

Oslo: State of the city

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Executive Summary

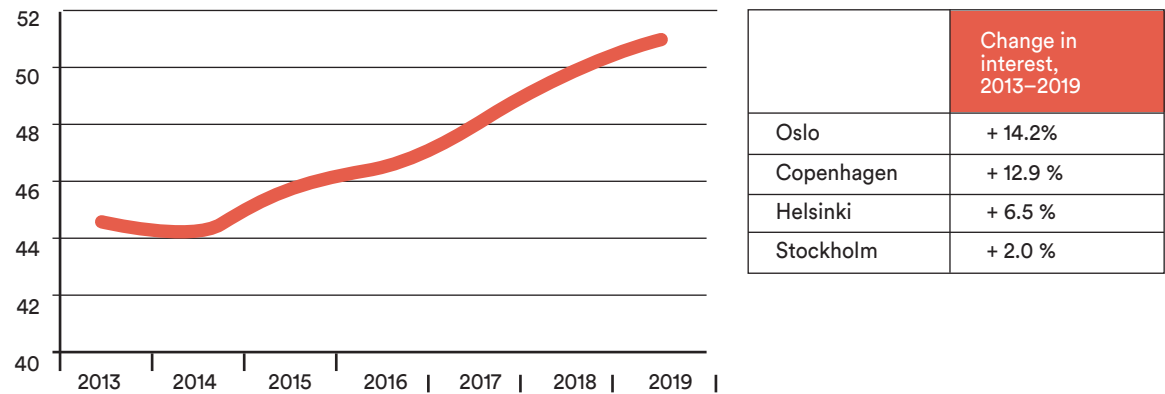
Great Expectations: Delivering on Oslo's Promise

2019 was perhaps the busiest year in Oslo's recent history. Its calendar has been packed in its role as Europe's Green Capital, host of peace talks, and home to a flourishing cultural centre with the new Munch Museum, Deichmann Library and National Museum. Oslo has also emerged as a clear leader on decarbonisation with an unprecedented global appetite for electric vehicles and the introduction of a car-free city centre. More attention, more demand and more expectation surround Oslo.

When these State of the City reports began in 2015, Oslo had only just started to tell the world its story as one of Europe's fastest-growing regions, and as a first-class choice for firms, investors and talent. The region's youthful vitality, enriching livability, pioneering spirit, and natural assets were roots of a compelling brand, but Oslo was yet to expand or diversify its global influence.

Five years on, the nature of the global competition and the global risks now looks different. This annual review of now more than 500 global benchmarks and other datasets firstly points to many clear areas of achievement. Oslo's advantages as a compact region have been amplified by its success at physical transformation through densified locations, city-shaping cultural projects and a newly opened up waterfront. These have driven greater international recognition, and greater variety to its visitor economy and its appeal to talent.

Global Interest in Oslo since 2013 online, based on 10+ million searches



Source: Google Trends (y axis based on maximum monthly score in Scandinavia (100)).

More physical and virtual traffic coming Oslo's way also reflects its commitment to set the early pace on the big questions that confront us in the 21st century. Perceptions of Oslo increasingly attach to its role as a pioneer in sustainability, a frontrunner in the decarbonisation of city systems, and a city challenging itself to do better on social issues of gender equality, LGBT+ inclusion, and disabled access. Oslo is gradually acquiring a reputation as Europe's most forward-thinking region, including in the way it integrates new digital technologies and promotes citizen well-being and enrichment.

Through the 2019-20 data we discovered that:

1: Oslo is sharpening its productivity edge. Even as other cities rapidly upgrade digital infrastructure, Oslo is becoming better known for its high performing labour market and the use of technology to enhance public services. A culture of taking employee health and wellbeing more seriously is also serving Oslo's reputation as a place where talent can access a special work-life balance and can concentrate on reaching its potential with fewer of the worries associated with 21st century urban living.

2: The infrastructure backbone is driving a reputation for speed and proficiency. Oslo's far-reaching and ambitious transport agenda has paid off in the global mind, with the region entering the very top performing group in studies of public transport efficiency and delivery. Oslo is

praised not only for how easy it is to access the transport system, but also its readiness to adopt tech solutions such as bike sharing schemes and digital payment services. Oslo's high levels of citizen engagement and trust have also continue to register.

3: The world sees Oslo as a sustainability leader in word and deed. As attention shifts to the full spectrum of what it means for a city to be resilient, Oslo is now excelling. As Europe's fastest mover on the Sustainable Development Goals, recognition of Oslo's health, wellbeing and carbon agendas is widespread. Specific initiatives around car-free zones, road safety, electric vehicles and investment in bike lanes, have all catapulted the region to the forefront of sustainable mobility.

So far, so good. But what is missing?

The data from the last 12 months also highlights that **some perceptions of Oslo remain stubbornly behind real performance.** In fact perceptions among citizens, visitors and investors lag Oslo's objective performance in 7 out of 8 areas. Expectations are high of the standard of Oslo's infrastructure, and its ability to deliver work-life balance. When the region does not live up to the high hopes, negative perceptions persist. This creates a clear need to bridge the gap and more effectively promote Oslo's achievements. Data also indicates that Oslo is still currently less visible online than many of its peers.

Into the 2020s, **Oslo confronts new kinds of challenge and will also need to be vigilant as it starts to compete in a higher calibre league where the competition is stronger.** The questions that now emerge include:

1: How does Oslo develop sharper innovation edges?

Despite the solid growth of Oslo's innovation eco-system, others have been quicker to establish global recognition in specific innovation industries, and to commercialise their higher education research. Maximising co-ordination and collaboration within Oslo's eco-system, and making more of the anchors and assets in the region, appears to be a clear priority if Oslo is to build collective resilience and scalable opportunities, and communicate them effectively. This also means there is an important opportunity to make the most of Oslo and Norway's first 'innovation district' to spark 'high trust' collaboration and demonstrate what is possible, both economically and socially.

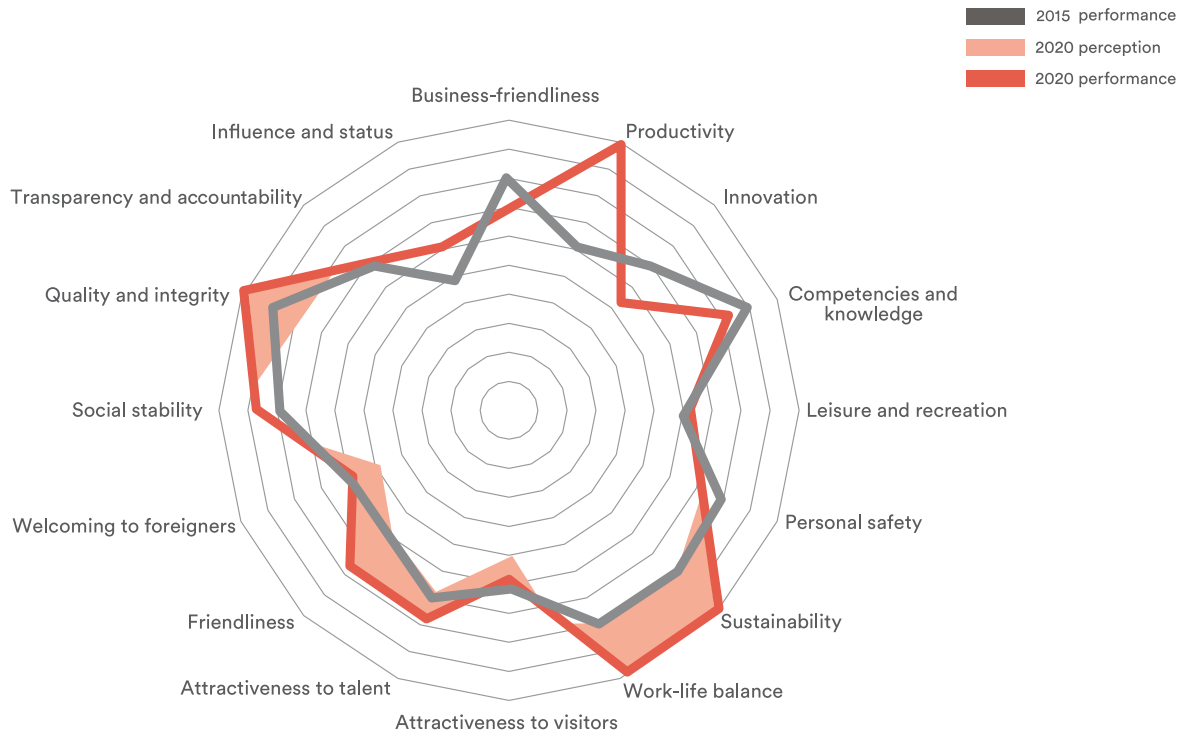
2: How can the world better understand Oslo's magnetic lifestyle equation? A wider audience is becoming familiar with Oslo's now outstanding cultural and enriched liveability offer, but there is still quite a low base of global

awareness of the region's amenities, character, nightlife, urban fabric and public spaces. Oslo has potential to expand its 'experience economy' to serve more visitors and residents, but there is a lag relative to other cities that are already more well known and can add more easily to their visible lifestyle.

3: Can Oslo achieve the openness to remain consistently magnetic and inclusive?

Oslo's innovation ambitions in part rest on its recognition as an open city and a welcoming social identity that is open to newcomers, to disruption, and to diverse ways of doing and thinking. This year, perceptions of the international workforce have laid down a fresh challenge for Oslo's welcome and ability to integrate. Relative to other cities, there has been a rise in people at risk of social or economic exclusion. These are competitive concerns and may also conflict with the Oslo's emerging reputation as one of the world's frontier cities for social and environmental progress.

The Oslo performance spidergram, 2015-2020



The consequences of success, and the consequences of being well known for some things but not for others, are starting to become more visible for Oslo. The risk is missed opportunity. This last year of results indicate that for Oslo to translate its momentum into wider visibility and demand, more permanent co-ordination and communication will be essential, with three areas appearing to be common priorities:

- Leadership ambition.** Oslo can make its first mover position more permanent in terms of green policy, cultural development, social inclusion and urban technologies. To do so will require being bold, proactive and experimental as the pace of change is fast and different aspects of a city's reputation can develop or dissipate quickly, especially during periods of turbulence. This may require convening a more networked and dispersed leadership in some sectors, broadening the base of promoters and communicators, and encouraging more partners to take a 'whole city' approach.
- Collective mindset.** To turn many of Oslo's recent edges into permanent advantages, requires wider scale of adoption and collaboration across more businesses, industries, institutions and assets in the region. Inherited strengths, one-off initiatives and pioneer institutions will not be enough by themselves for Oslo to excel. This means exploring ways to share ideas and know-how, concentrate and co-locate assets, and adapt business and institutional behaviour.
- Decisive communication** about Oslo's distinct offer, its cultural and innovation story, its core values and its success stories, leveraging more channels (Oslo business, Oslo citizens, Oslo ambassadors, third party endorsement) to do so. This also includes readiness to counteract reputational issues that emerge and address doubts and preconceptions about Oslo head on. Communication of Oslo's story now needs to become a permanent collaborative agenda.



1

Introduction

Oslo's journey

It is now five years since the Oslo region launched its brand strategy and since The Business of Cities began systematically benchmarking Oslo's progress on the global stage. These 'outside-in' reviews have provided an analysis of how the world sees Oslo, how it compares to other high-performing cities on the international stage, which strengths are standing out in the global mind, and what gaps it should address in order to diversify its offer and build its global reputation.

As Oslo has been evolving, so too has the way the world measures, compares and 'sees' cities. In this work we have been tracking Oslo's performance and progress across the widest possible set of more than 500 global benchmarks, rankings and comparative studies.

This is more effective than looking at just a handful of indexes, as it

captures the big picture about how Oslo is performing and is perceived, against its real peer group of cities internationally. The point is not that all the data or the studies are perfect, but that they are influential in telling the world how Oslo is doing. When viewed as a collective evidence base, they help to spot new trends, as the world is increasingly measuring cities in terms of their capacity for innovation, their urban appeal, their resilience and their governance.

These studies present Oslo with an additional tool to promote its strengths and to address new and ongoing challenges. They help the world to understand Oslo's advantages as a sustainable, connected, compact and ambitious region. They also expose gaps in perception and performance, and reveal the depth and quality of the global competition for talent, innovation and investment.

This year, we review Oslo's performance over the last 12 months, and also take a step back and assess: Where has Oslo really progressed since 2015?

Oslo has enjoyed an impressive decade of growth and diversification. Large investments in urban fabric, infrastructure, skills, and culture, has seen the region gain more global recognition for its quality of life, effective governance, social model and green economy. It has become a more distinctive metropolis on the global stage, and for many a shining example of a 21st century city that is visionary about the future and proactive about addressing the externalities of the present.

Table 1: Oslo metropolitan area's key economic statistics

	Growth 2010-2018
Population	+ 16%
GDP per capita	+ 5%
High-tech employment	+ 40%

Source: Eurostat, NUTS 2. Data for GDP per capita is from 2016

Oslo's momentum has translated into more visibility and competitiveness, and a more distinctive offer for companies, investors and talent. But despite progress, there is still much to be done, and many perception gaps persist. Into the 2020s, it is time for Oslo to be even more proactive in leveraging its advantages, building the eco-system, and correcting impressions to create new opportunities for the region to grow.



Overview and methodology

The way the world looks at, interprets, and makes decisions about cities has become more data-driven. This latest edition has analysed data from a database of 600 benchmarks spanning 30,000 data points, including online crowd-sourced data platforms that analyse citizen perceptions and behaviour, as well as worldwide real-time data. The report also includes global studies assessing perceptions of cities' future prospects as well as statistical data based on Eurostat, OECD and other platforms.

The State of the City 2020 evaluates Oslo's performance and international reputation across the same 16 thematic areas, so as to allow year-on-year comparison. These thematic areas sit within four overarching themes: Business, Liveability, Hospitality and Governance. The work also includes special features on Oslo Science City and a deep dive on the region's attractiveness to Talent. Organising the report in this way allows us to comment on all aspects of city competitiveness.

This year, we have again tracked Oslo's progress in objective indicators and in subjective perception studies. The report observes the differences between international perception and reality.

What the benchmarks do and do not tell us

The comprehensiveness and quality of city benchmarks varies significantly. Every benchmark has a specific aim and its own methodological strengths and shortcomings. On the whole, what benchmarks look at has in recent years become reflective of the needs of residents, entrepreneurs and small business, and not just real estate investors, corporate expats and visitors. They are also more attentive to neighbourhood-level attributes as well as 'whole region' flows and scores; and more interested in comparing the functioning region rather than just what goes on inside city centres.

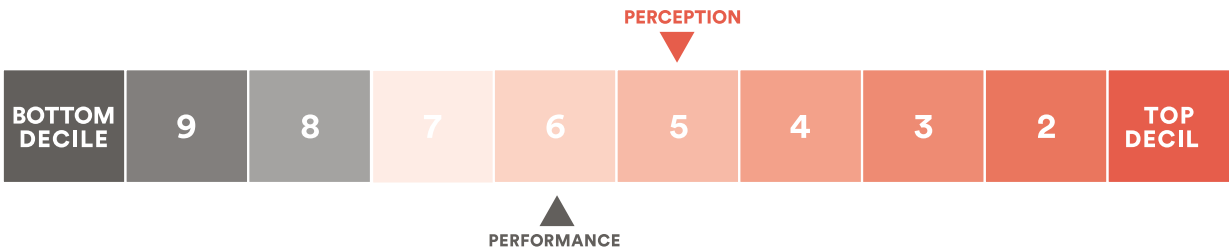
But benchmarks are not perfect tools. Some are based on data that is one to two years out of date. Many only look at a small number of 'top performer' cities, and so omit either Oslo or its main rivals. Some alter their methods each year. Many only pay attention to the things that are easiest to measure rather than what is most meaningful or influence-able by policy. This makes Oslo's performance in some areas more difficult to track. Our analysis takes these complexities into account, and where appropriate we explain what it all means for Oslo's policymakers and advocates.

This report:

- Conducts a full review and update to Oslo's comparative performance since February 2019.
- Assesses whether Oslo's international visibility in these comparative studies is improving, declining or stable.
- Provides a computed framework of Oslo Region's performance, and highlights where international perception diverges from this, and how position has evolved since 2015.
- Summarises the key actionable priorities for different stakeholder groups in Oslo that together can contribute to creating a high-functioning innovation, business and talent ecosystem.

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 metropolitan areas 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

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

Oslo's Visibility in Global Benchmarks

Over the past five years, Oslo has become more visible in international benchmarks, but at a slower rate than some of its peers.

In 2019-20, Oslo appeared in 42% of global studies that benchmark cities, a 3% increase compared to 2015. Over this period, Oslo has held its own, maintaining its position as the 48th most visible city globally, on a par with Helsinki, Seattle and Washington DC.

Over the past 5 years, Oslo has recorded some impressive breakthroughs in terms of appearing in high calibre city indexes. This year is no exception. For example, the region was included in the latest edition of InterNations Expat Cities and has also appeared in many new and influential indices that provide positive brand association, including:

- The European Cities Sustainable Development Goals Index
- IMD Smart City Index
- Findexable Global Fintech Cities
- JLL Innovation Geographies
- D&L Partners Prosperity and Inclusive City Seal and Awards

Many of Oslo's peer cities are however gaining even more attention, and at a faster rate. Oslo is now the 20th most visible city among its peers, having been 18th in 2015-16. Over the 5 year horizon we can see that cities like Austin, Manchester and Hamburg are also fast catching up, as their innovation and visitor economy stories catch global interest.

Figure 1: Proportion of appearances in global benchmarks and change over time, top 20 most visible peer cities

2015–2016			2019–2020			
Rank	City	% appearance in global benchmarks	Rank	City	% appearance in global benchmarks	Change in Rank
1 st	Sydney	87.2%	1 st	Sydney	75.2%	-
2 nd	San Francisco	74.4%	2 nd	Berlin	72.6%	+ 2
3 rd	Melbourne	64.1%	3 rd	San Francisco	70.8%	- 1
=4 th	Berlin	61.5%	4 th	Melbourne	64.6%	- 1
=4 th	Boston	61.5%	5 th	Stockholm	61.9%	+ 3
6 th	Copenhagen	59.0%	=6 th	Boston	61.1%	- 2
7 th	Barcelona	56.4%	=6 th	Copenhagen	61.1%	-
8 th	Stockholm	53.8%	=6 th	Barcelona	61.1%	+ 1
9 th	Vienna	51.3%	9 th	Munich	60.2%	+ 5
=10 th	Dublin	48.7%	10 th	Dublin	58.4%	-
=10 th	Vancouver	48.7%	11 th	Vienna	56.6%	- 2
=12 th	Montreal	46.2%	12 th	Vancouver	55.8%	- 2
=12 th	Frankfurt	46.2%	13 th	Rome	53.1%	+ 4
=14 th	Munich	43.6%	=14 th	Montreal	52.2%	- 2
=14 th	Zurich	43.6%	=14 th	Zurich	52.2%	-
=14 th	Warsaw	43.6%	16 th	Frankfurt	49.6%	- 4
17 th	Rome	41.0%	17 th	Prague	47.8%	+ 1
= 18 th	Oslo	38.5%	18 th	Warsaw	46.0%	- 4
=18 th	Prague	38.5%	19 th	Tel Aviv	43.4%	+ 3
=18 th	Helsinki	38.5%	= 20 th	Oslo	43.4%	-2

Source: The Business of Cities research.

