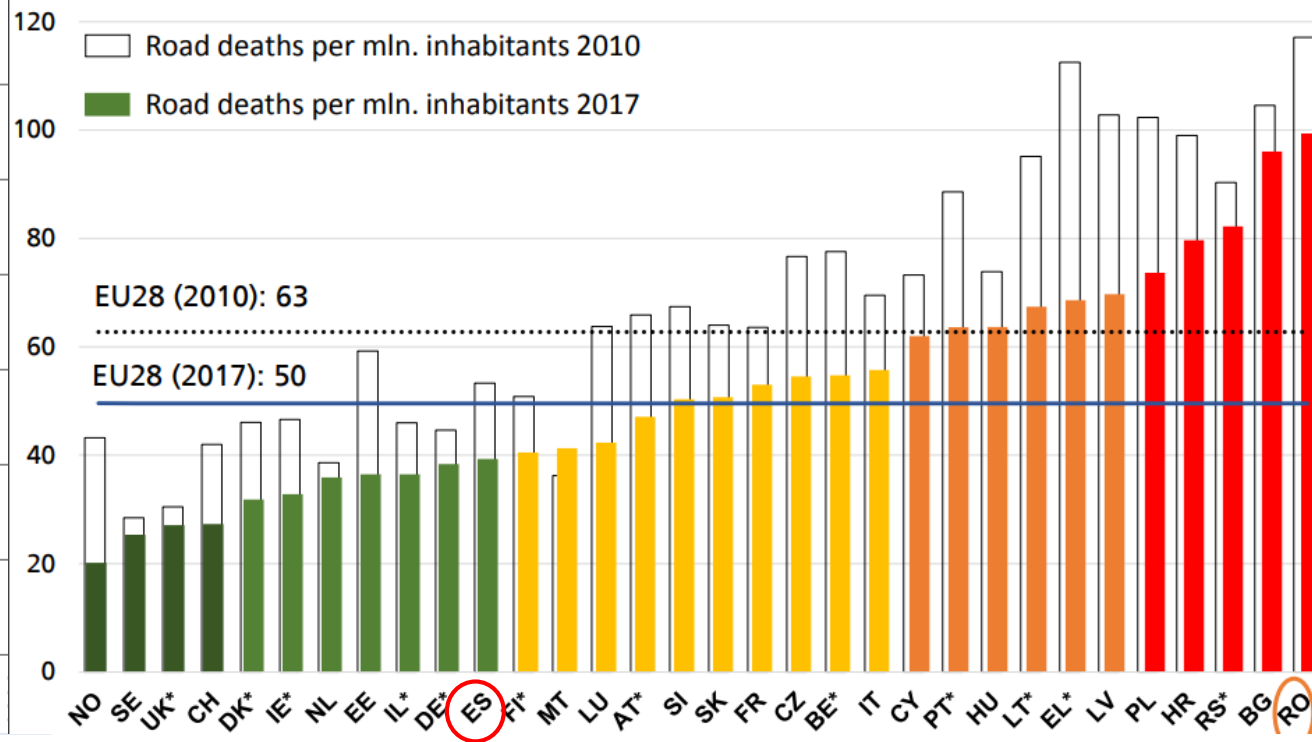
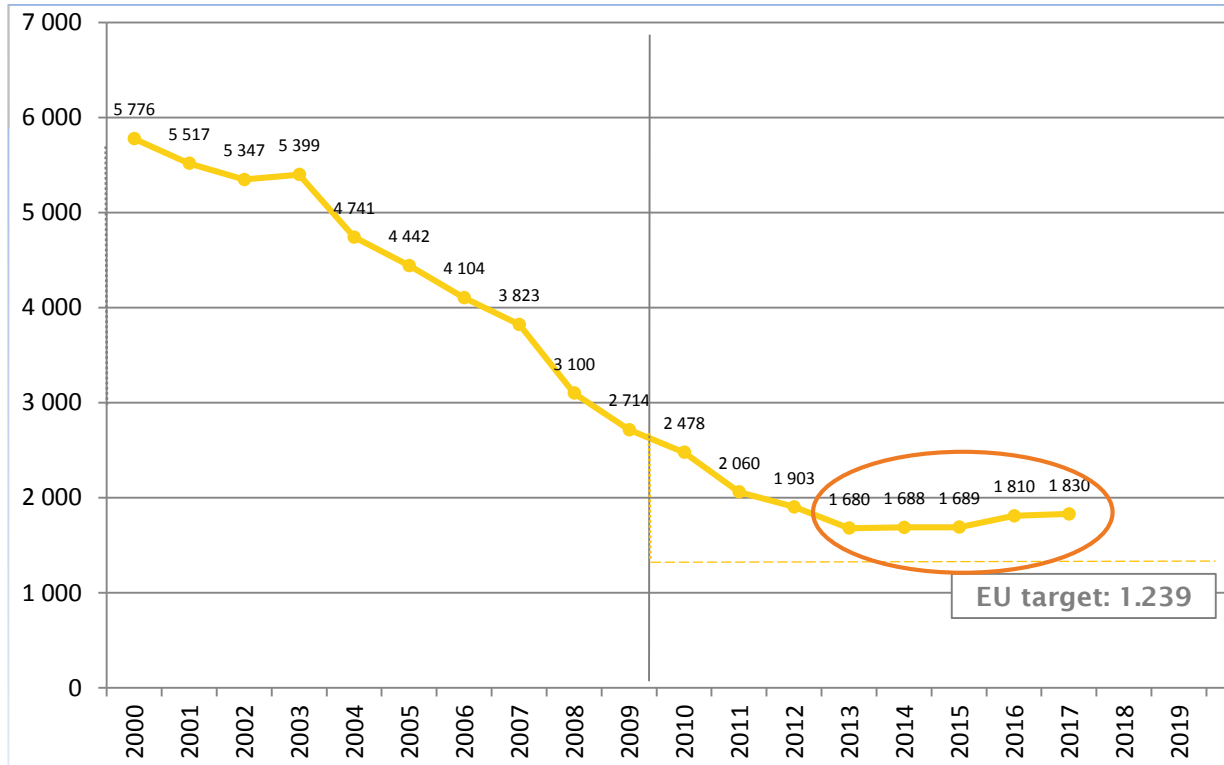




