



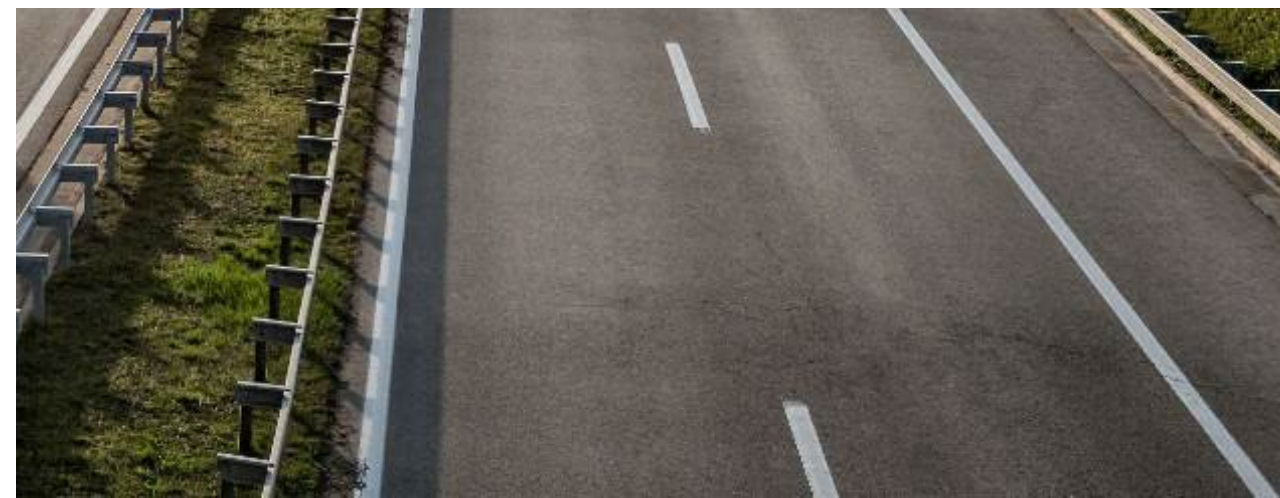
# Quantifying the investments to upgrade the European motorway network and assessing their socioeconomic impact

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Report prepared for:



# Motorways play a vital role in modern economies, acting as the backbone of road transport, the most widely used form of inland transportation

Growth of road transport for passengers and goods in the EU-27 (2000-2022)



Motorway networks are one of the **most significant infrastructure achievements** in last century



They are **indispensable to modern economies**, enabling **efficient transportation** and fostering **connectivity and trade**

