

# Digital Economies of the Future 2018/19 Winners



LONDON HAS BEEN NAMED **fDi**'s DIGITAL ECONOMY OF THE FUTURE FOR 2018/19, FOLLOWED BY DUBLIN AND SINGAPORE IN SECOND AND THIRD PLACE. **CATHY MULLAN** REPORTS ON THE RESULTS

**L**ondon is **fDi**'s Digital Economy of the Future for 2018/19. Major digital companies have established and/or expanded regional headquarters in the UK capital, including Netflix, Facebook and Time Warner. US-based software-as-a-service provider ThousandEyes credited its November 2017 office opening in the city to its reputation as a hub of technological innovation in Europe.

In 2016, Centre for London (a think-tank dedicated to the city) published its tech manifesto, which outline policy recommendations for a digital capital city. These included: the creation of an open data charter, which puts data at the heart of public service delivery in the city; the promotion of digital apprenticeships; and a taskforce to increase schemes to provide investors with a well-qualified, technically enabled workforce; and making broadband the city's fourth utility.

#### **Dublin's job boost**

More than 5200 digital FDI jobs were created in Dublin in 2017 – the highest annual number recorded by greenfield investment monitor **fDi** Markets. Dublin, which is the second most promising digital economy, boasts the highest level of digital FDI per capita of all the locations studied, as well as the highest digital FDI jobs and capital investment per capita.

Almost 54% of all the city's FDI was in the digital sector, and it is home to several major digital invest-



"I'M PROUD TO HAVE SPENT THE LAST FOUR YEARS SHARING TORONTO'S SUCCESS STORY AND WORKING TO ATTRACT INVESTMENT AND BUSINESSES FROM AROUND THE WORLD"

JOHN TORY, MAYOR, TORONTO

**TOP 10 OVERALL WINNERS**

RANK	CITY	COUNTRY
1	London	UK
2	Dublin	Ireland
3	Singapore	Singapore
4	New York	US
5	San Francisco	US
6	Amsterdam	Netherlands
7	Paris	France
8	Hong Kong	Hong Kong
9	Belfast	UK
10	Tokyo	Japan

**TOP 10 ECONOMIC POTENTIAL**

RANK	CITY	COUNTRY
1	Doha	Qatar
2	Shanghai	China
3	Beijing	China
4	Dublin	Ireland
5	Jakarta	Indonesia
6	Shenzhen	China
7	New York	US
8	Luxembourg	Luxembourg
9	Frankfurt	Germany
10	Singapore	Singapore

**TOP 10 COST EFFECTIVENESS**

RANK	CITY	COUNTRY
1	Nairobi	Kenya
2	Kiev	Ukraine
3	Vilnius	Lithuania
4	Islamabad	Pakistan
5	Yangon	Myanmar
6	Wrocław	Poland
7	Łódź	Poland
8	Hyderabad	India
9	Budapest	Hungary
10	Cluj-Napoca	Romania

**TOP 10 FDI ATTRACTION**

RANK	CITY	COUNTRY
1	London	UK
2	Dublin	Ireland
3	Singapore	Singapore
4	Paris	France
5	New York	US
6	Bangalore	India
7	Sydney	Australia
8	San Francisco	US
9	Amsterdam	Netherlands
10	Dubai	UAE

**TOP 10 DIGITAL INFRASTRUCTURE AND ENVIRONMENT**

RANK	CITY	COUNTRY
1	Washington, DC	US
2	Austin	US
3	Singapore	Singapore
4	Stockholm	Sweden
5	Hong Kong	Hong Kong
6	The Hague	Netherlands
7	Copenhagen	Denmark
8	Geneva	Switzerland
9	Dallas	US
10	Boston	US

