

ACCIÓ

for a regenerative future



Circular Economy in Catalonia

A business approach

ACCIÓ

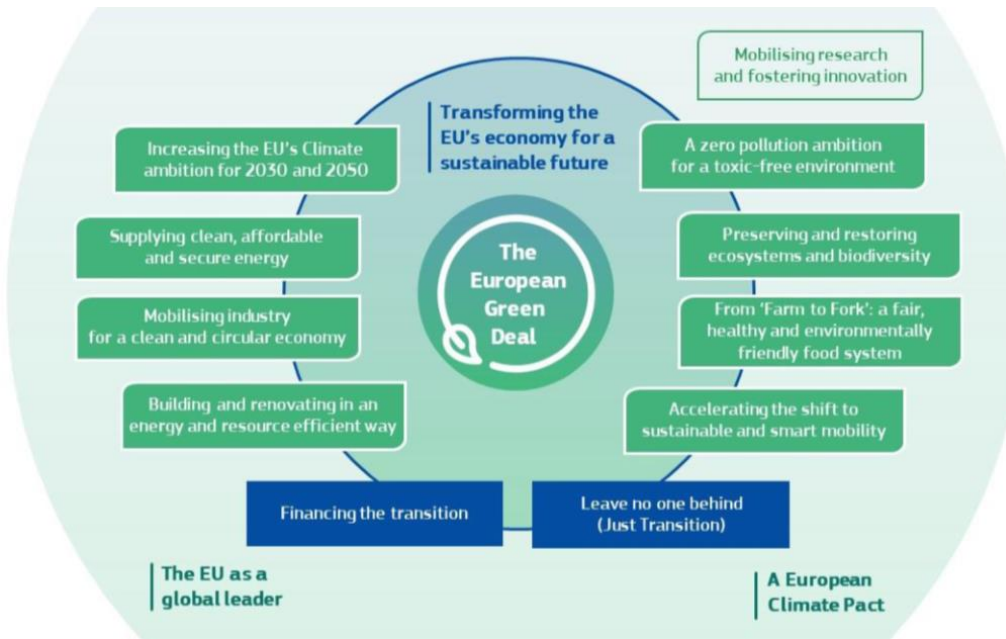
Catalonia &
Trade & Investment

 Generalitat de Catalunya
Government of Catalonia

CataloniaConnects

catalonia.com

EUROPE COMMITMENT [\(LINK to video\)](#)



https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_es

https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

ACCIÓ

Catalonia & Trade & Investment

 Generalitat de Catalunya
Government of Catalonia

CataloniaConnects

catalonia.com

Catalonia Government's commitment towards circular economy 2020 commitment renewed



Estratègia catalana d'ecodisseny
per a una economia circular i ecoinnovadora

CATALONIA CIRCULAR ECONOMY ROAD MAP 2021-2030



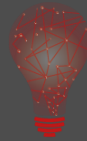
National agreement for the Catalan Industry (in preparation)



Business Innovation & Internationalization Programs



Connecting to ACCIÓ



INNOVATION



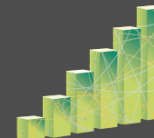
INTERNATIONALIZATION



FOREIGN INVESTMENT



START-UPS



FUNDING



CLUSTERS

ACCIÓ

Catalonia &
Trade & Investment

Going Circular. What are we offering?



BUILDING CAPACITY



BUSINESS OPPORTUNITIES



CONNECTIONS: CLOSING LOOPS



TECHNOLOGY ACCES



RDI INVESTMENT



ACCES TO FINANCE AND SCALE



ACCIÓ

Catalonia Trade & Investment

Generalitat de Catalunya
Government of Catalonia

CataloniaConnects
catalonia.com

Collaborative Innovation



<https://www.newplasticseconomy.org/>

More than 850 organisations united behind a common vision and targets for a circular economy for plastic

