



Index

Preface	3
Summary	4
Randstad Holland in the top 20 of European urban regions	6
1. Population	8
2. Economy	10
3. Labour market	16
4. Mobility	22
5. Business climate	28

Preface



Randstad Holland in The Netherlands

- Randstad Holland
- Western Netherlands
- large city
- other city
- international airport
- international seaport

Randstad Holland, as a region, is located centrally in the economic heart of Europe, in the western part of the Netherlands. The functionally highly differentiated area is the motor of the economy, knowledge industry, innovation, business and financial services and tourism. The four Randstad provinces (Noord-Holland, Zuid-Holland, Utrecht and Flevoland) collaborate in Europe as Randstad Region to strengthen the international competitive position and to maintain the high quality of life in the region. By linking economically powerful regions, and by creating strong transnational communities, the Randstad provinces have acquired excellent experience with economic matters.

The last five years, the angle of approach was primarily economic. However, in the light of the new Europe 2020 strategy, the focus is currently shifting to figures beyond Gross Domestic Product. Figures related to the quality of life and the quality of living and working have become more important. And therefore, in the coming year, we will increase the number of these figures for the Randstad, and strive for the availability and comparability of such figures on a regional European scale.

Statistics are important to measure progress made in these areas. Hence, the significance of producing an annual Randstad monitor. I'm happy to present you the sixth edition of this annual monitor. The monitor shows the development of the economy and the quality of life in Randstad Holland, and it links that development to 19 comparable metropolitan regions in Europe. By doing this, the monitor will provide you with the situation of the Randstad in the year 2009. Regio Randstad is pleased to offer you this overview.

H.M.C. Dwarshuis - Van de Beek
Chair of the executive board of the Randstad Region Europe
Member of the provincial Executive of the
Province of Zuid-Holland,



Summary

At the start of this year, TNO produced a new version of the [Randstad](#) monitor. The 2010 version is the sixth edition. The first was published for the [Randstad](#) Region in 2004.

The [Randstad](#) Monitor provides a cross-section of the data assembled by TNO, on the basis of public sources published by CBS, Eurostat and the OECD. [Randstad](#) Holland is compared with 19 other urban European regions, and with the EU27 average. The approach is primarily economic. However, to a limited extent, the monitor also focuses on such aspects as quality of life and quality of living and working. The regions the [Randstad](#) is compared with, have not been randomly selected. All twenty are regions with the same geographical demarcation – an urban centre surrounded by an area of lower population density. The monitor provides a picture on the basis of figures from the year 2008.

The current deeply routed economic crisis has the appearance of a downfall in the business cycle. The effects of the credit crunch show different results in the urban regions and countries. An analysis shows that the fast growers of the last few years are dealing with decreased growth levels. This is only the case for Ireland. For the other countries and regions the downfall is quite random.

The most important conclusion from the monitor is that on balance, the development of [Randstad](#) Holland is improving. With an economic growth of 1.6 percent over 2008 [Randstad](#) Holland reached fifth place. This is significantly higher than in the previous years. Other urban regions have been hit by the crisis in 2008: Copenhagen, Dublin, London, Stockholm, Madrid and Barcelona have fallen back compared with the average annual growth in GRP of 0.8 percent of big cities.

Unemployment in 2008 in the [Randstad](#) reached a very low level; according to the definition of Eurostat the lowest of the twenty most important European urban regions. The gross participation, not corrected for part time work, is the highest of all European cities. The economy of the Netherlands and the [Randstad](#) is not one of labour productivity, but of capacity (quality). [Randstad](#) is in eleventh place with regard to growth figures of labour productivity, which is relatively a lower position than the growth in GRP.