# The motorway networks make a substantial contribution to the economic activity

## Main benefits of road transport

### *User benefits*



Reduction of **journey times** and mitigation of **traffic congestion**

### *Agglomeration*



**Closer connections** and **improvement of efficiency**

### *Business Investment & FDI*



**Boost productivity** and **attraction of firm investments**

### *Trade*



Specialization and **competition among firms**

### *Labour Market Effects*



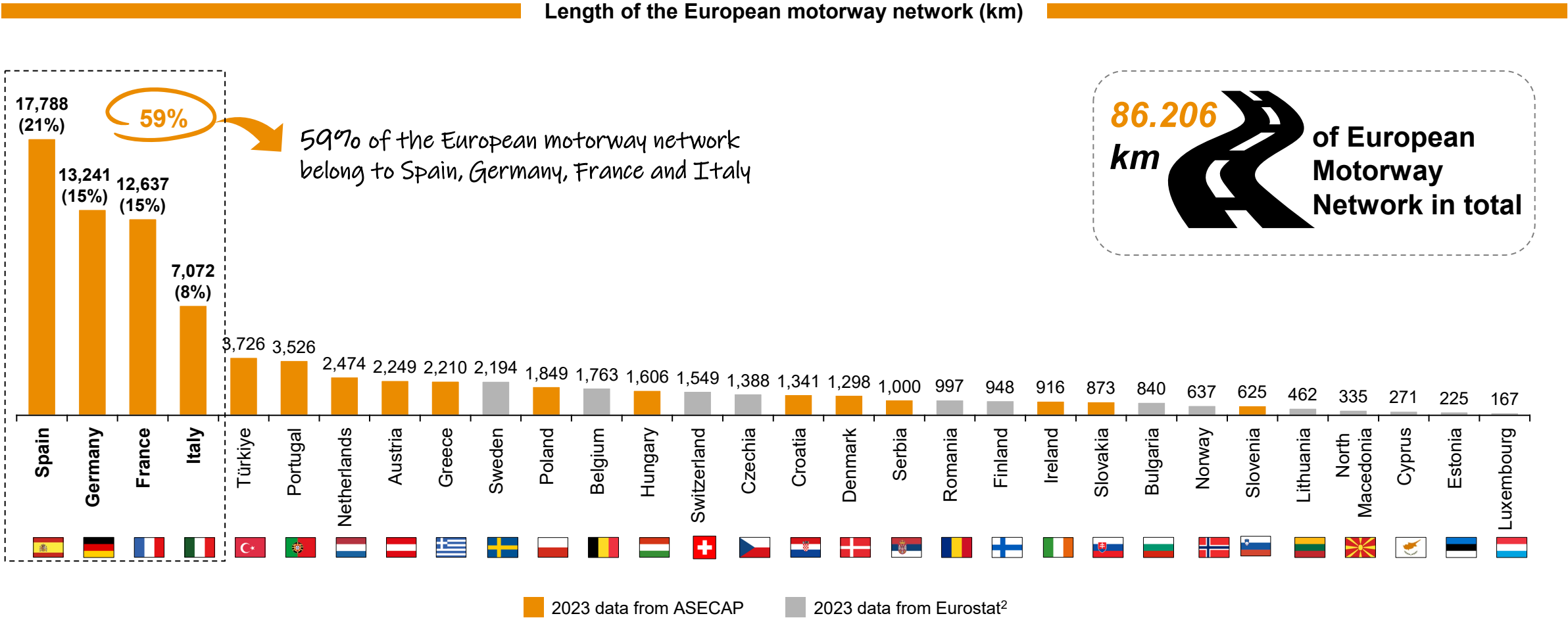
New employment **opportunities**

### *Induced Housing Investment*

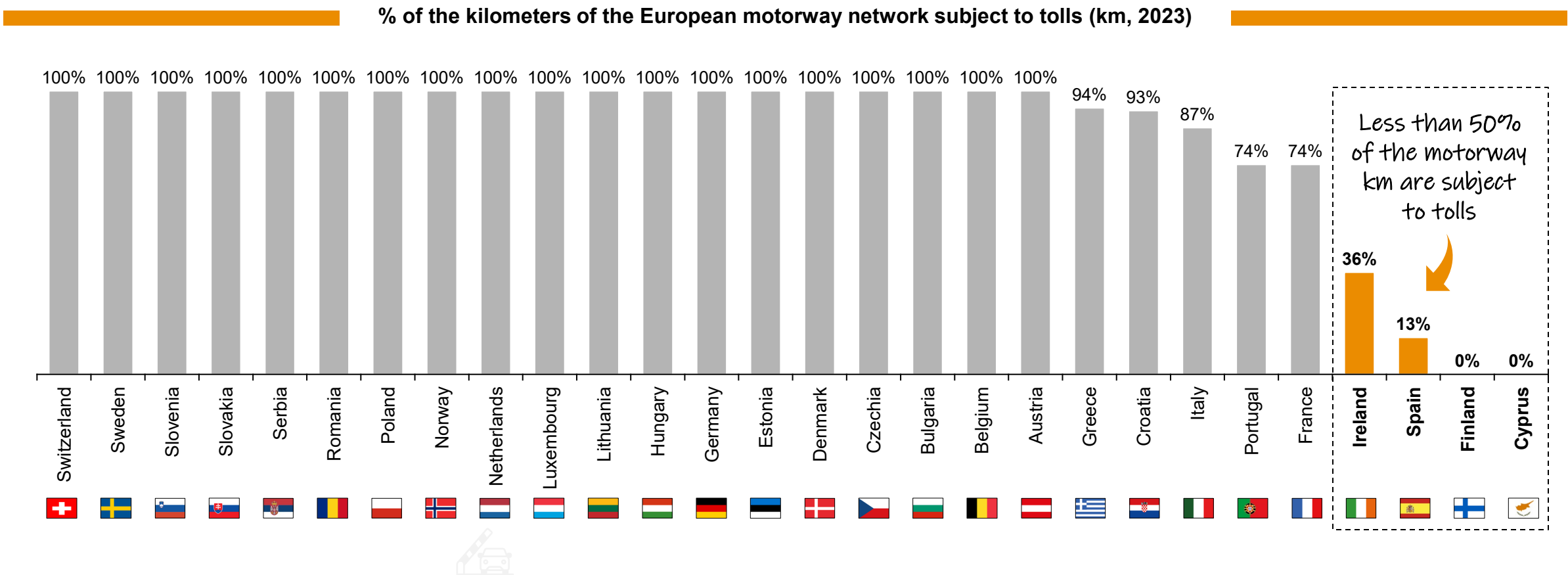


Reduction of **travel expenses** and new **investment opportunities**

Currently, the European motorway network spans over 86,000 kilometers, with Spain, Germany, France, and Italy accounting for 59% of its total length

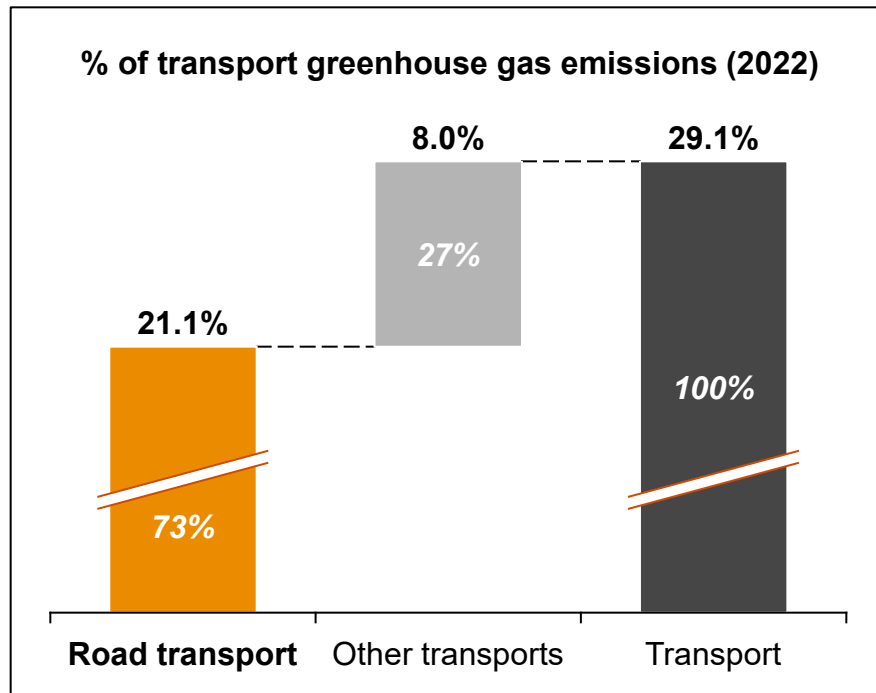


# Approximately 74% of European motorway network are subject to tolls, with most countries implementing them fully across their networks



