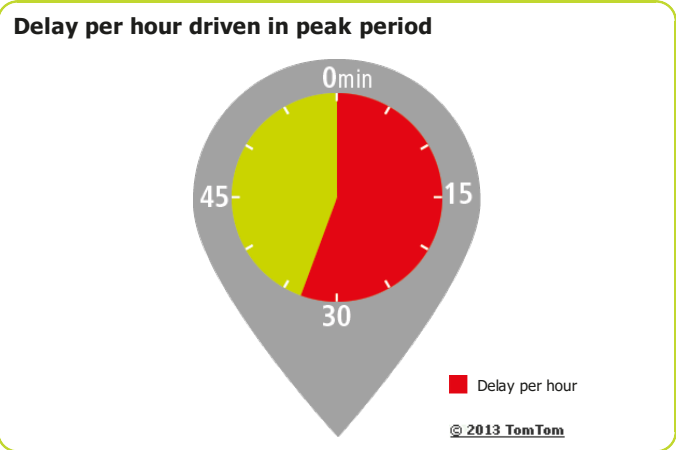
27%

Ranking

Ranking of city compared to continent	14/59
Congestion level on highways	14%
Congestion level on non-highways	36%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h



Most congested specific day	Fri 19 Oct 2012
Total network length	7 289 km
Total network length highways	705 km
Total network length non-highways	6 584 km
Total vehicle kilometres	377 135 563 km



Luxembourg

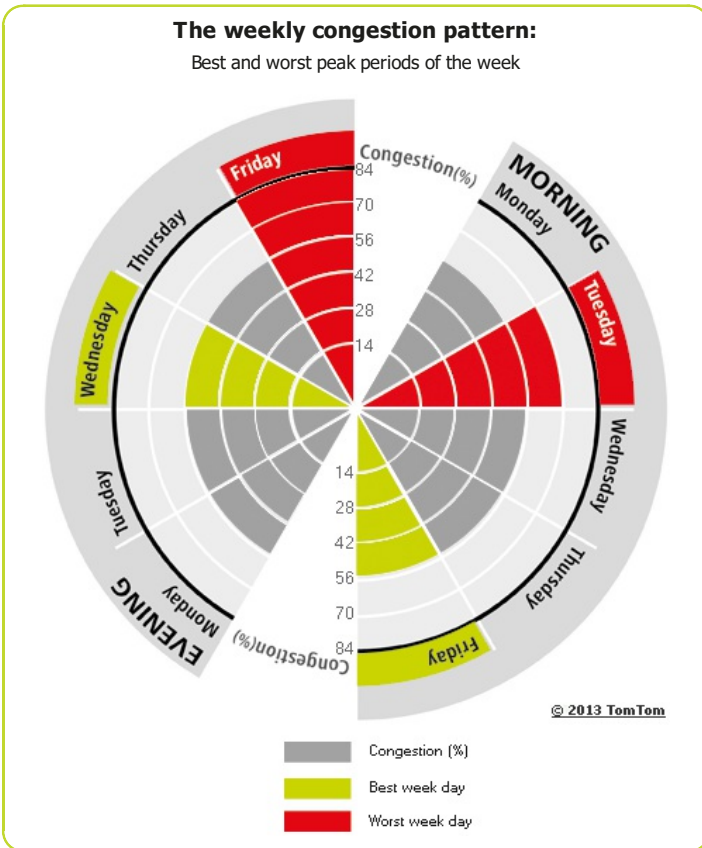


Congestion level

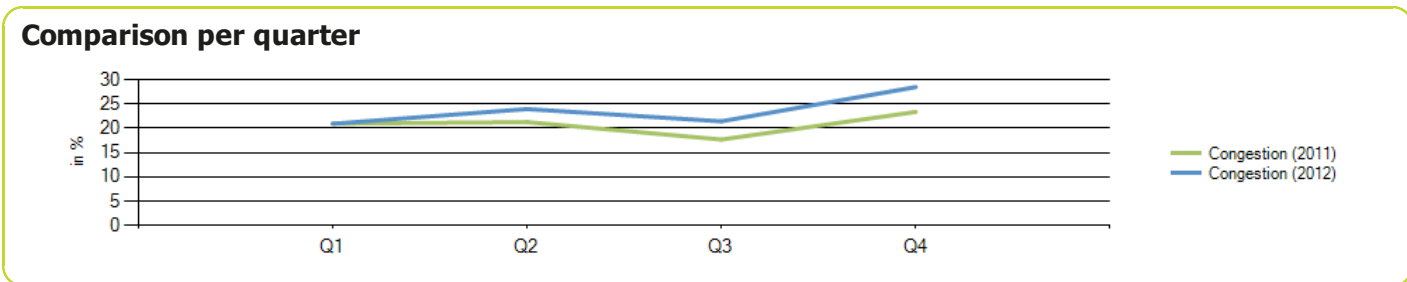
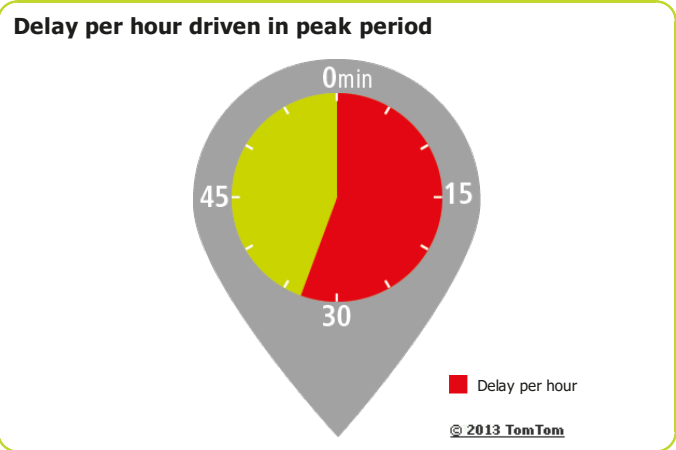
25%

Ranking

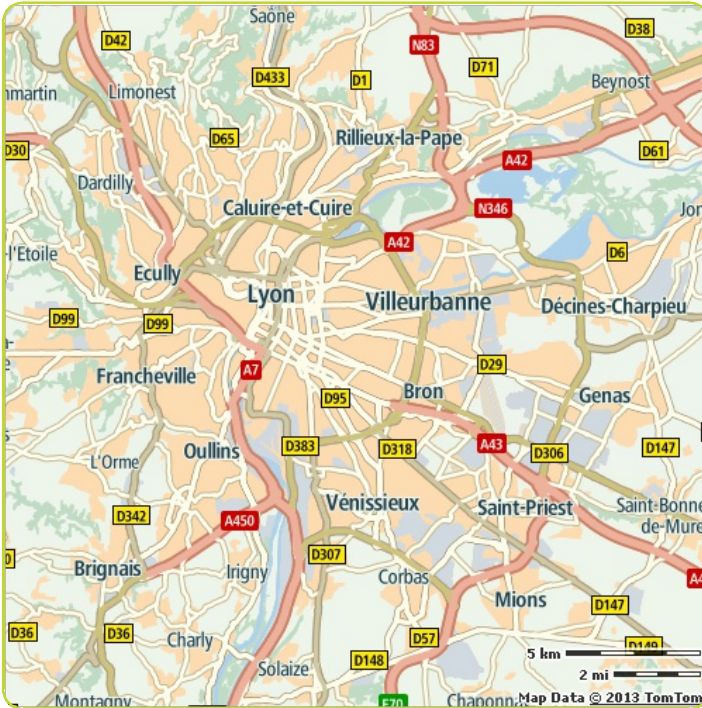
Ranking of city compared to continent	23/59
Congestion level on highways	16%
Congestion level on non-highways	37%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h



Most congested specific day	Fri 13 Jul 2012
Total network length	323 km
Total network length highways	70 km
Total network length non-highways	253 km
Total vehicle kilometres	3 927 041 km



Lyon

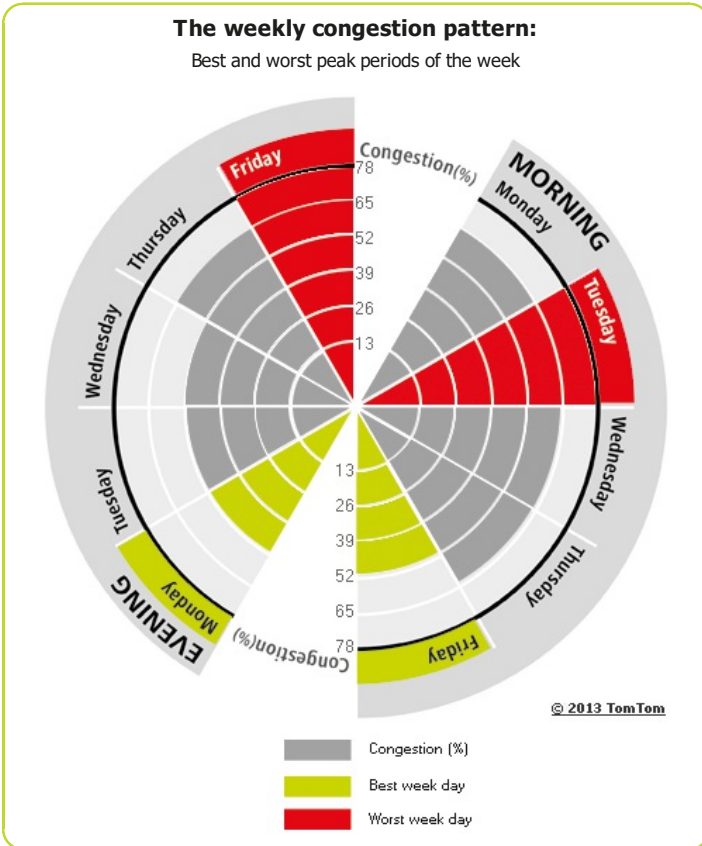


Congestion level

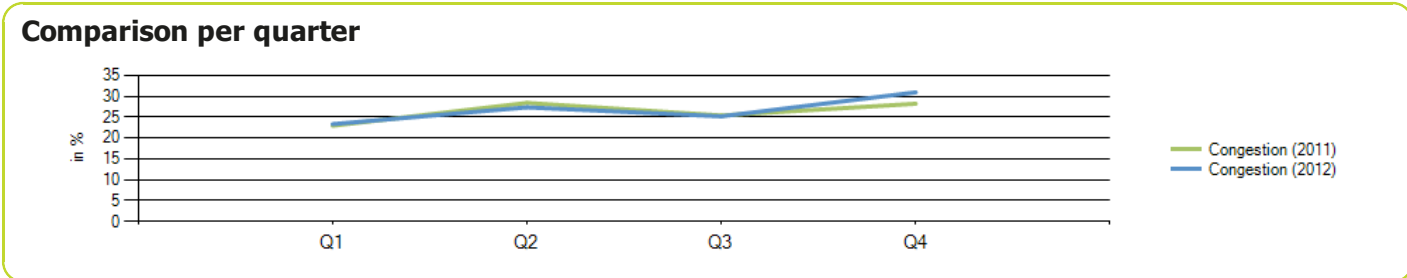
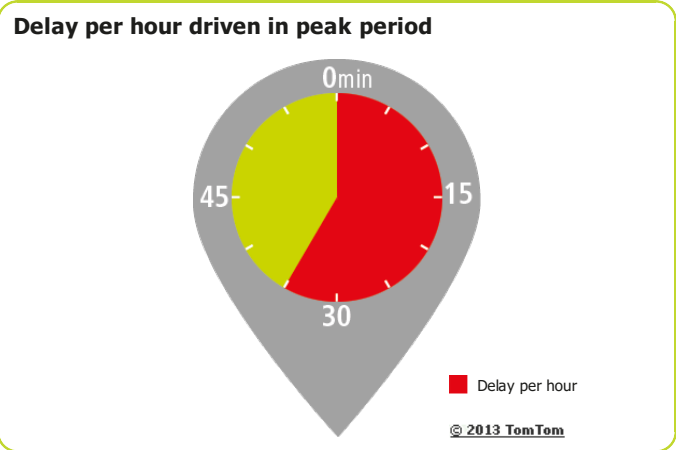
26%

Ranking

Ranking of city compared to continent	17/59
Congestion level on highways	21%
Congestion level on non-highways	34%
Delay per hour driven in peak period	34 min
Delay per year with a 30 min commute	83 h



Most congested specific day	Fri 29 Jun 2012
Total network length	1 761 km
Total network length highways	352 km
Total network length non-highways	1 409 km
Total vehicle kilometres	39 802 037 km



Málaga

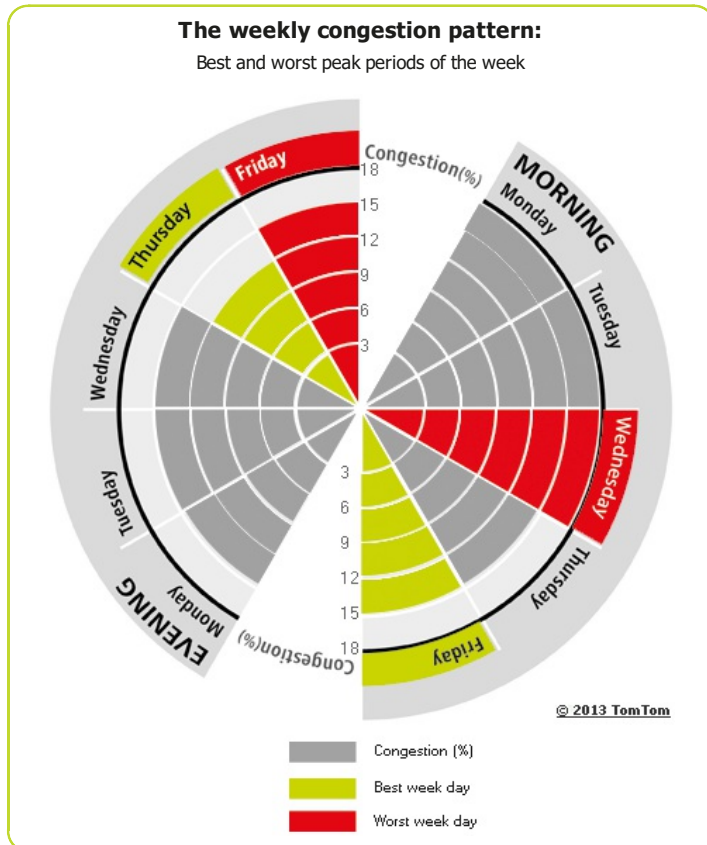


Congestion level

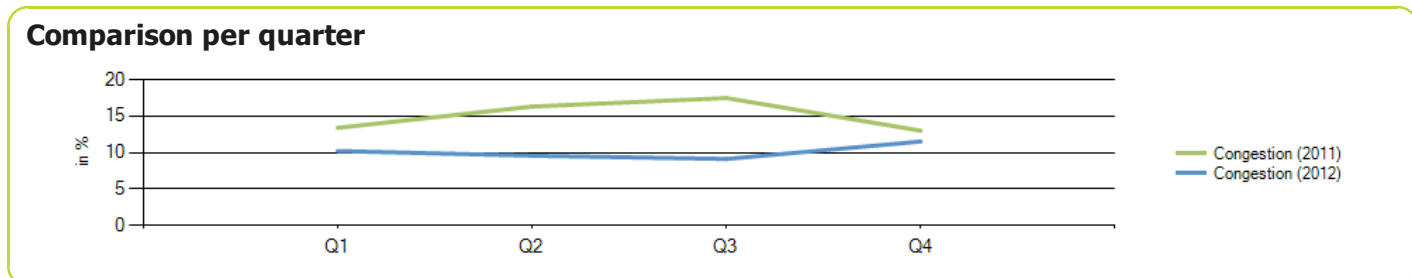
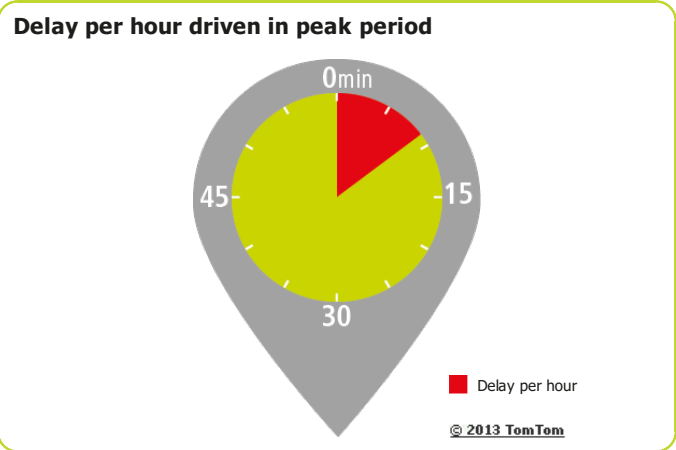
10%

Ranking

Ranking of city compared to continent	58/59
Congestion level on highways	5%
Congestion level on non-highways	12%
Delay per hour driven in peak period	8 min
Delay per year with a 30 min commute	27 h



Most congested specific day	Sat 17 Nov 2012
Total network length	250 km
Total network length highways	56 km
Total network length non-highways	193 km
Total vehicle kilometres	3 328 238 km



Madrid

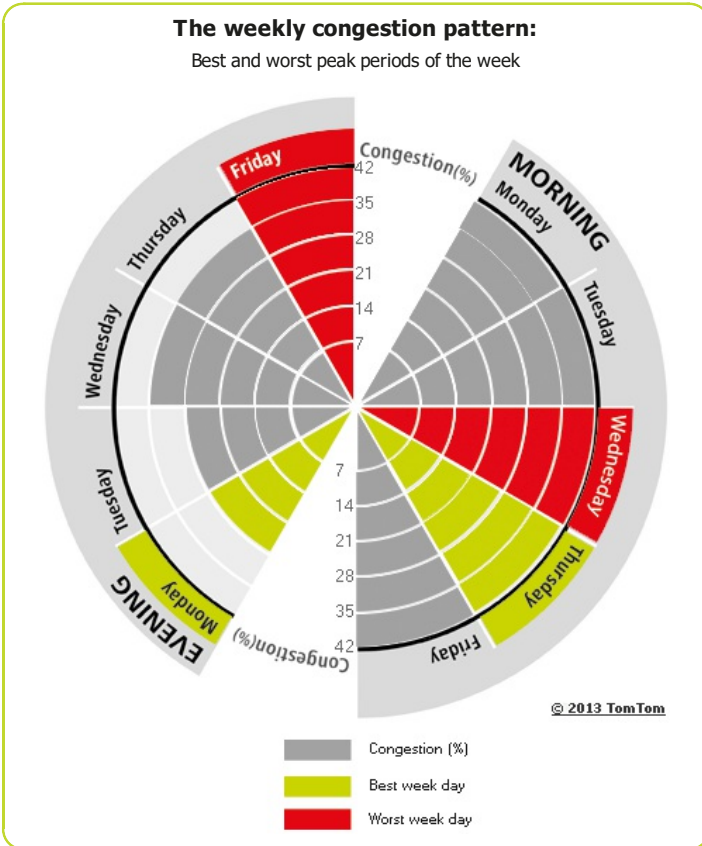


Congestion level

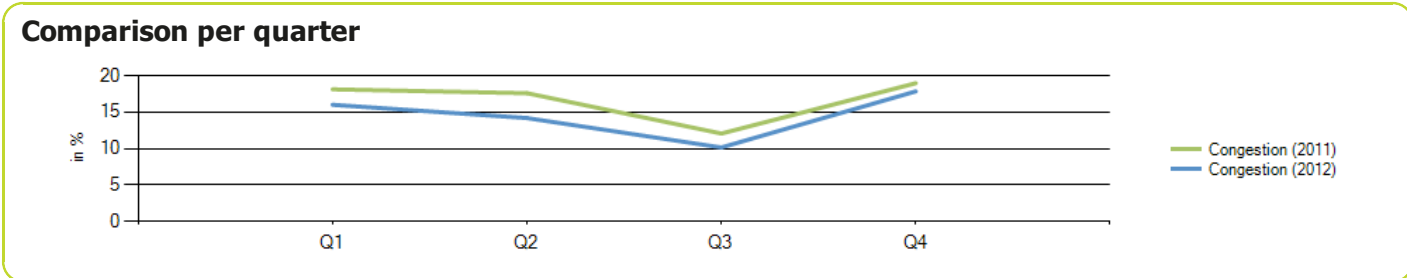
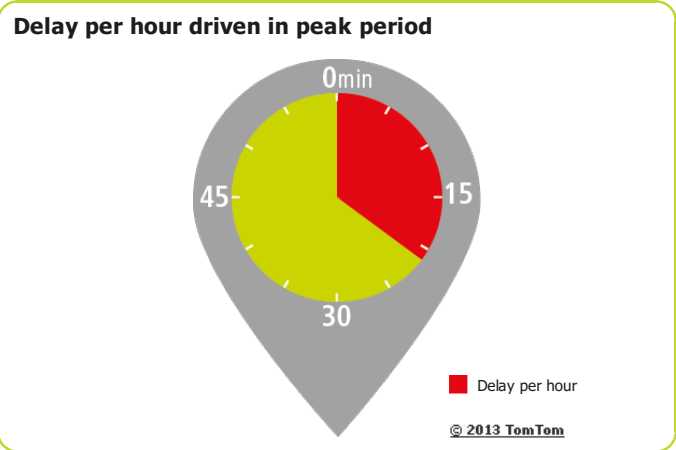
14%

Ranking

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



Most congested specific day	Fri 28 Sep 2012
Total network length	3 537 km
Total network length highways	1 220 km
Total network length non-highways	2 316 km
Total vehicle kilometres	96 981 346 km



Malmö

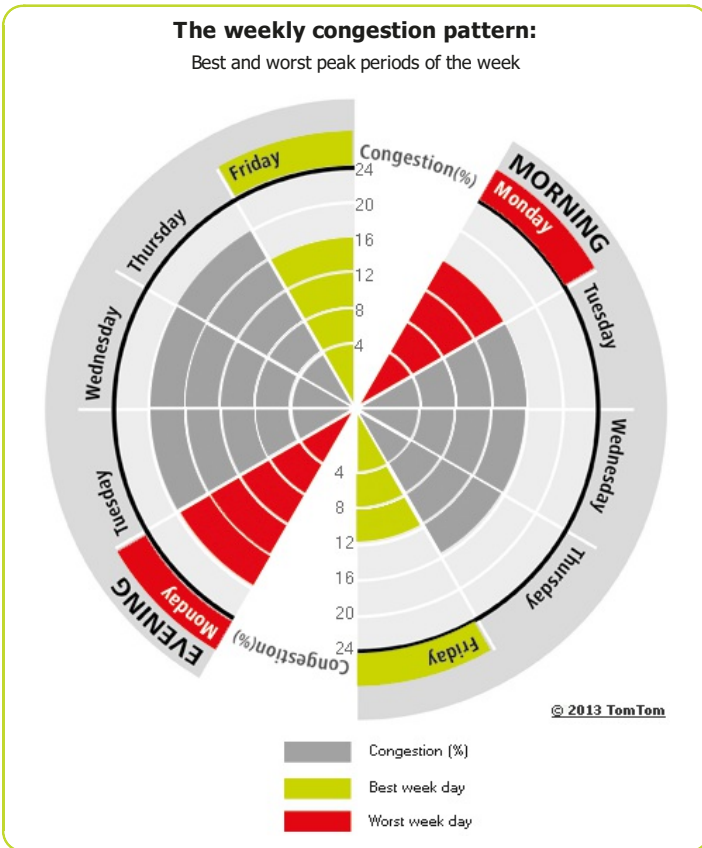


Congestion level

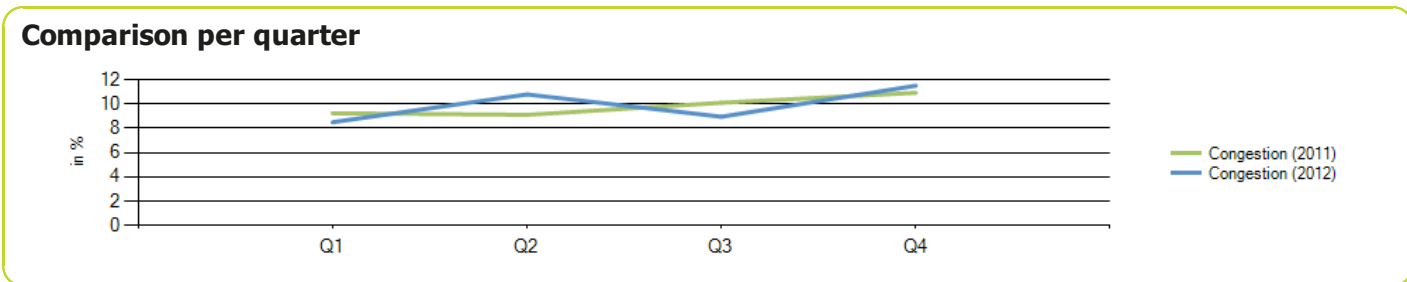
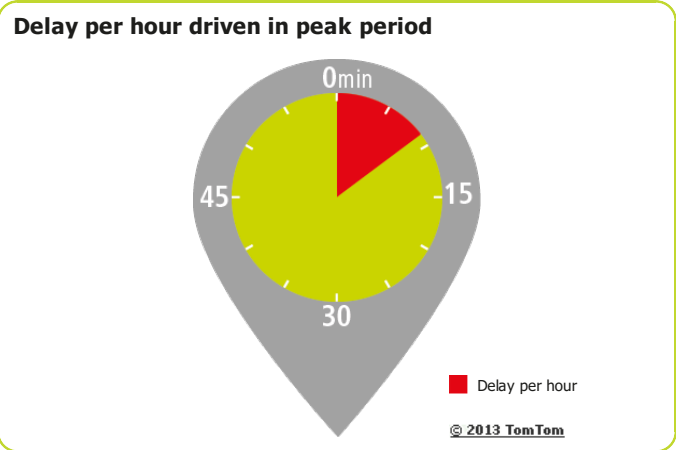
10%