This shows that while Oslo continues to benefit from its strong economic fundamentals and status as a highly liveable city, it is now competing in a more crowded marketplace, whose quality of life and affordability advantages and innovation capabilities are becoming rapidly well-known and sought after globally.

Oslo in the new world of data

Oslo is appearing in many popular new benchmarks that use online data mining and crowdsourcing, and which measure themes such as cities’ online presence and citizens’ well-being.

They include benchmarks such as:

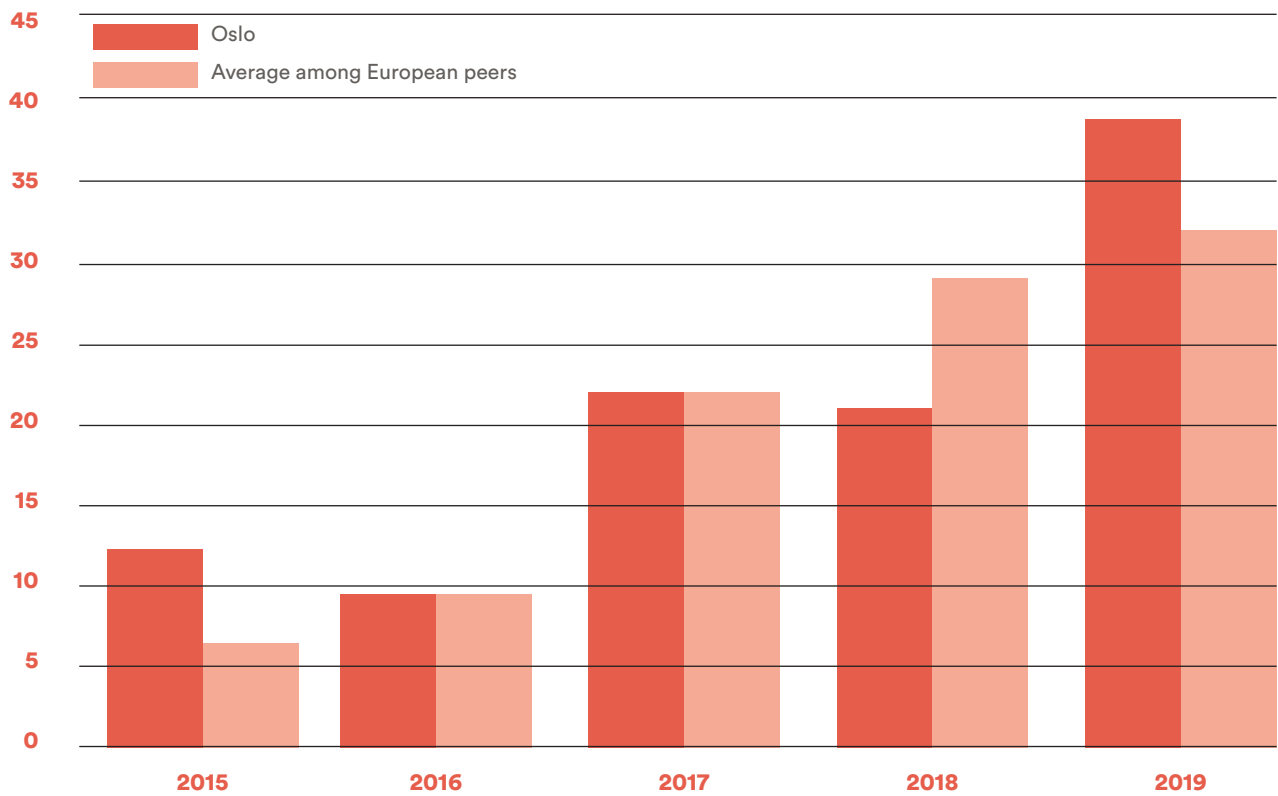
- ING Media World’s Most Talked About Cities
- Movinga’s Best Cities for Entrepreneurs and Best Cities for Families
- Nestpick’s Best Cities for Generation Z
- Kisi Work-Life Balance Index

On the other hand, new datasets have also highlighted that more cities are competing to occupy Oslo’s niches. More studies focus on particular specialisms where smaller high-performing cities in Europe and North America can excel. This means that although Oslo has achieved more top 10 scores in the last 12 months, the share of top performances has decreased.

Oslo’s Top 10s

Figure 2: Change in number of top 10 performances in global benchmarks

Numbers of top 10 performances in global benchmarks



Source: The Business of Cities research.

Where Oslo stands out

Table 2: 10 Stand-out index result for Oslo over the past year

Index	What it measures	Result
EasyPark Smart Cities Index	Ability of infrastructure and city systems to meet citizens 21 st century needs	1 st / 500
European Commission European Cities SDG Index	Progress towards achieving SDGs	1 st / 45
IMD World Competitiveness Centre Smart City Index	Citizen perceptions of infrastructure quality and technological and digital services	3 rd / 102
Moneybarn Global Commuter Index	Ease of commuting and well-being of commuters	3 rd / 114
Kisi Work-Life Balance	Work intensity, support of employers and institutions to reduce stress and liveability	3 rd / 40
Techtalk Currys Best Cities for Well-being	Quality of the urban environment, career opportunities and access to healthcare	3 rd / 77
CEOWorld Best Cycling Cities	Perception and performance of cities' cycling infrastructure and culture	6 th / 60
D&L Partners Prosperity and Inclusion in Cities Seal & Awards Index	Productivity, access to city services (health, education), affordability and quality of life	7 th / 113
JLL Innovation Geographies: Talent Hotspots	Concentration of educated and young talent in a city	9 th / 100
IESE Cities in Motion	All-round economic, social, environmental, technological and governmental performance of cities	14 th / 174

Signs of Oslo's Progress

Table 3: Indexes showing the largest (most positive) year-on-year change for Oslo

Index	What it measures	Improvement
SportCal Global Sports Cities Index	City-wide impacts of hosting large scale sporting events	130 th to 69 th
IESE Cities in Motion Index: Mobility	Traffic congestion, air and rail connectivity, size of vehicle fleet and public transportation efficiency	78 th to 20 th
IESE Cities in Motion Index: International Outreach	Air passengers, hotels capacity, conventions hosting	64 th to 19 th
EasyPark Smart Cities Index: Wifi hotspots	Availability of free public Wi-Fi hotspots	67 th to 40 th
European Startup Initiative Startup Europe Heatmap	Start-up founders' perception of strongest start-up ecosystems	37 th to 18 th

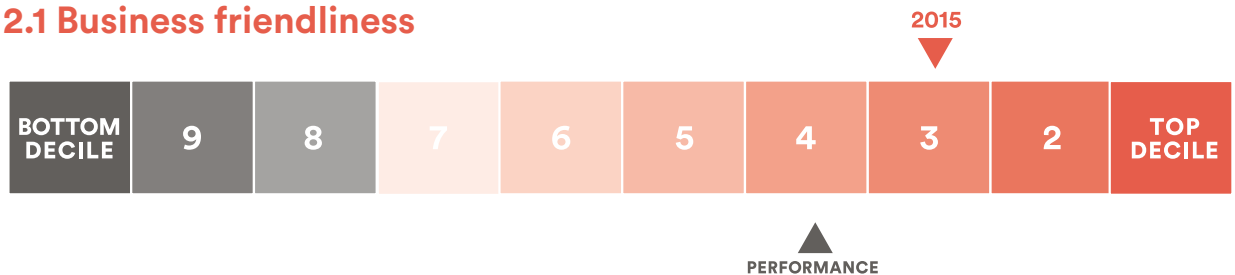
In the next sections, we benchmark Oslo's performance across the 16 major themes, focusing both on the journey over the past five years and what has changed in the past 12 months.



2

Business climate

2.1 Business friendliness



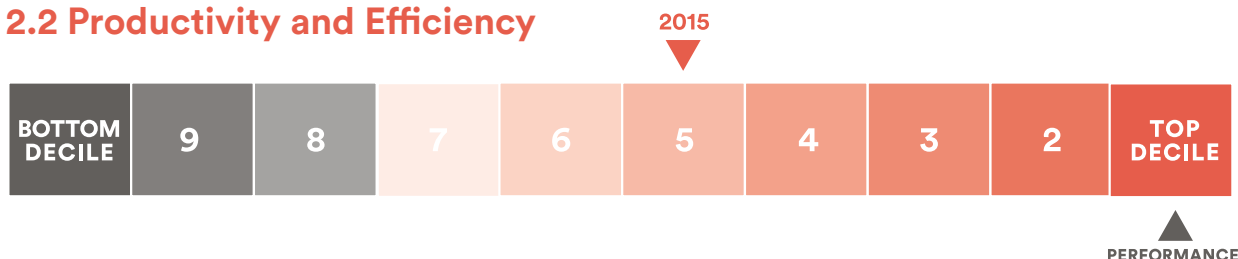
Oslo's journey of the past 5 years:

Over the past 5 years, Oslo has improved its regulatory environment relative to other cities, to attract and support businesses, helping it to emerge as a European hub for entrepreneurs. Its strong economic fundamentals, and consistently high market transparency, has helped to drive investor interest especially in the real estate market. Now its perceived advantages are eroding as costs rise and demand increases for scale and asset diversity. This provides an imperative to diversify locations and opportunities, and also to encourage investment into innovation and growth businesses.

Since 2019:

- **Oslo has continued to gain recognition for its pro-business regulatory environment.** It now ranks 9th globally for its business environment, mainly due to its relatively fast and cheap registration process when starting a business and its excellent legal support to companies in case of disputes or insolvency.¹ Oslo is also now 17th in a major measure of entrepreneurial dynamism and ease of starting a business, back in the top 10% of all cities, overtaking Dublin, Singapore, and Sydney.²
- **Oslo remains an attractive, transparent and investor-ready location for real estate but greater scale and diversity of its assets may be required in the next cycle.** The region still rates an impressive 54th for cross-border flows of real estate investment, on a par with Brisbane, Barcelona and Copenhagen, and its real estate market still represents over half of the total Norwegian transaction volume.³ It remains 14th in Europe for investor confidence in real estate fundamentals and demand, which is partly due to the successful development of Bjorvika as a new mixed-use CBD and to the lowest city centre vacancy rate in several years, at 2.9%. But perceived small scale and relative lack of liquidity have reduced all-round perceived prospects (29th out of 31 European cities), suggesting that as the region enters the 2020s it may need to unlock more opportunities in co-living, co-working and residential.⁴
- **Logistics costs reflect Oslo's shift towards more intensive and efficient utilisation of properties in the more central areas.** A relative lack of logistics space in high-demand locations is keeping rents high, with Oslo's rents for prime warehouses and distribution spaces now on average 30% higher than across Nordic peers.⁵ The region is also the 4th most expensive of 75 metropolitan areas for costs of transporting and storing goods, although additional space is anticipated over in the next 2 years.⁶ This reflects Oslo's shift to a more knowledge intensive city centre with high demand to serve them from central hubs adjacent to it, and over time point to the future efficiency benefits of unlocking new locations to create greater flexibility in the region.

2.2 Productivity and Efficiency



Oslo's journey of the past 5 years:

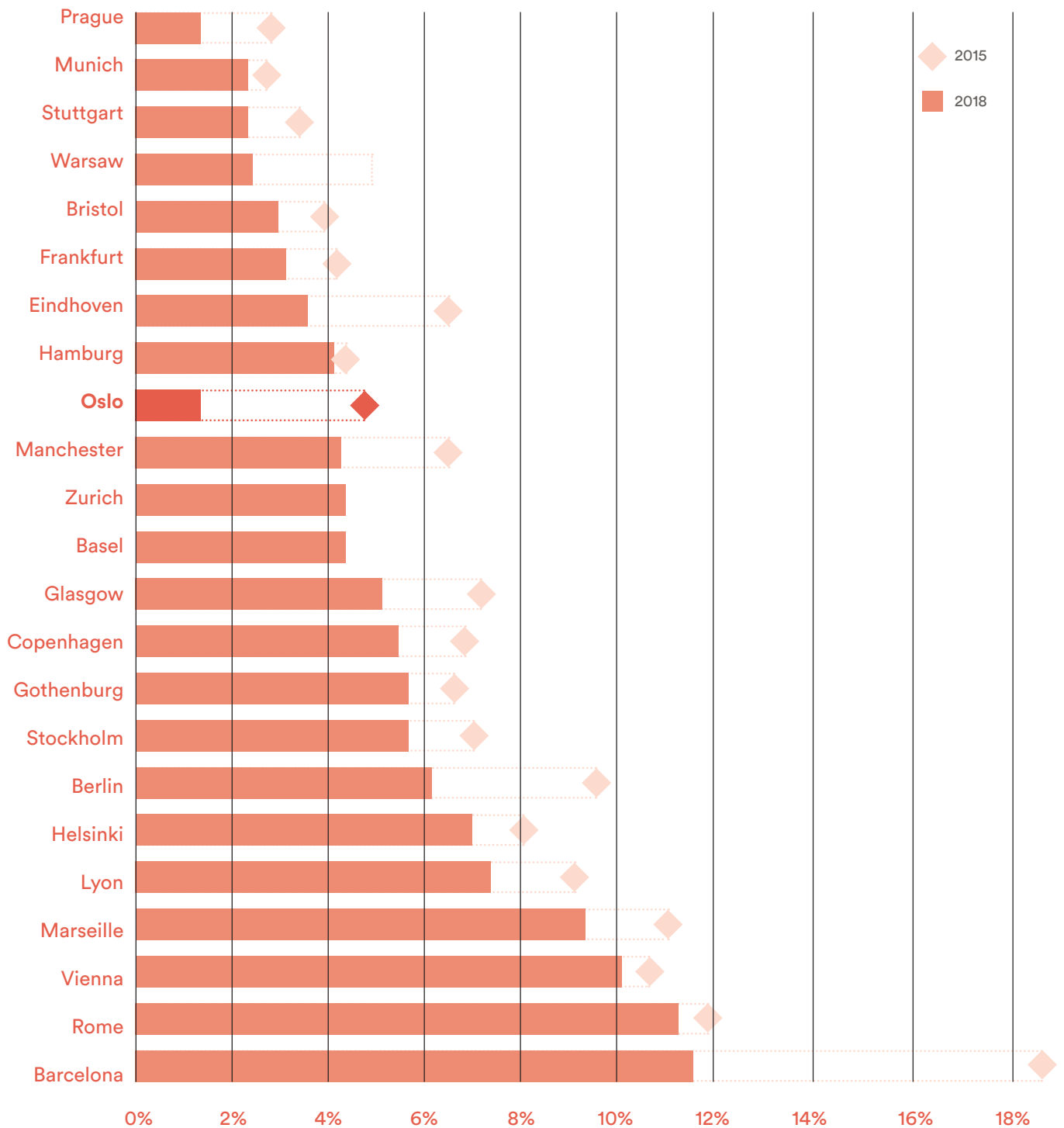
Oslo's successful attempts to diversify its economy have resulted in widespread job creation and productivity gains. The region's world-class IT infrastructure and technology assets, and willingness to embrace next cycle technologies, is a clear advantage. However, as demand has increased, diseconomies such as congestion have become a more important productivity concern for Oslo.

Since 2019:

- **Oslo has cemented its status as one of the most productive labour markets in the world.** The Oslo region is still in the top 5% most productive in the OECD, with per capita productivity ranking 23rd globally (6th among peers), ahead of major hubs such as Los Angeles and London.⁷⁸
- **Oslo's industry strengths and more diversified economy have ensured a more resilient labour market than most cities.** The last 12 months have seen Oslo region's unemployment rate decrease by 0.4 percentage points to 4.2% - a lower level than in 2015. Oslo still has one of the lowest unemployment rates among its European peer group (9th of 22).⁹
- **Oslo maintains its lead for internet connectivity across the city region.** Oslo climbed 7 places to 17th out of 174 cities globally in IESE's Technology sub-index for IT access, overtaking tech cities such as Dublin, Barcelona and San Diego. This is mainly due to Oslo's top performance for internet speed, which saw it rank 8th out of 100 cities in a major study of digital infrastructure.¹⁰
- **Oslo's improvements in mobile connectivity have raised potential for working while 'on the move.'** The region has achieved global recognition, with five top 10 performances this year alone. In a study of mobile network performance in top Nordic cities, Oslo recorded the most consistent high-quality coverage, and the 3rd highest download speed out of 13 peers.¹¹ Oslo's 4G connectivity is the 3rd best out of 500 cities.¹² The potential impact on productivity is further amplified by Oslo's high smartphone penetration rate, among the top 15 globally.¹³
- **Oslo's adoption of next cycle technologies has brought with it a further productivity edge.** Oslo is among the top 10 globally for its preparedness and willingness to incorporate next-generation technology, as demonstrated by the opening of the world's first 5G movie theatre and the partnership between the telecom company Telenor and Oslo University Hospital for the roll out of 5G trials.¹⁴
- **Recent policies have begun to have a small positive impact on congestion, which has been holding back productivity.** Although overall congestion is higher than in many of its European and North American peers, the region is now only the 250th most congested among 400 globally, an improvement of 67 places since 2017.¹⁵ This improvement is linked to recent traffic policies in the city centre, investments in bike lanes and bus services and development of smart mobility solutions. In fact, according to a new influential resident survey, congestion is not considered to be a problem in the city.¹⁶

Oslo's efforts to diversify its economy have led to a decrease in unemployment

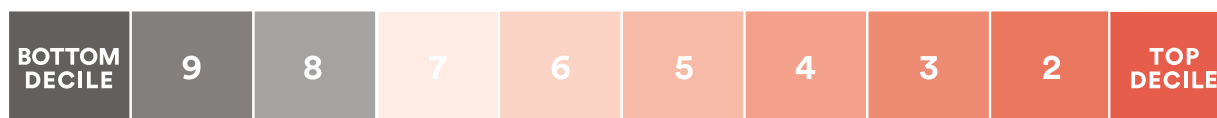
Figure 3: Unemployment rate in European cities in 2015 and in 2018



Source: Eurostat, NUTS 2 scale

2.3 Innovation

2015



▲
PERFORMANCE

Oslo's Journey the past 5 years:

Since 2015, Oslo has gradually been gaining ground as a hub for innovation and discovery. The eco-system has been steadily growing, driven by young and educated demographics, more start-up friendly regulations, and an entrepreneur culture that is becoming more collaborative. But other cities have been moving even more quickly: to specialise more decisively, to foster flagship districts to host innovation and showcase discoveries to the world, and to grow firms that scale into worldwide success stories. This means that in relative terms Oslo has begun to fall behind slightly for overall innovation momentum.

