ASECAP
Association Européenne des Concessionnaires d'Autoroutes et d'Ouvrages à Péage

Infrastructure safety:
Working towards Road Safety Vision Zero objective

The European Commission is currently implementing its **EU Road Safety Policy Framework 2021-2030 – next steps towards 'Vision Zero'**, its long-term strategic goal to get close to zero fatalities and zero serious injuries on EU roads by 2050 (Vision Zero). As an intermediate step, its medium-term objective is to reduce deaths and serious injuries by 50 % by 2030, as already enshrined in the **2017 La Valletta Declaration on Road Safety and in the Stockholm Declaration in 2020.** The framework includes a system monitoring fatalities and serious injuries at EU level based on 10 key performance indicators (KPIs) with timed targets for the reduction of casualties and serious injuries.

Road safety is the first priority of the toll road operators.
The social contract of motorway companies is to safeguard the safety of road users and their road workers and operating people first and also to target congestion-free traffic on their network. The motorway infrastructures are designed and built with highest quality and technological standards which make them the safest infrastructure than any other road infrastructure. Nevertheless, the ambition of the toll motorway sector is to reach the objective set by the European Commission: Vision Zero. To reach this target, the toll road operators represented in ASECAP already put in place, on a daily basis, actions aimed at ensuring high road safety standards for the users, therefore fulfilling the EU Road Safety Policy Framework 2021-2030 and implementing directly, at the same time, the **EU Directive on road safety infrastructure management** along the TEN-T road network.

Key actions performed by toll road operators to safeguard road safety.
Road safety is the result of the efficient and close interaction between the infrastructure, the vehicle and the driver. A motorway is an infrastructure specially designed and built according to the highest quality and technological standards, in order to guarantee to all drivers 24/7 the best safety conditions, high levels of service and driving comfort in all weather conditions. To make the network safe, the maintenance and operation is done all year long by patrollers 24 hours a day and operators managing the traffic control centres in order to make appropriate road management decision and actions.
The key components of a safety traffic management are:

1. Monitoring of traffic, weather and road conditions
2. Warning road users against any possible dangers
3. Maintaining excellent road conditions

Toll road operators permanently act at four levels on their network to improve road safety and reduce the number of road casualties:

Appropriate accident prevention measures

Accident prevention remains the priority for toll road operators by taking appropriate measures & actions:

- Maintaining the road network with the highest possible standards of safety 365 days in all weather conditions.
- Ensuring an effective infrastructure safety management by carrying out regularly road safety audits and inspections.

- Providing real time traffic information: queues at specific spots, accidents, road works, weather and road conditions, travel time information and other relevant information for the driver.
- Deploying cooperative intelligent systems (CITS) to detect automatically incident and provide real-time traffic information.
- Ensuring the safe management and protection of traffic on work sites by early warning through proper road signing and the use of different communication means (internet, traffic radio, VMS, variable message signs) including also the protection of road workers.
- Setting up of high-performance protective guardrails designed both to resist the impact and to absorb the energy.
- Fast removal of stopped vehicles and other possible dangers.
- Providing high quality service areas where drivers/users can rest.

Quick accident response

Quick accident response is of utmost importance in order to save lives, reduce the impact of an accident by specifically reducing the number of secondary accidents and restore the traffic conditions on the infrastructure.

The key operations/procedures undertaken by toll road operators are:

- Prompt road patrols' reaction: secure the accident area, clear & clean the road section affected.
- Activate the emergency response and cooperate with the fire brigades, police and emergency services.
- Early assistance and warning in case of accident.
- Prepare appropriate traffic management plan.

Collection and analysis of data accident

ASECAP and its members collect accident data in order to analyse and investigate the main causes and get useful information. Proper safety actions are based on the data analysis A detailed understanding of the accident lead to identify the best practices to be developed along the network:

- Acting on the infrastructure (improving and optimizing existing road networks eg with additional ITS systems and road-side equipments).
- Acting on drivers' behaviours (raising awareness campaigns, education activities)
- Interaction with car manufacturers and science.