Ranking

Ranking of city compared to continent	57/59
Congestion level on highways	6%
Congestion level on non-highways	22%
Delay per hour driven in peak period	9 min
Delay per year with a 30 min commute	30 h



Most congested specific day	Sun 2 Dec 2012
Total network length	410 km
Total network length highways	160 km
Total network length non-highways	250 km
Total vehicle kilometres	2 613 128 km



Manchester

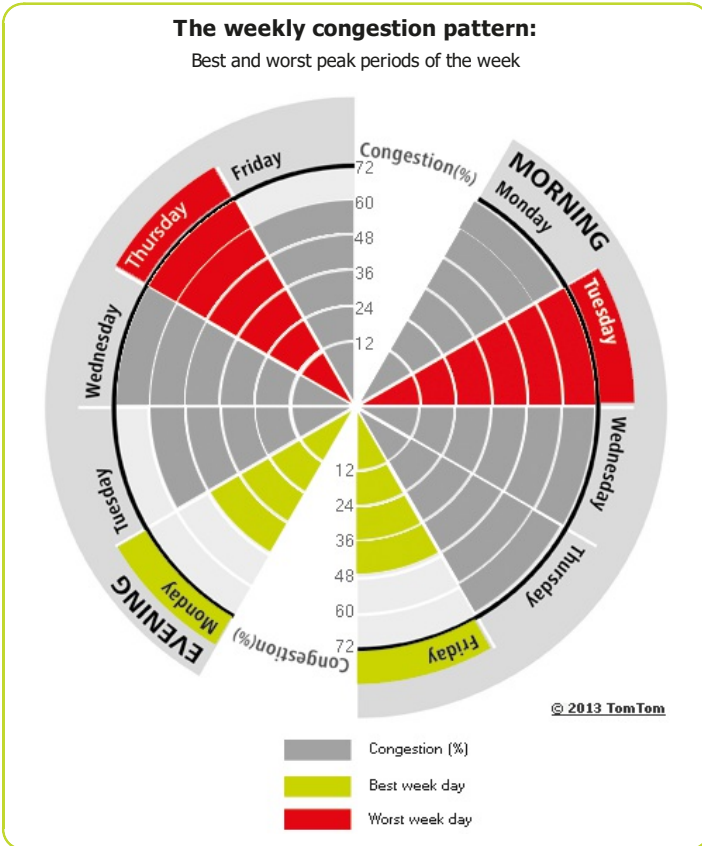


Congestion level

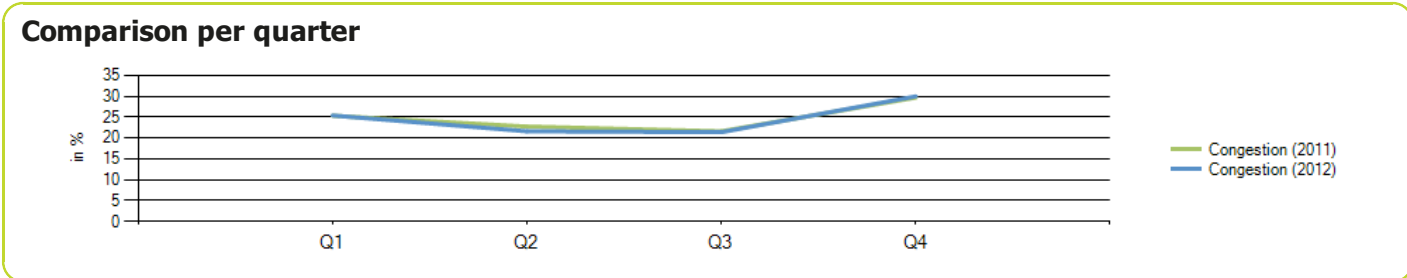
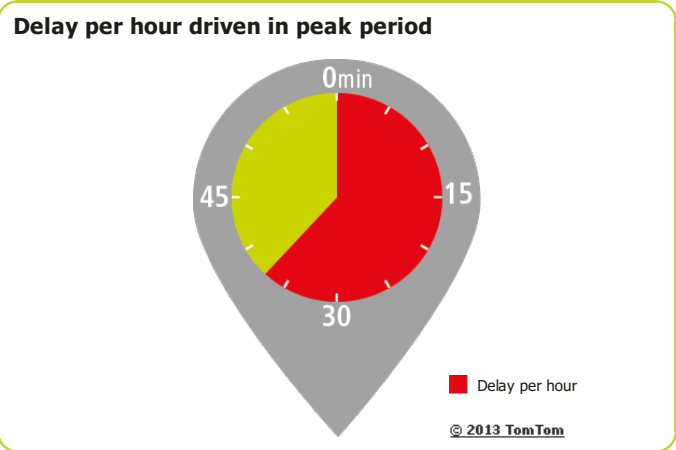
24%

Ranking

Ranking of city compared to continent	26/59
Congestion level on highways	16%
Congestion level on non-highways	33%
Delay per hour driven in peak period	36 min
Delay per year with a 30 min commute	86 h



Most congested specific day	Fri 14 Dec 2012
Total network length	1 572 km
Total network length highways	246 km
Total network length non-highways	1 326 km
Total vehicle kilometres	45 885 020 km



Marseille

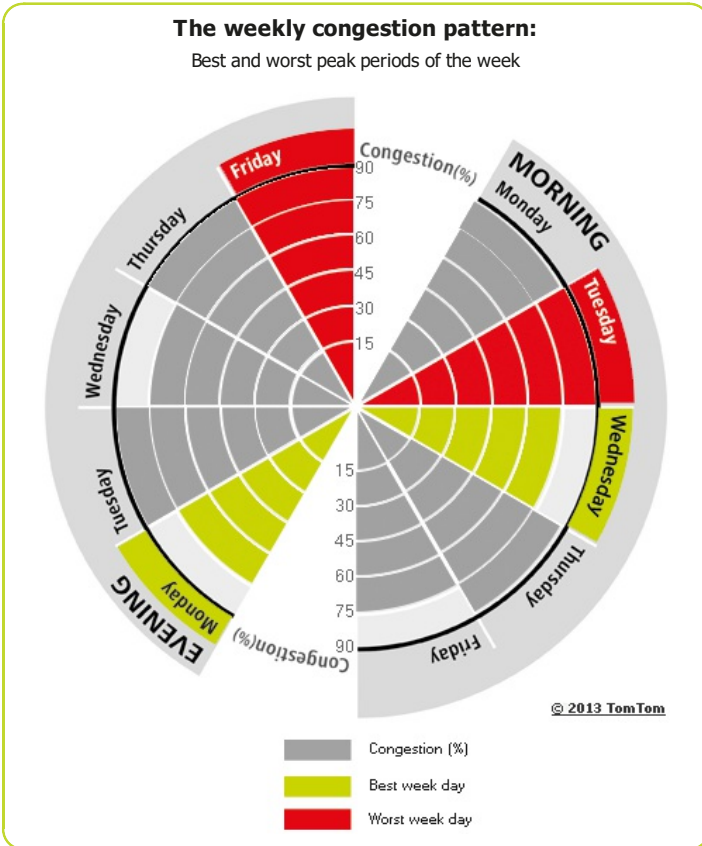


Congestion level

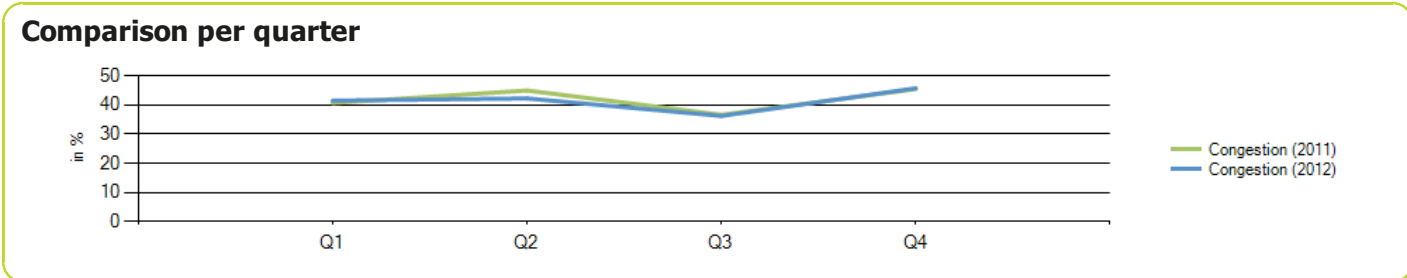
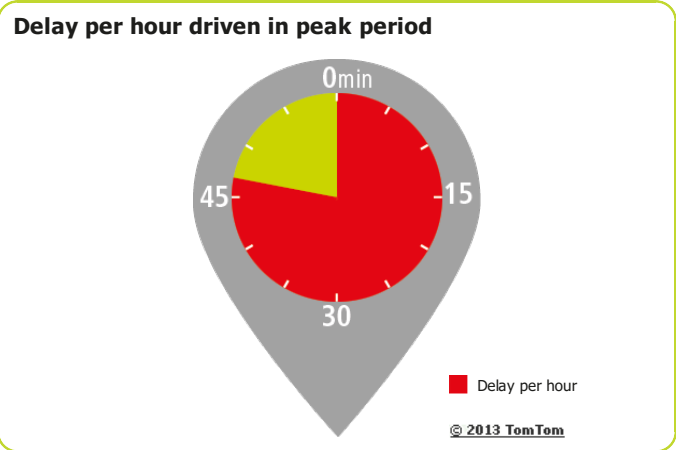
40%

Ranking

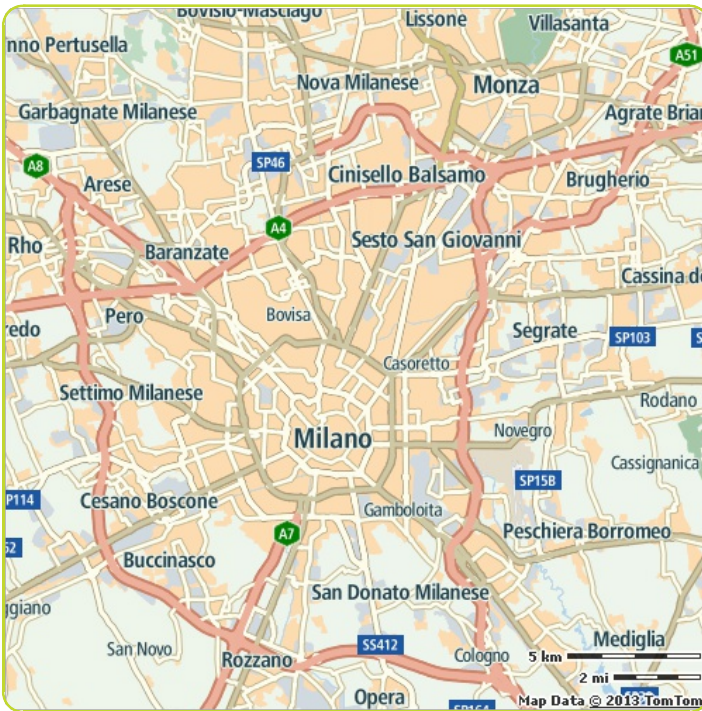
Ranking of city compared to continent	4/59
Congestion level on highways	24%
Congestion level on non-highways	50%
Delay per hour driven in peak period	46 min
Delay per year with a 30 min commute	99 h



Most congested specific day	Tue 10 Jul 2012
Total network length	491 km
Total network length highways	78 km
Total network length non-highways	413 km
Total vehicle kilometres	5 254 194 km



Milan

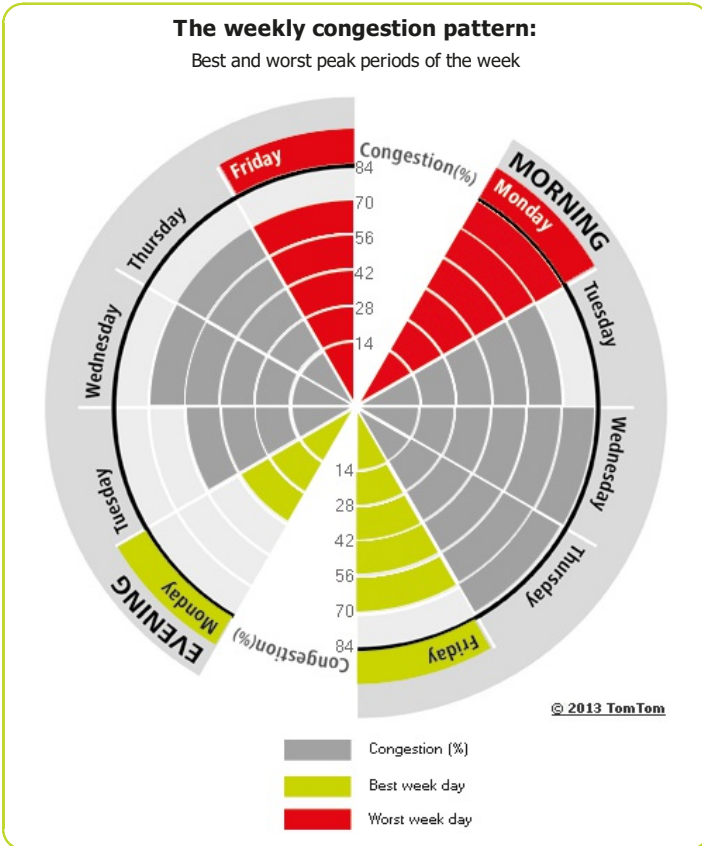


Congestion level

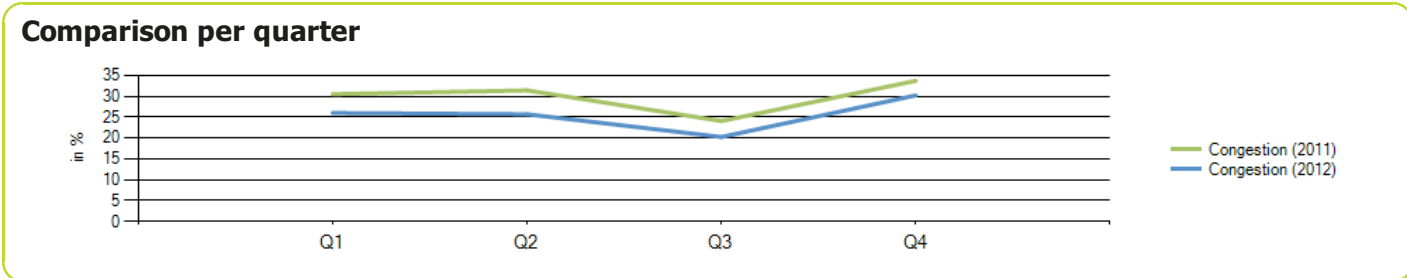
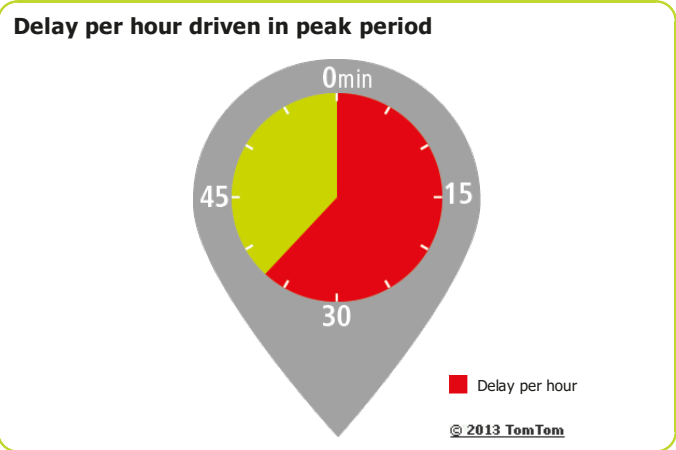
25%

Ranking

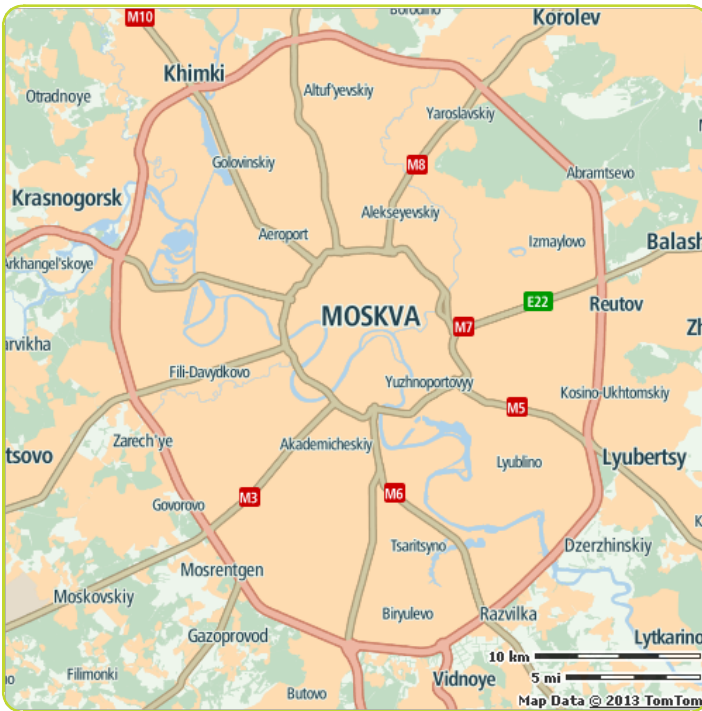
Ranking of city compared to continent	20/59
Congestion level on highways	20%
Congestion level on non-highways	29%
Delay per hour driven in peak period	37 min
Delay per year with a 30 min commute	87 h



Most congested specific day	Thu 20 Dec 2012
Total network length	2 357 km
Total network length highways	265 km
Total network length non-highways	2 092 km
Total vehicle kilometres	55 553 468 km



Moscow

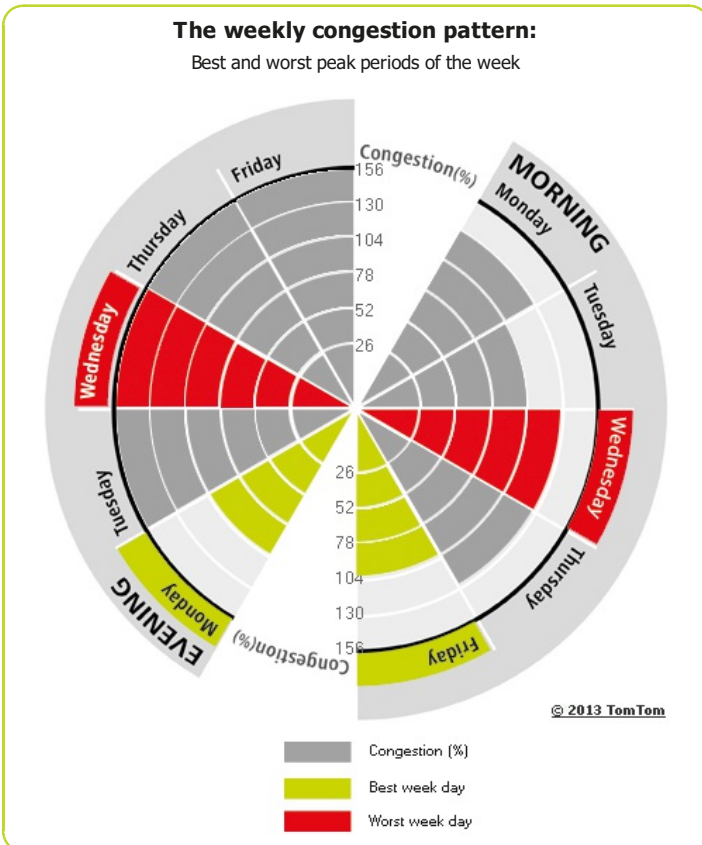


Congestion level

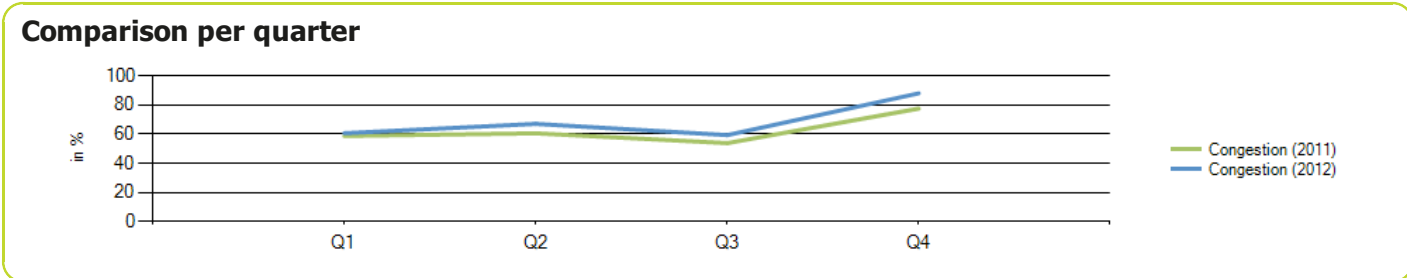
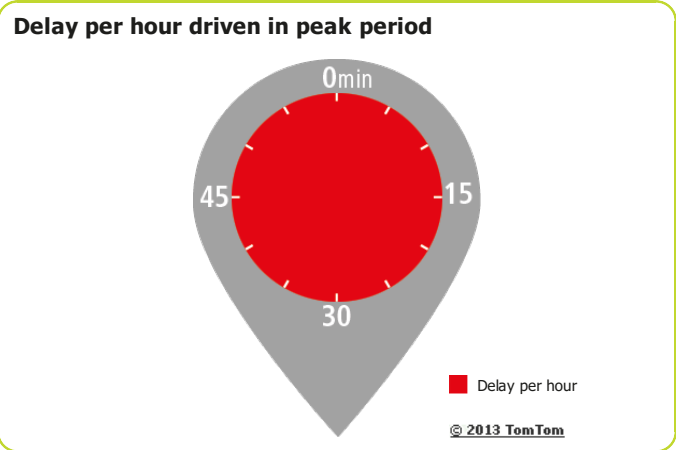
66%

Ranking

Ranking of city compared to continent	1/59
Congestion level on highways	62%
Congestion level on non-highways	68%
Delay per hour driven in peak period	74 min
Delay per year with a 30 min commute	127 h



Most congested specific day	Thu 29 Nov 2012
Total network length	2 062 km
Total network length highways	371 km
Total network length non-highways	1 691 km
Total vehicle kilometres	2 016 548 km



Munich

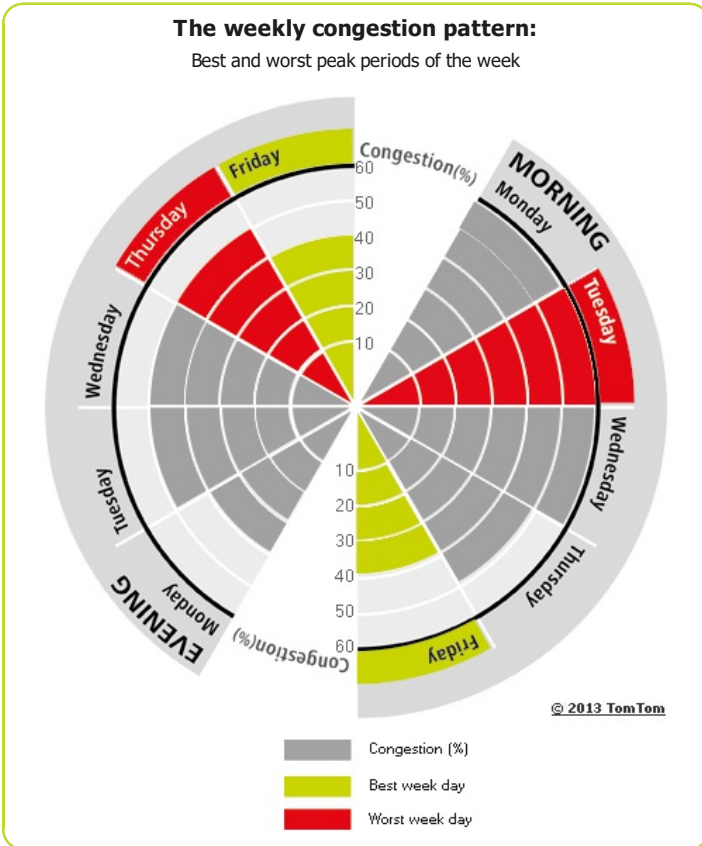


Congestion level

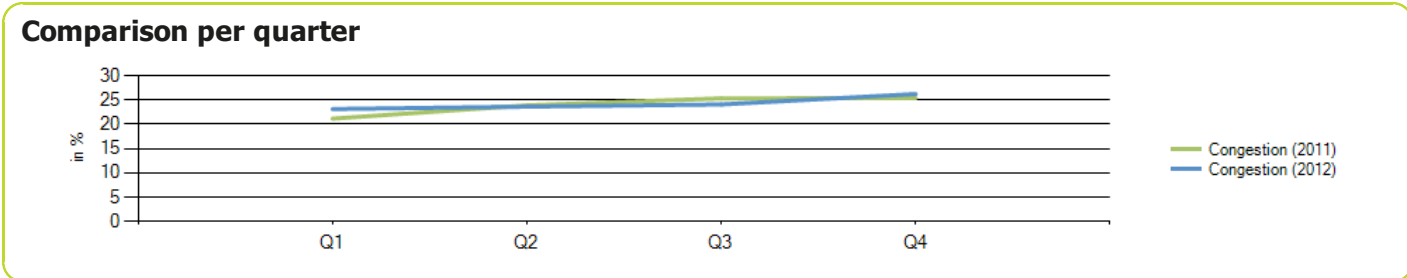
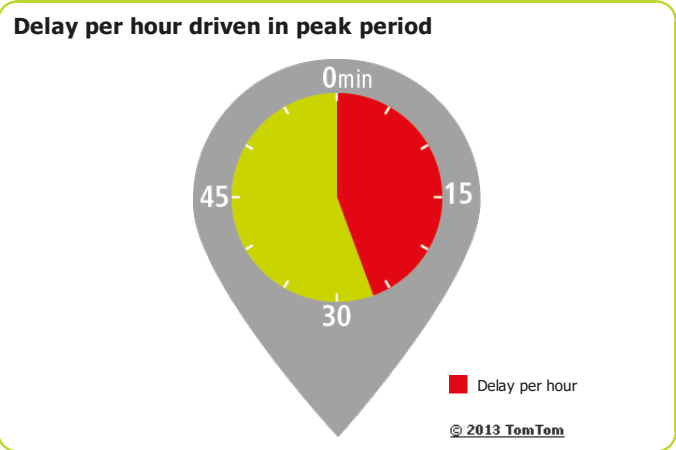
24%