Since 2019:

- **Oslo's innovation ecosystem has continued to gain recognition in Europe.** Oslo has grown in popularity amongst European start-up founders, climbing 19 places to 18th for its perceived attractiveness as a start-up destination.¹⁷ Its technology story is also gradually gaining recognition. In an index of online visibility, Oslo ranks in the top 15 in Europe for the proportion of online mentions related to technology, on par with Dublin and Amsterdam.¹⁸
- **Oslo's shift to high value sectors is driving job creation and growth in many innovation-rich industries such as arts, culture, media and other creative sectors.** In a European study of cities' creative economy strength, Oslo ranked 15th out of 41 cities for the role of the creative economy in driving jobs and innovation.¹⁹
- **Oslo is beginning to stand out for the collaborative working culture of smaller businesses, with others needing to follow suit.** In the latest European Innovation Scoreboard, the region is 16th for its all-round innovation performance compared to the EU average. It performs exceptionally well in measures of collaboration, ranking 2nd among European peers for its culture of SME collaboration, or 16th out of 238 European regions. This is even more impressive considering Oslo was performing below the EU average for this measure in 2014.²⁰ In terms of public-private collaboration, Oslo still has room to improve: it ranks 9th out of 18th European peers measured for the rate of joint publications between business and university researchers, well behind its Nordic and Swiss counterparts.²¹
- **Oslo's ecosystem is growing, but now at a slower rate compared to other cities globally.** The number of internationally recognised innovative firms in the City of Oslo has increased by 17% over the past year. While still a higher increase than in Austin or Copenhagen, this places Oslo 33rd among its strong peer group.²² Oslo has also fallen surprisingly from 81st to 119th globally in the major measure of the quality, impact and growth trajectory of start-up ecosystems.²³ This appears to be linked to the region's track record of producing large growth companies and "unicorns", which has room to improve.
- **Attracting more venture capital remains an important priority.** The amount raised by start-ups across funding rounds increased by 21% between 2018 and 2019 in Oslo but cities such as Brisbane, Munich, and Vienna saw increases above 100%. Sizes of investments also remain quite small.²⁴ Oslo ranks 48th out of 75 cities globally for the amount of funding received by technology-related and digital startups, with cities such as Tallinn and Helsinki scoring higher.
- **Oslo has been slower to establish global recognition for a single innovation sector.** Oslo's niches in software, fintech, deep tech or healthcare have not yet broken through to be among industry-specific top rankings, where other peer cities are featured. The region is 74th out of 238 in a new major study of fintech hubs, although it is listed as one of the 'top 20 ecosystems to watch in 2020'.²⁵
- **Oslo's research capability has room to translate into more discoveries and impact.** The region ranks 15th out of 18 peers for the share of scientific publications that are among the top-10% most-cited pub-

Special feature:

Collaborate to Innovate: Oslo Science City

Norway is in transition to an innovation-driven and knowledge-driven economy of the future. In a context where oil and gas still constitute about half of all Norwegian exports, and where ICT-based industries and other potential growth industries such as health technology and sustainable energy account for around 4-5%, it is knowledge-rich innovation in products, processes, services and ways of doing business that will increasingly be at the heart of Norway's competitive advantage and its success in global markets.

By global standards Oslo and Norway already possess world-class research and science organisations working at the frontier, and a highly educated workforce. But to get an edge in the innovation economy depends on collaboration and sharing - of know-how, people, services and infrastructure.

The innovation economy of the 2020s requires more businesses, entrepreneurs and institutions to concentrate in specific urban places and match up their skills,

to trust and learn from each other, take risks, and share resources in an agile and cost-effective way.

These concentrations – known as ‘**innovation districts**’ offer big potential productivity advantages to companies, investors, and workers. They provide identity for the eco-system's industry and research clusters. They create market visibility. They provide the energy and proximity to attract skilled workers and grow high value jobs. They provide the spaces and infrastructure that suit many players at once – anchor tenants, small and large businesses, research hubs, investors, entrepreneurs, incubators and accelerators.

Critically, they offer a chance to bring about a host of wider positive effects for the city and country's wider innovation ecosystem – solutions for society's needs, more ambitious built environment standards, ‘good design’ objectives, more access to high quality workplace environments, and more opportunities for local communities.

What are innovation districts?

Innovation districts are places in and around cities where knowledge institutions and companies cluster and form intensive connections with each other, with start-ups, incubators and citizens. They stand out not simply because companies are there or because of the real estate proposition, but because of the intensity and scale of the collaboration they host, driving new ideas and new routes to market.

One of the most popular definitions of innovation districts derives from the work of the Washington DC-based think tank, the Brookings Institution, who define them as:

“Geographical areas where leading edge anchor institutions and companies cluster and connect with small firms, startups, business incubators and accelerators”.²⁷

Innovation districts can take many forms, but in a re-urbanising knowledge economy thirsty for scarce talent, these locations increasingly succeed in compact, dense, public transport-rich, mixed use environments that provide the proximity and buzz that talent prefers. By making more productive use of land and buildings, they capture more returns on sunk public investments in infrastructure facilities, government funding for research and development, and the education of workers.

There are more than 100 fully activated innovation districts around the world, and at least 300 others emerging and aspiring. **40 of Oslo's wider peer group of 50 cities already have an official designated innovation district, and 18 now have more than one.**

Not every location can be an innovation district. Many hubs or development projects aim to become hotspots for discovery, but only some can achieve the catalytic significance of an innovation district on jobs. There need to be market pressures on knowledge institutions, businesses and entrepreneurs to pursue new opportunities, and the knowledge assets with the appetite and ability to accommodate large-scale, place-based collaboration and commercialisation in and around them.

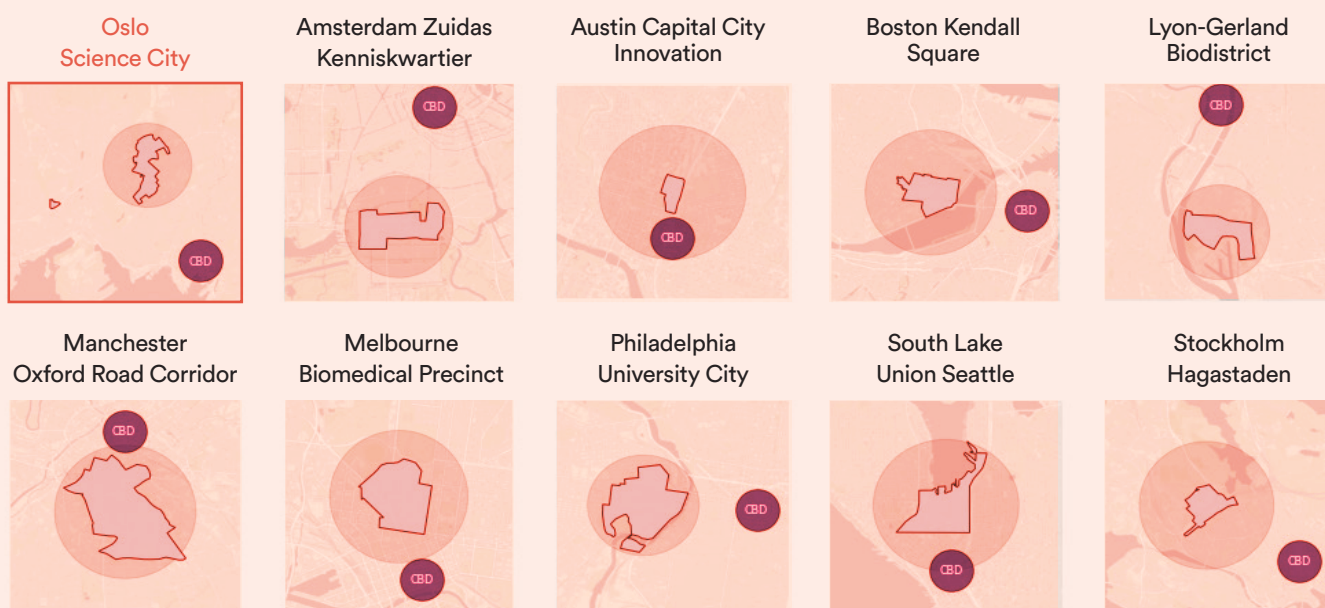
Why now?

For a fast-growing region like Oslo where the transition from an oil-based economy is well underway and where the knowledge economy and innovation ecosystem is starting to diversify and commercialise in the way we see in other advanced global regions, the time is right for an innovation district. By concentrating key pieces of the eco-system, it can advance specialisation, host decisive breakthroughs in specific innovation sectors, and become a recognised home for the 'new' economy. In a world that looks to the way innovation comes alive in particular places, an innovation district can powerfully demonstrate the values, ambitions and commitments of Oslo as a region and ecosystem and Norway as a nation.

In this context **Oslo Science City**, Norway's first innovation district, is emerging in Norway's most knowledge-intensive area as a strategically critical project for Oslo and Norway in the next cycle. Oslo Science City can be a driving force in the country's transition to a knowledge and innovation-driven economy that provides new

knowledge-based jobs, strengthens economic and environmental sustainability, and creates economic value. Today, the district is already part of a wider local knowledge ecosystem that is already home to nearly 30,000 employees and students, 8,000 researchers, 10,000 hospital staff and 1,000 organisations including one of Europe's largest hospitals, a leading University, numerous research institutes and several incubators.

This special feature provides an 'outside-in' benchmarking context to understand Oslo Science City's potential and opportunity, based on data analytics and comparative benchmarking.^{28 29} It assesses Oslo Science City in a global context of 50 leading innovation districts globally and among a close 'peer' group of 10 districts in high performing medium-sized cities in North America, Europe and Australia, including some of the top mature innovation districts globally.³⁰



Advantages Oslo Science City can build on

Oslo Science City already has some edges over other districts that are the basis for accommodating key elements of the local ecosystem.

1) Home to important anchor institutions such as the University of Oslo and Oslo University Hospital, Oslo Science City already has the institutional and educational presence to drive research capabilities and job creation.

50% of district floor space is currently absorbed by uses allied to universities and research institutes, which offer access to the frontier of science and are where the seeds for innovation take root. The University of Oslo is a global top 120 university, and ranks highly for earth and marine sciences, life sciences and medicine. Oslo University Hospital is in the top 100 healthcare institutions globally for biomedical sciences, ahead of Stockholm's Karolinska University Hospital, Cambridge Addenbrooke's Hospital or again Montreal's hospital of the university.³¹ Oslo Science City is also home to the SINTEF institute and the Norwegian Geotechnical Institute (NGI), both of whom are world-leading within their fields (technology and social sciences and geology and geo-engineering respectively).

2) The start-up and investment growth trajectory is already promising, supported by high-performing incubation.

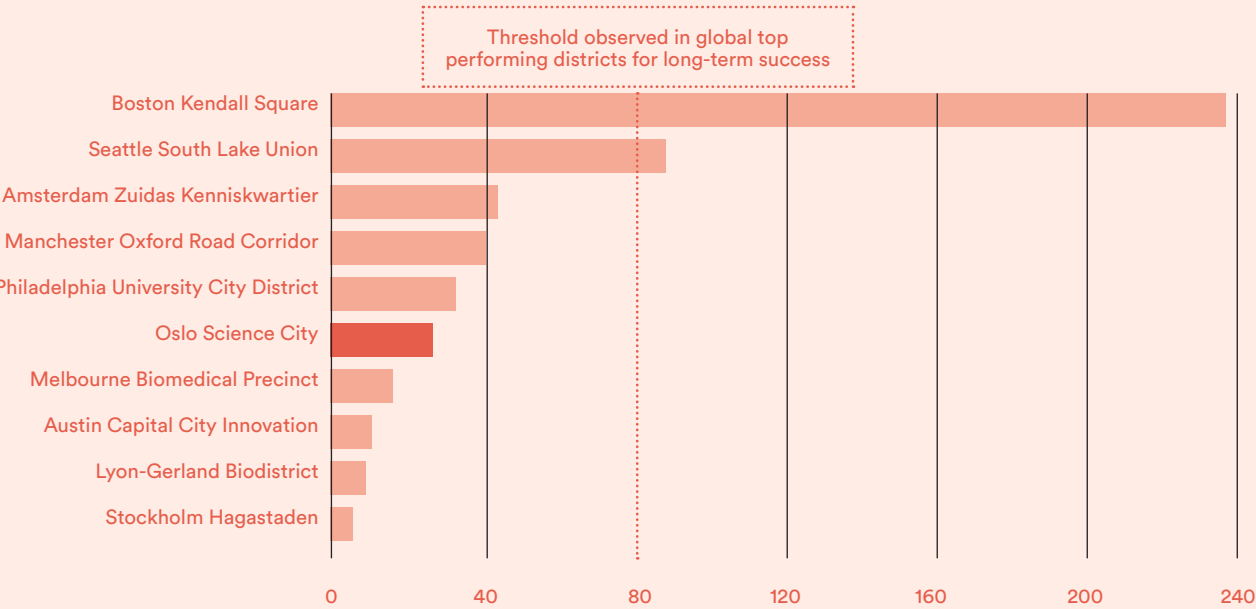
Successful firms attract complementary businesses and services, and also contribute to the "buzz" sought by talent, employees and residents. The higher the density, and the more firms are co-located, the more opportunities for partnerships and for transforming ideas into products, and the higher the number of entrepreneurs, who provide an outward mindset, a penchant for risk taking and an ability to spot new opportunities as they arise.

Figure 4 shows that for total density of innovative firms, Oslo Science City already has a higher density than other districts that are starting out on their innovation journeys, such as Melbourne Biomedical Precinct, Austin Capital City Innovation and Stockholm Hagatsaden, which is likely due to the district's pre-existing presence of anchor knowledge institutions.

Oslo is also already around one third of the way to accruing the firm density that global experience suggests is key to long-term district success, of around 80 firms per square kilometre. Other districts that fall into this category include London Knowledge Quarter, Toronto Health Sciences District, Boston Seaport and Singapore One North. But in order to reach its full potential, Oslo Science City may need to do more than to simply attract more start-ups. Experience suggests that in these leading districts there are a significant number of companies with more than 100 employees and which are growing rapidly, and many with a presence internationally. This signals an imperative for Oslo Science City to also focus on attracting larger firms and corporate anchors to help drive momentum and sustain innovation.

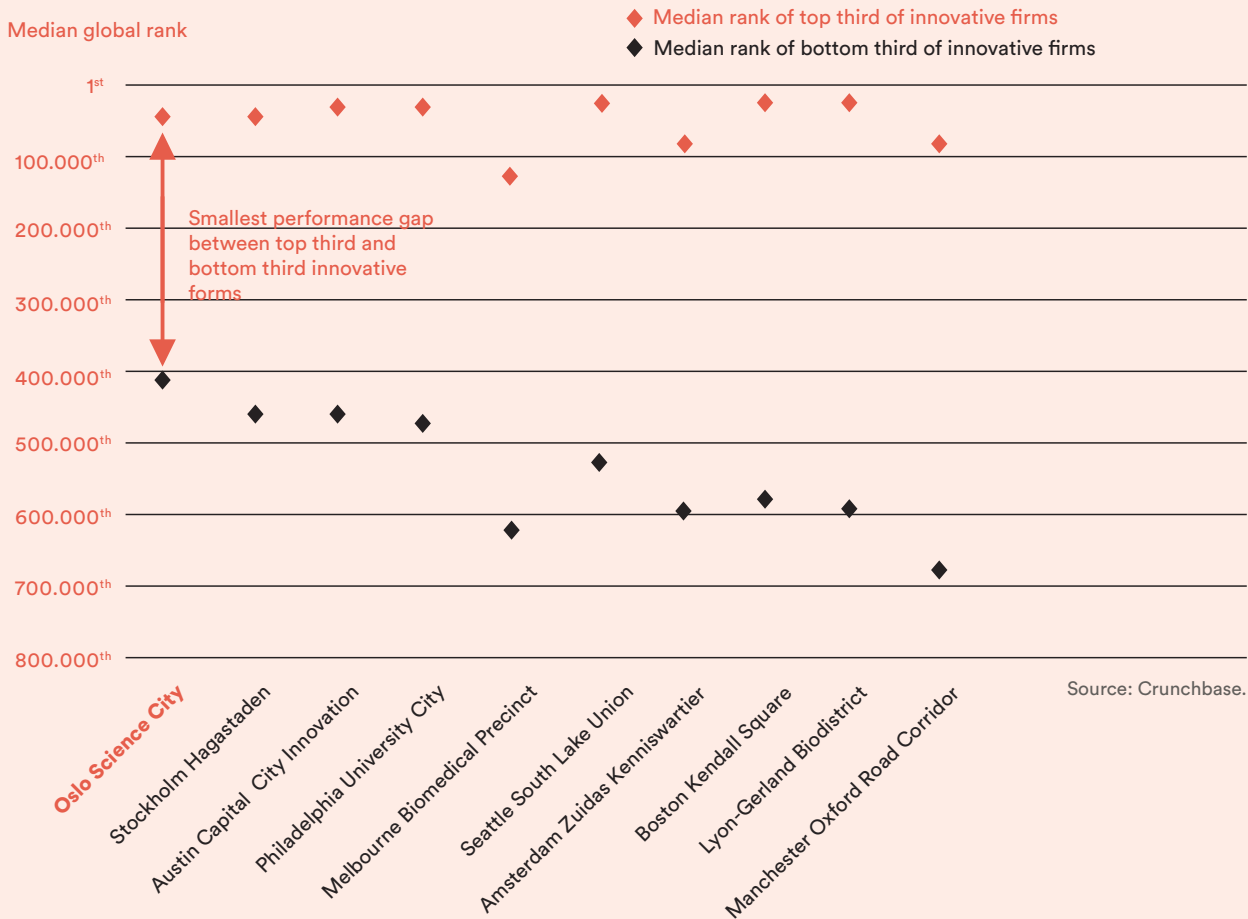
Successful innovation districts offer strong incubation and support functions for start-ups and scale-ups. Oslo Science City is already showing promise at fostering start-ups that reach a baseline level of performance, media visibility, and investor appeal. On average, the bottom third of innovative firms in Oslo Science City's wider area perform more strongly than their counterparts in all but two districts among a sample of more than 30 districts globally.

Figure 4: Density of innovative firms in each district, Oslo Science City and peers



Source: Crunchbase. *Data for Philadelphia and Seattle forecast based on sample data due to partiality of data at time of data collection in these cities.

Figure 5: Performance of top and bottom third of innovative firms, Oslo Science City wider area vs peers.



Source: Crunchbase.

3) There is already substantial specialisation in high value niches.

Specialisation provides a value proposition for the district, and helps define its market advantage, which is important for growing emerging industries, attracting targeted investments and guiding partnerships. Oslo Science City can build upon its existing edges in healthcare, frontier technologies linked to computer science and renewable and low carbon energies:

- 3 out of every 10 jobs in the district are in the public health sector, attracting many innovative suppliers and spin-offs. More than 30% of innovative firms are specialised in medical devices and healthcare, including Resani, which designed a hand sanitising technology to limit healthcare associated infections, and Vaccibody, a clinical stage biopharmaceutical and tailored immunotherapy firm leading the field of individualised cancer neo-antigen vaccines.
- The presence of for example SINTEF, the University of Oslo's Department of Informatics and the Oslo Science Park provides edges in advanced computing technologies linked to computer science. IT and commercial data services is the 2nd most prominent commercial specialisation in Oslo Science City, and the district has a 17% higher specialisation in frontier technologies than on average among peers globally due to the presence of advanced data analytics firms such as Intelec.
- Home to the University of Oslo, the Norwegian Geotechnical Institute (NGI) and SINTEF, Oslo Science City has an edge in sustainable energy and materials science. The number of commercial actors within energy and green technology in Oslo Science Park is also growing rapidly, with plans for a targeted expansion focusing on energy and green technology.