**TOP 10 BUSINESS FRIENDLINESS**

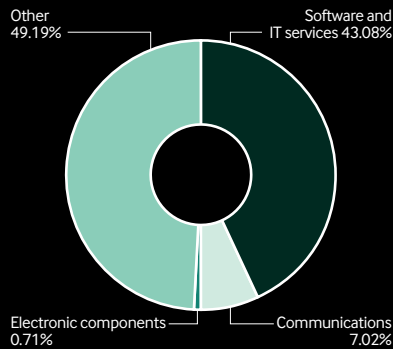
RANK	CITY	COUNTRY
1	Palo Alto	US
2	San Francisco	US
3	Tokyo	Japan
4	London	UK
5	Seoul	South Korea
6	Oslo	Norway
7	Reading	UK
8	Miami	US
9	Austin	US
10	Atlanta	US

tors, including Facebook, Google and Amazon. Companies in the city enjoy famously low corporation tax rates and Ireland performs well on several IT metrics, including the ICT Development Index in 2017, scoring 8.02 and ranking 15th of all 59 locations studied.

Singapore ranks third, having welcomed more than 680 FDI projects in digital sectors in the five years to 2017, representing over 30,000 jobs. Almost two-thirds of digital FDI into Singapore was in sales and marketing operations, while 13% was in R&D and 11% in headquarter functions. Singapore ranks first in both the Networked Readiness Index and in the World Digital Competitive Yearbook 2017 from IMD.

The city-state's Info-communications Media Development Authority to develop and regulate the information, communications and media sectors, and has established a road map for development. It is expected that Singapore will build on its AI, data analytics, cyber security and immersive media sectors and create 13,000 new jobs by 2020. The agency is also planning to work with companies and employees across sectors to drive the adoption of digital technology and improve productivity and efficiency.

**DIGITAL FDI INTO LONDON AS A PROPORTION OF TOTAL FDI, 2013-2017**



Source: fDi Intelligence

**TOP 10 FDI STRATEGY**

RANK	CITY	COUNTRY
1	Montreal	Canada
2	New York	US
3	Toronto	Canada
4	Hong Kong	Hong Kong
5	Auckland	New Zealand
6	Manchester	UK
7	Los Angeles	US
8	Kraków	Poland
9	Hamburg	Germany
10	Wrocław	Poland



# FDI Strategy

NORTH AMERICA SWEEPS THE BOARD IN THE FDI STRATEGY CATEGORY IN fDi'S DIGITAL ECONOMIES OF THE FUTURE 2018/19 RANKING, WITH MONTREAL RANKING FIRST. CATHY MULLAN REPORTS

**N**orth America reigns supreme for FDI Strategy, with Montreal coming in first for its digital FDI Strategy, followed by New York and Toronto (see table on page 29).

Greater Montreal boasts the highest concentration of digital jobs of all Canadian cities, and over the past decade the sector has grown twice as fast as the wider economy. The ecosystem in the city incorporates AI, video games, fintech, software and IT services, while the local TechnoMontreal ICT cluster engages with companies, education institutions, research bodies, investment sources and government bodies to enhance and grow the digital sector.

The Quebecois government launched the region's first digital strategy early in 2018, and announced that C\$1.5bn (\$1.17bn) would be spent on internet-based services by 2023, helping to increase citizens' IT competences and create a competitive and innovative business ecosystem. A range of agencies in the city support digital companies, including Finance Montreal, a cluster agency for fintech and finance companies; Montreal Institute of Learning Algorithms, an AI research organisation; and Alliance Numérique, a video game business network.

**It's up to two, New York, New York**  
New York is ranked second. Its tech sector is currently growing three times faster than in any other US city. More than 7600 tech companies call the city home, and over one-quarter is based in computer system design, more than one-fifth is internet-related and 15% are in telecommunications. New York City Economic Development Corporation has several teams in place to support companies in various sectors, including cybersecurity, smart cities and cleantech, life sciences, digital health and creative and applied tech. There are more than 120 incubators and 96 co-working spaces offering low-cost rental spaces, as well as business services, training and network opportunities, for start-ups and small businesses.

UrbanTech NYC, an initiative to catalyse innovation and support entre-

preneurs, and NYC Media Lab, which connects companies in media technology with academic institutions for research opportunities, are just two of a range of programmes on offer to develop the city's digital sector.

