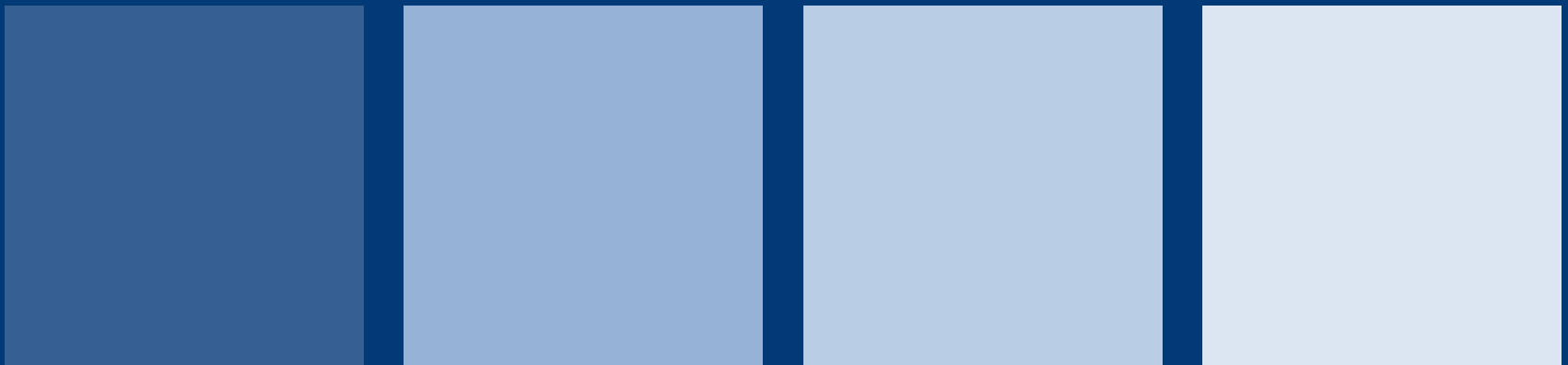


# Catalonia's strategy for becoming a Digital Nation



**Mrs Joana Barbany**  
**General Directorate for Digital  
Society**



**Generalitat de Catalunya**  
Government of Catalonia

Catalonia:  
the land of Barcelona

**32,000Km<sup>2</sup>**

Extension  
Similar to Denmark

**8Million**

Population  
Like Austria

**\$31,540**

GDP per capita  
Similar to Estonia

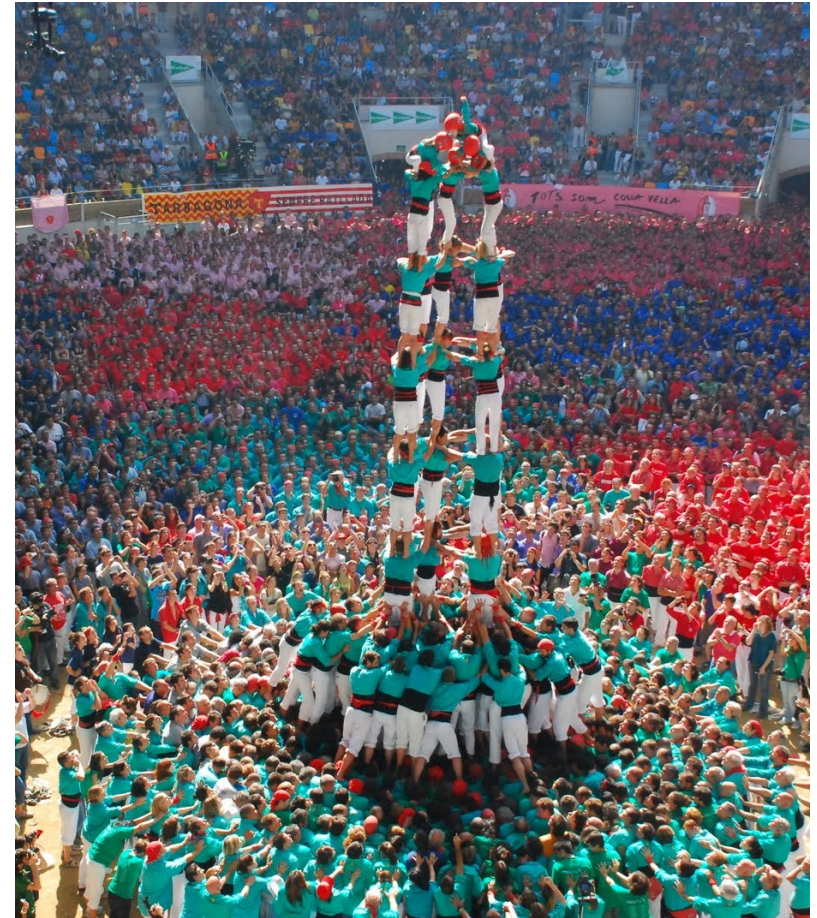
**\$4,600 M**

Foreign Direct Investment  
Similar to Denmark



