

World Research - 2019



REPORT

Savills Research

Tech Cities in Motion

savills



The cities at the forefront of global tech

In this, the third edition of Savills Tech Cities, five mainland Chinese cities make our ranking for the first time. These, together with other new entrants, brings our total Tech Cities to 30.

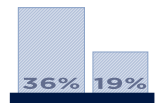
Testbeds for innovation, our Tech Cities are at the forefront of addressing transportation challenges.

To assess how effective they are, and how they compare, this year we've added a new 'mobility' category. It explores how effective our cities are at getting people from A to B.

Summary



■ Savills Tech Cities are important centres for tech in their region and VC investment hotspots. Vibrant cities in which to live and work, they are magnets for talent. The Savills Tech Cities index measures what makes them successful.



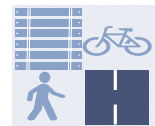
■ Tech Cities are outperforming other global centres. GDP across the 30 Tech Cities is forecast to rise by 36% in the next decade, against a rate of 19% across other developed cities.



■ New York has emerged as the premier Tech City in this year's index, overtaking San Francisco. Access to a deep talent pool and the city's reputation as a global centre of commerce makes New York the global leader.



■ Chinese Tech Cities have risen fast, and now account for a higher share of VC investment than their US counterparts. Beijing recorded an average \$34 billion of VC p.a. in the last three years, volumes higher even than New York and San Francisco.



■ Chinese cities have also emerged as leaders in shared mobility services. Our overall mobility ranking puts London first, however, thanks to transport innovations and an urban form conducive to cycling and walking.



■ The expansion of coworking space has gone hand in hand with the growth of the global tech sector. The average coworking-cost for a desk in a private office is \$590, and is highest in San Francisco at \$1,050.



What is a Savills Tech City?

- An important centre of tech within its region
- Major recipient of VC investment
- On the shopping list for expanding global tech companies
- A vibrant city in which to live and work
- A generator of, and magnet for, talent

The Savills Tech Cities index measures what makes a successful Tech City. Our assessment for each city comprises of over 100 individual metrics, ranging from the number of days needed to start a business through to the cost of a flat white coffee. These metrics are grouped into six categories: business environment, tech environment, city buzz & wellness, talent pool, real estate costs, and mobility. Each category is weighted to reflect its importance to the tech sector.



THE SIX INDEX CATEGORIES



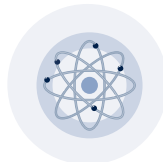
Business Environment

- Investment
- Size of finance & business services sector
- Ease of starting a business
- R&D / innovation
- Physical linkages
- Cost of doing business (regulations, taxes, pay)



Tech Environment

- Venture capital
- Size / value of tech sector
- Tech infrastructure
- Tech engagement



City Buzz & Wellness

- City wellness
- City buzz
- Cost of living



Talent Pool

- Higher Education
- Immigration & talent attractiveness
- City youthfulness



Real Estate Costs

- Cost of renting commercial and residential property
- Cost of coworking space



Mobility

- Shared mobility services
- Metro system
- Quality of urban infrastructure



3. LONDON
Big city buzz



2. SAN FRANCISCO
Tech environment



1. NEW YORK
Global centre of commerce

New York leads the way

The Big Apple has emerged as the premier Tech City in this year's index, overtaking San Francisco

