The Randstad compared to the top 20 European metropolitan areas
The Randstad Region comprises four provinces in the western Netherlands: Noord-Holland, Zuid-Holland, Utrecht and Flevoland.

The ‘Randstad’ is not a single city and it is not an agglomeration around a single city, such as one sees in Paris or London. Rather it is a conglomerate of large and midsize cities. Together, these cities have all the facilities necessary to play a significant role in the world.

It is a dynamic metropolitan region where 8.1 million people – nearly half of the country’s population – live and work. The well-known cities of Amsterdam, Rotterdam, Utrecht and The Hague are located in the Randstad.

The region offers a wide spectrum of economic activities. With a gross regional product (GRP) of EUR 367 billion, the Randstad Region is the fourth-largest metropolitan region in Europe after London, Paris and the Rhine-Ruhr. More than half of the Netherlands’ gross national product is generated in the Randstad.

The Randstad is a key point of access for Northwestern Europe. The region offers direct connections to the rest of the world, including through mainports such as the Port of Rotterdam, the largest port in Europe, and Amsterdam Schiphol Airport. In addition to other factors, such as world-class museums in Amsterdam, this excellent international accessibility makes the region appealing to international businesses, conferences and tourists.

As a regional cluster, the Randstad is an important driver for knowledge and innovation. Many knowledge institutions – including leading universities – are located in the Randstad Region.
Economic activities around the world are concentrated in metropolitan areas, and the same is true in Europe. The objective of the Randstad Monitor research underlying this brochure is to monitor the Randstad Region’s performance and compare it to the top 20 metropolitan areas in Europe. This is based on two core concepts: competitiveness and liveability.

The metropolitan areas to which the Randstad was compared were chosen based on internationally used indicators. The indicators do not relate to the size of the regions, but to the functions they fulfil.

The premise in this regard is that the regions must be comparable to one another, which means that a metropolitan region consists of both a city centre and the surrounding area. This is referred to as the ‘daily urban system’ that can be considered a natural spatial-economic unit consisting of one or more employment centres and the areas where the persons who work in those centres live.
<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>GDP 2016 (bn Euro)</th>
<th>Population (x1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>London</td>
<td>790</td>
<td>12,851</td>
</tr>
<tr>
<td>2</td>
<td>Paris</td>
<td>675</td>
<td>12,132</td>
</tr>
<tr>
<td>3</td>
<td>Madrid</td>
<td>213</td>
<td>6,429</td>
</tr>
<tr>
<td>4</td>
<td>Frankfurt</td>
<td>197</td>
<td>4,016</td>
</tr>
<tr>
<td>5</td>
<td>Munich</td>
<td>177</td>
<td>2,887</td>
</tr>
<tr>
<td>6</td>
<td>Berlin</td>
<td>169</td>
<td>5,267</td>
</tr>
<tr>
<td>7</td>
<td>Milan</td>
<td>295</td>
<td>7,795</td>
</tr>
<tr>
<td>8</td>
<td>Brussels-Antwerp</td>
<td>226</td>
<td>4,968</td>
</tr>
<tr>
<td>9</td>
<td>Munich</td>
<td>177</td>
<td>2,887</td>
</tr>
<tr>
<td>10</td>
<td>Berlin</td>
<td>169</td>
<td>5,267</td>
</tr>
<tr>
<td>11</td>
<td>Stockholm</td>
<td>149</td>
<td>2,257</td>
</tr>
<tr>
<td>12</td>
<td>Hamburg</td>
<td>148</td>
<td>3,272</td>
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<tr>
<td>13</td>
<td>Copenhagen</td>
<td>118</td>
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<td>14</td>
<td>Vienna</td>
<td>111</td>
<td>2,513</td>
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<tr>
<td>15</td>
<td>Manchester</td>
<td>93</td>
<td>2,774</td>
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<td>16</td>
<td>Helsinki</td>
<td>81</td>
<td>1,627</td>
</tr>
<tr>
<td>17</td>
<td>Warsaw</td>
<td>80</td>
<td>3,397</td>
</tr>
<tr>
<td>18</td>
<td>Prague</td>
<td>60</td>
<td>2,607</td>
</tr>
</tbody>
</table>

Gross Regional Product 2016 (bn Euro)
Population (x1000)
Demographics

The Randstad region is home to **8.1 million people**. The population of the Randstad grew steadily between 1996 and 2016, with the number of inhabitants rising by approximately 1 million during that period. The Randstad, just like other metropolitan areas, continues to urbanise.

While **the increase in population in the Randstad remains relatively stable**, population increases in other metropolitan areas are accelerating. With its 0.7 percent per year growth between 1996 and 2000, the Randstad was still the fourth fastest-growing region in Europe, but its ranking dropped significantly between 2014 and 2016, despite achieving that same rate of growth. On balance, the increase in the Randstad’s population is now at the average rate for the top 20 European metropolitan areas.