# *Star Rating the Spanish National Road Network*

THE EURORAP PROGRAMME IN SPAIN: 2002-2019

# Road Fatalities Spain 2000-2017

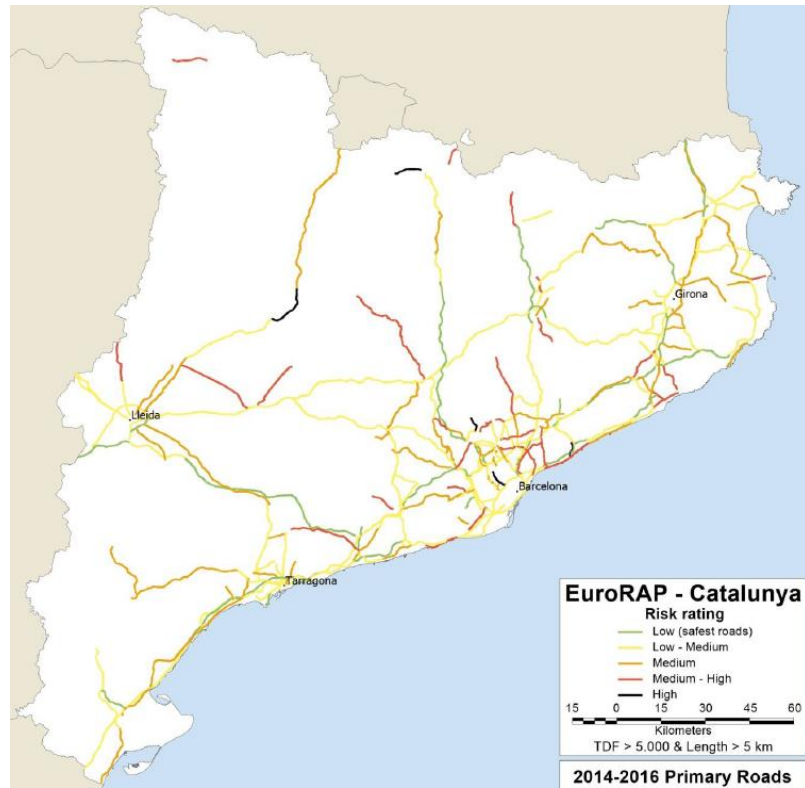


- From 2000 to 2013 Spain went from poor to top performing countries in road safety.
- Last 5 years show a worrying stagnation in road safety improvement, also coinciding with ever-low road maintenance public budgets.