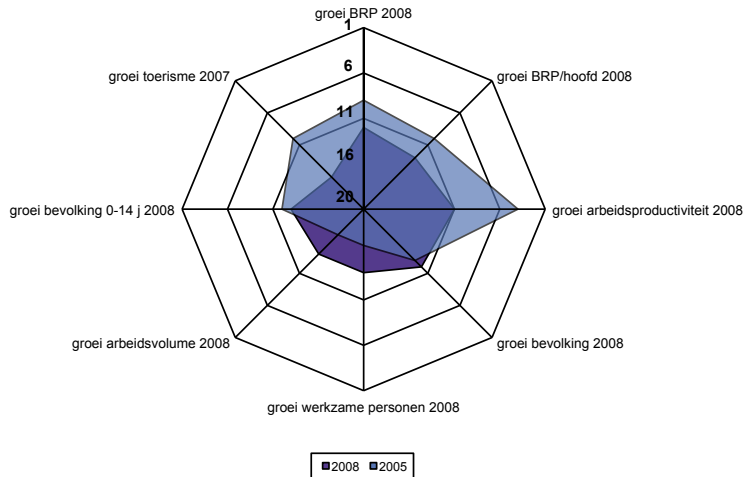
In addition, it is important to mention the investments in Research & Development and in innovation as part of GRP. In 1996 these were still 2.2 percent, like the average of the urban regions. In 2006 investment was only 1.6 percent, which is 0.3 percent point less than the average of urban regions. However, this is an overall tendency in Europe, and a relocation of R&D investments of North-West Europe to Eastern European countries. Stockholm, Paris, Munich, Berlin and Vienna have higher shares in private R&D investments. The same trend can be found in the patent applications, employment in the high tech industry and in knowledge intensive services. In all these fields [Randstad](#) scores relatively below average.



The top five positions in the list of 20 large urban regions are still occupied by the same category of regions, namely Dublin, Prague, Budapest, Madrid and London. With the exception of London and Dublin, these are urban regions that have only joined the EU in the recent past. These regions are therefore in short still enjoying the advantages of becoming part of a larger market. The bottom five positions on the list are occupied once again by the same group of German-speaking urban regions: Berlin, the Ruhr conurbation, Frankfurt/Main, Hamburg and Vienna. The European core area has demonstrated the lowest growth. Germany is suffering from industrial restructuring, also influenced by new competitors from Eastern Europe.

The key data from the monitor have been brought together in the Star graph. The Gross Regional Product per head of the population indicates how much all businesses and institutions in an area produce. By expressing this amount as a unit per head of the population, it is possible to compare areas of different sizes with one another. Labour productivity indicates how much money is earned per year by a person in employment in a 40-hour working week. Labour participation indicates what proportion of the potential working population is in paid employment. This indicator takes no account of the number of hours worked per week or per year. The attractiveness of an area is a yardstick for the quality of the establishment climate.

Randstad in de Top 20 van Europese stedelijke regio's



Reading this document

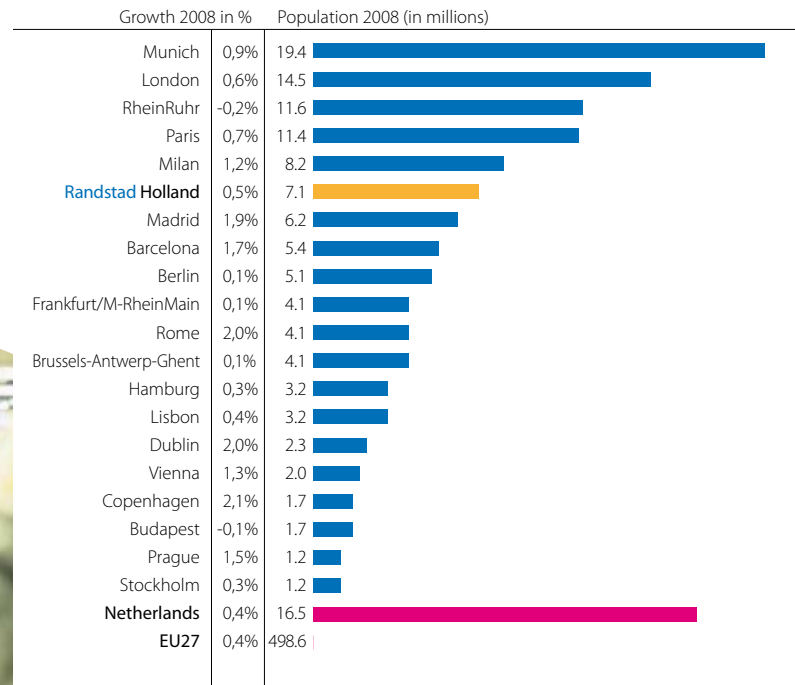
The following chapters provide an overview of the development of the **Randstad** according to the key economic indicators. Paragraphs one to five chart out the performance of the **Randstad** as compared with the 20 competing regions in Europe. In the concluding paragraph, the performance of the **Randstad** is demonstrated making use of the indicators used by the EU in measuring progress in terms of strategy for jobs and growth, the so-called Lisbon Agenda.