Catalonia  
Barcelona

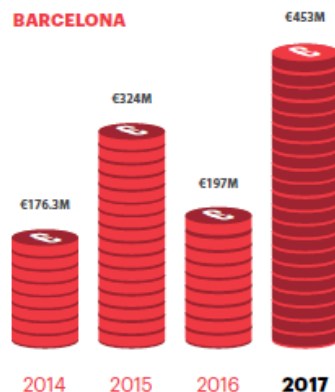
# FOR WHAT WE MIGHT BE KNOWN



**But also...**

Barcelona concentrates almost **60% of total startup investment** in Spain

(source: Pitchbook Data and MWCapital)



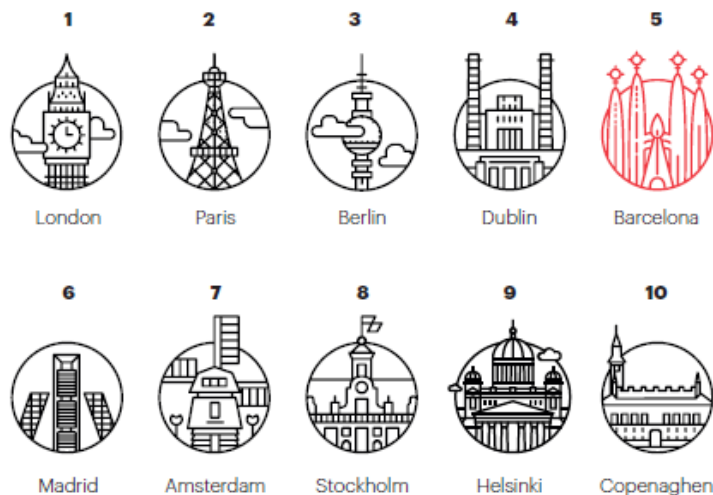
Barcelona is the **3rd most attractive city** in Europe for founders

(source: StartupHeatMap, Atomico and MWCapital)



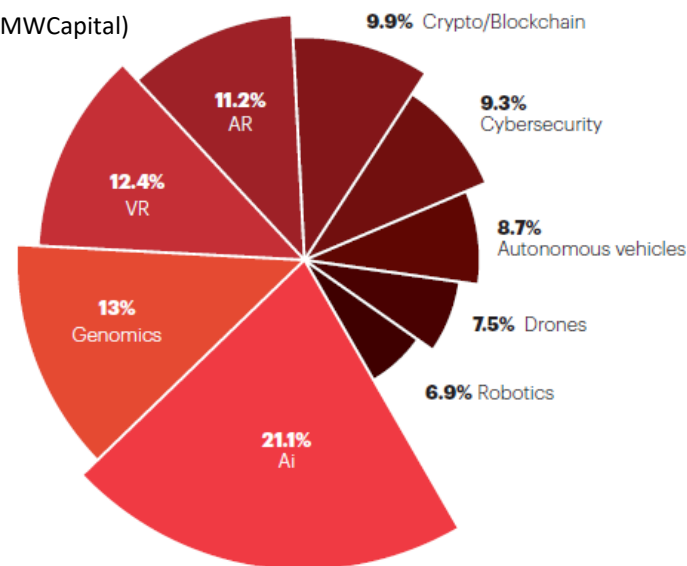
Barcelona ranks **5th in the top 10** European hubs for startups

