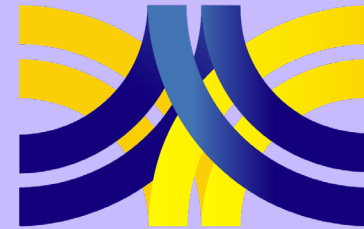


# 49<sup>th</sup> ASECAP DAYS

*Decarbonizing Road Infrastructure : Challenges,  
Perspectives and Actions in Tough Economy*

**ASECAP DAYS**



**BRUSSELS 2022**



Hotel Marriott Grand Place, Brussels  
24 – 25 November 2022

# ***ASECAP DAYS***



**BRUSSELS 2022**

## Spanish proposal for a sustainable nationwide road infrastructure financing program investments

Bruno de la Fuente

Director of Concessions, Economy and Studies



**3<sup>rd</sup> largest HCR network**  
17.387 km

**Old: 47% of the HCR**  
> 30 years

**Poor allocation for maintenance**  
≈2 B€/year instead of 4,3 B€/year

**Accumulate deficit of maintenance**  
10 B€

**Road accidents**  
>1,000 fatalities  
≈4,000 serious injuries

**Slow path for decarbonization**  
Emissions reduction

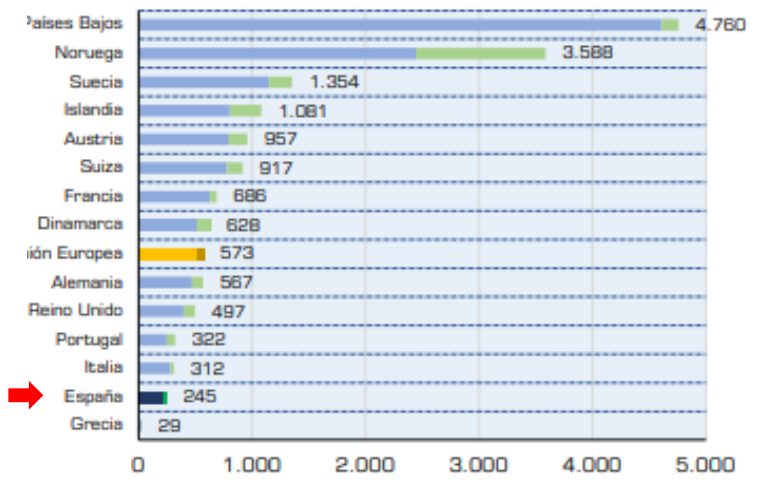
- 1990-2020: ES -8% VS EU -29%
- 2020-2021: ES +3% VS EU -5%
- 2022: Negative expectations (Gas & fuel consumption increase, higher transport demand, droughts limit hydroelectricity...)

**Scarce digitalization**  
ES scored 4,47/10 in the "Autonomous Vehicle readiness" ranking

*"Driving in a poorly maintained road supposes a 10% more of fuel consumption"*

Source: Asociación Española de la Carretera

Nº public charging points per million/hab



Source: Anfac

**AV ready countries**

Policy & legislation **Legislation score /4**

Technology & innovation **Company headquarters** **AV patents**

AV Companies with over \$50 million investment

Consumer acceptance **Year on year search volume difference**

Infrastructure **Public EV chargers per million people** **Road quality /10**

Country	AV readiness score /10
1 United States	8.62
2 Japan	7.59
3 France	7.37
4 United Kingdom	6.92
5 Germany	6.74
6 Canada	6.47
7 Sweden	6.34
8 Israel	6.03
9 Austria	5.85
10 Switzerland	5.58
11 Finland	5.54
12 Netherlands	4.78
13 Spain	4.47

Source: Confused.com

**Urgent need to upgrade the road network and to face its green and digital transition**

**10.6 B€ in the toll free HCR network**



**Improvements on existing roads**

- ➔ Road surfacing improvement
- ➔ Vertical signage improvement
- ➔ Horizontal signage improvement
- ➔ Emergency areas
- ➔ Access control systems

**874 M€**



**Road digitalization**

- ➔ Digital adaptation of infrastructure (Deployment of RSU / 5G / digitalization of pre-existing sensors)
- ➔ Infrastructure for data storage
- ➔ Advanced mobility solutions
- ➔ Management digitalization
- ➔ Fiber Optics deployment

**1.5 B€**



**Green transition of roads**

- ➔ Carbon sinks associated to roads
- ➔ Noise reduction program
- ➔ Road lighting optimization to maximize energy efficiency
- ➔ Infrastructure adaptation to climate change

**2.1 B€**



**Road safety**

- ➔ Directive 2019/1936 on road infrastructure safety
- ➔ 2+1 roads program
- ➔ Safety improvement for vulnerable users

**1.8 B€ <sup>(1)</sup>**



**Electric charging points**

- ➔ 1 electric station / 50 km
- ➔ 1 station / direction
- ➔ 12 ultra-rapid charging points / station