Ranking

Ranking of city compared to continent	27/59
Congestion level on highways	18%
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



Most congested specific day	Tue 7 Feb 2012
Total network length	1 875 km
Total network length highways	530 km
Total network length non-highways	1 345 km
Total vehicle kilometres	31 150 846 km



Murcia

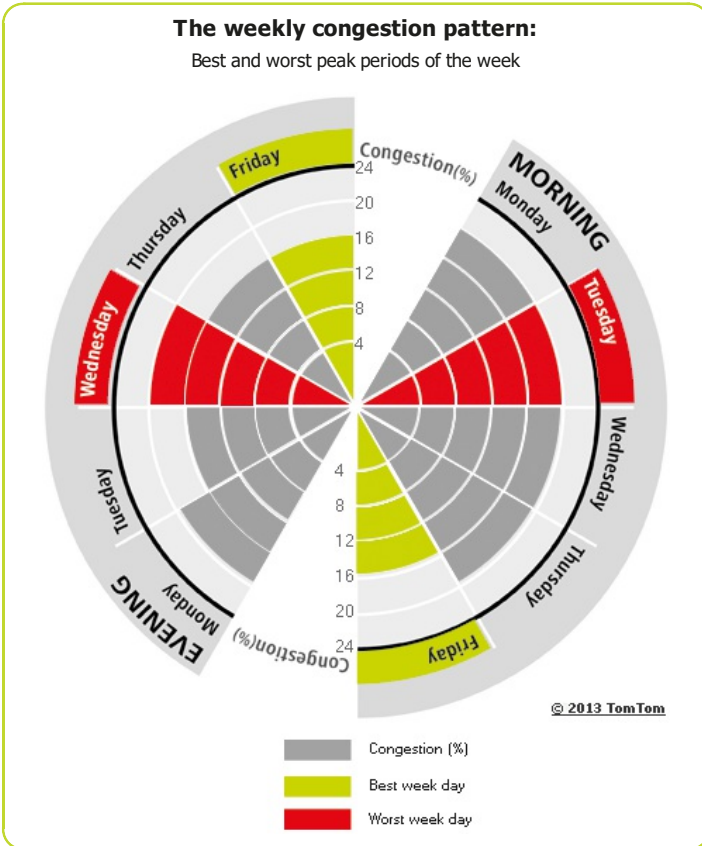


Congestion level

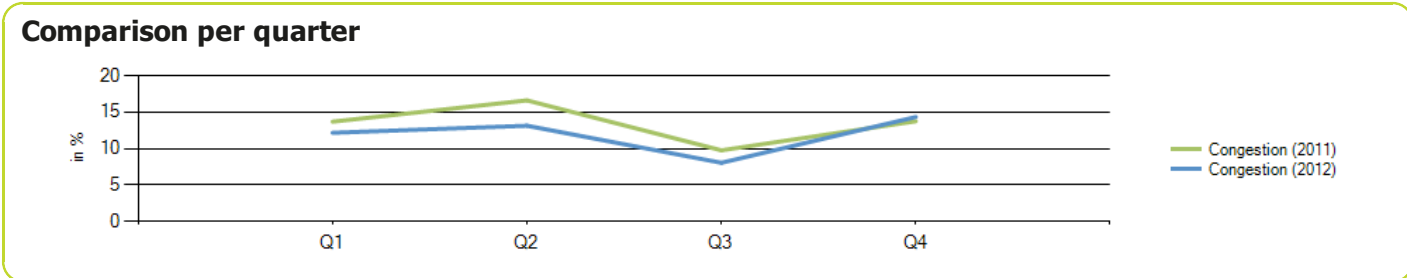
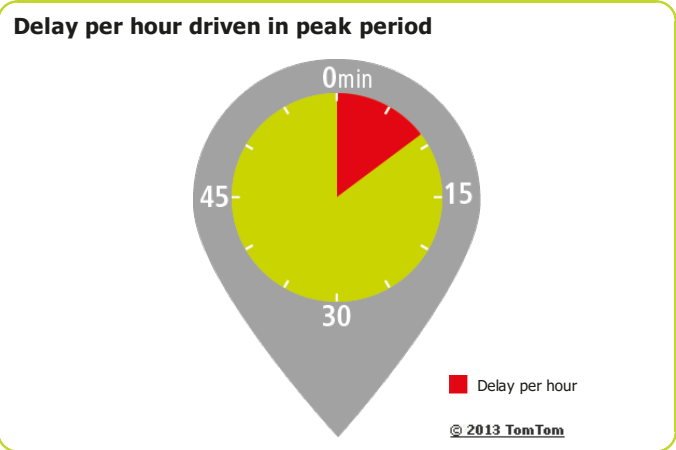
12%

Ranking

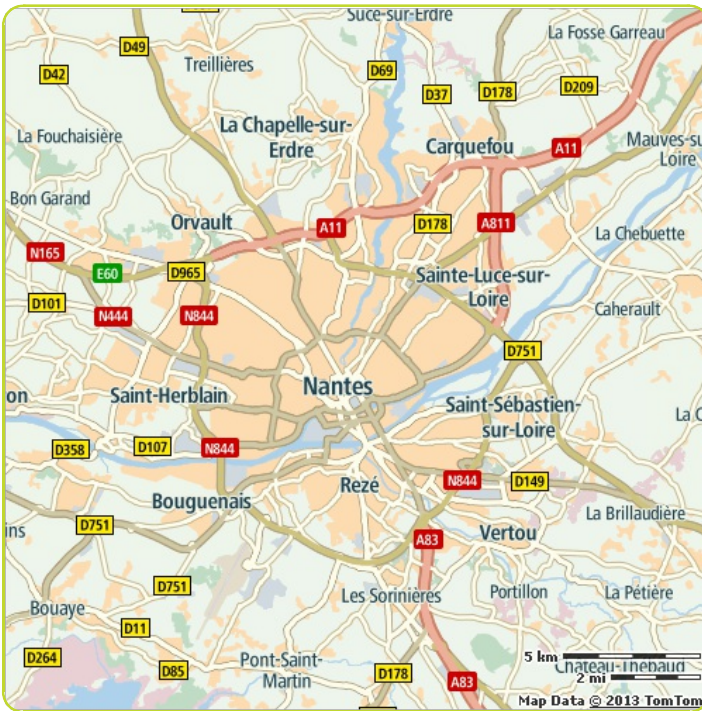
Ranking of city compared to continent	55/59
Congestion level on highways	5%
Congestion level on non-highways	22%
Delay per hour driven in peak period	9 min
Delay per year with a 30 min commute	30 h



Most congested specific day	Wed 2 May 2012
Total network length	324 km
Total network length highways	36 km
Total network length non-highways	289 km
Total vehicle kilometres	1 676 649 km



Nantes

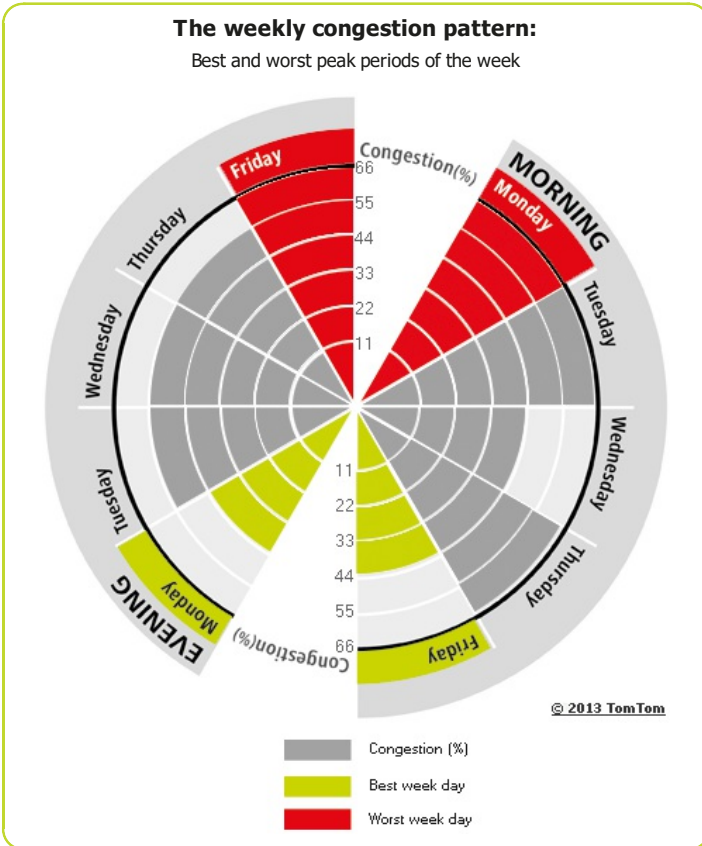


Congestion level

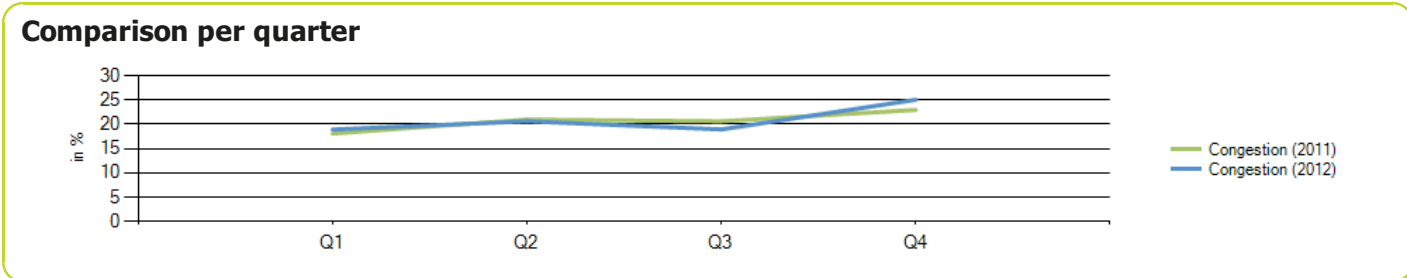
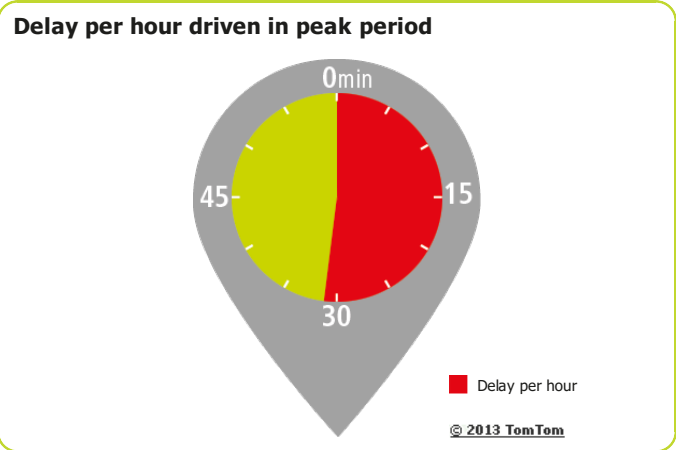
20%

Ranking

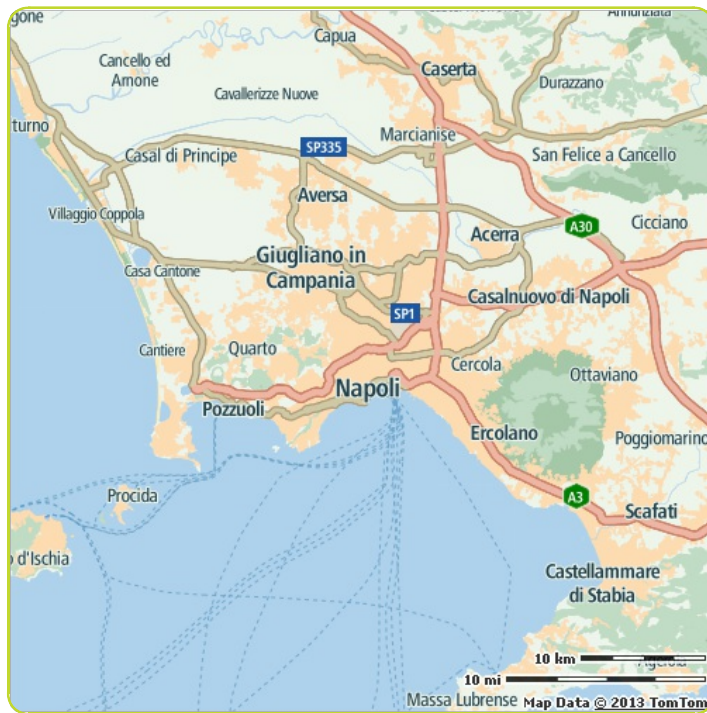
Ranking of city compared to continent	37/59
Congestion level on highways	15%
Congestion level on non-highways	27%
Delay per hour driven in peak period	30 min
Delay per year with a 30 min commute	76 h



Most congested specific day	Sat 11 Aug 2012
Total network length	1 106 km
Total network length highways	192 km
Total network length non-highways	915 km
Total vehicle kilometres	16 875 877 km



Naples

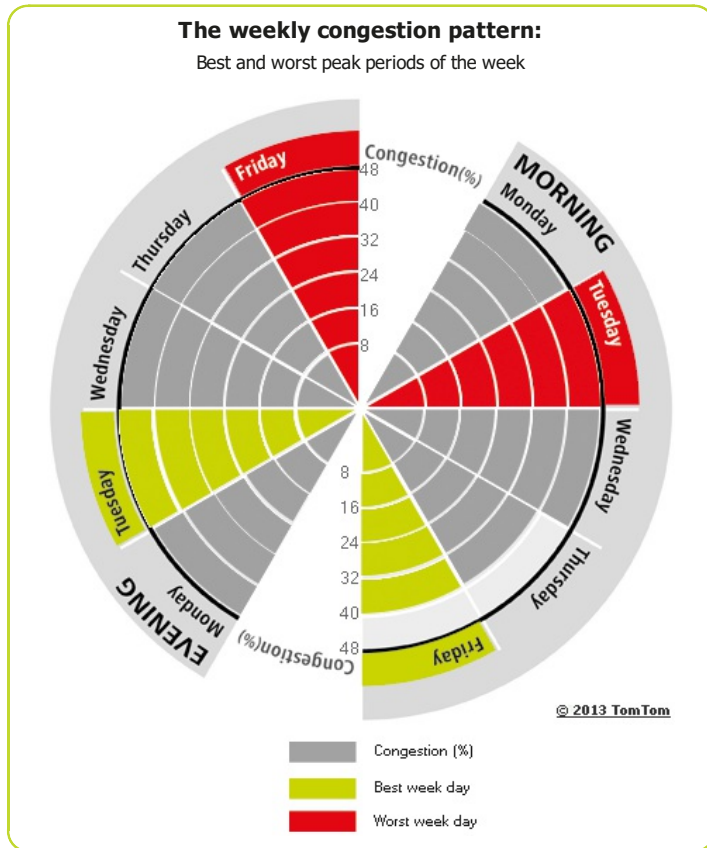


Congestion level

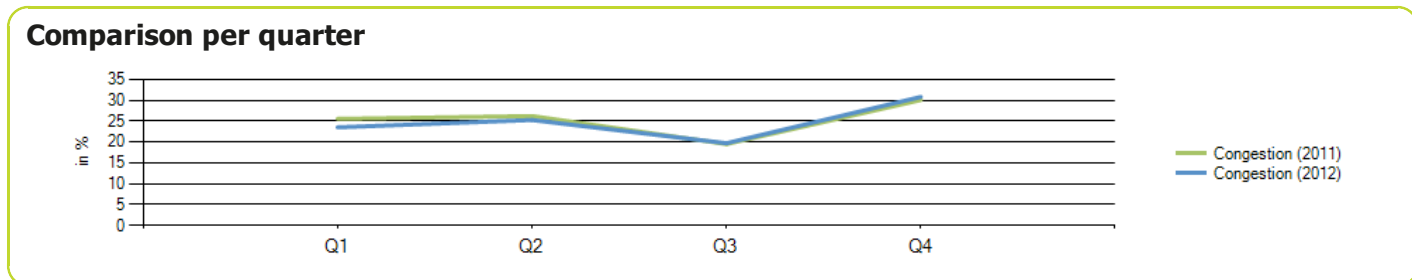
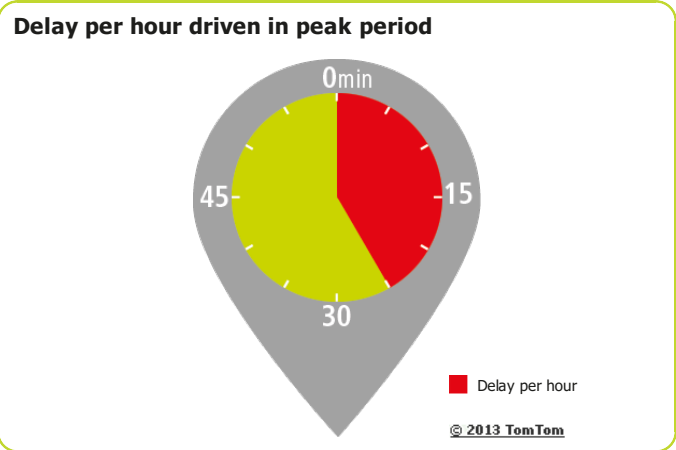
25%

Ranking

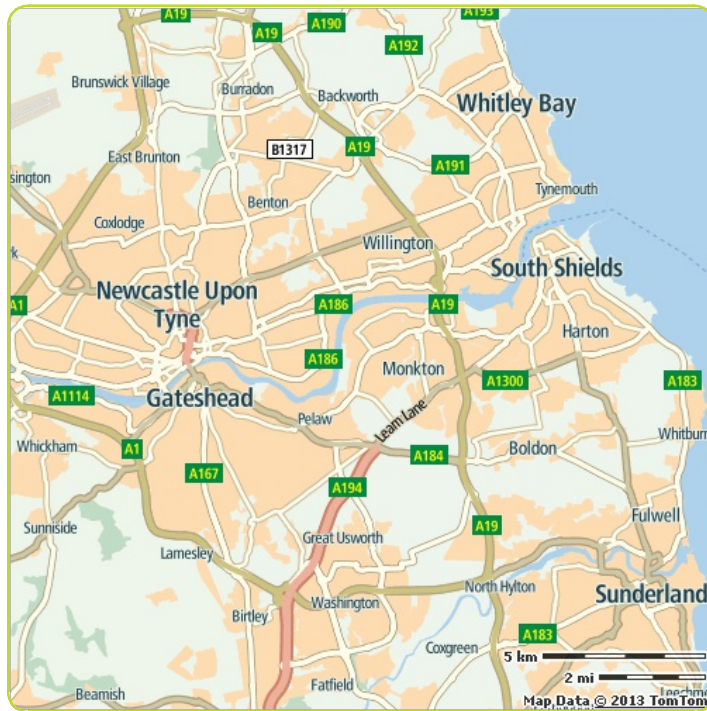
Ranking of city compared to continent	22/59
Congestion level on highways	13%
Congestion level on non-highways	37%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h



Most congested specific day	Tue 4 Dec 2012
Total network length	1 654 km
Total network length highways	248 km
Total network length non-highways	1 406 km
Total vehicle kilometres	10 740 964 km



Newcastle-Sunderland

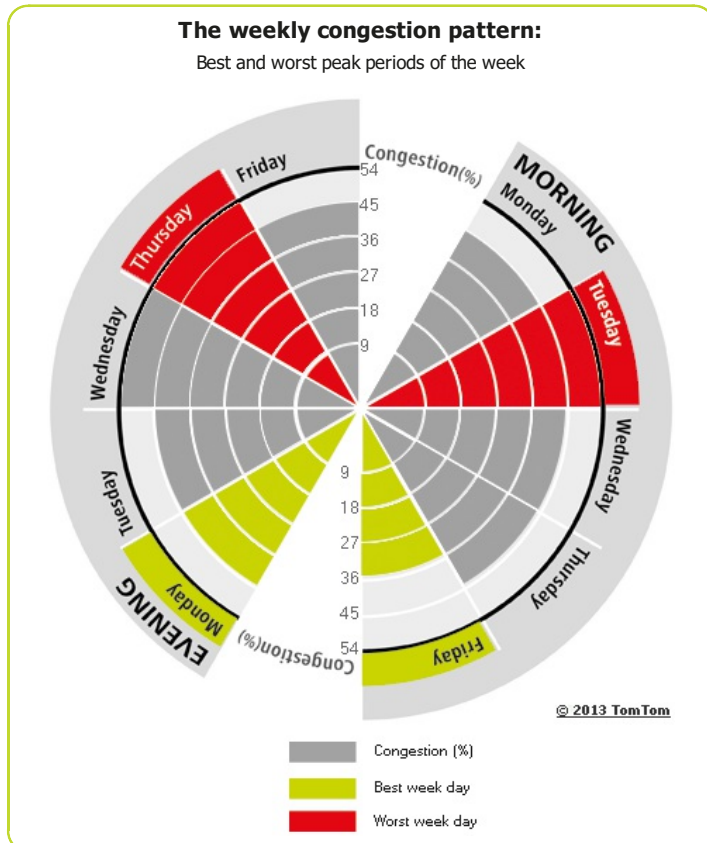


Congestion level

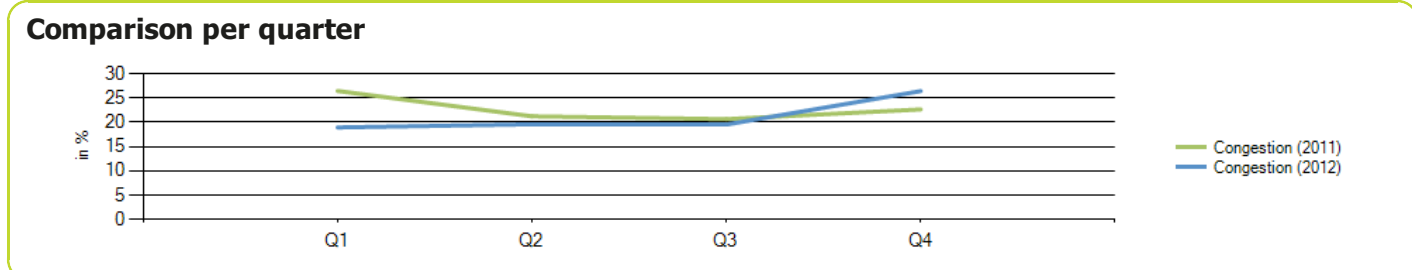
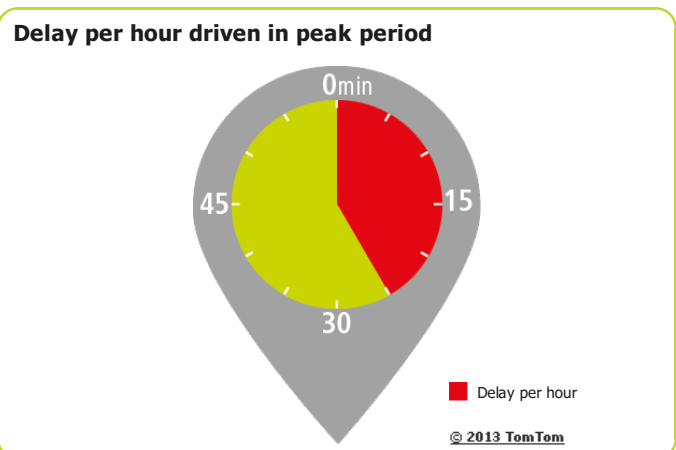
21%

Ranking

Ranking of city compared to continent	35/59
Congestion level on highways	15%
Congestion level on non-highways	26%
Delay per hour driven in peak period	25 min
Delay per year with a 30 min commute	67 h



Most congested specific day	Wed 5 Dec 2012
Total network length	1 327 km
Total network length highways	176 km
Total network length non-highways	1 151 km
Total vehicle kilometres	16 433 471 km