# The road transport sector faces significant challenges, as it is responsible for 73% of transport-related and 21% of total emissions in Europe

## Transport greenhouse gas emissions

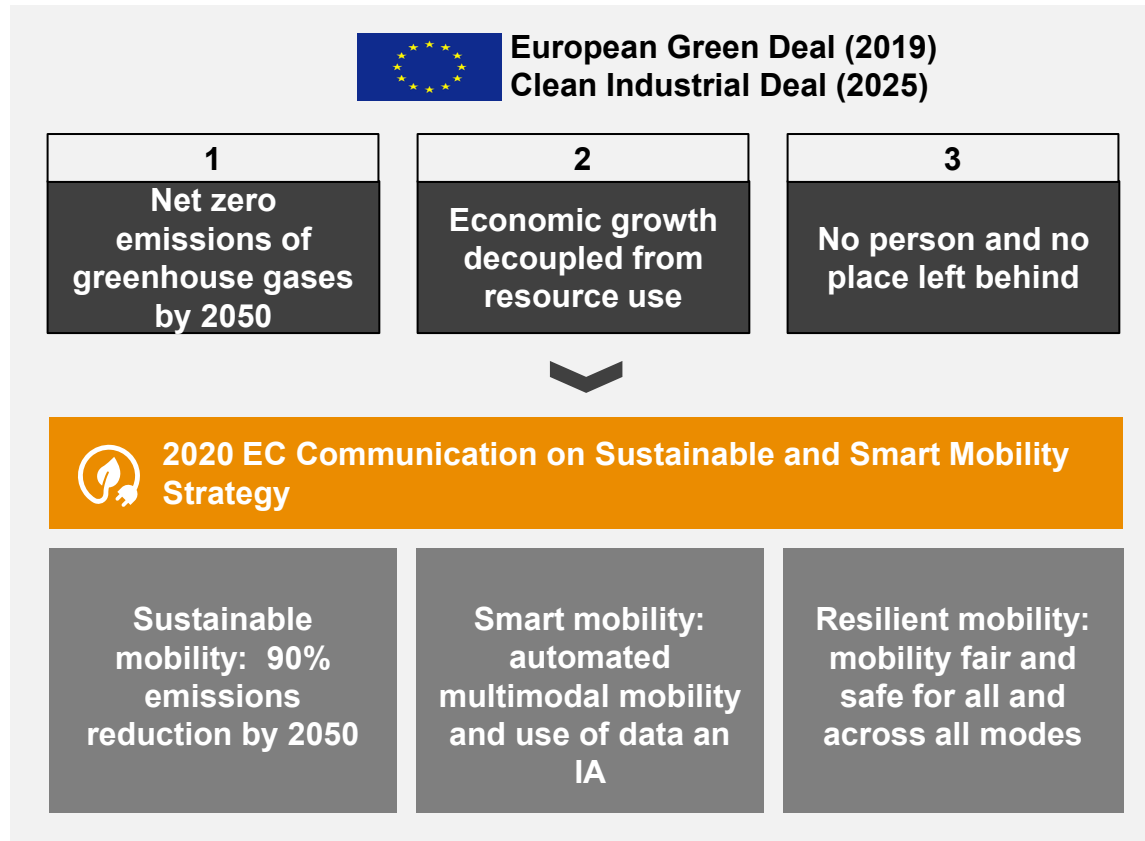


- The **urgency to decarbonize road transport** has never been greater.
- Addressing this challenge requires a unified and coordinated effort at both European and national levels to **modernize road infrastructure and accelerate the transition to sustainable, resilient, and efficient transport systems**.
- This transition is vital for achieving the **EU's climate goals** and **meeting the objectives of the European Green Deal / Clean Industrial Deal**



# To tackle this issue, European targets have been established to promote decarbonization supported by the European Taxonomy and NextGen funds

## Digitalization and Decarbonization Agenda



2 main European mechanisms to help finance the investments needed:

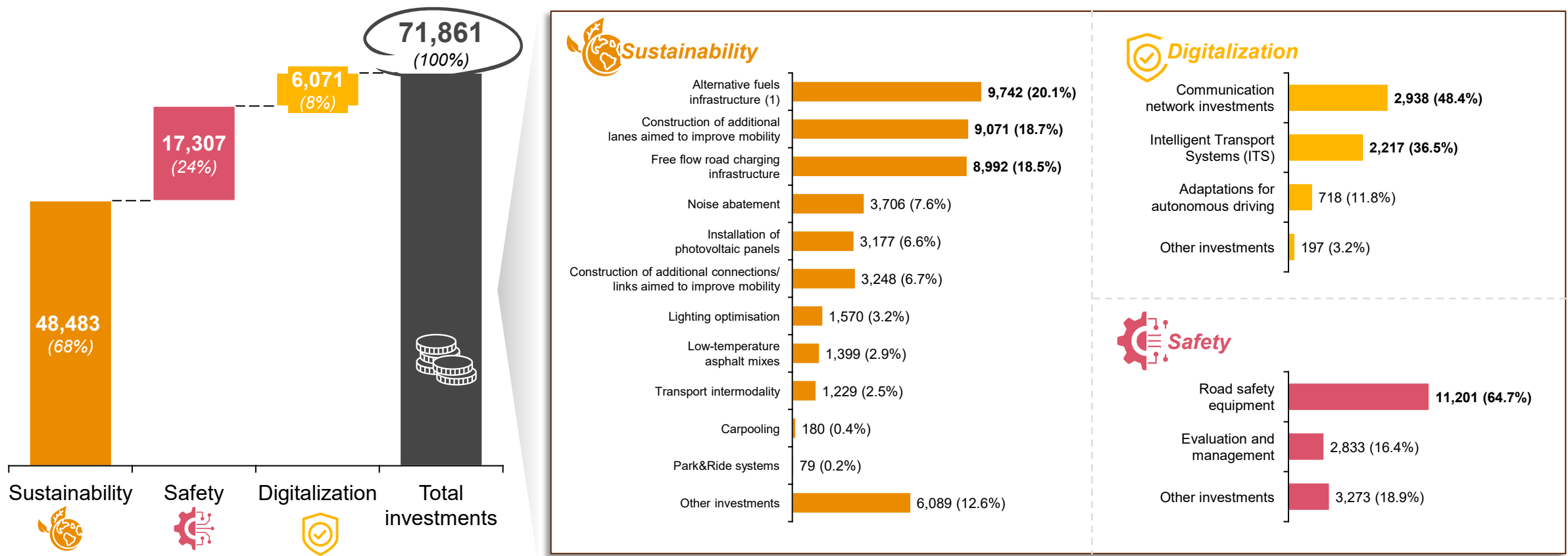
Next Generation EU funds

European Taxonomy

The EU Taxonomy is a classification system that defines criteria for economic activities aligned with a net zero trajectory by 2050 and broader environmental goals beyond climate

# The decarbonization of the mobility sector requires significant investments to upgrade the road transport infrastructure

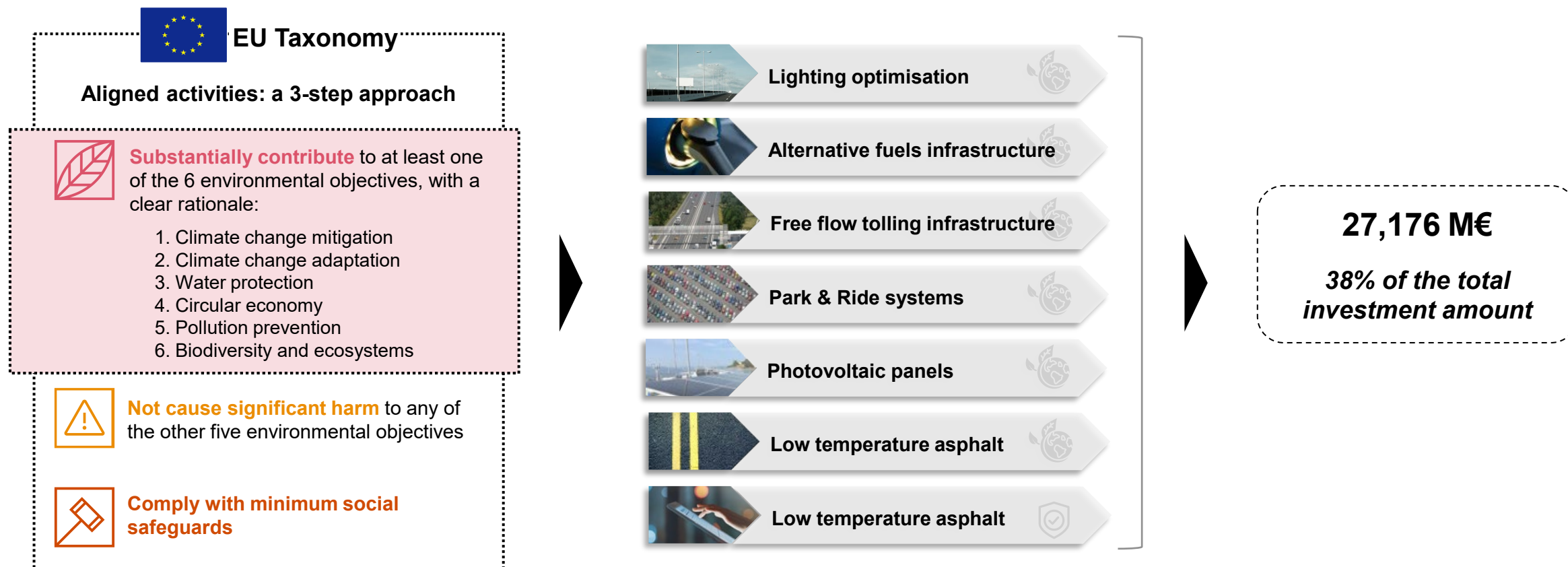
Identified investment needs to improve the motorway network in ASECAP member countries, broken down by investment area (M€, 2025-2035)