PepsiCo	L'Oréal	ASOS	Condé Nast	Suez	Amcor	Philips	Ahold Delhaize	Woolworths Holdings Limited	The Consumer Goods Forum
Ministry for the Environment - New Zealand	European Investment Bank	Veolia	Danone SA	Indorama Ventures Public Company Limited	Mondelēz International	The Government of France	Unilever	The Coca-Cola Company	Colgate-Palmolive Company
Novamont SpA	The Government of the United Kingdom	H & M Hennes & Mauritz AB	China Plastics Recycling Reuse and Association	Walmart Inc.	Fundacion Latinoamérica Verde	Fundacion Recycsol	Futamura Group	GANNI	gDiapers
Borealis AG	Nestlé	SC Johnson	Apple	WWF	Gemini Corporation NV	GES International AB	Government of Catalonia	Government of Grenada	Government of Rwanda
Graham Packaging Company	Granta Design	Greco & Guerreiro	GreenBiz Group Inc.	GreenBlue and the Sustainable Packaging					

ACCIÓ Catalonia & Trade & Investment

Generalitat de Catalunya Government of Catalonia



Make fashion circular

For fashion to thrive in the future, we must join forces and design a circular economy for clothes



<https://www.ellenmacarthurfoundation.org/our-work/activities/make-fashion-circular>

Core Partners

 BURBERRY LONDON ENGLAND	Gap Inc.	H&M Group	HSBC	INDITEX	PVH	
Burberry Group Plc	Gap Inc.	H&M Group	HSBC	Inditex	PVH	Stella McCartney

Participants

				ASOS				INTESA	KERING			
Adidas	Aditya Birla Fashion & Retail Ltd	Apex Spinning & Knitting Mills Limited	Arvind	Asos	Hirdaramani Group	HP	I:Collect	Intesa Sanpaolo	Kering	ReGain	Salvatore Ferragamo	Solvay
	BESTSELLER							M&S EST. 1884	NANUSHKA		Vestiaire Collective	
Bank and Vogue	BESTSELLER	C&A	Circular Systems	DuPont Biomaterials	Lee	Lenzing Group	London Waste and Recycling Board	M&S	Nanushka	Unilever	Vestiaire Collective	VF Corporation
FARFETCH				HALLOTEX	NORDSTROM		OUTERKNOWN		PRIMARK		Wrangler	
Farfetch	Fast Retailing	Fung Holdings Limited	Guess	Hallotex	Nordstrom	NYC Department of Sanitation	OUTERKNOWN	P&G	Primark	W. L. Gore and Associates	Wrangler	TEXAID

ACCIÓ

Catalonia Trade & Investment

Generalitat de Catalunya
Government of Catalonia

CataloniaConnects
catalonia.com

Food initiative

Igniting a food system transformation

<https://www.ellenmacarthurfoundation.org/our-work/activities/food>

Partners



CALOUSTE
GULBENKIAN
FOUNDATION

PHILANTHROPIC PARTNER



DANONE
ONE PLANET. ONE HEALTH



STICHTING
DOEN
NATIONALE NUTRITION
POSTCODE LOTERIJ

PHILANTHROPIC PARTNER

IKEA Foundation

PHILANTHROPIC PARTNER



mizkan
Bringing Flavor to Life™



Nestlé



NOVAMONT



PORTICUS

PHILANTHROPIC PARTNER



Knowledge grows

The initiative will engage 20+ cities on a journey to a circular economy for food with London, New York, and São Paulo as Strategic Partners. Members - Almere, Barcelona, Lisbon, Milan, Porto, Rio de Janeiro, Salvador, Sevilla, Toronto, and Torres Vedras (with more to be announced) will further accelerate implementation efforts. Municipalities, local and global businesses, and resource managers will work together in new ways to drive real systemic change.


E
C
O
S
Y
S
T
E
M

CIRCULAR ECONOMY

INNOVATION ECOSYSTEM IN CATALONIA

ACCIÓ

Catalonia &
Trade & Investment

 Generalitat de Catalunya
Government of Catalonia

CataloniaConnects

catalonia.com

Catalonia in figures (2018)