Nice

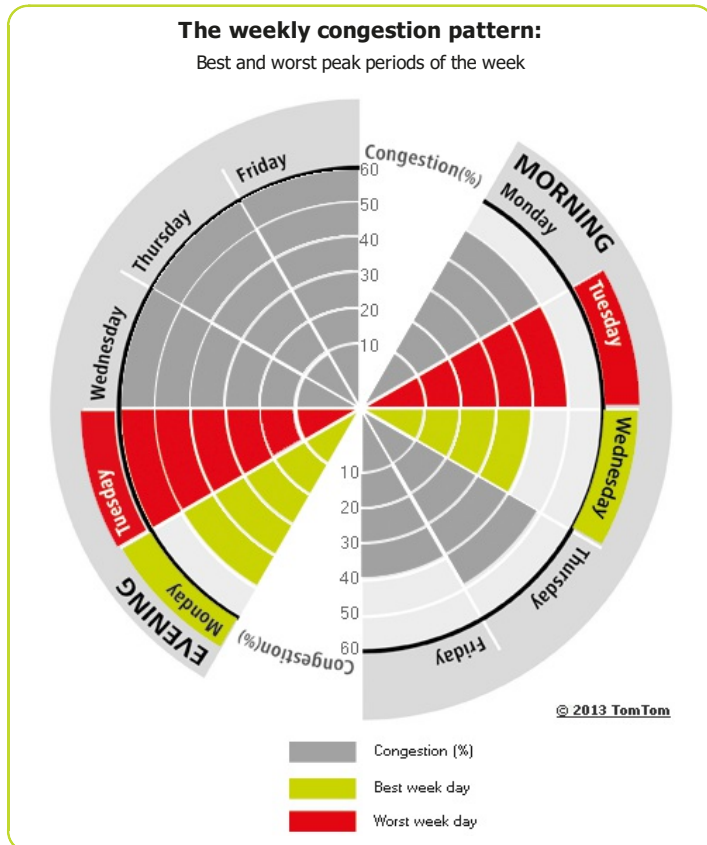


Congestion level

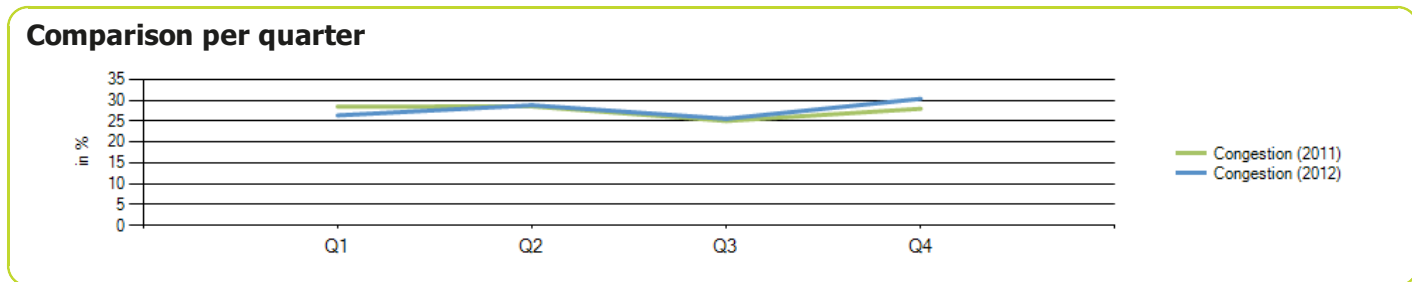
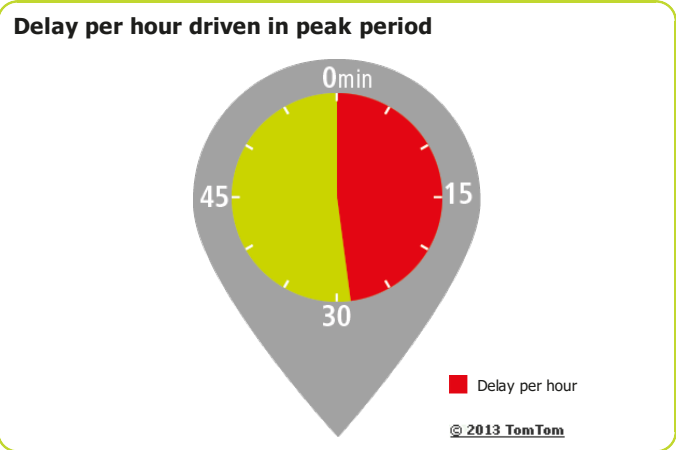
27%

Ranking

Ranking of city compared to continent	15/59
Congestion level on highways	15%
Congestion level on non-highways	34%
Delay per hour driven in peak period	29 min
Delay per year with a 30 min commute	74 h



Most congested specific day	Wed 22 Feb 2012
Total network length	305 km
Total network length highways	44 km
Total network length non-highways	261 km
Total vehicle kilometres	2 250 169 km



Nottingham

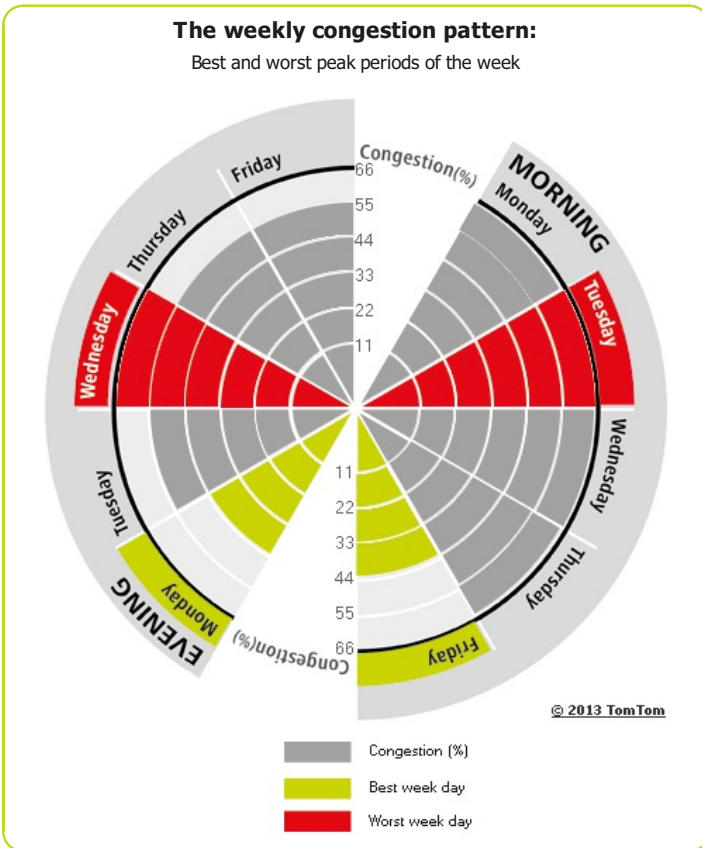


Congestion level

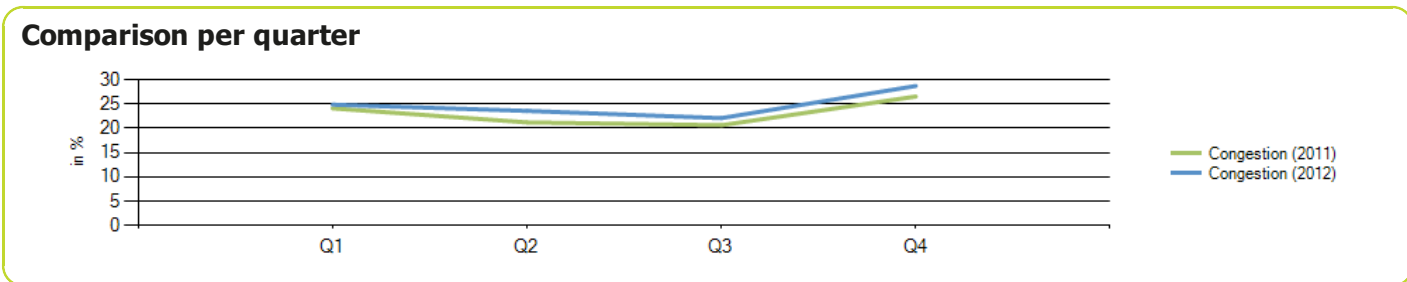
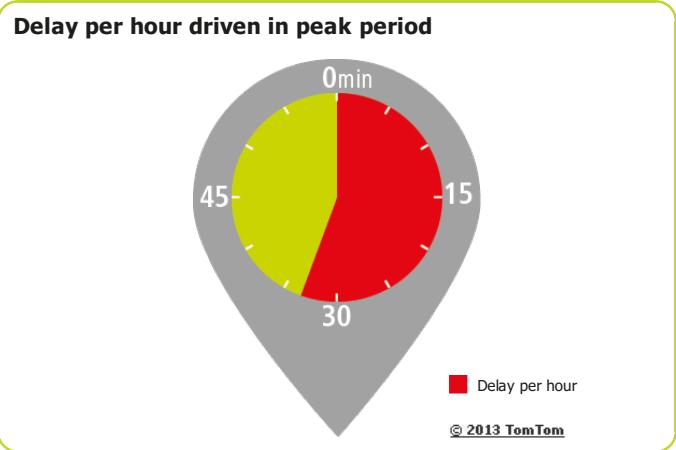
24%

Ranking

Ranking of city compared to continent	24/59
Congestion level on highways	6%
Congestion level on non-highways	32%
Delay per hour driven in peak period	33 min
Delay per year with a 30 min commute	81 h



Most congested specific day	Wed 11 Apr 2012
Total network length	424 km
Total network length highways	20 km
Total network length non-highways	404 km
Total vehicle kilometres	14 366 145 km



Oslo

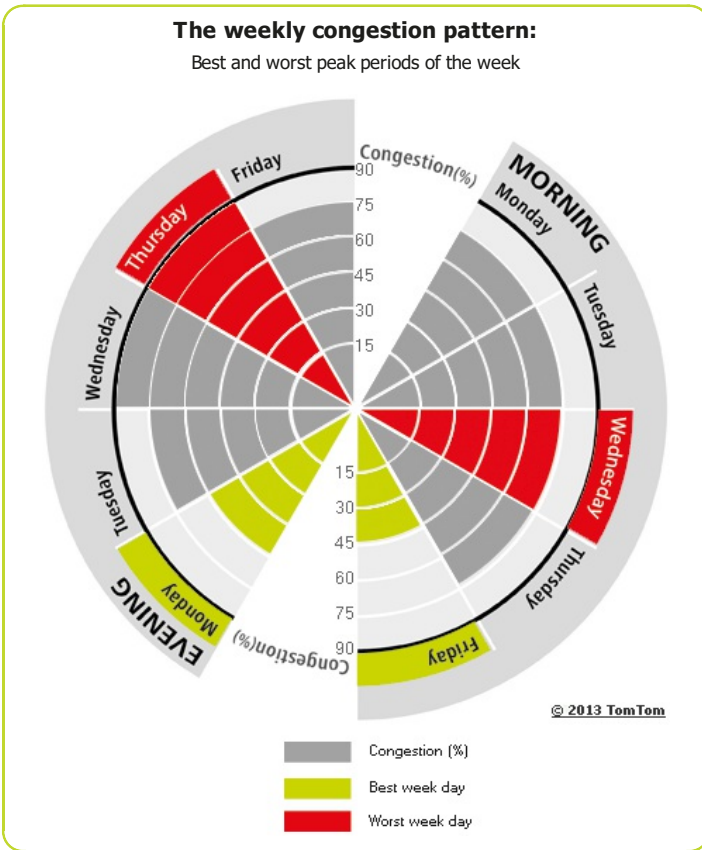


Congestion level

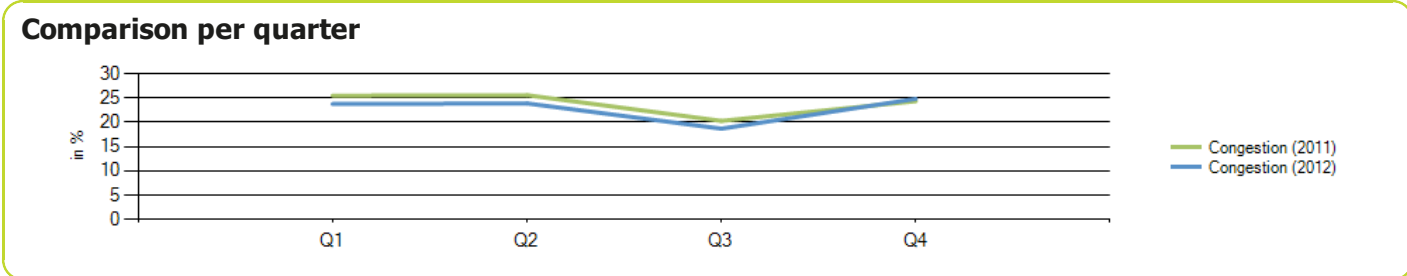
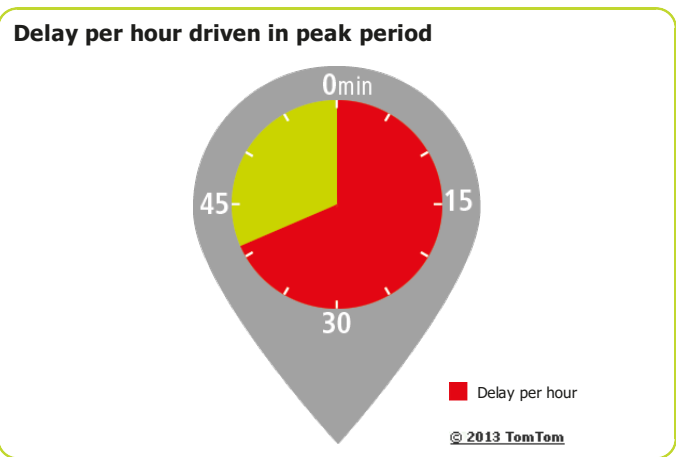
23%

Ranking

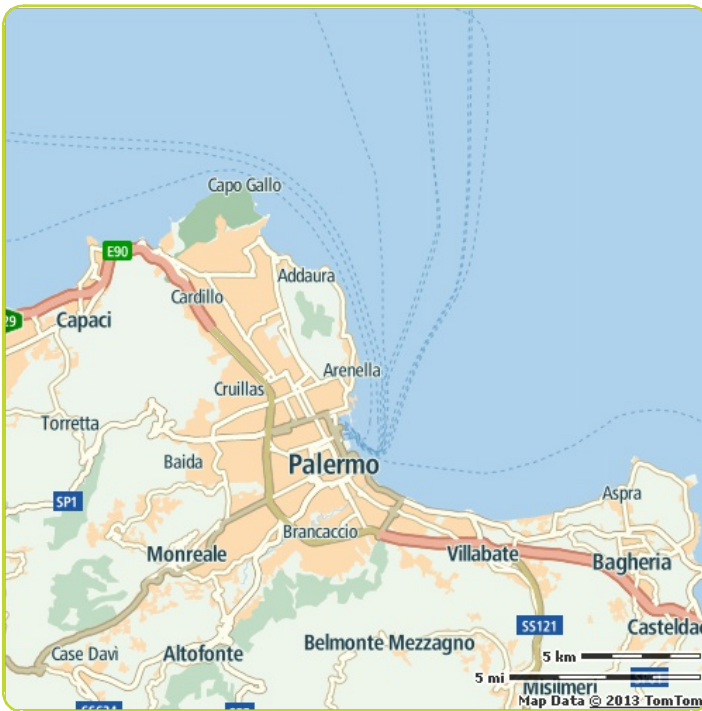
Ranking of city compared to continent	29/59
Congestion level on highways	19%
Congestion level on non-highways	30%
Delay per hour driven in peak period	41 min
Delay per year with a 30 min commute	93 h



Most congested specific day	Mon 9 Jan 2012
Total network length	533 km
Total network length highways	125 km
Total network length non-highways	408 km
Total vehicle kilometres	5 803 123 km



Palermo

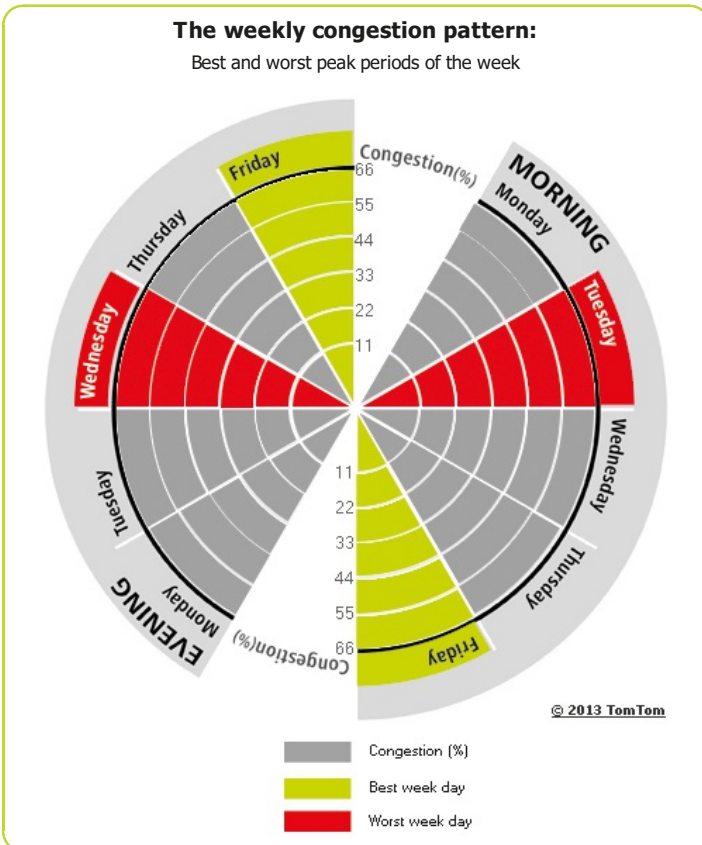


Congestion level

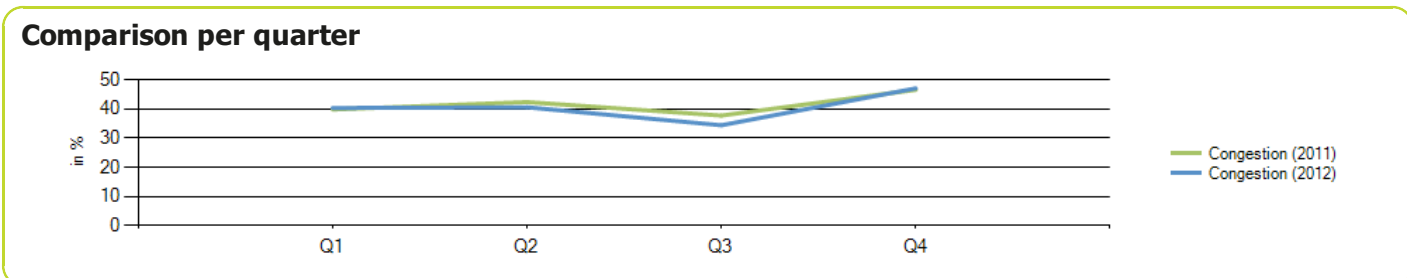
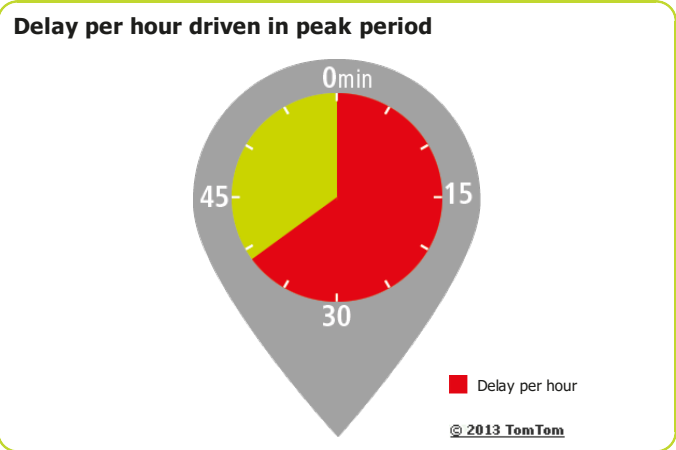
39%

Ranking

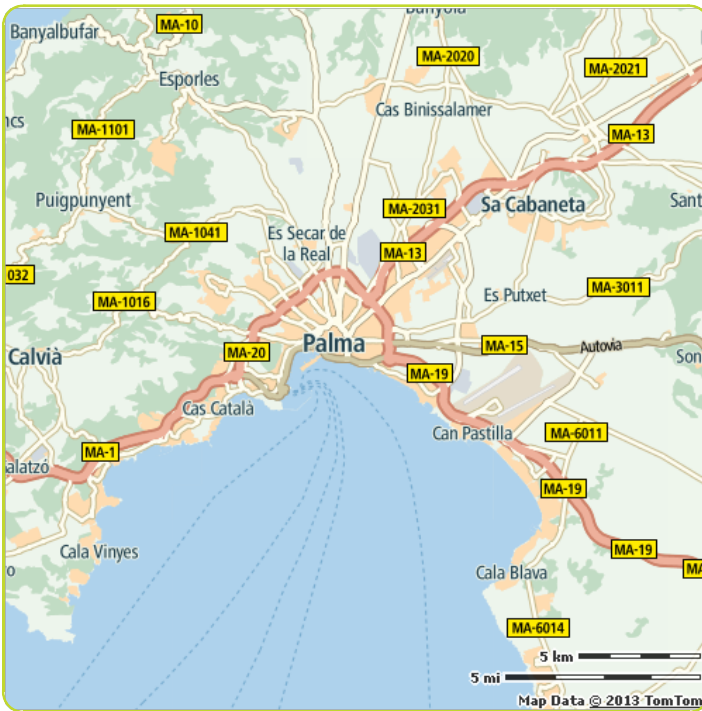
Ranking of city compared to continent	5/59
Congestion level on highways	27%
Congestion level on non-highways	49%
Delay per hour driven in peak period	38 min
Delay per year with a 30 min commute	89 h



Most congested specific day	Thu 6 Dec 2012
Total network length	327 km
Total network length highways	50 km
Total network length non-highways	276 km
Total vehicle kilometres	1 617 171 km



Palma de Mallorca

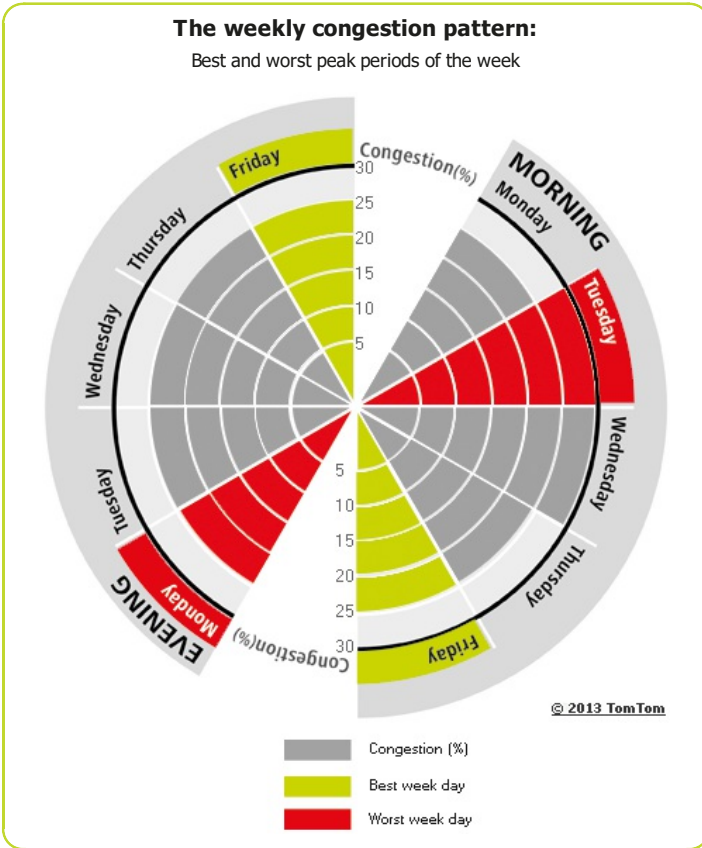


Congestion level

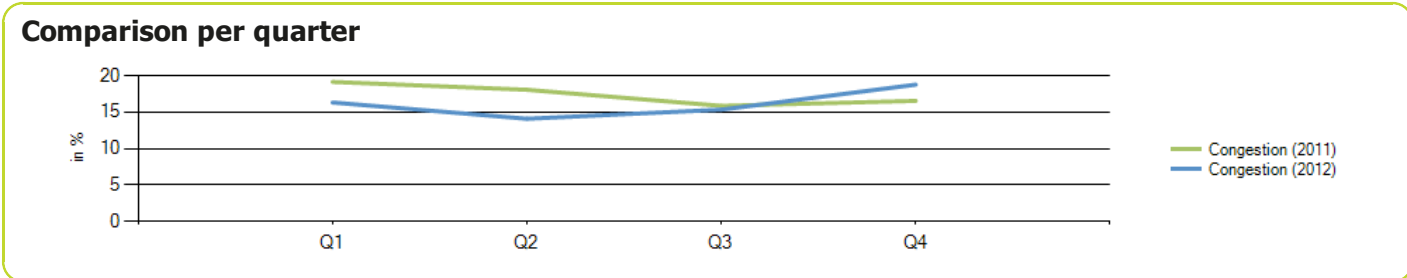
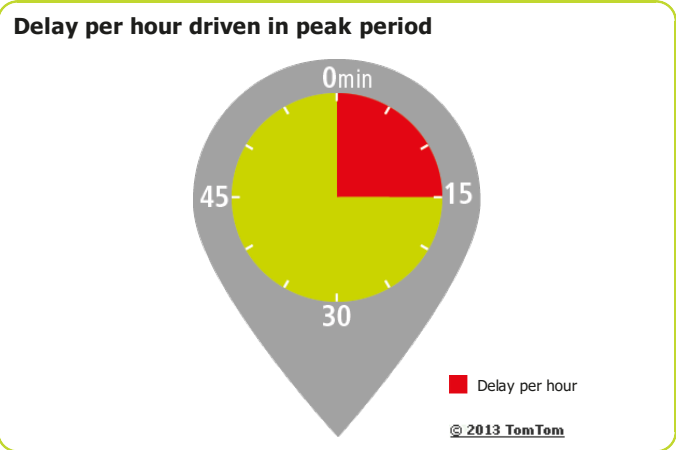
16%

