

**Barcelona
London Day[®]**

**Startup&Tech
Trends and Opportunities**

Tech focus entrepreneurial hub



- Internationally, Barcelona stands as the 5th European Start-Up tech hub by number of venture capital backed startups investment and size of investment by vcs from 2014 to 2018
- In tech entrepreneurship, Barcelona is the 3rd most attractive city in Europe to set up a startup, after Berlin and London
- The ecosystem is based on the natural city entrepreneurial DNA, its capacity to attract talent, the reasonable cost and the growing support of the public sector and other associations such as Barcelona Tech City which helps to articulate the sector

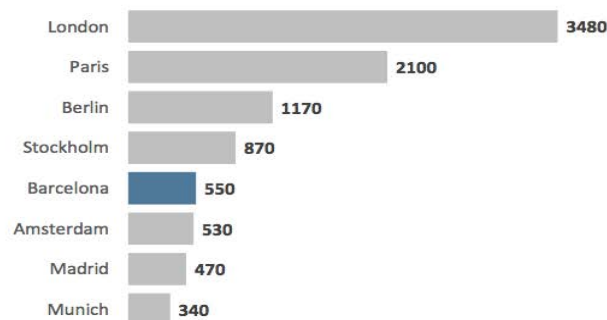
Top 10 Start-ups in Europe

Ranking 2017	City	Ranking 2018
1	London	1
2	Berlin	2
3	Barcelona	3
4	Paris	4
8	Lisbon	5
5	Amsterdam	6
9	Munich	7
10	Milan	8
20	Zurich	9
11	Copenhagen	10

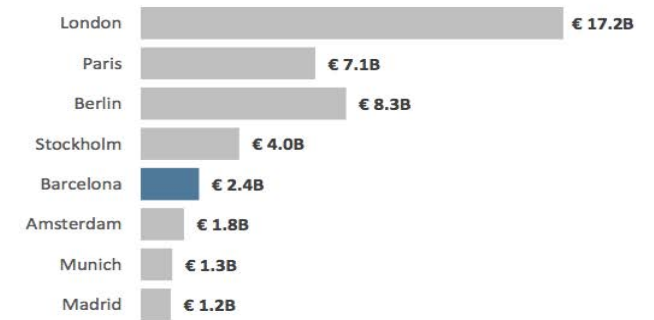
Source: Startup Heatmap Europe - Atomic.

Barcelona is the 5th largest European tech hub (by investment)

of VC backed startups



VC investment (2014-2018)



Source: DealRoom. Excludes buyouts, secondary transactions, debt, ICO, lending capital, grants.

Barcelona Start up Ecosystem size



- Barcelona, employs more than 40.000 professionals, with its 1.100 start-ups, 150 Scale Ups and 30 cases of grownups and exits
- Barcelona's entrepreneurial rate stood at 8.5% in 2017, higher than German and Spanish average (5.3% and 6.2% respectively)

1,100+ startups	150+ scaleups	30+ grownups & exits
Team size 2-50	Team size >51	IPO-ed or exited profitable companies
14,000+ employees	23,000+ employees	4,000+ employees



Growing hub for tech and innovation centers



- The growing Start-Up sector and the gradual positioning as a tech city able to attract international tech talent has also encouraged big corporates to set up their technology and innovation centres in Barcelona
- Recently, more than 25 companies including Cisco, Facebook, Nestlé, Allianz, Amazon, Zurich, Siemens, Roche opened their hubs in Barcelona