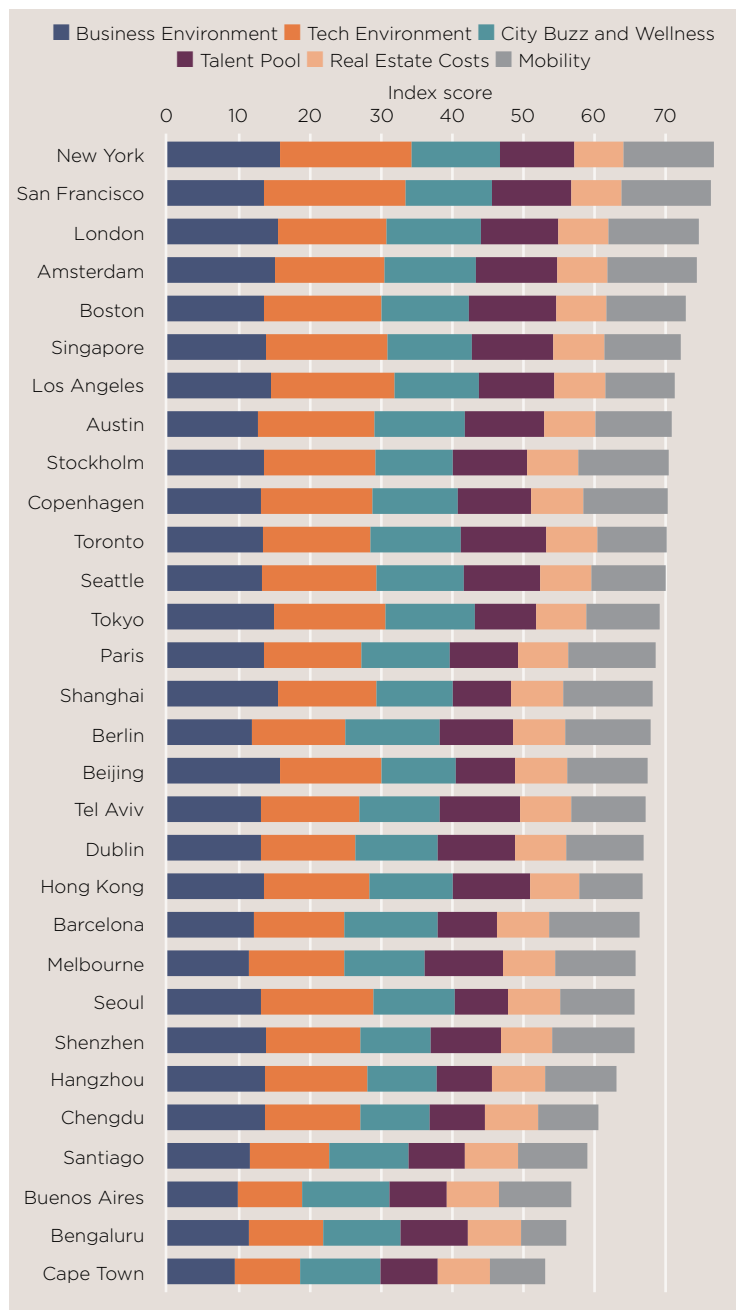
Access to a deep talent pool and the city's reputation as a global centre of commerce makes New York the global leader. It is no coincidence that Amazon recently selected New York's Long Island City as a location for its second headquarters, citing the ability to attract world-class talent as a key determinant. VC investment volumes have topped those of San Francisco for the last three years.

London ranks third. Performing especially well on our 'buzz and wellness' and mobility sub-metrics (see page 5), the UK capital remains the dominant tech hub in Europe, with three times more VC investment recorded in 2018 than the nearest European rival for VC investment, Paris.

Amsterdam is hot on its heels, rivalling London's position as the global gateway to Europe. This vibrant global hub benefits from a skilled, English-speaking workforce and scores well across all categories.

🗨️ **A centre of commerce with a deep talent pool and global links means that New York is an attractive base for both start-ups and multinationals alike** 🗨️

Figure 1 The Tech Cities global rankings



Source Savills World Research

Why mobility matters

The ease a city’s population can get from A to B is an important consideration

Our Tech Cities are among the fastest growing developed cities in the world. Across the 30 tech cities, GDP is forecast to rise by 36% in the next decade, against a rate of 19% across other developed centres. Measured by metro area, these 30 cities are home to 291 million people between them, and will add another 18 million inhabitants in the next 10 years.

Rising populations are putting ever greater pressure on existing infrastructure, posing a risk to city competitiveness. From mobility as a service to investment in ridesharing and autonomous vehicles, our Tech Cities are at the forefront of addressing this. Many of these cities benefit from an urban form that is conducive to cycling and walking, making sustainable modes of transport popular too.

We consider three elements when assessing mobility: the availability, density and investment in shared mobility services (car, bike and scooter sharing services), the scale and level of innovation in the city’s metro system, and the quality of urban infrastructure (walkability, cycle networks, congestion and air pollution).

