

# BARCELONA INNOVATION

Catalonia has always been characterised by the enterprising, dynamic and embracing spirit of its people. These qualities have given life to a high-tech economy focused on mobile phones, food sciences, urban sustainability, supercomputing and biotechnology.

By Braden Phillips



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## MOBILE PHONE TECHNOLOGY

Named Mobile World Capital for the seven-year period until 2018, Barcelona has become a hub for technology development, transfer and dissemination for the mobile phone industry. As host of the premier industry event, the city has gained an edge in growing new companies, especially in sectors like e-commerce and digital gaming. King.com, Ubisoft and Omnidrone are a few outstanding local names. Initiatives are underway to stay out front, including the Mobile World Hub, a programme that nurtures international innovative start-ups in Barcelona. Chosen companies receive a €50,000 grant to launch their projects.

**GSMA Barcelona** 📞 93 233 39 77

## SMART CITIES

Barcelona also holds the top global event for smart cities stakeholders, the Smart Cities Expo World Congress, which has helped make it a leader in the movement to

incorporate technology to make cities run better and more sustainably. From a new and more efficient bus network and a bike-sharing project to an electric mobility plan and new sensors that measure everything from air contamination to traffic congestion, the city is transforming itself into an urban lab. And there's the 22@ innovation district, an impressive marriage of smart urban planning and entrepreneurial innovation.

**Smart City Expo** 📞 93 233 20 00

## GASTRONOMY & FOOD INDUSTRY

Barcelona and its surrounding areas are world-renowned for food and the culture of eating. In recent years, a new wave of experimental chefs, led by names like brothers Ferran and Albert Adrià, the Roca brothers, Carme Ruscalleda and others who have made it a foodie mecca. But there's also a high-tech food industry at work behind the tinsel of Michelin stars; in a word: pork. There are over six million pigs in Catalonia,

## Telling facts

### ▶ 1

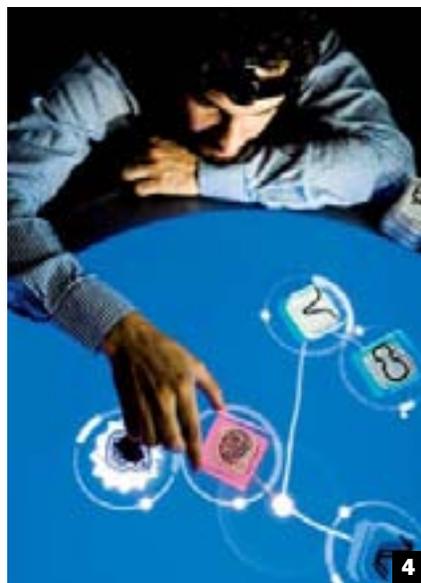
Knowledge-intensive businesses represent 49 percent of the occupational base of Barcelona.

### ▶ 2

The Mediterranean Diet, a staple of Barcelona kitchens, was added to UNESCO's Intangible Heritage List in 2010.

### ▶ 3

The Media-ICT building, located in 22@ and designed by Enric Ruiz Geli, is a groundbreaking example of smart design in architecture.



**2** CARLA TRAMULLAS **1.** MareNostrum supercomputer **2.** REEM, humanoid made by PAL Robotics **3.** Bernard Benbassat's cuisine **4.** Reactable, made by Music Technology Group (Universitat Pompeu Fabra)

nearly one per inhabitant. Pork-based products are Catalonia's fifth-biggest export, worth over €22 million. Olive oil and cava are two other big exports. These two sectors – haute cuisine and food production – come together at the city's annual food fair, *Alimentaria*, the biggest in Spain.  
**Alimentaria Barcelona** 📞 93 452 1800

### MARENOSTRUM

Barcelona's MareNostrum, Spain's most powerful supercomputer and the 29th most powerful in the world, is busily crunching data at the Polytechnic University of Catalonia (UPC). With a calculation capacity of over 94 trillion operations per second, the IBM-built computer provides modelling and computing services for various fields, from health research to astrophysics. One stand-out project is a 3-D map of the Milky Way. The computer is housed in a former medieval chapel, prompting *Fortune* magazine to say, 'MareNostrum is not the most powerful

supercomputer in the world, but it is the most beautiful.' Open for public tours.

### Barcelona Supercomputing Centre

📞 93 413 77 16

### BIOMEDICINE

The Barcelona area is home to 90 percent of the life sciences sector in Catalonia, a group of 512 companies. It has become one of Southern Europe's main biotech hubs, with 20 percent of all Spanish companies in the sector. Catalonia stands out for its strengths in oncology research. This has led to a unique initiative for the application of personalised medicine in cancer, the Barcelona Patient Cancer Platform (BPCP), which improves the diagnosis and treatment of cancer. Also, near Barcelona, investigators have access to the ALBA Synchrotron, which uses magnets to generate a bright synchrotron light used for research in medicine and life sciences, and other fields.

**BioCat** 📞 93 310 33 30

## LEADING RESEARCHERS



### MANEL ESTELLER

He is one of the world's top researchers in epigenetics, or the way our bodies modify their genetic make-up and impact growth.



### EDUARD BATLLE

Director of the Oncology Program at IRB Barcelona, he is at the forefront of efforts to find the cells that trigger colon tumours.



### JOSEP M. GATELL

Headed development of a therapeutic vaccine at Barcelona's Hospital Clinic that slows the growth of HIV in some patients for a year.



### CARLES LALUEZA-FOX

Sequenced the genome of a 7,000-year-old caveman and made a surprising discovery: he had dark skin and blue eyes.