New Technological Centres of multinationals in the Barcelona area						
Technological Centres	City	Place	Team	Surface	Description	Opening year
Lidl	Barcelona	Bergara,13 (the former headquarters of BBVA in Plaça Catalunya)	200	3.200	E-commerce services and customer relations	
CCC-Facebook	Barcelona	Torre Glòries	500	9.000	Monitoring of fake news	2018
Amazon	Barcelona	Luxa Silver 22@ Building	500	10.000	Support for SMEs in Southern Europe	2017
Purina Studios	Esplugues	Nestlé's Central Headquarters	40	900	E-commerce, Internet, social networks and relations with	2017
Nestlé Global Digital Hub	Esplugues	Nestlé's Central Headquarters	100	-	Development of applications, websites and virtual stores	2016
Nestlé Global IT	Esplugues	Nestlé's Central Headquarters	-	-	Global IT services of the Swiss group	2018
Allianz	Barcelona	Aragón, 295	150	-	Computer services	2018
Microsoft	Barcelona	-	60	1.000	Quantum Laboratory	Ongoing
Asics	Barcelona	Doctor Ferran, 25	70	2.500	Innovation Center and Accelerator	2018
Siemens	Cornellà	Sede Centra	50	500	Co-creation of energy projects	2018
Moodle	Barcelona	22@	10	-	European software base for the education sector	2018
IGG	Barcelona	22@	60	-	Video game development	2018
Satellogic	Barcelona	22@	10	-	European Database of Satellite Image Data Analysis Service	2018
ThoughtWorks	Barcelona	MediaTIC Building	125	500	Software development	2017
Zeptolab	Barcelona	Headquarters of Mediapro	100	925	Video game development	2018
AXA	Cornellà	WTC Almeda Park	150	-	Creation of applications for all AXA entities worldwide	-
Zurich	Barcelona	Central Headquarters	200	-	Global Big Data Center	2016
GFT	Sant Cugat	Central Headquarters	10	-	Data in the cloud, IA and IoT for the financial sector	2018
Dynatrace	Barcelona	Torre Glòries	-	1.250	Research and development laboratory	2018
Deloitte	Barcelona	MediaTIC Building	50	-	Cybersecurity Center	2015
Visa, Global Payments, Samsung, Arval, CaixaBank	Barcelona	Pier01	15	1.000	Centre for innovation in the digitalisation of payment methods	2017
Roche	Sant Cugat	Central Headquarters	530	7.200	Clinical laboratory development centre and digital hub for the Diabetes Care area	2017
Cisco	Barcelona	Antigua fàbrica de Ca l'Alier	-	-	IoT Solutions and Smart Cities	2018
N26	Barcelona	-	100	-	Tech hub in digital banking	2018

Magnet for talent at competitive costs



Competitive advantages

- The city is a magnet for international talent with focus on digital, tech and innovation. Barcelona ranks 4th most preferred city in the world to work, according to the Decoding Global talent survey 2018
- Barcelona's entrepreneurial ecosystem is impulsed additionally by the city's reasonable costs compared to other international cities: Barcelona ranks 79th in cost of living among the most important world cities
- Barcelona's average salary level is in the lower mid range among the most developed cities. The average net salary in New York in 2015 was 49,6% of the earned

Cost of living of cities in the world, 2018		
CITY	RANKING 2017	RANKING 2018
Hong Kong	2	1 ▲
Tokyo	3	2 ▲
Zurich	4	3 ▲
Singapore	5	4 ▲
Seoul	6	5 ▲
Luanda	1	6 ▼
Shanghai	8	7 ▲
N'Djamena	15	8 ▲
Beijing	11	9 ▲
Bern	10	10 ▬
Barcelona	121	79 ▲

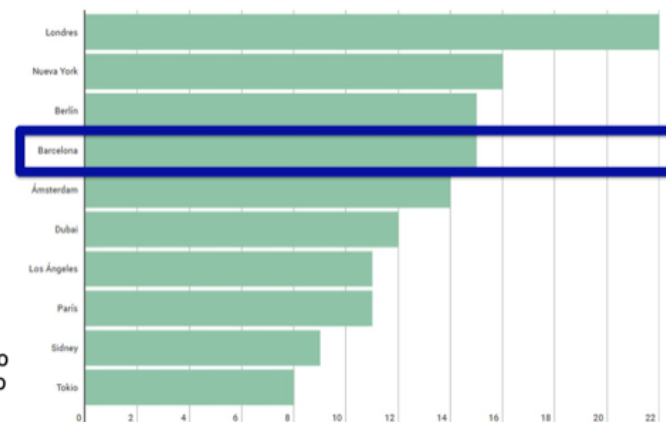
Source: Mercer Human Resource Consulting, Cost of Living City Ranking 2018