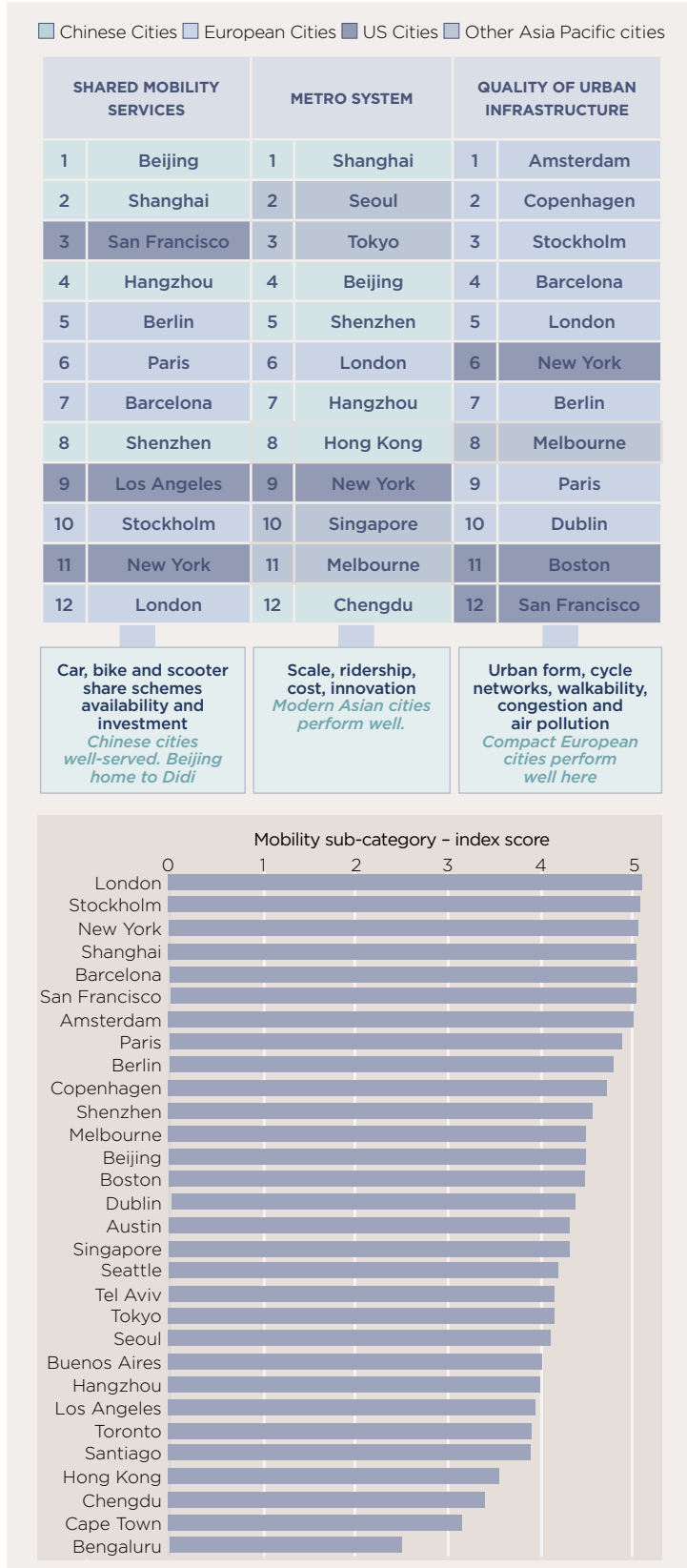
Chinese cities have emerged as leaders in shared mobility services. Many of the dockless bikeshare schemes now found in cities across the world (such as Mobike) originated in China. Hangzhou is home to more shared bikes than in any other city globally. Numbers here topped 800,000, before they had to be culled to manage congestion.

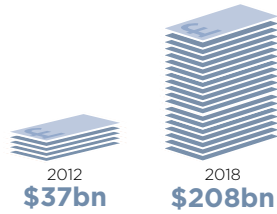
Major Asian cities lead when it comes to metro systems. The large, modern systems benefit from onboard wifi and air conditioning and are among the cheapest to travel on.