# Risk map (2002-2018)

EuroRAP Risk Map of Catalonia and Spain is published annually since 2002. Both risk maps are produced in public-private partnership every end of the year.

6.362 km  
52% of road  
network  
90% of veh\*Km  
100% TEN-T  
roads  
18% high risk  
rated



24,898 km  
51% of veh\*Km  
100% TEN-T core and  
extended  
Primary roads  
5% high risk rated

## Star Ratings + SRIP

RACC has built on existing partnerships to bring up star ratings as the default standard measurement for road infrastructure safety :



Generalitat de Catalunya  
**Departament de Territori  
i Sostenibilitat**

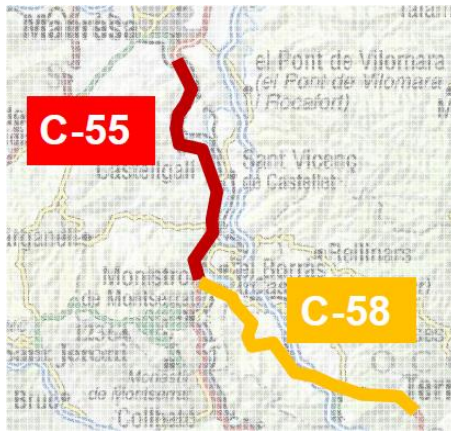
Road survey inspections **4,900km**  
Road coding  
Star ratings + SRIP  
**2013**