1.1 Population

If we look at population size, **Randstad** Holland occupies a sixth place with more than 7.1 million inhabitants. Since 2003, population growth in the area has fallen considerably. Regions with the highest number of inhabitants are Munich, London, RheinRuhr, Paris and Milan. When it comes to population growth, the **Randstad** has a position somewhere in the middle. The fastest growing regions in 2008 were Copenhagen, Rome, Dublin and Madrid. In most regions, population growth is more distinct in the surrounding countryside than in city centres. This suggests continued suburbanisation.



Ranking of European urban regions according to population growth 2008 in percent and according to population size 2008

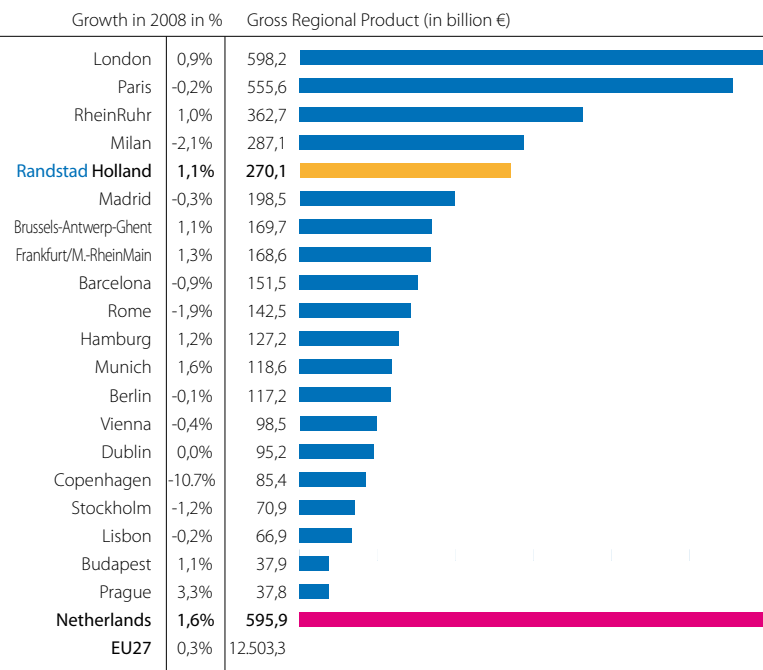


Source: TNO based on OECD/Eurostat/CBS

2.1 Gross Regional Product

Measured according to Gross Regional Product (GRP), **Randstad Holland**, at 270.1 billion euro, in 2008 reached a stable fifth position in the ranking of European urban regions. Growth in 2008 was 1.1 percent. Over the period 1995-2008, GRP in **Randstad Holland** grew on average by 2.2 percent per year. This is 0.2 percent higher than the average of all urban regions and as high as the growth rate of the Netherlands. Nevertheless, the growth is 0.7 percent lower than in 2007. The conditions for generating positive growth are high labour participation, low unemployment, a level of education above the EU average and international (air)ports.

Ranking of European urban regions according to growth in Gross Regional Product 2008 in percent, and according to the size of Gross Regional Product in billion euro



Source: TNO based on OECD/Eurostat/CBS

2.2 Labour productivity

Labour productivity is a yardstick that indicates how much value is added to the economy for a person in paid employment. The development indicates the extent to which the production of goods and services has increased in efficiency. Overall labour productivity for the EU27 in 2008 amounts to 64,700 euro per FTE. The list of 20 large urban regions scores considerably higher at 77,800 euro. **Randstad Holland** performs above average at 90,200 euro. Comparable regions are Frankfurt/Main, Hamburg and Vienna. Top regions with a productivity of more than 100,000 euro are Paris, Munich, Copenhagen, and Stockholm. Low scores were achieved by Budapest, Prague, Lisbon and Barcelona.