Table 4: Emerging edges for Oslo Science City relative to peers and global average

	% of firms specialising in...				
	Medical Devices & healthcare	Frontier technologies	Engineering and advanced manufacturing	Financial services & fintech	Low carbon technologies
Global Average	14%	8%	4%	5%	2%
Average among peers	28%	7%	4%	3%	1%
Oslo Science City Today	35%	9%	7%	7%	4%

Source: Crunchbase. *Wider area = within 1.5km radius of district centre point.

Oslo Science City also already has in place many of the longer-term ingredients that global experience shows are important for maintaining momentum as the district matures.

4) It inherits much stronger public transport access to other residential and commercial centres in the Oslo Region, and to key institutions, innovation hubs, and amenities.

It has more subway stops in its wider area than any of its peer districts, and relatively easy access to the airport. This gives it a real platform to attract more talent, smaller companies and anchors from the wider ecosystem. It is in the top 20% of districts globally for providing easy access for people to move through and within it and onto the wider region.

Table 5: Public transport access compared to global average and peers.

	Public transport access (max = 1)
Global average	0.52
Average among peers	0.67
Oslo Science City Today	0.67

Source: The Business of Cities research. Access measures aggregate time taken to reach Key city locations via public transport, where max score of 1 means the district has the fastest public transport access to all locations. See appendix for locations included.

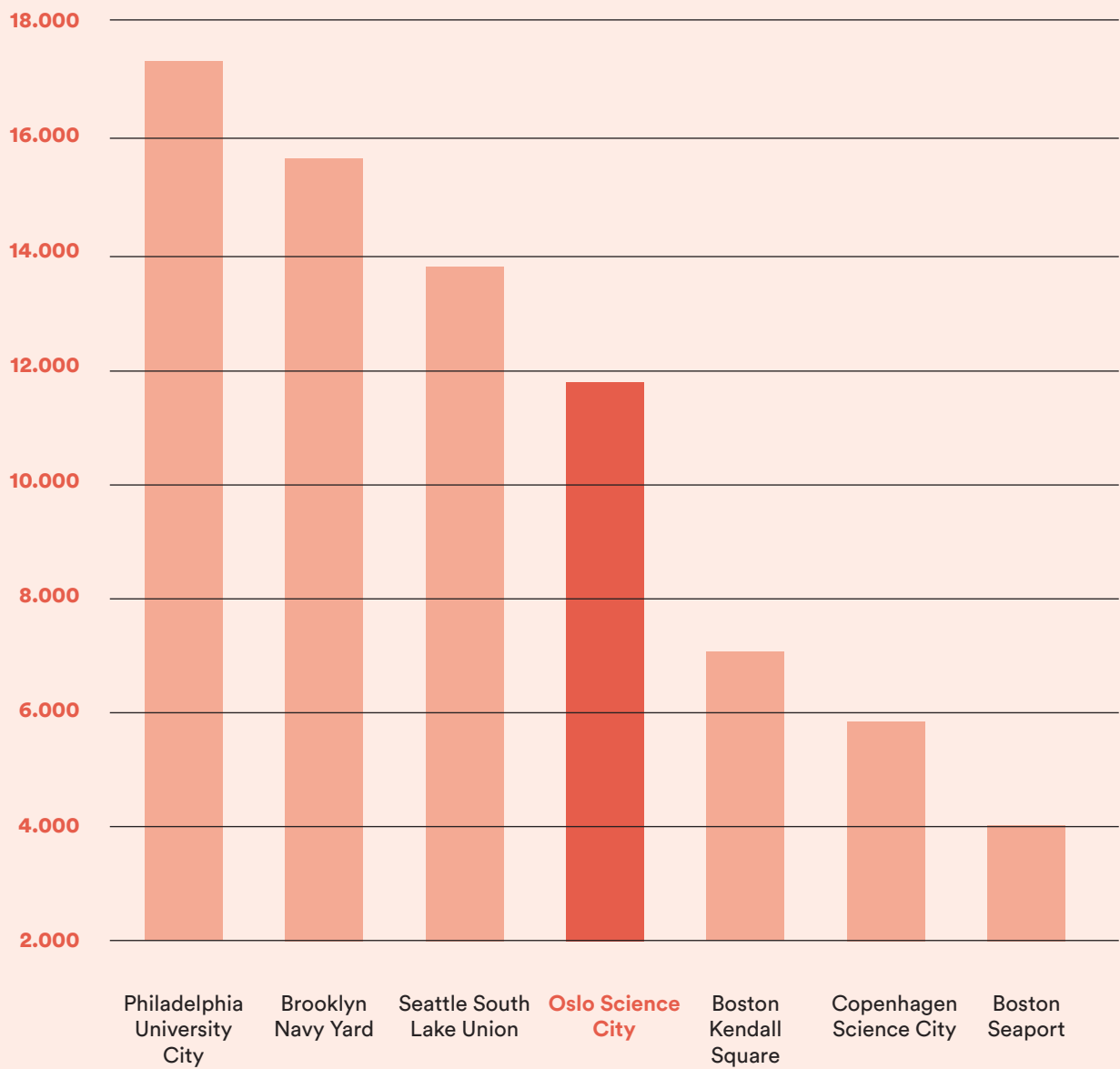
State of the city



5) It is already an area where talent is comfortable living and working.

Oslo Science City and surroundings are already home to a large number of residents by the standards of top districts. Over 17,000 people live inside and in close vicinity to it, which is more than in top districts in New York and Boston. Oslo Science City is already half way towards achieving a “medium density, high amenity” model. The wider residential base can be a source of users, customers, intelligence and accountability.

Figure 6: Residential population density of Oslo Science City relative to other selected high-performing innovation districts globally



Source: Crunchbase. *Wider area = within 1.5km radius of district centre point.

All in all, by global standards Oslo Science City has the assets, the scale and the potential to make a significant difference to the rate of invention, the development and performance of companies, and the wider reputation of the ecosystem.

Areas for Oslo Science City to focus attention and learn from others

To match best in class internationally, the benchmarking data suggests it will need to:

1) Raise jobs density and grow private sector jobs to a threshold that leads to critical mass and spillovers.

Most leading global districts tend to have a critical mass of more than 50,000 jobs, and a jobs density of more than 20,000 per sq. km. Oslo Science City currently produces 30,000 jobs, at a density of around 15,000 per sq. km. Most of these jobs are located at the outskirts of the core area.

Figure 7: Total number of jobs, Oslo Science City and peers



Sources: Innovation district annual reports and census data by ward/district. . *Comparable data not available for Austin Capital City. The number of jobs in Hagastaden includes jobs in the wider area, including Solna.

Currently Oslo Science City is home to approximately 4-6% of Oslo’s registered innovative companies and 4.5% of citywide venture investment. Although this is higher than districts measured in Stockholm and Edinburgh, as it is just starting out it is behind the average among the most advanced districts, for whom the figure is closer to 10%

Table 6: Share of city-wide investment happening within district in Oslo Science City and compared to global and peer average.

	% of total investment in city within district
Global average	7.3%
Average among peers	10.9%
Oslo Science City Today	4.5%

Source: Crunchbase.

2) Achieve greater commercial presence and all-day offer.

Compared to a world class location such as Kendall Square in Boston, Oslo Science City has around one sixth as much floor space taken up by commercial office, and half as much floor space absorbed by retail. Its overall floor area ratio, ie. the ratio of development to total buildable land, is currently around half that of Kendall Square, and many locations are more dense still. Meanwhile the 18 hour culture of Oslo Science City is yet to be developed, with Oslo Science City's amenities ranking 28th among 45 measured districts globally for the average length of opening hours. Intensification of the district, a higher share of “innovation economy uses”, and a stronger commercial and retail presence, and tactical placemaking to generate interest, will enable Oslo Science City to become a district where people want to live, visit, work, play and study.

Figure 8: Oslo Science City's total floor area ratio and floor space by use, relative to global benchmark*

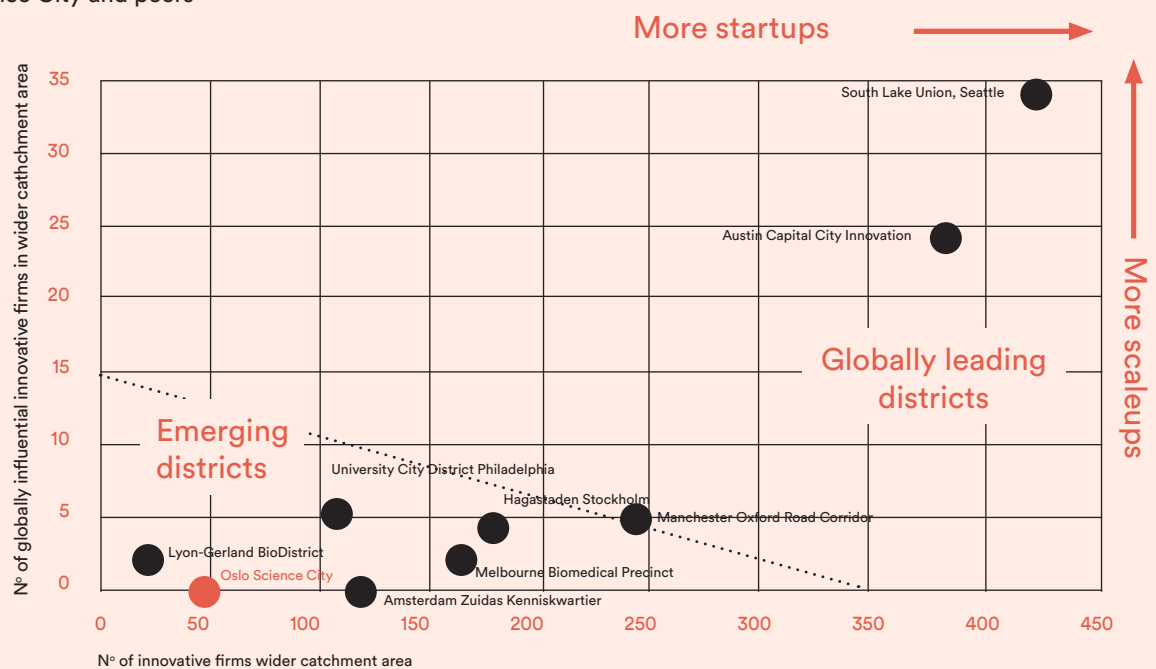


Sources: CBRE, Cambridge Redevelopment Authority. *Global benchmark = Boston Kendall Square.

3) Nurture a company that develops the scale and visibility to catalyse the eco-system.

Oslo Science City is the only district among its peers to not yet have a global top 10,000 ranked innovative firm headquartered within the wider area (see Figure 9). Other districts show the importance of highly successful scale-ups to grow the magnetism and confidence of the local eco-system. They also are a major driver of job creation, forming commercial partnerships with health and education institutions, and participating in events, incubator and accelerator programmes.

Figure 9: Total innovative firms and globally influential firms in wider area, Oslo Science City and peers



Source: Crunchbase. Kendall Square excluded as it falls outside these axes. Numbers are indicative due to partiality of locational information. *Wider area = within a 1.5km radius of district centre point.

4) Build the profile, narrative and identity of the district to attract people and companies and grow demand for the area.

Leading global innovation locations are popular and well known well beyond their borders, with a community that buys in to the vision and feel a sense of belonging. Their key attractions and experiences attract attention. Evidence suggests that compared to innovation districts that have achieved the highest levels of vibrancy and desirability, Oslo Science City is only about 7-10% as popular so far, based on online activity and commentary. Its visibility and profile has room to grow, including ways to communicate successes in a way that is distinctive and authentic, and building event programming to generate momentum, as many of the leading districts globally have done.

5) Improve amenities and vibrancy.

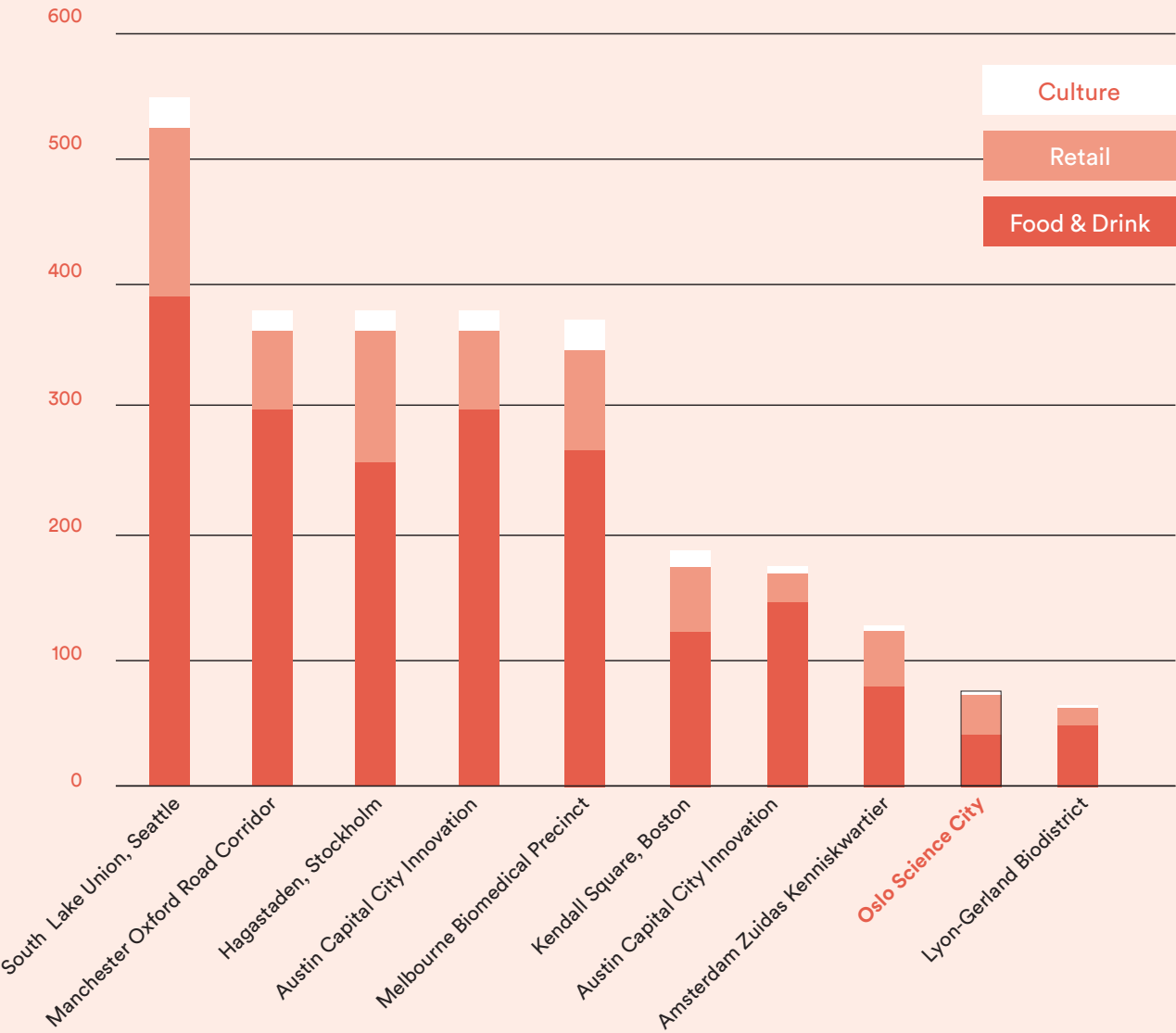
The most successful districts tend to densely co-locate commercial, residential, services and other cultural facilities – with at least 200 amenities (cultural, retail and culinary) per square kilometre. Oslo Science City currently has around 75 in the wider area, which may limit its appeal to local people and visitors (see Table 7). This places Oslo Science City 9th among its peers and in the bottom quarter of more than 50 innovation districts globally. Other districts have shown how to accommodate a large number of amenities within an institution-rich environment, such as Seattle South Lake Union (550) and Boston Seaport (210). A more amenity-rich district offer is an important way to grow demand and profile, create a sense of place for residents, consumers and workers, and build the reputation of the wider ecosystem.

Table 7: Density of amenities in Oslo Science City compared to peer and global average

	Density of amenities per km sq-
Global average	217
Average among peers	266
Oslo Science City Today	74

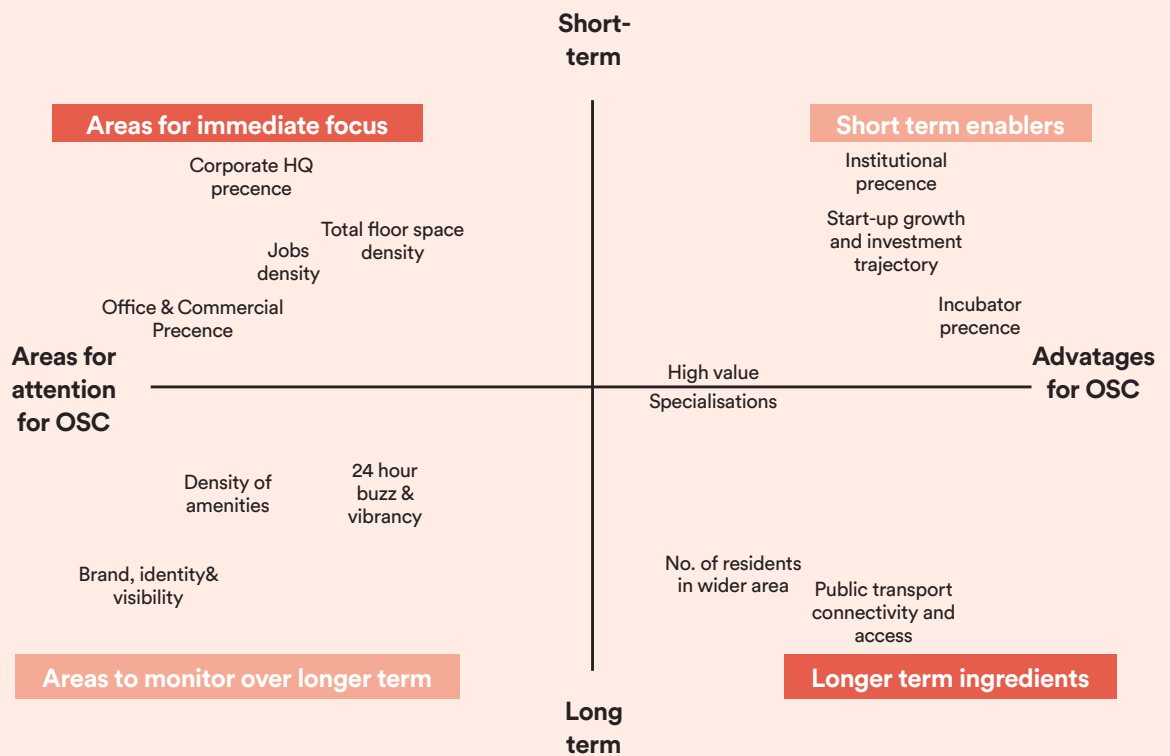
Source: Google

Figure 10: Concentration of cultural, culinary and retail amenities in Oslo Science City and peers



Source: Google

Summary of Opportunities and Priorities for Oslo Science City



What next for Oslo Science City?

