

2019

Oslo's International Benchmark Performance Dr Tim Moonen, Prof Greg Clark CBE, Jake Nunley and Opportune Simon The Business of Cities



Contents

| 4 | Executive Summary |
|----|---|
| 8 | Introduction |
| 11 | Benchmarking Oslo in 2019 |
| 12 | Oslo's Visibility in City Benchmarks |
| 14 | Business Climate |
| 20 | Quality of Life |
| 24 | Special Feature on Oslo's Green Economy |
| 32 | Hospitality |
| 34 | Special Feature on Oslo's Social Diversity and Expression |
| 40 | Governance |
| 45 | Methodology |
| 46 | Notes and References |

State of the city 4 State of the city

Executive Summary

2019 is an important year for Oslo as the region continues to establish itself as a distinctive metropolis in the European and global stage. Not only is Oslo gaining accolades as Europe's Green Capital, for the world's most ambitious restrictions on cars in its city centre, and for its trajectory towards becoming the first major zero-emission city. The region also continues to grow its population and diversify its economy at a very substantial rate, supported by a major infrastructure programme that will underpin the way the city and region develop in the decades to come.

These are many signs that Oslo is a region embracing the opportunity of growth and diversification. New neighbour-hoods are emerging within a high amenity compact city. A highly ambitious transport agenda is gaining momentum, including major tram network upgrades, a new subway tunnel planned through the centre of the city, and a path for public transport to become emission-free within a decade. Meanwhile innovation districts are emerging and secondary centres in the region are also establishing themselves. This is a time of underlying progress that waits to be fully reflected in the measures of how cities perform and are perceived, which are typically 'catching up' with reality on the ground.

For 4 years, we have been analysing how Oslo fares in the world's benchmarks of city performance and perception. This year's 2019 analysis shows that Oslo is more visible in these measures than ever, and emphasises that Oslo is starting to establish top-class credentials at the very peak of its peer group in at least four areas:

- Oslo's endeavour to become a global leader in sustainability is starting to pay off in the global mind. The city has entered the top performing group in new benchmarks measuring the wider elements of sustainable lifestyle and links to quality of living, such as urban canopy coverage and active transport. Oslo is increasingly an automatic choice in studies of the leading cities for sustainability. There are also some interesting examples where perceptions of Oslo's sustainability now exceed real performance this is a clue that global audiences have come to have higher expectations of what the city can achieve and means there is a chance to seize global leadership on this agenda for the longer term including in the green economy.
- 2. Oslo's recipe for talent is now becoming recognised. The city's mix of job opportunities, outstanding public services, and lifestyle satisfaction have all seen Oslo start to achieve very impressive objective scores for providing the ingredients for mobile talent and innovators. Ongoing cultural investment also continues to push Oslo up the charts for leisure, fun, authenticity and urban experience, and the perceived standard of its public places. While Oslo's association with quality is clearly growing, one challenge is to ensure that these strengths now start to convince more talent that may be concerned about cost of living equation, which appears to inhibit progress in terms of perception.
- Oslo is cementing its reputation as an open city with a progressive social model that successfully produces high equality, personal freedom and social integration. This is being achieved at the same time as accommodating rapid population growth and diversification. As more cities confront deep challenges of polarisation, Oslo has now reached the top classification of cities in measures of social stability, as global cities start to be compared on how well they empower women, minorities and new arrivals to fulfil their potential.
- 4. Oslo's advantage as a productive and digitally enabled platform for business is starting to register. The city has made important inroads for technology adoption and digital systems, and this is translating into recognition for urban efficiency and productivity. This platform is helping the wider technology and enterprise ecosystem to emerge, with a wider range of locations and districts across the Oslo region in which new tech companies are to be found. As place and neighbourhood attributes become more visible in international benchmarks of cities, the curation of specialised and digitally seamless economic locations will become an important element of Oslo's future competitiveness.

These four signals of peak performance illustrate that Oslo's own distinctive model as a 'Compact Global City' is starting to mature since we first began benchmarking the city in 2015. The world is now taking notice of Oslo's distinctive work and living model, open culture of entrepreneurship, and the ambition of its policymakers, institutions and companies to change the world and deliver for citizens.

Oslo's breakthrough benchmark performance in 2018/19

| BENCHMARK | ORGANISATION | OSLO'S POSITION |
|-------------------------------------|--|----------------------|
| Healthiest Cities Index | SpotAHome Real Estate Platform | 2 nd /89 |
| Global Talent Competitiveness Index | INSEAD Business School | 3 rd /115 |
| Best Cities for Tech Enthusiasts | RS Components, Global Engineering Supplier | 3 rd /90 |
| Competitiveness Index | BAK Basel Research Institute | 7 th /65 |
| Smart Cities Index | EasyPark Technology Services | 8 th /121 |

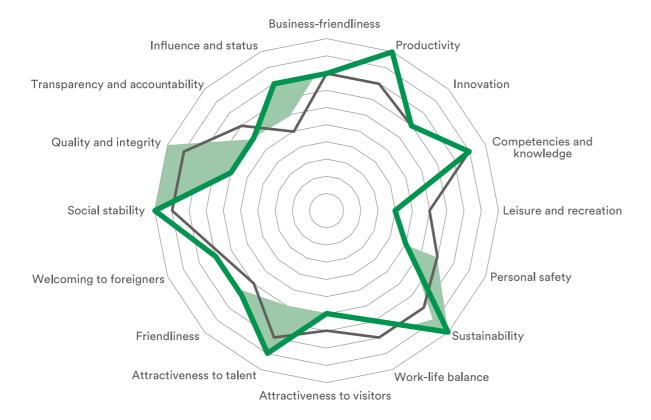


State of the city

The Oslo performance spidergram in 2019 and year-on-year change



6



*In 2019 the Friendliness and Welcoming to Foreigners measures have a combined score, as these themes have become increasingly integrated in the way cities are measured and rated.

The data from 2019 also highlights ongoing challenges to ensure all of Oslo's strengths are communicated. The way global studies measure cosmopolitanism, urban amenities, safety and governance do not currently always show Oslo in its best light, and the city's strong domestic market mean it does not excel in some measures of transparency and internationalisation. There is also a lag effect where the universe of benchmarks is catching up with the current cycle of policies and awards. This means that Oslo cannot afford to 'go quiet' with promoting its progress.

During this next phase of proactively managed expansion and investment, and armed with these more clearly defined edges, it is important for a region like Oslo to sustain its advantage and consistently communicate its core strengths and vision. The city's innovation economy is an important vehicle to achieve this, and it will be important that Oslo's innovation icons and success stories start to gain greater global recognition, and that its emerging innovation districts are actively supported by public, private and civic leaders. And with the attention Oslo is receiving this year, the city's urban lifestyle, character and leadership can gain even more global exposure, which will be very welcome as many other cities are energetically competing for their share of entrepreneurs, business and investors. Oslo's enhanced reputation will now come with greater expectations to fulfil and deliver on the promise of Europe's pioneering compact capital.



1

Introduction

An exciting 12 months for Oslo

Oslo has experienced an exciting 12 months at the forefront of cities promoting and piloting new approaches to urban living and sustainability. In the last 4 years we have observed strong forward momentum. The success of the region in terms of the growing number of entrepreneurs staying in and moving to the region, the rise of new kinds of tech and digital jobs, major new development coming to fruition, and the increasing specialisation of precincts and interchanges has translated into important gains for Oslo in terms of its appeal to a wide mix of domestic and international audiences.

There a number of Megatrends that have been in train driving Oslo's competitive development over the last 5 years and looking towards the next 5 years.

These include:

- Rapid population growth.
- Serving a much larger pool of global demand, especially from Asia.
- Combatting polarisation within a region becomes a competitive advantage.
- New technology and digitisation that accelerates industrial diversification.
- Values and principles that increasingly drive city identity.

These trends are giving rise to the imperative for Oslo to compete for game-changing talent and entrepreneurship on slightly different terms: Affordability, Accessibility, Lifestyle, Innovation-Friendliness, Culture and Values. Looking at the rest of the

world's media, these attributes and associations are increasingly part of Oslo's offer and legibility to the rest of the world (see Figure 1).

Oslo is one of the regions that is globalising rapidly in the recent cycle. Like a number of other regions, it is not the largest in its wider Scandinavian orbit. It is a place in economic transition, consisting of multiple centres, collectively seeking to achieve competitiveness and a renewed formula for success. As Oslo doesn't have the size and scale of larger regions it must instead compete on quality and difference. Not only do these regions have to maintain their prosperity to deliver outstanding public services, well paid jobs and an inclusive economy. They must also avoid the congestion, inflation, pollution, inequality, and homogenisation of larger cities, and act as beacons of distinctiveness, openness

Flourishing VIDIANTS Afe Rich Walkable Beautiful Wealthy Pricey Big Port Fun Sleek Daunting Part Fun Sleek Daunting Part Fun Busting Exciting Confident Expensive Wealthy Strong Walking Laid-back Clean Densely populated Lovely

Figure 1:

Terms used to describe Oslo in the global media in 2018/19

Source: Google. English language news sources only. This imperative can come to resemble a success formula that appears to look a little like this:

Oslo's progress needs to be tracked through performance analysis, and through gauging the 'gap' between perception and reality. This is partly the function of this report. Not only does this paper identify which of the many ingredients Oslo already possesses to become globally successful (everything from productivity to labour market, digital connectivity, industrial specialisation, urban vibrancy and street life, and entrepreneurship culture). It is also identifying ways that Oslo has to close the gap with international perception and use its perceived advantages to leverage new opportunities.

Ongoing economic diversification

+

World Class public services and infrastructures

+

Real urban vitality and vibrancy

+

Regional scale, choice and housing mix

+

International influence and institutional reach

+

Scientific industrial specialisation

+

Entrepreneurial ecosystems

+

Collaborative leadership

+

Compelling story and reputation

State of the city 10 State of the city 11

Overview and methodology

In 2019 we have again evaluated Oslo's performance across the ever-expanding universe of international indexes, benchmarks, rankings and comparative measures, among which Oslo appears more and more often.

In 2019 we have again evaluated Oslo's performance across the ever-expanding universe of international indexes, benchmarks, rankings and comparative measures, among which Oslo appears more and more often.

From an expanded database of more than 500 benchmarks spanning 20,000 data points, plus new worldwide real-time datasets, crowd-sourced qualitative data platforms and studies assessing perceptions of cities' future prospects as well as past and curent performance, the report assesses Oslo's current performance and international reputation in 16 thematic areas within four overarching themes: Business, Liveability, Hospitality, and Governance.