Ranking of European urban regions according to average annual growth 2008 in percent, and according to labour productivity (Gross Regional Product per man year)

average Annual growth (%) x € 1.000 per full time equivalent

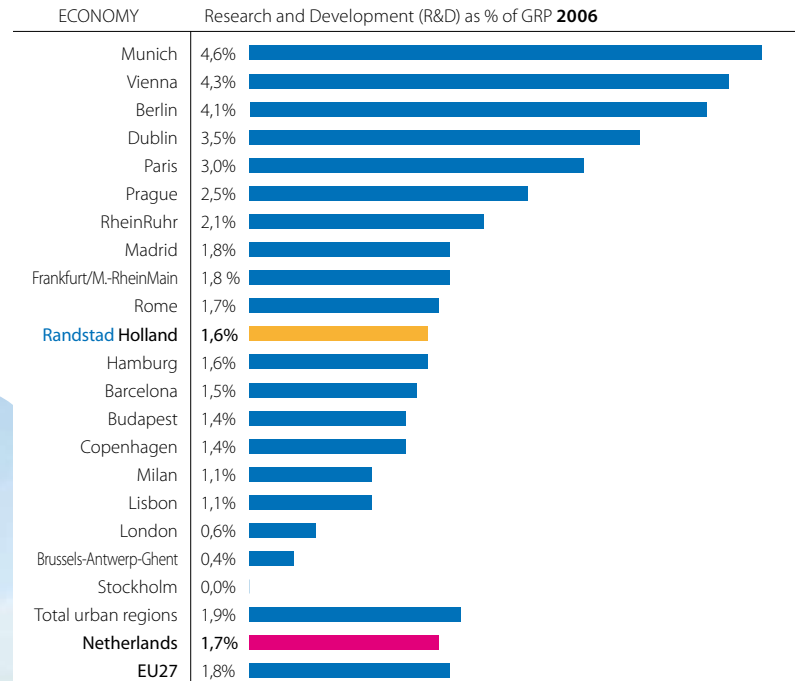
Region	average Annual growth (%)	x € 1.000 per full time equivalent
Paris	2,5%	113,6
Munich	2,2%	107
Copenhagen	0,7%	106,3
Stockholm	0,5%	100,3
Vienna	1,4%	97,9
Brussels-Antwerp-Ghent	0,2%	97,2
Hamburg	1,4%	92,9
Randstad Holland	1,3%	90,2
Frankfurt/M.-RheinMain	0,4%	89,9
Dublin	0,6%	85
RheinRuhr	1,7%	76,3
London	0,9%	71,6
Milan	2,3%	68
Rome	0,6%	67,2
Berlin	3,5%	63,9
Madrid	1,6%	60,9
Barcelona	3,6%	58
Lisbon	2,3%	42,8
Prague	2,3%	36,6
Budapest	4,5%	32,2
Total urban regions	1,5%	77,8
Netherlands	1,4%	87,5
EU27	1,4%	64,7

Source: TNO based on OECD/Eurostat

2.3 Research & Development (R&D)

Expenditure on research & development (R&D) in the EU27 as a whole amounts to 1.8 percent of GRP. In the various regions, major shifts are taking place at present according to this indicator. In **Randstad** Holland, the percentage spent on R&D fell from 2.2 percent in 1995 to 1.6 percent in 2006. This is lower than the average in the EU27 and lower than the average of the large urban regions. Regions with high expenditure are Munich, Vienna, Berlin, Dublin, and Paris. At the bottom of the list are London, the cities in the Flemish Diamond and Stockholm.

Ranking of European urban regions according to expenditure on Research & Development as a percentage of GRP, level 2006