Innovation districts take years of patience, co-ordination and ambition to develop. The collaboration they seek to ignite does not happen overnight. Yet for Oslo Science City, the promise is there.

Oslo Science City clearly benefits from a series of advantages that can enable it to become a global Top 30 innovation district in the future. It is well placed to deliver benefits not only to the wider ecosystem but also to the whole national economy – from higher wages and

quality jobs, to superior products for consumers and higher tax revenues for government. Its innovation outcomes may even provide Norway's economy and society with greater resilience during shocks and downturns.

To reach its potential, attention will need to be paid to its physical, commercial, and profile development, and the lessons of global experience of cities that have begun the journey already.

Potential priorities observed from this preliminary benchmarking analysis, for government and for business, include:

Short term

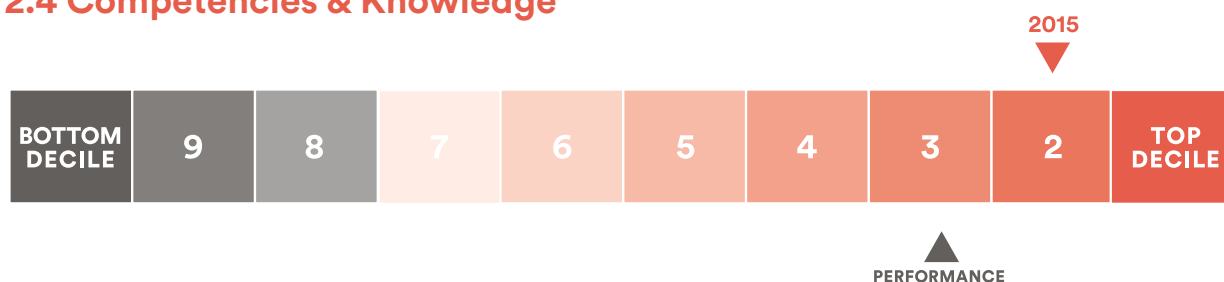
- Inspire developers and stakeholders to pay attention to and buy into the long term district vision.
- Create a clear set of targets with reference to international practice.
- Ensure a strong degree of coherence between individual site zoning plans, master plans and the overall district vision.
- Careful appraisal of which activities or anchors to relocate into Oslo Science City to build the cluster and identity and maximise ecosystem spillovers.
- Identify the places where ‘tactical urbanism’ and collaborative placemaking can galvanise attention and interest.
- Attract larger firms to drive momentum and provide resources and ambition to sustain innovation.

Long term

- Community engagement and participation in order to maintain a porous boundary and relationships between the campus and surrounding neighbourhoods.
- Optimising planning and development to ensure the district’s T-bane stations can become vibrant, mixed-use gateway hubs with plenty of amenities.
- Careful narrative and profile development, including authentic and distinctive messages, and a programme of events to host the region, Norway and the world to generate momentum and citizen engagement.
- Focus on developing networks of exchange and collaboration between different parties (e.g. between start-ups and scale-ups, between universities and corporates) to develop the ecosystem.



2.4 Competencies & Knowledge



Oslo's journey of the past 5 years:

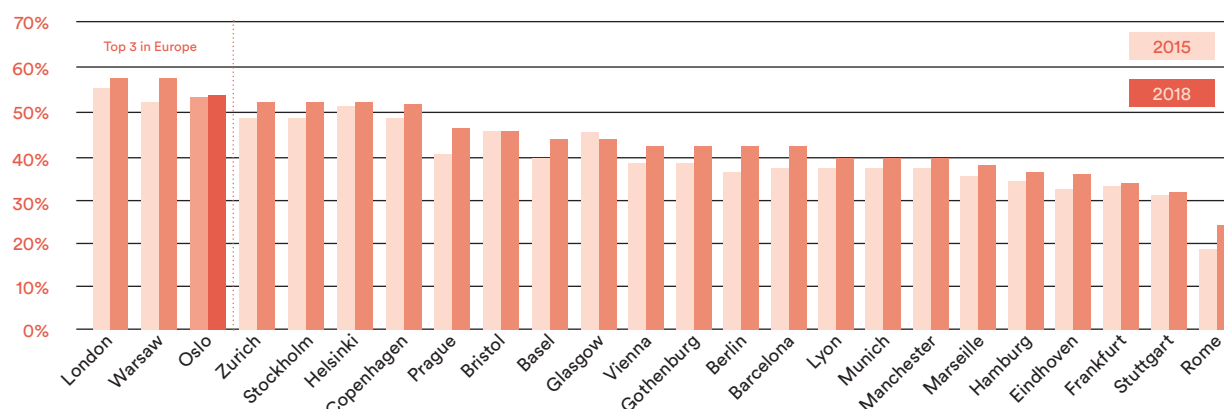
Oslo's highly educated population has become one of its main and most widely recognised business assets. The region has consistently achieved one of the highest education attainment levels in the world. However, Oslo has historically not performed well in terms of attracting international knowledge. Oslo's higher education institutions have improved, but have more to do to prepare skills of the future, gain global influence and drive wider knowledge competencies.

Since 2019:

- **Oslo has continued to excel for its educational attainment.** The region still has the 3rd highest share of career-age adults with a university degree in Europe, just behind London and Warsaw.³² A new measure on lifelong learning also sees Oslo rank an impressive 8th among peers, well above most cities outside the Nordics.³³
- **Oslo is becoming more of a high-tech and knowledge-intensive economy, and produces many digital graduates, but the skills and expertise gap remains significant.** Employment in high-technology sectors has increased to 8.1%, meaning Oslo is now in the top 15 European regions.³⁴ The region has climbed an impressive 20 places to 19th for the number of IT graduates. This is a positive sign that Oslo is slowly closing the gap in terms of digital skills with other cities vying to be digital economy leaders, such as Copenhagen and Manchester.³⁵ But gaps remain as sectors such as artificial intelligence, genomics and quantum computing grow more rapidly. The region ranks 89th globally for provision of future-ready technological education, with universities not yet fully pivoting to new computer science, technology and innovation-focused programmes.³⁶ It also has room to improve its rate of producing digital skills, as it is still behind leading European capitals and mid-sized cities such as Edinburgh and Kraków.³⁷
- **The global reach and calibre of Oslo's universities is under more scrutiny.** In the benchmarks the region's higher education system is not standing out for specific subjects. Oslo only ranks 58th out of 100 cities for medical universities/teaching hospitals,³⁸ and is absent from lists of the top performing institutions in Life Sciences, Computer Sciences and Engineering and Technology.³⁹ As the economy becomes more innovation-rich, there is more pressure on Oslo to ensure that the local or immigrant skills of its talent pool matches demand.

Oslo is among the top 3 metropolitan regions in Europe for higher education attainment.

Figure 11: Tertiary education attainment among 25-64 years olds, by NUTS 2 region



Source: Eurostat

Business climate:

Key agendas for Oslo

Developing sharper innovation edges.

Ensuring the supply of skills for the innovation economy keeps pace with demand.

Diversifying the range of innovation-ready locations in the region with more 'work play live' environments.

What does this mean for Oslo?

For the business community:

- Corporates can take an even more proactive role in schemes to re-train and up-skill current employees, offer more internships and vocational training. Organising effectively to share insights on the new skills needed with government and education providers can help create a more responsive curriculum and training programmes.
- To enable Oslo to more effectively bridge the gap between research discovery and market growth, pursue opportunities to collaborate with the public sector and research institutions, for example through delivering incubator and accelerator programmes and offering advice and guidance to entrepreneurs.

For universities and research institutions:

- Universities and other major institutions can provide start-ups with access to state-of-the-art equipment to help start-ups to develop and trial out their products and can contribute to the diversification of locations by opening up some of their land and reconfiguring assets to develop flexible office space.
- Research institutions can encourage interdisciplinary interactions between departments and increase funding opportunities for high-impact research in sectors the region is aiming to grow.

For investors:

- Real estate investors can support the innovation economy by providing flexible and amenable product and lease terms for start-ups, as well as the kind of commercial and residential spaces to produce a mixed-use, high-friction environment.
- Start-ups require high levels of investment to scale up their operations and expand outside their home market. Larger amounts of venture capital investment are required to support start-up growth.

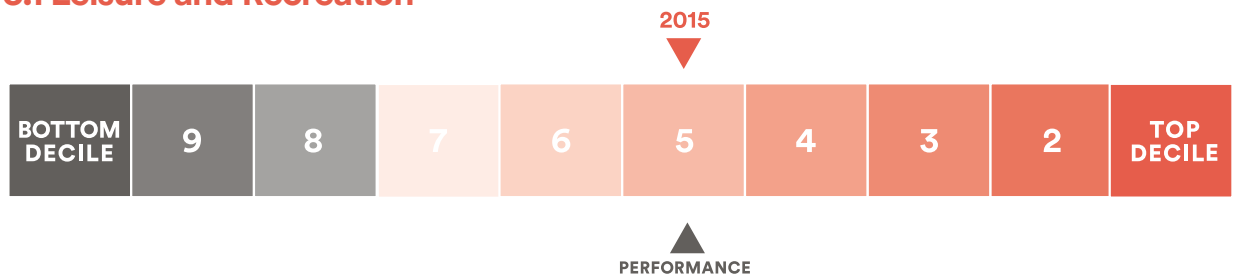
For governments:

- More incentivisation of start-ups specialised in the sectors it aims to grow, such as green mobility or healthcare, by giving them a platform or procurement channel to showcase and experiment their products. Other city and national governments are arranging dedicated spaces in as test beds to trial solutions or being the first client of their products.
- Focused support for Oslo Science City innovation district, in terms of optimising planning frameworks to ensure that T-Bane stations can become vibrant and mixed-use gateway hubs and streamlining zoning plans to foster coherence with district vision.
- Governments and intermediaries in the region can also continue to promote start-ups success stories and their role in developing revolutionary products by partnering with the investor community and organising activities to understand what start-ups can do to meet the requirements of venture capital funding.

3

Quality of Life

3.1 Leisure and Recreation



Oslo's journey of the past 5 years:

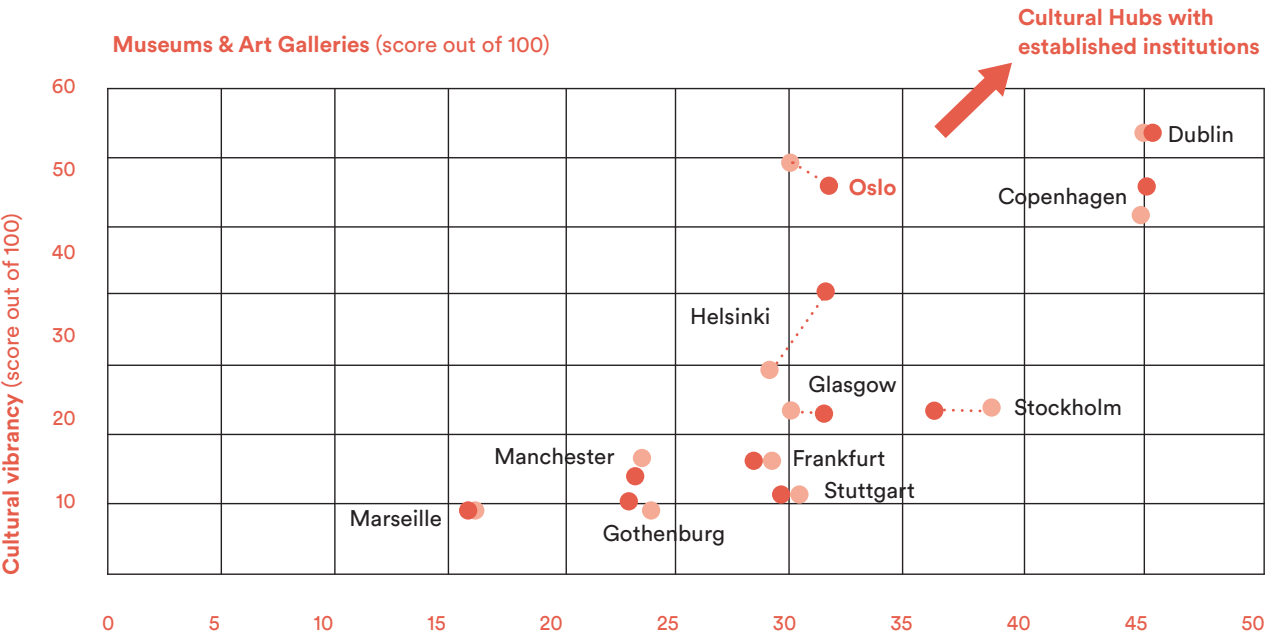
Since 2015, Oslo has consistently achieved high levels of satisfaction for its cultural offer. Continued efforts to improve cultural facilities, the redevelopment of the waterfront as well as a commitment to hosting a larger variety of music festivals and social events, have all helped the city develop its reputation as a 'fun' city whose leisure and recreation offer is disproportionately large relative to its size. As Oslo looks to the 2020s, it faces new imperatives to create new, authentic experiences that blur lines between live, work and play.

Since 2019:

- Oslo has established a series of new entertainment 'niches' that are increasing its appeal as a leisure destination.** Oslo has built its reputation as a gaming hub and recently ranked 27th out of 110th for its capacity to foster a strong e-sports culture, thanks to fast internet speeds and an already recognised gaming culture.⁴⁷ With the opening of the world's largest indoor winter sports arena, Oslo is also becoming an increasingly well-regarded destination for sports events. It jumped 61 places from 130th to 69th in an influential index of sports host destinations, overtaking Milan, Los Angeles, and Vancouver.⁴⁸ The region is also now beginning to stand out as a music destination, ranking in the top third of cities globally for the strength of its music scene, ahead of famous music cities like Melbourne and Barcelona, as the number of high-profile concerts by world-renowned artists has increased.⁴⁹
- Oslo's quality and diversity of cultural institutions has become even more widely recognised.** The city is now 19th out of 40 cities globally for the variety and vibrancy of its cultural offer, and in Europe, Oslo ranks 10th out of 41 medium-sized cities for its cultural vibrancy, due mainly to its concentration of museums and art galleries, which is more than double the average among cities of a similar size.⁵⁰ The presence of world-renowned cultural institutions such as the Opera House, the National Museum and the soon-to-open flagship Munch Museum has helped to cement Oslo's cultural reputation.
- Demand for meaningful and high-quality leisure experiences has further intensified, re-affirming that Oslo needs to be up to the challenge.** Residents' and expats' lower levels of satisfaction with the overall quality and range of the city's leisure options have begun to be exposed. 16% of expats are unhappy with leisure options in Oslo, compared to 12% globally, and residents' satisfaction is below average.^{51,52} This may be because despite continued investments in developing high-end cultural institutions, Oslo still has a lack of food and beverage options compared to other cities, for which it ranks in the bottom 10% of its peers.⁵³

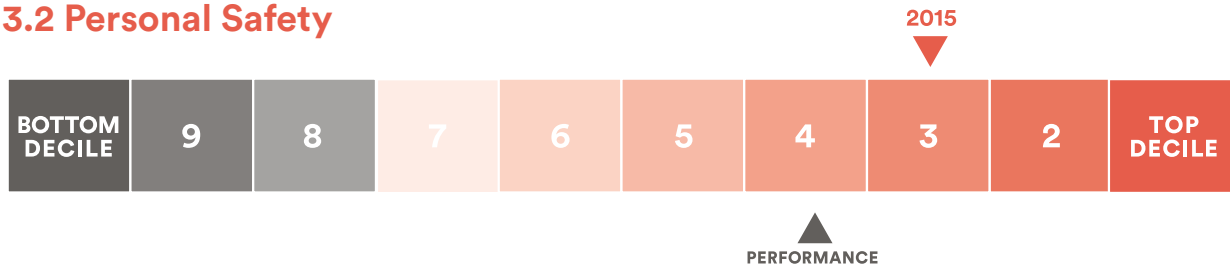
Oslo’s investment in cultural assets has boosted the region’s cultural vibrancy.

Figure 12: Scores for cultural vibrancy and museums & art galleries, Oslo and similarly sized peers, 2017-2019



Source: European Commission, The Cultural and Creative Cities Monitor 2019

3.2 Personal Safety



Oslo’s journey of the past 5 years:

Since 2015, Oslo is still by and large a very safe and low risk city for visitors and residents, in public spaces and on the roads. However, the last few years have seen an increase in Oslo’s crime rate relative to other cities, with more visible crimes such as robbery and property crimes beginning to have a direct impact on perceptions of neighbourhood safety.

Since 2019:

- **Oslo has emerged as a global leader for road safety, gaining international attention after becoming the first city globally to have no passenger or pedestrian car-related deaths for a whole year.**⁵⁴ New measures implemented as part of Norway's Vision Zero, including new restrictions on driving zones, strict speed limits and redeveloped cycling infrastructure are being reflected in a series of top performances. For example, Oslo is 3rd for road safety globally in a new study of urban driving conditions, and 12th out of 100 cities for perceived levels of road rage.⁵⁵ The region also sits just outside the top 15 globally for the numbers of cyclist fatalities, accidents and bicycle thefts.⁵⁶
- **Although very safe on the whole, vigilance will remain important as certain crimes become more common.** In the most recent study of crime, road safety, terrorist attacks and natural disasters, Oslo still ranks 8th out of 148 cities.⁵⁷ However, new datasets attest to an increase in Oslo's actual crime levels compared to European peers.⁵⁸ For example, the region has the 8th highest rate of robbery out of 18 peers.⁵⁹ However, it is important to remember that the vast majority of Oslo's peers are other highly safe cities and that despite the recent rise in crime levels, Oslo remains a very safe city globally, boasting low rates of homicides and violent crimes compared to cities in other parts of the world.
- **Perceptions of safety have slightly declined, as a result of higher levels of visible crime such as property crime, and a recent rise in youth crime.**⁶⁰ In the major measure of residents' perceptions of criminal activity and neighbourhood safety, Oslo has slipped to 13th globally, or 25th out of 50 peers. A majority of respondents are of the opinion that crime has increased in the past 3 years and there is also a moderate perception that property crimes such as vandalism and theft have increased.⁶¹ But this is also an area where Oslo may be disadvantaged, due to the high expectations of residents who have been used to world-class standards for many decades.

3.3 Sustainability and Resilience



Oslo's journey of the past 5 years:

One of the European Green Capitals, Oslo's efforts to protect the environment have over the past five years become recognised on the global stage. The region's successful implementation of sustainable policy across multiple sectors has contributed to widespread improvements in environmental quality, and has also led Oslo to become a true global leader on some specific agendas such as sustainable mobility. However, other Nordic cities have also demonstrated leadership, meaning Oslo will face new imperatives to ensure it does not fall behind for sustainable policy adoption, particularly in high-profile industries.