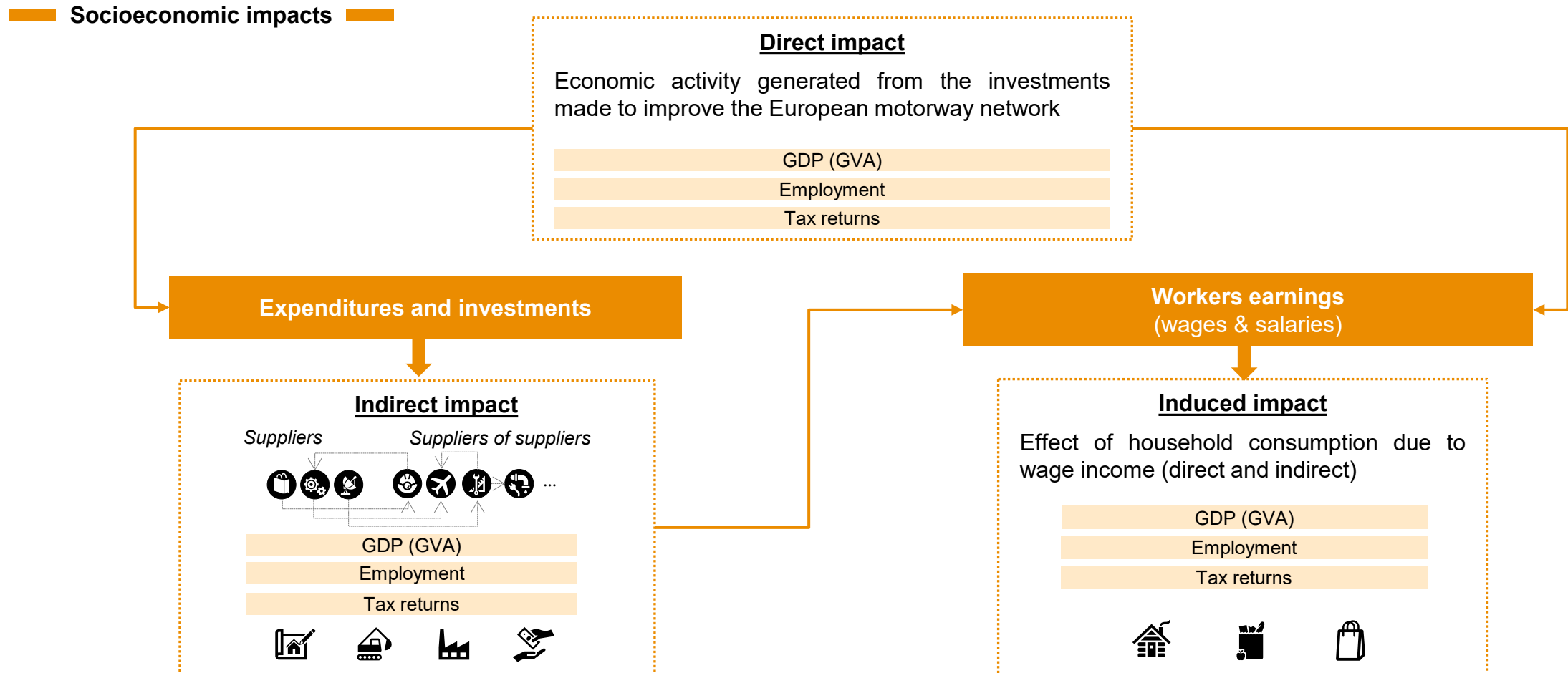


# Seven of the necessary investments meet the substantial criteria of the EU Taxonomy, accounting for €27,176 million (38%)

## Analysis of Compliance of the Identified Investments with the EU Taxonomy

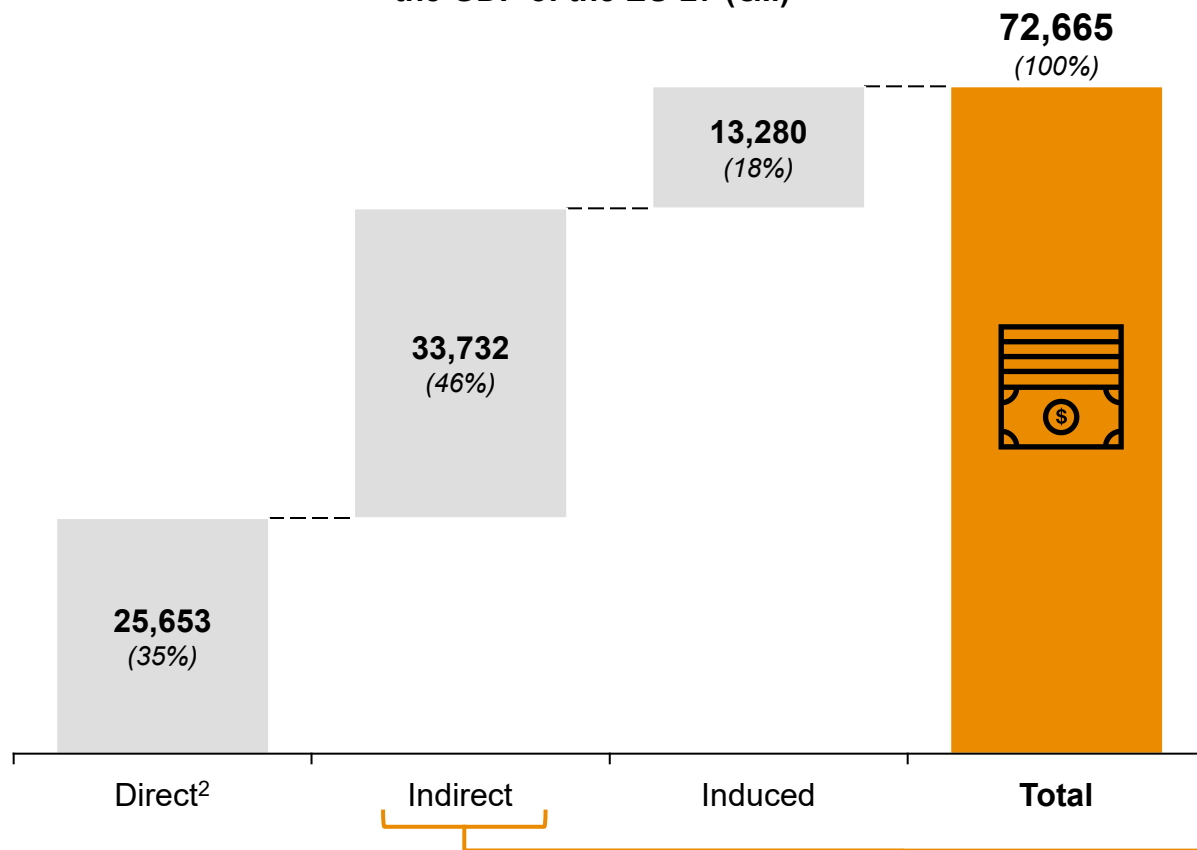


# These investments will have a socioeconomic impact in the EU-27, computed using the Input-Output methodology and the FIGARO tables from Eurostat



# These investments would yield significant socioeconomic benefits for the EU, potentially increasing GDP by up to 72,665 M€