Source: Eurostat edited by TNO



3.1 Employment

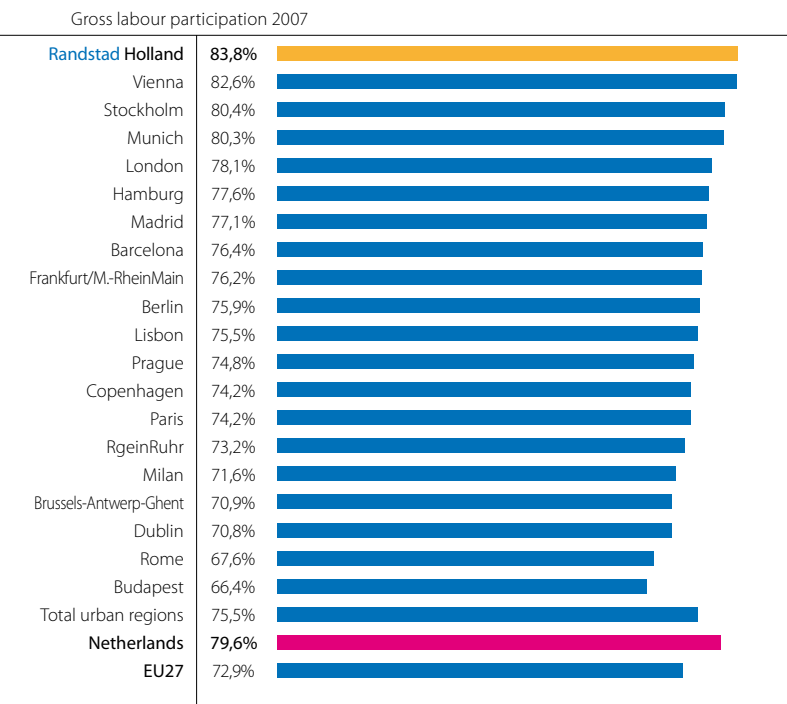
When it comes to growth in employment, the **Randstad** is in line with other regions. It occupies the seventh position. The five regions with higher growth in employment rates are Madrid, Dublin, Barcelona, Budapest and London. With the exception of London and Dublin, these are regions where entry to the EU has had a favourable effect, mainly because of lower wage costs. This does not apply for London; London is characterised by a flexible labour market where immigration ensures high supply levels and cheap labour. Heavy demand was generated in London during the at that time still smoothly-running (financial) service economy.

3.2 Labour participation

(Gross) labour participation in the **Randstad** is favourable: according to the Eurostat definition, it is now at 83.8 percent of the potential working population, as compared with 74.2 percent in 1999. **Randstad** is in first place, followed by Vienna (82.6 percent) and Stockholm (80.4 percent), and also Munich has a participation rate above 80 percent. The participation rates of the **Randstad** result from the huge volume of part-time employment in the economy of the Netherlands.



Ranking of European urban regions according to gross labour participation in 2008



Source: TNO based on OECD/Eurostat



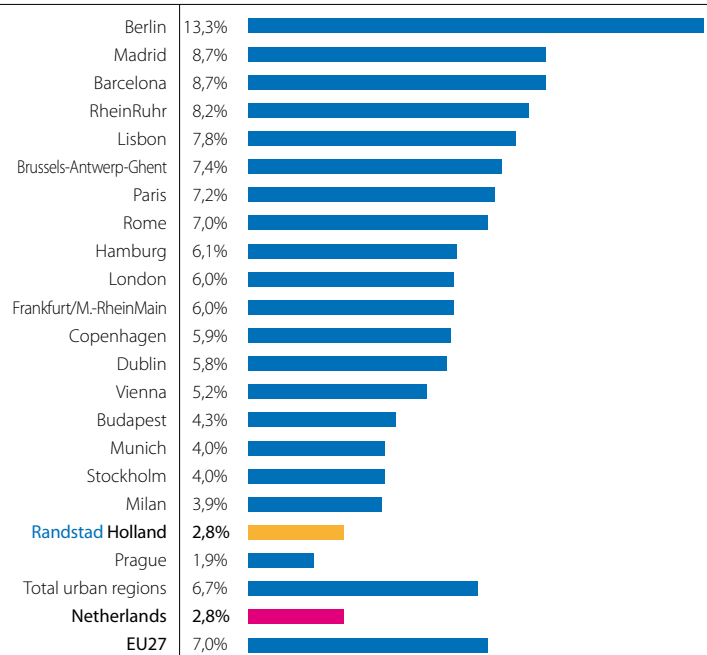
Gross labour participation = the number of people in work and searching for work as a percentage of the working population (i.e. between the ages of 15 and 64 years)

3.3 Unemployment

Together with the percentage in Prague (1.9 percent), unemployment in the **Randstad** is the lowest of the 20 large urban regions (2.8 percent). The measured unemployment level at 2.8 percent does, however, include a high percentage of long-term unemployed. At the same time it suggests that the labour market is tight. High percentages of unemployment are found in Berlin (13.3 percent), Madrid, Barcelona, Brussels-Antwerp-Ghent and Lisbon.