Since 2019:

- **Oslo has cemented its position as one of the world's most environmentally friendly regions.** After a significant jump in performance last year, Oslo has climbed a further 5 places to 8th globally in IESE's major measure of environmental quality, overtaking Singapore and Helsinki.
- **Oslo's efforts to implement sustainability measures have become more widely recognised.** The region ranked 1st in a new study monitoring the progress of European cities towards achieving the Sustainable Development Goals. In this study, Oslo was estimated to be almost three quarters of the way to realising the SDGs, with 6 SDGs already achieved such as good health and well-being (goal 3) and affordable and clean

energy (goal 7).⁶² This outstanding performance is the result of numerous initiatives aimed at decarbonisation, such as the implementation of a car-free zone in the city centre, the development of emission-free solutions for its port activities and investment in technologies for carbon capture and storage.

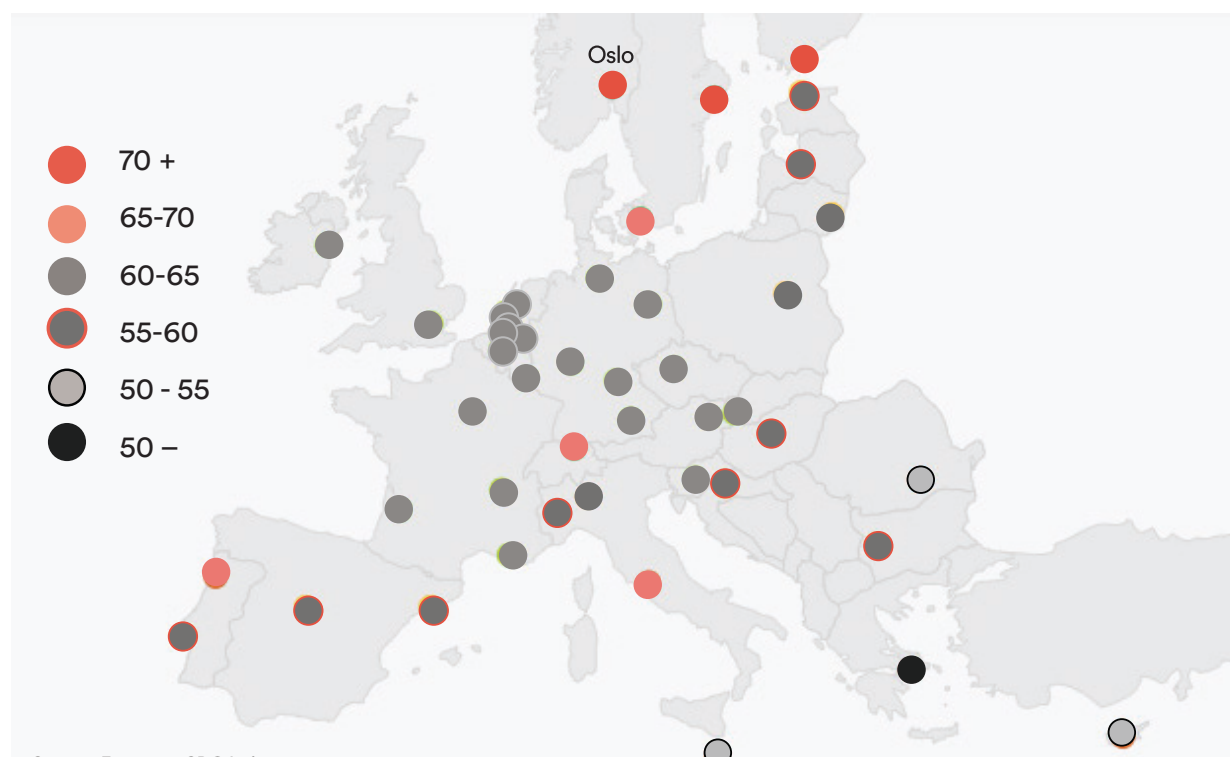
- **Measures to improve mobility and reduce carbon emissions have catapulted Oslo to the very forefront of sustainable mobility.** Investment in advanced electric vehicles and cycling infrastructure in addition to regulations encouraging a shift towards more active transport modes have resulted in a series of impressive results in new green mobility studies. Oslo now has the 3rd highest number of electric vehicle charging stations per capita globally and it ranks as the 6th best cycling city in the world.⁶³ It also is among the top 10 city regions globally for the availability of bike sharing schemes and is in the top 20 for cycle ways per capita.⁶⁴
- **Oslo has achieved worldwide recognition for its 'green' credentials.** The European Green Capital has the highest proportion of urban green area in Europe and 95% of inhabitants have a park or open green space

within 300 metres of their homes. Oslo also boasts the 3rd highest resident satisfaction rate with green spaces out of 25 highly developed cities, and has maintained its position among the top 15% of cities globally for perceptions of pollution, cleanliness and overall environmental quality, scoring particularly highly for the perceived quality and accessibility of drinking water and green spaces and parks.⁶⁵

- **Ensuring sustainable practice across all industries has emerged as a new imperative for Oslo.** Despite consistently impressive environmental certification rates, the region slipped 18 places to 22nd in the latest global review of sustainability practices of hotels, venues and convention bureaux, its lowest rank in 3 years, as other regions have made rapid progress.⁶⁶ Oslo now performs below the peer average for the sustainability performance of its meeting industry's supply chain, although this seems to mostly be due to lower levels of reporting and communication on sustainability operations. For other carbon-intensive industries, such as construction and maritime activities, new standards and an increase in public and private investment in new emission-free technologies may help to boost the region's performance in the coming years.

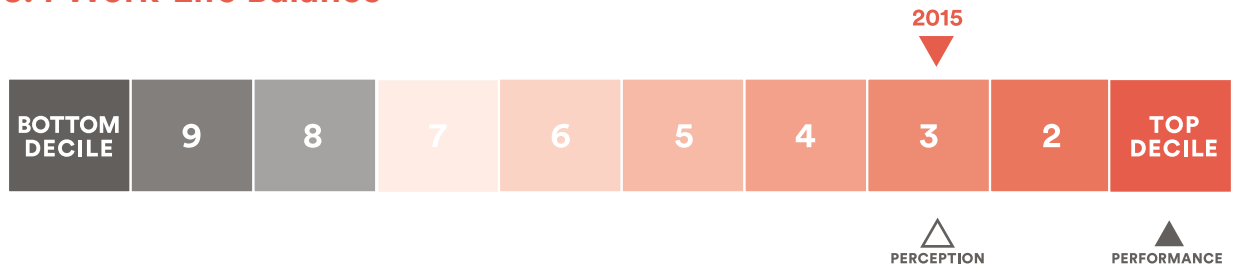
Oslo leads Europe in the race to achieving Sustainable Development Goals

Figure 14: Progress (%) towards the Sustainable Development Goals being achieved



Source: European SDG Index, 2019

3.4 Work-Life Balance



Oslo's journey of the past 5 years:

Oslo has gradually built up a status as a low-stress region that offers residents a unique work-life balance and the possibility of realising potential with time left over to do the things that matter. Over the years, a shift in citizen attention towards how well employers provide workers with the time and facilities to enjoy healthy and happy lives has enabled Oslo to more confidently assert its leading position as one of the most attractive regions in which to pursue a career. Only its increasing living costs have continued to detract from its strong reputation.

Since 2019:

- Oslo has continued to stand out for its workplace culture that supports employee well-being.** A resurgence of studies evaluating the wider factors that allow residents to enjoy a healthy work life balance has seen Oslo establish itself as the number 1 performer among its peers on aggregate across these measures. For example, in a major new study on work-life balance, Oslo ranks 1st out of 40 cities for the low average number of hours worked per week and for access to mental healthcare.⁶⁷ Oslo's strong performance is also supported by national labour policies, promoting paid maternity and paternity leave and a relatively high compulsory minimum of vacation days.
- Oslo's efforts to promote healthy attitudes to work have translated into even higher levels of job satisfaction.** Both residents and expats routinely express high levels of satisfaction with work intensity and lifestyle offering. In an in-depth survey of expats, Oslo is in the top 10 among 82 regions for perceived work-life balance.⁶⁸ It also boasts the 7th highest job satisfaction rate among residents out of its 23 European peers.⁶⁹ Interestingly, expats seem less satisfied with their jobs: Oslo ranks 50th with 22% of expats unhappy with their jobs, compared to 19% globally. This is likely at least partly the result of financial concerns, as 34% of expats feel they lack sufficient disposable income to cover all their living expenses, compared to 23% globally.⁷⁰

QUALITY OF LIFE: Agendas underlined for Oslo

Expanding Oslo's reputation for sustainability through large scale adoption of sustainable practices and policies across more industries and assets in the region.

Broadening and deepening the region's leisure and lifestyle offer.

Protecting and innovating on work-life balance.

What does this mean for Oslo?

For governments:

- Public procurement and standards can be used to incentivise more business leadership and virtuous competition to decarbonise. Programmes to support firms to invest in R&D, industry challenges and competitions, and an open public data platform for organisations to disclose their sustainability data, are all tools to maintain the momentum the city and region have picked up.
- Follow up the completion of investment in major cultural infrastructure with an integrated proposition about Oslo's lifestyle (e.g. nightlife, public space, retail and cuisine) and main attractions. Fully integrate culture across a wider range of social, environmental, and economic policies and start to tell the cultural story with more confidence and a differentiating voice. Explore opportunities to convene a more networked and dispersed leadership across Oslo's dynamic cluster of cultural organisations.

For the business community:

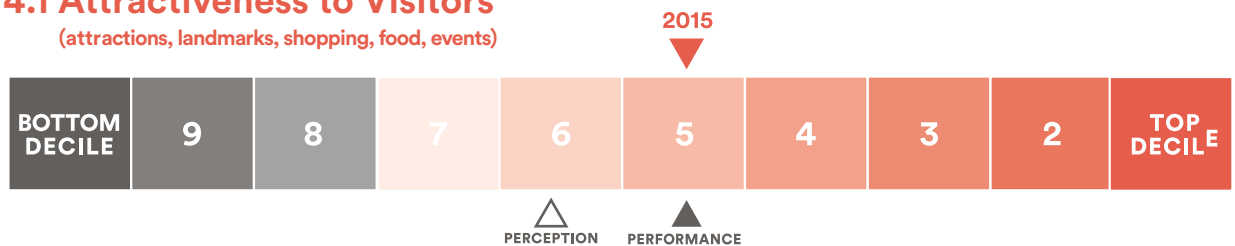
- Companies across all sectors can embrace and support Oslo's strategy towards decarbonisation and sustainable policy adoption. There are many ways to do so, including by: retrofitting buildings, shifting to cleaner energy sources and low-emissions transport modes, creating linkages across the supply chain to limit resource waste and boost the circular economy and engaging with employees to spur behavioural change.
- Oslo's corporates have an opportunity to leverage Oslo's reputation as a green city by investing in R&D in fast-growing sustainable sectors such as new energy and sustainable mobility.

4

Hospitality

4.1 Attractiveness to Visitors

(attractions, landmarks, shopping, food, events)



Oslo's journey of the past 5 years:

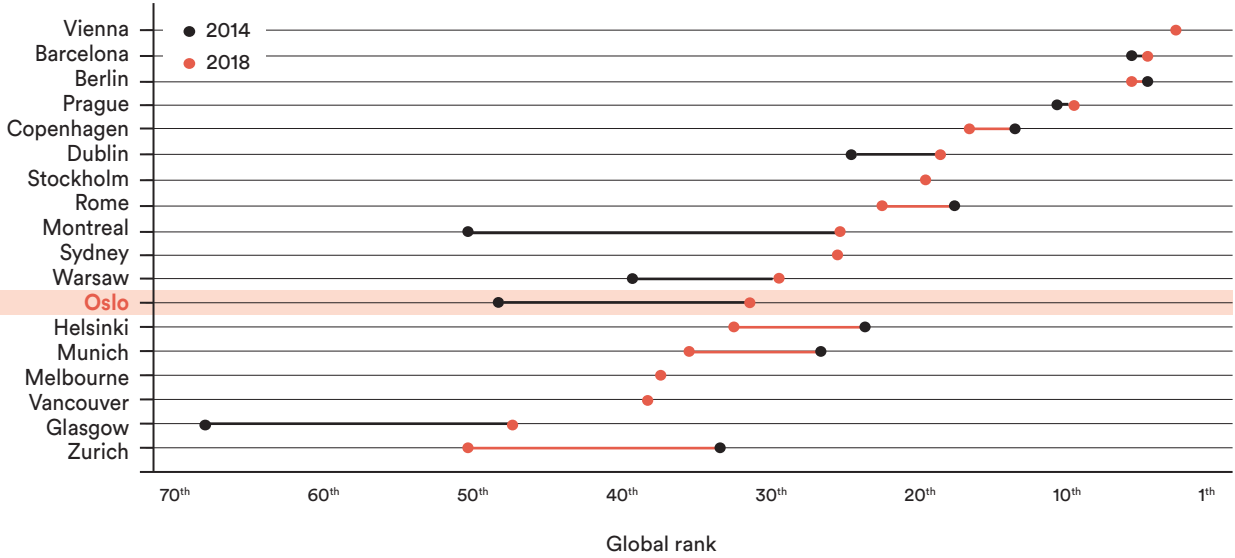
Oslo has grown its reputation as a tourist destination. As a gateway to Norway, the region has not only been attracting more air visitors, but has also gained recognition for its more diverse and mature visitor economy, its renewed cultural offer and its improving food scene. New developments such as Bjørvika have become significant economic and cultural engines in their own right. However, cost has if anything become an even more important deterrent for potential visitors.

Since 2019:

- **Oslo's status as a gateway for flows of business and well as leisure tourists has risen.** In a global measure of cities' visitor and tourism momentum, the region has jumped from 64th to 19th, and now ranks 8th out of 36 peer cities.⁷¹ This strong performance results mainly from improved tourist and business visitor numbers: since 2015, the total number of air passengers has increased by 15% and Oslo has now the 3rd highest number of air passengers per capita in Europe (excluding resort cities): an impressive performance considering its size and location.⁷²
- **Oslo is more recognised as a business destination.** Oslo ranks 60th globally for business travel in 2020 in a new survey of company executives, or 11th when looking only at small cities, as a result of its high skilled workforce, efficient public transport and vibrant high-end dining scene.⁷³ Oslo also now sits just outside the top 30 cities globally for hosting congress and conventions events – a noticeable increase from 48th in 2015.⁷⁴ This is likely the result of VisitOslo's consistent investment in outreach.
- **Oslo is an inclusive destination for visitors with a disability, ranking 4th in Europe.** Oslo scores particularly well for the number of accommodation listings with wheelchair access (4th out of 38) and for the proportion of wheelchair accessible attractions (8th).⁷⁵ This can become a differentiator for Oslo's visitor economy, and ties into the inclusive and socially progressive reputation.
- **Oslo's cultural institutions will be a big driver, but its leisure and entertainment offer may need more clarity.** In the major measure of cities' product offering, including convention centres and museums, Oslo has climbed from 64th to 61st globally. But for average ratings of restaurants, bars and shops, it has fallen 27 places. The region now ranks in the bottom 20% of its peers, or 126th globally. This gap between product offering and event programming – now the 9th highest among peers – suggests that the outstanding cultural offer is matched by high-quality and visible leisure options that can improve experiences of residents, overseas talent and visitors alike.⁷⁶

Oslo has successfully established itself as an attractive location for business meetings.

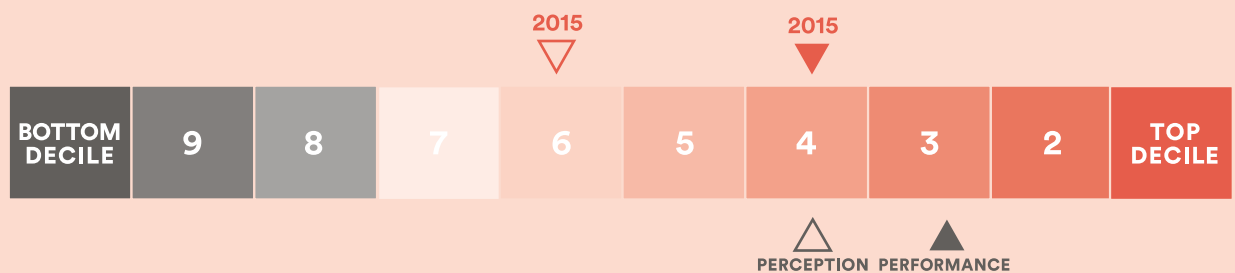
Figure 14: Oslo's performance in attracting business conferences, 2014 and 2018



Source: ICCA Statistics Report, City Rankings 2018 and 2014



4.2 Special Feature on Attractiveness to talent



Oslo's journey:

Over the past five years, the global competition for talent has intensified dramatically - not only for businesses and employers seeking to innovate and lead, but also for cities and regions for whom a more diversified mix of professionals and innovators has become essential to ensuring success of globally traded industries.

Oslo, like other cities, has come to realise that talent fuels the innovation ecosystem that can help it to generate the next cycle of jobs, improve efficiency and continue to diversify its economy. Positioning itself as an attractive alternative to more established global cities, both for Norwegians and for global talent, has become even more important.

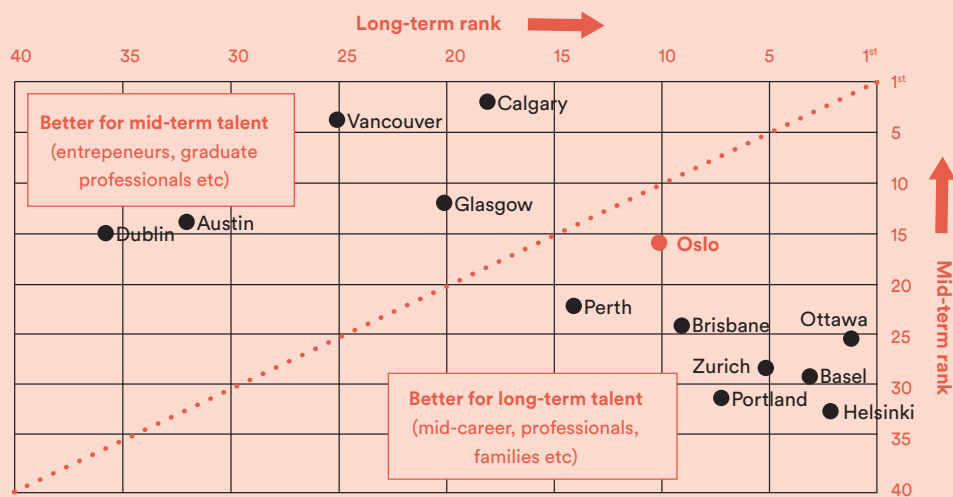
Oslo has steadily improved its ability to provide a full set of systems and services to attract, accommodate and retain talent through investment in branding and recruitment initiatives, settlement programmes and policies to enhance resident quality of life. As appetite has shifted towards a broader agenda of how well cities provide the real ingredients for different types of talent to thrive (e.g. families, younger generations and entrepreneurs), Oslo's attractiveness has stood out as more people recognise its quality of life, childcare and cultural offer. But affordability has become a more important concern and talent requirements are changing.

1: Oslo's ingredients to attract mobile entrepreneurs have improved, but its offer to family age workers stands out most.