Contribution of investments in the European motorway network to the GDP of the EU-27 (€M)



The most represented sectors that indirectly impact the GDP of the EU-27

**23.3%**

Of **indirect contribution** to GDP corresponds to **Manufacturing sector** (7,866 M€)



**13.5%**

Of **indirect contribution** to GDP corresponds to **Construction sector** (4,562 M€)



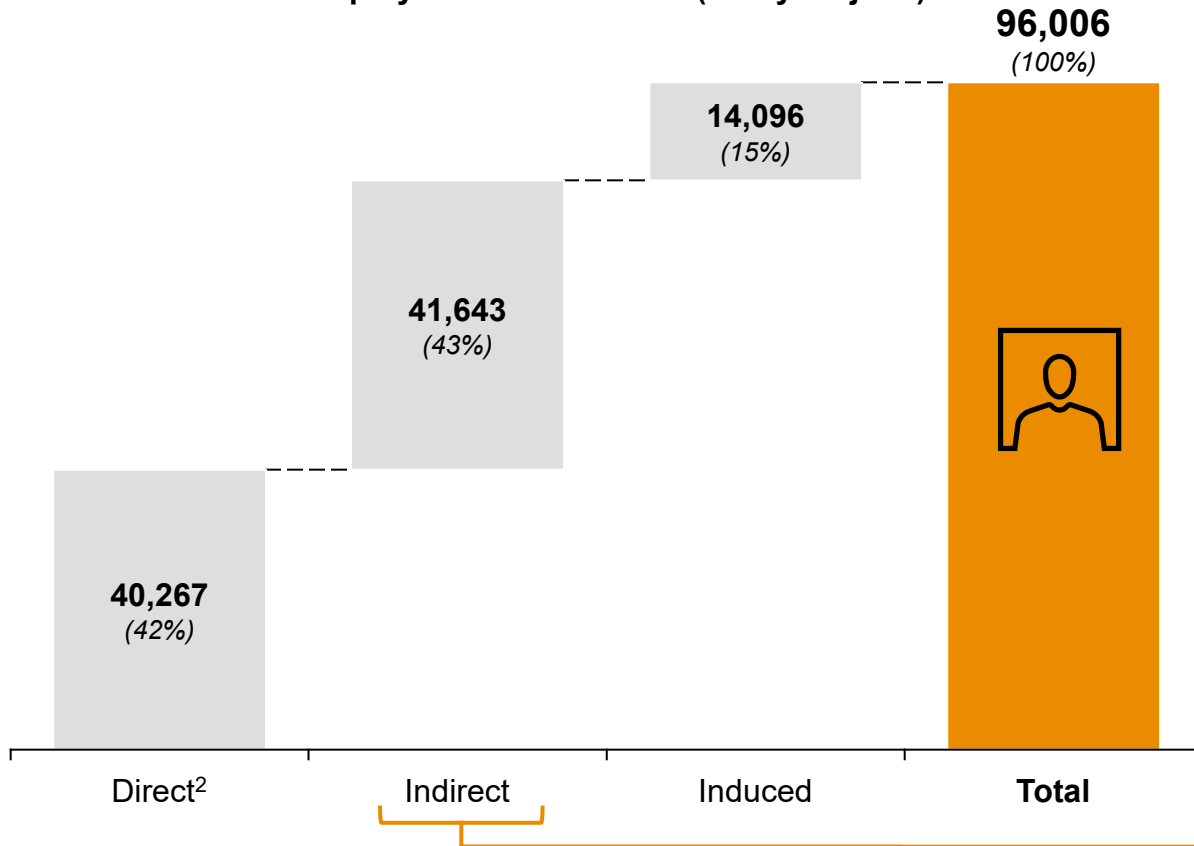
**12.7%**

Of **indirect contribution** to GDP corresponds to **Trade & Repair sector** (4,301 M€)



Furthermore, these investments will boost employment, primarily benefiting the manufacturing, construction, and trade & repair sectors

Contribution of investments in the European motorway network to the employment of the EU-27 (FTE/year jobs)



The most represented sectors that indirectly impact the GDP of the EU-27

**23.4%**

Of **indirect contribution** to employment corresponds to **Manufacturing sector** (7,866 M€)



**17.2%**

Of **indirect contribution** to employment corresponds to **Construction sector** (4,562 M€)