Ranking

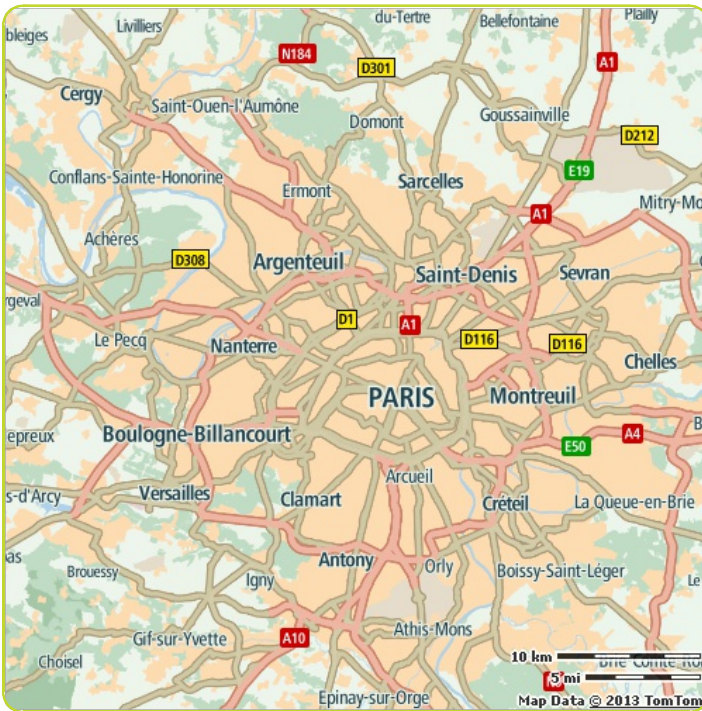
Ranking of city compared to continent	51/59
Congestion level on highways	7%
Congestion level on non-highways	20%
Delay per hour driven in peak period	14 min
Delay per year with a 30 min commute	43 h



Most congested specific day	Mon 15 Oct 2012
Total network length	291 km
Total network length highways	44 km
Total network length non-highways	246 km
Total vehicle kilometres	1 795 312 km



Paris

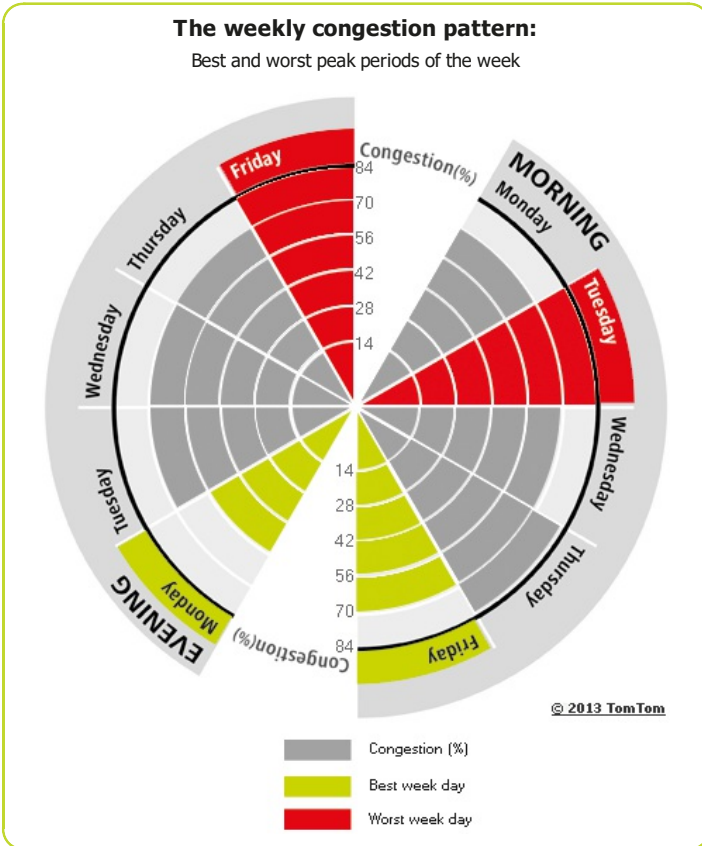


Congestion level

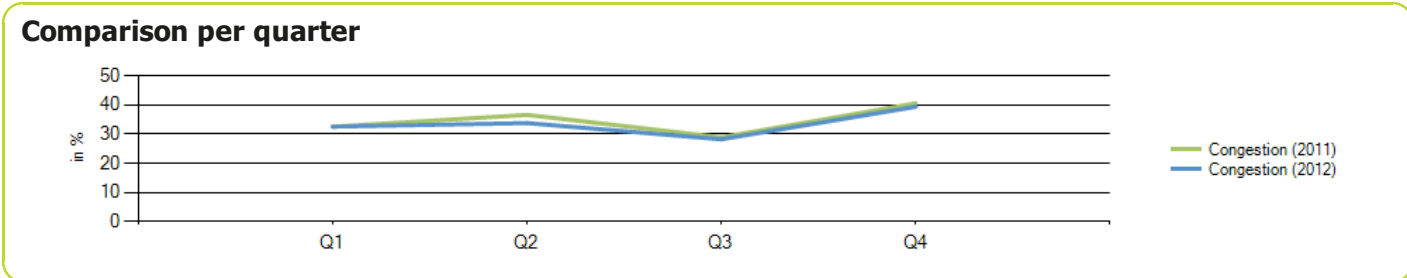
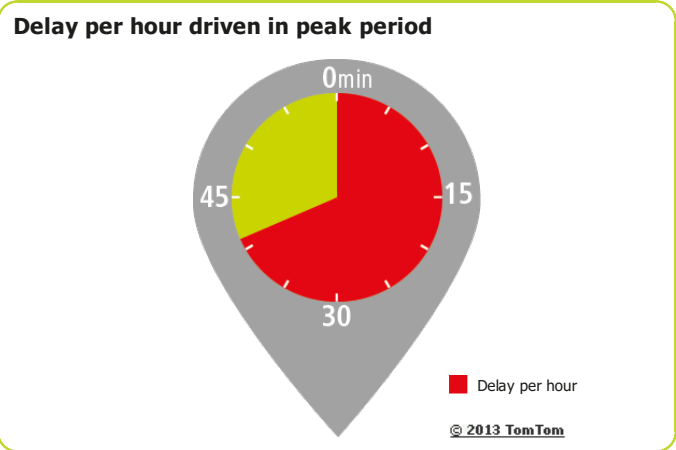
33%

Ranking

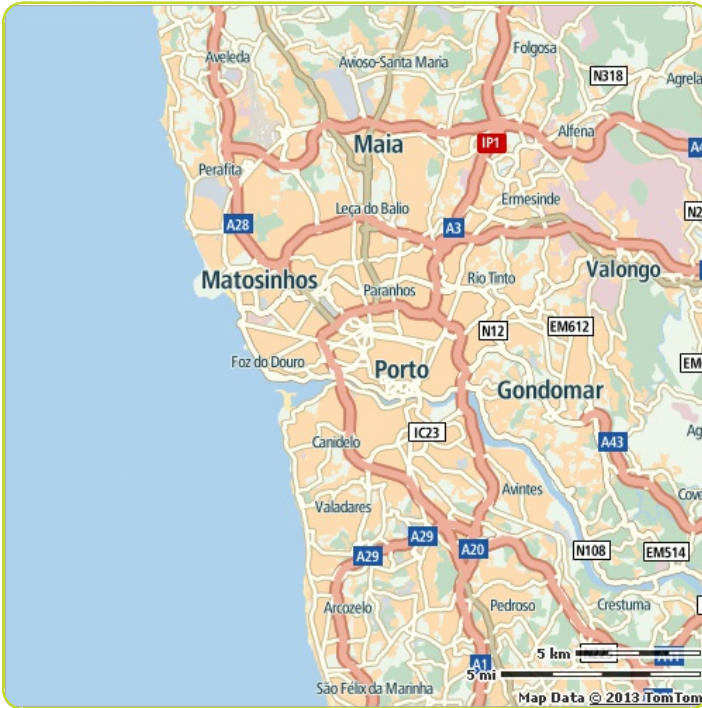
Ranking of city compared to continent	7/59
Congestion level on highways	32%
Congestion level on non-highways	34%
Delay per hour driven in peak period	40 min
Delay per year with a 30 min commute	92 h



Most congested specific day	Thu 20 Dec 2012
Total network length	7 837 km
Total network length highways	1 434 km
Total network length non-highways	6 403 km
Total vehicle kilometres	309 954 672 km



Porto

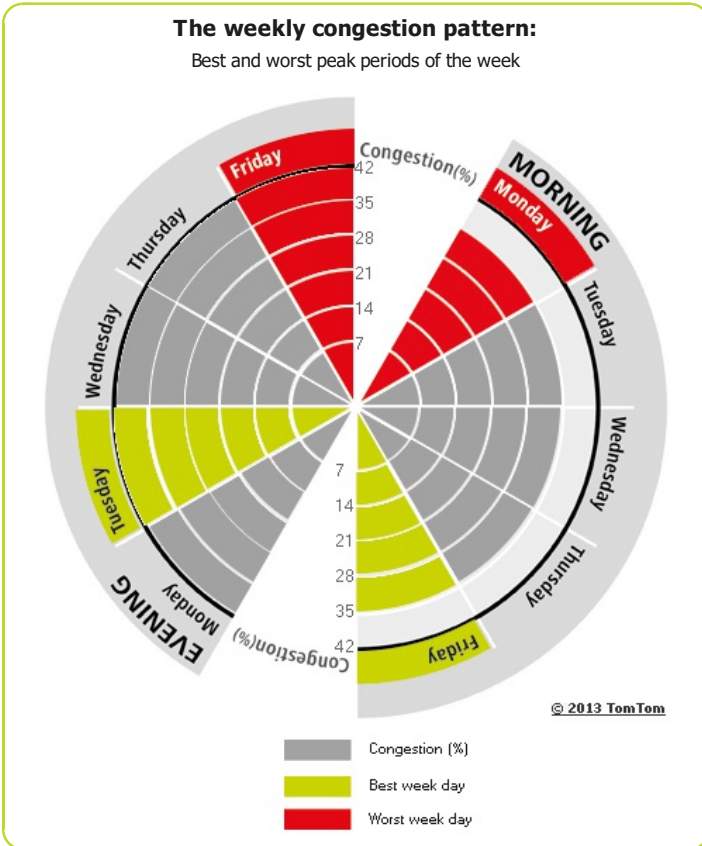


Congestion level

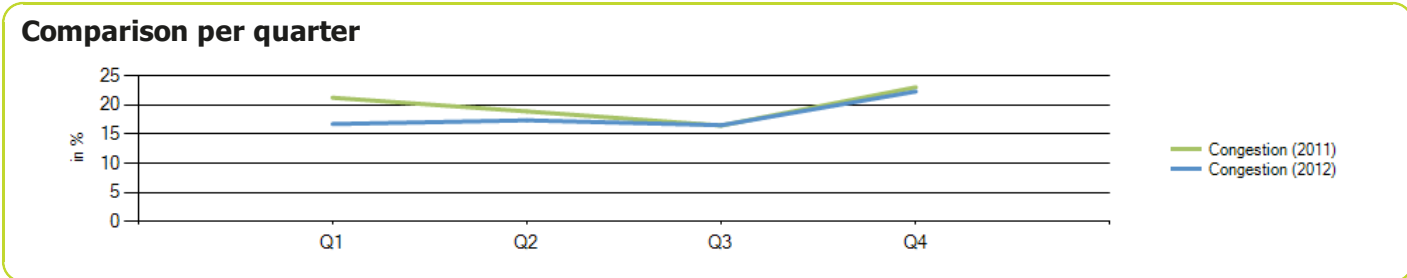
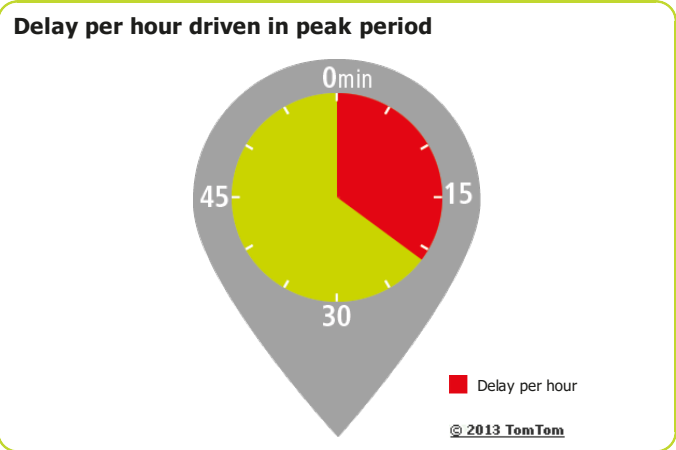
18%

Ranking

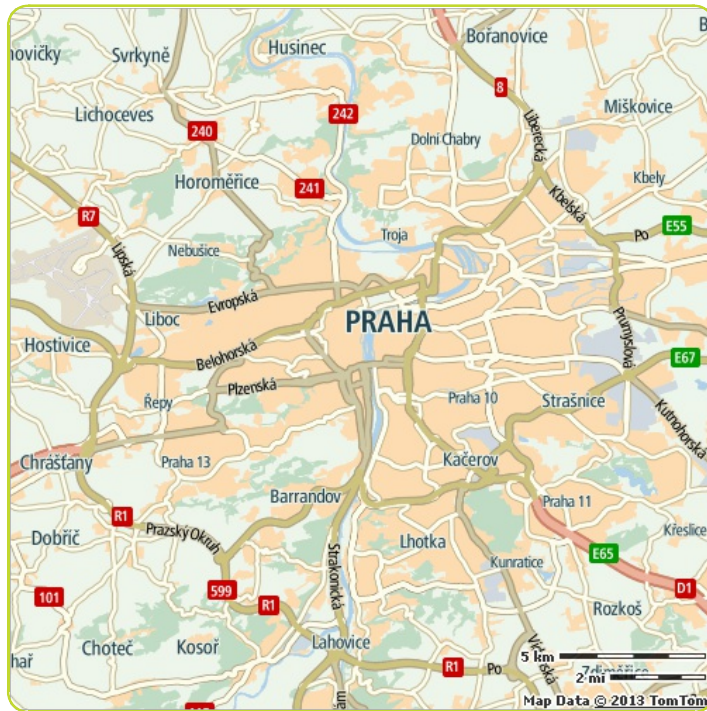
Ranking of city compared to continent	47/59
Congestion level on highways	9%
Congestion level on non-highways	25%
Delay per hour driven in peak period	21 min
Delay per year with a 30 min commute	59 h



Most congested specific day	Tue 25 Sep 2012
Total network length	965 km
Total network length highways	166 km
Total network length non-highways	799 km
Total vehicle kilometres	8 010 668 km



Prague

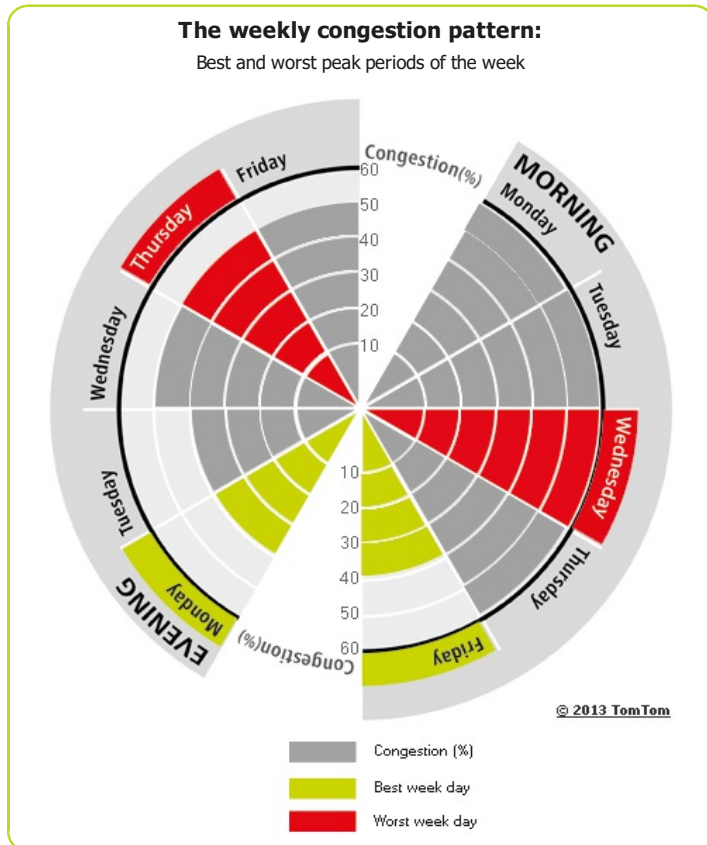


Congestion level

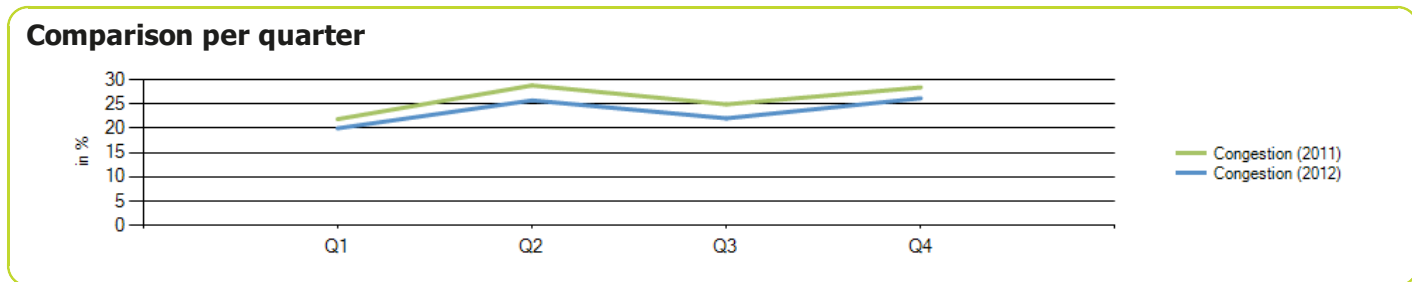
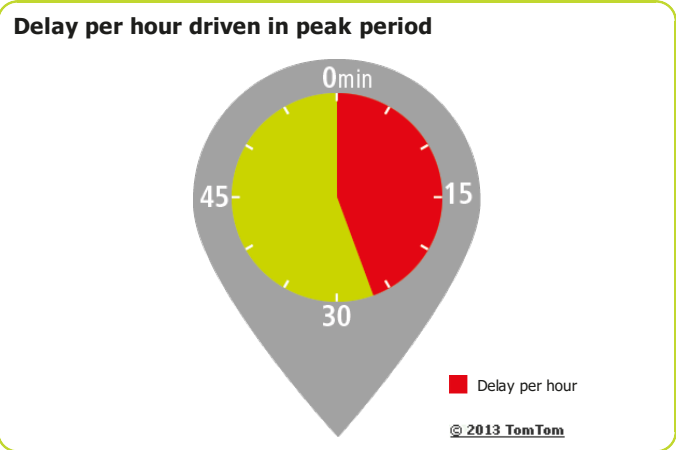
23%

Ranking

Ranking of city compared to continent	28/59
Congestion level on highways	18%
Congestion level on non-highways	29%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h



Most congested specific day	Mon 16 Jul 2012
Total network length	1 054 km
Total network length highways	234 km
Total network length non-highways	820 km
Total vehicle kilometres	13 736 159 km



Rome

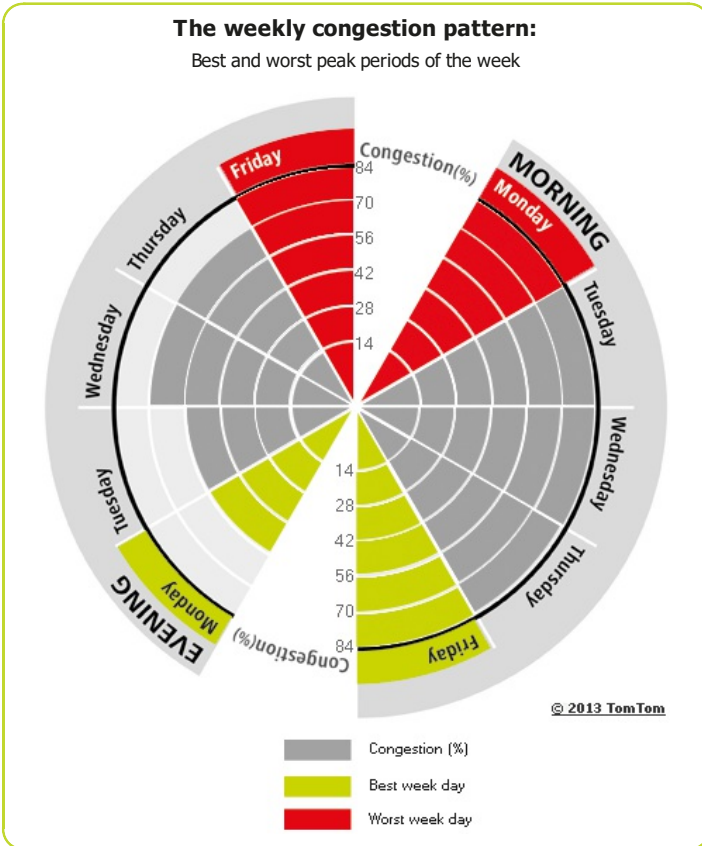


Congestion level

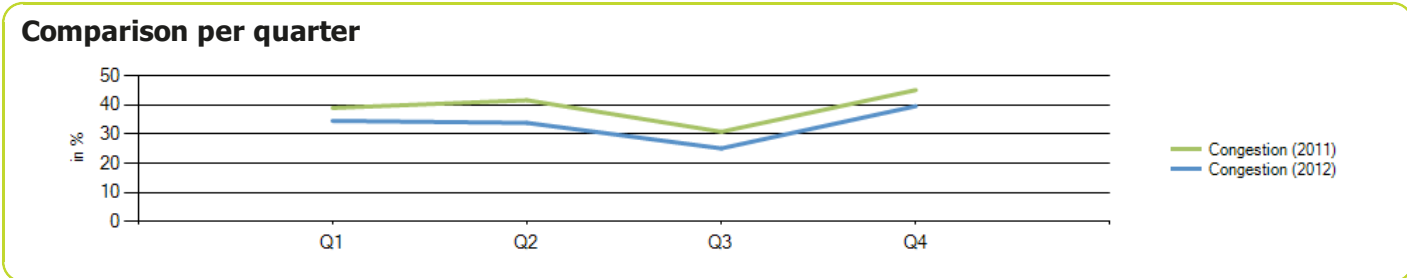
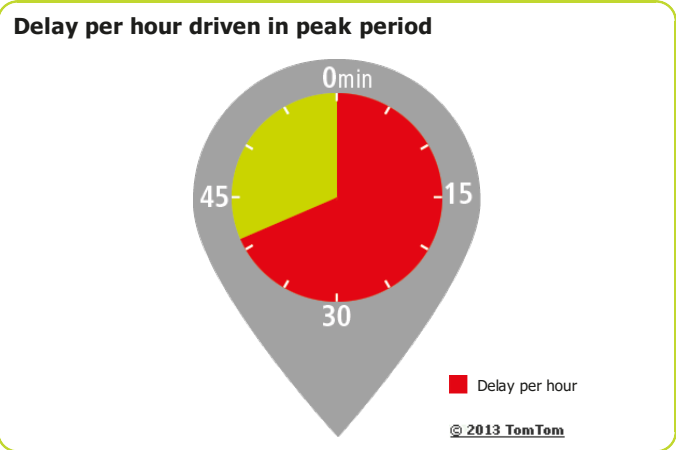
33%

Ranking

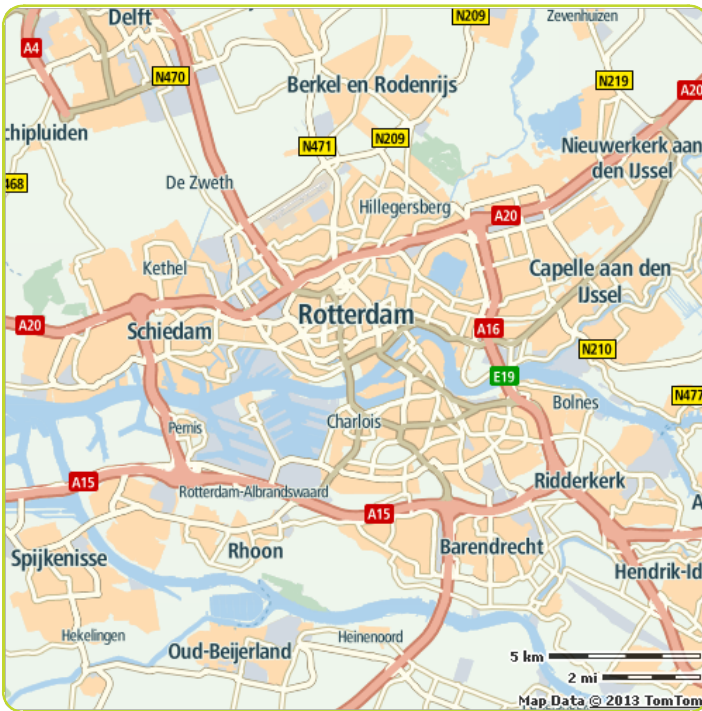
Ranking of city compared to continent	8/59
Congestion level on highways	25%
Congestion level on non-highways	37%
Delay per hour driven in peak period	41 min
Delay per year with a 30 min commute	93 h