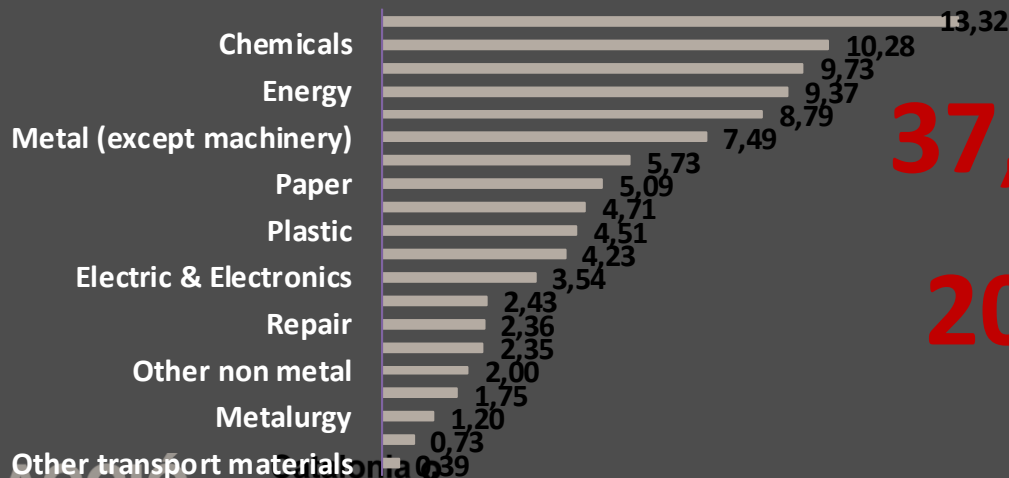
7.5 MILLION INHABITANTS

€242,3 BN GDP

618,366 COMPANIES



DIVERSE PRODUCTIVE BASE



37,605

INDUSTRIAL COMPANIES

20.7%

INDUSTRIAL GVA

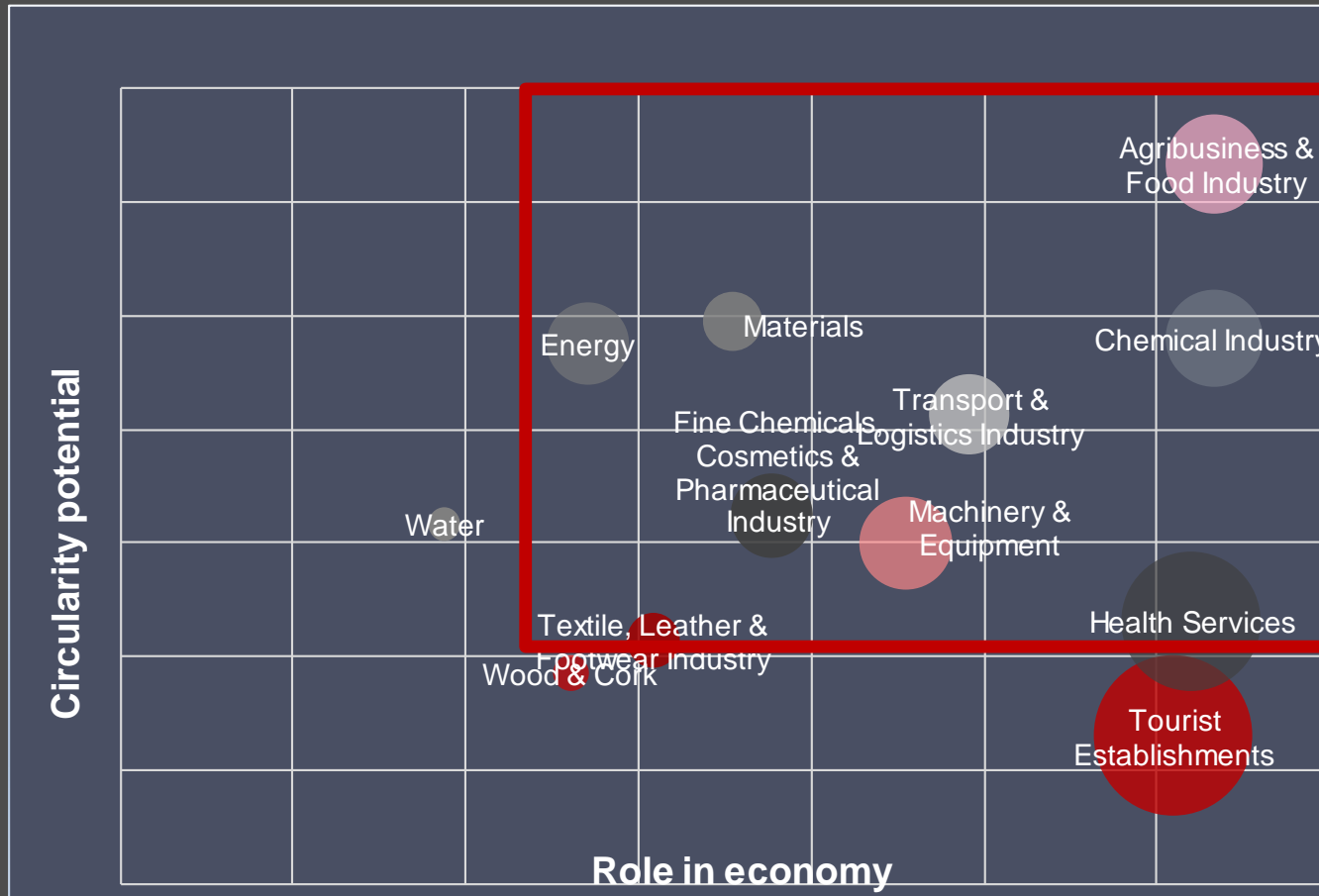
ACCIO

Source: Catalan Statistics Institute (Idescat) and DIRCE.

CataloniaConnects

catalonia.com

CIRCULAR ECONOMY POTENTIAL FOR LEADING ECONOMIC SECTORS IN CATALONIA



Joint project with Territory and Sustainability Dept. / Method and support from Ellen MacArthur Foundation



Catalonia, a key innovation hub in Europe



- **Catalonia** was the **1st region in Continental Europe** that received the greatest R&D investment and the highest number of R&D jobs, and represents the **56.4% of the R&D investment in Spain** in the period **2012-2016**.

- More than **1,300 startups** are located in Catalonia.
- Barcelona ranks as the **3th city in attractiveness for founders**, according to *Startup Heatmap Europe Report 2018* **and lies 5th in the European league table** of startup hubs, behind cities such as London, Berlin, Paris and Amsterdam
- Catalonia has huge **leading scientific facilities** such as: ALBA Synchrotron, Mare Nostrum (3rd Southern Europe Supercomputer), Biomedical Research Park, Scientific Park of Barcelona, Barcelona Institute of Science and Technology, ICIQ or ICFO, among many others.



ACCIÓ

Catalonia
Trade & Investment

 **Generalitat de Catalunya**
Government of Catalonia

CataloniaConnects

catalonia.com

GROWING INNOVATION CE DEMAND IN ALL LEADING SECTORS



50% Catalonia Cluster Programme have already circular economy in agenda.
 More than 2000 innovative companies involved