The final pillar, urban infrastructure, looks at the quality of the urban environment. European cities compare favourably. Amsterdam, Copenhagen, Stockholm and Barcelona are among the world’s most cycle-friendly. Their compact size allows residents shorter commutes, easier access to amenities and a better work/life balance.

While not leading in any single category, taken together, London ranks first overall for mobility. The city’s public transport system offers smart ticketing (mobile, contactless, Oyster), integrated across all transport modes (from rail to bus). Existing congestion charging and a low emissions zone will be complemented with an ultra-low emissions zone this year. Pollution remains a major issue, however, while upgrading the world’s oldest metro system poses ongoing challenges.

Figure 2 The mobility sub rankings





VC investment volumes across the 30 Tech Cities rose from \$37 billion in 2012 to \$207.8 billion in 2018

The rise of Chinese Tech Cities

Chinese Tech Cities have risen rapidly on the global stage, and now account for a higher share of VC investment than their US counterparts.

VC investment volumes across the 30 Tech Cities rose from \$37 billion in 2012 to \$207.8 billion in 2018. While the scale of overall investment has risen, the US-city share of these volumes has dropped from 40% to 28% (see Figure 3). Chinese cities, by contrast, have seen their share rise from 11% to 36% over the same period.

For every US tech giant there is a Chinese equivalent. The US has 'FAANG' (Facebook, Amazon, Apple, Netflix, and Google). China has 'BAT' (Baidu, Alibaba and Tencent), and more recently the mobile-driven 'TMD' (news app Toutiao, group-buying service Meituan-Dianping, and ride-sharing firm Didi Chuxing).

Tapping into a vast, internet-enabled domestic market they have risen fast, and thanks to integrated payment systems, revolutionised the way business is conducted in the country. China is also a global leader in AI.

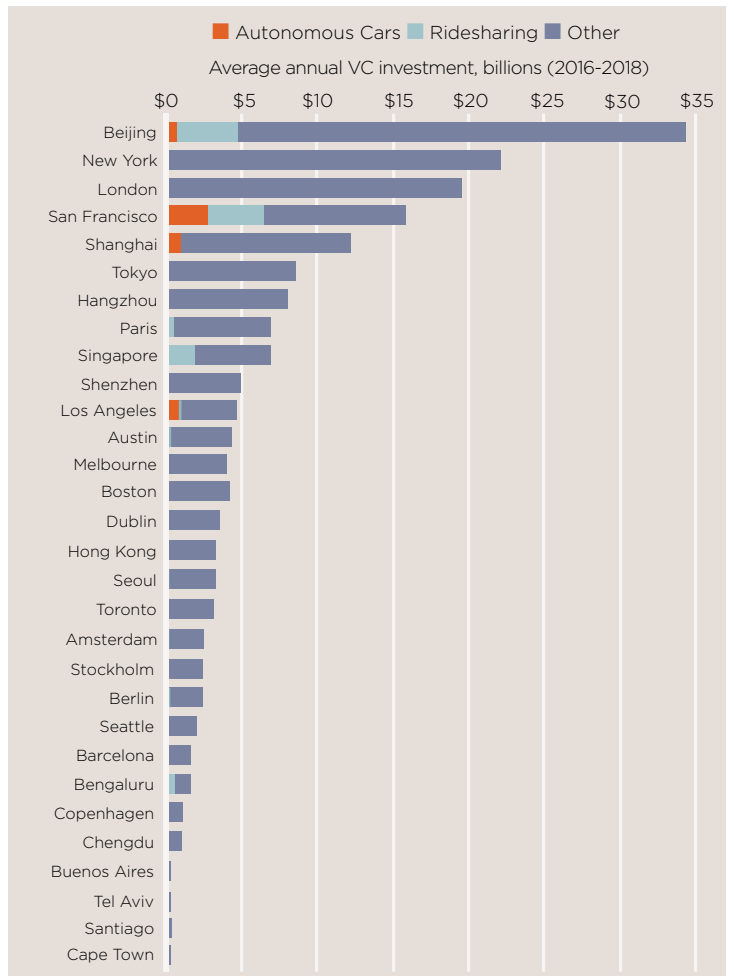
Already established as a centre of tech manufacturing, home-grown hardware firms are now making global moves.