Most congested specific day	Fri 3 Feb 2012
Total network length	1 291 km
Total network length highways	218 km
Total network length non-highways	1 073 km
Total vehicle kilometres	31 930 321 km



Rotterdam

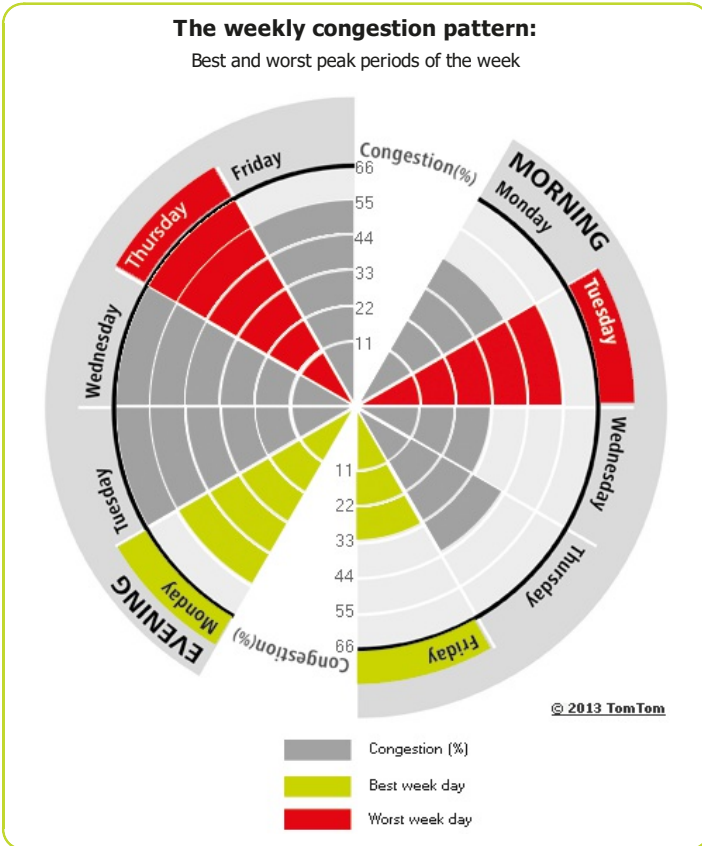


Congestion level

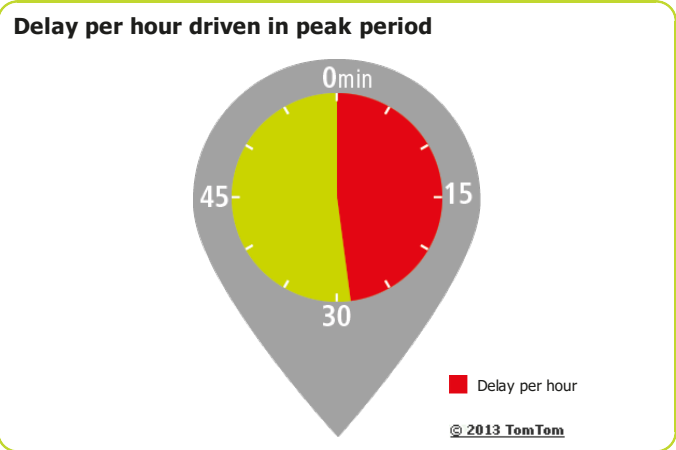
19%

Ranking

Ranking of city compared to continent	41/59
Congestion level on highways	13%
Congestion level on non-highways	29%
Delay per hour driven in peak period	28 min
Delay per year with a 30 min commute	73 h



Most congested specific day	Fri 3 Feb 2012
Total network length	1 242 km
Total network length highways	207 km
Total network length non-highways	1 036 km
Total vehicle kilometres	62 419 473 km



Ruhr region east

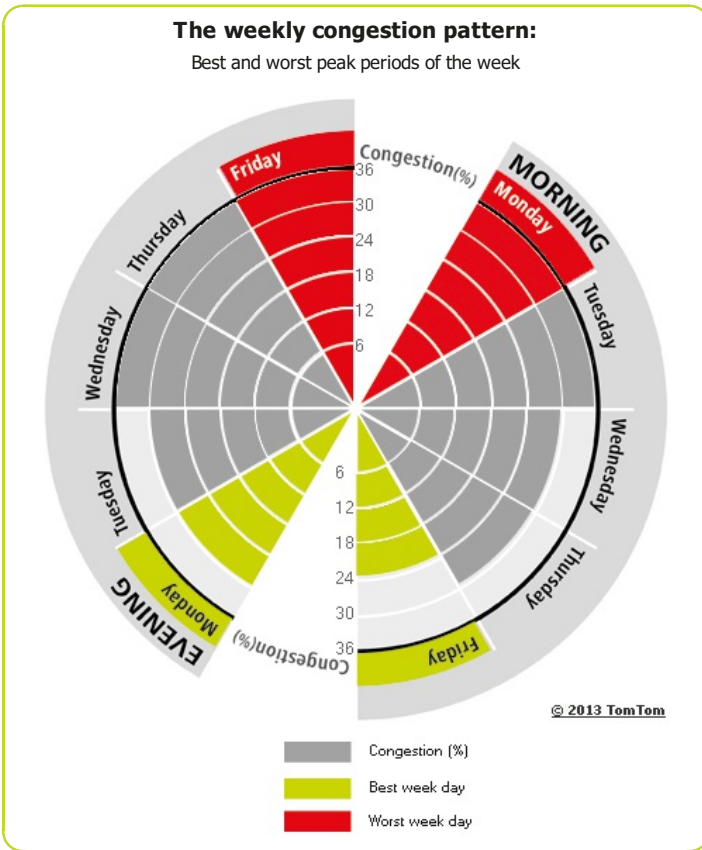


Congestion level

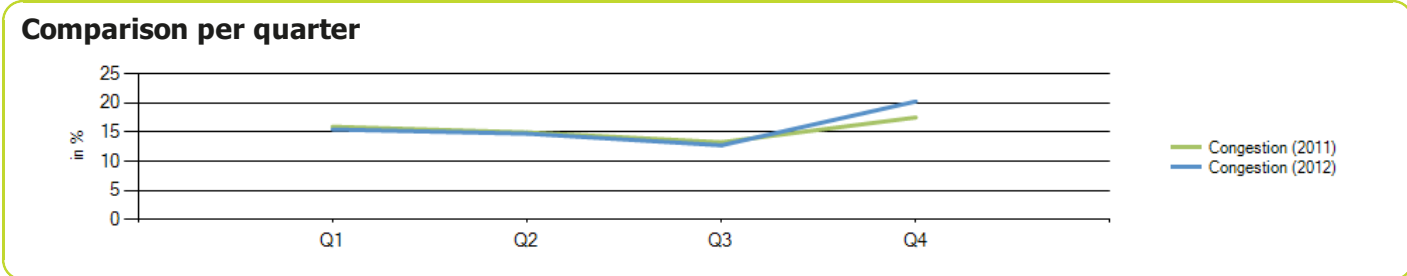
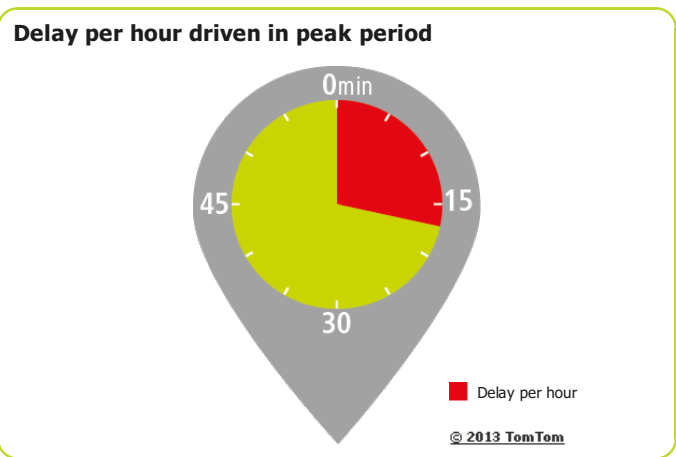
16%

Ranking

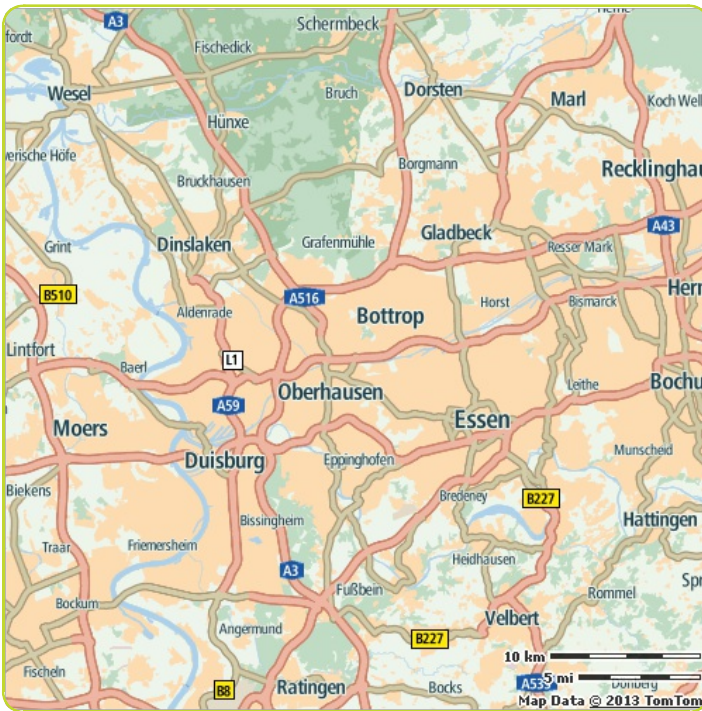
Ranking of city compared to continent	50/59
Congestion level on highways	12%
Congestion level on non-highways	25%
Delay per hour driven in peak period	17 min
Delay per year with a 30 min commute	50 h



Most congested specific day	Wed 12 Dec 2012
Total network length	3 021 km
Total network length highways	624 km
Total network length non-highways	2 396 km
Total vehicle kilometres	37 606 575 km



Ruhr region west

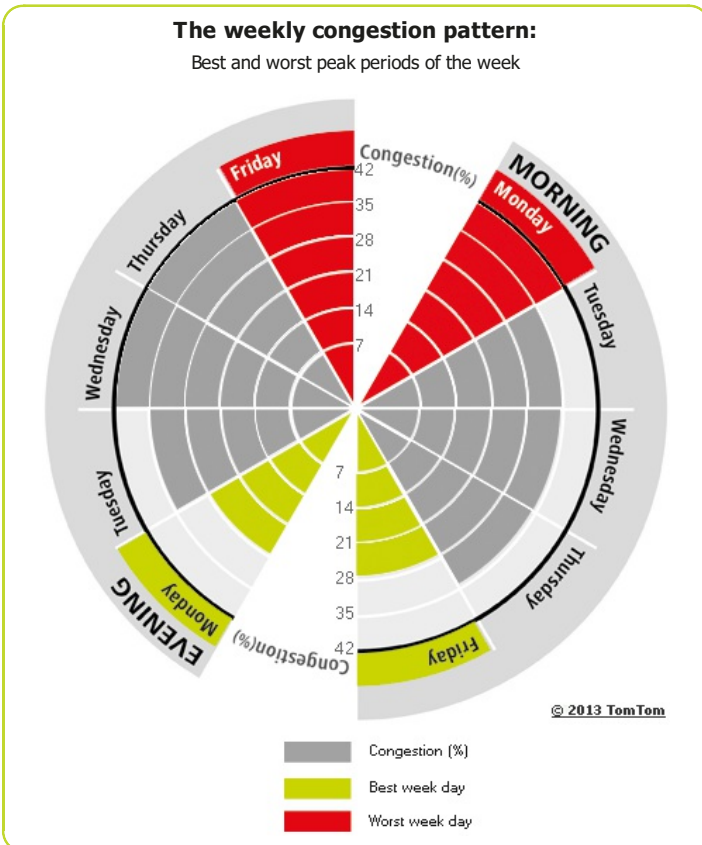


Congestion level

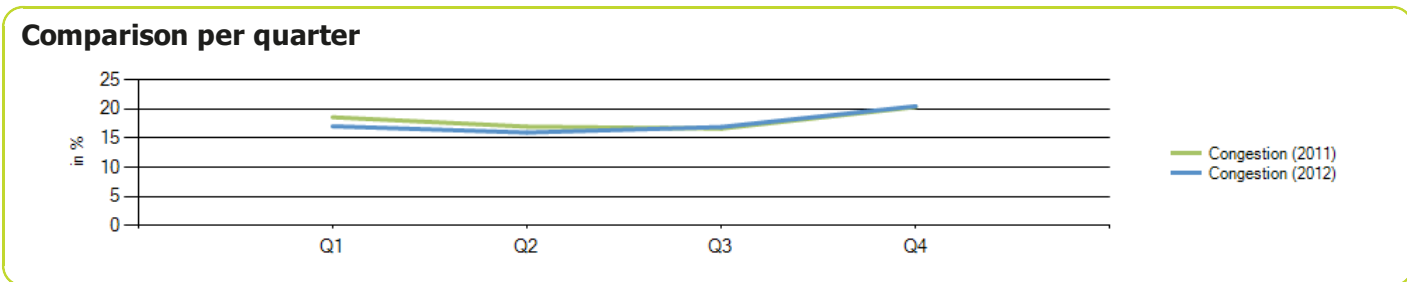
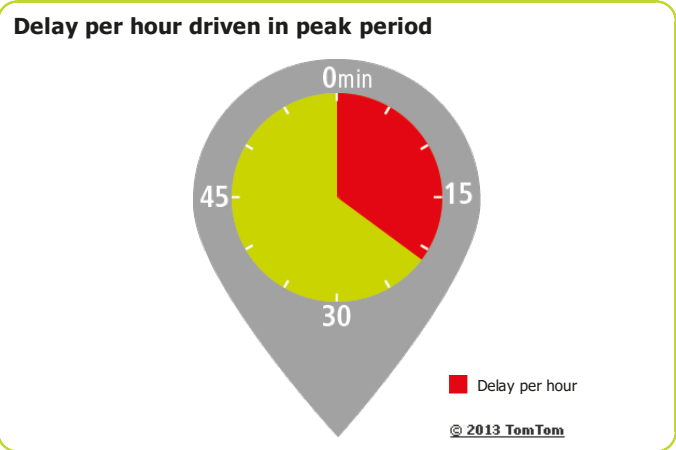
18%

Ranking

Ranking of city compared to continent	45/59
Congestion level on highways	14%
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



Most congested specific day	Sat 30 Jun 2012
Total network length	2 996 km
Total network length highways	684 km
Total network length non-highways	2 312 km
Total vehicle kilometres	51 966 990 km



Seville

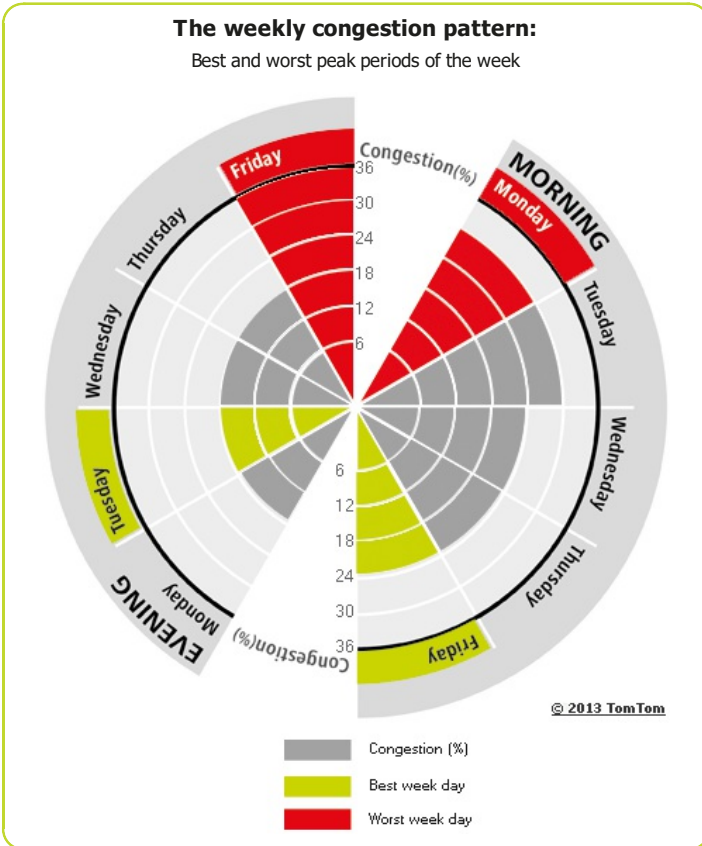


Congestion level

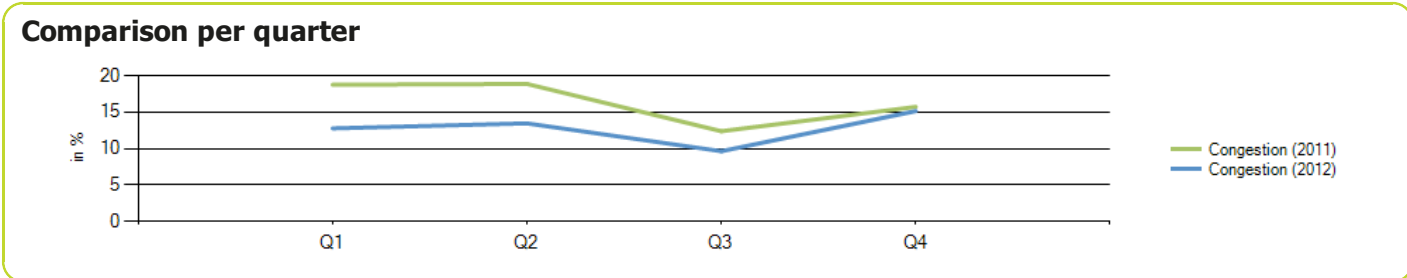
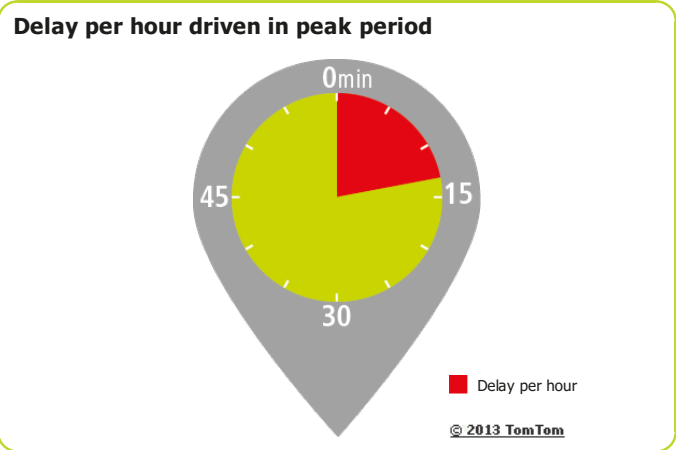
13%

Ranking

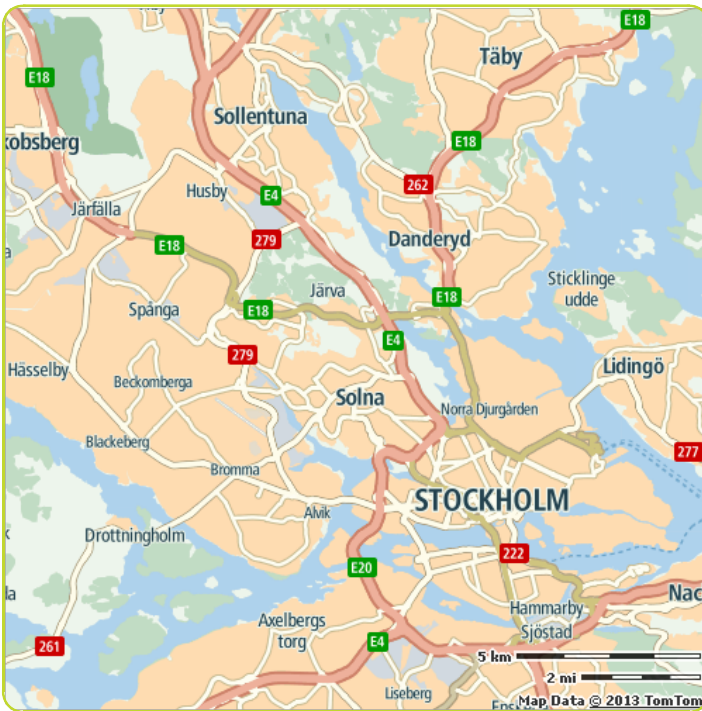
Ranking of city compared to continent	54/59
Congestion level on highways	9%
Congestion level on non-highways	17%
Delay per hour driven in peak period	12 min
Delay per year with a 30 min commute	38 h



Most congested specific day	Thu 27 Sep 2012
Total network length	520 km
Total network length highways	113 km
Total network length non-highways	407 km
Total vehicle kilometres	6 560 516 km



Stockholm

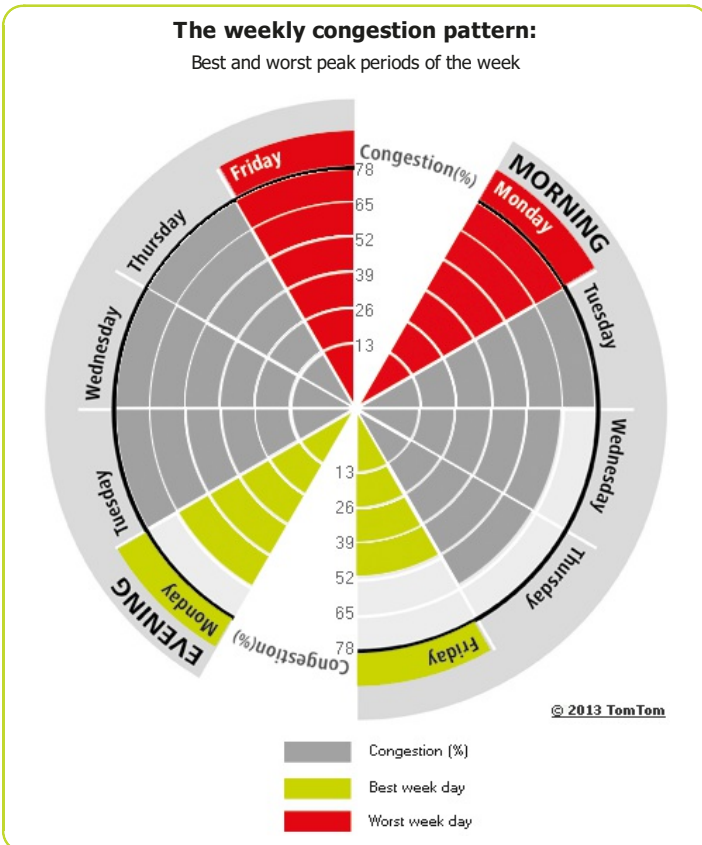


Congestion level

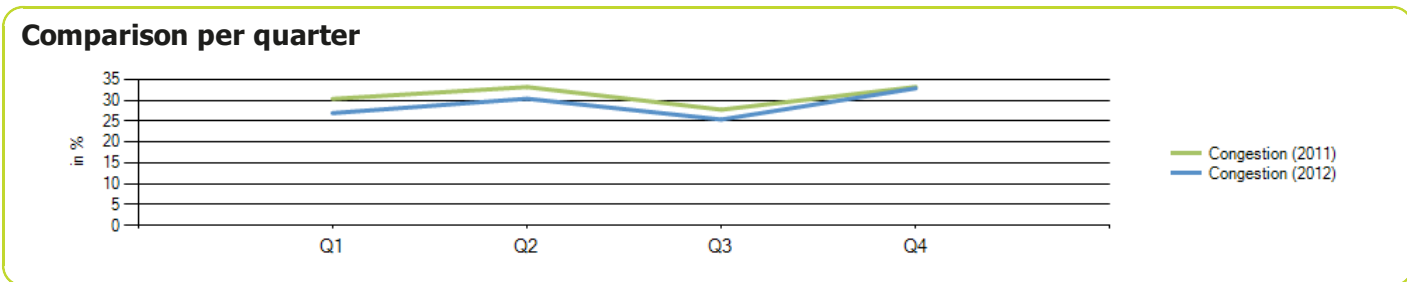
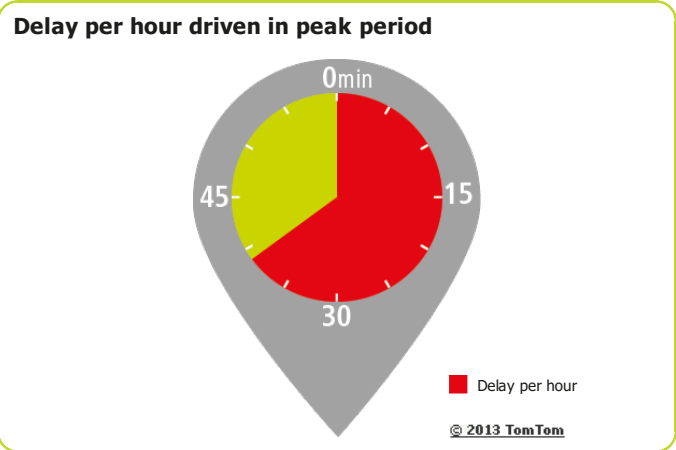
28%