Ranking of European urban regions according to unemployment as a percentage of the working population in 2008



Source: TNO based on OECD/Eurostat

3.4 Education level

The level of education is an important yardstick for the future growth potential of a region. In the **Randstad**, 33.6 percent of the working population in employment is higher educated. This percentage is above the average of the urban regions, at 31.8 percent. Regions with higher percentages are London, Paris, Madrid, Copenhagen, Stockholm, and the cities of the Flemish Diamond. The percentage of lower educated, at 15.8 percent Milan and Rome at 21.0 percent. On the top of the list, are London at 43.7 percent and Paris at 41.0 percent. By comparison, the EU27 average is 25.2 percent.

Ranking of European urban regions according to education as a percentage share of the total employed working population in 2008












	High	Average	Low
	Education level (%)		
London	43,7%	38,7%	17,7%
Paris	41,0%	35,0%	24,1%
Madrid	40,5%	28,0%	31,5%
Copenhagen	39,4%	39,4%	21,2%
Stockholm	37,6%	48,9%	13,5%
Flemish Diamond	37,1%	39,3%	23,6%
Dublin	36,3%	39,2%	24,4%
Berlin	34,5%	48,9%	16,6%
Randstad Holland	33,6%	41,9%	24,5%
Barcelona	31,2%	25,7%	43,0%
Munich	30,1%	55,4%	14,4%
Budapest	29,5%	60,4%	10,1%
Prague	28,4%	68,2%	3,4%
Hamburg	26,3%	55,1%	18,6%
Frankfurt/Main	24,4%	58,0%	17,6%
Vienna	23,9%	55,7%	20,4%
RheinRuhr	23,6%	57,5%	18,9%
Lisbon	22,0%	20,9%	57,1%
Rome	21,0%	49,4%	29,7%
Milan	15,8%	46,6%	37,6%
Urban regions	31,8%	42,6%	25,6%
Netherlands	30,3%	43,8%	25,9%
EU27	25,2%	49,2%	25,6%

Source: TNO based on Eurostat/OECD

4.1 Air traffic: passenger traffic and air freight

The number of passengers travelling via Schiphol decreased in 2008 by -0.8 percent, equal to the average of the 10 largest airports in Europe (-0.8 percent in 2008). The total number of passengers flying via Schiphol amounted to 47.4 million. The number of passengers decreased for almost all regions, except from Rome, Munich and Paris.











Passenger traffic at the largest airports in Europe according to percentage growth and in millions passengers in 2008

Air traffic	Growht 2008	Passenger traffic x million, 2008
London Heathrow	-1,4%	66,9 
Paris Charles de Gaulle	1,3%	60,7 
Frankfurt/Main	-1,2%	53,2 
Madrid	-2,5%	50,8 
Amsterdam	-0,8%	47,4 
Rome Fiumicino	6,9%	35,1 
Munich	1,4%	34,4 
London Gatwick	-2,8%	34,2 
Barcelona	-7,9%	30,2 
Paris Orly	-0,9%	26,2 
Top-8 Airports	-0,8%	439,2 

Source: International Airport Council/Schiphol

In terms of air freight, Schiphol remains the third largest airport in Europe, but in terms of growth it is number six. Goods transhipment in the port of Rotterdam grew by 3.5 percent in 2008 to 421 million tonnes. Rotterdam endures competition of Hamburg and Antwerp, which ports are showing higher growth rates than Rotterdam. In terms of container transhipment, the port of Rotterdam has more competition; volumes decreased in Rotterdam by -0.1 percent to 10.784 thousand TEU compared with an average of 2.0 percent. Hamburg and Antwerp have Rotterdam in their sights.

Freight traffic (total incoming and outgoing including transhipment) at the ten largest airport hubs in Europe according to percentage growth and in thousands of tonnes in 2008

Freight traffic	Growht 2008	Thousands of tonnes 2008
Paris	-0,7%	2039 
Frankfurt/Main	-2,6%	2021 
Amsterdam	5,4%	1610 
London Heathrow	4,5%	1314 
Luxemburg	14,4%	860 
Brussels	7,9%	762 
Cologne	3,0%	719 
Liege	20,4%	490 
Milan	16,2%	471 
Madrid	-	-
Top-10 Airports	-3,6	10296 

Source: International Airport Council/Schiphol

4.2 Internet traffic

In terms of Internet traffic, AMSIX in Amsterdam maintains its leading position in Europe with a volume of 554.9 Gigabit per second. This means a big increase compared with 2007, when Amsterdam was also leading with a volume of 371.7 Gigabit per second. Frankfurt also developed strongly, to a volume of 523.9 (Gigabit per second). London seems to have given up the race. Moscow appears to become the Internet centre for Eastern Europe.