Note: The use of the set trademarks is for informative purposes only. Trademarks mentioned in this document are the registered trademarks of the companies to which they belong and are not owned by ACCIÓ. This is a partial and illustrative representation of companies that form part of the ecosystem in Catalonia; however, there may exist other companies that have not been included in the study.

CIRCULAR ECONOMY SOLUTIONS IN CATALONIA

In Catalonia there are a number of initiatives and organizations related to the Circular Economy: public authorities that drive projects and initiatives, organized clusters, universities, technology centres and other stakeholders, trade shows and International networks.



391
COMPANIES (2014)

- 91% of the companies identified are **SMEs** (under 250 employees) and **83% are companies incorporated before 2007** (companies over 10 years of age).
- 52.2%** of the companies in the sector **export** and **12.2%** have a **subsidiary abroad**.
- 76%** of companies are **concentrated in Barcelona**.
- Waste** includes **67.3%** of companies.



70,419
EMPLOYEES (2014)

- Waste** includes **76.4% of employees**, and of these, **82.5%** are involved in the **waste management subsector**.



€4,090 M
of **TURNOVER**
(2015)


- The 391 companies identified **have an aggregate turnover of €11,038 M**, of which **€4,090 M is exclusively linked to the Circular Economy**.
- The €4,090 M accounts for **2% of the total Catalan GDP** (2014).
- 6 major operators** of waste concentrate **more than a third of the total estimated business volume** in Circular Economy.