**3.7 B€ <sup>(1)</sup>**



**Safe parking areas**

- ➔ 1 station / 150 km

**547 M€**

(1) Includes also deployment on conventional roads



High capacity network free of toll

**88,6%**

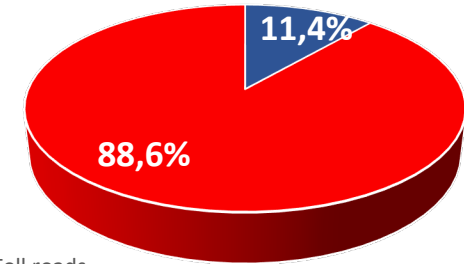


### Massive use of roads

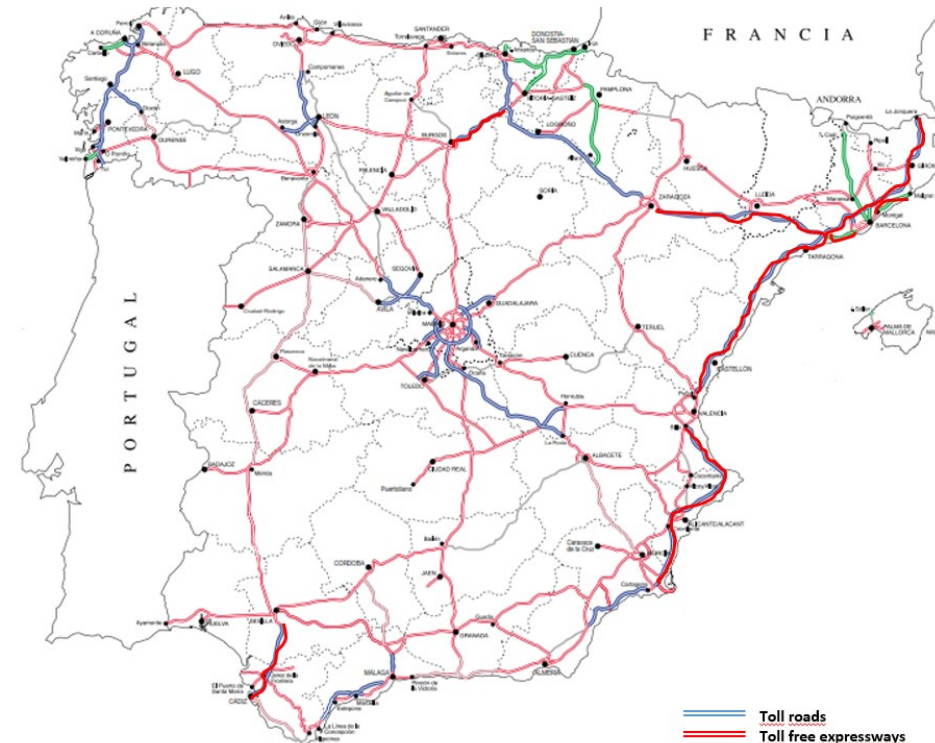
- Rail transport market share is only 3,6%
- Higher damage of roads
- Unsustainable financing
- Increase of road transport externalities
- Traffic congestion
- Different treatment by region

### HIGH CAPACITY ROAD NETWORK (KM)

Toll	1.984
Non toll	15.402
	<b>17.387</b>



- Toll roads
- Non toll



— Toll roads  
— Toll free expressways

## Spanish Recovery, Transformation and Resilience Plan

### COMPONENT 1: Sustainable, safe and connected mobility shock plan in urban and metropolitan environment



*“Introduce economic signals to the market to encourage more sustainable and efficient behaviours.*

*Internalization of external costs linked to factors such as environmental impact, congestion or infrastructure maintenance.*

*Development of a predictable financing model for maintenance of infrastructure within the framework of European regulation.*

*Establish a pay per use system in the State's road network, which can be extended to other roads by introducing "the polluter pays" and "user pays" principles.*

*Incentives to most sustainable and efficient vehicles.*

*The effective implementation could be carried out in 2024. According to international experience, 2 to 3 years is the minimum time needed to develop the regulatory instruments and create the structure.”*

#### "Tolls" for Spain's highways by 2024 Opposition in Mallorca when this was previously raised



#### El Gobierno busca que los peajes «no generen agravios territoriales» Transportes presentará en unos meses una propuesta de «tarificación justa y sostenible»

**El Gobierno confirma que se pagará por las autovías aunque rechaza llamarle peaje**

El Secretario General de Infraestructuras ha rechazado llamar al cobro que se hará sobre las autovías peajes porque dice será "un sistema de tarificación".

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#### Cada kilómetro, un céntimo

Los peajes tendrán un coste más alto cada vez que los usen.

¿Por qué cada kilómetro pagará más? Los peajes que se están levantando en las autovías españolas son los más altos de Europa. Los peajes que se están levantando en las autovías españolas son los más altos de Europa. Los peajes que se están levantando en las autovías españolas son los más altos de Europa.

**Everything is still undefined**



**SEOPAN proposal**

- Road charged
- Vehicles charged
- Charging scheme
- Business model
- Public/Private operation
- Technology
- Toll tariffs
- Discounts / rebates
- Enforcement
- Term for implementation
- Coexistence with existing toll roads
- Etc...

- Interurban expressways currently free of charge (13.674 km)
- All vehicles
- Toll per km travelled
- Concessions to private companies for 25 years
- 6-7 lots
- DSRC / Mobile / Video



**Includes investments to upgrade the road network and to face its green and digital transition**



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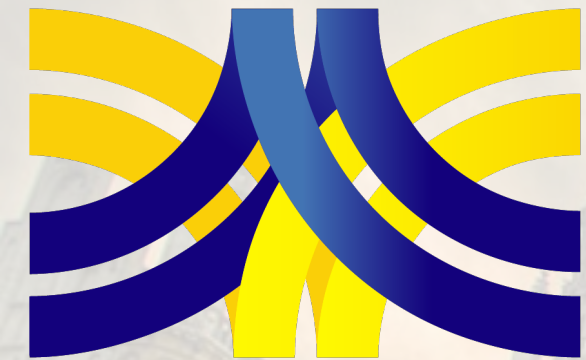
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**Upgrade the road network**  
**Green transition**  
**Digital adaptation**  
**Smart mobility**  
**Sustainable transport system**





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**THANK YOU FOR  
YOUR ATTENTION**

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