(source: StartupHeatMap, Atomico, Dealroom and MWCapital)



**Investment** in the next 4 years, by technology

(source: MWCapital)



# Big Data Startup companies in Europe 2017



DATA LANDSCAPE

67

**Big Data startups in Catalonia 2017**  
Ranking highest in Europe

(source: DataLandscape)



Catalonia is ranked  
**1st**  
as **European Regions  
of the Future**

(source: Financial Times, 2018/19 FDI STRATEGY)

Barcelona is the  
**9th**  
**smartest city  
in the world**

(source: Juniper Research, 2017)

Barcelona ranks  
**2nd**  
in Europe  
**Digital City Index**

(source: NESTA)

RANK	REGION	COUNTRY
1	Catalonia	Spain
2	North Rhine-Westphalia	Germany
3	Scotland	UK
4	Lombardy	Italy
5	Emilia-Romagna	Italy
6	Madrid	Spain
7	Paris Region	France
8	Silesia	Poland

Rank	City	Country
1	Singapore	Singapore
2	London	UK
3	New York	US
4	San Francisco	US
5	Chicago	US
6	Seoul	South Korea
7	Berlin	Germany
8	Tokyo	Japan
9	Barcelona	Spain
10	Melbourne	Australia
11	Dubai	UAE
12	Portland	US
13	Nice	France
14	San Diego	US
15	Rio de Janeiro	Brazil
16	Mexico City	Mexico
17	Wuxi	China
18	Yinchuan	China
19	Bhubaneswar	India
20	Hangzhou	China

Europe

Rank	Change	City	Investment	Tourism	Talent
1	0	London	1	1	1
2	+1	Barcelona	4	2	2
3	-1	Paris	3	3	3
4	0	Berlin	2	6	4
5	0	Amsterdam	5	4	5

# Recent ICT investments in Catalonia

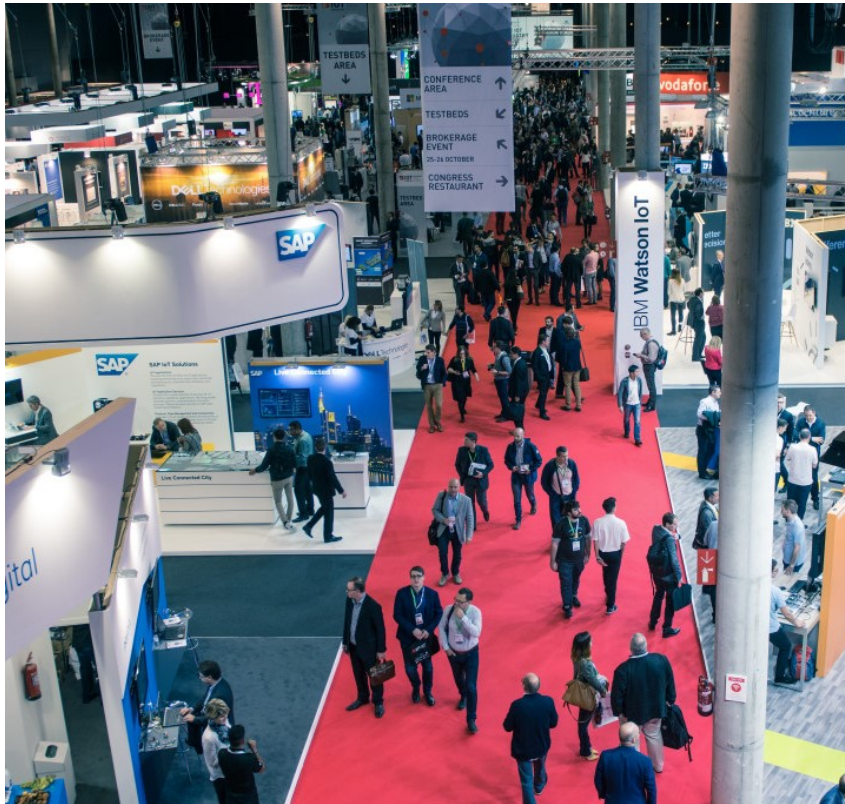
(January-September 2018)