Beijing sees by far the greatest VC investment, an average of \$34 billion per annum in the last three years, with volumes higher even than New York and San Francisco. Close to regulators some of China's largest tech firms are headquartered in Beijing.

Our ranking puts Shanghai ahead as a more 'global' tech city, however, thanks to an international business environment and better of quality of life for residents (Beijing's air quality is the worst of any of our Tech Cities).

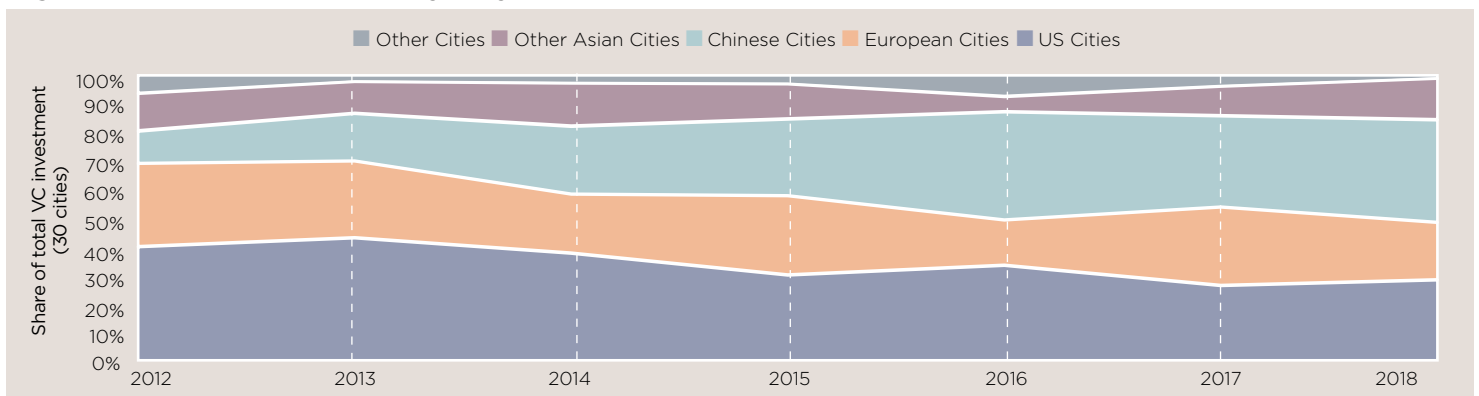
Elsewhere, Shenzhen, an exceptionally youthful tech city, benefits from strengthening links with Hong Kong (just 15 minutes away via high-speed rail) and a new tech-stock exchange, ChiNext. Hangzhou, home to Alibaba, stands out as a lower cost 'smaller' city (population 9.5m), famed for its West Lake UNESCO World Heritage site. Chengdu's tech economy has risen on outsourcing, its government is pro-business and tech investment is rising.

Figure 4 VC investment volumes by city



Source Savills World Research using Pitchbook

Figure 3 Chinese cities take a higher global share of VC investment*



*Across our 30-city sample

Source Savills World Research using Pitchbook

“Chinese Tech cities now account for a higher share of VC investment than their US counterparts”