Salary levels in cities around the world, 2018		
GROSS SALARY (NEW YORK - 100)	CITY	NET SALARY (NEW YORK - 100)
129.8	Zurich	153.8
131.5	Geneva	133.1
89.6	Chicago	94.9
101.3	Copenhagen	92.3
86.3	Munich	87.0
79.2	Tokyo	85.3
77.3	Berlin	79.0
68.5	London	76.0
80.9	Montreal	73.5
60.3	Hong Kong	72.4
68.6	Paris	69.4
66.5	Lyon	67.0
73.9	Amsterdam	64.2
65.2	Milan	59.5
58.3	Madrid	50.0
58.4	Barcelona	49.6
30.0	Athens	28.1

Source: UBS, Prices and Earnings 2018

Decoding Global Talent 2018 (BCG)

% of workers willing to move to other cities to work



Additional cost based competitive advantages



- Housing, office and industrial rental prices are also competitive, compared to other European cities, despite the increase in prices in the last years
- Price of housing rentals rank 35th in Europe
- Latest Prime offices rentals stand at 303 €/m²/per year, way below the main European cities

Price of housing rentals in the centre (€/month), 2018

Ranking	City	Country	3 rooms	1 room	Ranking	City	Country	3 rooms	1 room
1	London	United Kingdom	3,407	1,827	26	Rome	Italy	1,896	967
2	Genoa	Switzerland	3,157	1,681	27	The Hague	Netherlands	1,632	963
3	Zurich	Switzerland	3,001	1,574	28	Reading	United Kingdom	1,776	950
4	Amsterdam	Netherlands	2,554	1,525	29	Bern	Swiss	1,913	931
5	Dublin	Ireland	2,683	1,520	30	Helsinki	Finland	1,679	930
6	Luxembourg	Luxembourg	2,890	1,484	31	Bristol	United Kingdom	1,650	920
7	Reykjavik	Iceland	2,341	1,479	32	Milton Keynes	United Kingdom	1,431	916
8	Copenhagen	Denmark	2,308	1,310	33	Eindhoven	Netherlands	1,557	915
9	Oslo	Norway	2,118	1,247	34	Sliema	Malta	1,731	903
10	Lausanne	Switzerland	2,365	1,238	35	Barcelona	Spain	1,474	894
11	Lugano	Switzerland	2,458	1,193	36	Galway	Ireland	1,481	891
12	Oxford	United Kingdom	2,215	1,164	37	Frankfurt	Germany	1,669	860
13	Paris	France	2,438	1,148	38	Edinburgh	United Kingdom	1,571	857
14	Cambridge	United Kingdom	1,939	1,139	39	Espoo	Finland	1,443	856
15	Stockholm	Sweden	1,893	1,135	40	Madrid	Spain	1,573	854
16	Munich	Germany	2,197	1,104	41	Hamburg	Germany	1,800	853
17	Basel	Switzerland	2,185	1,096	42	Stuttgart	Germany	1,465	848
18	Bergen	Norway	1,663	1,087	43	Leiden	Netherlands	1,390	845
19	Brighton	United Kingdom	1,901	1,083	44	Birmingham	United Kingdom	1,459	827
20	Utrecht	Netherlands	1,809	1,063	45	Bournemouth	United Kingdom	1,510	826
21	Trondheim	Norway	1,717	1,047	46	Vienna	Austria	1,625	820
22	Cork	Ireland	1,698	1,031	47	Göteborg	Sweden	1,374	819
23	Rotterdam	Netherlands	1,653	1,028	48	Berlin	Germany	1,550	814
24	Stavanger	Norway	1,681	984	49	Brussels	Belgium	1,378	813
25	Milan	Italy	2,012	977	50	Manchester	United Kingdom	1,456	811

Source: Numbeo. Query conducted in September 2018.

Rental price of premium logistics land in cities around the world, 2018*

RANKING	CITY	COUNTRY	RENT LOGISTICS LAND (€/YEAR)
1	Hong Kong	Hong Kong	333.57
2	London	United Kingdom	240.57
3	Tokyo	Japan	214.85
4	Shanghai	China	113.13
5	Stockholm	Sweden	110.76
6	Singapore	Singapore	109.36
7	Oakland	United States	107.21
8	Beijing	China	105.27
9	Munich	Germany	103.55
10	Sydney	Australia	103.44
11	Midlands	United Kingdom	101.83
12	Manchester/Liverpool	United Kingdom	101.83
13	Barcelona	Spain	99.89
14	Auckland	New Zealand	99.14
15	Shenzhen	China	97.74
16	Los Angeles/Orange County	United States	95.58
17	Frankfurt	Germany	93.22
18	Seoul	South Korea	92.78
19	Leeds/Sheffield	United Kingdom	90.52
20	New Jersey	United States	88.91

* 1st quarter data
Source: 2018 Global Industrial and Logistics Prime Rents, CBRE Research.