SATELLOGIC



# Hosting the most important technological events in the world



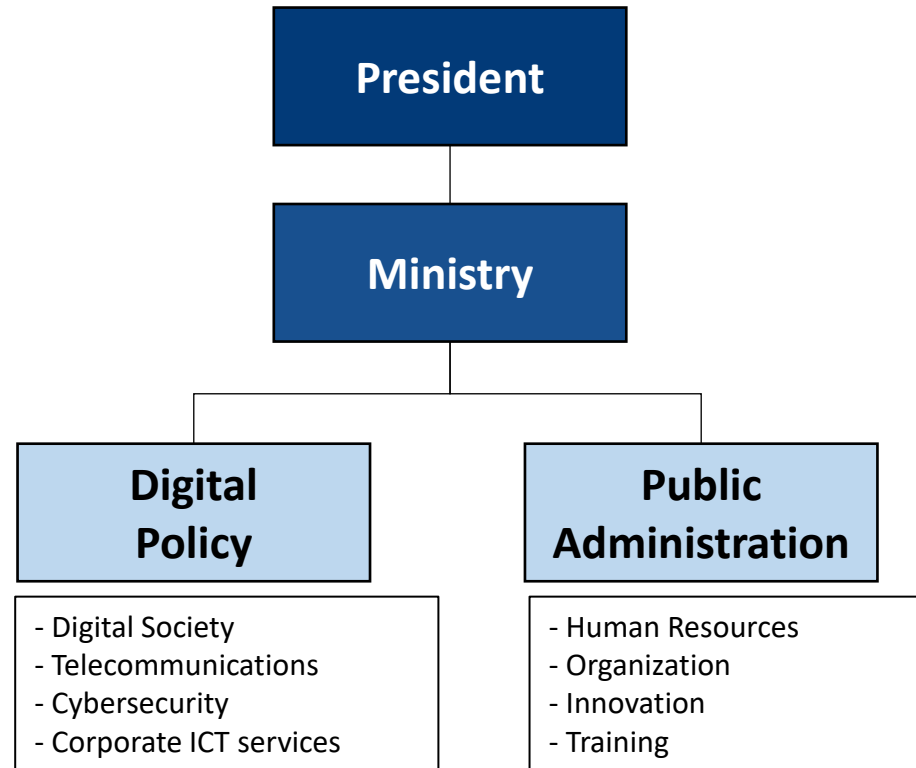
BARCELONA 26 FEB-1 MAR 2018







## New Ministry for Digital Policy



**October 2014**

**“Catalonia is the 1st European territory to approve a smart region strategy”**

***Markku Markkula,***

President of the European Committee of the Regions