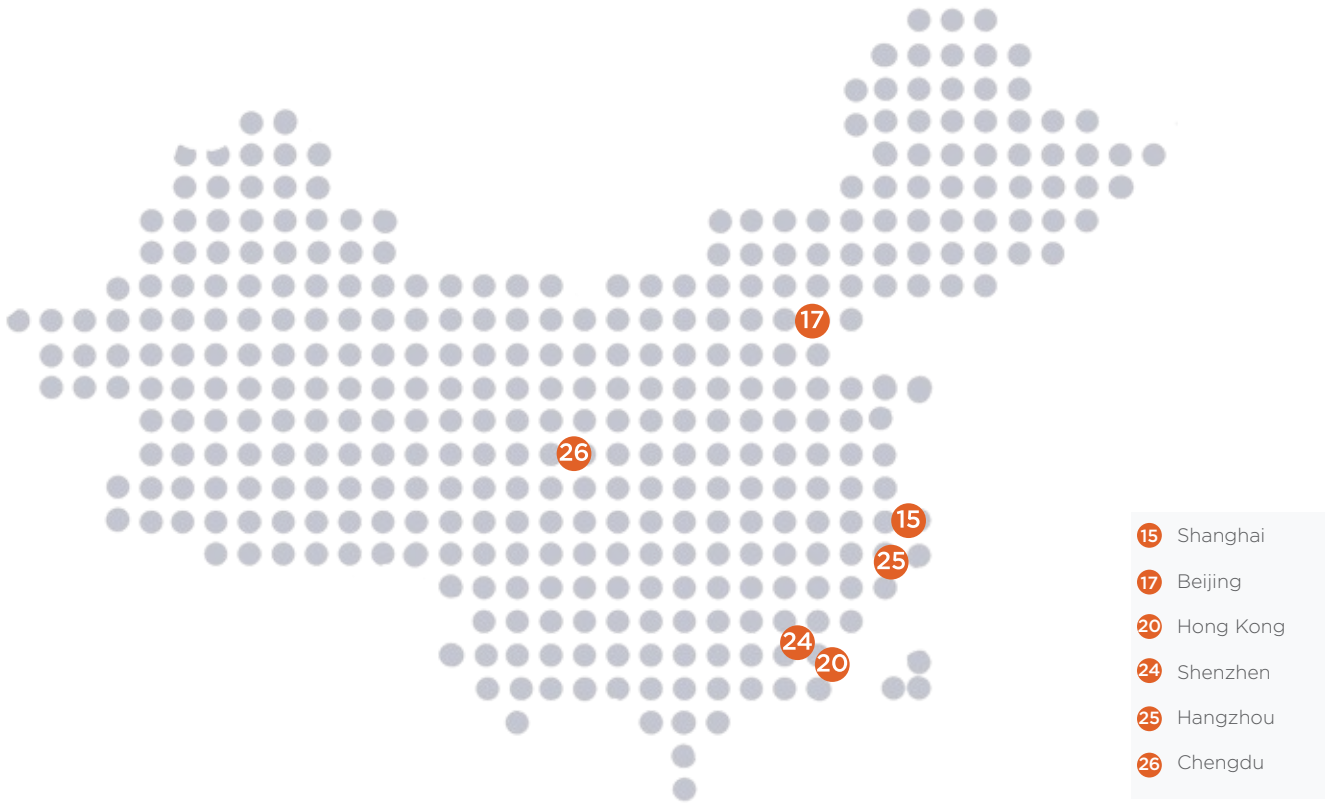


Figure 5 Chinese Tech Cities rankings



Shanghai

Rank: 15
Population: 24.2m
VC investment*: \$12bn
Notable Tech Companies: Ele.me
 Global city appealing to expats and good for scaling larger tech companies



Shenzhen

Rank: 24
Population: 12.5m
VC investment*: \$4.5bn
Notable Tech Companies: Tencent
 High-tech manufacturing centre, now a start-up hub in its own right



Beijing

Rank: 17
Population: 21.7m
VC investment*: \$34bn
Notable Tech Companies: Didi, Baidu
 Major VC recipient. China’s capital, close to regulators



Hangzhou

Rank: 25
Population: 9.5m
VC investment*: \$7.6bn
Notable Tech Companies: Alibaba
 An hour away from Shanghai. Quality of life and famous for West Lake UNESCO world heritage site



Hong Kong

Rank: 20
Population: 7.4m
VC investment*: \$2.9bn
Notable Tech Companies: WeLab, 8 Securities
 Gateway to China and top for ease of doing business, but losing its USP?



Chengdu

Rank: 26
Population: 16.0m
VC investment*: \$0.2bn
Notable Tech Companies: SuDiYi
 Central China hub built on outsourcing services, pro-business and rising

Source Savills World Research
 *Average annual venture capital investment between 2016 and 2018. Source: Pitchbook

Mainstream residential rent
(per week)



Highest
San Francisco \$720

Average
\$350

Lowest
Chengdu \$140

Coworking cost
(desk in a private office, per month)



Highest
San Francisco \$1,050

Average
\$590

Lowest
Buenos Aires \$110

The cost of real estate

We give real estate costs the lowest weighting in our index, because factors such as the availability of talent and quality of business environment matter more to the tech sector, but property still plays a role.