Source: Cluster Development, having first identified the companies on the basis of information taken from interviews, a search by codes of reference and previous directories and databases provided by sector stakeholders and ACCIO, later recovering the information available in the SABI Online database

ACCIO

Catalonia
Trade & Investment

Catalonia
Trade & Investment

 **Generalitat de Catalunya**
Government of Catalonia

 **Generalitat de Catalunya**
Government of Catalonia

CataloniaConnects
catalonia.com

A GROWING NUMBER OF KEY PLAYERS COMMITTED

PUBLIC POLICES AND INSTRUMENTS FOR BUSINESS

CLÚSTERS & SECTORAL BUSINESS ORGANIZATIONS

START UPS

CONSULTANCY & ENVIRONMENT ENGINEERING

AWARENESS, BUILDING CAPACITY GUIDANCE, DIAGNOSIS

TERRITORIAL INITIATIVES - SYMBIOSIS

TECHNOLOGY INNOVATION PLATFORMS

SECTORAL R+D+i COMMUNITIES

TECHNOLOGY CENTRES & RESEARCH GROUPS

Note: The use of these trademarks is for informative purposes only. Trademarks mentioned in this document are the registered trademarks of the companies to which they belong and are not owned by ACCIÓ. This is an illustrative representation of companies and organization that form part of the ecosystem in Catalonia; however, there may exist other that have not been included in the study. All of them are cooperating with ACCIÓ in specific initiatives of circular economy and sustainability projects.

START UPS IN CIRCULAR ECONOMY.



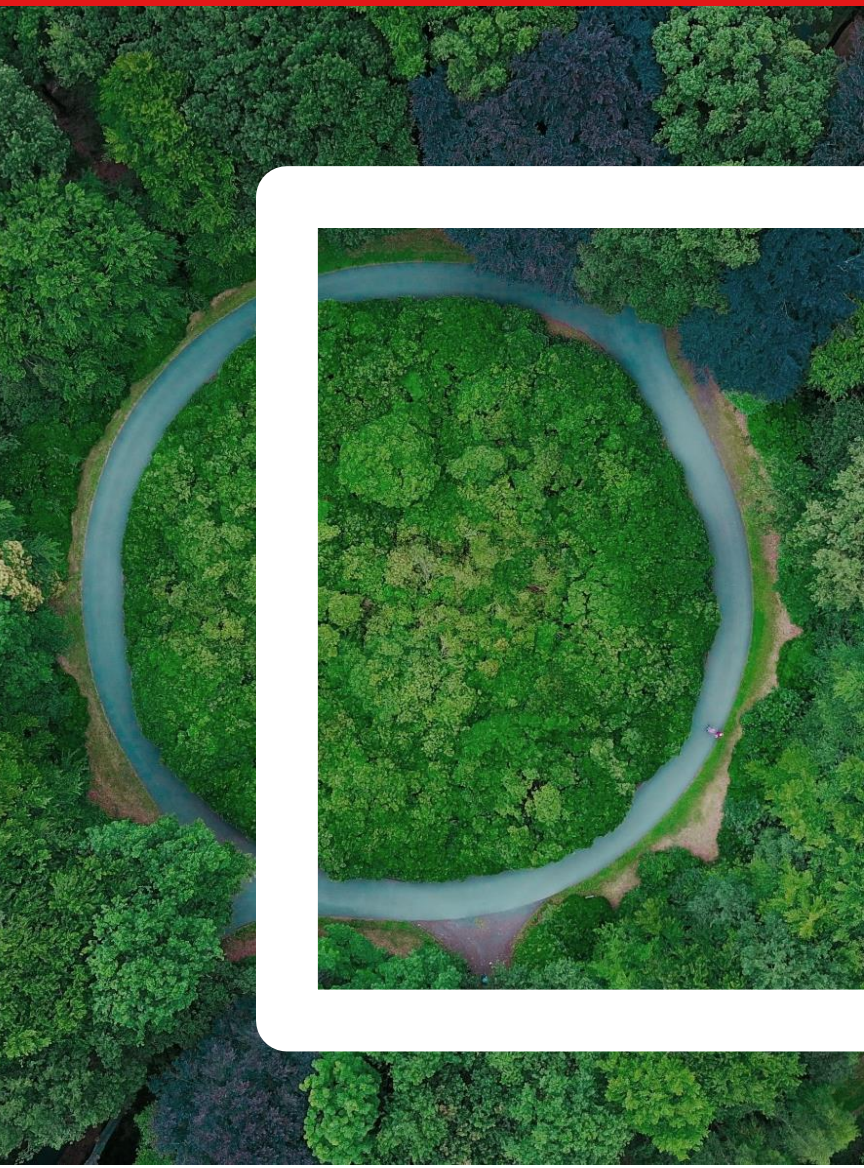
**CLEAN TECH
STARTUPS
X 2 in last 5
years**

Note: The use of these trademarks is for informative purposes only. Trademarks mentioned in this document are the registered trademarks of the companies to which they belong and are not owned by ACCIÓ. This is a partial and illustrative representation of companies that form part of the ecosystem in Catalonia; however, there may exist other companies that have not been included in the study.