**SMARTCAT  
PROJECT**

***From Smart City to Smart Region***



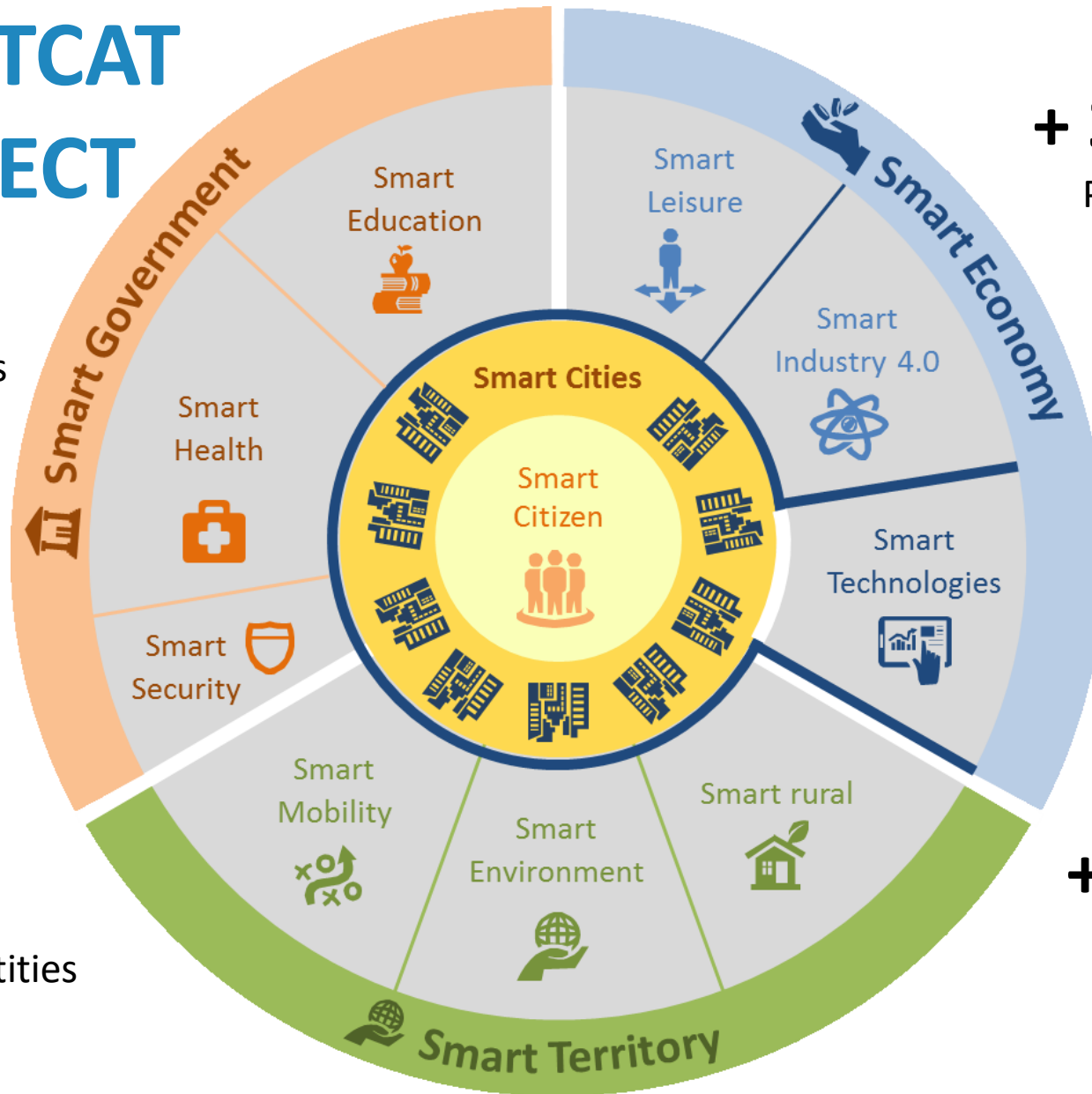
# SMARTCAT PROJECT

**+ 230**  
initiatives

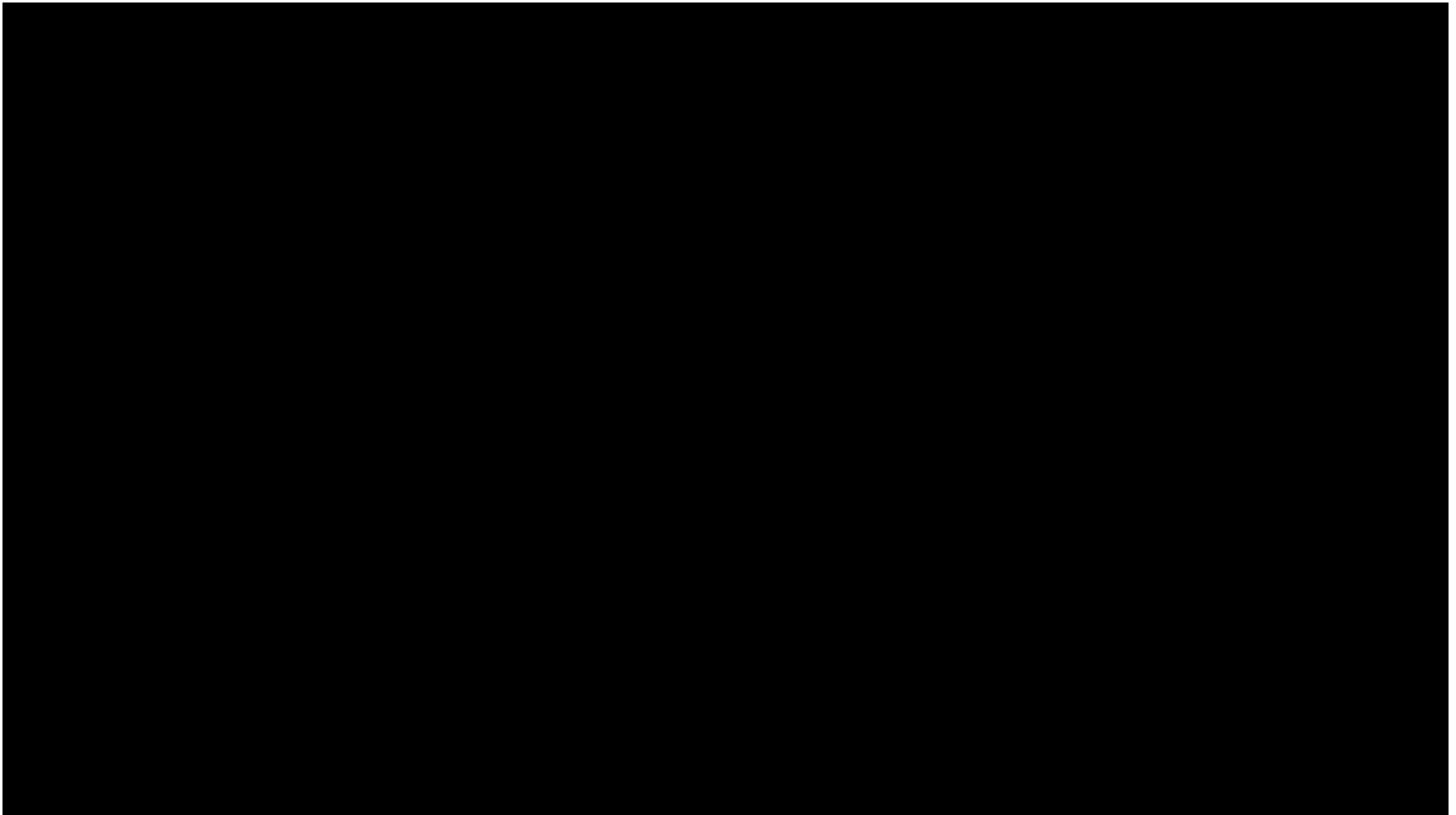
**+ 350**  
Partners

**+ 70**  
public entities  
involved

**+ 200**  
annual  
events



# SMARTCAT PROJECT



## 2018 - 2021

## 5 GOALS

Presidency of Catalonia

Ministry for Digital Policy  
and Public Administration

Digital Policy



**Digital citizens:** engaged, empowered, skilled and guaranteed digital rights.



A **connected territory** of smart cities and digital infrastructures.



A 21<sup>st</sup> century government: open and **digital administration**.



A **cyber secure nation:** cyberprotected citizens, businesses and institutions.