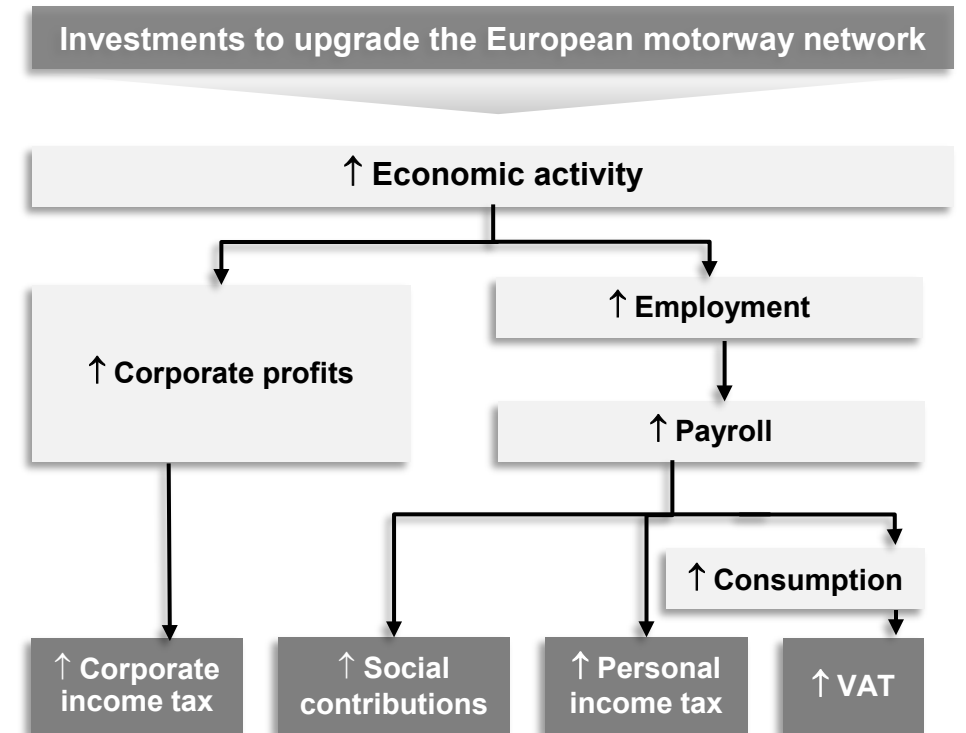
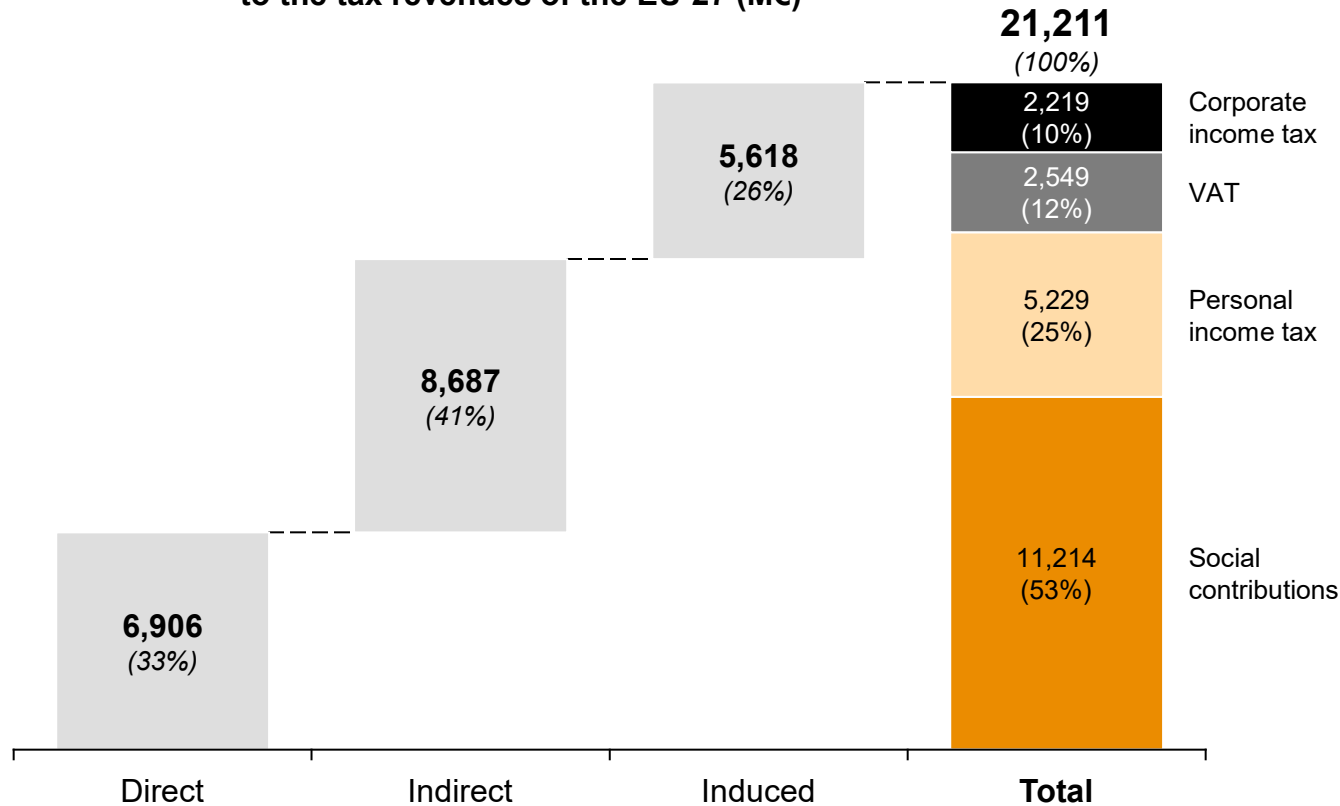
**15.3%**

Of **indirect contribution** to employment corresponds to **Trade & Repair sector** (4,301 M€)



# The upgrade of the European motorway network will stimulate economic activity through firms and employers, leading to an increase in tax revenues

Contribution of investments in the European motorway network to the tax revenues of the EU-27 (M€)








Additionally, these investments will also contribute to reduce air pollution and congestion, while enhance safety

Cost-Benefit Analysis

**BENEFITS**  
of the investment area to society  
For each investment identified in the previous section, its associated benefits will be assessed using a ranking scale ranging from 0 to 3