This year we also include a deep dive into Oslo's emerging status as a leader in the green economy, having been awarded the title of European Green Capital 2019, and the city's ability to foster social and economic diversity, integration and inclusion.

The 4th 'outside-in' review, published in 2018, identified that:

 Oslo continues to incrementally improve its global visibility in the world of cities, renewing its reputation as a metropolis at the forefront of the global agendas of the 21st century – peace, technology, climate change, inclusion and cohesion.

- Oslo is slowly beginning to be identified as an internationally important location for innovation and entrepreneurship, aided by Oslo's growing magnetism as a place to live and enjoy an urban lifestyle.
- This is a time of rapid change for how cities are measured and perceived there a stronger focus on personal factors such as happiness, stress and work-life balance, and on social factors such as gender and income equality. The Oslo region generally tends to perform well in these new measures and this could be an emerging area of reputational strength in future.

This report:

- Conducts a full review and update to Oslo's comparative performance since March 2018.
- Assesses whether Oslo's international projection and outreach in these comparative studies is improving, declining or stable.
- Develops an Oslo Region Performance Spidergram, and highlights where international perception diverges from this.
- Provides a headline analysis of Oslo's evolving position, broken down into the key areas of interest.

Explaining the 10-point scale

In the following sections, we detail Oslo's position across these 16 indicators, along a 10-point scale. Where there are sufficient indicators in both the performance and perception categories, Oslo's position is shown twice to reflect how performance and perception compare. The scale is indicated by the horizontal colour scheme and is explained in more detail in the method note appendix.

Benchmarking Oslo against peer cities

The State of the City report continues to benchmark Oslo among a peer group of 50 medium-sized, upper income, high quality cities with a global orientation, and with at least one visible specialisation.

By measures of size, GDP per capita, sector composition and internationalisation, 12 of the 49 peer cities still strongly correspond to Oslo's assets across multiple dimensions (see left column). A second group of 22 cities has similar qualities to Oslo but are somewhat larger in terms of population and market size. A third group of 15 cities resembles Oslo in terms of metropolitan size but lacks the breadth and depth of assets and advantages that Oslo possesses.

Strongly comparable in most areas

| Austin |
|-----------|
| Basel |
| Brisbane |
| Calgary |
| Dublin |
| Glasgow |
| Helsinki |
| Ottawa |
| Perth |
| Portland |
| Vancouver |
| Zurich |
| |

Comparable global assets or strategy, but not size and scale

| Abu Dhabi | |
|---------------|--|
| Barcelona | |
| Berlin | |
| Boston | |
| Copenhagen | |
| Detroit | |
| Frankfurt | |
| Hamburg | |
| Kuwait City | |
| Melbourne | |
| Montreal | |
| Munich | |
| Rome | |
| San Diego | |
| San Francisco | |
| Seattle | |
| Stockholm | |
| Stuttgart | |
| Sydney | |
| Tel Aviv | |
| Vienna | |
| Warsaw | |
| vvarsaw | |

Comparable size and wealth, fewer similar assets or strategic imperatives

| , |
|---|
| Adelaide |
| Bristol |
| Cleveland |
| Eindhoven |
| Gothenburg |
| Las Vegas |
| Lyon |
| Manchester |
| Marseille |
| Minneapolis |
| New Orleans |
| Orlando |
| Prague |
| Raleigh |
| San Jose |
| |

State of the city 12 State of the city 13

Oslo's Visibility in Global Benchmarks

Oslo's global visibility continues to improve in absolute terms, and over the past year, relative to other cities, it has stabilised following a sharp increase over the past few years.

In the last 12 months Oslo appeared in 54% of global studies that benchmark cities, compared to 48% in the previous year (see Figure 2). This makes the city more visible than stand-out cities such as Tel Aviv and San Diego and larger cities such as Boston and Frankfurt. In relative terms the city is the 17th most visible city among its 50 peers, compared to 16th in the previous year. However Vancouver, Helsinki and Warsaw have all seen an increase in visibility to now place above Oslo in the number of appearances in global benchmarks.

Figure 2: Number of appearances in global benchmarks and change over time, top 20 most visible peer cities

2017-2018 2018-2019 % appearance in % appearance in Change Rank Rank global benchglobal benchin Rank marks marks 66.7% Sydney 1st 1st Sydney 73.7% 2^{nd} 63.3% Stockholm =2nd Stockholm 72.6% =3rd **=2**nd + 2 63.3% Copenhagen Berlin 71.6% 62.2% San Francisco 4th=3rd Barcelona 71.6% + 3 60.0% Berlin 5th5thCopenhagen 67.4% - 3 6th 6^{th} +1 58.9% Barcelona Vienna 67.4% 57.8% Vienna 7th San Francisco 63.2% - 3 56.7% Zurich 8th=8th Zurich 62.1% 9th=8th Melbourne + 2 54.4% Dublin 62.1% 53.3% Melbourne 10^{th} 10th Munich 61.1% + 4 52.2% **11**th **11**th Dublin 58.9% - 2 Rome 12th + 3 51.1% **Boston** =12th Prague 56.8% 51.1% Frankfurt =12th =13th Rome 55.8% - 2 14th 50.0% =13th + 4 Munich Vancouver 55.8% 15^{th} =13th + 6 48.9% Prague Helsinki 55.8% 47.8% Oslo 16th 16th 54.7% + 2 Warsaw 43.3% 17th **17**th Oslo 53.7% -1 Vancouver 42.2% Warsaw 18th 18th Boston 51.6% - 6 38.9% Helsinki =19th 46.3% -7 Frankfurt 38.9% Hamburg =19th =19th 46.3% + 4 Montreal

City has entered the 2018–2019 top 20 $\,$

34.4%

Montreal

23rd

Top 20 rank

City has fallen out of the 2018-2019 top 20

45.3%

- 2

Source: The Business of Cities research.

In global terms, Oslo is now the 34th most profiled city in the world. This puts the city on a par with Shanghai, Budapest and Lisbon, and thanks to good data availability, well ahead of significantly larger cities such as Beijing (38th), Istanbul (39th) and Bangkok (40th). Across all studies Oslo is the 36th highest aggregate performer globally, level with Geneva and Washington D.C. As the world of benchmarks continues to expand to accommodate more cities in Asia Pacific, Oslo maintains a highly competitive position.

21st

Hamburg

This year Oslo has recorded some breakthrough appearances and has appeared for the first time in high-profile indices measuring audience perception. The city has also appeared in many new and influential indices, including:

- The BAK Basel Economic Potential Index
- The Greenpeace and Wuppertal Institute Report on Sustainable Urban Mobility
- The Bloom Consulting Digital City Index

2018/19 has also seen more growth in 'soft' benchmarks of city performance, many of which are based on new data methods such as online data mining. Oslo continues to be widely covered in these studies, which have good media profile, such as:

- The SpotAHome Healthiest Cities Index
- Movinga's Best Cities to Find a Job
- The SpotAHome Digital Nomads Index
- RS Components' Best Cities for Tech Enthusiasts

Table 1: Stand-out index results for Oslo over the past year

| | RESULT |
|--|-----------------------|
| SpotAHome Healthiest Cities | 2 nd /89 |
| INSEAD Global Talent Competitiveness Index | 3 rd /115 |
| RS Components Best Cities for Tech Enthusiasts | 3 rd /90 |
| ICCA et al. Global Destination Sustainability Index (sustainable growth of MICE tourism) | 4 th /47 |
| BAK Basel European Economic Potential Index | 6 th /65 |
| Movinga Best Cities to Find a Job | 8 th /100 |
| EasyPark Smart Cities Index | 8 th /121 |
| SafeAround World's Safest Cities | 8 th /111 |
| La Salle European Regional Economic Growth Index | 9 th /100 |
| IESE Cities in Motion: Environment | 13 th /165 |

Table 2: Stand-out index results for Oslo over the past year

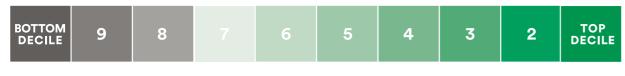
| | Change in result since past edition |
|--|--------------------------------------|
| IESE Cities in Motion Index: Technology | 72 nd to 24 th |
| EasyPark Smart Cities Index (overall result) | 34 th to 8 th |
| IESE Cites in Motion Index: Governance | 77 th to 51 st |
| Resonance World's Best Cities (overall result) | 56 th to 45 th |
| EasyPark Smart Cities Index (internet speed) | 75 th to 8 th |

Oslo's open and accessible data platform favours inclusion in such indices, and so the city will likely continue to be well covered in the ever-expanding number of online real-time or crowd-sourced datasets of urban perception and performance that are increasingly used by prospective talent and investors.

2

Business climate

2.1 Business friendliness



PERFORMANCE

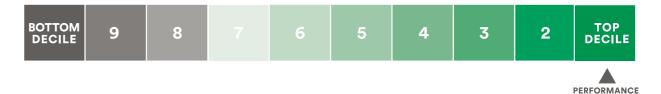
The 2018 review found that:

Oslo was starting to overcome some of its inherited perception challenges as a place to do business because of its strong business and investment fundamentals. Benchmarks evaluated Oslo as an increasingly entrepreneur friendly city with a robust macro environment to support established and emerging businesses to develop across a mix of sectors.

Since 2018:

- Oslo has become steadily more recognised for its ease of doing business, due to its improved regulatory openness and its growing track record of hosting businesses. IESE Business School's major study now ranks Oslo 17th out of 165 cities worldwide (up from 20th last year) for ease of starting a business, having overtaken Hong Kong and Auckland.² Another study that reviews overall business freedom, labour flexibility and business setup times places Oslo a very impressive 7th out of 264 cities and 1st out of 47 peers.³ This represents something of a breakthrough in this area and translates to better outcomes for Oslo in other all-round studies.
- Stable growth fundamentals have helped to maintain a high appeal to business and investors. In the influential La Salle E-REGI index, Oslo is still among the top 10 cities in Europe for business growth potential, while in fDi Intelligence's Major European Cities of the Future assessment, Oslo is now in the top 10 for business friendliness, ahead of most Scandinavian cities and just below Paris.⁴
- Inherited challenges of high relative business costs, taxation and registration barriers mean that Oslo is not yet rated as a business-friendly city in all measures. While the process of registering a new business in Oslo has been streamlined, the global data used still identifies barriers to starting a company. In a recent study by real estate consultancy firm Movinga, Oslo ranked a surprising 98th globally for the number of new business registrations.⁵ This may be due to differing business rules, or the fact that English is not the main language for business in the city. Where business appeal is measured in part by overall taxation levels, Oslo is sometimes downgraded to the middle of the global pack.⁶

2.2 Productivity



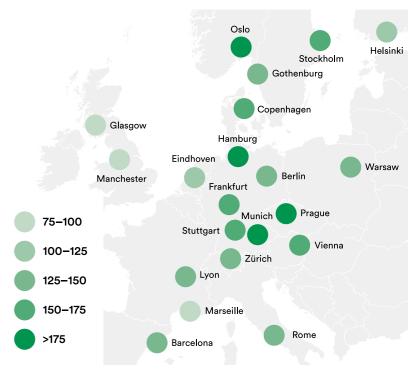
The 2018 review found that:

Productivity performance has been a long term advantage for Oslo, thanks not only to its exceptional GDP per capita and low unemployment but also high scores for productivity-boosting factors such as internet penetration and broadband usage. Some shorter-term measures were less favourable, due to a shift in the methodology of indices that favoured rates of productivity growth rather than Oslo's absolute productivity advantage.