**Digital innovation** as the driving force of the new economy.

TECHNOLOGIES

INFRASTRUCTURES

2014 - 2018

**SMARTCAT**



2018 - 2022

**5 GOALS**

**# digital Catalonia**

“Smart citizen” OR “digital citizens” as origin







**IT DOES NO MATTER HOW YOU CALL IT!**

## Digital citizens

## STEMCAT Plan

Promote STEM vocations among students in Catalonia

1. Increase number of graduates in STEM studies
2. Increase average of women in the STEM studies
3. Improve STEM competencies in compulsory education
4. Positive vision of STEM

- 
-  Digital citizens
  -  Connected territory
  -  A 21<sup>st</sup> century government
  -  Cyber secure nation
  -  Digital innovation as a new economy

TECHNOLOGIES  
INFRASTRUCTURES



## Digital citizens

## #DONATIC Plan (womenICT)

Promotion of women's role on ICT

#Donatic wants to promote specially

1. Participation of women in the construction of the digital society
2. Technological vocations among women

- Digital citizens
- Connected territory
- A 21<sup>st</sup> century government
- Cyber secure nation
- Digital innovation as a new economy

TECHNOLOGIES

INFRASTRUCTURES

**WomenliderTIC**  
Dones en xarxa



**donaTICawards**  
Generalitat de Catalunya








**GSMA Women 4 Tech**  
GSMA



## Digital citizens

### SAFE INTERNET PROGRAM

- ➔  Digital citizens
-  Connected territory
-  A 21<sup>st</sup> century government
-  Cyber secure nation
-  Digital innovation as a new economy

TECHNOLOGIES

INFRASTRUCTURES



- 01 -  
Dades segures

PRACTICA ELS  
HÀBITS  
-CIBER-  
SALUDABLES



- 02 -  
Revisa privacitat



- 03 -  
Frau digital









- 04 -  
Civisme digital



- 05 -  
Dispositius al dia

# Digital citizens

## DIGITAL RIGHTS AND RESPONSIBILITIES CHARTER

- 
-  Digital citizens
  -  Connected territory
  -  A 21<sup>st</sup> century government
  -  Cyber secure nation
  -  Digital innovation as a new economy

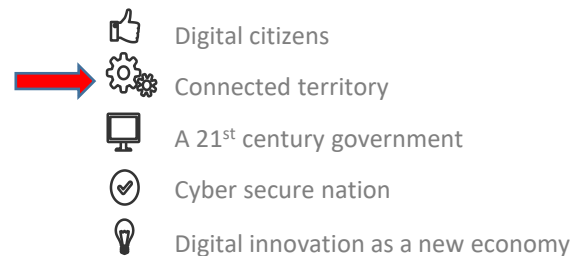


The charter on Digital Rights and Responsibilities is a key element of the Digital Society and the empowered digital citizen.

**DIGITAL CITIZEN + RULE OF LAW + EMPOWERMENT + HUMAN RIGHTS**

# Connected Territory

## smartCATALONIA



TECHNOLOGIES  
INFRASTRUCTURES

**smartCATALONIA**  
from smart cities to smart nation

SINCE 2014:

**60+**  
Programs

**200+**  
annual events

**smartCATALONIA CHALLENGE**  
competition city challenges

**18** Projects in **9** cities  
**700+** Participants & **90** solutions  
**2** Editions







**Catalonia smartLAB**  
network of urban labs

**15**  
Solutions tested  
in **10** cities



- eGovernment
- Energy
- Environment
- Mobility
- Security
- Education
- Tourism
- Culture

## Connected Territory FIBER OPTIC

-   Digital citizens
-  Connected territory
-  A 21<sup>st</sup> century government
-  Cyber secure nation
-  Digital innovation as a new economy

TECHNOLOGIES  
INFRASTRUCTURES



### Nationwide infrastructure: Open Network

>> 29 country capital cities  
Connected, all capitals to be  
Connected by 2020

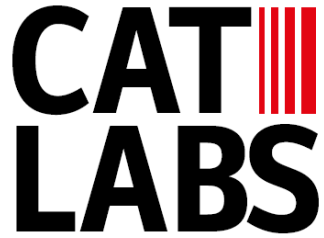
>> 254 out of 947 municipalities  
Connected. All municipalities to  
be Connected by 2023