abertis **autopistas**

Road survey inspections **3,400km**  
Road coding  
Training  
**2017**

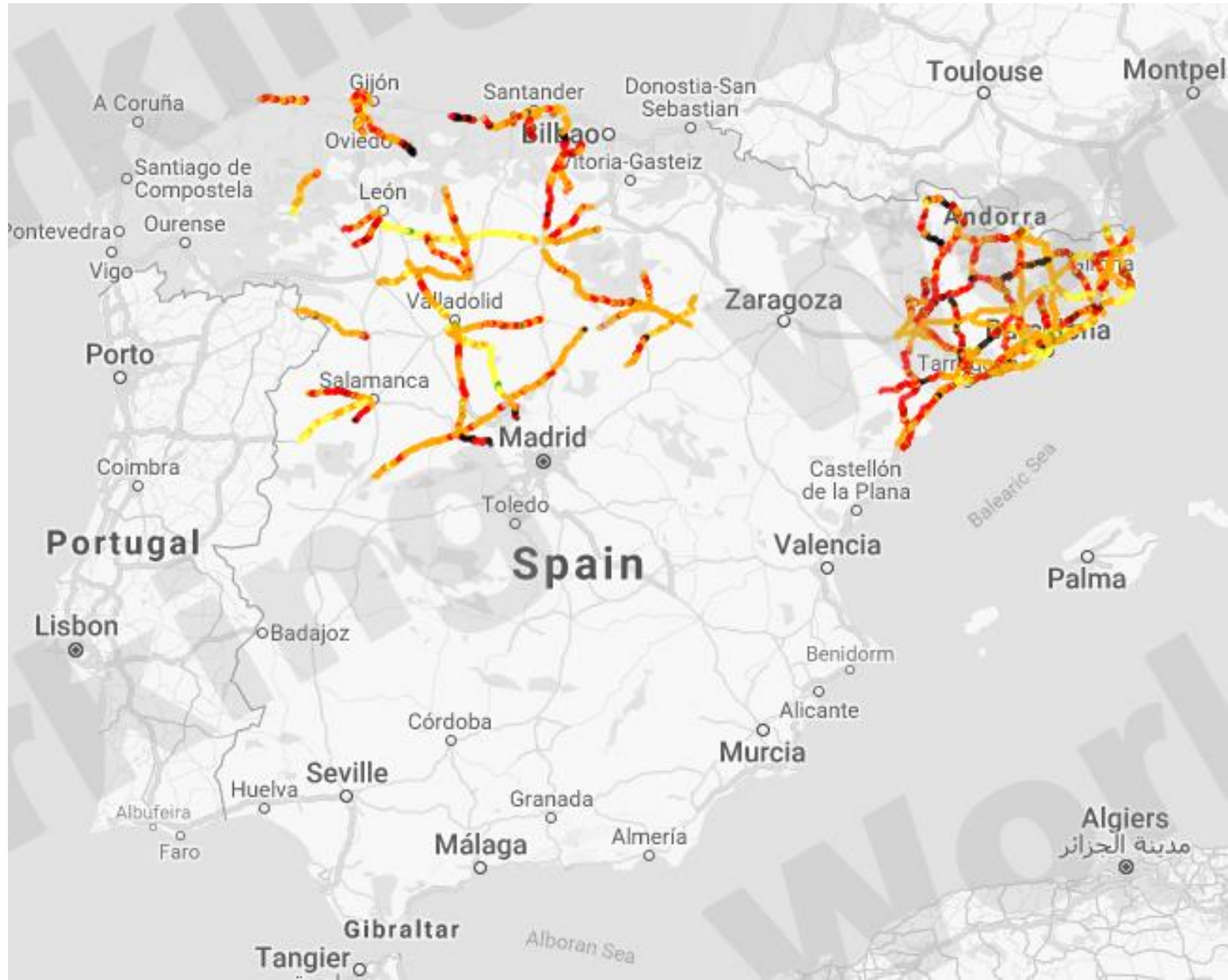


Road survey inspections **3,000km**  
Training  
Star ratings + SRIP  
**2018**



## Star Rating surveys

- ▶ So far 2 important surveys have been produced: Catalonia 2013 and North Castille 2018.
- ▶ Currently more surveys underway in southwest Spain
- ▶ 15,000 additional Km expected during 2019 and 2020, led by Dirección General de Tráfico



## Star Rating results

- ▶ All star rating datasets together (8,000 km) show that **75% km of roads are 3-star or better**, but actually **83% of travel takes place in 3-star or better**.

| Star Ratings   | Vehicle Occupant |         |
|----------------|------------------|---------|
|                | Length (km)      | Percent |
| 5 Stars        | 41.70            | 0.53%   |
| 4 Stars        | 1,512.00         | 19.04%  |
| 3 Stars        | 4,398.60         | 55.40%  |
| 2 Stars        | 1,588.20         | 20.00%  |
| 1 Star         | 341.20           | 4.30%   |
| Not applicable | 58.60            | 0.74%   |
| Totals         | 7,940.30         | 100.00% |

| Star Ratings   | Vehicle Occupant  |         |
|----------------|-------------------|---------|
|                | VKT (km)          | Percent |
| 5 Stars        | 315,130,110.96    | 1.08%   |
| 4 Stars        | 7,424,135,203.34  | 25.37%  |
| 3 Stars        | 16,637,051,576.58 | 56.85%  |
| 2 Stars        | 4,040,831,398.94  | 13.81%  |
| 1 Star         | 593,580,596.29    | 2.03%   |
| Not applicable | 253,015,571.29    | 0.86%   |
| Totals         | 29,263,744,457.39 | 100.00% |

## Safer Roads Investment Plan results

- ▶ *Safer Roads Investment Plans deliver a first approach for a safety upgrade at network level, based on maximizing lives saved for every Euro invested.*
- ▶ *Typically, EuroRAP's investment plan help reduce up to 20% of killed and seriously injured victims over 20 years.*

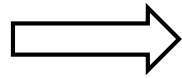
North  
Spain

| Total FSIs Saved | Total PV of Safety Benefits | Estimated Cost | Cost per FSI saved | Program BCR |
|------------------|-----------------------------|----------------|--------------------|-------------|
| 318              | 92,041,292                  | 15,795,230     | 49,678             | 6           |

Catalo  
nia

| Total FSIs Saved | Total PV of Safety Benefits | Estimated Cost | Cost per FSI saved | Program BCR |
|------------------|-----------------------------|----------------|--------------------|-------------|
| 1,418            | 464,034,521                 | 42,827,798     | 30,199             | 11          |

2-star roads



3-star roads



## Interventions

- Roadside obstacle protection
- Access points
- Pedestrian Flow
- Hard shoulder
- Signposting and beacons



## Plans and next steps

- ▶ *Extend star-ratings to reach +20,000 Km of national network (DGT)*
- ▶ *Integrate star-ratings into network safety management protocols (Catalonian Road Administration)*
- ▶ *Automation of road data collection and coding → zero error policy.*
- ▶ *Work together to set country-wide targets of 95% of travel in 3-star or better in 2030.*
- ▶ *Advocacy to create a national road safety fund to upgrade 10,000 km of roads from 1 and 2 star, to 3 and 4 star.*
- ▶ *Setting minimum star rating standard for new built roads*

# Thank You!