Since 2018:

- As more cities around the world invest in upgrades to digital connectivity, Oslo has strengthened its lead over others for digital network effects, with an extensive internet network and usage across the city region. The city is recognised in all international indexes of the past year reviewing internet speed as well as access. In one Smart Cities Index Oslo jumped remarkably from 75th position to 8th globally in terms of internet speed.⁷ If this can be sustained this is likely to be an important area of advantage in the global indices for the next period of time.
- Oslo's ability to manage congestion to ensure productive work days compared to other rapidly growing cities has begun to be captured in the benchmarks, even though overall congestion still has room to improve. As of January 2019, Oslo sits in the top 20% of cities globally for low commute time and traffic management, which is reflective of specific multi-modal policies.⁸ However, in the major study of congestion by INRIX, Oslo's overall congestion level is still the 11th highest among major European cities.⁹ As measured performance tends to lag policies and reforms, Oslo may have to wait for the effects of recent changes to kick in to wider international recognition.
- Unemployment has remained low, but in a Europewide high employment cycle Oslo's advantage has slightly declined. The overall regional unemployment rate has been stable below 5%, but Oslo has slipped from 9th to 12th among peers with Manchester, Basel and Eindhoven all overtaking since 2017.

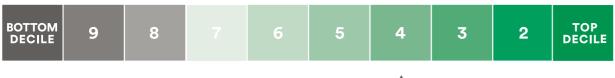
Figure 3: GDP per capita compared to EU-28 average (benchmarked to 100)



Source: Eurostat Regional Yearbook 2018.

State of the city 16 State of the city 17

2.3 Innovation





The 2018 review found that:

Oslo was gradually establishing more recognition for building the eco-system and business platforms to support innovation. Oslo was starting to appear in more studies because of its healthy momentum in a European context where many cities are competing, with room to improve further.

Since 2018:

- Oslo's status as a technology- and innovationfriendly city has become more widely recognised. The city has jumped by 3 places in the 2thinknow Innovation Cities Index compared to last year, having overtaken Beijing, Madrid and Copenhagen, and remains in the top 10% globally for its ability to commercialise innovation.10 In the "Best Cities for Tech Enthusiasts 2018 Index" Oslo placed a highly impressive 3rd overall, just behind Amsterdam and Philadelphia, a new high in its capacity to appeal to a tech-focused crowd.11 This partly reflects the fundamentals of a tech-capable workforce allied to the impact of dedicated international gatherings such as Oslo Fintech and Oslo Innovation Week. Data shows that Oslo still places 7th among all European peers for the percentage of the population employed in such sectors, just behind Basel and Stockholm, and has one of the highest shares among its size in the world.
- Oslo's steadily improving performance and perception is partly linked to its ability to successfully incubate start-ups. In a new index assessing market, cultural conditions, availability of capital and technological know-how, the capital ranked an impressive 37th best start-up city globally for 2019, ahead of Frankfurt and Los Angeles. Meanwhile over the past year, the number of internationally recognised innovative technology firms in the city has increased by 50%, on a par with fast moving innovation ecosystems such as Barcelona. The vast majority of the region's firms are in the IT, software, and fintech sectors, although health care, biotechnology, and mobile apps are all becoming important innovative niches for the city (see Figure 4)

Figure 4:

Stylised breakdown of Oslo's innovative firms by sector

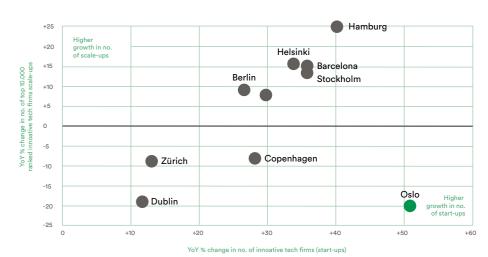
Source: Crunchbase, February 2019 data



 Oslo's ability to scale up firms into international leaders with catalytic impact still has room to improve compared to peer cities. Currently only 12 of Oslo's innovative technology firms are ranked in the major index of the top 10,000 firms globally. This is about half as many as in Helsinki and Copenhagen, but also 20% lower than in 2018, as more cities' companies attain global reach (see Figure 5). Oslo needs more firms to meet the standards for venture capital funding: in the new high-profile CAE Global Startup Ecosystem Report, the city does not feature in the top 50 cities globally for number of VC deals, VC investment, or angel and seed-stage deals, whereas many of its peers, including the likes of Sydney, Basel and Helsinki, do tend to feature.13 However, Oslo has seen an increase in the number of companies receiving funding of more than €1 million over the past year, and by this measure Oslo now ranks in the top third among its peer group.14

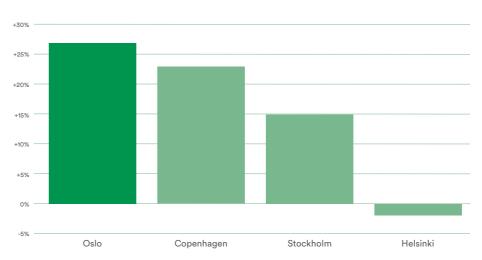
igure 5:

Year-on-year % change in number of innovative technology start-ups and scale-ups in Oslo and selected peers*



Source: Crunchbase, February 2019 data. *Selected peers = cities that have more than 10 top 10,000 ranked innovative technology firms.

Figure 6:Oslo's global online reputation change for innovation, 2014 to 2018



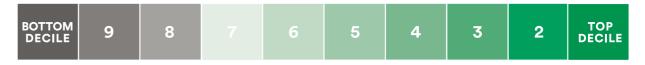
Source: Google Trends

The interest in Oslo's innovation momentum is also visible in patterns of Google use over the last 5 years, which show Oslo as having achieved the highest relative increase in being associated with innovation between 2014 and 2018 among Scandinavian cities, at over 25% (see Figure 6).

State of the city 18 State of the city



2.4 Competencies & Knowledge



PERFORMANCE

The 2018 review found that:

Oslo was climbing at a rapid pace in indexes measuring human capital and education attainment in cities. The relatively small number of top-ranked universities and students at such institutions were the only constraints in the global rankings.

Since 2018:

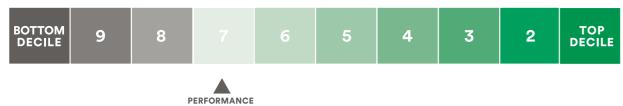
- Oslo is growing in recognition in studies that consider education as a critical ingredient for future success. Oslo places in the top 10 in the education sub-sections of fDi's "European Cities of the Future Rankings" (301 cities) and of INSEAD's "Global City Talent Competitiveness Index" (114 cities).
- Oslo continues to boast a highly skilled population at all levels of education, with a very large universityeducated resident base,¹⁵ with recognised skillsets to effectively participate in the regional labour market. Oslo also ranks 2nd in Europe for the percentage of the labour force with at least secondary education, behind Prague.¹⁶
- Where Oslo tends to perform slightly less well is in measures of knowledge that focus mainly on university performance and research output. Many studies rely on global university rankings where Oslo's limited breadth and influence compared

- to other world-class knowledge centres results in modest scores overall. This also applies to science and technology studies. In Nature's ranking of the "Top 200 Science Cities in the world", Oslo ranks 148th for absolute number of science articles, while when only cities with a metropolitan population less than 2 million are considered, Oslo ranks a more impressive 10th.¹⁷
- One challenge is Oslo's recorded modest R&D expenditure, possibly due to national measures. In the most recent of INSEAD's globally influential Talent Competitiveness Index, Oslo score for R&D is far behind leaders in North America and Europe.¹⁸

State of the city State of the city 20 21

Quality of Life

3.1 Leisure and Recreation



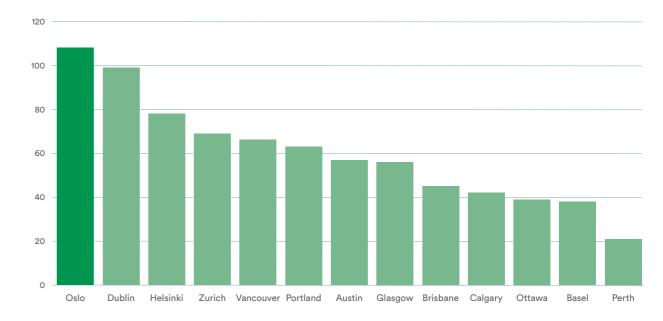
The 2018 review found that:

Oslo's continued investment in culture over the past decade has led the city to grow its cultural reputation and this prompted improvements in recognition for the region's cultural and active lifestyle offer.

Since 2018:

- This is a more volatile theme and in recent performance measures, Oslo's overall leisure and recreation ratings has declined because of changes in what is being measured. The number of studies reviewing family appeal, such as activities for children – an area in which Oslo has performed very strongly - has fallen. The city is also not recognised yet for its nightlife, which has continued to drag down the city's performance in studies of young visitors and expatriates in global rankings. Restricted opening hours mean that Oslo currently ranks 105th for nightlife in a leading study of cities for millennials, for example, well behind Scandinavian peers.¹⁹
- However these performance issues are not reflected in terms of reputation, where Oslo has strengthened its reputation as a "fun" city, thanks to higher numbers of music festivals and social meet-up events. The city ranks 11th out of 35 peers for the number of festivals - higher than Manchester, Sydney and Berlin - and well above average for the number of social meet-ups - higher than all other Scandinavian peers except for Gothenburg.20 Oslo is also increasingly seen as a city in which it is easy to meet new people and find a partner. Movinga's "Best Cities to Find Love" sub-index measuring the number of gathering options sees the city ranks 13th out of 29 peers.21
- The city has cemented its reputation as a global leader for number of cultural institutions and amenities compared to its size. In 2019, Oslo ranks 2nd among all its peers for the number of museums and theatres, and 1st when only museums are considered (see Figure 7). The quality of its museums, concert halls, sport and performing arts venues all continue to increase popular perception of quality of life in the capital: in one international review on the quality of leisure activities in cities, culture enthused visitors and working professionals assessed Oslo to be on par with global metropolises like Boston and Tel Aviv, and well ahead of Copenhagen and Vienna.²² This is an important breakthrough.
- As a result we would expect Oslo's performance measures to bounce back in 2020 with a wider variety of benchmarks set to be published in this area.