## Connected Territory

### PUNTTIC and CATLAB network

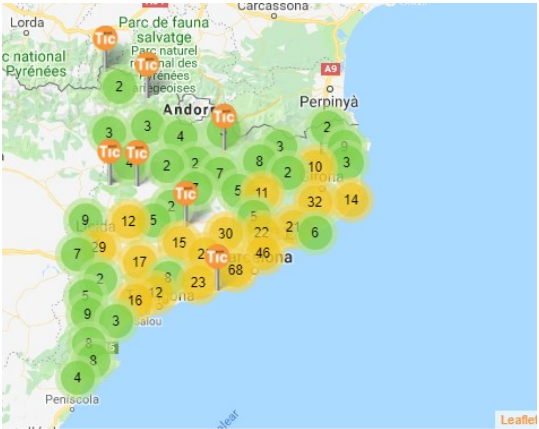
- Digital citizens
- Connected territory
- A 21<sup>st</sup> century government
- Cyber secure nation
- Digital innovation as a new economy

TECHNOLOGIES  
INFRASTRUCTURES

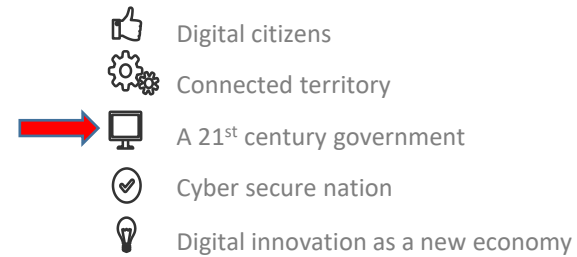


>> Spaces for social, digital and collaborative innovation among de country

>> Using the quadruple helix approach to accelerate the transfer of research and innovation results









## A 21st century government



- Digital and innovative administration: people, processes, data and technology
- Innovative organization: Generalitat co-working spaces
- Digital intrapreneurship: improvement of digital services and relationship with citizen
- Electronic Voting System

# Ciber Secure Nation

## LAUNCH OF CATALAN AGENCY FOR CYBER SECURITY

-  Digital citizens
-  Connected territory
-  A 21<sup>st</sup> century government
-   Cyber secure nation
-  Digital innovation as a new economy

TECHNOLOGIES  
INFRASTRUCTURES

### Cyberattacks against Catalan government triple in a year

"We have a very powerful cyber-umbrella which can respond to the constant attacks from around the world" says Catalan president

18 September 2017 08:26 PM  
by ACN | L'Hospitalet de Llobregat






Low-intensity cyberattacks against the Catalan government increased by 200% last week of September in comparison with the same period last year. Yet, Puigdemont says his administration is ready to tackle the threat that cyber

SHARE



# Digital Innovation as a new economy

## HOSTING THE MOST IMPORTANT TECHNOLOGICAL EVENTS IN THE WORLD

-  Digital citizens
-  Connected territory
-  A 21<sup>st</sup> century government
-  Cyber secure nation
-  Digital innovation as a new economy



TECHNOLOGIES  
INFRASTRUCTURES








BARCELONA 26 FEB-1 MAR 2018





# Technologies and Infrastructures

-  Digital citizens
-  Connected territory
-  A 21<sup>st</sup> century government
-  Cyber secure nation
-  Digital innovation as a new economy



Promoting the research and development of Advanced Technologies:

- Blockchain
- IA
- Big Data
- 5G



And Developing alliances and an ecosystem around them:

- 5GBarcelona
- Catalonia Smart Drones
- IoT Catalan Alliance
- Etc.





Generalitat de Catalunya  
**Departament de Polítiques Digitals  
i Administració Pública**

**“Catalonia will be digital or won’t be at all”**