Awareness-raising campaigns

ASECAP upholds the 'safety system approach' in which drivers and other users remain the key actors: they have to abide by the legal requirements, respect warnings, safety procedures and safe driving behaviors as promoted by toll road operators. To encourage drivers to have a responsible behavior on the motorway, ASECAP members run awareness & education campaigns using different communication tools (videos, spots, books, games)

C-ITS as a public goal to safeguard safe mobility and efficient traffic management

C-ITS – the cooperative intelligent transport systems – deployment and applications will play a crucial role in achieving the "Vision Zero" goal in road safety by establishing the vital direct link between vehicles themselves, road infrastructure and other road users, delivering warnings to road workers and vehicles and helping to prevent accidents as well as their severity and reduce the secondary accidents occurrence. Therefore, ASECAP members foresee that C-ITS has a great potential to further improve the health and safety for road users and workers on road works sites. Furthermore, with increasing penetration rates of cooperative connected and, in future, also automated vehicles, C-ITS will contribute enabling collaborative traffic management to reducing congestion and to creating a smooth traffic flow: it has a positive impact on fuel consumption that is reduced and, hence, CO_2 emissions and air pollution are reduced. ASECAP members are already investing massively to upgrade, adapt & modernize their motorways for full deployment of autonomous vehicles.

ASECAP Infrastructure safety figures				
	2019	2020	2021	Scope (*)
Network in construction (Km)	699	788	1,181	Full
Network widening (Km)	281	241	221	Full
Total Investments (M€)	6,715	6,963	7,597	Full
Injured persons	25,515	15,678	17,592	Partial 4
Fatal Accidents	567	417	472	Partial 3
Fatalities	643	465	521	Partial 3
Personal injury rate	9.10	7.30	6.93	Partial 4
Fatal accident rate	0.20	0.19	0.18	Partial 3
Fatality rate	0.23	0.21	0.20	Partial 3
Km travelled (Mio Km)	284,401	217,632	257,048	Partial 3
Km travelled (Mio Km)	280,482	214,909	253,958	Partial 4

(*) see methodology below

Table 1: *Overview of ASECAP Key figures*

One of the most relevant indicators for measuring infrastructure safety is the number of injured persons: in 2021, 17,592 persons have been injured while travelling on the network. The amount is higher compared to 2020 (15,678 people), but we need to consider that the number of km travelled in 2020 is significantly lower compared to the pre-Covid 19 period. In 2019, the number of injured persons has been 25,515. Please notice that this figure does not refer to the whole ASECAP network (please see methodology section). Fatal accidents declined over time: they have been 567 in 2019, 417 in 2020 and 472 in 2021. Fatalities in 2021 amount to 521, 465 in 2020 and 643 in 2019.

In order to understand the safety trends over time it is relevant to look at personal injury rate, fatal accident rate and fatality rate. These indicators consider the number of Km travelled and therefore are particularly well suited in order to compare different years.

In 2021, there were 6.93 injured persons for each 100 million Km travelled. The figure has been improving over time: it was 9.10 in 2019 and 7.30 in 2020.

Decrease of fatality rate:

0.23
in 2019

0.20
in 2021

The fatal accident rate has been improving as well: in 2021, there has been 0.18 fatal accidents for each 100 million Km travelled. In 2019 they were 0.20.

The safety of the infrastructure is one of the main objectives of ASECAP members and it requires significant investments and efforts.

In 2021, there are 1,181 km of network in construction (they were 699 in 2019 and 788 in 2020). Out of this amount, 221 km of network were being widened. Total investments (including both existing and new investments) have been 7,597 million euros in 2021. They were 6,715 in 2019 and 6,963 in 2020.

Methodology

ASECAP collected data from its members as of December 31, 2021. If KPIs were not available for all members, the mean value of the available data to infer the value for missing members was used. Were reported only KPIs with a sufficient coverage, that is with a relatively high percentage of available data compared to missing data. On average, KPIs have 89% of available data and 11% of missing data.