Figure 7: Number of museums in Oslo and its most comparable peers



Source: Trip Advisor, January 2019 data.



State of the city 22 State of the city 23

3.2 Personal Safety



The 2018 review found that:

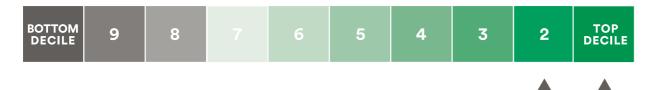
Oslo's quality of life and public services is very strong by global standards but a relatively high crime rate for a city of its scale was one of the key reasons why the city was not always recognised in the most high-profile quality of life rankings.

Since 2018:

- New regional datasets on actual crime levels have highlighted that Oslo has a murder rate that is higher than more than half of its European peers (8th highest rate out of 20 cities). This puts the city on a par with Stockholm (6th highest), but well behind other Scandinavian cities such as Helsinki (lowest), Copenhagen (5th lowest), and detracts from Oslo's overall score in a number of studies.²³ This is an area where more comprehensive assessments of safety that will emerge over time should advantage Oslo.
- Meanwhile Oslo's underlying progress means that global citizen perception of Oslo's safety has increased, with the city appearing in the top 20 in half of all major studies on perceived safety over the past 12 months. This is partly because wider measures of safety are developing. SafeAround's annual review of

- the world's safest student cities placed a very healthy Oslo 8th out of 111 cities.²⁴ The Wuppertal Institute report on mobility in 13 European cities even observed the city's road safety to be 1st in Europe.²⁵
- In an important index measuring residents' perceptions of criminality and street harassment in cities,
 Oslo placed 122nd out of 327, up 41 spots from 2018.
 The city's position relative to its peers also increased, from 27th among 43 peers in 2018 to 23rd in 2019.²⁶
- Oslo has cemented its reputation as a relatively safe city for international travellers and workers, with perceived safety ranks equal to other medium-size capitals such as Ottawa, Prague and Warsaw.²⁷

3.3 Sustainability and Resilience



The 2018 review found that:

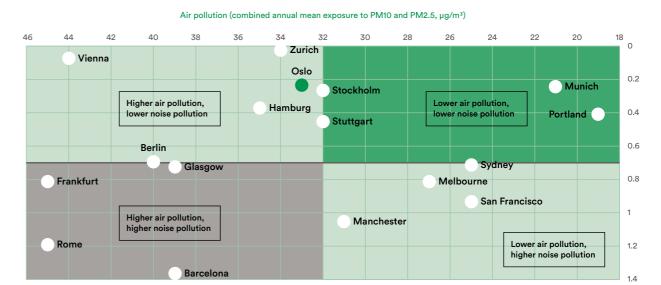
Oslo was gaining more recognition for its sustainability successes, particularly in the fields of industry and business, or in terms of bicycle use. While Oslo continued to be one of the least polluted cities in the world, the region performed slightly less well in measures of greenhouse gas emissions compared to previous years.

Since 2018:

- Oslo has taken bold steps to promote the overall environmental friendliness of the city and the results are beginning to show in the indexes. The city appeared in 7th place in a classification of the 25 greenest capital cities in Europe.²⁸ It is also notably one of the five cities in this ranking to have received the title of European Green Capital, awarded to Oslo by the European Commission for the year of 2019 in recognition of the city's approach to conserving its natural areas and tackling climate change in innovative ways, for example through its adoption of the climate budget.
- Meanwhile the city's reputation for its overall urban environmental quality has improved to an even higher standard.²⁹ Oslo leapt from 10th to 4th place out of 34 peers in the IESE Cities in Motion Environment sub-measure, overtaking Berlin and Zürich in the process, due mainly to improving air and water quality.³⁰
- Oslo has continued to reduce its greenhouse gas emissions. Overall CO₂ emissions have declined by 7% since 1990 levels, and the city is committed to reaching the target of a 36% reduction by 2020 and 95% by 2030. Oslo has also begun to stand out as a city that has the buy-in and support from its citizenry in the fight against climate change: a recent survey found that three quarters of the city's residents agreed that it was important to do what is necessary to meet this target.³¹

- Oslo is achieving recognition in several new, niche studies that measure specific aspects of sustainability and cover a smaller number of cities. The city ranked 3rd out of 27 cities in an innovative new study of urban tree canopy coverage by researchers at MIT (1st out of 8 peers), and 3rd out of 13 cities for prevalence of active transport (the number of people walking and cycling to work) in an influential Greenpeace study on mobility in European cities.³² This reflects a growing trend that Oslo is a mandatory city to be included in studies of cutting edge sustainable cities.
- Oslo's efforts to reduce pollution have triggered an improvement in resident perceptions of pollution in the city, even though overall air pollution levels still have room for improvement in global terms. In one global study, visitors to the city rated Oslo as the 28th best performing city on various perceived pollution factors out of 294 cities, meaning in perception terms it is now very close behind other medium-sized cities renowned for high levels of environmental quality such as Vancouver and Minneapolis.33 But data from the WHO show that in terms of the annual mean exposure to PM10 and PM2.5, Oslo in reality still ranks 31st out of 50 peers. In spite of very low noise pollution, this is why Oslo does not guite make it into the top group of cities for low noise and air pollution in Figure 8.

Figure 8:
Air and noise in Oslo relative to selected peers



 $Source: WHO\ Ambient\ Air\ Quality\ database,\ Mimi\ World\ Hearing\ Index\ 2017.\ *Selected\ peers=all\ cities\ appearing\ in\ this\ index.$

Noise pollution proxy (min = 0; max =2)

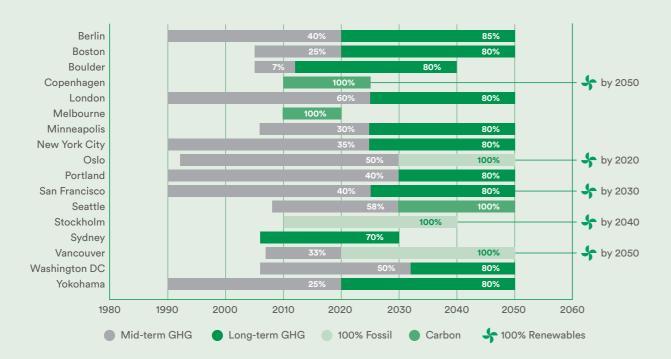
State of the city 24 State of the city 25

Special feature:

Oslo's Green Economy

Oslo's Green Economy is being accelerated by policy leadership to advance in electric vehicles (EV) adoption, renewable energy conversion, and other sustainable goals. The commitments of the public sector to be carbon neutral, adopt green action plans, invest in large EV fleets, and implement green procurement policies, are all stimulating demand and innovation. As it stands, Oslo is one of a limited number of cities globally to target 100% renewable energy by 2020, and a 50% reduction in greenhouse gas emissions by 2030 (see Figure 9).

Figure 9:Green economic development policies and targets in selected global cities



Source: Vancouver Economic Commission 34

Overall, the benchmarks of cities in the green economy are still to fully emerge, but the global data so far demonstrates that Oslo is:

- Becoming more renowned in the global media for its green credentials relative to other Scandinavian cities.
- Building a substantial low carbon innovation sector relative to other cities, with room to grow further.
- Enabling more traditional sectors to embrace the low carbon revolution.

- Emerging as a global leader for the adoption of renewable energy in public and private sectors, and the promotion of sustainable tourism.
- Translating its sustainability edge into the establishment of new urban quarters.

These areas are yet to become an area of comparative or reputational advantage for Oslo but are likely to in the coming years as cities' progress in the green economy gains more attention around the world.

Oslo's green economy in the global media

Oslo is becoming more associated for its green credentials – whether in terms of sustainable urbanism or economic transition. Google Trends data indicates that Oslo has experienced the largest relative increase in global interest in the city's 'green' attributes, among Scandinavian capitals over the past five years, with overall interest increasing by nearly 30% between 2014 and 2018 (see Figure 10).

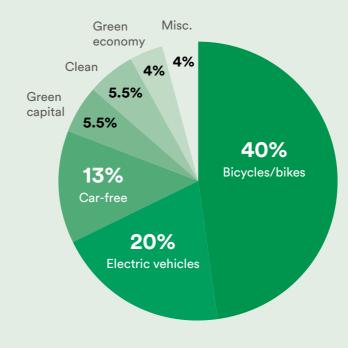
jure 10:

Oslo's global online reputation change for greenness, 2014 to 2018*



Source: Google Trends. *All figures relative to Helsinki in 2014 (score = 1).

Figure 11:Breakdown of "green" assets associated with Oslo in leading global media sources, 2018/19



In the majority of cases where leading global media sources reference Oslo's "greenness," the tendency is to focus on green policies and awards won by the city.

Over the past year, nearly half of all references to Oslo as a "green" city have focused on the city's bicycle lane policies, and a further third on its adoption of electric vehicles or efforts to limit cars in the city centre (by promoting an accessible and pedestrianised Ring 1 zone and removing hundreds of parking spots at street level). References to Oslo as a clean city that make a link to the fjord clean-up initiative, and to the city's status as European Green Capital, also feature clearly in media descriptions. By comparison, references to other green terms such as 'resilience', 'renewables' or 'biodiversity' account for less than 5% of all mentions (see Figure 11). Oslo's reputation for the green economy is not yet well established but can leverage progress in related areas.

^{*}See appendix for methodology.

Quotes that describe Oslo in the global media in 2018/19 tend to highlight the city's pre-eminence in the electric vehicle and active mobility space and its ability to stay 'ahead of the trend' when it comes to urban sustainability.