Although ageing is the dominant trend in Europe, the population in the Randstad is relatively young. While the share of the Randstad’s population aged 15 to 74 – the potential working population – is average in size; the group of people aged 0 to 14 is relatively large.
### Population size and average population growth per period

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>12,851</td>
<td>1.4%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Paris</td>
<td>12,132</td>
<td>0.3%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Rhine-Ruhr</td>
<td>11,704</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Randstad</td>
<td>8,116</td>
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</tr>
<tr>
<td>Milan</td>
<td>7,795</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madrid</td>
<td>6,429</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Barcelona</td>
<td>5,443</td>
<td>-0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Berlin</td>
<td>5,267</td>
<td>1.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Brussels-Antwerp</td>
<td>4,968</td>
<td>0.7%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Rome</td>
<td>4,346</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frankfurt</td>
<td>4,016</td>
<td>1.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Warsaw</td>
<td>3,397</td>
<td>0.6%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Hamburg</td>
<td>3,272</td>
<td>1.1%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Munich</td>
<td>2,887</td>
<td>1.6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Manchester</td>
<td>2,774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prague</td>
<td>2,607</td>
<td>0.9%</td>
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</tr>
<tr>
<td>Vienna</td>
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</tr>
<tr>
<td>Stockholm</td>
<td>2,257</td>
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<td>0.4%</td>
</tr>
<tr>
<td>Helsinki</td>
<td>1,627</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The five largest economies in Europe

- London: 790 bn Euro
- Paris: 675 bn Euro
- Rhine-Ruhr: 446 bn Euro
- Randstad: 367 bn Euro
- Milan: 295 bn Euro

Gross Regional Product per capita

- Stockholm: €66 000
- Munich: €61 000
- London: €61 000
- Copenhagen: €59 000
- Paris: €56 000

Economic growth 2014-2016

- Stockholm: 4.5%
- Warsaw: 4.3%
- London: 3.7%
- Madrid: 3.2%
- Copenhagen: 2.9%
- Barcelona: 2.8%
- Prague: 2.8%
- Randstad: 2.5%
The Randstad is the fourth-largest economy in Europe, after London, Paris and the Rhine-Ruhr, achieving a gross regional product (GRP) of EUR 367 billion in 2016.

Since 2014, the Randstad has been experiencing a significant recovery in economic growth. In terms of economic growth, the 2.5 percent increase in its GRP has returned the Randstad from bringing up the rear to a respectable position in the sub-top of Europe. In the years 2014-2016, the top 5 consisted of Stockholm, Warsaw, London, Madrid and Copenhagen. The Randstad is growing at a rate that is higher than that of the Netherlands as a whole (2.5 percent versus 2.1 percent).

The Randstad also ranks in the sub-top in terms of per capita growth in GRP; it may even take fifth place, according to the provisional growth figures for 2016. With an average GRP of EUR 45,000 per capita, the Randstad ranks eighth in the top 20. Stockholm, London, Munich, Copenhagen and Paris are the wealthiest urban areas in Europe.

The recovery of the Dutch economy is centred in the Randstad. The Randstad’s recovery is being driven by an increase in exports via the airports and seaports in Amsterdam and Rotterdam and is now being supported by the recovery of the housing market and an increase in confidence attributable to job recovery. The stabilised financial sector is also contributing to the recovery of confidence. As a result, domestic spending and consumption are on the rise. In addition to the wholesale, commerce and transport markets, the recovery is also making itself felt in the hospitality, ICT and professional services industries. The construction industry is playing a special role, bouncing back strongly with the improvement of the housing market.
Employment is on the increase. But where prior to 2009 economic growth was primarily dependent on an increase in the number of persons with jobs, the role of labour productivity has become more prominent in recent years. For the years 2014-2016, the Randstad ranks an average of third in terms of increased labour productivity.

Although the unemployment rate has started to drop, it remains at a higher average than it did prior to 2009, when the Randstad had one of the lowest unemployment rates among Europe’s metropolitan areas.

The percentage of the people aged 15 to 74 that are working or looking for work – known as the participation rate – is at a high level of 70 percent, but that figure is not increasing. The average for all metropolitan areas is 67 percent.

The period between 1995 and 2000 was a very successful one for the Randstad, driven largely by domestic spending through the strong development of the housing market and the generous availability of credit, combined with a rapidly increasing participation rate that made more people confident. The gross participation rate is now moving towards the average for metropolitan areas.
Working population and unemployment rate

<table>
<thead>
<tr>
<th>City</th>
<th>Number of workers (x1000, 2016)</th>
<th>Unemployment rate (%, 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>6,581</td>
<td>5.1</td>
</tr>
<tr>
<td>Paris</td>
<td>6,222</td>
<td>9.6</td>
</tr>
<tr>
<td>Rhine-Ruhr</td>
<td>6,005</td>
<td>5.3</td>
</tr>
<tr>
<td>Randstad</td>
<td>4,340</td>
<td>7.1</td>
</tr>
<tr>
<td>Milan</td>
<td>3,697</td>
<td>7.9</td>
</tr>
<tr>
<td>Brussels-Antwerp</td>
<td>2,289</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Gross participation rate (2015)

- Stockholm: 76%
- Munich: 72%
- Warsaw: 71%
- London: 71%
- Randstad: 70%
- Copenhagen: 70%
- Helsinki: 70%
- Madrid: 70%
- Barcelona: 68%

Labour productivity

- London: 66 €/h
- Randstad: 60 €/h
- Paris: 75 €/h
- Stockholm: 74 €/h
- Copenhagen: 73 €/h
- Munich: 70 €/h
Investments in Research & Development are on the upswing in the Randstad; these now account for 2 percent of the GRP, just under the average of 2.2 percent. To be in the European top, however, R&D must account for some 3.7 percent of the GRP.