Ranking

Ranking of city compared to continent	12/59
Congestion level on highways	25%
Congestion level on non-highways	32%
Delay per hour driven in peak period	39 min
Delay per year with a 30 min commute	90 h



Most congested specific day	Wed 5 Dec 2012
Total network length	1 115 km
Total network length highways	229 km
Total network length non-highways	886 km
Total vehicle kilometres	7 705 364 km



Strasbourg

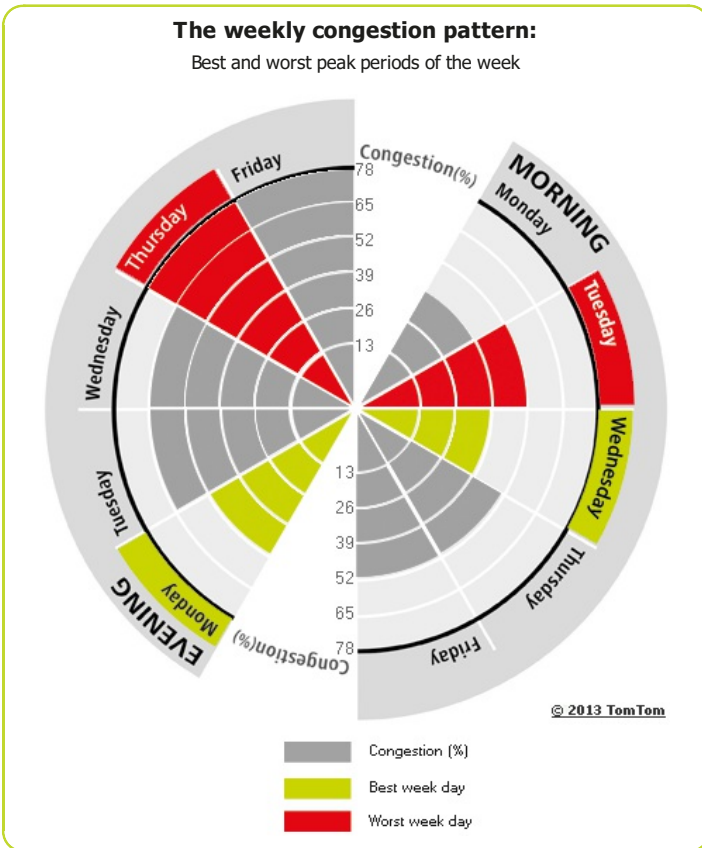


Congestion level

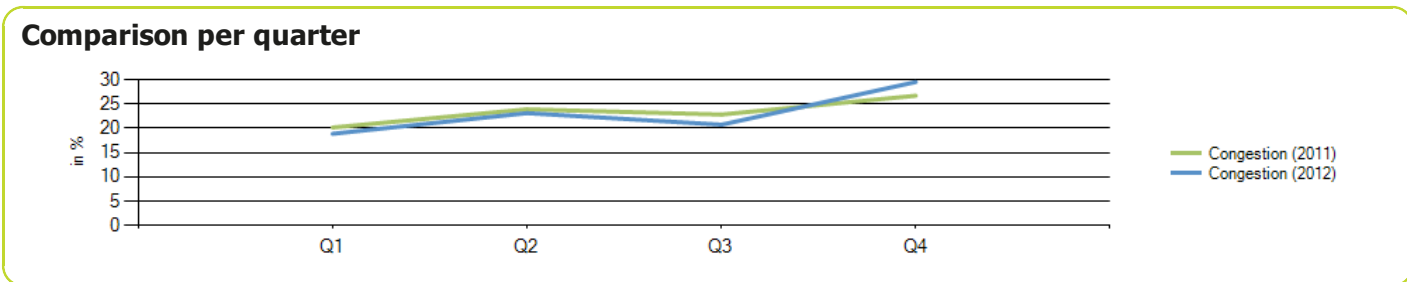
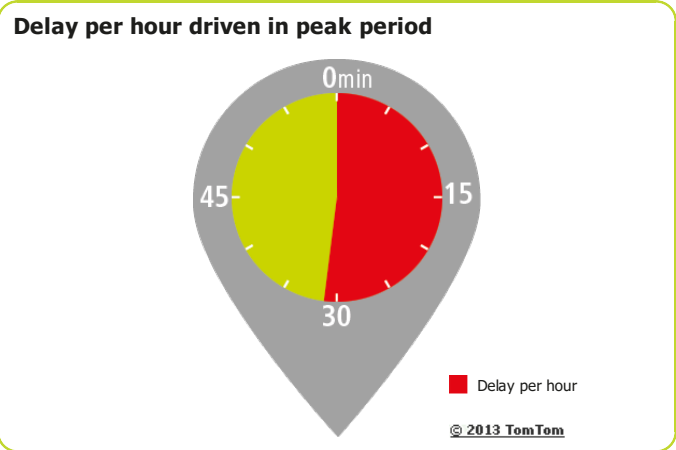
23%

Ranking

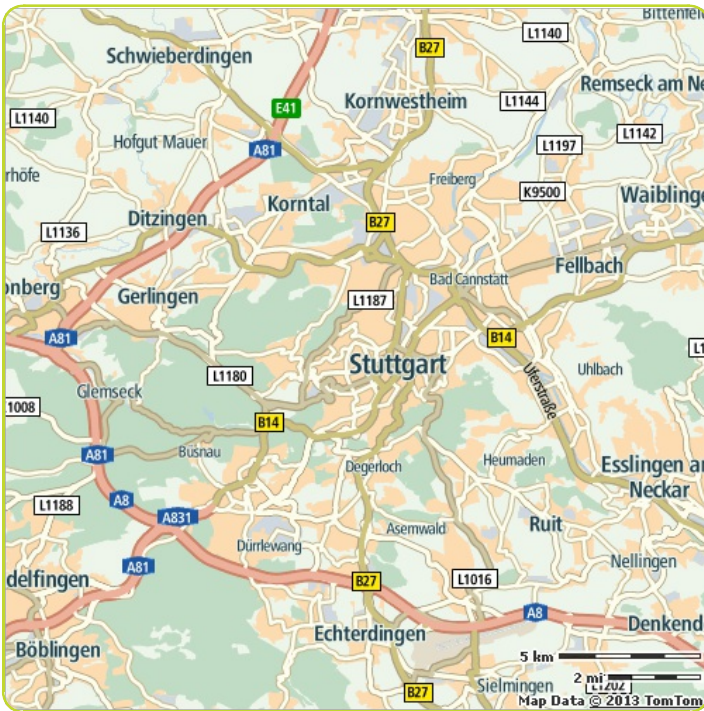
Ranking of city compared to continent	30/59
Congestion level on highways	18%
Congestion level on non-highways	30%
Delay per hour driven in peak period	31 min
Delay per year with a 30 min commute	78 h



Most congested specific day	Tue 13 Nov 2012
Total network length	517 km
Total network length highways	118 km
Total network length non-highways	400 km
Total vehicle kilometres	7 128 409 km



Stuttgart

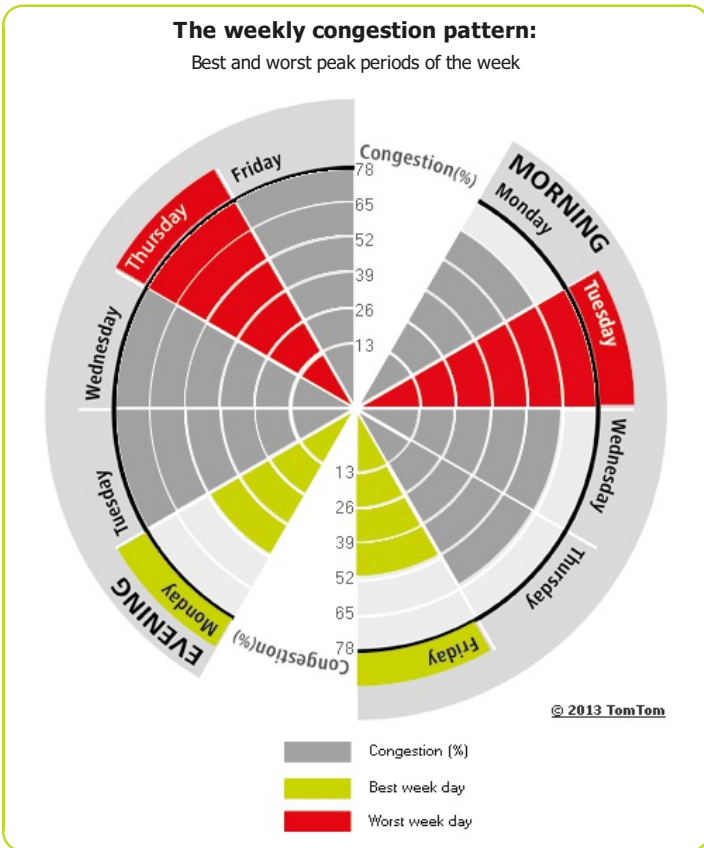


Congestion level

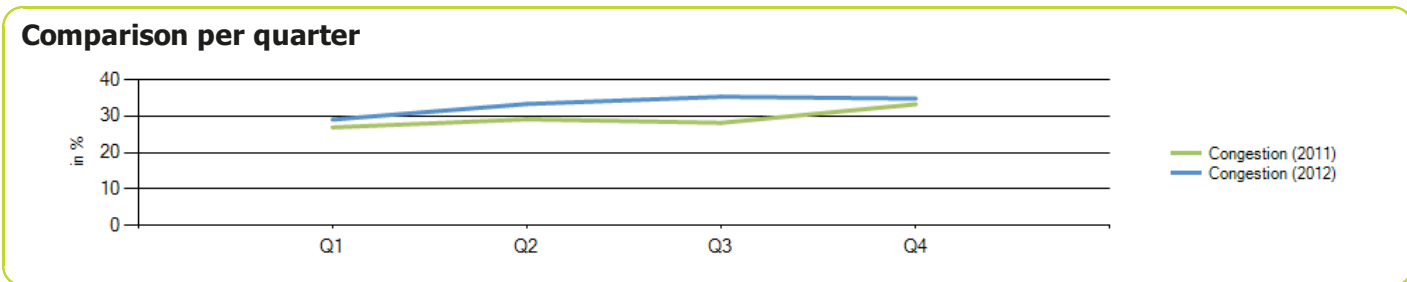
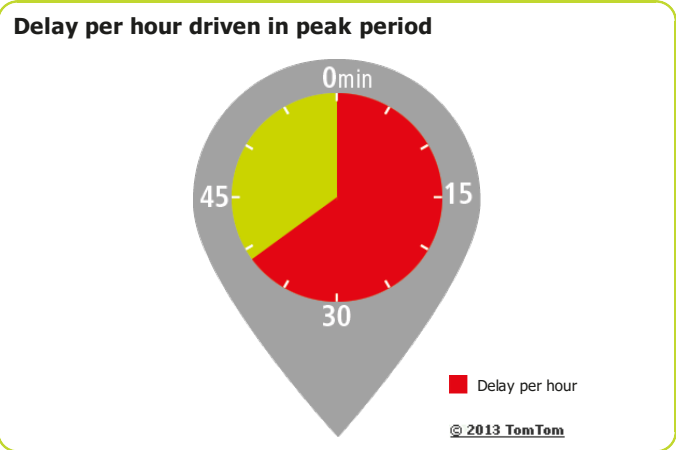
33%

Ranking

Ranking of city compared to continent	6/59
Congestion level on highways	32%
Congestion level on non-highways	34%
Delay per hour driven in peak period	38 min
Delay per year with a 30 min commute	89 h



Most congested specific day	Fri 20 Jul 2012
Total network length	758 km
Total network length highways	151 km
Total network length non-highways	608 km
Total vehicle kilometres	8 192 505 km



The Hague

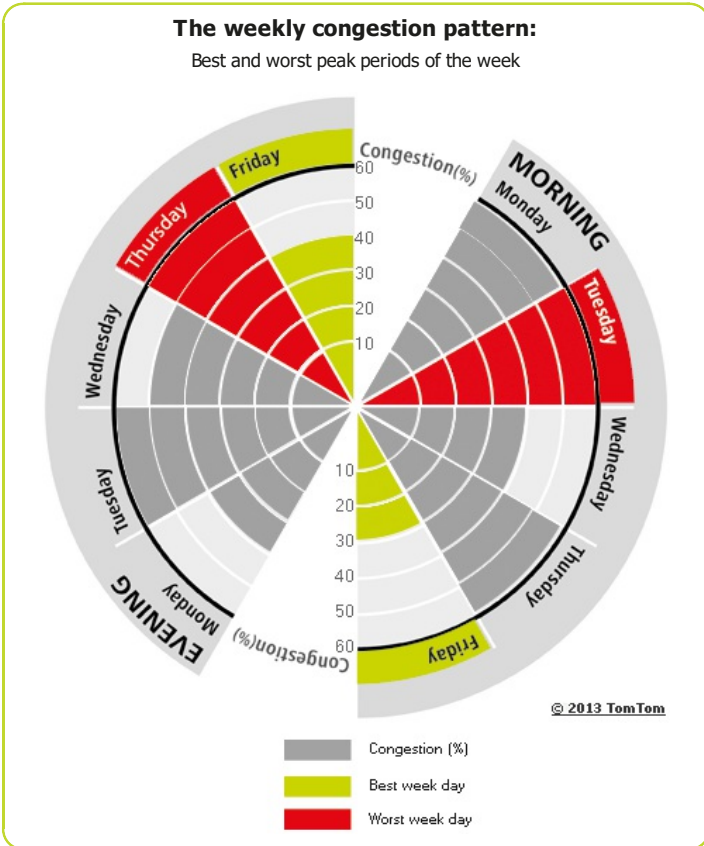


Congestion level

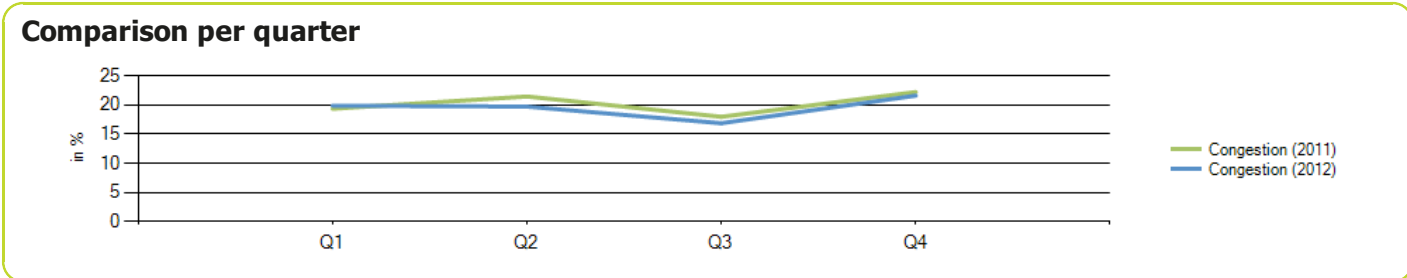
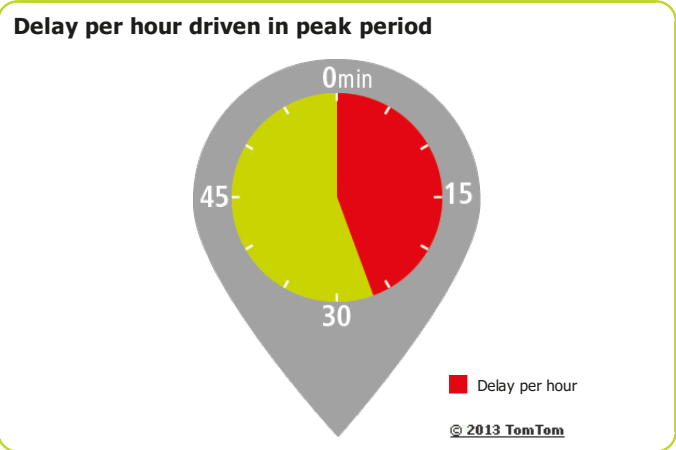
20%

Ranking

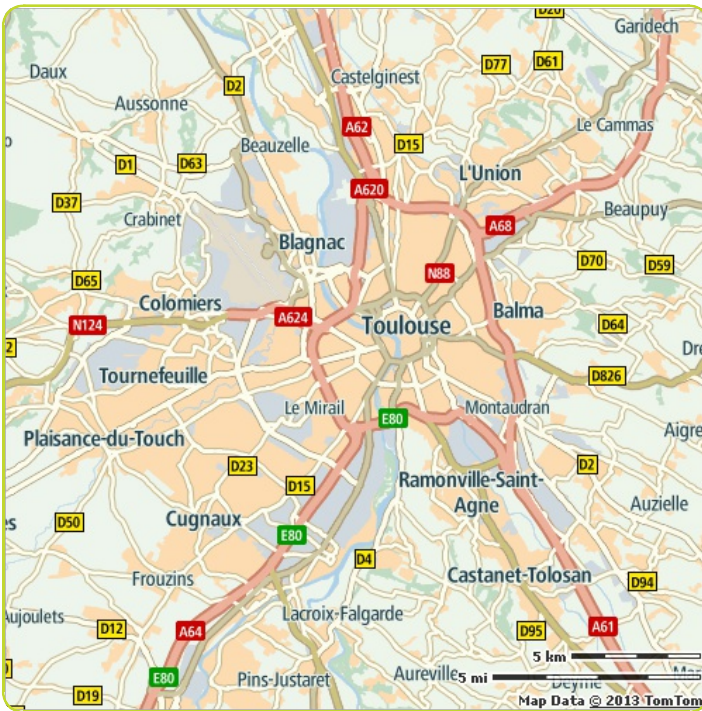
Ranking of city compared to continent	40/59
Congestion level on highways	11%
Congestion level on non-highways	27%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h



Most congested specific day	Fri 3 Feb 2012
Total network length	466 km
Total network length highways	70 km
Total network length non-highways	396 km
Total vehicle kilometres	25 476 248 km



Toulouse

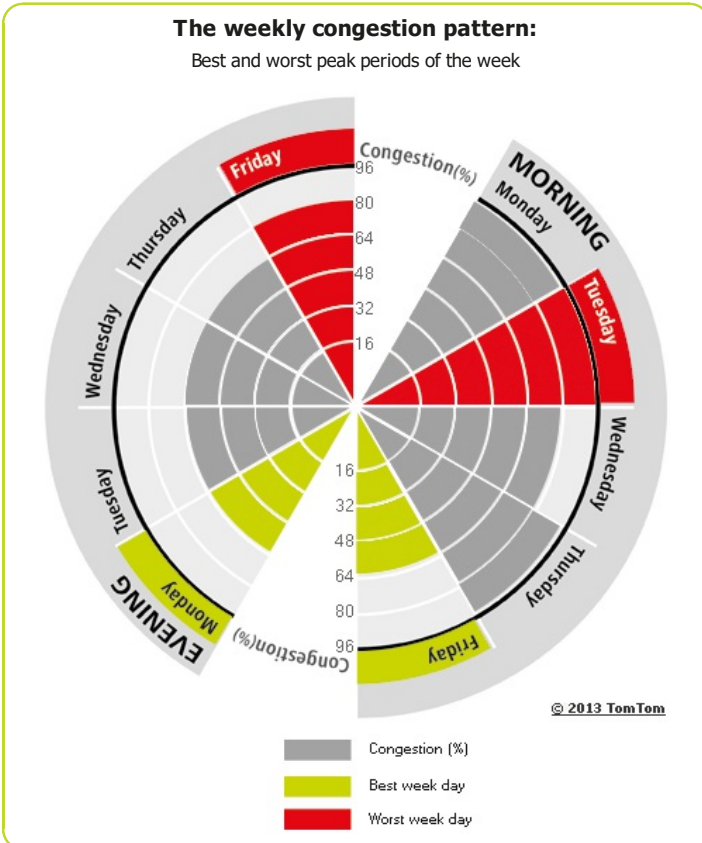


Congestion level

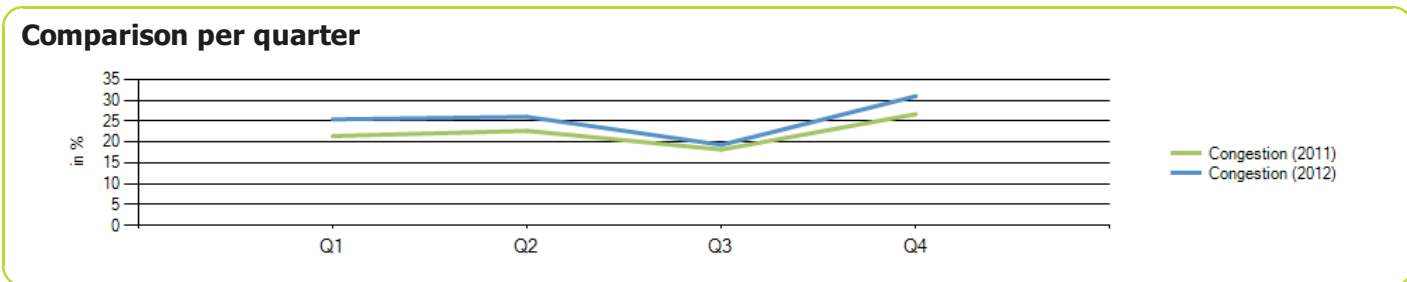
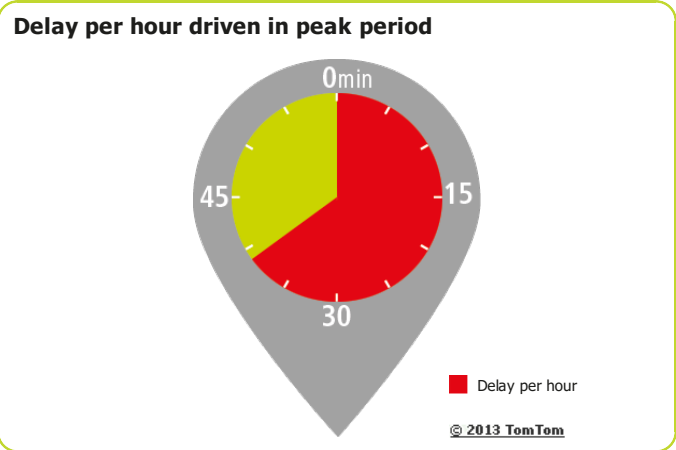
25%

Ranking

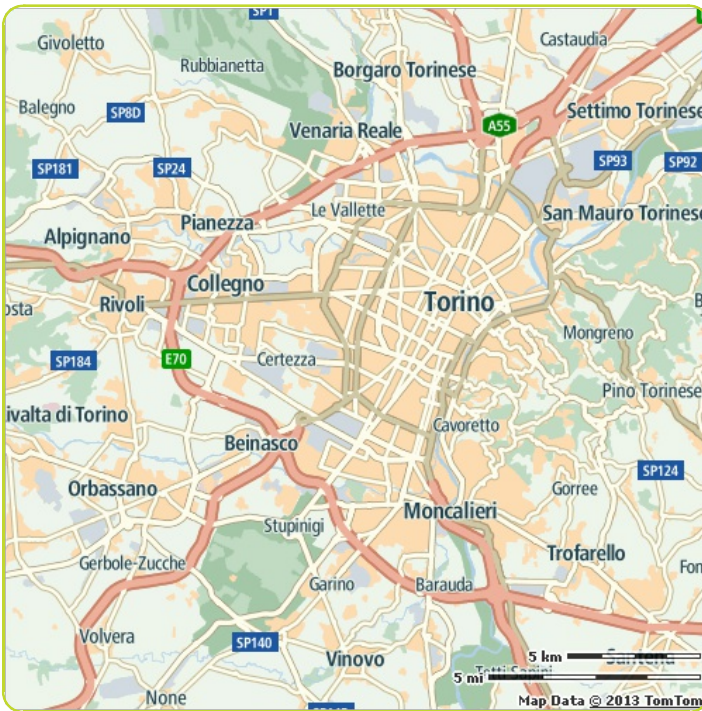
Ranking of city compared to continent	21/59
Congestion level on highways	20%
Congestion level on non-highways	32%
Delay per hour driven in peak period	39 min
Delay per year with a 30 min commute	90 h



Most congested specific day	Mon 21 May 2012
Total network length	1 185 km
Total network length highways	194 km
Total network length non-highways	991 km
Total vehicle kilometres	20 700 940 km