Figure 12:

Quotes used to describe Oslo's green economy in the global media, 2018-19

"Oslo is [already] a new reference for sustainability...
[and] will [soon] become a benchmark in terms of sustainable destinations... Urban planners, local politicians and businessmen have been working for years to reduce the carbon footprint of the city and ensure a more sustainable future for all, and these efforts ...
[are] what has differentiated the capital of Norway from other European cities."

El Nuevo Día, Puerto Rico, 2019

"The capital of Norway has proposed to eliminate the emission of harmful gases by 2025 and to do this it will prohibit the circulation of diesel and petrol-based vehicles. One out of every three cars is electric and the luxurious Tesla is a common sight in the streets of the city."

El País, Madrid, 2018

"Oslo is spearheading a broader trend, with other big cities like Paris, Madrid, Brussels and Helsinki all trying to reverse from the car-based society."

Channel News Asia, Singapore, 2018

"The capital of electric power in Europe remains Oslo."

La Repubblica, Rome, 2018

"I'm inspired by Norway's capital Oslo -- a classic old city that keeps chugging into the future. It's architecturally fascinating, extremely liveable, and mellow. Even with all the slick urban buildings, the feel of Oslo is green -- dotted with parks and lakes, and surrounded by hills and forests."

Los Angeles Times, 2018

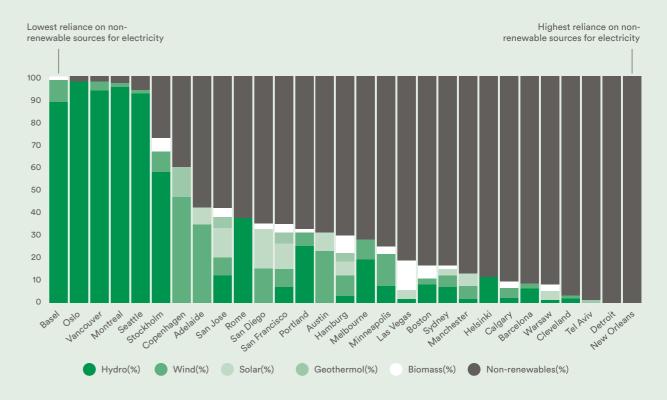
State of the city 27

Green infrastructure and Green Economy progress in the last 12 months:

Oslo's reputation for investing in climate adaptation infrastructure is becoming better established in the benchmarks. Studies highlight Oslo's strengths as a keen promoter of electric vehicle adoption, for which the city places in the top 6 globally in two new indices (3rd among its peers).³⁵ This is reflective of the recent bold changes to Oslo's transport system³⁶ and the relatively quick roll out of electric vehicles and charging stations.³⁷

 Oslo has emerged as a global leader for the adoption of renewable energy sources, which is helping to strengthen economic resilience and improve longterm economic prospects. The city was recently cited as having the 14th lowest dependence on fossil fuels in the world among cities outside of Latin America, and 5th if looking only at major cities (see Figure 13).

Figure 13:
Reliance on non-renewable energy sources for electricity, Oslo and selected peers

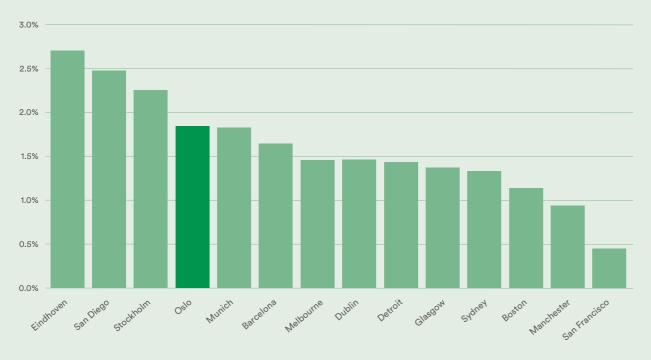


Source: CDP Open Data Portal "Citywide Electricity Mix". Selected peers = peers included in the data portal.

- Early adoption of renewables is one contributor to Oslo's favourable scores in indices assessing long-term environmental risk and economic resilience, including the influential UN Habitat review that sees Oslo rank in the top 25% globally for long-term economic sustainability.³⁸
- Oslo's emerging strengths in the low carbon sector have begun to result in economic spillovers. In 2019, the share
 of Oslo's top innovative firm activity in the low carbon and green economy sectors surpassed 1.8%, which is
 more than three times that of Manchester and San Francisco, and comparable to other cities successfully incubating greentech firms such as Munich and Barcelona (see Figure 14). Oslo is home to the renowned solar and
 renewable energy firm Otovo, which ranks just outside the top 10,000 most innovative technology firms globally.

State of the city 28 State of the city 29

Figure 14:
Share of top innovative firm activity in low carbon/green economy sectors, Oslo and selected global peers



Source: Crunchbase, February 2019 data. *See appendix for methodology.

• Oslo is also translating its green commitments into green tourism and wider development spillovers. Oslo is now ranked the 4th city in the world for sustainable growth in MICE tourism according to the Global Destination Sustainability Index. 100% of the city's hotels are easily accessible by public transport, all of the cities exhibition centres have sustainability certification, and 35 hotels in the city-centre are green-certified. In addition, the airport's new terminal is the first ever airport building to receive an "excellent" BREEAM rating, and Oslo's new cycle of cultural investments are all being built in an environmentally conscious manner. The green approach is also starting to drive the urban transformation of neighbourhoods, such as a super mixed-use city centre agricultural quarter that will feature an innovation pilot and showcase how agriculture will support the city's pivot towards a greener economy.

Opportunities for Oslo

No city has yet fully established a global reputation as a pioneer in the green economy, although cities such as Vancouver, Singapore, Hamburg and others are starting to stake a claim. There are also big national agendas afoot to kick start a more inclusive green economy. As such there is a short window of opportunity for Oslo to use the impact and attention of 2019 to begin a focused effort to scale the green economy.

- Oslo will benefit from a reputation as a world leader for green solutions
 for a while, and should use this visibility dividend to build a long cycle of
 Oslo's leadership that includes more innovation in environmental policies
 and more attempts to translate that to support home-grown aspirational
 green businesses. This can become an export opportunity for Oslo as
 more cities look to learn from Oslo as well as admire it.
- The green economy in Oslo will benefit from an enabling policy framework, improved analytics, public awareness, infrastructure investment, and demand from business and investors. This economy will be catalysed by ongoing improvements to the innovation eco-system and to the positive changes in Oslo's spatial development.
- Other cities are finding success by identifying dedicated urban areas for green solutions and test beds, working together with other cities on green norms and standards, and ensuring that procurement and funding rules favour greener companies. There is potential for one of Oslo's emerging Innovation Districts to become a recognised location for the high value green economy as well as for green infrastructure.
- Oslo has the opportunity to develop and partner with other cities to create a Green Economy Benchmark. This can raise awareness of Oslo's leadership and highlight the wider nature of Oslo's green capital status, so that 2019 can be the start, and not the peak, of the city's ambitions in this area.
- The green economy should also be viewed as a way to renew social
 participation and fairness and re-state Oslo's established values as a city
 of peace and reconciliation. Oslo can increasingly start to convene the
 world around green solutions and environmental justice. The Green Capital status provides the momentum to seize this leadership opportunity.

State of the city 30 State of the city 31



3.4 Work-Life Balance



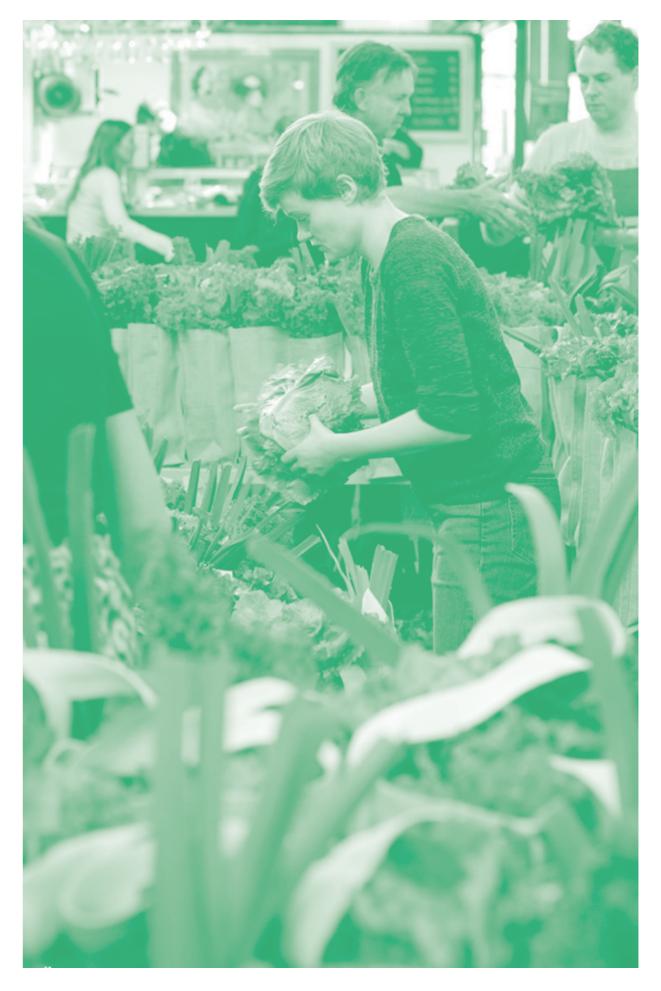
PERFORMANCE

The 2018 review found that:

Oslo is gradually becoming widely perceived externally as a low-stress and happy city with a healthy work-life balance. However affordability, vacation days, and mental health factors slightly eroded Oslo's overall performance in this fast moving area of global study.

Since 2018:

- Oslo continues to perform well in studies on work-life balance that focus on the ability of the cities to foster healthy environments for citizens. In a new global study of the healthiest cities, Oslo ranks 2nd behind Amsterdam, due mainly to high scores for work-life balance (9th), the number of vacation days (24th), and low rates of adult obesity (34th).
- However, Oslo continues to lag in studies reviewing work-life balance that look at easily available data on costs and vacation time such as the number of paid leave days and the cost of living. In a new European ranking by real estate firm Silver Door, Oslo only ranks 29th out of 39 cities (13 out of 24 peer cities). This means Oslo does not easily establish its global reputation in this area.
- There have been fewer indexes this year that review the previously under explored aspects of work-life balance in which Oslo has traditionally performed well, such as happiness, stress levels, and maternity and paternity laws. However, the fact that Norway as a whole continues to benefit from a positive international perception on its work-life balance is helping to maintain Oslo's overall reputation as an attractive city in which to pursue a career.³⁹

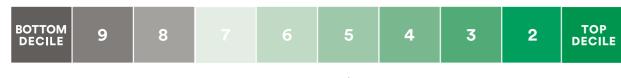


State of the city 32 State of the city 33



Hospitality

4.1 Attractiveness to Visitors (attractions, landmarks, shopping, food, events)



PERFORMANCE

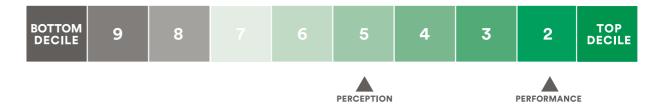
The 2018 review found that:

Oslo had gained recognition for its more diverse and mature visitor economy, particularly its improving culinary scene and cultural offer and its role as a gateway to Norway. However, cost remained an important deterrent for potential visitors, which was reflected in global indices.