The cost and availability of suitable office space for scaling tech firms can make the difference between uninhibited growth and an opportunity missed. High residential accommodation costs can dissuade young talent from making a city home.

Coworking costs

The expansion of coworking has gone hand in hand with the growth of the global tech sector. Coworking providers accounted for 13% and 13.5% of office market take-up in London and Dublin respectively in the first nine months of 2018. The sector is rising fast globally, but there is room for growth. Even in US markets such as Manhattan, total coworking space is estimated at just 2% of total office stock.

Private offices, offering the benefits of coworking (flexible leases, amenity provision), but with individual space for the occupier, is the coworking

subsector rising fastest. We have measured costs for this type of space (see Figure 6).

Costs are highest in San Francisco where the supply/demand imbalance is most acute. Some markets appear good value by comparison, notably Amsterdam, at \$380 per month.

Residential rents

Mainstream residential rents (see table) matter because they are a factor in where young talent decides to settle.

In San Francisco residential rents have grown faster than capital values in the last decade, in spite of rent controls, and are the highest of our Tech Cities at \$720 per week. New York is more expensive for real estate costs overall, but renters have more affordable, but still commutable, options in the outer boroughs.

Several European centres compare favourably. Barcelona (\$250 per week) and Berlin (\$200 per week) offer relatively affordable rental accommodation. Our Chinese and South American Tech Cities offer the lowest mainstream rents (sub \$200 per week), but salaries are lower here too.

Figure 6 Real estate costs rankings

Real Estate costs ranking	City	Sample metric Mainstream residential rent (Per week, USD)	Sample metric Coworking cost (desk in a private office, per month, USD)
1	Bengaluru	\$160	\$250
2	Chengdu	\$140	\$270
3	Buenos Aires	\$180	\$110
4	Hangzhou	\$190	\$290
5	Santiago	\$180	\$330
6	Cape Town	\$280	\$350
7	Barcelona	\$250	\$380
8	Berlin	\$200	\$520
9	Seoul	\$270	\$350
10	Shanghai	\$260	\$380
11	Melbourne	\$330	\$540
12	Shenzhen	\$330	\$220
13	Copenhagen	\$410	\$620
14	Beijing	\$190	\$290
15	Tel Aviv	\$460	\$310
16	Dublin	\$470	\$670
17	Stockholm	\$330	\$1,000
18	Toronto	\$360	\$960
19	Los Angeles	\$490	\$810
20	Seattle	\$440	\$660
21	Austin	\$440	\$890
22	Singapore	\$330	\$800
23	Amsterdam	\$350	\$380
24	Paris	\$400	\$980
25	London	\$490	\$890
26	Boston	\$510	\$970
27	San Francisco	\$720	\$1,050
28	Tokyo	\$320	\$740
29	Hong Kong	\$450	\$750
30	New York	\$520	\$950
	Average	\$350	\$590

Source Savills World Research
Sample metrics displayed. Our real estate costs ranking comprises of residential and commercial costs for tech occupiers and their employees.

“The affordability of property plays a role in the success of a Tech City, but other factors matter more”



Savills World Research

We're a dedicated team with an unrivalled reputation for producing well-informed and accurate analysis, research and commentary across all sectors of global property

Paul Tostevin

World Research
+44 (0) 207 016 3883
ptostevin@savills.com

Anh Nguyen

World Research
+44 (0) 207 877 4541
anh.nguyen@savills.com

James Macdonald

Research China
+8621 6391 6688
james.macdonald@savills.com.cn

Steven Lang

Commercial Research
+44 (0) 207 409 8738
slang@savills.com

Jeremy Bates

Worldwide Occupier Services
+44 (0) 207 409 8813
jbates@savills.com

Nicky Wightman

Global Occupier Trends
+44 (0)1223 347 087
nwightman@savills.com