ACCIÓ **Catalonia & Trade & Investment**

Generalitat de Catalunya
Government of Catalonia

CataloniaConnects
catalonia.com



LEADING CIRCULAR ECONOMY SOLUTIONS IN CATALONIA

Catalonia
Trade & Investment

 Generalitat de Catalunya
Government of Catalonia

<http://catalonia.com/circulareconomy.jsp>

ACCIÓ

Catalonia
Trade & Investment

 Generalitat de Catalunya
Government of Catalonia

CataloniaConnects
catalonia.com

From the almond skin to a cholesterol reduction

An antioxidant fiber of almonds and hazelnuts as a natural medicine



Organic waste transformation into bioplastics using bacteria

First test in bioplastic bags in industrial scale



Biomaterials for the industry 4.0 growth

Valorization of organic waste to produce bioplastics up graded properties. Biotech IA 3D



Edible, flavored and 100% biodegradable straw

Using an innovative complex production process first in class



Smart packaging to ensure quality and cut down food waste.

Quantitative and cost-effective mobile based solution



Eco-friendly batteries for single-use applications

Batteries made of paper, carbon and small quantities of non-toxic metals



Turning sewage sludge into fuels and hydrogen

The conversion of organic waste biomass into synthetic fuels and green hydrogen



Surgical clothing reuse

Eco-friendly integral health care solutions



Robotic sorter of plastic packaging

Technology 4.0 applied to material recovery from MRF waste stream types



Pay-as-you-throw (PAYT) schemes for waste generation

Moving towards a European recycling society with a high level of resource efficiency



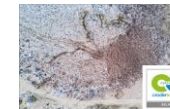
Green electricity from plants' photosynthesis

Microbial fuel cells as an alternative energy source. - build environment -4.0



Innovating in construction market by using recyclable materials

High-end reclaimed material for circular living, all made from cellulose waste



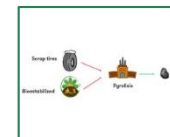
In situ soil and aquifer remediation of TPH and metals

A combination of techniques that optimizes time, energy and water consumption



Generation of activated carbon from waste products

Use in adsorbent filters in the treatment of water and gas



P
U
B
L
I
C

P
O
L
I
C
I
E
S



Circular Economy Hotspot Catalonia

<http://www.cehotspot.cat/en/home>

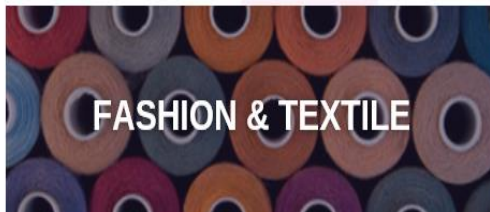
500 participants
25 countries
in previous CE Hotspot editions

 **Generalitat de Catalunya**
Government of Catalonia

cehotspot.cat
@mediambientcat
@accio_cat
#CEHotspotCAT
#CatalunyaCircular

The guided tours will be structured around the following

9 ECONOMIC SECTORS:





**Thanks !
Gràcies !**

@accio_cat


Maite Ardèvol
Circular Economy and Sustainability Lead
mardevol@gencat.cat

ACCIÓ al Món

Accra / Amsterdam / Berlín / Bogotà / Bombai / Boston / Brussel·les / Buenos Aires / Casablanca / Copenhaguen / Dubai / Hong Kong / Istanbul / Johannesburg / Lima / Londres / Mèxic DF / Miami / Milà / Montreal / Moscou / Nairobi / Nova York / Panamà / París / Pequín / Santiago de Xile / Sao Paulo / Seül / Silicon Valley / Singapur / Sydney / Stuttgart / Teheran / Tel Aviv / Tòquio / Varsòvia / Washington DC / Xangai / Zagreb

ACCIO

Catalonia &
Trade & Investment

 **Generalitat de Catalunya**
Government of Catalonia

CataloniaConnects

catalonia.com