EMEA office market comparison.

	€/m ² /per year	Prime yield (%)
London	1,379	3.50
Paris	810	3.00
Dublin	646	4.00
Milan	585	3.60
Frankfurt	480	3.15
Munich	468	3.20
Amsterdam	425	3.00
Berlin	408	2.90
Brussels	315	4.25
Barcelona	303	3.75

Startup&tech and city of knowledge: Trends and Opportunities



Key Sector Features

Environment

- Supportive environment policy and city leadership, especially around smart city innovation
 - Currently growing support by the Central Government focusing on improving the Start-Up ecosystem through a new set of laws
- Presence of government-funded initiatives such as Barcelona Activa, which helps startups raise seed funding to set up their business

Infrastructure


























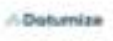























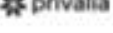


- Growing number of co-working spaces (+200) and events facilitate knowledge sharing
- Top-notch international events attract companies from all around Europe
- Several accelerators including Startupbootcamp, Telefónica's Wayra and SeedRocket also Numa, Europe's first growth acceleration program, opened in Barcelona
- Efficient transportation system and international transport hub

Startups in Barcelona do great because...

- Talent: they are able to attract international and local talent
- Cost: they are capital efficient companies
- Experience: they benefit from a new generation of second-time entrepreneurs
- Location: they are in a Southern European location from where they are able to operate globally

Start Ups and Tech Sector: Trends and opportunities



	INVESTOR	FOCUS	SELECTED INVESTMENTS		
	Ysios Capital	Early stage			
	Inveready	Seed, Early Stage			
	Antal Venture Builder	Seed, Early Stage			
	Flint Capital	Series A, Series B			
	Encomenda Smart Capital	Seed, Early Stage			
	Sabadell Venture Capital	Early Stage			
	Caixa Capital Risc	Seed to Series B			
	4Founders Capital	Seed, Early Stage			
	Nero Ventures	Early Stage			
	Nauta Capital	Early Stage			
	Sitka Capital	Seed			
	Wayra	Seed			
	Cabledes & Partners	Seed			

Why Barcelona



Strategic location and market potential

- Strategic location: the capital of the Mediterranean sea.
- Market potential: Barcelona metropolitan area with circa 5M people, is the gate way to Southern Europe.
- Good international connections by sea, air and roads.
- Solid Infrastructure
- Unique quality of life.

Competitiveness in costs

- Average salary level is in the lower to mid range among the most developed cities.
- Office and industrial rental prices are competitive, compared to other European cities.
- Housing is still cheaper than main European capitals.

Well positioned to generate and attract talent

- High quality education system with internationally ranked business schools: IESE and ESADE.
- The city is a talent magnet for internationals. 18.5% of the population are foreigners. The international talent attracted by the high quality standards and the interesting job offers, reinforced by the growing digital and tech ecosystem.

Tech, Digital and Knowledge Focus

- Diversified economy and traditionally very entrepreneurial.
- Growing startup hub: with 1,100 tech startups as the 5th European startup hub. In tech entrepreneurship, Barcelona is the 3rd most attractive city to set up a startup, after Berlin and London.



Sources:

- Observatori Barcelona 2018 Report
- Barcelona Data Sheet 2018
- Cushman & Wakefield Data
- GDP Data Source: Oxford Economics
- Global Cities Investment Monitor 2018, KPMG
- Networked Society City Index 2016, Ericsson AB
- International Congress and Convention Association (ICCA)
- 2thinknow Innovation Cities™ Index 2018
- The State of European Tech 2017
- Financial Times, Global MBA Ranking 2018
- Global Entrepreneurship Monitor (GEM), Executive brief for Catalonia 2017-18
- The Safe Cities Index 2017. The Economist Intelligence Unit
- FDi Cities and Regions of the Future 2018/19

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