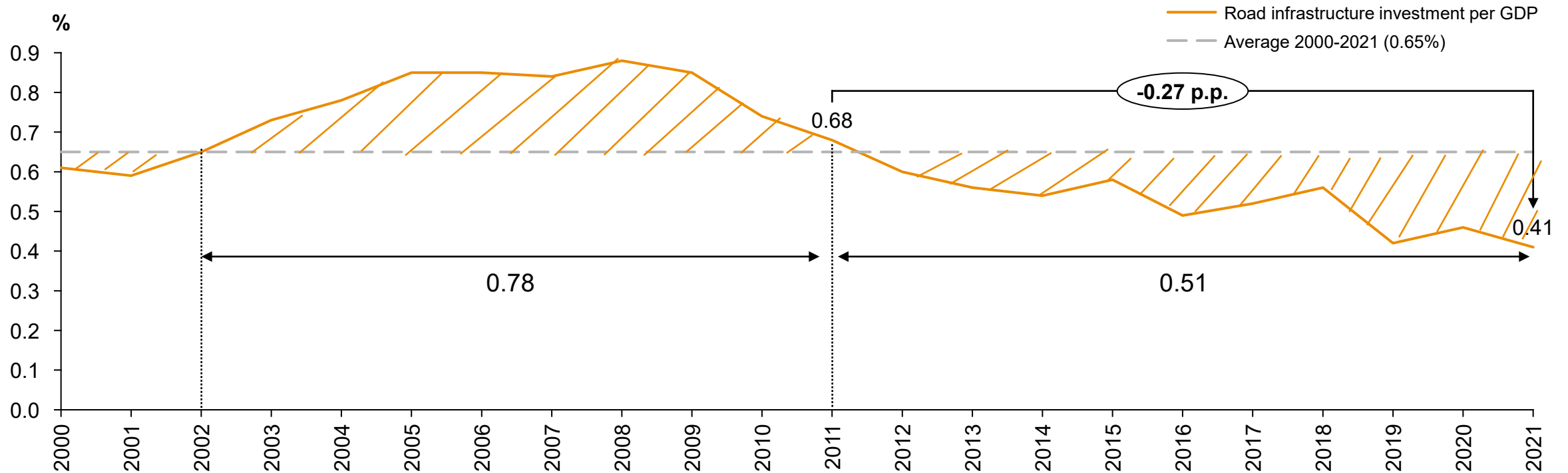
**COSTS**  
of the investment area to society  
In order to improve the European motorway network, some investments are needed, and their cost is the one considered in this CBA

**CBA Results**  
(approaching to the NPV)

		SUSTAINABILITY		SAFETY		DIGITALIZATION	
		Quantification	Conclusion	Quantification	Conclusion	Quantification	Conclusion
BENEFITS	 Air pollution reduction	<div><div></div><div></div><div></div></div>	↓ air pollution	<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>	↓ air pollution
	 Accident reduction	<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>	↓ accidents	<div><div></div><div></div><div></div></div>	↓ road accidents
	 Noise pollution mitigation	<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>	
	 Travel time savings	<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>	
	 Congestion decrease	<div><div></div><div></div><div></div></div>	↓ congestion	<div><div></div><div></div><div></div></div>		<div><div></div><div></div><div></div></div>	↓ congestion
COSTS		Initial investment		17,307 M€		6,071 M€	
Overall result of the investment		Investments will significantly contribute to sustainable mobility		Investments can reduce road fatalities, a key priority for policymakers and authorities		Investment in this area is relatively low compared to the substantial benefits it offers	

# The downward trend of Governments public investment in road infrastructure since 2011 puts at risk the modernization of the sector

Evolution of EU-27 road infrastructure investment per GDP

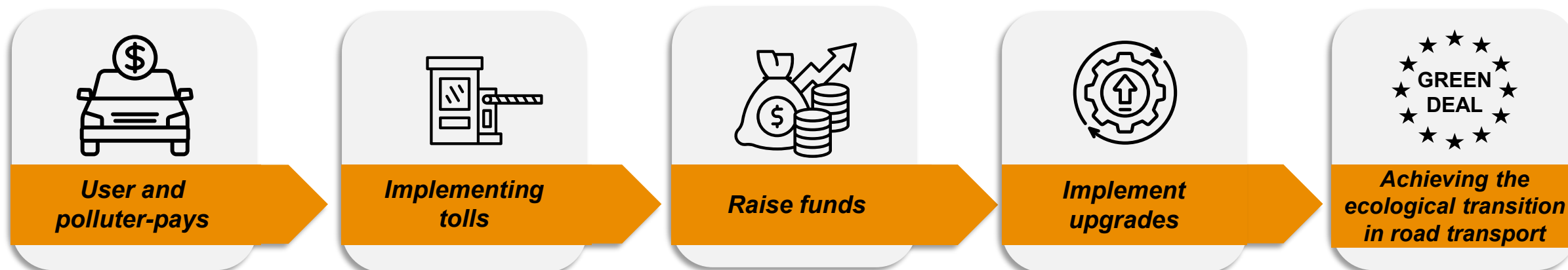


Due to the **existing budgetary constraints and change in spending priorities**, the EU has decreased the public investment in transport infrastructure, which **hinders the modernization** of the transport system



# Considering the public budget restrictions, alternative funding sources such as tolls are essential to upgrade the infrastructure and decarbonize the sector

## Toll implementation into the financing strategy



### Outcome



**Public funds remain protected**, allowing Member States to allocate budgets to other essential public services



**Risk transfer**. The concessionaire assumes key risks, compliance duties, and possible profit losses



Concessionaires **speed up road access** and can manage demand with variable **toll pricing**



Tolls ensure **road maintenance and safety** while **reducing dependance on public budgets**



Concessionaires ensure **road efficiency and quality**, with **life-cycle insight** and **economic adaptability**



Tolls **internalize emission costs**, promoting **sustainable transport choices** and encouraging the **shift to low-emission vehicles**



# Thank you

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This document is based on public data, data from the survey, and data provided by ASECAP and motorway concessionaire companies. The data that has not been audited by PwC. This document is distributed for informational purposes only. The analysis does not imply recommendations. The information is presumed reliable, but is not guaranteed to be complete or true. PricewaterhouseCoopers Asesores de Negocios, S.L., its partners, employees or collaborators do not accept or assume any obligation, responsibility or duty of diligence regarding the consequences of the action or omission on their part or that of third parties, based on the information contained herein. document or with respect to any decision based on it.

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