Since 2018:

- Oslo has continued to hold its own against larger metropolises as an attractive and interesting city to visit. It is one of only 50% of its peer cities to appear in the World Cities Ranking "World's Best 150 cities to visit", while in an influential study of the quality of cities' museums, convention centres and attractions, Oslo places ahead of Montréal and Manchester, ranking 64th overall (21 out of 50 peers).40
- Key measures of international outreach have seen Oslo fall slightly, despite the city's capital status.
 One global review that takes into account number of airport passengers, hotels, and international conferences has seen Oslo slip 6 places from 58th to 64th out of 165 cities globally, and be overtaken by Helsinki and Dallas.⁴¹
- Cost remains a key deterrent to travel to the city. The 2019 version of the Price of Travel Backpacker sees Oslo continue to rank in the top 5% most expensive cities to visit in the world, similar to last year.⁴²
- There have been fewer studies measuring individual aspects of the visitor economy, such as culinary scene and openness to tourists. But in one measure of cities' shopping, culinary, arts and nightlife options, Oslo only just makes it into the top 100, ranking 99th globally or 30th among 50 peers – on a par with Brisbane and Cologne, though still above Helsinki, Stockholm and Zurich. This is again an example of Oslo reaching a performance 'ceiling' because of its smaller size.⁴³

4.2 Attractiveness to Talent



The 2018 review found that:

A number of indices showed Oslo registering on the global radar as an exciting place to move to and build a career, especially for professionals with families. Cost of relocation was one of the most important deterrents for prospective talent.

Since 2018:

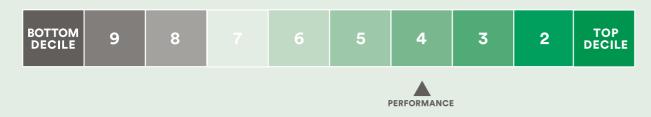
- Oslo continues to grow its reputation as a city with unique attractions for adventurous global talent. The influential INSEAD Talent Competitiveness Index ranked Oslo 3rd out of an expanded 115 cities this year, behind only Washington D.C. and Copenhagen.⁴⁴ In its review on attraction in Western European metropolitan areas, economic consultancy BAK Basel ranked Oslo 18th overall.45 Oslo also appears in the top ten of cities globally in Movinga's most recent "Best Cities to Find a Job" index. This is partly a reflection of the fact that the city's high living standards, good healthcare, and high levels of life satisfaction are now beginning to be recognised in measures of talent attraction, and partly a reflection of Oslo's ability to rank on a par with large global metropolises in studies on citizens' overall purchasing power.⁴⁶
- Urban quality of life, supported by Oslo's compact and well-designed medium density model, continues to stand out as Oslo's strong point in global reviews. Oslo places 9th overall (7th out of 42 peers) in Movinga's specific measure on the standard of living in cities, which considers a wide breadth of factors (from the cost of living and disposable income, to government effectiveness and healthcare expenditures).⁴⁷
- Global studies have started to weight affordability more heavily, in response to growing concerns among millennial populations in particular that cost of living is becoming prohibitively high in several major cities worldwide. As a result, Oslo's position in some global rankings of talent attractiveness and talent retention has begun to be affected.⁴⁸ The high perceived cost of living places Oslo as the 2nd most expensive city after Zurich among 25 peers in Nomad List's global ranking.49 In such rankings that reflect young and millennials' perception of cities, Oslo does however manage to retain an advantage in the quality of its urban fabric as well as its co-working spaces, internet speeds, and other measures of 'hipster' appeal but cost stays the most prominent deterrent to Oslo's appeal to local and international prospective talent.

State of the city 34 State of the city 35

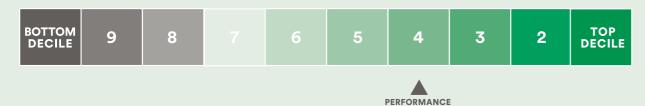
4.3 + 4.4 Special feature:

Oslo's Social Diversity and Expression

Friendliness



Welcoming to Foreigners



^{*}In 2019 the Friendliness and Welcoming to Foreigners measures have a combined score, as these themes have become increasingly integrated in the way cities are measured and rated.

In the past year, attention on cities' ability to successfully accommodate diversity, host newcomers, and foster a genuine sense of inclusivity has become more pronounced. There are at least three reasons for this.

- Firstly, immigration and the continued diversification of metropolitan populations means that it has become essential to engage those who arrive in a city for work and optimise their experience.
- Secondly, mobile talent, particularly in the early and mid-stages of their careers, are increasingly judging and choosing between cities based on their ability to make them 'feel at home', express themselves freely, and to nurture structures and companies that are flat, horizontal and non-hierarchical in nature.
- Thirdly, there is increasingly a premium on cities' ability to foster economic participation through the implementation of competent initiatives in areas such as labour market inclusion, upskilling of migrants, promotion of inclusive work cultures and entrepreneurship.

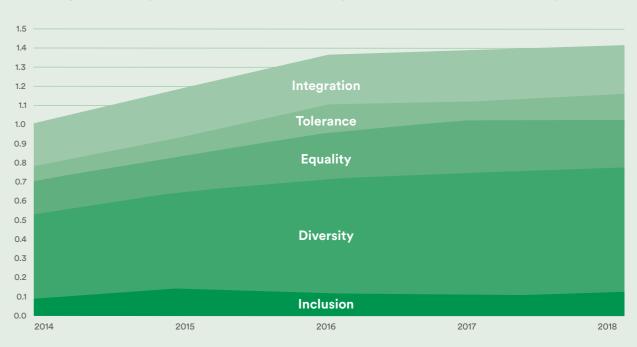
These attitude shifts are visible in latest urban strategies, publications and in the media more broadly, as well as in the measures of how cities perform. In particular, the world of benchmarks is now catching up to the realisation that diversity – in all its forms – is critical to economic competitiveness. A successful city's skills base has to be reflective of a wide variety of experiences, skills and perspectives.

The appetite to measuring these phenomena is visible in the fact that:

- The number of indexes and special reports dedicated to factors such as tolerance, freedom of expression, and diversity doubled between 2015-2017 and 2017-2019.
- All-round studies of urban performance are now more than twice as likely to include diversity themes as components of competitiveness.
- The priorities of leading tech publications, crowd-sourced city data, and other sites used by mobile talent, have all placed more of an emphasis on these factors in recent years.
- The magnitude of online interest in these factors in relation to cities, as shown by overall search interest, has increased by more than 40% over the past five years (see Figure 15).

Figure 15:

Overall Google search activity for a selection of inclusion and diversity related terms in relation to cities, past five years*



Source: Google Trends. *Relative to 2014 (where overall Google search activity = 1).

State of the city 36 State of the city 37

How is Oslo performing?

Urban indexes and datasets both measure performance and also shape perception. What this means is that Oslo's economic performance and perceived business credentials will increasingly be influenced by the city's ability to promote openness to new talent that endorses and integrates diversity of all kinds. In the past few years, and with a focus on the past year specifically, these comparative studies suggest that:

- Because Oslo is still one of the fastest growing major cities in Europe, the immigrant and expat share of the population in the city is now growing rapidly and means that Oslo now competes on a par with renowned diverse regions such as Brisbane and the San Diego region for this measure.
- Oslo's diversity is a new phenomenon, and new arrivals encounter a proud and strong national cultural

identity where diversity in civic expression, culture and celebrations is still emerging. In survey measures citizens in Oslo have tended to have a favourable view of foreign citizens, and these imply a friendly disposition. ⁵⁰ However some data suggests making new friends has posed a challenge for foreign residents living in Nordic countries, especially Norway. ⁵¹

Overall, however, Oslo continues to be viewed as a tolerant city for immigration, where it now ranks 14th out of 100 cities.⁵² Oslo also benefits from a Scandinavian business culture which places a strong emphasis on gender and LGBT equality – factors which are seen as increasingly important to the city's ability to attract the next generation of creative talent, such as new students emigrating to study. Oslo performs extremely well in several rankings on the welcome provided to journalists, for example.⁵³

Oslo's social diversity and inclusion in the global media

In global media analysis of Oslo, it is striking that the city's reputation for welcomingness is currently most clearly visible in terms of openness and tolerance of the city's population (see Figure 16). This represents an important area of progress. By comparison, despite its successful record of implementing policies aimed at strengthening inclusivity and equality, these elements are currently less visible. Partly this is because global media currently focuses on the ability of mobile populations to integrate into new places seamlessly. It is also because Oslo and Norway's reputation for fairness is well established, while the openness is a pleasant surprise for people who encounter or move to Oslo for the first time.

Figure 16:

Types of adjectives used to describe Oslo in articles that focus on the city's social inclusion and diversity, 2016-2019

See appendix for details.

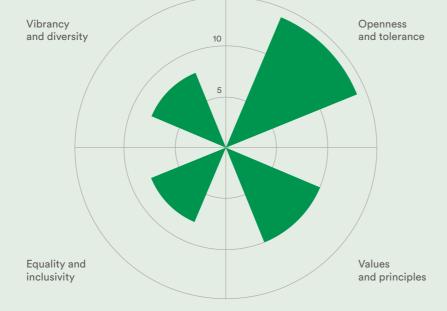


Figure 17:

Quotes used to describe Oslo's social diversity and inclusion in the global media, 2018-19

"Oslo is becoming a vibrant hub for Norwegian and foreign talent who appreciate the transparency and quality of the ecosystem and the social safety net."

Irish Times, Dublin, 2018

"I asked Nustad why he chose to host Katapult Future Fest in Oslo - although it seemed rather obvious as Oslo sparkled in the sunshine, a beautiful and hospitable city with a gleaming airport and efficient integrated transport system... He thought for a moment. "There is an honesty and focus on trust here and we are more focused on sustainable growth here than commercial elements", he answered."