Third-placed Toronto is home to 44% of Canada's top 250 ICT companies. In 2017, the city was chosen to host Google's Sidewalk Lab, transforming the East Waterfront area into a 'smart city' and acting as a global test case for digital-focused urban development. The city's MaRS Discovery District is the world's largest innovation hub and boasts 140,000 square metres of space in the city centre for start-ups, researchers and innovators. Signatories to the facility include Facebook, Etsy and Airbnb.

Toronto benefits from Ontario's Immigrant Nominee Programme, which offers the opportunity for permanent immigration pathways for workers in technology and entrepreneurs. Investors can also avail themselves of the many industry-academic collaborations that take place. Co-op programmes give students two years' field-specific work experience while they work towards their degrees in several Toronto region universities, including University of Guelph,

McMaster University and University of Waterloo, which has the largest co-op programme in the world, offering students placements with more than 6700 companies in 65 countries.

## Methodology

To create the shortlist, the fDi Intelligence division of the Financial Times collected data using the specialist online FDI tools fDi Benchmark and fDi Markets as well as other sources. Data was collected for 117 locations, under five categories: Economic Potential, FDI Attraction, Digital Infrastructure and Environment, Cost Effectiveness and Business Friendliness. Locations scored up to a maximum of 10 points for each data point, which were weighted by importance to the FDI decision-making process in order to compile the subcategory rankings.

In addition, surveys were collected under a sixth category, FDI Strategy, for which there were 15 submissions. Locations in the top 10 in this category were given bonus points, which contributed to their overall score. Together, the data subcategory rankings and the FDI Strategy ranking make up the overall Digital Economies of the Future 2018/19 ranking. ■

## JUDGING CRITERIA

### ECONOMIC POTENTIAL

- Population
- Population growth rate (%)
- Unemployment rate
- Inflation rate
- GDP
- GDP per capita
- Average annual GDP growth rate (2013-2017)
- Projected average annual GDP growth rate (2018-2022)

### FDI ATTRACTION

- FDI in digital sectors (2013-2017)
- FDI jobs in digital sectors (2013-2017)
- Capital investment in digital sectors (2013-2017)
- FDI in digital sectors per 100,000 people (2013-2017)
- FDI jobs in digital sectors per 100,000 people (2013-2017)
- Capital investment in digital sectors per 100,000 people (2013-2017)
- Number of colocation or expansion projects in digital sectors (2013-2017)
- Number of colocation or expansion projects in digital sectors per 100,000 (2013-2017)

- Inward FDI (2013-2017)
- Outward FDI (2013-2017)
- Proportion of inward FDI in digital sectors (2013-2017)
- Proportion of outward FDI in digital sectors (2013-2017)

### DIGITAL INFRASTRUCTURE AND ENVIRONMENT

- PwC Global 100 Software Leaders
- PwC 25 Fastest Growing Cloud Companies
- PwC Emerging Markets Top 30 Software Companies
- IMD World Digital Competitiveness Yearbook 2017
- ICT Development Index 2017
- Internet download speed
- Internet upload speed
- Internet Society internet user penetration

### COST EFFECTIVENESS

- Annual rent for prime Grade A office space (\$ per sq m)
- Annual rent for prime Grade A industrial space (\$ per sq m)
- Average salary (\$) for semi-skilled worker
- Average salary (\$) for skilled worker
- Corporation tax rate (%)

- Cost of establishing a business (absolute value using GNI)
- Cost of registering a property (% of property value)
- Cost of construction permits (absolute value using GNI)
- Cost of establishing an electricity connection (absolute value using GNI)
- 4\*/5\* hotel in city centre (\$ per night)

### BUSINESS FRIENDLINESS

- Number of companies in digital sectors
- Number of companies in digital sectors per 100,000 people
- Number of patents in digital sectors
- Number of patents in digital sectors per 100,000 people
- Fixed and wireless broadband subscriptions per 100 inhabitants
- Networked Readiness Index 2017
- Days taken to start a business
- Ease of Doing Business Index
- Index of Economic Freedom
- Corruption Perception Index
- Strength of Investor Protection Index
- Country risk score