Turin

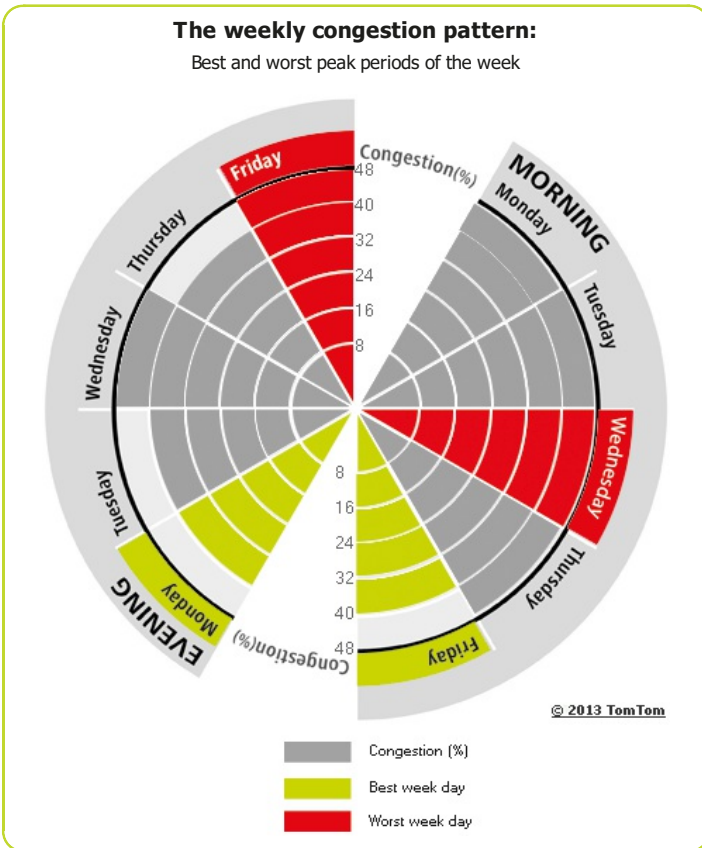


Congestion level

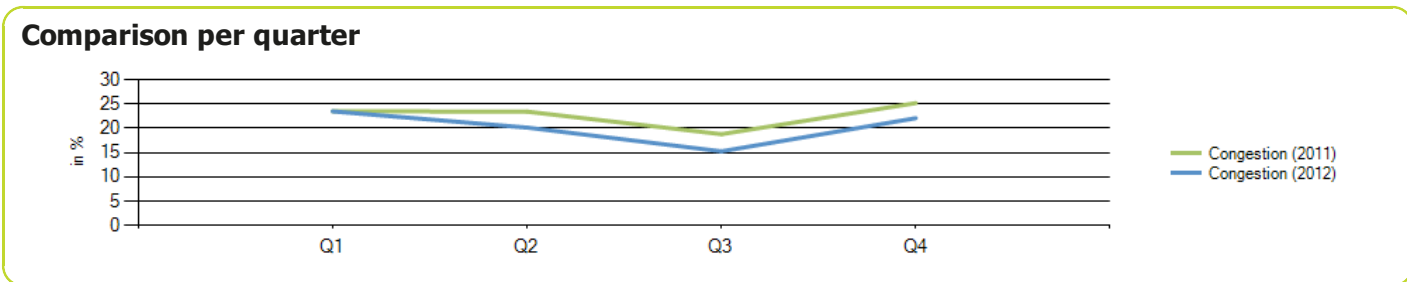
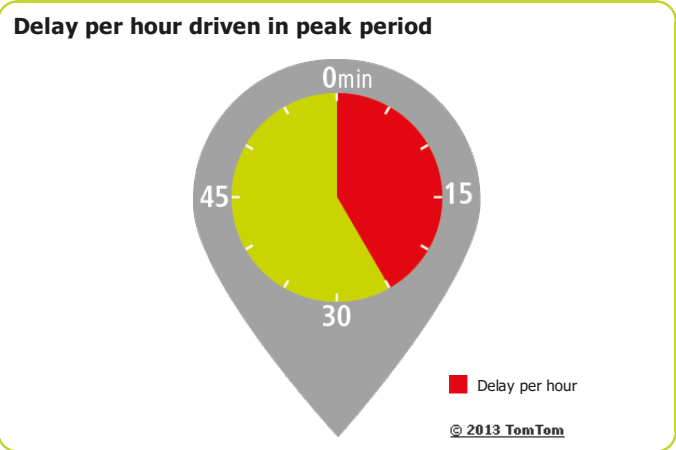
20%

Ranking

Ranking of city compared to continent	39/59
Congestion level on highways	10%
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



Most congested specific day	Wed 1 Feb 2012
Total network length	1 447 km
Total network length highways	143 km
Total network length non-highways	1 304 km
Total vehicle kilometres	15 279 057 km



Valencia

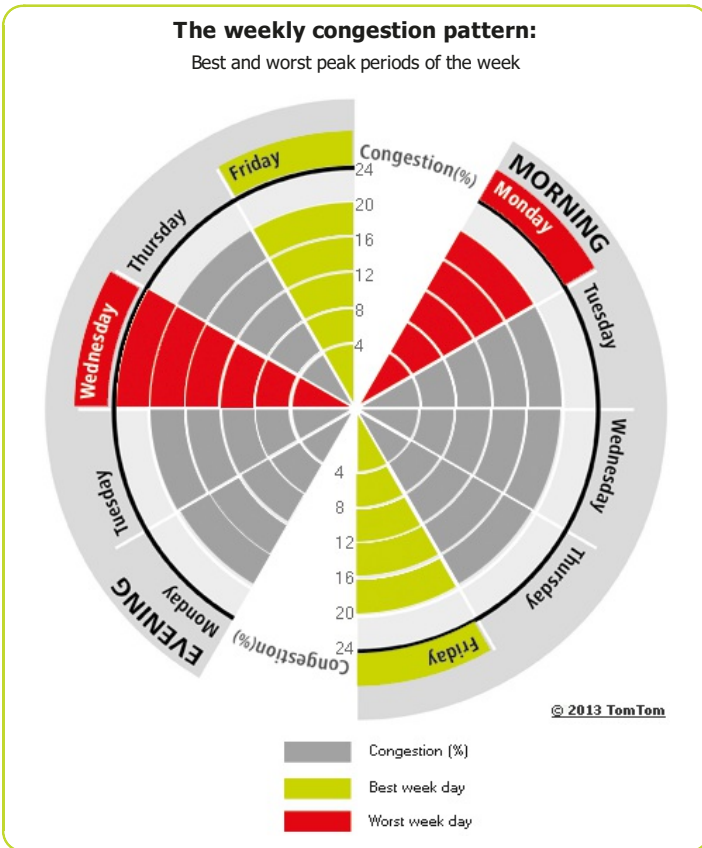


Congestion level

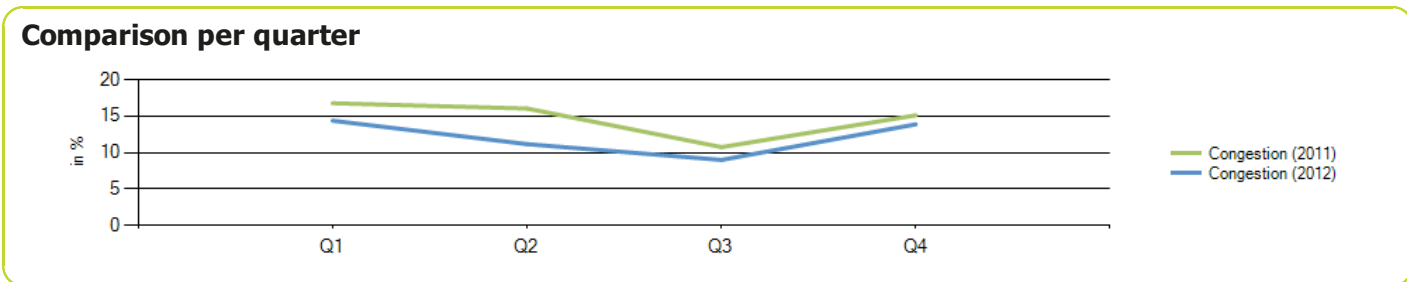
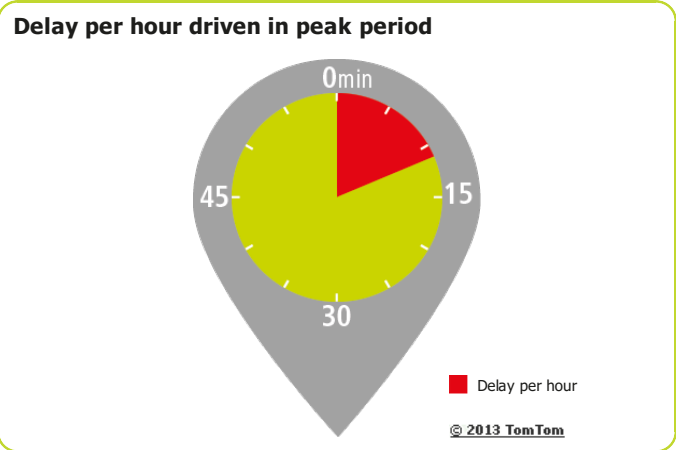
11%

Ranking

Ranking of city compared to continent	56/59
Congestion level on highways	5%
Congestion level on non-highways	19%
Delay per hour driven in peak period	11 min
Delay per year with a 30 min commute	35 h



Most congested specific day	Wed 5 Dec 2012
Total network length	831 km
Total network length highways	238 km
Total network length non-highways	593 km
Total vehicle kilometres	9 077 537 km



Vienna

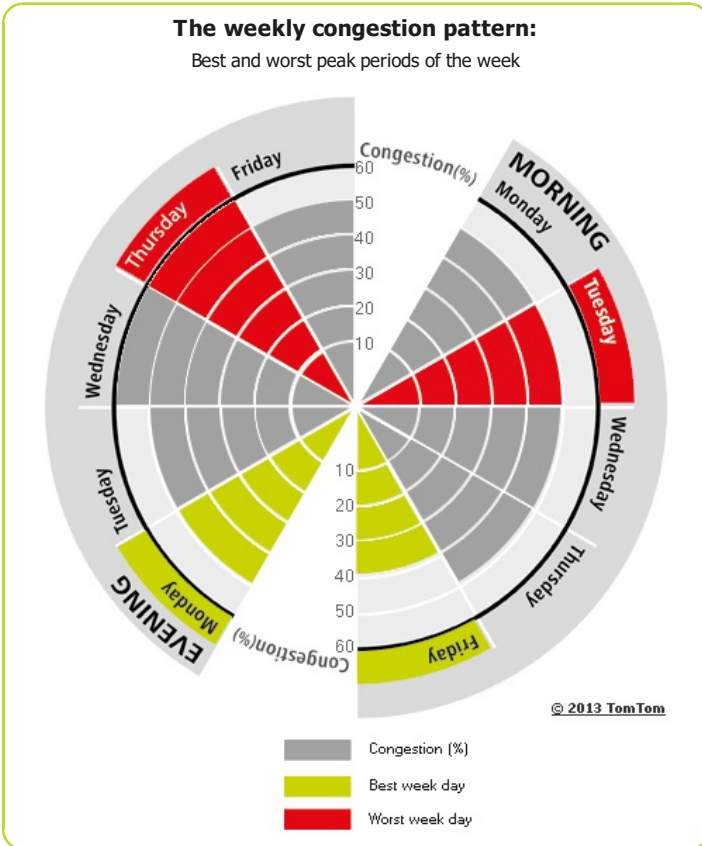


Congestion level

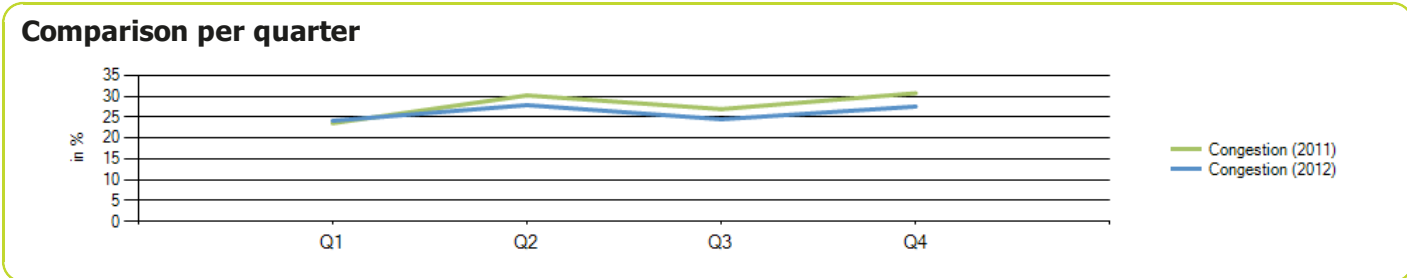
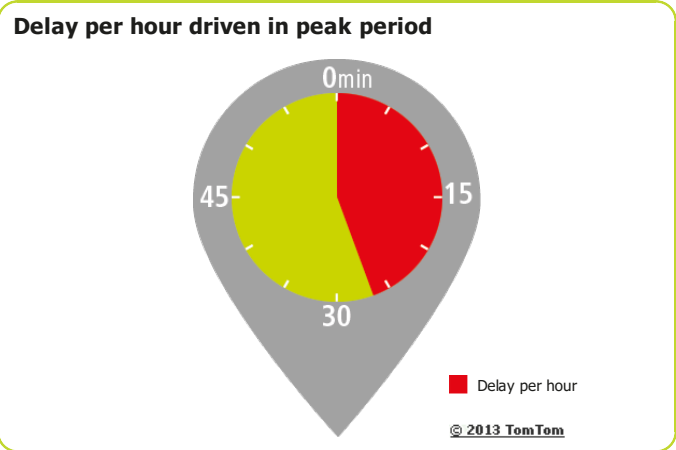
25%

Ranking

Ranking of city compared to continent	19/59
Congestion level on highways	17%
Congestion level on non-highways	32%
Delay per hour driven in peak period	27 min
Delay per year with a 30 min commute	71 h



Most congested specific day	Thu 25 Oct 2012
Total network length	1 314 km
Total network length highways	228 km
Total network length non-highways	1 085 km
Total vehicle kilometres	21 541 161 km



Warsaw

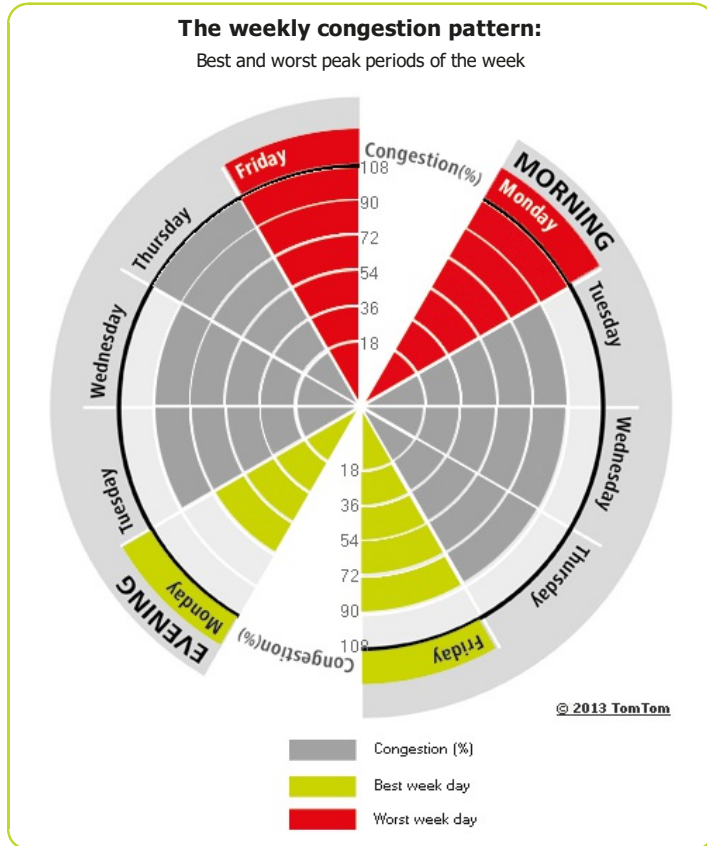


Congestion level

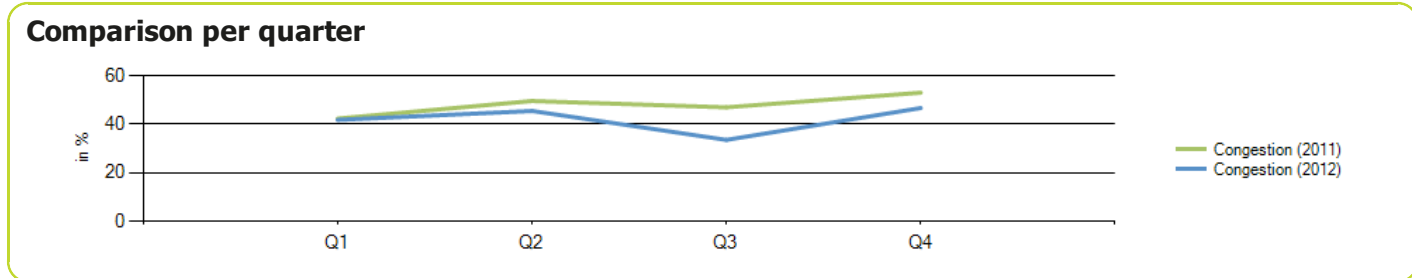
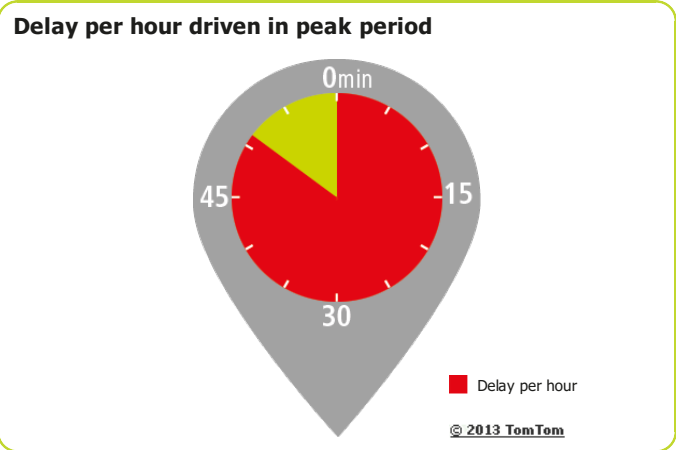
42%

Ranking

Ranking of city compared to continent	3/59
Congestion level on highways	39%
Congestion level on non-highways	46%
Delay per hour driven in peak period	51 min
Delay per year with a 30 min commute	105 h



Most congested specific day	Tue 18 Dec 2012
Total network length	1 005 km
Total network length highways	357 km
Total network length non-highways	648 km
Total vehicle kilometres	6 666 320 km



Zaragoza

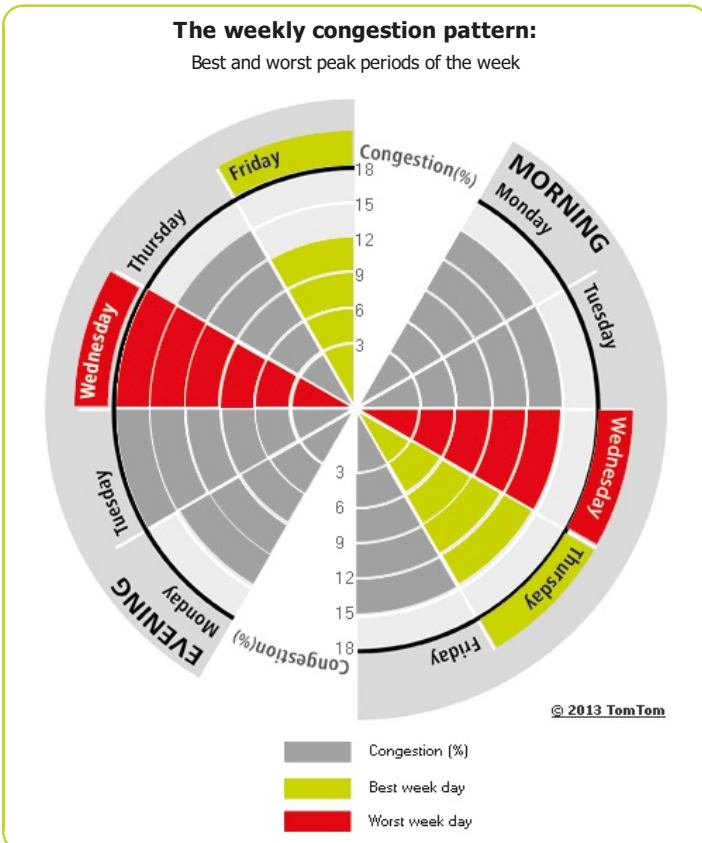


Congestion level

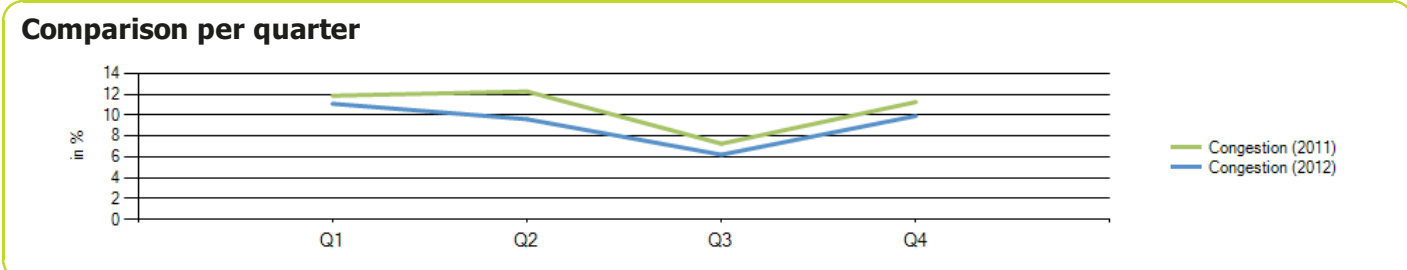
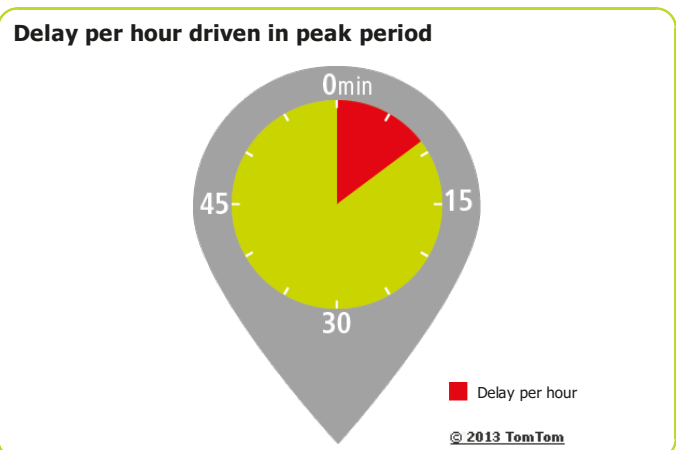
9%

Ranking

Ranking of city compared to continent	59/59
Congestion level on highways	0%
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



Most congested specific day	Thu 16 Feb 2012
Total network length	402 km
Total network length highways	124 km
Total network length non-highways	278 km
Total vehicle kilometres	4 864 470 km



Evaluated cities

Europe

Rank	City	Country	24/7	Morning peak	Congestion Level (%)		
					Evening peak	Weekdays	Weekend
1	Moscow	Russia	66	106	138	81	34
2	Istanbul	Turkey	55	80	125	59	45
3	Warsaw	Poland	42	84	88	50	19
4	Marseille	France	40	77	77	45	22
5	Palermo	Italy	39	64	64	44	25
6	Stuttgart	Germany	33	59	67	39	15
7	Paris	France	33	70	65	38	19
8	Rome	Italy	33	76	63	39	15
9	Hamburg	Germany	32	49	55	35	22
10	Brussels	Belgium	32	75	81	39	12
11	Dublin	Ireland	29	62	62	34	17
12	Stockholm	Sweden	28	62	70	33	14
13	Berlin	Germany	28	42	50	31	15
14	London	United Kingdom	27	56	55	31	18
15	Nice	France	27	41	54	30	17
16	Cologne	Germany	26	49	54	32	11
17	Lyon	France	26	58	56	30	16
18	Leeds-Bradford	United Kingdom	26	54	59	30	14
19	Vienna	Austria	25	43	50	29	12
20	Milan	Italy	25	70	55	31	10
21	Toulouse	France	25	76	56	29	11
22	Naples	Italy	25	40	45	28	15
23	Luxembourg	Luxembourg	25	52	59	30	9
24	Nottingham	United Kingdom	24	59	52	28	12
25	Budapest	Hungary	24	46	45	28	13
26	Manchester	United Kingdom	24	62	59	28	11
27	Munich	Germany	24	49	42	27	13
28	Prague	Czech Republic	23	52	40	28	8
29	Oslo	Norway	23	61	75	27	8
30	Strasbourg	France	23	41	64	27	9
31	Frankfurt am Main	Germany	22	48	41	26	9
32	Birmingham	United States	22	46	45	25	10
33	Liverpool	United Kingdom	21	38	39	24	14
34	Lille	France	21	53	48	25	9
35	Newcastle-Sunderland	United Kingdom	21	41	43	23	12
36	Lisbon	Portugal	20	45	51	24	9
37	Nantes	France	20	52	49	24	10
38	Genoa	Italy	20	37	38	23	12
39	Turin	Italy	20	44	39	23	10
40	The Hague	Netherlands	20	46	45	23	12
41	Rotterdam	Netherlands	19	38	55	23	8
42	Barcelona	Spain	19	46	38	23	8
43	Gothenburg	Sweden	19	33	52	22	9
44	Glasgow	United Kingdom	18	38	42	21	11
45	Ruhr region west	Germany	18	32	35	21	8
46	Helsinki	Finland	18	35	40	20	9
47	Porto	Portugal	18	31	39	20	10
48	Copenhagen	Denmark	17	42	34	20	8
49	Amsterdam	Netherlands	17	35	39	20	8
50	Ruhr region east	Germany	16	29	30	19	7
51	Palma de Mallorca	Spain	16	25	22	18	8
52	Madrid	Spain	14	39	29	17	4
53	Bern	Switzerland	13	24	38	16	3
54	Seville	Spain	13	24	20	15	6
55	Murcia	Spain	12	18	15	14	5
56	Valencia	Spain	11	18	19	13	6
57	Malmö	Sweden	10	14	18	11	7
58	Málaga	Spain	10	16	12	11	5
59	Zaragoza	Spain	9	13	13	11	4

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 kilometres.
Total network length highways	Total length of the evaluated network in kilometres for FRC0 and FRC1 only.
Total network length non-highways	Total length of the evaluated network in kilometres for FRC2, FRC3 and FRC4 only.
Total vehicle kilometres	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 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.