Forbes, London, 2018

"The Norwegian capital is thriving from a unique combination of business agility, a cultural receptiveness to technology, and a social desire to do good."

Computer Weekly Magazine, London, 2018

State of the city

Observations and priorities for Oslo:

The city of Oslo has long been at the forefront of global efforts to promote diversity and inclusion, dating back at least 20 years. The city remains one of only a few in the world to fully coordinate efforts in inclusion and managing public grants for integration and diversity activities. Now Oslo increasingly attracts population from a variety of cultures because of its quality of life. This creates an imperative to continue building the programme of activities that celebrates Oslo's cultural personality and DNA, and demonstrates how new arrivals are made to feel welcome in a variety of settings.

The current benchmark findings and global media review together seem to raise a series of additional priorities for Oslo if it is establish its reputation as a place to make friends and roots, and to freely be oneself, as well as to meet friendly people. These include:

- Active development of workplace ties, and encouragement of spaces, places and events where Oslo's cosmopolitanism and diversity can be celebrated and shared more widely.
- Integrated and sustained communication of the city's welcoming business culture. Enquiries from people of migrant background seeking support to start a business should communicate its advantages in terms of business culture, partnership, freedom and social openness.⁵⁴
- Storytelling and communication efforts can continue to exemplify openness to testing new models of work and play, and actively address any preconceptions that Oslo's residents and businesses are less risk-hungry than other European cities.⁵⁵
- Oslo may benefit from partnerships with other Norwegian cities – such as Bergen, Stavanger and Trondheim– and regions in order to leverage Norway's combined reputation for openness, and the distinguishing features of the welcome in each city.
- Closely and proactively monitor and track urban indexes that measure these trends, and identify ways to gather data that express the changing zeitgeist in business and cultural attitudes in Oslo.

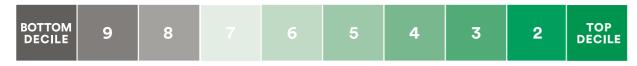


State of the city 40 State of the city

5

Governance

5.1 Societal Stability





The 2018 review found that:

Oslo continued to be regarded as a highly egalitarian global city. Some lower scores on perceived social cohesion were linked to Oslo's rapid business growth, as more dynamic business centres tend to have lower social cohesion scores.

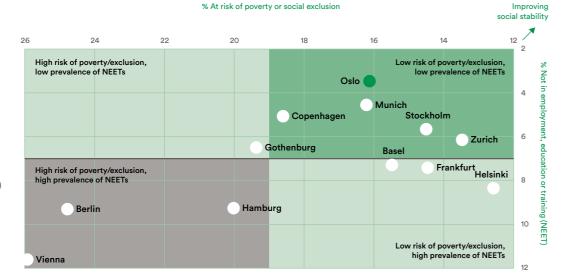
Since 2018:

- Oslo has cemented its reputation as a global leader in the field of gender equality and personal freedom. Indeed, two global influential studies report Oslo as being the most equal city in the world for employment opportunities.⁵⁶ This is an important area of advantage and differentiation in Oslo's business story.
- The major measure of social cohesion saw Oslo maintain its rank of 21st out of 165 cities, while many of its peers slipped.⁵⁷ Oslo's position in the top 15% most socially cohesive cities globally is reflective of both a low risk of social exclusion and low numbers of
- economically inactive young people compared to other cities (see Figure 18). Oslo still performs far ahead of larger European capitals for these measures.
- A new measure developed by the OECD on Regional Wellbeing has seen Oslo perform in the middle of the pack for the perceived level of social network support among citizens (8th out of European 20 peers). However, it is important to note that in absolute terms Oslo still scores a very strong score (8.8/10) and ranks equally with Stuttgart and Helsinki.⁵⁸



Population at risk of social exclusion or poverty and % of population that are not in employment, education or training (NEET), Oslo and Northern/Western European peers*

Source: Eurostat. NUTS2 scale. *All peers for which recent (2017-) data available.



5.2 Quality and Integrity



The 2018 review found that:

Oslo was perceived to offer a high quality of systems and services. The city climbed in rankings on expert perception on city smartness, and in studies measuring citizen participation, satisfaction with public transport, and health outcomes.

Since 2018:

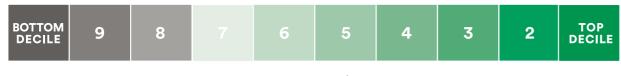
- In measures of perception, Oslo is increasingly becoming synonymous with quality, whether in terms of public space, city systems or citizen democracy. Oslo is gaining more renown for the perceived high quality, cleanliness and safety of its public places. The city ranked 3rd globally in a new HSBC review of expat perceptions of public spaces, and 9th overall in SpotAHome's sub-index on the perceived quality of green spaces and parks within a city.⁵⁹
- Oslo continues to record a high relative level of citizen participation, which translates into positive overall perceptions of the integrity of city leaders and high levels of trust in the public administration.⁶⁰
- Indexes show a rise in the perceived quality and reliability of the city's public transport system. In one latest Smart Cities Index, Oslo shot from the 20th to the 7th place among 30 city peers for this measure.⁶¹ This reflects increasing resident satisfaction with public transport services and is linked to the attention gained by the bold steps taken by city government for policies and investments in an expanded fleet and electric-powered vehicles.⁶²
- Despite positive sentiment data, performance data on the overall quality of Oslo's physical fabric have recently been held back by the focus on variety and diversity which tends to privilege cities with

greater scale. In the globally influential Resonance study, Oslo dropped 31 positions from 129th to 165th overall for the perceived quality of its natural and built environment, due mainly to the city's low score for diversity and vibrancy of street life relative to peers.63 Meanwhile IESE's sub-index on urban planning also shows a steep decline in Oslo's position, from 3rd to 48th worldwide. This is mainly due to a shift in indicators away from prevalence of cycling and number of architects towards the variety of built form and the availability of floating transportation options (e.g. shared bicycles schemes). But while larger metropolises performed better in these features, Oslo still places in the middle of the pack of its most comparable city peers (alongside Basel, Dublin, Helsinki, etc.).64

41

 Although Oslo has become a leader in implementing measures that reflect smart city thinking, the capital does not appear in several high-profile Governance and Smartness rankings (e.g. The Eden Strategy Institute, Juniper, McKinsey). This may suggest that recent smart initiatives taken by the city and region are not yet fully registering on the radar of organisations developing global benchmarks. State of the city 42 State of the city 43

5.3 Transparency and Accountability



PERFORMANCE

The 2018 review found that:

Oslo continues to benefit from a strong institutional framework, as the city's performance in indices on quality of public services and digital infrastructure has been steadily improving.

Since 2018:

- An increasing focus on open data and whether cities' markets are open to non-domestic players is one reason for a drop back for Oslo this year. The major measure of real estate market transparency developed by JLL now ranks Oslo 64th out of 158 cities globally. This puts well behind English-speaking cities in particular.⁶⁵
- Meanwhile Oslo's performance has improved in measures pertaining to public services and the government's ability to implement policy effectively. The city ranked 6th overall in the Movinga sub-index on government effectiveness, performing better than all its 14 peer cities of comparable size and wealth.⁶⁶
- Indexes have begun to measure governance at a broader scale, to account for more than just public finance capabilities, and include factors such as administrative efficiency, the digitalisation of government, and the design and implementation of new organisational and management models such as private initiatives. In the IESE "Cities in Motion" governance sub-index, Oslo has leaped from the 77th place to the 51st place overall as a result of this shift in indicators, while many of Oslo's peers have experienced declines of the same magnitude, like Auckland and Hamburg.⁶⁷ In another index measuring the strength of the city's digital infrastructure and the ability of government to digitally engage its citizenry (traffic of local govt. websites), Oslo rose to 8th place among 30 peers (up from 14th place in the previous year).68

5.4 Status and Influence

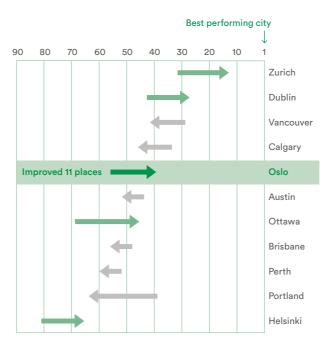


The 2018 review found that:

Oslo's increasing presence in reputational benchmarks was a positive sign that the city's global profile was steadily improving.

Since 2018:

- Oslo's is once again achieving greater visibility in important studies that relate to influence and credibility of cities. On the one hand, in terms of city brand, Oslo appears in 45th place in the influential Resonance index, the city's best position yet, while it is also starting to appear more frequently in reader surveys of the best cities in Europe for visitors and talent.⁶⁹ In the major study of city reputation (see Figure 19), Oslo is one of the only five cities to experience a rise in position (out of 12 most comparable peer cities). Oslo is spearheading the revival in confidence in European cities.
- **Figure 19:** Change in position of Oslo and most comparable peers for overall city reputation, 2017 to 2018



Source: Resonance World's Best Cities 2019. Oslo and most comparable peer cities only.

- Studies of international engagement and influence have also seen Oslo improve. INSEAD's review that covers cities' involvement in international relations places Oslo an impressive 5th out of 115 cities (1st among its peer group).⁷⁰ The results show Oslo punching above its weight relative to its small size, placing just behind much larger and arguably more politically established cities like Paris and Washington DC. The high number of intergovernmental organisations in a compact city is an important edge. Oslo's institutional strength in now becoming more central to its clout.
- While Oslo's ability to "tell its story" and reveal its unique character has improved, the wider battle for global attention is fierce. In a major index measuring the quantity of references and stories shared about cities online, Oslo dropped to 141st position overall (down from 124th last year).71 Another index studying online promotion placed the city in the middle of the pack relative to its European peers (15th out of 24) for the volume of international online searches undertaken by prospective investors, tourists and residents.72 Oslo is also omitted from important global indexes on city status and influence.73 These outcomes are partly is because the methods of some global benchmarks favour cities of larger scale, but also highlights the challenge to continually emphasise Oslo's edges.