Since 2019:

- **Oslo is attracting a growing number of next generation tech workers.** Oslo is now the 32nd best city for entrepreneurs globally as a result of strong access to market and to suitable space. It is also among the global top 40 for appeal to Generation Z, ahead of Austin, Denver and Lisbon.⁷⁷
- **On the other hand, Oslo continues to excel in terms of fundamentals for long-term talent to thrive.** As global attention has shifted to how to raise a family mid-career in cities, Oslo has emerged as one of the most family friendly medium-sized options globally. A new survey of over 6,500 parents globally finds that Oslo has the highest proportion of parents agreeing that the city is a good place to raise a family, and Oslo also ranks 20th among more than 75 global cities for the low monthly average price of childcare relative to local wages.⁷⁸

Figure 15: Oslo's scores in the measures of ingredients for mid-term talent to thrive vs. long-term talent relative to its most comparable peers

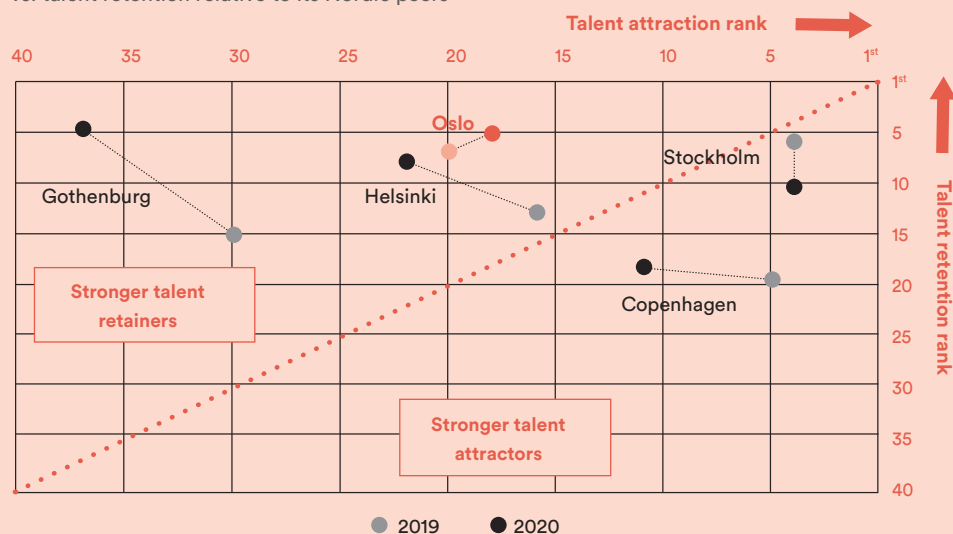


Source: The Business of Cities Research. *Aggregate score = across all benchmarks relating to entrepreneurial and longer-term talent. See appendix for examples.

2: Oslo is the only Scandinavian capital to have strengthened its proposition for both talent attraction and retention over the past year.

- Oslo remains an example of a city where it is can be challenging to attract people to the region, but once they are there, there are many reasons to stay. On the attraction side, Oslo's public ratings for living standards, average monthly salary and job security have all improved on last year. But Oslo's overall performance continues to be held back by more moderate scores for weather and climate, and leisure and cultural offer.
- Where Oslo really excels is for areas that might over time lead talent to consider moving elsewhere, such as social cohesion, public transport efficiency, cycling friendliness and internet access and speed. Oslo's consistent efforts to effectively manage the diseconomies of growth, such as congestion and pollution, are paying off in the minds of current and prospective talent.

Figure 16: Oslo's scores in the measures of talent attraction vs. talent retention relative to its Nordic peers

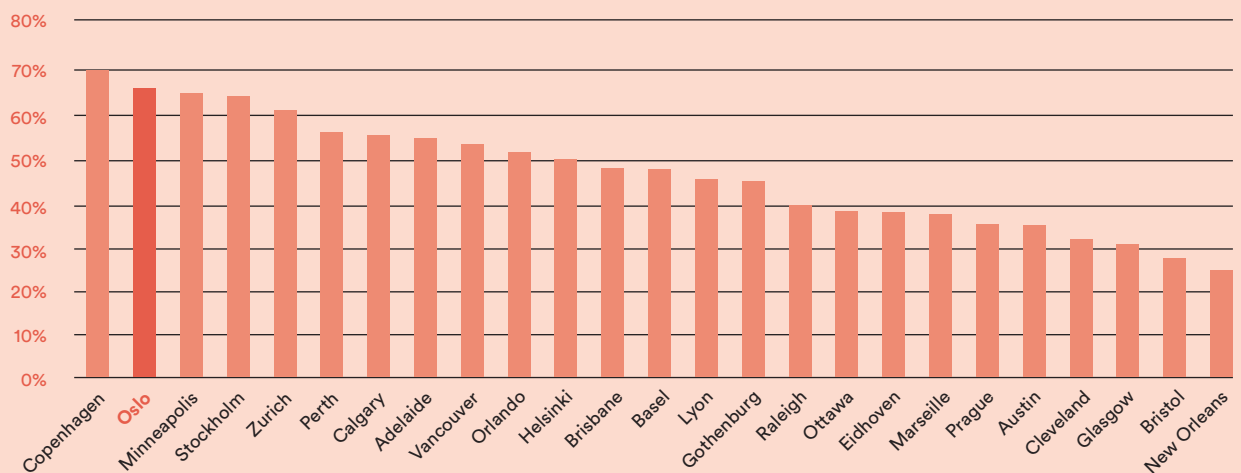


Source: The Business of Cities research. *Scores = aggregate across all benchmarks broadly relating to talent attraction and retention. See appendix for examples.

3: Oslo is retaining more of its home-grown top graduate talent than other cities, and is contending effectively to attract top talent

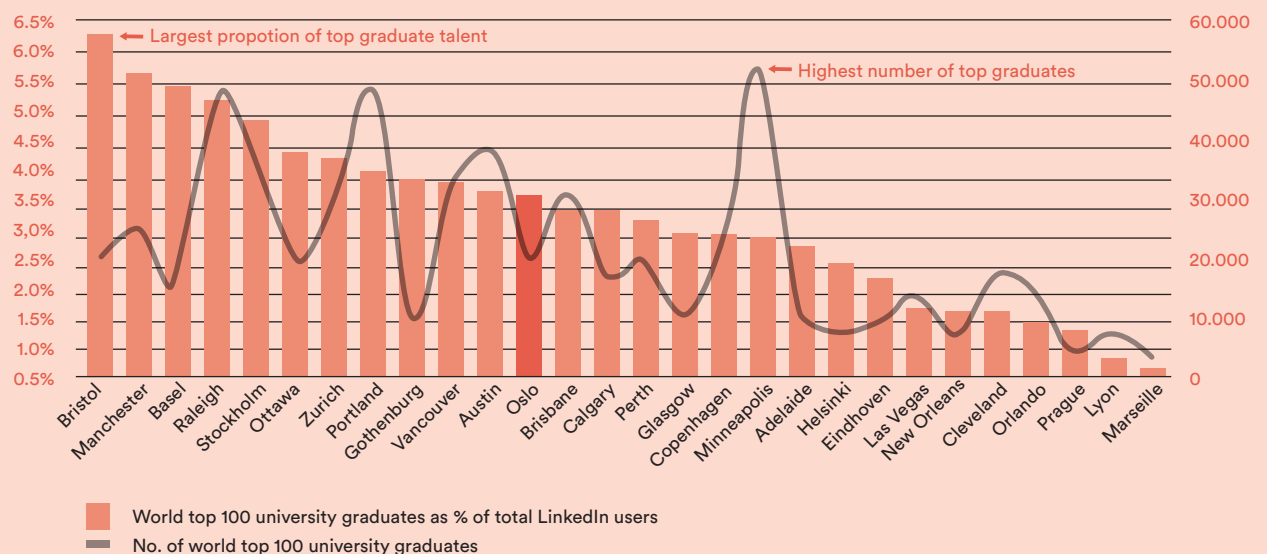
New evidence on real flows of talent between cities shows that in 2020, Oslo retains roughly two out of every three graduates that have gone to its top universities, putting it second only to Copenhagen among peer cities of a similar size. Meanwhile, of the share of working age residents who studied at a global top 100 university outside of Oslo, the region ranks ahead of Copenhagen and Helsinki among the Nordics. Although ahead of Brisbane, Glasgow and Minneapolis globally, Oslo does however have room to improve here.

Figure 17: % retention of home-grown graduate talent (top 1,000 universities)



Source: LinkedIn (January 2020 data). *Top 1,000 universities only.

Figure 18: Attraction of world top 100 university graduates, absolute and relative to cities' total talent base



Source: LinkedIn (January 2020 data). *Graduates of top 100 universities only.

4: The rewards on offer for talent in Oslo appear resilient.

Across all measures, the Oslo region has improved relative to its peers in more areas related to talent attraction and retention than it has declined. The overall change has been net positive.

- **Oslo has enjoyed continuous improvements to purchasing power and living standards for local residents.** The major study of GDP per capita and median annual salary compared to local living costs has seen Oslo climb 1 place to 6th globally, while Oslo has notably also appeared in the global top 20 in a new study of average monthly salaries.⁷⁹ As a result, Oslo's resident purchasing power has stabilised and is now improving, with Oslo climbing from having the 80th highest purchasing power among 200 cities in 2018 to the 86th highest among 226 cities in 2019.⁸⁰
- **Oslo's ability to meet and exceed expat expectations on working hours, work life balance and career opportunities has also improved.** Expats living in Oslo are 5% more likely to be satisfied with local career opportunities than on average across 80 global cities according to a new survey, and are more satisfied with work life balance than in any of the other Scandinavian capitals except Copenhagen.⁸¹

5: Affordability and costs are becoming an even more important factor, especially for mobile talent

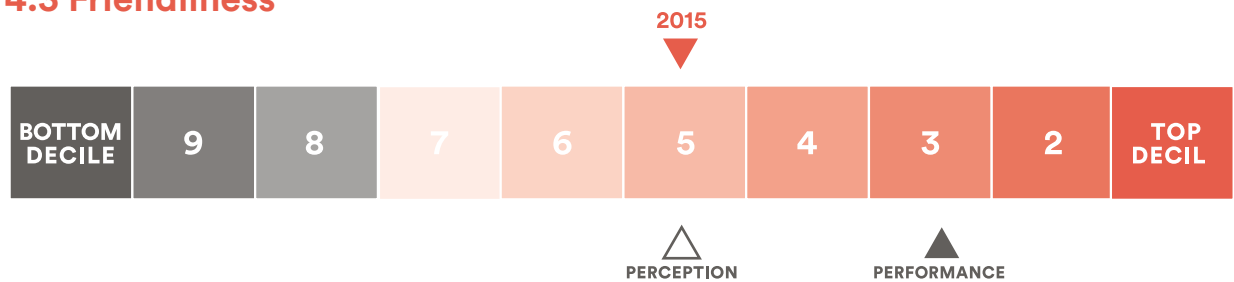
In 2020, Oslo has slipped in many of the leading measures of affordability - not only for goods, but also for services such as healthcare and for housing and rents. Oslo now has the 4th highest cost of living among 110 cities globally, and was recently rated as the 5th most expensive location in Europe for expats.

- **This year new data also shows that alongside a weaker reputation for openness and friendliness, rising costs are also a major factor holding back Oslo's overall appeal to foreign workers.** Only two thirds of expats in the region are satisfied with their financial situation, compared to 74% globally, and only 67% feel they have enough disposable income to comfortably meet living expenses, compared to 77% globally. Together with a growing interest in how easy it is to settle and integrate (see section 4.4), this is one major factor holding back Oslo's all-round talent appeal this year.

6: Oslo needs to be up to the challenge as the requirements of talent continue to change.

The global conversation on talent suggests that what the younger generation of workers expect from their cities in particular is changing. In 2020, when thinking about where to relocate and settle, mobile workers are placing more emphasis on labour market depth, urban amenities, healthy and meat-free lifestyles, breadth of food and entertainment scenes, and universal Wifi. In these areas, Oslo sometimes performs less strongly. Business and government can all respond to these gaps.

4.3 Friendliness



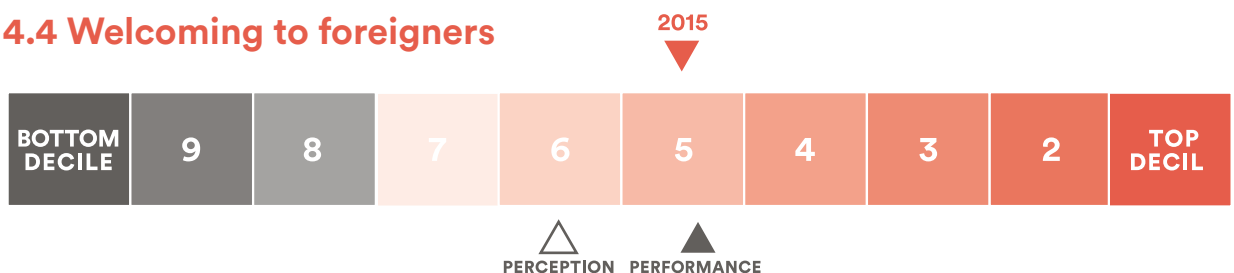
Oslo's journey of the past 5 years:

As appetite to compare cities on more specific areas has grown and availability of data has improved, Oslo has successfully leveraged its status as one of Europe's most peaceful cities to demonstrate leadership on LGBT friendliness and inclusion. On the other hand, Oslo has, like many other Scandinavian cities, been slower to gain a reputation for being a friendly city for expats, as new datasets have begun to expose the perceived difficulties of socialising and making friends.

Since 2019:

- **Oslo has maintained its reputation as a frontrunner for LGBT+ inclusion.** Studies assessing cities' level of acceptance towards the LGBT+ community routinely rate Oslo in the top 25% cities globally, due to an established culture of LGBT rights across areas such as equality in marriage and adoption rights, and as a result of Oslo being a first mover with respect to anti-discrimination safeguards being enshrined in law and policy. Oslo's performance is further strengthened by high levels of perceived safety for LGBT+ people.⁷⁹
- **Oslo's openness has yet to translate into improved foreign experiences and better integration of its foreign-born population.** New data highlight that foreign residents and visitors find it more difficult to engage with the local population and become a part of social networks. The latest edition of an influential expat perception survey found that over half the expats struggle to make long-term friends, compared to an average of 35% globally. Similarly, one of three expats considered the local population to be generally unfriendly, 15% higher than the global average, but nevertheless lower than in Stockholm and Copenhagen.⁸⁰

4.4 Welcoming to foreigners



Oslo's journey of the past 5 years:

Oslo has steadily gained more recognition for its tolerance and openness to immigration as the proportion of foreign-born residents living in the city has grown and new initiatives designed to foster integration have been implemented. In more recent years, it has come to light that expats find it difficult to integrate and settle in the region, as is the case throughout Scandinavia.

Since 2019:

- **Oslo has continued to be viewed as a city open to immigration.** Growing recognition of welcoming initiatives to help newcomers, such as a dedicated agency and information packages for newly arrived foreign residents, have contributed to an increasing number of foreign-born people choosing to settle in the region. In the major measure of demographic diversity, Oslo ranks 39th out of 110th, well above other Scandinavian capitals such as Stockholm (45th) and Copenhagen (72nd).⁸¹ Meanwhile in the major joint measure of cities' diversity and educational attainment, Oslo climbed 4 places to 25th, overtaking San Diego, Melbourne and Paris.⁸²
- **Foreign residents' real experiences of moving to Oslo have emerged as a threat to its long-held reputation for hospitality.** In a major annual global expat survey, Oslo ranked 64th out of 82 for perceived ease of settling in. Oslo is however ahead of other Scandinavian cities such as Copenhagen and Stockholm, and language does not seem to be a barrier, with Oslo ranking 37th for the perceived ease of living in the city without being able to speak Norwegian.⁸³
- **New data have begun to expose challenges relating to the integration of foreign-born residents.** In the major expat survey, the main reason for not feeling settled was the difficulty of integrating into the local culture. Meanwhile, a recent Eurostat survey shows that only 5% of Oslo's residents strongly agree with the statement that foreigners are well integrated.⁸⁴ This places Oslo at the bottom of its peer group, above only Helsinki, Vienna, Berlin and Rome in Europe.

HOSPITALITY:

Agendas underlined for Oslo

Improving integration of foreign workers and talent

Retaining more high skilled people

Winning more contests for mobile activity, and winning over potential long-term customers and visitors for Oslo.

What does this mean for Oslo?

For governments:

- More concerted policy attention on the gaps for families who move: language courses, mentors, facilitators, manuals to Norwegian society and culture
- Stronger promotion of the benefits of workplace diversity and showcasing the success stories of companies and institutions that have diversified their workforce.
- Participation in networking events and alliances to foster cross-company connections spanning local and international employees.
- Designing new and innovative work environments in the desirable locations will be more important for talent retention.

For university and research institutions:

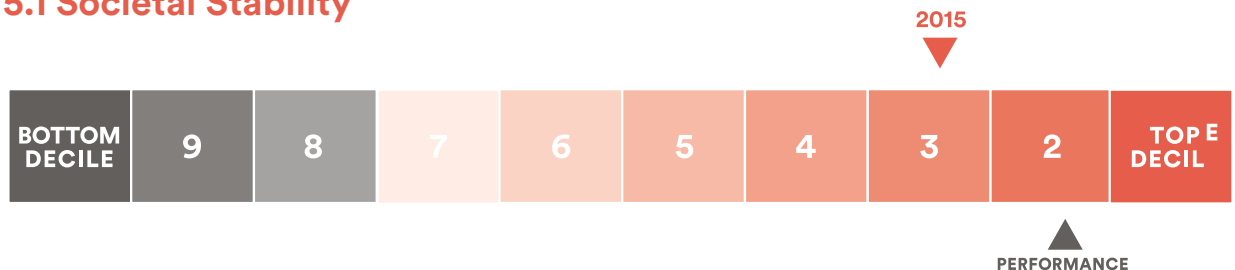
For the business community:

- Explore routes to become more open employer: bias-free performance and reward metrics; nominated staff with skills to facilitate the transfer of knowledge to new arrivals; promoting vacancies that do not have a language requirement; subsidising Norwegian language classes
- Deeper partnerships with companies can help graduates find relevant jobs, either by providing internships/traineeships to international students or by accompanying them throughout the work visa process to facilitate their transition into the Norwegian labour market.

5

Governance

5.1 Societal Stability



Oslo's journey of the past 5 years:

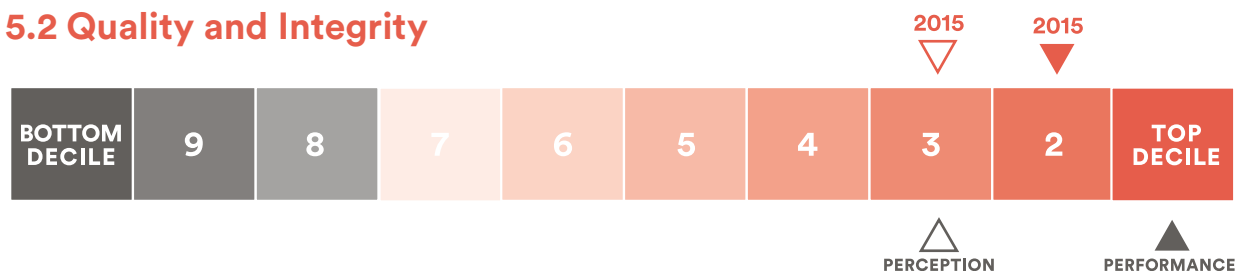
Oslo has developed and maintained its reputation as one of Europe's most socially inclusive regions, proving that small and young regions can grow at an unprecedented rate and still produce positive outcomes for citizens. The region has become a recognised global leader for promoting gender equality and personal freedom, although recent years have seen Oslo experience an increase in wealth and skills inequalities which may begin to raise scrutiny on its status as one of the world's most socially progressive cities.