Some indicators refer to the whole ASECAP network, while some indicators refer to a subset of the ASECAP network. More specifically, KPIs of this report refer to one of the following scopes:

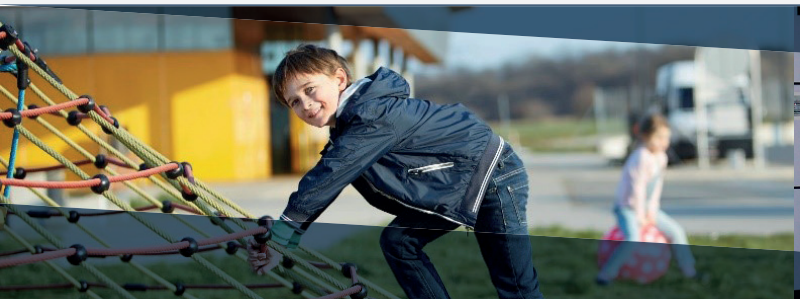
– "Full": data refer to the whole ASECAP network (87,937 km in 2019, 86,174 km in 2020, 82,255 km in 2021).

– "Partial 1": data refer to a subset of the ASECAP network (35,450 km in 2021, 35,225 km in 2020 and 29,136 km in 2019).

– "Partial 2": data refer to a subset of the ASECAP network (29,070 km in 2021, 29,664 km in 2020 and 30,157 km in 2019)

– "Partial 3": data refer to the whole ASECAP network with the exclusion of Toll Collect, ADM, AVTODOR, PE Roads of Serbia, ICA, Midland Motorways Group, Kapsch.

– "Partial 4": data refer to the whole ASECAP network with the exclusion of Toll Collect, ITIA, ADM, Westerscheldetunnel, AVTODOR, ICA, PE Roads of Serbia, Midland Motorways Group, Kapsch.



122 fatalities less in 2021 compared to fatalities in 2019.

19% less deaths in 2021 compared to 2019.

21.2 billion € invested in 3 years

2,688 Km under construction from 2019/2021 including 221 km of network widening

1,807 rest areas in 2021, accounting for an increase of over 30% compared with 2001.

1,412 services areas in 2021, accounting for an increase of 37% compared with 2001.

More than 290 safe and secure parking areas for trucks along motorway network in 2021*.

*2021 is the first year the data was collected.

ASECAP

Association Européenne des Concessionnaires d'Autoroutes et d'Ouvrages à Péage

ASECAP is the European Association of Operators of Toll Road Infrastructures across 19 member countries representing 128 companies employing more than 40,000 direct jobs and 200,000 indirect jobs. They operate, maintain, manage a network of more than 82,000 km with a long-term vision that ensures highest quality standards to make the road infrastructure safest thank to the user/payer principle providing sustainable financing.

Registered Office / Siège de l'Association
152 avenue de Malakoff - 75116 Paris

Brussels Offices / Bureaux à Bruxelles
15, rue Guimard - 1040 Bruxelles
Tel. +32 2 289 26 20
Fax + 32 2 514 66 28
e-mail secretariat@asecap.com
www.asecap.com

@ASECAP_EU

ASECAP – EU ASSOCIATION

Photo credit: Front page: ©shutterstock -- Second page: ©ASFINAG -- Third page: ©ASFINAG (left); ©NDS (right) -- Last page: ©DARS (left); ©Ascendi / APCAP (middle) ; ©ASFA Photothèques sociétés d'autoroutes-DR (right)

Design: Rafael Medeiros | designerorafa@gmail.com | @rafa_el_designer

ADBD Communicare | Av. da Igreja, 42, 10.º Esq. | 1700-239 Lisboa
T (+351) 217 817 290 | (+351) 217 817 299 | geral@adbd.pt | www.adbdcommunicare.com

March 2023