Internet traffic (gigabit per second, daily average) via exchanges in Europe, 2004-2009

	2004	2005	2006	2007	2008	2009
	June	Nov	Nov	Dec	Dec	Dec
Gbit per sec (daily average)						
Amsterdam	15,2	80,2	130,5	243,4	371,7	554,9
Frankfurt/Main	14,2	31,2	62,6	155,6	299,0	523,9
London	29,6	56,0	77,1	226,6	235,5	364,0
Moscow	-	1,8	7,1	7,0	39,7	137,3
Stockholm	-	21,6	32,8	70,2	87,1	117,9
Budapest	-	12,9	21,9	44,5	56,8	86,2
Madrid	12,1	-	-	75,0	84,1	82,0
Prague	-	4,5	11,5	21,0	42,0	73,7
Paris	13,7	8,1	-	11,0	36,0	48,0
Milan	3,1	5,4	11,5	15,6	17,2	30,5
Vienna	3,1	6,1	7,8	10,2	16,2	19,4
Oslo	-	5,8	8,4	7,0	12,0	15,6
Helsinki	-	7,9	7,9	10,9	13,9	14,3
Athene	0,1	0,2	1,0	2,4	8,1	13,7
RheinRuhr	-	-	-	-	-	12,1
Brussel	1,9	0,0	4,1	5,5	7,7	9,5
Copenhagen	-	-	-	-	-	7,0
Rome	0,4	0,8	1,9	2,8	6,4	5,6
Lisbon	-	-	-	-	-	4,9
Munich	-	-	-	-	-	3,7
Dublin	0,1	0,1	0,4	0,4	1,3	2,5
Berlin	-	-	-	-	-	2,5
Hamburg	-	-	-	-	-	1,9
Zurich	-	2,2	0,3	2,0	3,6	1,3
Geneve	-	0,9	0,2	0,3	0,7	0,5
Barcelona	0,3	0,1	0,3	0,1	0,3	0,5

Source: different internet exchanges, via ams-ix and eur-ix



4.3 Tourism

For years already, London has been the most attractive region for tourists, followed by Paris, Rome and Dublin. The top 10 is quite stable, with an eleventh place for Amsterdam. Over the period 1995-2008 Rome, Berlin, Barcelona, and Prague showed the highest growth rates. Amsterdam developed below average at 2.3 percent. Tourism in Amsterdam shrank at 6 percent. With the number of conferences, the **Randstad** occupies a leading international position. The entire conference market somewhat decreased while the market in **Randstad** Holland shrank more clearly. In 2008, Paris, Vienna, Barcelona, Berlin and Budapest, overtook the **Randstad** in terms of the number of international conferences.



Number of overnight stays in overnight accommodation, total and foreign guests, in European cities (2008) x million, average annual growth 1995-2008 and the growth in 2008.

	2008	2008
Total	Million	%
London	126,2	3,0%
Paris	35,1	-1,7%
Rome	31,2	20,4%
Dublin	25,4	5,6%
Berlin	17,8	2,7%
Madrid	15,8	3,6%
Barcelona	12,5	-8,3%
Prague	12,2	-0,2%
Vienna	11,0	5,6%
Munich	9,8	3,3%
Amsterdam	8,3	-6,0%
Hamburg	7,7	4,4%
Milan	7,4	7,9%
Stockholm	6,0	6,9%
Budapest	6,0	-2,4%
Lisbon	6,0	-2,2%
Florence	5,8	0,9%
Frankfurt/Main	5,4	0,9%
Brussels	5,3	3,4%
Copenhagen	4,8	-2,4%
Average Top20	359,7	3,2%

5.1 Real estate market

In London, Brussels and Dublin, the first signs have become visible of a slackening of the real estate market. Figures up to and including the third quarter of 2009 demonstrate a fall in rent prices. In Amsterdam, the average rent price rose moderately by 0.8 percent (2008/Q3- 2009/Q3) to 335 euro. Non-occupancy in Amsterdam in 2009 amounted to 14.6 percent of the rentable floor surface. This is still higher than the average of 11.3 percent for the urban regions. With a downturn in the economy in prospect, this is not a positive position.