Since 2019:

- **Oslo has cemented its reputation as a global leader in the field of Oslo stands out even more for its social inclusion.** Oslo is in the top 10 out of 113 cities for the inclusiveness and the accessibility of public services, with top performances for education for all (7th), and for providing affordable housing, fair access to healthcare, and a high-quality environment (12th).⁸⁵ Meanwhile, Oslo climbed re-joined the global top 20 for social cohesion, while many of its peers slipped.⁸⁶ This is reflective of the reliable standards of governance to provide access to basic services, compared to many top global cities.
- **More disparities in wealth and skills are affecting Oslo's performance.** The share of population at risk of poverty and social exclusion has increased by 4% since last year, meaning Oslo now has the 5th highest rate of risk among 11 measured European peers.⁸⁸ Meanwhile Oslo has fallen to 28th in Europe for reducing the share of young people not in education, employment or training (NEET).⁸⁹

placing 4th in Europe for its progress. The region also performs strongly both for the gender employment gap (3rd/45) and gender wage gap (6th), although this still leaves room for improvement.⁸⁷

5.2 Quality and Integrity



Oslo's journey of the past 5 years:

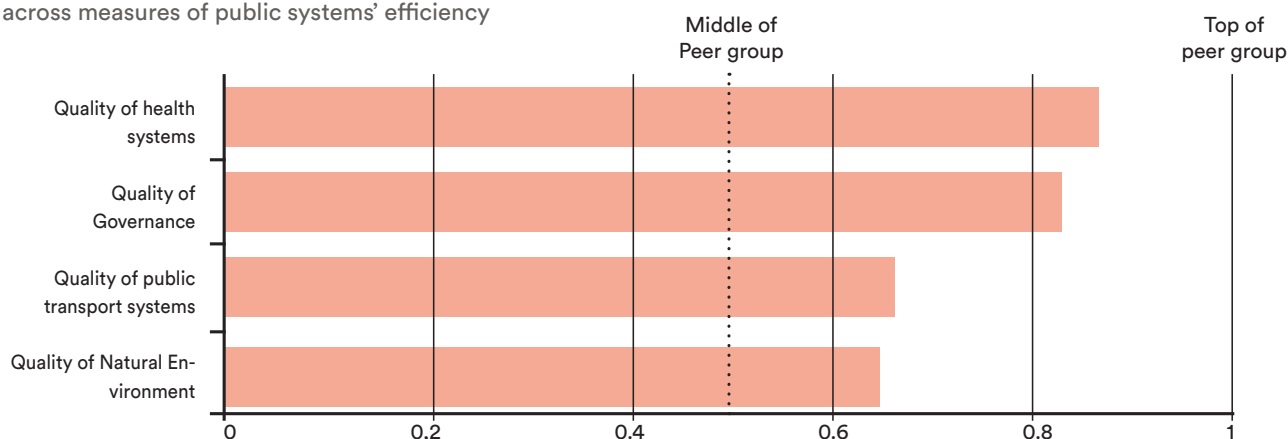
Oslo has become widely recognised for providing a seamless platform of public systems and services, as citizens have reported consistently high satisfaction with transport, education and infrastructure systems. The region has been demonstrating leadership on citizen participation and engagement and become more recognised for its government “smartness”, while a commitment to ‘density done right’ means its built environment has remained highly rated.

Since 2019:

- Oslo's use of technology to enhance daily life is ahead of the game and capturing the imagination.** In a new major survey of citizen perception of the impact of smart technologies on everyday life, Oslo is 3rd globally.⁹⁰ Citizens rate the use of technology for mobility particularly highly, with the roll-out of bike-sharing and micro-mobility schemes, the use of digital payments services for public transport, and autonomous vehicles trials. Similarly, the region was rated the smartest city in the world in the latest edition of EasyPark Smart Cities Index, up from 34th in 2017, partly as a result of an improvement in expert perceptions about the region's progress since last year.
- Relative to others, the quality and efficiency of Oslo's public transport system has improved.** Four top 20 performances this year have helped to cement Oslo's status as having one of the most efficient mobility systems globally. In a European study of public transport coverage and efficiency, Oslo ranked an impressive 11th, reflecting recent investment and initiatives geared towards green mobility, such as the expansion of the electric vehicles fleet and introduction of procurement policies demanding zero-emissions delivery vehicles.⁹¹
- Public satisfaction with Oslo's infrastructure is broadly on the rise.** Oslo boasts the 19th highest share of people satisfied with public transport, up from 27th last year.⁹² A major survey also revealed that foreign workers in Oslo are fairly satisfied with transport infrastructure, with Oslo ranking 30th out of 82 cities.⁹³
- Perceptions of the quality of Oslo's urban environment and healthcare systems suggest room to improve.** In a new study of citizen satisfaction with hospital care, Oslo ranks only 70th globally.⁹⁴ 85% of expats are happy with the quality of the environment, compared to the global average of 71%, but this is still behind other Scandinavian cities, such as Helsinki (92%), Copenhagen (93%) and Stockholm (95%).⁹⁵

Oslo outperforms its peers for public management and infrastructure

Figure 19: Oslo's performance among peer group across measures of public systems' efficiency



Source: The Business of Cities research. See appendix for methodology.

5.3 Transparency and Accountability



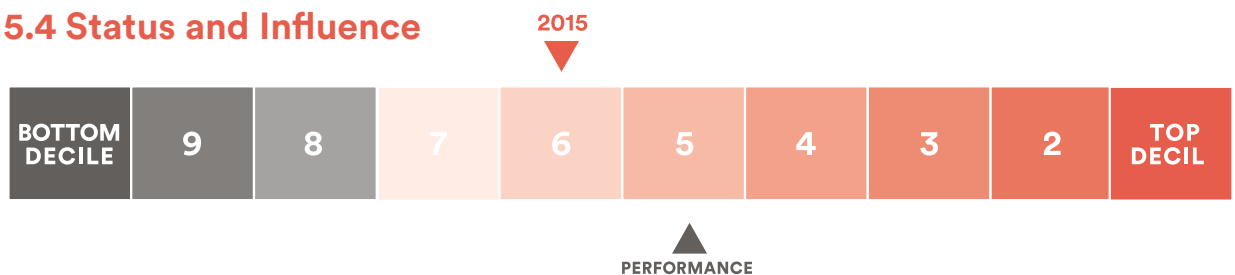
Oslo's journey of the past 5 years:

Oslo's institutional depth and effectiveness has underpinned higher trust in political decision making than in other 'low trust, low co-ordination' cities. High rates of tax or regulation are offset by improvements in the quality of public services and digital infrastructure. Overall Oslo has maintained its reputation as a fairly transparent and responsive city, but more can be done to widen scope of participation.

Since 2019:

- **Oslo's transparency and reliability is steady but scores can improve.** In a major measure of governance effectiveness and quality, Oslo's position has remained steady, just outside the top 50, whereas half of its peers have slipped.⁹⁶
- **There is higher citizen participation and trust in local decisions.** In a new major study of citizen perceptions, Oslo has one of the highest proportions of residents feeling they can contribute to local decision making, and trust in public authorities is more than 10% above the average among similarly sized cities.⁹⁷ In another measure of citizen participation, the region has climbed 5 places to 20th.⁹⁸
- **Digital infrastructure systems are gradually becoming a tool to better engage with citizens.** Oslo climbed 4 places to 32nd globally for ability to engage citizens on digital platforms.⁹⁹ However, there is still room for Oslo to improve the scale of impact and the involvement of business and universities, as it does not feature in a new study assessing the top 20 cities globally for leveraging new technologies to transform and improve their urban eco-systems and to engage with citizens as well as business and academic communities.¹⁰⁰

5.4 Status and Influence



Oslo's journey of the past 5 years:

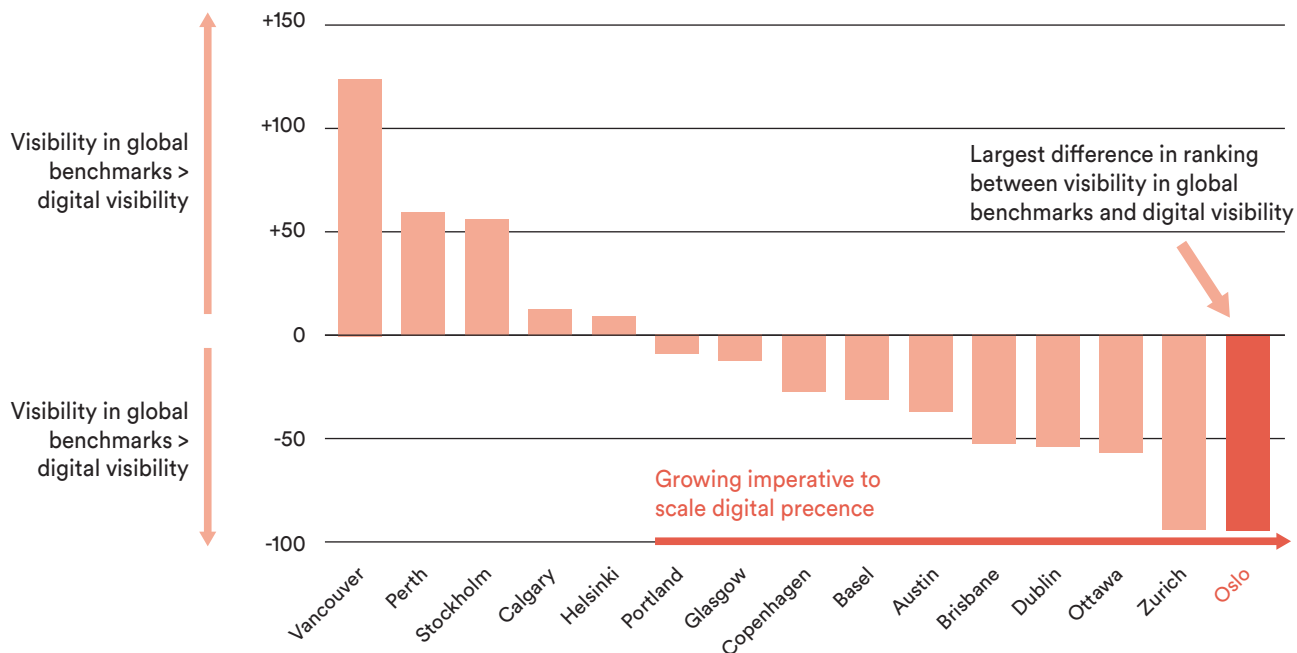
Oslo has steadily improved global visibility and influence as a result of hosting the world more often and implementing world-leading environmental initiatives. But as global competition for attention and influence has grown fiercer, and online presence and visibility have become more important, new efforts appear to be required.

Since 2019:

- **Oslo's leadership profile is maturing.** In a major study of cities' ability to demonstrate leadership across multiple agendas, Oslo climbed 9 places to 14th, overtaking Sydney, Boston and Helsinki.¹⁰¹ This is a direct reflection of a string of ambitious environmental, public transport and cultural initiatives implemented in recent years.
- **Relative to the pace happening elsewhere, Oslo's reputation as a financial centre is not developing fast in this cycle.** The rise of the Asia-Pacific have the resurgence of larger European cities post-Brexit, has reduced Oslo's financial services visibility among industry professionals. It has lost 16 places in the major measure of industry sentiment since 2017, overtaken by the likes of Hamburg and Kuala Lumpur.¹⁰²
- **Oslo's digital presence is a priority to grow different sources of global influence.** There is a gap between Oslo's growing visibility in global rankings and its presence in digital news and social media. In a new measure of cities' digital visibility, Oslo ranks 138th out of 250 cities, and in a major index measuring the quantity of references, stories and recommendations shared about the city, it fell a further 2 places to 143rd.¹⁰³ This points to a challenge to turn locals and visitors into "digital city ambassadors," as larger regions and tourist destinations have done.¹⁰⁴
- **Oslo continues to be omitted from some important global indexes on city status and influence.**¹⁰⁵ Oslo is not included in major new studies on city importance or 'soft power' this year. This, together with the shift to digital measures of visibility and influence, explains Oslo's decline in performance since 2019.

Greater competition among cities for online market share

Figure 20: Gap between visibility in global benchmarks and online, Oslo and selected peers.



Source: ING Media World's Most Talked About Cities. Visibility in global benchmarks measures a city's appearances in a set of 24 publicly available global city rankings. Digital visibility measures a city's total mentions in the news, social media and on blogs and forums.

GOVERNANCE:

Agendas underlined for Oslo

Diversifying global visibility and growing online presence.

Continuing to set the pace on overcoming gender bias, social inequalities, and skills gaps, to build on Oslo's progressive reputation.

For governments:

- Progress strategies that use Oslo's 'smart city' advantage to shift to govtech model that focus on what makes a good city and what citizens need – including those who are older, disabled, new immigrants and marginalised.
- Maintain Oslo's priority on women and girls' safety and treatment as a core policy agenda. Implement gender mainstreaming pilots using disaggregated data.

For the business community, universities and start-ups:

- Proactively work beyond normal boundaries to address some of the preconceptions about the administrative barriers to working in Oslo.
- Partner where possible with Oslo-based start-ups promoting equality and inclusion, and encourage employees to contribute to digital platforms that allow workers to highlight gender and discrimination issues.

- Lend participation and weight to organisations that convene gender expertise, lead research, and deliver business training for professionals to incorporate an inclusive lens in their work and practices.

For citizens:

- There are more avenues to become digital "ambassadors" and storytellers for the city through powerful communication, sharing experiences online and addressing misperceptions.
- Participate in civic technologies, apps and city dashboards to support more insight about inclusivity in streets and local neighbourhoods



Conclusion

Since the first report in 2016 on Oslo's performance in the world's system of cities, the city-region has been establishing itself as a leader in a number of strategic areas.

In particular Oslo is achieving special recognition for its pioneering sustainability achievements, its enriching quality of life, its inclusive social model and its productive workforce. In a positive global cycle Oslo has also expanded the breadth and depth of its visitor economy. The region's investment in its physical fabric, cultural assets and digital infrastructure is registering on the radar for companies, visitors and talent. International events, new museums, and pioneering initiatives have been celebrated in global media, such as European Green Capital, the ban on car parking in the city centre, and ongoing divestment from fossil fuels.

Oslo is therefore well placed to cement its position as a beacon on the global agendas of our time: human health, climate change, resilience, cultural inclusion, and liveability.

2020 and the next decade to come presents more growth opportunities for Oslo but also a new horizon of risk and responsibility for cities and regions. The region's progressive social model, diversifying economy and strong demographics will translate into new opportunities for the region's future. Yet more than anything the imperative for next decade is to match ongoing rapid progress in building and curating a pioneering city-region that enjoys an enriching quality of life, with systematic efforts to communicate Oslo's story and advantages across multiple sectors and actors in the region.



The Oslo Performance Spidergram, 2020 and year-on-year change



Oslo's longer and shorter term journey: the five year and year-on-year spidergram



Methodology

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

i. 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.

ii. 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.

iii. 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 29th out of 50 comparator cities for Innovation, giving it a score of $1 - (29/50) = 0.42$. This puts Oslo in the 6th decile for Innovation performance.

- e.g. In measures with a perception element, Oslo ranks 13th out of 45 comparator cities for Quality and Integrity, giving it a score of $1 - (13/50) = 0.71$ (5 cities are discounted from the calculation due to not appearing in any of these measures). This puts Oslo in the 3rd decile for perception of its Quality and Integrity.

Notes to individual figures

Table 5

Locations included: central business district, highest ranked university, closest hospital, main museum in city, main retail district and main airport.

Figure 15

Example benchmark themes relating to:

For entrepreneurial talent: quality of co-working spaces, number of Wi-Fi hotspots, quality of 4G signal, ease of settling in, number of concerts, monthly salary, etc.

For longer-term talent: satisfaction with healthcare, childcare costs, family friendliness, exposure to air pollution, job security

Figure 16

Example benchmark themes relating to:

For talent attraction: wages, living standards, entrepreneur friendliness, weather and climate

For talent retention: congestion levels, exposure to air pollution, housing affordability, health and wellbeing

Figure 19

"Quality of Health Systems" measures the access to, quality of and citizens' satisfaction with healthcare services. "Quality of Governance" evaluates the perceived efficiency of public service delivery as well as citizen participation. "Quality of Public Transport Systems" measures the accessibility, efficiency and reliability of the public transportation system as well as citizens'



Notes and References

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- 8 JLL Global 650
- 9 Eurostat
- 10 EasyPark Smart Cities Index: Internet Speed
- 11 Tutela State of Mobile Networks Report: Nordics
- 12 EasyPark Smart Cities Index: 4G LTE
- 13 EasyPark Smart Cities Index: Smartphone Penetration
- 14 Nestpick Best Cities for Generation Z: Connectivity/5G
- 15 TomTom Global Traffic Index 2019
- 16 IMD Smart City Index. Oslo is assessed against a group of cities with similar levels of HDI. The cities include: Amsterdam, Berlin, Boston, Brisbane, Copenhagen, Dublin, Dusseldorf, Geneva, Gothenburg, Hong Kong, Melbourne, Montreal, New York, Rotterdam, San Francisco, Seattle, Singapore, Stockholm, Washington DC, Zurich, Sydney, The Hague, Toronto, Vancouver,
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- 18 ING Media World's Most Talked About Cities
- 19 European Commission Cultural and Creative Cities Monitor 2019
- 20 EU Regional Innovation Scoreboard 2019 and 2014.
- 21 EU Regional Innovation Scoreboard 2019
- 22 Crunchbase
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- 24 Dealroom, accessed in February 2020.
- 25 Findexable The Global Fintech Index 2020; Startup Genome Startup Ecosystem Ranking 2019
- 26 EU Regional Innovation Scoreboard 2019
- 27 <https://www.brookings.edu/wp-content/uploads/2016/07/InnovationDistricts1.pdf>
- 28 Real-time "big datasets" of data providers that track innovation, firm & investment dynamics. These datasets span 850,000+ firms, 300,000+ investments, & 2,500+ incubators and accelerators globally, user generated data recorded on the world's leading online platforms tracking citizen and user sentiment relating to quality of amenities and online engagement with district attractions, and in-house geo-located data derived from real-time GIS data. This includes insights on firm location, amenities, and public transport connectivity.
- 29 All data have been analysed using machine learning research methods and advanced data visualisation and spatial statistics packages such as Sci-Kit Learn, Geopandas, ArcGIS and Google Data Studio. In order to allow for consistency in analysis, all districts have been analysed both at the official boundary scale, and at a wider catchment area scale. Unless specified otherwise, wherever the words 'wider area' appear, this refers to a 1.5km radius from the centre point of the district.
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- 51 CEOWorld Safest Cities 2019
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- 64 IESE Cities in Motion: International Outreach
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- 80 Nestpick Best Cities for Generation Z: Internationalism
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