Of the working population in the Randstad, 39 percent are highly educated, which is average for the top 20 metropolitan areas. While this percentage is increasing in the Randstad, it is increasing more significantly in other regions. The number of foreign students is higher in the top European regions. The number of people with lower-level educations is higher in the Randstad than on average in other metropolitan areas, but the number with average-level educations is lower.

In terms of trademark filings and product design rights, the Randstad falls in the middle. The same is true for knowledge-intensive, technologically oriented services.
Investment in Research and Development (in % of GRP in 2014)

- Copenhagen: 3.9
- Stockholm: 3.6
- Randstad: 2.0
- Munich: 4.2
- Helsinki: 3.7
- Frankfurt: 3.1

% of working population with higher education

- London: 49%
- Helsinki: 49%
- Paris: 48%
- Madrid: 48%
- Randstad: 39%

Foreign students 2014 as % of the total number of students

- London: 38.3%
- Vienna: 26.3%
- Manchester: 26.2%
- Munich: 18.0%
- Copenhagen: 18.5%
- Berlin: 19.0%
- Randstad: 12.1%
Traffic congestion: travel time lost due to traffic jams in 2016

- 22% Randstad
- 23% Copenhagen
- 25% Madrid

Passenger air travel (mln passengers, 2016)

- 158 London
- 97 Paris
- 64 Randstad
- 61 Frankfurt
- 50 Madrid

Internet traffic via main internet exchanges in Europe in 2017

- 3,417 Gb/s Frankfurt
- 652 Gb/s Stockholm
- 3,130 Gb/s Randstad
- 2,094 Gb/s London

Number of multinationals, total turnover

<table>
<thead>
<tr>
<th>Metropolitan area</th>
<th>Number of multinationals</th>
<th>Turnover in million US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Randstad</td>
<td>12</td>
<td>702,762</td>
</tr>
<tr>
<td>London</td>
<td>21</td>
<td>1,004,222</td>
</tr>
<tr>
<td>Paris</td>
<td>27</td>
<td>1,566,545</td>
</tr>
<tr>
<td>Madrid</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Frankfurt</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Stockholm</td>
<td>22%</td>
<td></td>
</tr>
</tbody>
</table>
The Randstad is considered attractive to very attractive for businesses. After London and Paris, the Randstad ranks as the most important location for multinationals in Fortune’s Global 500. Amsterdam’s overcapacity in the top segment of the market for international office space is a thing of the past. The recovery began slowly in 2013, accelerating in 2016.

In terms of accessibility, the Randstad is among the top regions of Europe. The Randstad has the least traffic congestion (lost travel time due to traffic jams) of the top 20 metropolitan areas. Passenger air travel is developing apace thanks to Schiphol Airport and the same is true for freight transport thanks to the Port of Rotterdam.

In terms of data traffic, Amsterdam and Frankfurt are the two largest Internet exchange hubs in Europe, distantly followed by London and Stockholm.

The Randstad is also strong on tourism, now ranking fourth of the top 5 thanks to above-average growth in recent years. The Randstad holds first place when it comes to the number of international conferences.

The air quality of the Randstad region is relatively good, ranking in the sub-top of metropolitan areas.
Number of international conferences

- 254 Randstad
- 195 Berlin
- 186 Brussels-Antwerp
- 178 Vienna

Number of nights spent by tourists

- 77 Paris
- 76 Barcelona
- 45 Hamburg
- 41 Berlin
- 41 Randstad
* No data available for London

Air quality in 2014 (particulate matter, PM)

- 28.5% Manchester
- 32% Madrid
- 32.3% Munich
- 36.3% Randstad
The Representation of the Randstad Region promotes the joint European interests of the provinces of Noord-Holland, Zuid-Holland, Utrecht and Flevoland. The partnership primarily focuses on the following topics:

- Smart Randstad
- Regional economy and accessibility
- Circular economy and energy
- Agrofood
- Environment, nature conservation & water

In Brussels, the Representation of the Randstad follows the European policy agenda closely in an effort to contribute to European regulations that are effective and enforceable, as well as to the optimal use of available European funds. The Representation of the Randstad accomplishes this by sharing its knowledge and expertise with European policymakers and other stakeholders and by actively participating in networks of European regions.

The Representation of the Randstad Region works from the House of the Dutch Provinces, where all twelve Dutch provinces maintain offices.

Colophon
This brochure is a publication of the Representation of the Randstad Region in Brussels. The brochure is based on the “Randstad Monitor 2016: De Top-20 van Europese grootstedelijke regio’s 1995-2016” published by NEO Observatory (only available in Dutch).

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Design: AdGrafics, www.adgrafics.eu
Images: © Shutterstock

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