Industry and traffic are responsible for the emission of fine dust and nitrous oxides. These substances can reduce life expectation in a region, and as such influence the quality of the living environment.

5.2 Nitrogen dioxide (NO₂)

Oxides are measured according to nitrogen dioxide (NO₂). **Randstad** Holland achieved an average score of 30 µg/m³ in 2007. Milan has high concentrations of nitrous oxides, as does Rome, London, Paris, Frankfurt/Main, Munich, Lisbon, the Flemish Diamond, Vienna and Budapest have higher concentrations than **Randstad** Holland. There are low concentrations of NO₂ in Hamburg, Brussels, Berlin, Copenhagen, Stockholm and Dublin.

5.3 Fine dust (PM₁₀)

Fine dust is measured according to the concentration PM₁₀ (depending on the cross-section of dust particles in a micrometer, PM₁₀ or PM_{2.5} are measured). **Randstad** Holland has below average concentrations of PM₁₀. This also applies for the Flemish Diamond. Munich, Vienna, and Milan also achieve a relatively unfavourable score in this field. Prague has very low concentrations of PM₁₀. In this area, Stockholm and Dublin also achieves a favourable score.



Concentration NO₂ and PM₁₀

Concentration NO₂ and PM₁₀ according to urban region for various years

	2003	2004	2005	2006	2007	2004	2005	2006	2007
	NO ₂ (µg/m ³)					PM ₁₀ (µg/m ³)			
Londen	39	35	37	42	44	23	24	30	24
Parijs	50	44	46	47	43	22	19		30
Ruhrgebied	33	35	34	30	30	29	26	25	18
Milaan	59	71	58	60	59	42	54		
Randstad Holland	40	36	40	34	30	35	34	34	34
Madrid	36	36	33	29		31	32	27	25
Frankfurt/Main	43	41	40	37	39	26	25	26	23
Vlaamse Ruit	40	36	36	33	32	33	33	34	28
Barcelona									
Rome			41	41	44	26	27		31
Hamburg	29	29	30	31	30	22	23	30	24
Berlijn	26	25	23	27	24	26	28	30	23
München	42	42	44	33	36	28	25	27	23
Kopenhagen	23	22	23	25	19	32	21	21	

	2003	2004	2005	2006	2007	2004	2005	2006	2007
	NO ₂ (µg/m ³)					PM ₁₀ (µg/m ³)			
Stockholm	17	17	15	17	13	17	19	19	17
Wenen	32	27	31	32	32	27	32		27
Dublin	26	12		22	10	13	15		15
Lissabon	29	30	33	33	34	32	30	31	28
Boedapest			30	32	34		43		43
Praag		27	29	30	24	28	26	33	25
Amsterdam	40	39	38	36	28	34	31	34	35
Rotterdam	45	42	50	37	37	36	37	33	34
Den Haag	37	34	32	30	25	34	33	34	32
Utrecht	37	31							
Brussel	38	35	35	30	29	30	27	29	29
Antwerpen									
Gent	41	37	36	36	34	36	38	38	26

Source: TNO

5

BUSINESS CLIMATE

Randstad Holland in figures

The Lisbon indicators

The Lisbon indicators for the EU27, the EU15, the Netherlands and **Randstad Holland** 2008

	EU 27	EU 15	Nederland	Randstad
General Economic Background				
1. GDP per capita in PPS	100	110,7	134	140,8
2. Labour productivity	100	109,9	114,5	118
Employment				
3. Employment rate	65,9	67,3	77,2	81,4
4. Employment rate of older workers	45,6	44,3	53	-
Innovation and Research				
5. Youth education attainment level by gender	78,5	75,8	76,2	-
6. Gross domestic expenditure on R&D	1,9	1,99	1,63	1,53
Economic Reform				
7. Comparative price levels	100	104,4	104	-
8. Business investment	18,4	18,3	16,9	16,1
Social Cohesion				
9. At risk-of-poverty rate after social transfers	17	16	11	-
10. Long-term unemployment rate	2,6	2,6	1,0	1,1
11. Dispersion of regional employment rates	11,1	10,5	2,2	1,1
Environment				
12. Greenhouse gas emissions		92	94	-
13. Energy intensity of the economy	169,39	151,66	177,12	-
14. Volume of freight transport relative to GDP	106,8	100,9	88,7	-

Source: Eurostat/CBS/edited by TNO