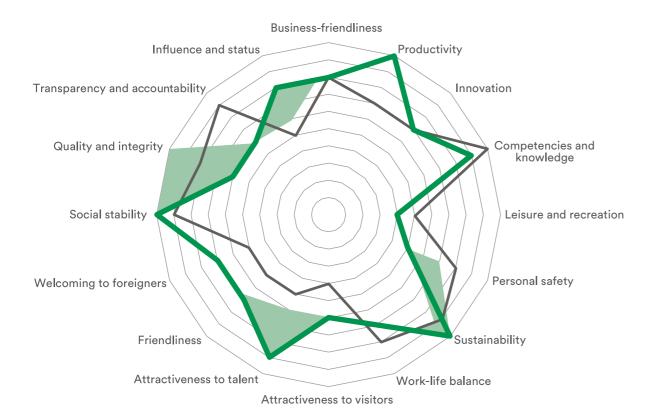
State of the city 44 State of the city 45

Conclusion

Over the 4 years that we have been analysing how Oslo fares in the world's system of cities, it has become apparent that Oslo has started to become a city that achieves recognised excellence in a number of its core strategic agendas.

The Oslo Performance Spidergram, 2015-2019





^{*}In 2019 the Friendliness and Welcoming to Foreigners measures have a combined score, as these themes have become increasingly integrated in the way cities are measured and rated.

In particular Oslo in 2019 has reached the very top group of performers for sustainability, for its inclusive social model, and for productivity. On objective measures the city's appeal for talent has also improved substantially, as has its hospitality and welcome. These all reflect improved ways that cities are being measured, real improvements on the ground, and changes in how other cities are performing. What is clear is that Oslo's association with quality, innovation, high standards, and ambition, is

clearly growing in the global consciousness. The world is now taking notice of Oslo and in some cases giving it the benefit of the doubt. 2019 and the European Green Capital provide an opportunity to build on the attention and translate this into even more proactive and collaborative initiatives around Oslo's future economy, innovation and sustainability, while remaining vigilant about the areas where the competition is strong.

Methodology

Oslo's overall performance by theme (spidergram and sliding scales)

- For each of the 16 themes, Oslo has been evaluated in multiple comparative indexes, benchmarks and metrics.
 - For each theme, Oslo's competitiveness has been graded on a 10-point scale, based on its performance relative to all other comparator cities that appeared in at least one index, benchmark or metric within each theme.
- For each index, benchmark or metric, rankings were inputted to our ELO algorithm which is used to compute the overall performance of all the measured comparator cities for each theme.

The ELO algorithm rates cities or regions by comparing their performance in every possible permutation against a list of other cities/regions. The system produces the most accurate comparative assessment of city/region performance, as it accounts for the fact that some cities/regions appear in more rankings than do others, and that each ranking measures a different number of cities.

For themes where there was more than one perception-based measure, two ELO algorithm runs were undertaken - one using all the rankings taken from purely performance-based measures, and another for all measures containing a perceptual element. For these themes, Oslo receives a score for both performance and perception. Any of the 50 cities not appearing in at least one index, benchmark or metric were discounted from any ELO algorithm runs.

- i. Oslo's final score for each theme is based on its overall score, where Oslo's rank compared to all other measured cities within that theme determines the decile in which it falls. A score of 0.9-1 would put Oslo in the top decile, 0.8-0.9 in the 2nd decile, and so on.
- e.g. In performance only measures, Oslo ranks 20th out of 50 comparator cities for Innovation, giving it a score of 1- (20/50) =
 0.6. This puts Oslo in the 4th decile for Innovation performance.
- -e.g. In measures with a perception element, Oslo ranks 4th out of 43 comparator cities for Quality and Integrity, giving it a score of 1-(43/50) = 0.91 (7 cities are discounted from the calculation due to not appearing in any of these measures). This puts Oslo in the top decile for perception of its Quality and Integrity.

Notes to individual figures

Figure 11:

Mentions of Oslo's Green Economy in the Global Media

To calculate the number of mentions relating to Oslo's green economy in the leading global media, we reviewed archives of 10 of the most influential media outlets since 1st January 2018: The New York Times, BBC News, The Guardian, Le Monde, The Globe and Mail, The South China Morning Post, The Economist, The Sydney Morning Herald, Al Jazeera and The Times of India.

Figure 14:

Oslo's share of top innovative firm activity in the Green Economy sector

The share of top innovative firm activity in the Green Economy sector was calculated using Crunchbase data on the top 500 innovative technology firms in all comparator city regions for which data was available at the metropolitan scale and which had more than 500 such firms. Given that many firms span more than one category, we counted the total number of times that Green Economy categories were mentioned in each city, and compared this to the total number of mentions across all categories.

Green Economy categories included: Renewable energy, Solar, CleanTech, Clean energy, Environmental consulting, Electric vehicle, Sustainability, Energy storage, Energy efficiency, Green building, Wind energy, Recycling, Environmental engineering, Smart building, Biomass energy, Green consumer goods, GreenTech, Biofuel

Figure 16:

Types of words used to describe Oslo in articles that focus on the city's social inclusion and diversity

To analyse what it is that the global media concentrate on in terms of Oslo's Inclusion and diversity, we reviewed all global media articles making at least passing reference to these topics over the past three years. All relevant adjectives and nouns related were then classified into groups to determine their relative importance:

Values and principles - e.g. happy/happiness, pragmatic/ pragmatism, laid back/relaxed, honest(y), just, trust(ing), peace(ful), etc.

Equality and Inclusivity - e.g. equal(ity), inclusive/inclusivity, integrated/integration, etc.

Vibrancy and diversity - e.g. diverse/diversity, dynamic/dynamism, vibrant/vibrancy, etc.

Openness and tolerance - e.g. friendly/friendliness, open(ness), acceptance/accepting, progressive/progressivist, welcome/welcoming, hospitality/hospitable, etc.

State of the city 46

Notes and References

- Conde Nast's Best Cities in Europe (Reader's Choice Awards).
- IESE Cities in Motion 2018 Economy
- Teleport 2019 Business Freedom
- La Salle E-REGI Index 2018. fDi European's Cities and Regions of the Future 2018/19: Business Friendliness
- 5. Movinga Best Cities to Find a Job New Business Registration
- 6. Teleport 2019 Taxation
- EasyPark Internet Speed
- 8. Teleport 2019 Commute
- 9. INRIX Global Traffic
- 10. 2thinknow Innovation Cities Index
- 11. RS Components Best Cities for Tech Enthusiasts 2018 Index
- 12. Valuer Best 50 Startup Cities for 2019
- 13. CAE Global Startup Ecosystem Report
- 14. Dealroom 2019
- 15. Eurostat 2017-2013 data. % 25-64 yo with tertiary education
- OECD Regional Wellbeing Labour force with min. secondary education
- 17. Nature's "Top 200 Science Cities in the world"
- 18. INSEAD Global Talent Competitiveness Index 2019
- 19. Nestpick Millennial Cities Ranking 2018 Nightlife
- 20. Nestpick Millennial Cities Ranking 2018 Festivals
- 21. Movinga's "Best Cities to Find Love" Expat Social Opportunities
- 22. NomadList 2019 Fun
- 23. OECD Regional Wellbeing Homicide Rate
- 24. SafeAround World's Safest Student Cities
- Greenpeace Wuppertal Institute, Living Moving Breathing Ranking of European Cities in Sustainable Transport 2018
- 26. Numbeo 2019 Crime index
- 27. NomadList 2019 Safety
- 28. Compare the market European Green Capitals 2018
- 29. Teleport 2019 Environmental Quality
- 30. IESE Cities in Motion Environment Environmental Quality
- 31. https://tremontherald.com/environment/oslo-starts-2019-as-europes-eco-capital/355731/
- MIT Senseable Cities Green View Index. Greenpeace Wuppertal Institute, Living Moving Breathing - Ranking of European Cities in Sustainable Transport 2018 - Active mobility
- 33. Numbeo 2019 Pollution index
- http://www.vancouvereconomic.com/blog/vecs_take/cities-are-innovation-platforms-for-green-economic-development/
- RS Components Best Cities for Tech Enthusiasts Electric Car Charging Points 2019. SpotAHome Healthiest Cities - Electric Vehicle Charge.

- UN Environment https://www.unenvironment.org/news-and-stories/story/ oslo-takes-bold-steps-reduce-air-pollution-improve-livability
- 38. Lloyd's of London City Risk Index
- https://www.tnp.no/norway/economy/norway-is-the-third-best-country-forwork-life-balance
- 40. Resonance World's Best Cities (product)
- 41. IESE Cities in Motion (International Outreach)
- 42. Price of Travel Backpacker 2019
- 43. Resonance World's Best Cities (programming)
- 44. INSEAD Talent Competitiveness Index 2019
- 45. Bak Basel Attractiveness to Talent
- 46. Numbeo 2019 Purchasing Power
- 47. Movinga Best Cities to Find a Job Standard of Living
- 48. INSEAD Talent Competitiveness Index 2019 Attract, Retain
- 49 Nomadl ist 2019 Cost
- 50. European Commission
- 51. InterNations Expat Insider 2016
- 52. Movinga Best Cities to Find a Job 2018 Immigration
- The Telegraph 2017. https://www.telegraph.co.uk/travel/lists/most-welcoming-cities/
- 54. Intercultural Cities, Building the future of diversity. Oslo profile (2012).
- 55. Intercultural Cities, Building the future of diversity. Oslo profile (2012).
- Movinga Best cities to find a Job Opportunity for women overall score. Nestpick 2018 Cities for Millenials - Gender Equality Score
- 57. IESE Cities in Motion 2018 Social Cohesion
- 58. OECD Regional Wellbeing Community
- HSBC Expat Explorer Top 3 Public Places. SpotAHome Digital Nomads Index (Green spaces)
- 60. EasyPark 2018 Smart Cities Index Citizen Participation
- 61. EasyPark 2018 Smart Cities Index Public transport
- 62. EasyPark 2018 Smart Cities Index Citizen Participation
- 63. Resonance World's Best Cities (place)
- 64. IESE Cities in Motion 2018 Urban planning
- 65. JLL Global Real Estate Transparency Index 2016
- 66. Movinga Best Cities to Find a Job Government Effectiveness. Cities of comparable size and wealth to Oslo: Adelaide, Bristol, Cleveland, Eindhoven, Gothenburg, Las Vegas, Lyon, Manchester, Marseille, Minneapolis, New Orleans, Orlando, Prague, Raleigh, San Jose
- 67. IESE Cities in Motion 2018 Governance
- 68. EasyPark Smart Cities Digitalisation of Government
- 69. Conde Nast Traveller Best 35 Cities in Europe Readers' Choice Awards 2018
- INSEAD Talent Competitiveness Index 2019 Be Globa
- 71. Resonance World's Best Cities (place)
- 72. Bloom Consulting Digital City Index 2017
- 73. Reputation Institute; Gottlieb Duttweiler Institute

